

1 **Volume 3, Section 1 – McShane, Cost of Capital**

2
3 **Q. Please provide copies of the following publications and/or documents referred to in**
4 **Ms. McShane’s Direct Testimony:**

- 5
6 a. (page 10, line 275) Moody’s Credit Opinion, Newfoundland Power Inc., July
7 2005.
- 8 b. (page 11, footnote 4) Conference Board of Canada, Provincial Outlook 2006,
9 Long-Term Economic Forecast, March 2006 - only the Executive Summary and
10 the chapter covering Newfoundland and Labrador are required.
- 11 c. (page 11, footnote 6) Consensus Economics, Consensus Forecasts, February 12,
12 2007.
- 13 d. (page 17, footnote 10) Marlene K. Puffer, “Back to Basics,” Canadian Investment
14 Review, Fall 2006.
- 15 e. (page 18, footnote 13) DBRS, Credit Rating Report: Newfoundland Power,
16 January 6, 2006.
- 17 f. (page 19, footnote 16) The DBRS publication where its “broad guidelines for
18 A/BBB ratings” are published.
- 19 g. (page 19, footnote 17) Moody’s Investor Services, Rating Methodology: Global
20 Regulated Electric Utilities, March 2005.
- 21 h. (page 20, lines 550-552) The S&P publication that Ms. McShane is referring to in
22 the referenced passage.
- 23 i. (page 21, lines 570-572) Standard and Poor’s, Key Credit Factors: Assessing U.S.
24 Vertically Integrated Utilities’ Business Risk Drivers, September 2006.
- 25 j. (page 21, footnote 19) Standard and Poor’s, Research: Key Ratings Factors for US
26 Electric Transmission Companies, November 10, 2005.
- 27 k. (page 21, footnote 20) Standard & Poor’s, Corporate Criteria, October 2004.
- 28 l. (page 21, footnote 21) Standard & Poor’s, Research: Newfoundland Power Inc.,
29 April 23, 2004.
- 30 m. (page 25, footnote 23) S&P, Peer Comparison: Consolidated Edison Inc., Hydro
31 One Inc., and National Grid PLC - Same Rankings, Different Basis, October 11,
32 2005.
- 33 n. (page 25, footnote 23) S&P, Research: Peer Comparison: North American Stand-
34 Alone Transmission Companies Deliver Electricity and Profits, April 20, 2006.
- 35 o. (page 26, lines 678-681) DBRS, The Rating Process and the Cost of Capital for
36 Utilities: Five Reasons Why Canadian Utilities have Lower Ratios and Five
37 Changes to Regulation Which Should be Introduced in Canada, May 2003.
- 38 p. (page 26, lines 687-698) The three DBRS reports referred to in the referenced
39 lines dealing with ATCO Ltd., AltaLink, and FortisAlberta.
- 40 q. (page 27, lines 719-720) S&P, Research Update: ATCO Group of Companies ‘A’
41 Ratings Affirmed; Outlook Stable, November 9, 2004.
- 42 r. (page 27, lines 726-727) S&P, Research Summary: AltaLink, June 5, 2006.
- 43 s. (page 27, line 732) S&P, Research: Union Gas, August 24, 2006.

- 1 t. (page 27, footnote 24) Standard & Poor’s, Industry Report Card: Regulatory
2 Rulings, M&A, and Fuel Cost Recovery Dominate Global Utilities Credit
3 Environment, November 21, 2006.
- 4 u. (page 33, line 891 and page 37, lines 1020-1021) Consensus Economics,
5 Consensus Forecasts, October 2006.
- 6 v. (page 37, footnote 34) Blue Chip Financial Forecasts (December 2006).
- 7 w. (page 62, footnote 65) Taylor, Karen, BMO “Pipelines/Gas & Electric Utilities:
8 2007 ROEs Decline to Unprecedented Levels; Ontario Gets Reprieve,” December
9 7, 2006.
- 10 x. (page 63, footnote 67) The Conference Board of Canada, Electricity
11 Restructuring: Opening Power Markets, May 2004.
- 12 y. (Appendix B, page 15) For the two sources for the Table B-3 figures, provide
13 copies of the pages containing the raw underlying annual data series for each of
14 the 6 columns.
- 15 z. (Appendix B, page 19, footnote 86) Blue Chip Financial Forecasts, March 1,
16 2007.
- 17 aa. (Appendix B, page 23, footnote 89) Dr. Stephen A. Ross, “Is Beta Useful?” The
18 CAPM Controversy: Policy and Strategy Implications for Investment
19 Management, AIMR, 1993.
- 20
- 21 A. (a) Moody’s Credit Opinion, Newfoundland Power Inc., July 2005 is Attachment A;
22 See e-file CA-NP-263, Attachment A.pdf.
- 23
- 24 (b) Conference Board of Canada, Provincial Outlook 2006, Long-Term Economic
25 Forecast, March 2006 is Attachment B;
26 See e-file CA-NP 263, Attachment B.pdf.
- 27
- 28 (c) Consensus Economics, Consensus Forecasts, February 12, 2007 is Attachment C;
29 See e-file CA-NP 263, Attachment C.pdf.
- 30
- 31 (d) Marlene K. Puffer, “Back to Basics,” Canadian Investment Review, Fall 2006 is
32 Attachment D;
33 See e-file CA-NP-263, Attachment D.pdf.
- 34
- 35 (e) DBRS, Credit Rating Report: Newfoundland Power, January 6, 2006 is
36 Attachment E.
37 See e-file CA-NP-263, Attachment E.pdf.
- 38
- 39 (f) The DBRS publication where its “broad guidelines for A/BBB ratings” are
40 published is Attachment F;
41 See e-file CA-NP-263, Attachment F.pdf.
- 42
- 43 (g) Moody’s Investor Services, Rating Methodology: Global Regulated Electric
44 Utilities, March 2005 is Attachment G;
45 See e-file CA-NP-263, Attachment G.pdf.

- 1 (h) The S&P publication that Ms. McShane is referring to in the referenced passage is
2 Attachment H.
3 See e-file CA-NP-263 Attachment H I.pdf.
4
- 5 (i) See response to CA-NP-263 (h).
6
- 7 (j) Standard and Poor's, Research: Key Ratings Factors for US Electric Transmission
8 Companies, November 10, 2005 is Attachment J;
9 See e-file CA-NP-263, Attachment J.pdf.
10
- 11 (k) Standard & Poor's, Corporate Criteria, October 2004 is Attachment K.
12 See e-file CA-NP-263, Attachment K.pdf.
13
- 14 (l) Standard & Poor's, Research: Newfoundland Power Inc., April 23, 2004 is
15 Attachment L.
16 See e-file CA-NP-263, Attachment L.pdf.
17
- 18 (m) S&P, Peer Comparison: Consolidated Edison Inc., Hydro One Inc., and National
19 Grid PLC - Same Ratings, Different Basis, October 11, 2005 is Attachment M;
20 See e-file CA-NP-263 Attachment M.pdf.
21
- 22 (n) S&P, Research: Peer Comparison: North American Stand-Alone Transmission
23 Companies Deliver Electricity and Profits, April 20, 2006 is Attachment N.
24 See e-file CA-NP-263, Attachment N.pdf.
25
- 26 (o) DBRS, The Rating Process and the Cost of Capital for Utilities: Five Reasons
27 Why Canadian Utilities have Lower Ratios and Five Changes to Regulation
28 Which Should be Introduced in Canada, May 2003 is Attachment O.
29 See e-file CA-NP-263, Attachment O.pdf.
30
- 31 (p) The three DBRS reports referred to in the referenced lines dealing with ATCO Ltd.,
32 AltaLink, and FortisAlberta is Attachment P.
33 See e-files CA-NP-263, Attachment P - DBRS AltaLink November 2004.pdf;
34 CA-NP-263, Attachment P - DBRS ATCO Dec 2004.pdf; and CA-NP-263,
35 Attachment P - DBRS FortisAlberta September 2004.pdf.
36
- 37 (q) S&P, Research Update: ATCO Group of Companies 'A' Ratings Affirmed;
38 Outlook Stable, November 9, 2004 is Attachment Q.
39 See e-file CA-NP-263, Attachment Q.pdf.
40
- 41 (r) S&P, Research Summary: AltaLink, June 5, 2006 is Attachment R.
42 See e-file CA-NP-263, Attachment R.pdf.
43

- 1 (s) S&P, Research: Union Gas, August 24, 2006 is Attachment S.
2 See e-file CA-NP-263, Attachment S.pdf.
3
- 4 (t) Standard & Poor's, Industry Report Card: Regulatory Rulings, M&A, and Fuel
5 Cost Recovery Dominate Global Utilities Credit Environment, November 21,
6 2006 is Attachment T.
7 See e-file CA-NP-263, Attachment T.pdf.
8
- 9 (u) Consensus Economics, Consensus Forecasts, October 2006 is Attachment U.
10 See e-file CA-NP-263, Attachment U.pdf.
11
- 12 (v) Blue Chip Financial Forecasts, December 2006 is Attachment V.
13 See e-file CA-NP-263, Attachment V.pdf.
14
- 15 (w) Taylor, Karen, BMO "Pipelines/Gas & Electric Utilities: 2007 ROEs Decline to
16 Unprecedented Levels; Ontario Gets Reprieve," December 7, 2006 is Attachment W.
17 See e-file CA-NP-263, Attachment W.pdf.
18
- 19 (x) The Conference Board of Canada, Electricity Restructuring: Opening Power
20 Markets, May 2004 is Attachment X.
21 See e-file CA-NP-263, Attachment X.pdf.
22
- 23 (y) The raw underlying annual data series for each of the 6 columns for the two
24 sources for the Table B-3 figures is Attachment Y.
25 See e-files CA-NP-263, Attachment Y - CIA Cdn Economic Stats 1924-2005.pdf;
26 and CA-NP 263, Attachment Y - Ibbotson 2007 Yearbook.pdf.
27
- 28 The Ibbotson Associates, *Stocks, Bonds, Bills & Inflation, 2007 Yearbook* has
29 been provided as this is the latest update. The columns entitled Risk Premiums
30 are calculated from the Stock Returns and Bond Returns columns and thus have
31 no underlying data.
32
- 33 (z) Blue Chip Financial Forecasts, March 1, 2007 is Attachment Z.
34 See e-file CA-NP-263, Attachment Z.pdf,
35
- 36 (aa) Dr. Stephen A. Ross, "Is Beta Useful?" The CAPM Controversy: Policy and
37 Strategy Implications for Investment Management, AIMR, 1993 is Appendix AA.
38 See e-file CA-NP-263, Appendix AA.pdf.
39
40

Moody's Credit Opinion
Newfoundland Power Inc., July 2005

This Analysis provides a discussion of the factors underpinning the credit ratings and should be read in conjunction with our Credit Opinion. The most recent ratings, opinion, and other research specific to this issuer are provided on Moodys.com. Click here to link.

Analysis

CANADA
Americas

July 2005

Contact	Phone
Toronto	
Allan McLean	1.416.214.1635
New York	
Dan Gates	1.212.553.1653

Newfoundland Power Inc.

Newfoundland Power Inc.'s (NPI) Baa1 rating (senior secured) and stable outlook reflect the following key credit strengths and challenges:

Credit Strengths

- First mortgage security over NPI's property, plant and equipment
- Low risk, cost of service regulated monopoly, predominantly T&D utility
- Lack of competitive pressure due to dominant position in a small, isolated and relatively low growth market
- Stable & supportive regulatory regime
- Moderate leverage - constrained by 65% debt/capitalization bank covenant
- Sufficient liquidity under NPI's \$100 million syndicated committed revolving credit facility
- Manageable debt maturity profile
- Operational and financial independence from parent, Fortis Inc., and affiliates
- Expectation of low restructuring risk

Credit Challenges

- Declining trend in FFO/Debt in recent years
- Slightly free cash flow negative
- Relatively small company serving a historically weak economy
- Rising electricity rates due to flow through of rising purchased power costs



Moody's Investors Service
Global Credit Research

Credit Strengths

FIRST MORTGAGE SECURITY OVER NPI'S PROPERTY, PLANT AND EQUIPMENT

NPI's first mortgage bonds (FMBs) are secured by a first fixed and specific charge on property, plant and equipment owned or to be acquired by the company as well as a floating charge on all other assets. The FMBs also benefit from a general sinking fund which is to be funded annually in an amount equal to 1% of the original principal balance of the FMBs. The FMBs represent virtually all of NPI's debt with the exception of its unsecured bank lines which are comprised of a \$100 million syndicated committed revolving term facility and a \$20 million demand facility.

LOW RISK, COST OF SERVICE REGULATED MONOPOLY, PREDOMINANTLY T&D UTILITY

Moody's considers NPI's business risk to be relatively low, reflecting the fact that it is predominantly a transmission and distribution utility that is regulated on a cost-of-service basis by the Board of Commissioners of Public Utilities of Newfoundland and Labrador (PUB). The 144 MW of generation owned by NPI, two thirds of which is small hydro, represents approximately 10% of NPI's total assets and generates roughly 10% of the electricity that NPI delivers to its customers. NPI purchases the balance of the electricity consumed by its customers from provincially-owned Newfoundland & Labrador Hydro (Hydro). The cost of power purchased from Hydro is a flow through to end use consumers.

LACK OF COMPETITIVE PRESSURE DUE TO DOMINANT POSITION IN A SMALL, ISOLATED AND RELATIVELY LOW GROWTH MARKET

NPI has a dominant market position on the island of Newfoundland serving 225,000 or approximately 85% of the on-island customers (the balance of on-island customers are directly served by Hydro). The island of Newfoundland is an isolated and relatively low-growth market which acts as an effective barrier to competitive entry. In addition, as noted below, Moody's believes that market restructuring and the introduction of competition are unlikely to occur in the foreseeable future.

STABLE & SUPPORTIVE REGULATORY REGIME

NPI operates under a cost of service return on rate base regime that is overseen by the PUB. NPI benefits from the existence of a Rate Stabilization Account (RSA) which captures volatility in the price of power purchased from Hydro that reflects fluctuations in the cost and quantity of fuel oil burned by Hydro. The PUB reviews the RSA and adjusts NPI's rates annually in July to permit NPI to recover or refund RSA balances from ratepayers. In addition, the PUB has approved the use of a Weather Normalization Reserve (WNR) to adjust for the financial impact of weather on demand patterns and of hydrology on purchased power requirements. While NPI's short-term cash flows can be impacted by variations in weather, hydrology and purchased power costs, the existence of the RSA and WNR provide NPI with the ability to ultimately recover these costs from ratepayers.

MODERATE LEVERAGE - CONSTRAINED BY 65% DEBT/CAPITALIZATION BANK COVENANT

NPI has moderate leverage with FFO/Adjusted Debt of approximately 14% and Adjusted Debt/Adjusted Capitalization of about 56% according to Moody's calculations. NPI's leverage is constrained by the covenant in its bank credit agreement which limits its debt to capitalization to 65%. At Q1 2005, NPI's debt to capitalization ratio calculated in accordance with the covenant was 54%, leaving adequate headroom under the covenant. Also, Moody's expects that NPI will continue to pursue a dividend policy that will ensure that it remains at or near the maximum 45% equity allowed by its regulator.

SUFFICIENT LIQUIDITY UNDER NPI'S \$100 MILLION SYNDICATED COMMITTED REVOLVING CREDIT FACILITY

In January 2005, NPI established a \$100 million 364-day syndicated committed revolving credit facility. The facility is extendible for additional 364 day periods with the consent of the lenders. However, if the lenders do not extend the maturity date, NPI has the option to draw down the full amount of the facility and convert it to a one year term loan. Moody's expects that, together with retained cash flow, this facility will be adequate to support the company's ongoing capital expenditure requirements of approximately \$50 million annually. NPI expects to periodically issue additional FMB debt to reduce the amount outstanding under the revolving credit facility. Moody's notes that the availability of funds under NPI's revolving credit line could be constrained in adverse circumstances due to the existence of a Material Adverse Change (MAC) clause. However, Moody's believes that the potential impact of the MAC clause is some-

what muted by the fact that there is a specific carve-out for adverse weather conditions, which is one of the most likely events that could negatively impact the company's performance.

MANAGEABLE DEBT MATURITY PROFILE

NPI's sinking fund payment and maturity schedule is manageable. Sinking fund payments over the next five years are scheduled to be less than \$4 million annually. First Mortgage Bond Series AC matures in 2007 (\$32.7 million currently outstanding) following which the next maturity occurs in 2014.

OPERATIONAL AND FINANCIAL INDEPENDENCE FROM PARENT, FORTIS INC., AND AFFILIATES

Consistent with Fortis' philosophy of operating its utility subsidiaries on a stand-alone basis, NPI is operationally and financially independent of Fortis and the level of dividends paid to Fortis has not historically been stressful for NPI. The company's financial agreements illustrate this financial strategy. NPI's bank credit agreement contains covenants which prohibit affiliate loans and guarantees and place meaningful restrictions on other affiliate transactions. These provisions place prohibitions on loans and guarantees to affiliates and meaningful restrictions on all affiliate transactions.

EXPECTATION OF LOW RESTRUCTURING RISK

Moody's expects the risk of electricity market restructuring in Newfoundland to be relatively low. While there was discussion in the past about the possibility of provincially-owned Hydro acquiring NPI, after studying the situation, the government announced in February of 2004 that it was not the government's intent to pursue the ownership of NPI by Hydro.

Credit Challenges

DECLINING TREND IN FFO/DEBT IN RECENT YEARS

Recent declines in the ratio of funds from operations to total debt (FFO/Debt) reflect the impact of lower regulated depreciation on revenues. Following a depreciation study conducted in 2002, the company was required to reduce the amortization of its assets by \$5.8 million annually during each of 2003, 2004 and 2005. All else being equal, Moody's expects amortization for rate making purposes to increase by approximately \$5.8 million commencing 2006, which should have a positive impact on FFO/Debt and other cash flow metrics. The recent declines in FFO/Debt also reflect the increase in the amount of outstanding debt, which has tracked the steady growth in NPI's property plant and equipment.

SLIGHTLY FREE CASH FLOW NEGATIVE

Consistent with most electric utilities, it is expected that NPI will continue to be modestly free cash flow negative after capital spending and dividends for the foreseeable future. This reflects NPI's moderate but steady cash flow, its significant ongoing capital expenditure program, and its expected dividend pay-out. As previously noted, Moody's expects that NPI will continue to pursue a dividend policy that will ensure that it remains at or near the maximum 45% equity allowed by its regulator. As a result, Moody's expects an increase in NPI's dividend payout in the near term.

RELATIVELY SMALL COMPANY SERVING A HISTORICALLY WEAK ECONOMY

NPI is a relatively small company with total assets of less than \$1 billion serving a customer base of approximately 225,000. It operates in a jurisdiction whose economy has been relatively weak and which continues to be more dependent upon the cyclical natural resource sector than the country as a whole. While the province's population continues to decline, NPI has benefited to some degree from the relocation of a portion of the population from small remote communities to larger urban centres such as St. John's.

RISING ELECTRICITY RATES DUE TO FLOW THROUGH OF RISING PURCHASED POWER COSTS

NPI has experienced material increases in the cost of power purchased from Hydro, largely due to the escalating price of fuel oil which fires Hydro's largest thermal generating station. While the cost of purchased power is a flow through to the ratepayer, rising electricity rates could negatively impact electricity demand.

Related Research

Credit Opinion:

Newfoundland Power Inc. June 8, 2005

Rating Methodology:

Global Regulated Electric Utilities, March 2005(91730)

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

Related Websites

Moody's Canada Inc.

www.moody's.ca

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<u>Author</u>	<u>Associate Analyst</u>	<u>Production Manager</u>
Allan McLean	Indu Sambandam	William L. Thompson

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Conference Board of Canada, Provincial Outlook 2006
Long-Term Economic Forecast
March 2006



Provincial Outlook Executive Summary 2006

Long-term Forecast Profound Demographic Changes Weigh On Potential Growth

NATIONAL OVERVIEW

Canada seems poised to enjoy the good times ahead. High commodity prices, a relatively good fiscal stance, low inflation and the lift to purchasing power resulting from a strong currency have benefited many sectors in the economy. In particular, consumer spending and business investment have surged over the past three years allowing real gross domestic product (GDP) to advance at a healthy clip despite the significant drag caused by a deteriorating trade balance. Total government spending has posted steady and strong gains recently, as federal transfers to the provinces have seen generous increases, helping cover the quickly expanding costs of health care. Residential investment too has added fuel to the fire, although this boom is expected to be snuffed out quickly as home construction realigns with demographic demand. Over the next five years (2006–10), the Canadian economy is expected to advance by an average growth pace of 3 per cent, slower than the

HIGHLIGHTS

- Ontario and Alberta will occupy the two top spots over the long term, Ontario from a favourable demographic outlook due to sturdy international migration and Alberta from the development of the oil sands, where an amazing \$100 billion in investment is expected to expand the industry.
- Over the long term, real GDP growth will average 2.3 per cent in British Columbia and 2 per cent in Prince Edward Island, as the provinces become preferred retirement havens for baby boomers.
- Declining population and depletion of oil reserves will weigh heavily on Newfoundland and Labrador over 2005–25.
- Population will shrink in every year of the forecast in New Brunswick and Nova Scotia, impeding real economic growth significantly over the long term.
- Quebec can expect average annual growth of 2 per cent over the forecast, as major capital outlays in electricity-generating capacity and sound export activity compensate for tepid population growth.
- Population growth will hold steady over the forecast period in Manitoba due to more favourable immigration. Saskatchewan will experience very weak population gains over 2005–25.

3.3 per cent growth attained between 1995 and 2005 but nonetheless at a pace above the underlying potential of the economy. Demographic factors suggest that economic growth will advance more and more slowly over the long term, with economic growth averaging 2.3 per cent over 2011 to 2020. The economy is expected to manage growth of 2.1 per cent per year over the last five years of the forecast, still not a bad result considering the weak population growth and the effects of a much older society.

Demographic factors suggest that economic growth will advance more and more slowly over the long term.

Although the forecast is promising, we need to be aware of a number of potential snags that could significantly alter the near-term growth path. Of most concern is the question of whether the United States will manage to smoothly navigate the large imbalances that plague its economy. The presence of a hefty federal government deficit is overshadowed by the global imbalance evidenced by a huge current account deficit. Moreover, American consumers, who represent roughly 20 per cent of the world economy, are highly leveraged on real estate prices that some consider arbitrarily high. Oil prices have also continued their ascent recently, this time propelled by a heating geopolitical situation. While the U.S. and world economies seem to have adjusted to higher energy prices, price softening would be a welcome relief to help dissolve some of the structural difficulties faced by the U.S. economy.

Assuming that the U.S. and world economies do steer their way through the troubles ahead, Canada's outlook is positive. The Canadian economy has survived numerous structural adjustments on the domestic and international stage, including fiscal reform, the high-tech wreck, the development of multinational trading blocs, corporate malfeasance and globalization. More recently, Canadian manufacturers have been scrambling to adjust to what amounted to a reduction in sales prices of more than 30 per cent, the result of the rapid acceleration in the value of our currency. While adjustments are not complete, the manufacturing sector has done surprisingly

well over the transition, undergoing heavy retooling and layoffs that finally, over 2004 and 2005, produced excellent growth in labour productivity.

And while there has been poor growth in manufacturing employment recently, Canada has not been lacking in new jobs. This is especially true in Alberta, where high energy prices have led to frenzied investment and construction activity in the oil patch. Elevated commodity prices have resulted in increased economic activity for many resource sectors, while British Columbia is undergoing a construction boom, in part due to preparation for the 2010 Olympics. The situation has resulted in low unemployment, higher wages and changing migration flows as central and eastern Canadians migrate west, especially to Alberta, looking for better job opportunities.

While energy and commodity prices are assumed to have peaked, they are forecast to remain strong over the forecast, partly because of the steady growth in demand coming from China and other developing nations. Elevated oil prices will support ongoing development of Canada's massive oil sands reserves; other resource sectors, with some notable exceptions, will also benefit from the profitable situation brought about by high world prices. Central Canada too will face better prospects as the Canadian dollar stabilizes and eases modestly in the near term. This will provide a break for the manufacturing sector, which must remain lean and innovative to compete in the global environment. More balanced regional performances will help lift real GDP growth by 3.1 per cent in 2006, while growth will remain strong at about 3 per cent over the near term as the economy reaches its full potential.

Beyond 2010 the Canadian economy will experience a deceleration in growth that is expected to continue through the remainder of the forecast horizon. Slower population growth and the effects of an aging population will restrain labour force growth and heavily influence income and spending patterns. With the first members of the large baby-boom cohort about to celebrate sixty, the labour market is on the verge of a massive wave of retirement that will only accelerate over the next 20 years. Even with optimistic immigration assumptions, this will result in sharp slowing in the labour force that will weaken growth in GDP. However, economic growth

can be rescued by heavy investment in machinery and equipment and technology, and by utilizing more highly skilled workers and using more innovative production processes. To some extent, all of these things are already happening and the pace of productivity growth has been improving. Over the long term, strong labour productivity—getting more output per worker—is a key assumption behind our long-term forecast.

The most striking development over the long term will be the aging of the Canadian population. The postwar baby boom came to an end in the mid 1960s, and the fertility rate has been much lower since then. Consequently, the age distribution of the population will change considerably as the baby-boom generation progresses up the population pyramid. This will be particularly noticeable beyond 2010, when the share of the population over 65 climbs steeply. The assumption is made that a strong and growing level of immigration will shore up overall population growth. International immigration is expected to rise from about 230,000 in recent years to 300,000 by 2025. Thanks to strong net immigration, Canadian population growth will be sustained over the long term, with growth easing modestly from its current pace of 0.9 per cent to an average just above 0.7 per cent over 2021–25.

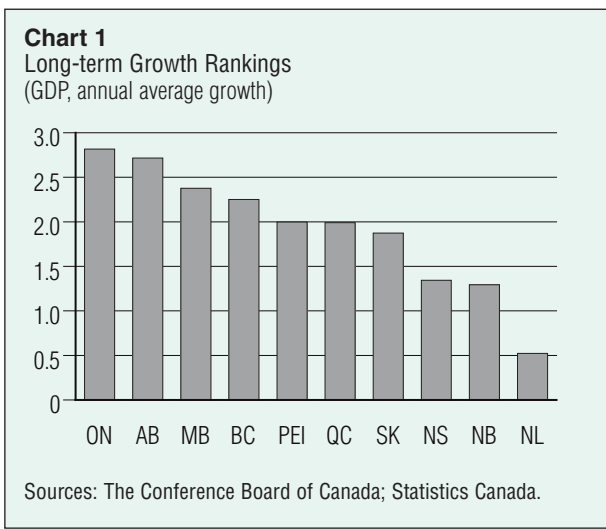
International immigration is expected to rise from about 230,000 in recent years to 300,000 by 2025.

Higher immigration will not suffice to offset the dominant aging of the baby boom, with the most important implication arising as a growing constraint on labour force growth. The pressure is not immediate, as a strong economic performance in recent years has enticed people to re-enter the job market. In particular, relief came as the result of an extraordinary jump in the participation of women in the 55–59 age cohort. This change was brought about by the aging of women who through their working lives have exhibited higher labour force participation than have earlier generations. These developments provide temporary relief to the effects of the aging population on the labour force, but the overall participation rate will start to ease in the next decade as baby boomers begin to leave the labour force. This will lead to a dramatic slowing in

overall labour force growth and will result in a shortage of workers, in particular skilled workers, to replace the increasing number of retirees.

Several changes will occur in the marketplace to address the rising pressures. The tightening labour market is assumed to produce high real wage growth, which in turn will lead firms to substitute capital for labour wherever feasible. Therefore, although growth in investment will slow as the technology sector matures, it will still remain robust over the next 20 years, and labour productivity will improve dramatically. Moreover, some workers eligible to retire will remain in the workforce to take advantage of higher real wages. The net result will be an unemployment rate that shrinks steadily, averaging just below 5.5 per cent over the last five years of the forecast, and labour productivity that reaches growth of close to 2 per cent annually beyond 2010.

The aging population will bring many more challenges and changes to the long-term outlook. One of the more significant challenges will be the additional burden on the health-care system and thus on public finances. Particular pressure will be added in the latter years of the forecast as costs rise significantly for the 75+ age group. In addition, the changing age structure will shrink the market for single-detached family dwellings through the entire forecast period. Conditions will change somewhat with a recovery in the number of people aged 0–14 beginning around 2012, as the grandchildren of the baby boom arrive in heavy numbers. Provincial governments will once again feel the pressure of a surge in elementary school enrolment in the later years of the long-term forecast.



Other important structural changes over the long term include an ever-shrinking role for producers of raw materials but a real increase in the prices of certain raw materials, including crude oil and forest products, as they become scarce. Financial markets will come under pressure as baby boomers move from the high-saving pre-retirement years to become low-saving senior citizens. Consumption of durable items such as autos and household furnishings will slow, while consumption of services will continue to expand, especially after 2020. For further details on the challenges that the Canadian economy will face over the next 20 years, see the full edition of *Canadian Outlook: Long-term Forecast*, 2006 Edition.

PROVINCIAL OVERVIEW

Ontario, Alberta, Manitoba and British Columbia will post the strongest economic growth over the long term, while real GDP in the remainder of the country will average just 1.8 per cent, compounded annually, from 2005 to 2025. (See Chart 1.) In the top two spots, Alberta and Ontario are expected to do particularly well. Economic growth in Alberta in 2006 is expected to comfortably surpass 4 per cent for the third consecutive year. The energy sector will remain one of the main driving forces in Alberta over the forecast as the province benefits from rising oil prices, several multi-billion-dollar investment projects, an immense non-conventional oil supply and better extraction technology. Alberta's oil sands are expected to generate close to \$100 billion in investment by 2025. Over the longer term, with a significant number of Canada's aging citizens expected to move to British Columbia and Prince Edward Island, population and service sector output will grow in these provinces. Thanks to oil projects and development at Voisey's Bay, Newfoundland and Labrador will post the strongest real GDP growth in 2006. Nonetheless, continued population decline and the depletion of oil reserves will severely slow growth in the province's overall economy in the last 15 years of the forecast, enough to leave the average growth rate much weaker than in any other province over the entire forecast. At first glance, the wedge of 2.3 percentage points separating the fastest and slowest growing provinces may not seem significant, but it becomes quite large when compounded over more than 20 years.

The key factors influencing the long-term performance of an economy are population growth, labour force productivity and investment patterns. Population growth

will vary considerably from province to province, though all provinces will be dealing with a declining natural rate of increase. Moreover, although significant advances in communication technology have lessened the importance of location for many industries, the movement of population within and between provinces is expected to continue to be from smaller to larger centres, and net international migration will favour the larger provinces. These trends will lead to declining population in three provinces—Newfoundland and Labrador, Nova Scotia, and New Brunswick—over the entire forecast period. The sluggish population prospects will lead to a faster aging of the population in these Atlantic provinces. This profound demographic change will result in fewer people of working age and therefore to weaker economic growth. But even if productivity gains mitigate the demographic effects on real GDP growth, real economic growth will average less than 1 per cent over 2011–25 in all Atlantic provinces except Prince Edward Island. However, with productivity gains, real GDP per capita will continue to make advances, albeit at a slower pace, over the next 20 years.

The movement of population within and between provinces is expected to continue to be from smaller to larger centres.

Estimates of potential output have been generated for all provinces by taking into account growth in potential employment, the capital stock and total factor productivity. Detailed demographic analysis, an essential determinant of potential output, has been conducted for each province, taking into account the unique population characteristics of each over the long term. One clear result emerges from these estimates of potential output: potential output growth will decelerate in every province over the next 20 years. This general finding is attributable mainly to an aging population, which will dampen growth in the labour force considerably in the last decade of the forecast.

AGRICULTURE

Canada's agriculture industry has been adapting to ongoing structural changes. Lower transportation subsidies have changed the cost structure for grain farmers in the Prairies since the mid 1990s, resulting in greater concentration of ownership, changes to the crop mix

and higher value-added products at home. As livestock producers take advantage of economies of scale, production in this industry too has become increasingly concentrated. At the same time, the international agriculture subsidy war is forcing lower subsidy jurisdictions to be more efficient. A gradual global movement away from protectionism in agriculture markets is expected to further enhance Canada's export potential. As a relatively low cost producer, Canada is generally on a sound footing heading into the future.

Agricultural output will be shaped over the long term by developments in global demand and supply. The key factor determining demand will be population growth. The United Nations expects world population to grow from 6.5 billion in 2005 to 7.9 billion by 2025; over that span, Canadian exports are expected to shift to non-traditional, high population-growth markets. Moreover, upward pressure on agricultural commodity prices is expected to come from constraints on food supply and, by extension, on the supply of global arable land. This in turn is expected to spur productivity-enhancing research and development, including a greater reliance on genetically modified food. In addition, a growing Mexican middle class, combined with greater Canadian access to the Mexican market under the North American Free Trade Agreement, will result in increased pork exports. China represents another potentially strong export market for Canadian producers, especially in light of China's recent acceptance into the World Trade Organization and its emerging status as an economic superpower. Consequently, growth in Canadian agricultural output is expected to exceed global population growth, with average annual compound growth of 2 per cent over 2005–25.

FISHING

Fisheries on the east and west coasts are expected to face supply constraints over the long term. Mollusks and crustaceans have dominated the east coast industry in recent years; but, while these species are more profitable than groundfish, on balance they generate fewer jobs. The east coast groundfish industry has shown few signs of improvement and appears to be far from a measurable recovery. Recent studies by the federal government indicate that cod stocks have not recovered since the moratorium on cod fishing was imposed in 1992 and that the fish are scrawnier than before, likely due to adaptations in breeding. The drop in sea temperature in

the Scotian Shelf has increased the population of pelagics such as herring, which eat cod eggs, making the recovery difficult. The recovery of groundfish species like haddock and cod is also related to environmental factors and difficult to predict. Though the cod moratorium has been lifted, it is unlikely that cod stocks will be returning to their levels of the late 1980s.

The slump in the groundfish industry forced fishermen to turn to crustaceans, such as crab, lobster and shrimp. The stocks of these species are also dwindling. Total allowable catch for crab was reduced in recent years by the Department of Fisheries. Lobster landings also declined, continuing to follow a downward trend over time. An expected drop in the sea temperature will limit growth in east coast fishery over the forecast period. Meanwhile, the traditional west coast fishery is battling lower stocks, although it is unclear whether this phenomenon is temporary or permanent. As well, the Canadian fishing industry is combating public stigma towards new technological developments in aquaculture (fish farms), especially with respect to farmed salmon.

The medium-term outlook for fishing shows modest opportunities, with average growth of less than 1 per cent per year.

Continued growth of the aquaculture industry (which is classified under agriculture) is expected to buttress long-term job creation, but Canadian producers will face stiff competition from warm-water aquaculture producers, particularly in South America. In the near term, the aquaculture industry must contend with studies that criticize the way it operates and which adversely compare the quality of its products to those of wild fish. A recent U.S. study concluded that farm-raised Atlantic salmon contain pollutants and toxins and that their consumption should be limited.

The medium-term outlook for fishing shows modest opportunities, with average growth of less than 1 per cent per year expected between 2005 and 2015. Over the remainder of the forecast, growth will be quite limited. Years of struggle have caused young Canadians to shy away from the profession, and newer technology requires fewer human resources. Although the restraint shown by the federal government in applying catch restrictions is expected to bear fruit over the long term,

there is too much uncertainty surrounding the industry to predict a dramatic recovery. All told, average annual compound growth of 0.1 per cent per year is expected over the last decade of the forecast.

FORESTRY

In the long term, both demand and supply-side constraints will make the forestry sector one of Canada's weakest industries. The sector will continue to make gains over the medium term, growing at an average annual compound rate of 1.2 per cent from 2005 to 2010. However, the sector is expected to contract at an average rate of 0.5 per cent over 2011 to 2025.

In the long term, both demand and supply-side constraints will make forestry one of Canada's weakest industries.

Sustainable development, once believed to be an issue for the next decade, has already begun to affect the sector. Effective in April 2005, Quebec announced sweeping changes in its forest management policies, which reduced the annual allowable cut (AAC) by up to 20 per cent in some regions.

On the west coast, the industry is buzzing about the mountain pine beetle infestation, trying to determine the long-term implications of this disaster. There is definitely some ambiguity around this issue, given that the duration and level of destruction are influenced by many different factors, including weather and soil conditions. However, some things are clear. The province has been responding to the infestation by increasing the AAC in regions where the destruction has been rampant. Because trees remain commercially viable for only a few years after they are killed by the beetle, the British Columbia Ministry of Forests has allowed higher cut levels to harvest these dead trees and to attempt to isolate infestation areas. With supply limited, near-term increases will need to be offset with decreases in the long term. Further, with approximately 30 per cent of British Columbia's timber supply coming from the lodgepole pine and the current infestation expected to kill about 80 per cent of this supply, the sector will face serious restructuring issues in the years to come.

Not particular to any region in the country are the demand issues that will affect the sector in the long term. The aging of the population will cause a deceleration in household formation rates, which, when coupled with decelerating population growth, will dampen the outlook for housing in Canada and the United States. Declining housing starts will in turn lead to weak lumber demand.

MINING

The mining sector will grow at an average annual compound rate of 2.2 per cent over 2005 to 2025. The mining sector is divided into four industry sub-groupings: metals, non-metallic minerals, mineral fuels, and services to the mining sector. Growth will vary somewhat for the four categories over the long term.

Over the first part of the forecast, the metal mining sector will continue to benefit from elevated metal prices, driven in part by seemingly insatiable demand from China. High prices are driving a flurry of exploration activity across the country and resulting in the reopening of operations once mothballed. Uranium has been faring particularly well, with the depletion of worldwide stocks leading to new projects and exploration ventures. Over 2005 to 2014, metal mining is expected to post average annual compound gains of 1.9 per cent. However, tighter global environmental restrictions on new mine development and the discovery of more cost-effective mines in other parts of the world will limit metal mining to just 1 per cent growth, compounded annually, over 2015 to 2025.

Thanks mainly to the continued development of diamond mines in the Northwest Territories and Nunavut, non-metal mining will grow by 2.9 per cent from 2005 to 2025. Canada is expected to become the third largest diamond producer in the world. Snap Lake is scheduled to begin production in 2007, and the Victor project in northern Ontario is slated to open in 2008. Further, De Beers Canada recently filed an application to construct and operate a mine at Gahcho Kue, which is assumed to begin production in 2010.

Long-term prospects for potash demand are also good, as the gradual erosion of soil nutrients will result in more intensive use of fertilizers. Potash Corporation

of Saskatchewan holds a large proportion of the world's potash supply, so increased demand for fertilizer in an industry already operating at close to capacity is a boon for that province's non-metal mining industry.

On the energy front, events during the past couple of years have shown how a tight supply–demand situation for key commodities can quickly send prices skyward and governments scrambling to secure reliable sources. Global spare capacity for crude oil continues to be worryingly tight, and this is reflected in energy prices. The billions of dollars of investment slated to increase capacity in Canada's oil sands will be but a drop in the bucket in light of the rate at which developing economies, such as China and India, are expected to consume oil. Even for industrialized economies like the United States, oil and natural gas demand are set to continue at an unwavering pace unless significant steps are put in place to curb demand. Just to satisfy expected global demand, billions of dollars will need to be poured into oil exploration and development by member states of the Organization of the Petroleum Exporting Countries (OPEC) and in the Caspian region.

The West Texas Intermediate (WTI) price of crude oil will lose some steam over the medium term.

The small cushion of spare production capacity, currently estimated at 1 to 2 million barrels per day, will remain over the medium term, as will the risk to oil exports from geopolitically sensitive regions such as the Middle East. The Conference Board expects world oil prices to reflect the tight global supply and demand situation and associated geopolitical risks in the near and medium term, but these should dissipate in the long term. Crude oil demand growth is forecast to be especially strong in developing countries, whose share of world oil consumption will increase from the current 38 per cent to 49 per cent by 2030. The West Texas Intermediate (WTI) price of crude oil will lose some steam over the medium term to reach US\$43 by 2010 and will then resume climbing as new sources become more difficult to discover and exploit. By 2025, the WTI will reach an equilibrium price of US\$62 per barrel.

Energy investment will forge ahead as many oil sands mining and development projects start producing oil over the medium and long term. As such, Alberta remains a hotbed of energy investment. The decline in the conventional oil supply will continue but will be offset by oil sands development in the west and some offshore production in Newfoundland. Bad luck encountered by some energy companies in offshore Nova Scotia over the past couple of years will dampen the investment outlook in that province. Quebec will lead the nation in hydroelectric development, with some major projects already under construction or about to begin, and some longer term projects planned after 2010.

Natural gas spot prices are affected more significantly than oil by supply and demand fundamentals in North America. The tight natural gas situation will not reverse itself in the short or medium term. On an energy-content basis, oil and natural gas prices are assumed to converge as a significant portion of industrial users in the United States can switch between the fuels. In Canada, conventional production is forecast to continue declining over the medium and long terms, especially in Alberta, with the maturing of the Western Canadian Sedimentary Basin. Gas extracted through unconventional methods is not expected to make up the loss from conventional production in the near or medium term.

While a record number of natural gas wells were once again drilled in Canada in 2005, production is forecast to remain stable in the very near term but to decline over the medium and long term, especially in Alberta. Most new wells are shallow and are being depleted faster than new reserves can be found, and Alberta's natural gas fields, the source of 75 per cent of Canada's natural gas supply, no longer have the huge reserves needed to meet growing North American demand.

Canadian energy investment will be dominated over the medium and long term by commitments to develop Alberta's vast oil sands. Technical improvements to the extraction process have made this development profitable at projected world oil prices. The outlook is somewhat at risk as both skilled labour and building materials are in high demand and low supply. Significant funds will

also be committed to exploration and development of offshore resources on Canada's east coast, especially offshore Newfoundland. An upside risk to the forecast is presented by the prospect—currently remote and speculative—of west coast exploration projects.

Pipeline projects will also form a significant part of the energy investment outlook as new production capacity coming out of the oil sands will need to be transported to new and existing markets. Billions will be spent on expansions to existing systems in Western Canada. This includes the \$7-billion pipeline in the Mackenzie Valley that will transport Mackenzie and Beaufort gas south to Alberta and the U.S. market.

MANUFACTURING

Canadian manufacturers are facing the perfect storm. Higher energy and raw material prices have raised costs while the stronger Canadian dollar has lowered the prices many manufacturers receive. Furthermore, intensified competition from low-wage countries such as China and India has put downward pressure on product prices globally. In an effort to increase cash flow and invest strategically in this new industrial era, manufacturers will focus on reducing operating costs over the forecast period.

Over the longer term, manufacturing will post the highest average growth rate among Canada's major industry groupings.

These recent developments have combined to restrain growth in manufacturing activity to a modest 2.3 per cent in 2005. Manufacturing output is expected to accelerate gradually over the medium term as manufacturers adapt and become more efficient. As such, manufacturing output is forecast to increase by an average compound growth rate of 3.9 per cent from 2005 to 2010. Over the longer term, the manufacturing sector will post the highest average growth rate among Canada's major industry groupings, growing by an annual average compound rate of 3.4 per cent from 2005 to 2025. The strongest performers will be manufacturers of transportation equipment (aerospace and motor vehicles), furniture, primary metals, electrical, machinery, petroleum and coal, and chemicals.

CONSTRUCTION

Canada's non-residential real estate market entered the recent slowdown in a relatively balanced state. Burned by past excesses, non-residential developers have taken a much more cautious approach than they took over most of the 1990s. The recent revival in economic activity has helped lower vacancy rates for commercial, industrial and office space, especially in key urban centers. Consequently, growth in non-residential investment outside the energy sector is recovering, with growth expected to average 3.7 per cent over 2006–10. A decline in the pace of overall GDP growth will also ease the pace at which capital outlays are made over the long term. Growth in non-energy, non-residential construction will average 2.4 per cent annually from 2011 to 2025.

Growing energy needs have prompted Canadian utilities to consider medium-term investment projects. There will be numerous power projects in Quebec over the forecast period. On top of the ongoing capital initiatives, Hydro-Québec may move ahead with the \$2-billion Eastmain 1-A and Prince Rupert River diversion capital development. Hydro-Québec will also purchase 3000 megawatts (MW) of wind power from companies throughout the province between 2005 and 2012. This \$3-billion investment in new wind-power capacity will be made by individual companies. On a more speculative note, a liquid natural gas terminal in the eastern part of the province may also be constructed before the end of the decade at a cost of over \$700 million. Over the longer term, additional hydroelectric projects may go ahead in Quebec. Between 2011 and 2015, a \$5-billion, 1500 MW hydroelectric development could get under way on the Romaine River in the Mingan region. Over the following five years, another \$5-billion, 1500 MW project is anticipated on the Petit Mécatina River in the Mingan region. Finally, a huge \$10-billion development on the à la Baleine River could become a reality sometime in the decade after 2020. As a result, the outlook includes additional spending of between \$10 billion and \$15 billion by Hydro-Québec on three new generation projects, in addition to a \$4-billion facility on the Churchill River in Labrador. Ontario will also heavily invest in the electricity sector over the next several years to refurbish idle nuclear reactors, develop new natural gas-fired generating plants and generate power from wind.

Pipeline projects will also form a major part of the energy investment outlook. Multiple billions will be spent on expansions to existing systems in Western and Atlantic Canada. The outlook also includes a multibillion-dollar pipeline in the Mackenzie Valley to ferry Mackenzie and Beaufort gas south to Alberta and the U.S. market. The utility projects, plus significant oil sands and offshore oil and gas investment over the forecast period, play a noticeable part in the long-term investment profile.

Housing starts have exceeded the 200,000 mark for years running, at levels significantly above demographic requirements.

When structural changes in the economy suppressed employment and income growth during the 1990s, housing markets experienced paltry growth. Building activity was well below household formation levels as would-be market entrants doubled-up, remained in family homes longer or sought cheaper rent in subdivided existing housing units. A combination of pent-up demand, strong employment growth and low borrowing costs has sparked a housing boom over recent years that far exceeded the most optimistic expectations. Housing starts have exceeded the 200,000 mark for years running, at levels significantly above demographic requirements. While the frenzied activity is continuing, there are growing signs that the market is getting saturated. Still-low financing rates are expected to allow new home construction to ease to levels more in line with demographic requirements. From a peak of close to 220,000 units expected in 2005, starts are forecast to slide to about 143,000 units in 2025. As a result of stronger immigration assumptions, new housing requirements are higher than in last year's long-term outlook.

SERVICE SECTOR

The shift in the age structure of the population is expected to boost domestic demand for services over the long term. With continued improvement in global communication technology, a significant portion of these services will be imported. Consequently, total imports of services are expected to outpace service exports, increasing the services trade deficit substantially.

However, domestic service industries will also benefit from increased demand in the long term. Manufacturing is expected to drive growth in the transportation, wholesale trade and business services industries. The trend toward outsourcing of key business processes will continue, ensuring steady growth in consulting services. The financial services industry is expected to post strong growth over the forecast, as more senior citizens will require wealth management services. At the same time, demand for housing will wane, so the real estate sector is expected to suffer lower demand for services. Overall, service sector output is forecast to increase by 2.3 per cent over 2005–25, compounded annually.

Output of government-provided services is not expected to rise strongly over the next five years as many provinces face significant budgetary deficits. The latest round of provincial government budgets set forth plans to adjust spending to the fiscal realities faced by the various jurisdictions in Canada. Governments at the provincial level have put the squeeze on spending projections in order to achieve surpluses over the next two to five years. There are exceptions: British Columbia and Alberta will use elevated resource royalty revenues to generate strong surpluses in the near term. Growth in public output is expected to rise by an annual average of 2.6 per cent from 2005 to 2010. After 2010, public sector output will continue to expand at a slow pace, averaging 2.1 per cent at compound annual rates from 2011 to 2025.

NEWFOUNDLAND AND LABRADOR

Newfoundland and Labrador is expected to lag behind all other provinces in real GDP growth over the long term, advancing at an average annual compound growth rate of 0.5 per cent from 2005 to 2025. A declining population is the key driver underlying this weak outlook. Steady net out-migration, combined with a low and declining natural rate of population increase, will perpetuate the population decline that began in 1994. Further, the national trend of an aging population will be amplified in Newfoundland and Labrador, constraining labour force growth and putting pressure on provincial government spending.

During the last 10 years, the province's economy has by turns been stimulated and shielded by several factors. These include major natural-resource-driven business investment and construction, production start-ups, public spending and tax cuts, high commodity prices and strong global demand. However, some of these factors will soon cease and others will ease, resulting in a possible slowdown in economic growth beyond 2006. Furthermore, high energy prices and a strong Canadian dollar will continue to challenge the province's struggling manufacturing sector. At the same time, the provincial government will face significant pressure to refrain from running fiscal deficits, with much greater effort needed to reduce its massive debt-to-GDP ratio—the largest in the country.

PRINCE EDWARD ISLAND

Prince Edward Island will experience respectable long-term growth, thanks to a positive demographic outlook. The Island will lead the Atlantic Provinces in GDP growth, averaging 2 per cent compounded annually over 2005 to 2025. Solid gains in the food processing and aerospace industries will help propel manufacturing, which is expected to outperform the other goods-producing sectors.

Prince Edward Island will lead the Atlantic Provinces in GDP growth, averaging 2 per cent compounded annually.

Population growth will benefit from positive net interprovincial migration, reinforcing the province's image as a retirement haven for Atlantic Canadians. Prince Edward Island will post the highest average population growth rate in the Atlantic region, a demographic trend that will help sustain consumption growth in the long term. Growth in the consumption of services will be particularly strong, as an aging population tends to purchase relatively more services, such as health care and travel.

Overall, compounded real economic growth will advance by an average of 2.4 per cent per year in the medium term (2005 to 2010) but weakening demographic fundamentals will help limit growth to 1.8 per cent over the long term (2011 to 2025).

NOVA SCOTIA

The Nova Scotia economy is anticipated to advance by an average of 1.3 per cent annually from 2005 to 2025, ranking it eighth among the ten provinces. Manufacturing activities are expected to expand by an average of 2.4 per cent over 2005–25, but growth in most of the domestic industries is expected to soften during the forecast. In particular, the production of mineral fuels will drop by an average of 5.6 per cent annually over the forecast period as exploration activities lose momentum, with miners shifting their attention from the Scotian shelf to the west coast and the territories. The reduction of exploration activities will slow growth in mining services to an average of 0.4 per cent over the forecast, compared with 17.6 per cent between 1995 and 2004. ExxonMobil, one of the biggest petroleum players in Nova Scotia, abandoned half of its exploration licenses in 2004 as more holes turned up dry. This has created anxiety among other offshore explorers and led to a loss of over \$422 million in exploration commitments. The uninspiring finding rate could lead to further evaporation of the \$1.15 billion in exploratory licenses the province is counting on between now and 2012. This could kill prospects on the Scotian Shelf just when energy prices are at their best.

Nova Scotia will face a number of fundamental demographic challenges over the forecast period. First, the average age of the population will gradually increase as the baby boomers inch closer to retirement. The aging of the baby boomers will put enormous strain on the province's fiscal prospects. While more spending on facilities and services will be required for health and long-term care for the baby boomers, the aging of the population will slow economic growth and thus the government's revenue-generating capacity. A compositional shift in consumer spending will also result as people buy fewer durable goods and consume more services, especially in the last five years of the forecast. Second, low fertility rates and negative interprovincial migration will slow population growth in the province.

Weak demographic fundamentals are expected to dominate the population outlook, exerting a profound impact on the province's labour market and the economy. Overall, economic growth is projected to reach an average of 2 per cent over 2005–10 and to decelerate to 1.4 per cent over the next five years. The consequences

of the demographic change will add to the slowing of the economy in the last decade of the forecast. Growth in real GDP is expected to average 0.9 per cent between 2016 and 2020 and 0.8 per cent during the last five years of the forecast.

NEW BRUNSWICK

Real GDP is projected to grow at a relatively slow average rate of 1.3 per cent from 2005 to 2025 in New Brunswick, for ninth rank among the ten provinces. Weaknesses in construction and metal mining will limit overall economic growth as the province grapples with the completion of megaprojects and the closing of the Brunswick mine in 2008. Forestry will also add to the slow pace of economic growth as inadequate silviculture spending stalls increases in total annual allowable cut, and structural changes in market conditions stifle demand for pulp and paper.

The New Brunswick government is going ahead with the multi-million dollar refurbishment of the Point Lepreau nuclear plant.

In the medium term, however, the construction industry will be propped up by capital spending on health-care facilities, municipal infrastructure and border crossings. Work is under way between Grand Falls and Woodstock to complete the twinning of the Trans-Canada Highway (TCH) in the province. Brun-Way Group, the consortium working on this section of the highway, will also operate, maintain and rehabilitate the TCH between the Quebec border and Longs Creek, and between Woodstock and the U.S. border. Work on these projects, worth \$400 million, intensified in early 2005. Site preparation has also begun on Irving Oil's much-anticipated \$750-million liquefied natural gas project at the Canaport terminal near St. John, a project expected to engage more than 500 construction workers for nearly three years. The provincial government is also going ahead with the multi-million dollar refurbishment of the Point Lepreau nuclear plant. Site preparation and engineering work began in mid 2005 and full-scale construction of storage facilities for the nuclear waste should begin early in 2006. In the long term, sturdy growth in manufacturing should offset weak construction and mining activities, allowing the overall economy to expand during the entire forecast period.

Weak demographic dynamics will dominate the outlook over the long term. One notable factor will be a rise in the average age of the population. As the proportion of those older than 65 increases, consumption patterns will change for both government and consumers. Spending on health care will have to rise significantly to meet the changing needs of the aging population. In addition, rising net international immigration will be largely offset by a net outflow of people to other parts of Canada. Finally, New Brunswick's fertility rate, one of the lowest in the country, will be a drag on population growth. Total population is projected to shrink every year over the forecast.

The weakening population outlook will have significant consequences for the province's labour market and overall economic growth. The Conference Board expects growth in real GDP to decelerate from an annual average of 2 per cent in the first six years of the forecast to 1.1 per cent over 2011–20 and still further to 0.8 per cent from 2021 to 2025.

QUEBEC

With favourable financing conditions whipping up consumer appetites for new homes and big-ticket items over the last two years, the Quebec economy has been relatively successful in overcoming the dampening effects of an appreciating Canadian dollar. Even as the export-sensitive manufacturing sector shed jobs, reorganized production plans and made very little gains, overall provincial real GDP growth at market prices averaged close to 2.5 per cent over 2004–05. Quebec's real GDP at market prices is expected to progress by an average of 2.7 per cent from 2006 to 2010 and by a moderate 1.8 per cent compound annual rate over the last 15 years of the outlook, in line with potential growth, as demographic changes weigh on economic prospects.

Economic growth will slow over the long term as aging baby boomers and a low fertility rate weaken population growth to a compound annual rate of only 0.3 per cent between 2011 and 2025, reducing consumer expenditures and housing demand. The proportion of people aged 65 and older will increase substantially over the entire forecast period, by nearly 10 percentage points to 22.2 per cent, while the number of young people under the age of 20 will shrink from 1,718,966

in 2005 to 1,582,696 in 2025. Housing starts will fall steadily from 50,767 units in 2005 to about 12,345 units in 2025 as demographic factors weaken the number of new households and the need for new housing. Real export growth, the pillar of robust economic activity in the late 1990s, will gradually decelerate over the long term because of slowing U.S. growth and a Canadian currency averaging around US\$0.82. The telecommunications, transportation equipment, biotechnology, and metal and alloy sectors are expected to be some of the positive contributors to the trade outlook over the next 20 years.

ONTARIO

Ontario's economic performance softened in 2005. Weaker residential investment dampened overall investment growth despite a slight rebound in non-residential investment and ongoing strength in machinery and equipment. While the domestic economy performed well again in 2005, bolstered by strong consumer spending and government spending, the trade sector continued to be a cause of drag on the overall performance of the economy. Softening net exports subtracted 0.8 percentage points from the bottom line, resulting in growth of real GDP at market prices of 2.4 per cent.

Although the strong Canadian dollar and high energy prices will continue to challenge the heart of Ontario's manufacturing sector, the provincial economy is expected to put together a better performance this year, with real GDP climbing by 2.9 per cent. Led by ongoing strength in consumer spending and business investment, the domestic economy is expected to post solid growth once again in 2006. The export sector will continue to adjust to the high Canadian dollar, but strong global demand led by the U.S. economy will strengthen export performance in 2006.

The Ontario economy is forecast to grow strongly over the medium term thanks to sustained U.S. economic growth and solid domestic demand. The major downside risks to the medium-term outlook are the volatility of the high-flying Canadian dollar, energy prices, and Ontario's public finances. The Ontario economy will be among the strongest in Canada over the long term, expanding by a compound annual rate of 2.8 per cent over 2005–25.

The Ontario government's plan to eliminate the structural deficit as outlined in the 2005 budget appears difficult to achieve. The government's plan depends on the freezing of non-health, non-education spending and a significant reduction in health-care spending growth. Historical spending patterns, record financial investments by the federal government, and pressures to reduce wait times make it highly unlikely that the government will be able to meet its financial targets. As such, real government spending on goods and services is expected to grow by a compound annual rate of 2.8 per cent over 2005 to 2010.

The Ontario economy will be among the strongest in Canada over the long term.

Potential output growth is estimated to grow by 2.8 per cent per year on average from 2005 to 2014 and 2.6 per cent over 2015 to 2025. Two key factors will reduce the economy's capacity to expand. First, the proportion of retirees in the population will rise considerably, constraining long-term potential labour force growth. Second, the growth of total factor productivity (TFP) is expected to slow as the forecast wears on, as it is assumed that the current pace of technological change will ease toward the end of the current decade.

MANITOBA

Manitoba is expected to enjoy a relatively healthy economy over the next 20 years, in good part due to a diversifying and expanding manufacturing sector, solid employment growth, and strong government spending. The economy is expected to grow by an average annual compound growth rate of 2.4 per cent over 2005–25.

Manitoba's long-term economic health will slow interprovincial out-migration and strengthen immigration. Both of these factors will help offset a declining natural rate of increase. As a result, the population growth rate will hold steady over the forecast period. However, the low fertility rate of baby boomers will result in an aging population plus a sharp deceleration in labour force growth. The aging of the population will further strain an already overburdened health-care sector, forcing the government to devote a greater share of its spending to this area.

Manufacturing will remain the strongest component of output over 2005–25, with growth of 3.7 per cent, compounded annually. Despite short-term challenges in the cattle industry, Manitoba’s agriculture outlook remains healthy over the period, with an annual compound growth rate of 2 per cent.

SASKATCHEWAN

Saskatchewan’s economic growth is expected to be strong for the remainder of this decade, but it will cool off in the long term as demographic changes take hold. The province’s real GDP is forecast to grow at 2 per cent annually between 2005 and 2015, and by 1.5 per cent per year between 2016 and 2025. Taken together, this yields an average of 1.9 per cent growth per year over the entire forecast period of 2005–25, ranking Saskatchewan seventh among Canada’s provinces and well below the national average of 2.4 per cent.

Saskatchewan will face a number of fundamental changes over the next 20 years. First, the average age of the population will gradually increase. This will put an enormous strain on the province’s health-care sector and force the government to increase spending to rebuild and maintain its health-care resources. Second, the aging of the population will result in a structural change in consumption, as an older population is expected to spend less on durable goods and more on services, especially in the last five years of the outlook. Third, a relatively high fertility rate will be more than offset by steady inter-provincial out-migration, resulting in slower total population growth.

Mining promises to post solid growth for the remainder of this decade.

Manufacturing will remain the strongest component of output over 2005–25, with growth of 3.4 per cent, compounded annually. Saskatchewan’s agricultural outlook remains relatively healthy, with an annual compound growth rate of 1.6 per cent expected over the entire forecast period. Finally, mining promises to post solid growth for the remainder of this decade, led by uranium and potash extraction, with average annual growth of 2.1 per cent between 2005 and 2015 and a slowdown to 1.6 per cent over 2016–25.

ALBERTA

The Alberta economy will advance solidly over 2005 to 2025, expanding by a compound average annual rate of 2.7 per cent, with the energy sector remaining a driving force. Sustained high oil prices, an immense non-conventional oil supply and continually improving extraction technology have shifted the focus of the energy market to oil sands production. Long-term prospects for the non-conventional oil industry in Alberta are very favourable. About \$53 billion in activities related to the oil sands have already been proposed by several major energy players for 2005–15, while an additional \$7 billion in oil-sands-related development is slated for the remainder of the outlook. About \$24 billion has been spent in the sector since 1995.

Long-term prospects for the non-conventional oil industry in Alberta are very favourable.

Natural gas spot prices are affected by supply and demand fundamentals in North America. Weather-related events in the United States were priced in early in 2005 and were further exacerbated by the severe supply shock following hurricanes Katrina and Rita. The tight natural gas situation will not reverse itself in the short or medium term. Although the number of wells being drilled for natural gas is being kept elevated by drilling for coal bed methane, production of natural gas is expected to decline over the forecast, especially in Alberta, with the maturing of the Western Canadian Sedimentary Basin. Most wells being drilled are shallow and are depleted faster than new reserves can be found. Gas extracted through unconventional methods is not expected to make up the loss from conventional production in the near or medium term.

While the long-term forecast for the province is favourable, an aging population will take its toll on output. Total population growth is projected to weaken over the forecast, dampening demand for consumer goods and housing. However, record resource revenues and the positive job market will continue to attract businesses and job seekers, boosting Alberta’s population growth outlook relative to that of other provinces. Overall, economic growth is expected to reach an average annual compound rate of 3.4 per cent during the first decade of

this century (2000–09), before weaker demographic conditions slow the economy to average annual growth of 2.5 per cent over 2010 to 2025, in line with underlying potential output growth.

BRITISH COLUMBIA

Real GDP in British Columbia is forecast to grow at a compound annual rate of 2.3 per cent over 2005–25. After rebounding strongly in both 2004 and 2005, the economy is expected to maintain a healthy pace over the medium term. The export sector will be stimulated by stronger global demand, especially from the United States and Asia, and the domestic sector will continue to build momentum with increased interprovincial migration. Large-scale infrastructure investment and a host of projects in preparation for the 2010 Olympics will keep activity healthy in the province's construction sector over the medium term. Government coffers are benefiting from the strong economic performance, and the government expects a budget surplus of around \$1.6 billion in the 2005–06 fiscal year. The provincial government is forecasting further budget surpluses over the medium term and should therefore become a positive force in the economy after a few years of tepid growth.

Demographic changes will moderate economic growth in British Columbia over the long term. Population growth will slow over the forecast period, even with a return to

positive net interprovincial migration, as the aging of the baby boomers dramatically changes the province's age profile. This shift will also slow growth in domestic demand, with consumer spending patterns and housing activity undergoing the most pronounced changes. While sluggish, population growth will nevertheless be higher than in most other provinces, with a compound annual rate of 0.9 per cent from 2005 to 2025.

While sluggish, population growth will nevertheless be higher than in most other provinces.

Over the near term, the outlook is quite positive for forestry, the province's key resource sector, as the sector is benefiting from expedited lumber harvests to combat the mountain pine beetle infestation and reductions in Quebec's annual allowable cut. However, the long-term outlook is not quite as upbeat, as the forecast incorporates the fallout expected once the pine beetle epidemic peaks, which will lead to a decline in real forestry output. Further, the reduction in housing demand likely to result from an aging North American population will lead to a corresponding drop in demand for wood products. Although worldwide demand for wood is expected to pick up gradually over the forecast period, the challenge for British Columbia will be to respond to the increased demand while facing a shrinking timber supply.

Table 1—Key Economic Indicators: Canada

(Forecast Completed: Dec. 13, 2005)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
GDP at market prices (current \$)	1,076,577 9.6	1,108,048 2.9	1,154,204 4.2	1,216,191 5.4	1,290,185 6.1	1,424,447 4.8	1,487,284 4.4	1,554,432 4.5	1,626,447 4.6	1,703,932 4.8	1,779,508 4.4	1,854,001 4.2	
GDP at basic prices (current \$)	999,930 9.9	1,032,177 3.2	1,069,700 3.6	1,131,143 5.7	1,199,982 6.1	1,263,489 5.3	1,323,289 4.7	1,381,223 4.4	1,443,490 4.5	1,510,534 4.6	1,582,966 4.8	1,652,753 4.4	1,721,146 4.1
GDP at basic prices (constant 1997 \$)	943,737 5.3	959,620 1.7	991,870 3.4	1,013,899 2.2	1,045,297 3.1	1,074,318 2.8	1,107,566 3.1	1,141,553 3.1	1,175,255 3.0	1,209,823 2.9	1,246,278 3.0	1,279,827 2.7	1,312,469 2.6
Consumer price index (1992=1.0)	1.135 2.7	1.164 2.5	1.190 2.2	1.223 2.8	1.246 1.8	1.274 2.3	1.299 2.0	1.324 1.9	1.351 2.0	1.378 2.1	1.407 2.1	1.436 2.1	1.466 2.1
Implicit price deflator— GDP at basic prices (1997=1.0)	1.059 4.4	1.076 1.5	1.078 0.3	1.116 3.5	1.148 2.9	1.176 2.5	1.195 1.6	1.210 1.3	1.228 1.5	1.249 1.7	1.270 1.7	1.291 1.7	1.311 1.5
Average weekly wages (level \$)	657 2.4	667 1.5	676 1.4	683 1.1	695 1.8	716 2.9	735 2.8	756 2.8	777 2.7	798 2.7	820 2.7	844 2.9	870 3.1
Personal income (current \$)	840,382 7.3	876,471 4.3	899,282 2.6	930,093 3.4	970,198 4.3	1,016,742 4.8	1,068,745 5.1	1,117,971 4.6	1,167,486 4.4	1,217,924 4.3	1,268,786 4.2	1,319,323 4.0	1,373,892 4.1
Personal disposable income (current \$)	639,567 7.3	669,196 4.6	693,667 3.7	719,553 3.7	747,496 3.9	776,357 3.9	815,733 5.1	853,200 4.6	890,314 4.3	928,151 4.2	966,508 4.1	1,005,307 4.0	1,045,549 4.0
Personal savings rate	4.7 16.3	5.2 10.2	3.5 -32.8	2.4 -31.5	1.4 -39.6	-0.3 -118.6	0.5 283.2	1.0 111.1	1.1 11.1	1.1 -4.1	0.9 -20.1	0.8 -13.8	0.7 -4.4
Population (000s)	30,651 0.9	30,974 1.1	31,321 1.1	31,618 0.9	31,908 0.9	32,174 0.8	32,431 0.8	32,689 0.8	32,947 0.8	33,203 0.8	33,459 0.8	33,724 0.8	33,997 0.8
Labour force (000s)	15,844 1.7	16,112 1.7	16,579 2.9	16,954 2.3	17,183 1.4	17,358 1.0	17,649 1.7	17,945 1.7	18,189 1.4	18,391 1.1	18,571 1.0	18,734 0.9	18,873 0.7
Employment (000s)	14,760 2.6	14,946 1.3	15,308 2.4	15,664 2.3	15,952 1.8	16,176 1.4	16,487 1.9	16,775 1.7	17,022 1.5	17,266 1.4	17,494 1.3	17,646 0.9	17,780 0.8
Unemployment rate (percentage)	6.8	7.2	7.7	7.6	7.2	6.8	6.6	6.5	6.4	6.1	5.8	5.8	5.8
Retail sales (current \$)	287,838 6.0	300,448 4.4	319,525 6.3	331,147 3.6	346,721 4.7	372,058 7.3	389,592 4.7	405,531 4.1	422,736 4.2	440,707 4.3	460,170 4.4	481,237 4.6	502,941 4.5
Housing starts (units)	151,653 1.1	162,733 7.3	205,034 26.0	218,426 6.5	233,431 6.9	216,969 -7.1	194,337 -10.4	187,747 -3.4	183,620 -2.2	181,461 -1.2	179,915 -0.9	178,105 -1.0	176,147 -1.1

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Table 1—Key Economic Indicators: Canada

(Forecast Completed: Dec. 13, 2005)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
GDP at market prices (current \$)	1,930,751 4.1	2,009,213 4.1	2,088,104 3.9	2,170,393 3.9	2,253,825 3.8	2,341,094 3.9	2,431,513 3.9	2,524,707 3.8	2,621,980 3.9	2,723,866 3.9	2,828,272 3.8	2,936,673 3.8	3,047,518 3.8
GDP at basic prices (current \$)	1,791,690 4.1	1,863,682 4.0	1,935,822 3.9	2,011,436 3.9	2,088,155 3.8	2,168,070 3.8	2,250,618 3.8	2,335,884 3.8	2,425,245 3.8	2,518,929 3.9	2,614,641 3.8	2,713,807 3.8	2,815,112 3.7
GDP at basic prices (constant 1997 \$)	1,345,493 2.5	1,377,928 2.4	1,409,301 2.3	1,441,105 2.3	1,472,245 2.2	1,503,110 2.1	1,534,940 2.1	1,567,183 2.1	1,599,848 2.1	1,633,808 2.1	1,667,710 2.1	1,702,697 2.1	1,737,343 2.0
Consumer price index (1992=1.0)	1.496 2.1	1.527 2.1	1.559 2.1	1.591 2.1	1.624 2.1	1.659 2.1	1.695 2.2	1.733 2.2	1.773 2.3	1.814 2.3	1.856 2.3	1.899 2.3	1.944 2.3
Implicit price deflator— GDP at basic prices (1997=1.0)	1.332 1.5	1.352 1.6	1.374 1.6	1.396 1.6	1.418 1.6	1.442 1.7	1.466 1.7	1.490 1.7	1.516 1.7	1.542 1.7	1.568 1.7	1.594 1.7	1.620 1.7
Average weekly wages (level \$)	898 3.3	928 3.3	959 3.4	992 3.4	1026 3.5	1062 3.5	1100 3.5	1139 3.5	1179 3.5	1220 3.5	1263 3.5	1307 3.5	1353 3.5
Personal income (current \$)	1,431,230 4.2	1,490,043 4.1	1,551,305 4.1	1,614,390 4.1	1,679,186 4.0	1,746,875 4.0	1,817,774 4.1	1,892,017 4.1	1,969,098 4.1	2,049,418 4.1	2,132,874 4.1	2,219,109 4.0	2,308,909 4.0
Personal disposable income (current \$)	1,087,449 4.0	1,130,667 4.0	1,175,179 3.9	1,220,987 3.9	1,267,858 3.8	1,316,627 3.8	1,367,565 3.9	1,420,790 3.9	1,475,899 3.9	1,533,159 3.9	1,592,592 3.9	1,653,846 3.8	1,717,513 3.8
Personal savings rate	0.7 -3.4	0.7 4.1	0.8 6.6	0.8 7.5	0.8 -0.9	0.8 -3.9	0.8 0.6	0.8 1.7	0.8 -0.7	0.8 -1.4	0.8 -3.0	0.7 -6.5	0.7 -5.0
Population (000s)	34,270 0.8	34,543 0.8	34,817 0.8	35,090 0.8	35,363 0.8	35,636 0.8	35,907 0.8	36,177 0.8	36,445 0.7	36,711 0.7	36,973 0.7	37,232 0.7	37,488 0.7
Labour force (000s)	18,995 0.6	19,108 0.6	19,214 0.6	19,305 0.5	19,382 0.4	19,448 0.3	19,505 0.3	19,558 0.3	19,611 0.3	19,662 0.3	19,711 0.3	19,757 0.2	19,800 0.2
Employment (000s)	17,912 0.7	18,020 0.6	18,130 0.6	18,218 0.5	18,287 0.4	18,344 0.3	18,403 0.3	18,460 0.3	18,519 0.3	18,578 0.3	18,632 0.3	18,683 0.3	18,736 0.3
Unemployment rate (percentage)	5.7	5.7	5.6	5.6	5.6	5.7	5.6	5.6	5.6	5.5	5.5	5.4	5.4
Retail sales (current \$)	525,410 4.5	548,727 4.4	572,758 4.4	597,469 4.3	623,136 4.3	649,796 4.3	677,754 4.3	706,689 4.3	735,960 4.1	766,170 4.1	797,611 4.1	829,887 4.0	863,529 4.1
Housing starts (units)	174,133 -1.1	172,105 -1.2	170,033 -1.2	167,850 -1.3	165,522 -1.4	163,044 -1.5	160,418 -1.6	157,651 -1.7	154,751 -1.8	151,754 -1.9	148,712 -2.0	145,668 -2.0	142,634 -2.1

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Table 2—Key Economic Indicators: Newfoundland and Labrador

(Forecast Completed: Dec. 13, 2005)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
GDP at market prices (current \$)	13,914 14.2	14,246 2.4	16,559 16.2	18,199 9.9	19,432 6.8	20,420 5.1	22,542 10.4	22,909 1.6	23,099 0.8	23,647 2.4	24,366 3.0	25,255 3.6	25,472 0.9
GDP at basic prices (current \$)	12,566 15.4	12,876 2.5	15,065 17.0	16,634 10.4	17,810 7.1	18,698 5.0	20,723 10.8	21,001 1.3	21,104 0.5	21,563 2.2	22,190 2.9	22,975 3.5	23,083 0.5
GDP at basic prices (constant 1997 \$)	11,166 5.9	11,342 1.6	13,380 18.0	14,218 6.3	14,118 -0.7	14,409 2.1	15,157 5.2	15,199 0.3	15,070 -0.9	15,044 -0.2	15,137 0.6	15,247 0.7	15,214 -0.2
Consumer price index (1992=1.0)	1.133 3.0	1.145 1.1	1.173 2.4	1.207 2.9	1.229 1.8	1.261 2.6	1.282 1.7	1.303 1.7	1.327 1.8	1.352 1.9	1.377 1.9	1.402 1.8	1.427 1.8
Implicit price deflator— GDP at basic prices (1997=1.0)	1.125 8.9	1.136 0.9	1.124 -1.0	1.171 4.1	1.262 7.8	1.298 2.8	1.367 5.4	1.382 1.1	1.400 1.3	1.433 2.3	1.466 2.3	1.507 2.8	1.517 0.7
Average weekly wages (level \$)	566 2.2	574 1.4	588 2.5	604 2.7	622 3.1	637 2.4	654 2.6	674 3.0	693 2.9	709 2.2	722 1.9	736 1.9	752 2.2
Personal income (current \$)	11,126 4.4	11,585 4.1	11,882 2.6	12,409 4.4	12,852 3.6	13,370 4.0	13,927 4.2	14,402 3.4	14,895 3.4	15,453 3.7	15,956 3.3	16,379 2.7	16,743 2.2
Personal disposable income (current \$)	8,741 4.3	9,143 4.6	9,355 2.3	9,806 4.8	10,147 3.5	10,479 3.3	10,909 4.1	11,281 3.4	11,661 3.4	12,089 3.7	12,480 3.2	12,817 2.7	13,098 2.2
Personal savings rate	0.6 -70.4	1.5 176.3	-0.2 -114.4	0.3 251.1	0.3 -9.6	0.6 108.9	2.0 217.0	2.5 24.4	2.6 2.8	2.5 -2.8	2.2 -10.0	2.1 -8.3	1.9 -5.9
Population (000s)	529 -1.0	523 -1.1	520 -0.6	519 -0.2	518 -0.2	516 -0.4	513 -0.5	511 -0.4	509 -0.4	507 -0.4	505 -0.4	502 -0.4	500 -0.4
Labour force (000s)	238 -1.4	243 2.2	249 2.3	254 2.0	255 0.4	253 -0.7	255 0.6	255 0.2	255 -0.2	254 -0.1	254 -0.1	252 -0.6	250 -0.8
Employment (000s)	198 -1.2	204 3.1	208 1.7	212 2.2	215 1.4	215 -0.2	216 0.8	217 0.4	218 0.4	221 1.3	222 0.6	222 0.0	219 -1.4
Unemployment rate (percentage)	16.7	16.0	16.5	16.4	15.6	15.2	15.0	14.8	14.3	13.1	12.5	11.9	12.5
Retail sales (current \$)	4,760 7.4	5,201 9.3	5,407 4.0	5,736 6.1	5,755 0.3	5,918 2.8	6,065 2.5	6,237 2.8	6,441 3.3	6,684 3.8	6,921 3.5	7,142 3.2	7,324 2.5
Housing starts (units)	1,459 6.4	1,788 22.5	2,419 35.3	2,692 11.3	2,870 6.6	2,396 -16.5	1,802 -24.8	1,471 -18.3	1,374 -6.6	1,334 -3.0	1,283 -3.8	1,177 -8.3	1,108 -5.9

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Table 2—Key Economic Indicators: Newfoundland and Labrador

(Forecast Completed: Dec. 13, 2005)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
GDP at market prices (current \$)	25,474	25,958	26,838	27,519	28,183	28,898	29,559	30,169	30,579	30,933	31,228	31,672	32,083
	0.0	1.9	3.4	2.5	2.4	2.5	2.3	2.1	1.4	1.2	1.0	1.4	1.3
GDP at basic prices (current \$)	22,973	23,340	24,099	24,661	25,204	25,786	26,306	26,773	27,041	27,248	27,386	27,664	27,903
	-0.5	1.6	3.3	2.3	2.2	2.3	2.0	1.8	1.0	0.8	0.5	1.0	0.9
GDP at basic prices (constant 1997 \$)	14,889	15,008	15,289	15,467	15,577	15,619	15,762	15,847	15,849	15,818	15,767	15,757	15,752
	-2.1	0.8	1.9	1.2	0.7	0.3	0.9	0.5	0.0	-0.2	-0.3	-0.1	0.0
Consumer price index (1992=1.0)	1,450	1,474	1,499	1,526	1,553	1,581	1,610	1,639	1,670	1,702	1,732	1,765	1,798
	1.6	1.6	1.7	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.9	1.9
Implicit price deflator—GDP at basic prices (1997=1.0)	1,543	1,555	1,576	1,594	1,618	1,651	1,669	1,689	1,706	1,723	1,737	1,756	1,771
	1.7	0.8	1.4	1.2	1.5	2.0	1.1	1.2	1.0	1.0	0.8	1.1	0.9
Average Weekly Wages (level \$)	769	788	808	828	848	868	891	915	939	964	990	1016	1043
	2.3	2.4	2.5	2.5	2.4	2.4	2.6	2.7	2.7	2.7	2.7	2.6	2.6
Personal income (current \$)	17,041	17,453	18,022	18,554	19,054	19,518	20,078	20,650	21,212	21,786	22,372	22,966	23,577
	1.8	2.4	3.3	3.0	2.7	2.4	2.9	2.8	2.7	2.7	2.7	2.7	2.7
Personal disposable income (current \$)	13,330	13,646	14,068	14,465	14,838	15,186	15,600	16,024	16,441	16,865	17,298	17,736	18,186
	1.8	2.4	3.1	2.8	2.6	2.3	2.7	2.7	2.6	2.6	2.6	2.5	2.5
Personal savings rate	1.8	1.8	1.8	1.8	1.7	1.6	1.5	1.5	1.4	1.3	1.2	1.1	0.9
	-6.5	-2.7	-0.2	-0.2	-4.1	-6.1	-3.8	-3.6	-5.3	-6.4	-7.9	-11.1	-11.2
Population (000s)	498	496	494	491	489	487	484	481	478	475	472	469	465
	-0.5	-0.4	-0.4	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7
Labour force (000s)	248	246	245	243	240	238	236	234	231	229	227	224	221
	-0.8	-0.8	-0.7	-0.8	-0.8	-0.9	-0.9	-1.0	-1.0	-1.0	-1.0	-1.1	-1.2
Employment (000s)	213	211	212	212	210	207	206	204	202	200	197	195	193
	-2.6	-1.1	0.4	-0.1	-0.8	-1.4	-0.6	-0.8	-1.0	-1.1	-1.2	-1.2	-1.1
Unemployment rate (percentage)	14.1	14.4	13.4	12.8	12.7	13.1	12.8	12.7	12.7	12.8	12.9	12.9	12.9
Retail sales (current \$)	7,471	7,675	7,948	8,207	8,455	8,688	8,967	9,250	9,523	9,799	10,084	10,371	10,668
	2.0	2.7	3.6	3.2	3.0	2.7	3.2	3.2	2.9	2.9	2.9	2.8	2.9
Housing starts (units)	1,036	950	866	771	690	600	517	435	378	330	288	248	210
	-6.4	-8.4	-8.8	-11.0	-10.5	-13.0	-13.8	-16.0	-13.1	-12.6	-12.8	-13.9	-15.1

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Table 3—Key Economic Indicators: Prince Edward Island

(Forecast Completed: Dec. 13, 2005)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
GDP at market prices (current \$)	3,364 6.5	3,434 2.1	3,736 8.8	3,849 3.0	3,998 3.9	4,157 4.0	4,306 3.6	4,478 4.0	4,668 4.2	4,853 4.0	5,046 4.0	5,235 3.7	5,431 3.7
GDP at basic prices (current \$)	3,033 6.4	3,140 3.5	3,378 7.6	3,476 2.9	3,610 3.9	3,746 3.7	3,871 3.4	4,022 3.9	4,191 4.2	4,355 3.9	4,526 3.9	4,690 3.6	4,860 3.6
GDP at basic prices (constant 1997 \$)	2,809 2.0	2,800 -0.3	2,972 6.2	3,027 1.8	3,082 1.8	3,143 2.0	3,199 1.8	3,273 2.3	3,364 2.8	3,452 2.6	3,551 2.8	3,639 2.5	3,720 2.2
Consumer price index (1992=1.0)	1.117 4.1	1.146 2.6	1.177 2.7	1.219 3.5	1.245 2.2	1.279 2.7	1.300 1.7	1.319 1.5	1.341 1.7	1.366 1.8	1.392 1.9	1.417 1.8	1.444 1.9
Implicit price deflator— GDP at basic prices (1997=1.0)	1.080 4.4	1.121 3.8	1.136 1.3	1.148 1.0	1.172 2.0	1.192 1.7	1.210 1.5	1.229 1.5	1.246 1.4	1.261 1.2	1.275 1.1	1.289 1.1	1.306 1.4
Average weekly wages (level \$)	467 0.8	469 0.5	479 2.2	475 -0.8	477 0.4	488 2.3	500 2.5	513 2.6	526 2.5	539 2.4	551 2.3	565 2.6	581 2.7
Personal income (current \$)	3,045 6.9	3,119 2.4	3,264 4.7	3,319 1.7	3,464 4.4	3,614 4.3	3,765 4.2	3,920 4.1	4,080 4.1	4,240 3.9	4,405 3.9	4,577 3.9	4,765 4.1
Personal disposable income (current \$)	2,420 6.8	2,475 2.3	2,602 5.1	2,634 1.2	2,750 4.4	2,851 3.7	2,969 4.1	3,091 4.1	3,215 4.0	3,340 3.9	3,470 3.9	3,607 4.0	3,752 4.0
Personal savings rate	1.9 -41.2	0.6 -67.2	1.0 58.4	-2.4 -342.7	-2.7 -12.0	-2.6 4.6	-0.9 64.6	-0.4 58.0	-0.3 26.1	-0.3 -20.5	-0.6 -67.2	-0.7 -28.6	-0.8 -12.1
Population (000s)	136 0.2	137 0.1	137 0.2	137 0.2	138 0.4	138 0.0	138 0.3	139 0.4	139 0.4	140 0.5	141 0.6	142 0.7	143 0.8
Labour force (000s)	71 1.9	72 1.1	73 1.5	74 1.1	75 1.3	76 1.6	77 0.7	78 1.3	79 0.9	79 0.8	80 0.6	80 1.0	81 0.8
Employment (000s)	63 4.4	64 1.3	65 1.6	66 2.2	67 0.8	68 2.0	68 0.6	69 1.4	70 1.5	71 1.1	72 1.0	72 0.9	73 0.7
Unemployment rate (percentage)	12.1	11.9	11.9	10.9	11.3	10.9	11.1	11.0	10.5	10.2	9.9	10.0	10.1
Retail sales (current \$)	1,274 6.6	1,325 4.0	1,369 3.4	1,383 1.0	1,385 0.1	1,436 3.7	1,463 1.9	1,518 3.7	1,580 4.1	1,644 4.0	1,714 4.3	1,794 4.7	1,877 4.6
Housing starts (units)	710 15.3	675 -4.9	775 14.8	814 5.0	919 12.9	966 5.2	657 -32.0	613 -6.7	589 -3.9	589 0.0	649 10.2	681 4.9	690 1.3

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Table 3—Key Economic Indicators: Prince Edward Island

(Forecast Completed: Dec. 13, 2005)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
GDP at market prices (current \$)	5,618 3.4	5,810 3.4	6,001 3.3	6,194 3.2	6,408 3.5	6,625 3.4	6,851 3.4	7,083 3.4	7,322 3.4	7,576 3.5	7,831 3.4	8,087 3.3	8,361 3.4
GDP at basic prices (current \$)	5,020 3.3	5,184 3.3	5,346 3.1	5,510 3.1	5,695 3.4	5,881 3.3	6,074 3.3	6,271 3.3	6,476 3.3	6,694 3.4	6,912 3.3	7,129 3.1	7,361 3.3
GDP at basic prices (constant 1997 \$)	3,796 2.0	3,871 2.0	3,946 1.9	4,017 1.8	4,089 1.8	4,160 1.7	4,233 1.7	4,305 1.7	4,376 1.6	4,449 1.7	4,522 1.6	4,595 1.6	4,668 1.6
Consumer price index (1992=1.0)	1,469 1.8	1,495 1.8	1,521 1.7	1,548 1.8	1,576 1.8	1,606 1.9	1,636 1.9	1,668 1.9	1,700 1.9	1,733 1.9	1,768 2.0	1,805 2.0	1,841 2.0
Implicit price deflator— GDP at basic prices (1997=1.0)	1,322 1.2	1,339 1.3	1,355 1.2	1,372 1.3	1,393 1.5	1,414 1.5	1,435 1.5	1,457 1.5	1,480 1.6	1,505 1.7	1,529 1.6	1,551 1.5	1,577 1.7
Average weekly wages (level \$)	597 2.7	614 2.9	632 2.9	652 3.0	671 3.0	692 3.1	714 3.1	736 3.2	760 3.2	784 3.2	809 3.2	834 3.1	860 3.1
Personal income (current \$)	4,954 4.0	5,155 4.1	5,361 4.0	5,577 4.0	5,794 3.9	6,026 4.0	6,268 4.0	6,521 4.0	6,786 4.1	7,062 4.1	7,346 4.0	7,639 4.0	7,947 4.0
Personal disposable income (current \$)	3,898 3.9	4,053 4.0	4,210 3.9	4,374 3.9	4,538 3.8	4,714 3.9	4,897 3.9	5,087 3.9	5,287 3.9	5,494 3.9	5,707 3.9	5,926 3.8	6,156 3.9
Personal savings rate	-0.9 -10.4	-0.9 -1.9	-0.9 1.0	-0.9 1.8	-1.0 -5.3	-1.0 -7.1	-1.1 -3.4	-1.1 -2.5	-1.1 -4.0	-1.2 -4.7	-1.2 -5.5	-1.3 -7.6	-1.4 -5.7
Population (000s)	144 0.8	145 0.8	146 0.8	148 0.9	149 0.9	150 0.9	152 0.9	153 0.9	154 0.8	155 0.8	157 0.8	158 0.8	159 0.8
Labour force (000s)	82 0.8	82 0.8	83 0.7	84 0.7	84 0.4	84 0.4	84 0.3	85 0.3	85 0.3	85 0.3	85 0.3	86 0.3	86 0.3
Employment (000s)	73 0.4	74 0.6	74 0.5	74 0.6	75 0.3	75 0.4	75 0.3	75 0.3	76 0.3	76 0.3	76 0.3	76 0.3	77 0.3
Unemployment rate (percentage)	10.4	10.6	10.7	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.8
Retail sales (current \$)	1,960 4.4	2,047 4.5	2,136 4.3	2,228 4.3	2,321 4.2	2,421 4.3	2,524 4.3	2,631 4.2	2,741 4.2	2,855 4.1	2,972 4.1	3,093 4.1	3,220 4.1
Housing starts (units)	711 3.0	738 3.8	747 1.2	756 1.2	758 0.3	756 -0.3	748 -1.1	737 -1.5	723 -1.9	706 -2.4	685 -2.9	664 -3.1	644 -3.0

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Table 4—Key Economic Indicators: Nova Scotia

(Forecast Completed: Dec. 13, 2005)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
GDP at market prices (current \$)	24,651 6.9	25,938 5.2	27,182 4.8	28,875 6.2	29,964 3.8	31,354 4.6	32,629 4.1	33,855 3.7	35,030 3.5	36,331 3.7	37,676 3.7	38,973 3.4	40,136 3.0
GDP at basic prices (current \$)	22,474 7.3	23,594 5.0	24,635 4.4	26,193 6.3	27,197 3.8	28,418 4.5	29,527 3.9	30,582 3.6	31,628 3.4	32,775 3.6	33,966 3.6	35,085 3.3	36,062 2.8
GDP at basic prices (constant 1997 \$)	20,867 3.5	21,578 3.4	22,400 3.8	22,706 1.4	23,048 1.5	23,536 2.1	24,047 2.2	24,487 1.8	24,984 2.0	25,496 2.1	26,029 2.1	26,478 1.7	26,886 1.5
Consumer price index (1992=1.0)	1,142 3.5	1,163 1.9	1,198 3.0	1,239 3.4	1,261 1.8	1,293 2.6	1,318 1.9	1,339 1.6	1,363 1.8	1,388 1.9	1,415 1.9	1,440 1.8	1,467 1.9
Implicit price deflator— GDP at basic prices (1997=1.0)	1,077 3.7	1,094 1.5	1,100 0.6	1,153 4.9	1,180 2.3	1,207 2.3	1,228 1.7	1,249 1.7	1,266 1.4	1,285 1.5	1,305 1.5	1,325 1.5	1,341 1.2
Average weekly wages (level \$)	547 1.7	551 0.8	560 1.6	565 1.0	576 1.9	597 3.6	610 2.3	626 2.5	642 2.6	658 2.4	673 2.3	690 2.6	709 2.7
Personal income (current \$)	22,360 4.4	23,191 3.7	23,862 2.9	24,713 3.6	25,579 3.5	26,767 4.6	27,921 4.3	28,979 3.8	30,033 3.6	31,123 3.6	32,146 3.3	33,176 3.2	34,267 3.3
Personal disposable income (current \$)	17,527 4.2	18,214 3.9	18,761 3.0	19,467 3.8	20,130 3.4	20,936 4.0	21,820 4.2	22,646 3.8	23,456 3.6	24,296 3.6	25,088 3.3	25,902 3.2	26,729 3.2
Personal savings rate	2.3 -39.8	3.4 50.2	0.7 -78.3	0.0 -99.1	-1.1 -1683.8	-0.5 54.4	0.5 200.2	1.0 104.6	1.1 8.9	1.0 -5.7	0.8 -23.3	0.6 -22.0	0.5 -16.9
Population (000s)	934 0.1	933 -0.1	934 0.1	936 0.2	937 0.1	937 0.0	936 -0.1	936 0.0	935 0.0	935 0.0	935 0.0	934 -0.1	934 -0.1
Labour force (000s)	452 1.4	460 1.7	467 1.5	475 1.6	484 2.0	485 0.1	490 1.0	492 0.6	495 0.5	497 0.4	497 0.1	499 0.2	497 -0.2
Employment (000s)	411 2.0	415 1.0	422 1.7	431 2.1	442 2.4	444 0.6	449 1.2	454 0.9	457 0.7	460 0.7	463 0.6	464 0.2	463 0.0
Unemployment rate (percentage)	9.1	9.8	9.6	9.1	8.8	8.3	8.2	7.9	7.7	7.5	7.0	7.0	6.8
Retail sales (current \$)	8,956 4.0	9,278 3.6	9,840 6.1	10,015 1.8	10,297 2.8	10,691 3.8	11,071 3.6	11,440 3.3	11,854 3.6	12,301 3.8	12,752 3.7	13,251 3.9	13,751 3.8
Housing starts (units)	4,432 4.3	4,092 -7.7	4,970 21.5	5,096 2.5	4,717 -7.4	4,699 -0.4	3,952 -15.9	3,014 -23.7	2,776 -7.9	2,741 -1.3	2,700 -1.5	2,586 -4.2	2,476 -4.3

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Table 4—Key Economic Indicators: Nova Scotia

(Forecast Completed: Dec. 13, 2005)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
GDP at market prices (current \$)	41,335 3.0	42,432 2.7	43,562 2.7	44,717 2.7	45,897 2.6	47,115 2.7	48,366 2.7	49,611 2.6	50,865 2.5	52,222 2.7	53,636 2.7	55,035 2.6	56,478 2.6
GDP at basic prices (current \$)	37,070 2.8	37,968 2.4	38,892 2.4	39,841 2.4	40,815 2.4	41,808 2.4	42,818 2.4	43,819 2.3	44,831 2.3	45,937 2.5	47,084 2.5	48,199 2.4	49,350 2.4
GDP at basic prices (constant 1997 \$)	27,293 1.5	27,599 1.1	27,914 1.1	28,211 1.1	28,493 1.0	28,758 0.9	29,008 0.9	29,250 0.8	29,491 0.8	29,748 0.9	30,008 0.9	30,264 0.9	30,504 0.8
Consumer price index (1992=1.0)	1,493 1.8	1,519 1.8	1,546 1.7	1,573 1.7	1,600 1.7	1,631 1.9	1,662 1.9	1,696 2.0	1,732 2.1	1,769 2.1	1,809 2.2	1,847 2.1	1,889 2.2
Implicit price deflator— GDP at basic prices (1997=1.0)	1,358 1.3	1,376 1.3	1,393 1.3	1,412 1.4	1,432 1.4	1,454 1.5	1,476 1.5	1,498 1.5	1,520 1.5	1,544 1.6	1,569 1.6	1,593 1.5	1,618 1.6
Average Weekly Wages (level \$)	729 2.8	750 2.9	772 2.9	796 3.0	820 3.1	846 3.1	872 3.1	900 3.2	928 3.2	957 3.2	988 3.2	1019 3.1	1051 3.1
Personal income (current \$)	35,397 3.3	36,488 3.1	37,624 3.1	38,784 3.1	39,962 3.0	41,199 3.1	42,466 3.1	43,778 3.1	45,130 3.1	46,533 3.1	47,990 3.1	49,458 3.1	50,979 3.1
Personal disposable income (current \$)	27,574 3.2	28,400 3.0	29,245 3.0	30,110 3.0	30,984 2.9	31,899 3.0	32,835 2.9	33,802 2.9	34,796 2.9	35,825 3.0	36,893 3.0	37,966 2.9	39,076 2.9
Personal savings rate	0.4 -19.1	0.4 -9.4	0.4 -3.4	0.4 -1.9	0.3 -19.5	0.2 -31.9	0.1 -31.5	0.1 -40.5	0.0 -93.2	-0.1 -1540.8	-0.2 -121.6	-0.3 -73.2	-0.4 -37.2
Population (000s)	933 -0.1	932 -0.1	931 -0.1	930 -0.1	929 -0.1	928 -0.1	927 -0.2	925 -0.2	923 -0.2	921 -0.2	919 -0.2	917 -0.3	914 -0.3
Labour force (000s)	496 -0.3	494 -0.4	492 -0.4	490 -0.5	487 -0.6	483 -0.7	480 -0.7	476 -0.8	472 -0.8	468 -0.8	464 -0.8	460 -0.9	456 -0.9
Employment (000s)	463 -0.1	461 -0.5	459 -0.4	457 -0.5	454 -0.6	451 -0.7	447 -0.8	444 -0.8	440 -0.8	437 -0.8	433 -0.8	430 -0.8	426 -0.8
Unemployment rate (percentage)	6.6	6.8	6.7	6.7	6.7	6.7	6.7	6.8	6.8	6.7	6.7	6.6	6.6
Retail sales (current \$)	14,257 3.7	14,752 3.5	15,259 3.4	15,779 3.4	16,316 3.4	16,877 3.4	17,454 3.4	18,047 3.4	18,646 3.3	19,264 3.3	19,913 3.4	20,565 3.3	21,246 3.3
Housing starts (units)	2,338 -5.6	2,210 -5.5	2,102 -4.9	1,968 -6.4	1,813 -7.9	1,643 -9.4	1,458 -11.3	1,268 -13.1	1,098 -13.4	952 -13.3	817 -14.1	701 -14.3	592 -15.5

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Table 5—Key Economic Indicators: New Brunswick

(Forecast Completed: Dec. 13, 2005)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
GDP at market prices (current \$)	20,077 5.4	20,757 3.4	21,102 1.7	22,417 6.2	23,231 3.6	24,295 4.6	25,342 4.3	26,266 3.6	27,163 3.4	28,070 3.3	29,084 3.6	30,040 3.3	30,948 3.0
GDP at basic prices (current \$)	18,299 5.4	18,922 3.4	19,092 0.9	20,286 6.3	20,995 3.5	21,922 4.4	22,834 4.2	23,636 3.5	24,412 3.3	25,196 3.2	26,085 3.5	26,897 3.1	27,654 2.8
GDP at basic prices (constant 1997 \$)	17,323 2.6	17,602 1.6	18,262 3.7	18,680 2.3	19,183 2.7	19,642 2.4	20,211 2.9	20,620 2.0	20,932 1.5	21,213 1.3	21,638 2.0	21,974 1.6	22,272 1.4
Consumer price index (1992=1.0)	1,128 3.3	1,147 1.7	1,186 3.4	1,226 3.4	1,244 1.4	1,273 2.4	1,295 1.8	1,317 1.6	1,341 1.8	1,366 1.9	1,393 1.9	1,419 1.9	1,449 2.1
Implicit price deflator— GDP at basic prices (1997=1.0)	1,056 2.7	1,075 1.8	1,046 -2.7	1,086 3.9	1,094 0.8	1,116 2.0	1,130 1.2	1,146 1.5	1,166 1.7	1,188 1.8	1,205 1.5	1,224 1.5	1,242 1.4
Average weekly wages (level \$)	573 5.1	578 1.0	588 1.7	603 2.5	612 1.5	624 2.0	640 2.5	657 2.7	675 2.7	693 2.7	708 2.2	726 2.6	747 2.8
Personal income (current \$)	17,440 4.8	17,926 2.8	18,304 2.1	18,898 3.2	19,444 2.9	20,106 3.4	21,011 4.5	21,825 3.9	22,587 3.5	23,383 3.5	24,130 3.2	24,866 3.0	25,669 3.2
Personal disposable income (current \$)	13,732 4.1	14,204 3.4	14,539 2.4	15,040 3.4	15,419 2.5	15,844 2.8	16,548 4.4	17,188 3.9	17,780 3.4	18,396 3.5	18,981 3.2	19,576 3.1	20,195 3.2
Personal savings rate	4.9 -23.3	6.0 22.6	3.6 -40.9	3.1 -12.9	1.0 -66.6	-1.0 -193.1	-0.5 50.1	0.0 110.1	0.1 186.2	0.1 -45.4	-0.2 -319.0	-0.3 -103.0	-0.4 -28.3
Population (000s)	751 0.0	750 -0.1	750 0.0	751 0.1	751 0.0	751 0.0	750 -0.1	750 -0.1	749 -0.1	747 -0.2	746 -0.2	745 -0.2	743 -0.2
Labour force (000s)	368 1.6	372 1.0	382 2.7	383 0.3	388 1.4	388 -0.2	392 1.2	395 0.7	396 0.4	397 0.2	397 0.0	398 0.1	396 -0.4
Employment (000s)	331 1.7	331 -0.2	343 3.7	344 0.2	351 2.0	350 0.0	356 1.6	360 1.0	362 0.5	363 0.5	365 0.5	365 -0.1	364 -0.3
Unemployment rate (percentage)	10.0	11.1	10.2	10.3	9.8	9.6	9.3	8.9	8.8	8.5	8.0	8.2	8.1
Retail sales (current \$)	7,282 4.5	7,498 3.0	7,787 3.9	7,827 0.5	7,963 1.7	8,477 6.5	8,874 4.7	9,178 3.4	9,489 3.4	9,827 3.6	10,171 3.5	10,548 3.7	10,938 3.7
Housing starts (units)	3,079 10.9	3,462 12.4	3,862 11.6	4,489 16.2	3,947 -12.1	4,056 2.8	3,145 -22.5	2,587 -17.7	2,370 -8.4	2,299 -3.0	2,218 -3.5	1,958 -11.7	1,810 -7.6

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Table 5—Key Economic Indicators: New Brunswick

(Forecast Completed: Dec. 13, 2005)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
GDP at market prices (current \$)	31,912 3.1	32,874 3.0	33,838 2.9	34,836 2.9	35,789 2.7	36,764 2.7	37,776 2.8	38,763 2.6	39,803 2.7	40,913 2.8	41,995 2.6	43,105 2.6	44,268 2.7
GDP at basic prices (current \$)	28,465 2.9	29,266 2.8	30,062 2.7	30,895 2.8	31,681 2.5	32,474 2.5	33,291 2.5	34,082 2.4	34,925 2.5	35,831 2.6	36,698 2.4	37,579 2.4	38,506 2.5
GDP at basic prices (constant 1997 \$)	22,568 1.3	22,834 1.2	23,086 1.1	23,321 1.0	23,539 0.9	23,750 0.9	23,960 0.9	24,162 0.8	24,364 0.8	24,562 0.8	24,757 0.8	24,944 0.8	25,130 0.7
Consumer price index (1992=1.0)	1,476 1.9	1,503 1.9	1,531 1.8	1,559 1.8	1,587 1.8	1,617 1.9	1,649 2.0	1,682 2.0	1,716 2.0	1,753 2.1	1,791 2.1	1,831 2.2	1,870 2.1
Implicit price deflator— GDP at basic prices (1997=1.0)	1,261 1.6	1,282 1.6	1,302 1.6	1,325 1.7	1,346 1.6	1,367 1.6	1,389 1.6	1,411 1.5	1,433 1.6	1,459 1.8	1,482 1.6	1,507 1.6	1,532 1.7
Average weekly wages (level \$)	768 2.9	791 3.0	816 3.1	841 3.2	868 3.2	896 3.2	925 3.2	955 3.3	987 3.3	1,019 3.3	1,052 3.3	1,086 3.2	1,121 3.2
Personal income (current \$)	26,498 3.2	27,322 3.1	28,180 3.1	29,058 3.1	29,955 3.1	30,897 3.1	31,871 3.2	32,874 3.1	33,904 3.1	34,976 3.2	36,076 3.1	37,182 3.1	38,328 3.1
Personal disposable income (current \$)	20,826 3.1	21,459 3.0	22,109 3.0	22,774 3.0	23,451 3.0	24,160 3.0	24,891 3.0	25,643 3.0	26,413 3.0	27,214 3.0	28,035 3.0	28,858 2.9	29,710 3.0
Personal savings rate	-0.5 -20.4	-0.6 -5.0	-0.5 0.2	-0.5 1.4	-0.6 -10.2	-0.7 -12.9	-0.7 -6.7	-0.8 -5.3	-0.8 -7.6	-0.9 -8.1	-0.9 -8.9	-1.0 -11.5	-1.1 -8.8
Population (000s)	742 -0.2	740 -0.2	738 -0.3	736 -0.3	733 -0.3	731 -0.3	728 -0.4	726 -0.4	723 -0.4	720 -0.4	716 -0.5	713 -0.5	709 -0.5
Labour force (000s)	395 -0.4	393 -0.5	391 -0.5	388 -0.6	386 -0.7	383 -0.8	379 -0.8	376 -0.9	373 -0.9	369 -0.9	366 -1.0	362 -1.0	358 -1.0
Employment (000s)	363 -0.3	361 -0.5	359 -0.5	357 -0.6	355 -0.7	352 -0.7	349 -0.8	347 -0.8	344 -0.8	341 -0.9	338 -0.9	335 -0.9	332 -0.9
Unemployment rate (percentage)	8.1	8.0	8.0	8.0	8.0	8.0	7.9	7.8	7.8	7.7	7.6	7.6	7.4
Retail sales (current \$)	11,334 3.6	11,733 3.5	12,144 3.5	12,566 3.5	13,005 3.5	13,465 3.5	13,942 3.5	14,428 3.5	14,916 3.4	15,422 3.4	15,942 3.4	16,464 3.3	17,006 3.3
Housing starts (units)	1,655 -8.6	1,493 -9.8	1,331 -10.8	1,185 -11.0	1,044 -11.9	919 -12.0	814 -11.4	716 -12.0	627 -12.4	543 -13.4	469 -13.6	399 -15.0	344 -13.8

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Table 6—Key Economic Indicators: Quebec

(Forecast Completed: Dec. 13, 2005)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
GDP at market prices (current \$)	225,153 6.7	230,995 2.6	243,251 5.3	253,421 4.2	266,692 5.2	279,426 4.8	292,350 4.6	304,183 4.0	317,157 4.3	331,458 4.5	346,416 4.5	359,873 3.9	373,495 3.8
GDP at basic prices (current \$)	209,526 6.9	215,028 2.6	225,487 4.9	235,593 4.5	247,781 5.2	259,358 4.7	271,143 4.5	281,948 4.0	293,899 4.2	307,158 4.5	321,056 4.5	333,299 3.8	345,642 3.7
GDP at basic prices (constant 1997 \$)	201,334 4.5	204,317 1.5	212,710 4.1	217,061 2.0	222,352 2.4	227,685 2.4	233,641 2.6	240,213 2.8	246,520 2.6	253,425 2.8	260,581 2.8	266,375 2.2	272,031 2.1
Consumer price index (1992=1.0)	1.106 2.4	1.132 2.4	1.155 2.0	1.184 2.5	1.207 1.9	1.235 2.3	1.259 2.0	1.283 1.9	1.309 2.0	1.335 2.0	1.363 2.1	1.391 2.1	1.420 2.1
Implicit price deflator— GDP at basic prices (1997=1.0)	1.041 2.3	1.052 1.1	1.060 0.7	1.085 2.4	1.114 2.7	1.139 2.2	1.160 1.9	1.174 1.1	1.192 1.6	1.212 1.7	1.232 1.7	1.251 1.6	1.271 1.5
Average weekly wages (level \$)	610 1.3	617 1.1	630 2.1	639 1.5	651 1.8	667 2.5	683 2.4	702 2.7	721 2.8	742 2.8	763 2.8	785 2.9	810 3.2
Personal income (current \$)	187,153 7.1	194,727 4.0	199,687 2.5	207,741 4.0	216,110 4.0	225,594 4.4	236,940 5.0	247,237 4.3	257,629 4.2	268,099 4.1	278,739 4.0	288,672 3.6	299,412 3.7
Personal disposable income (current \$)	139,209 6.2	145,412 4.5	151,875 4.4	158,587 4.4	163,655 3.2	169,468 3.6	178,259 5.2	185,934 4.3	193,541 4.1	201,200 4.0	209,065 3.9	216,582 3.6	224,358 3.6
Personal savings rate	3.8 12.6	4.3 12.1	4.2 -2.5	3.4 -19.9	1.9 -42.3	-0.5 -123.4	0.6 230.9	1.1 89.6	1.2 9.1	1.2 -4.7	0.9 -19.8	0.8 -15.6	0.7 -7.4
Population (000s)	7,353 0.4	7,392 0.5	7,440 0.6	7,486 0.6	7,537 0.7	7,579 0.6	7,614 0.5	7,650 0.5	7,684 0.4	7,714 0.4	7,742 0.4	7,773 0.4	7,804 0.4
Labour force (000s)	3,717 1.4	3,772 1.5	3,907 3.6	3,991 2.2	4,028 0.9	4,056 0.7	4,123 1.7	4,182 1.4	4,225 1.0	4,253 0.7	4,278 0.6	4,288 0.2	4,291 0.1
Employment (000s)	3,402 2.5	3,440 1.1	3,568 3.7	3,624 1.6	3,687 1.7	3,721 0.9	3,788 1.8	3,844 1.5	3,890 1.2	3,940 1.3	3,980 1.0	3,991 0.3	4,000 0.2
Unemployment rate (percentage)	8.5	8.8	8.7	9.2	8.5	8.3	8.1	8.1	7.9	7.4	7.0	6.9	6.8
Retail sales (current \$)	65,245 5.1	67,956 4.2	72,099 6.1	75,326 4.5	78,518 4.2	84,901 8.1	88,701 4.5	92,141 3.9	95,950 4.1	99,916 4.1	104,289 4.4	108,778 4.3	113,402 4.3
Housing starts (units)	24,695 -4.1	27,682 12.1	42,452 53.4	50,289 18.5	58,448 16.2	50,767 -13.1	39,759 -21.7	35,573 -10.5	32,832 -7.7	31,929 -2.8	30,724 -3.8	29,875 -2.8	28,287 -5.3

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Table 6—Key Economic Indicators: Quebec

(Forecast Completed: Dec. 13, 2005)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
GDP at market prices (current \$)	387,068	401,060	415,133	429,638	444,272	460,007	475,929	492,254	508,822	526,100	543,712	561,603	579,907
	3.6	3.6	3.5	3.5	3.4	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3
GDP at basic prices (current \$)	357,915	370,551	383,208	396,313	409,539	423,734	438,006	452,668	467,577	483,136	498,926	514,880	531,184
	3.6	3.5	3.4	3.4	3.3	3.5	3.4	3.3	3.3	3.3	3.3	3.2	3.2
GDP at basic prices (constant 1997 \$)	277,464	282,670	287,673	292,518	297,346	302,240	307,235	312,037	316,778	321,586	326,533	331,516	336,374
	2.0	1.9	1.8	1.7	1.7	1.6	1.7	1.6	1.5	1.5	1.5	1.5	1.5
Consumer price index (1992=1.0)	1,451	1,482	1,514	1,546	1,579	1,613	1,649	1,686	1,724	1,762	1,802	1,844	1,887
	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3
Implicit price deflator—GDP at basic prices (1997=1.0)	1,290	1,311	1,332	1,355	1,377	1,402	1,426	1,451	1,476	1,502	1,528	1,553	1,579
	1.5	1.6	1.6	1.7	1.7	1.8	1.7	1.8	1.7	1.8	1.7	1.6	1.7
Average weekly wages (level \$)	835	863	892	923	955	988	1,023	1,059	1,096	1,135	1,174	1,215	1,258
	3.1	3.3	3.4	3.5	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Personal income (current \$)	310,249	321,500	333,176	345,157	357,446	370,458	383,935	397,732	411,998	426,815	442,216	457,913	474,124
	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.5
Personal disposable income (current \$)	232,092	240,195	248,482	256,992	265,665	274,814	284,263	293,914	303,866	314,181	324,888	335,764	346,971
	3.4	3.5	3.5	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.3
Personal savings rate	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.8	0.7	0.7	0.7	0.6	0.6
	-6.9	2.1	5.8	6.8	-1.6	-4.3	0.0	1.0	-1.4	-2.4	-3.9	-8.1	-6.3
Population (000s)	7,834	7,864	7,893	7,921	7,948	7,975	8,001	8,027	8,051	8,075	8,097	8,117	8,137
	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2
Labour force (000s)	4,288	4,288	4,287	4,282	4,276	4,266	4,256	4,244	4,231	4,219	4,206	4,192	4,177
	-0.1	0.0	0.0	-0.1	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3
Employment (000s)	4,006	4,007	4,009	4,005	3,998	3,992	3,986	3,974	3,963	3,951	3,939	3,926	3,912
	0.1	0.0	0.1	-0.1	-0.2	-0.1	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3
Unemployment rate (percentage)	6.6	6.6	6.5	6.5	6.5	6.4	6.4	6.3	6.3	6.4	6.3	6.4	6.3
Retail sales (current \$)	118,003	122,862	127,849	132,977	138,321	143,938	149,762	155,654	161,605	167,746	174,143	180,638	187,370
	4.1	4.1	4.1	4.0	4.0	4.1	4.0	3.9	3.8	3.8	3.8	3.7	3.7
Housing starts (units)	26,672	25,064	23,538	22,230	21,336	20,665	19,833	18,847	17,721	16,473	15,136	13,747	12,345
	-5.7	-6.0	-6.1	-5.6	-4.0	-3.1	-4.0	-5.0	-6.0	-7.0	-8.1	-9.2	-10.2

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Table 7—Key Economic Indicators: Ontario

(Forecast Completed: Dec. 13, 2005)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
GDP at market prices (current \$)	440,983 7.8	453,743 2.9	478,233 5.4	493,625 3.2	516,368 4.6	541,155 4.8	567,375 4.8	594,554 4.8	624,482 5.0	656,270 5.1	690,199 5.2	723,346 4.8	756,413 4.6
GDP at basic prices (current \$)	406,465 7.8	418,062 2.9	440,487 5.4	456,916 3.7	477,016 4.4	499,394 4.7	523,243 4.8	548,283 4.8	576,082 5.1	605,701 5.1	637,425 5.2	668,047 4.8	698,453 4.6
GDP at basic prices (constant 1997 \$)	396,658 6.1	403,822 1.8	416,888 3.2	424,218 1.8	436,940 3.0	446,846 2.3	460,393 3.0	476,060 3.4	492,313 3.4	509,196 3.4	526,665 3.4	542,934 3.1	559,209 3.0
Consumer price index (1992=1.0)	1.142 2.9	1.177 3.1	1.201 2.0	1.233 2.7	1.256 1.9	1.284 2.2	1.311 2.1	1.337 2.0	1.366 2.1	1.396 2.2	1.427 2.2	1.458 2.2	1.491 2.2
Implicit price deflator— GDP at basic prices (1997=1.0)	1.025 1.6	1.035 1.0	1.056 2.0	1.077 2.0	1.092 1.3	1.118 2.4	1.136 1.7	1.152 1.3	1.170 1.6	1.189 1.7	1.210 1.7	1.230 1.7	1.249 1.5
Average weekly wages (level \$)	706 2.5	719 1.9	728 1.2	734 0.9	744 1.4	762 2.3	777 2.0	798 2.8	821 2.8	845 2.9	866 2.5	891 2.9	919 3.1
Personal income (current \$)	347,773 8.1	360,990 3.8	370,067 2.5	381,306 3.0	395,483 3.7	414,312 4.8	435,578 5.1	456,685 4.8	478,470 4.8	500,690 4.6	523,116 4.5	545,815 4.3	570,570 4.5
Personal disposable income (current \$)	265,329 8.7	274,554 3.5	284,269 3.5	293,951 3.4	303,713 3.3	314,456 3.5	330,260 5.0	346,213 4.8	362,433 4.7	379,001 4.6	395,796 4.4	413,049 4.4	431,148 4.4
Personal savings rate	7.5 16.5	6.9 -8.3	5.0 -27.1	3.9 -22.9	2.7 -30.7	1.0 -62.5	1.7 69.5	2.2 31.1	2.4 4.9	2.3 -2.1	2.1 -9.6	2.0 -6.5	1.9 -2.6
Population (000s)	11,660 1.5	11,866 1.8	12,070 1.7	12,233 1.3	12,373 1.1	12,499 1.0	12,635 1.1	12,778 1.1	12,923 1.1	13,069 1.1	13,216 1.1	13,369 1.2	13,526 1.2
Labour force (000s)	6,170 2.6	6,327 2.5	6,498 2.7	6,673 2.7	6,775 1.5	6,855 1.2	6,975 1.8	7,115 2.0	7,242 1.8	7,351 1.5	7,448 1.3	7,553 1.4	7,651 1.3
Employment (000s)	5,814 3.2	5,925 1.9	6,035 1.9	6,209 2.9	6,317 1.7	6,400 1.3	6,533 2.1	6,665 2.0	6,788 1.8	6,907 1.8	7,023 1.7	7,111 1.3	7,194 1.2
Unemployment rate (percentage)	5.8	6.4	7.1	6.9	6.8	6.6	6.3	6.3	6.3	6.0	5.7	5.9	6.0
Retail sales (current \$)	111,501 6.6	114,294 2.5	120,992 5.9	125,122 3.4	129,086 3.2	136,846 6.0	143,060 4.5	149,350 4.4	156,244 4.6	163,866 4.6	171,001 4.7	179,377 4.9	188,107 4.9
Housing starts (units)	71,521 6.4	73,282 2.5	83,597 14.1	85,180 1.9	85,114 -0.1	77,491 -9.0	73,513 -5.1	76,537 4.1	79,293 3.6	81,116 2.3	81,759 0.8	82,516 0.9	83,661 1.4

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Table 7—Key Economic Indicators: Ontario

(Forecast Completed: Dec. 13, 2005)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
GDP at market prices (current \$)	791,227 4.6	826,551 4.5	861,868 4.3	898,791 4.3	936,446 4.2	975,142 4.1	1,015,848 4.2	1,057,615 4.1	1,101,835 4.2	1,148,301 4.2	1,196,047 4.2	1,245,915 4.2	1,297,245 4.1
GDP at basic prices (current \$)	730,559 4.6	763,061 4.4	795,433 4.2	829,444 4.3	864,169 4.2	899,658 4.1	936,930 4.1	975,238 4.1	1,016,006 4.2	1,058,894 4.2	1,102,847 4.2	1,148,686 4.2	1,195,853 4.1
GDP at basic prices (constant 1997 \$)	576,249 3.0	592,834 2.9	608,840 2.7	625,336 2.7	641,947 2.7	657,244 2.4	673,871 2.5	691,013 2.5	708,573 2.5	727,138 2.6	745,332 2.5	764,198 2.5	783,085 2.5
Consumer price index (1992=1.0)	1.525 2.2	1.559 2.2	1.594 2.2	1.629 2.2	1.666 2.2	1.703 2.2	1.742 2.3	1.785 2.4	1.828 2.4	1.875 2.5	1.922 2.5	1.971 2.5	2.021 2.5
Implicit price deflator— GDP at basic prices (1997=1.0)	1.268 1.5	1.287 1.5	1.306 1.5	1.326 1.5	1.346 1.5	1.369 1.7	1.390 1.6	1.411 1.5	1.434 1.6	1.456 1.6	1.480 1.6	1.503 1.6	1.527 1.6
Average weekly wages (level \$)	949 3.3	981 3.4	1013 3.3	1048 3.4	1083 3.4	1120 3.4	1158 3.4	1198 3.4	1239 3.4	1281 3.4	1325 3.4	1370 3.4	1417 3.4
Personal income (current \$)	597,105 4.7	624,061 4.5	651,831 4.4	680,595 4.4	710,290 4.4	740,922 4.3	773,220 4.4	807,068 4.4	842,521 4.4	879,640 4.4	918,133 4.4	958,178 4.4	1,000,177 4.4
Personal disposable income (current \$)	450,390 4.5	470,021 4.4	490,036 4.3	510,741 4.2	532,031 4.2	553,907 4.1	576,888 4.1	600,908 4.2	625,993 4.2	652,175 4.2	679,295 4.2	707,444 4.1	736,914 4.2
Personal savings rate	1.9 -2.1	1.9 1.2	1.9 2.5	2.0 3.0	2.0 -0.3	2.0 -1.4	2.0 0.3	2.0 0.8	2.0 -0.1	2.0 -0.5	1.9 -1.0	1.9 -2.4	1.9 -1.5
Population (000s)	13,684 1.2	13,843 1.2	14,003 1.2	14,165 1.2	14,328 1.1	14,491 1.1	14,655 1.1	14,820 1.1	14,985 1.1	15,151 1.1	15,316 1.1	15,481 1.1	15,645 1.1
Labour force (000s)	7,741 1.2	7,823 1.1	7,904 1.0	7,976 0.9	8,041 0.8	8,102 0.8	8,159 0.7	8,214 0.7	8,269 0.7	8,324 0.7	8,377 0.6	8,429 0.6	8,481 0.6
Employment (000s)	7,285 1.3	7,362 1.1	7,439 1.0	7,509 0.9	7,571 0.8	7,620 0.6	7,677 0.7	7,733 0.7	7,793 0.8	7,855 0.8	7,911 0.7	7,967 0.7	8,025 0.7
Unemployment rate (percentage)	5.9	5.9	5.9	5.9	5.8	5.9	5.9	5.8	5.8	5.6	5.6	5.5	5.4
Retail sales (current \$)	197,347 4.9	206,792 4.8	216,380 4.6	226,274 4.6	236,579 4.6	247,115 4.5	258,240 4.5	269,753 4.5	281,510 4.4	293,700 4.3	306,341 4.3	319,411 4.3	333,145 4.3
Housing starts (units)	84,786 1.3	85,764 1.2	86,729 1.1	87,386 0.8	87,397 0.0	87,007 -0.4	86,442 -0.6	85,883 -0.6	85,245 -0.7	84,586 -0.8	83,923 -0.8	83,267 -0.8	82,600 -0.8

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Table 8—Key Economic Indicators: Manitoba

(Forecast Completed: Dec. 13, 2005)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
GDP at market prices (current \$)	34,045 6.5	35,042 2.9	36,705 4.7	38,031 3.6	40,211 5.7	42,142 4.8	44,255 5.0	46,201 4.4	48,192 4.3	50,314 4.4	52,447 4.2	54,818 4.5	57,273 4.5
GDP at basic prices (current \$)	31,563 6.3	32,405 2.7	33,740 4.1	35,116 4.1	37,283 6.2	39,035 4.7	40,972 5.0	42,758 4.4	44,590 4.3	46,551 4.4	48,520 4.2	50,703 4.5	52,960 4.5
GDP at basic prices (constant 1997 \$)	30,381 4.5	30,743 1.2	31,533 2.6	31,970 1.4	32,765 2.5	33,712 2.9	34,862 3.4	35,805 2.7	36,804 2.8	37,745 2.6	38,788 2.8	39,891 2.8	40,995 2.8
Consumer price index (1992=1.0)	1.181 2.5	1.212 2.7	1.231 1.5	1.253 1.8	1.278 2.0	1.314 2.8	1.342 2.2	1.367 1.8	1.392 1.8	1.420 2.0	1.450 2.1	1.480 2.1	1.510 2.0
Implicit price deflator— GDP at basic prices (1997=1.0)	1.039 1.7	1.054 1.5	1.070 1.5	1.098 2.6	1.138 3.6	1.158 1.8	1.175 1.5	1.194 1.6	1.212 1.5	1.233 1.8	1.251 1.4	1.271 1.6	1.292 1.6
Average weekly wages (level \$)	593 4.3	597 0.6	604 1.1	609 0.9	632 3.8	660 4.4	677 2.6	695 2.7	716 3.0	735 2.7	752 2.3	772 2.7	794 2.8
Personal income (current \$)	28,363 5.3	29,398 3.7	30,087 2.3	30,910 2.7	32,153 4.0	33,650 4.7	35,267 4.8	36,717 4.1	38,180 4.0	39,682 3.9	41,156 3.7	42,668 3.7	44,370 4.0
Personal disposable income (current \$)	22,104 4.6	23,048 4.3	23,631 2.5	24,310 2.9	25,210 3.7	26,220 4.0	27,492 4.9	28,622 4.1	29,745 3.9	30,897 3.9	32,032 3.7	33,214 3.7	34,494 3.9
Personal savings rate	4.9 2.6	4.9 -0.7	2.4 -49.9	1.6 -34.6	0.6 -62.4	-1.0 -270.1	-0.6 40.3	-0.1 89.0	0.0 160.0	0.0 -123.8	-0.2 -2379.3	-0.4 -60.7	-0.4 -15.3
Population (000s)	1,147 0.4	1,150 0.3	1,155 0.4	1,160 0.5	1,169 0.7	1,177 0.7	1,184 0.6	1,191 0.6	1,198 0.6	1,205 0.6	1,212 0.6	1,220 0.7	1,228 0.7
Labour force (000s)	581 1.4	584 0.5	598 2.4	600 0.5	608 1.3	610 0.3	619 1.4	627 1.4	633 1.0	639 0.9	645 0.9	651 0.8	655 0.7
Employment (000s)	552 2.2	554 0.5	567 2.4	571 0.6	576 1.0	580 0.7	590 1.7	598 1.4	605 1.1	611 1.0	617 1.1	624 1.0	630 1.0
Unemployment rate (percentage)	5.0	5.0	5.1	5.0	5.3	4.9	4.6	4.6	4.5	4.5	4.3	4.1	3.9
Retail sales (current \$)	9,337 4.5	9,878 5.8	10,570 7.0	10,953 3.6	11,692 6.7	12,667 8.3	13,378 5.6	13,894 3.9	14,454 4.0	15,036 4.0	15,646 4.1	16,327 4.4	17,058 4.5
Housing starts (units)	2,560 -18.3	2,963 15.7	3,617 22.1	4,206 16.3	4,440 5.6	4,961 11.7	4,510 -9.1	4,424 -1.9	4,725 6.8	4,808 1.8	4,867 1.2	4,902 0.7	4,937 0.7

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Table 8—Key Economic Indicators: Manitoba

(Forecast Completed: Dec. 13, 2005)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
GDP at market prices (current \$)	59,545 4.0	62,009 4.1	64,412 3.9	66,531 3.3	68,991 3.7	71,569 3.7	74,218 3.7	77,061 3.8	80,050 3.9	83,057 3.8	86,161 3.7	89,403 3.8	92,710 3.7
GDP at basic prices (current \$)	55,031 3.9	57,285 4.1	59,469 3.8	61,371 3.2	63,613 3.7	65,952 3.7	68,346 3.6	70,932 3.8	73,664 3.9	76,405 3.7	79,226 3.7	82,168 3.7	85,166 3.6
GDP at basic prices (constant 1997 \$)	41,951 2.3	43,011 2.5	44,052 2.4	44,804 1.7	45,711 2.0	46,613 2.0	47,502 1.9	48,473 2.0	49,496 2.1	50,491 2.0	51,521 2.0	52,590 2.1	53,652 2.0
Consumer price index (1992=1.0)	1,538 1.9	1,566 1.9	1,597 1.9	1,628 1.9	1,659 1.9	1,694 2.1	1,729 2.1	1,765 2.1	1,804 2.2	1,842 2.1	1,880 2.1	1,922 2.2	1,964 2.2
Implicit price deflator— GDP at basic prices (1997=1.0)	1,312 1.5	1,332 1.5	1,350 1.4	1,370 1.5	1,392 1.6	1,415 1.7	1,439 1.7	1,463 1.7	1,488 1.7	1,513 1.7	1,538 1.6	1,562 1.6	1,587 1.6
Average weekly wages (level \$)	817 3.0	842 3.0	869 3.2	897 3.3	927 3.3	957 3.3	989 3.3	1,022 3.3	1,056 3.3	1,091 3.3	1,128 3.3	1,165 3.3	1,204 3.3
Personal income (current \$)	46,095 3.9	47,876 3.9	49,757 3.9	51,603 3.7	53,581 3.8	55,659 3.9	57,810 3.9	60,094 3.9	62,486 4.0	64,950 3.9	67,524 4.0	70,199 4.0	72,988 4.0
Personal disposable income (current \$)	35,784 3.7	37,119 3.7	38,513 3.8	39,892 3.6	41,357 3.7	42,890 3.7	44,477 3.7	46,153 3.8	47,905 3.8	49,706 3.8	51,585 3.8	53,534 3.8	55,563 3.8
Personal savings rate	-0.5 -11.3	-0.5 3.2	-0.4 9.2	-0.4 11.8	-0.4 -2.8	-0.4 -8.1	-0.4 0.5	-0.4 2.8	-0.4 -1.4	-0.4 -3.3	-0.5 -5.6	-0.5 -11.4	-0.5 -6.8
Population (000s)	1,237 0.7	1,246 0.7	1,255 0.7	1,264 0.7	1,273 0.7	1,282 0.7	1,292 0.7	1,301 0.7	1,311 0.7	1,321 0.7	1,330 0.7	1,340 0.7	1,349 0.7
Labour force (000s)	659 0.6	663 0.5	666 0.5	669 0.4	671 0.3	673 0.3	675 0.3	677 0.3	680 0.3	682 0.3	684 0.3	686 0.4	689 0.3
Employment (000s)	634 0.6	638 0.7	643 0.7	643 0.0	645 0.3	647 0.3	648 0.2	650 0.3	653 0.4	655 0.3	657 0.3	659 0.3	661 0.3
Unemployment rate (percentage)	3.9	3.7	3.5	3.9	3.9	4.0	4.1	4.1	3.9	4.0	4.0	4.0	4.0
Retail sales (current \$)	17,786 4.3	18,541 4.2	19,325 4.2	20,097 4.0	20,928 4.1	21,791 4.1	22,685 4.1	23,617 4.1	24,567 4.0	25,533 3.9	26,540 3.9	27,577 3.9	28,657 3.9
Housing starts (units)	4,974 0.7	5,002 0.6	4,992 -0.2	5,011 0.4	5,027 0.3	5,037 0.2	5,042 0.1	5,035 -0.1	5,027 -0.2	5,009 -0.4	4,985 -0.5	4,961 -0.5	4,936 -0.5

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Table 9—Key Economic Indicators: Saskatchewan

(Forecast Completed: Dec. 13, 2005)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
GDP at market prices (current \$)	33,811	33,275	34,289	36,443	40,542	42,441	44,285	45,915	47,649	49,450	51,405	53,377	55,418
	9.9	-1.6	3.0	6.3	11.2	4.7	4.3	3.7	3.8	3.8	4.0	3.8	3.8
GDP at basic prices (current \$)	31,924	31,430	32,696	34,773	38,449	40,220	41,938	43,454	45,074	46,760	48,598	50,436	52,335
	11.1	-1.5	4.0	6.4	10.6	4.6	4.3	3.6	3.7	3.7	3.9	3.8	3.8
GDP at basic prices (constant 1997 \$)	28,901	28,290	28,065	29,215	30,254	31,148	31,980	32,722	33,540	34,232	34,923	35,577	36,260
	2.4	-2.1	-0.8	4.1	3.6	3.0	2.7	2.3	2.5	2.1	2.0	1.9	1.9
Consumer price index (1992=1.0)	1.167	1.203	1.237	1.265	1.293	1.323	1.348	1.374	1.401	1.431	1.461	1.490	1.519
	2.6	3.1	2.8	2.3	2.2	2.3	1.8	1.9	2.0	2.1	2.1	2.0	1.9
Implicit price deflator—GDP at basic prices (1997=1.0)	1.105	1.111	1.165	1.190	1.271	1.291	1.311	1.328	1.344	1.366	1.392	1.418	1.443
	8.5	0.6	4.9	2.2	6.8	1.6	1.6	1.3	1.2	1.6	1.9	1.9	1.8
Average weekly wages (level \$)	580	592	595	602	615	638	657	675	693	711	727	746	765
	3.4	2.1	0.5	1.1	2.3	3.7	2.9	2.7	2.7	2.7	2.2	2.6	2.6
Personal income (current \$)	23,166	23,704	24,188	25,051	26,948	27,601	28,773	29,842	30,929	31,985	32,955	33,956	35,042
	3.6	2.3	2.0	3.6	7.6	2.4	4.2	3.7	3.6	3.4	3.0	3.0	3.2
Personal disposable income (current \$)	18,188	18,649	19,128	19,940	21,548	21,905	22,812	23,657	24,506	25,330	26,096	26,901	27,735
	3.8	2.5	2.6	4.2	8.1	1.7	4.1	3.7	3.6	3.4	3.0	3.1	3.1
Personal savings rate	-0.9	-1.7	-4.0	-4.2	0.1	-4.3	-4.0	-3.5	-3.3	-3.4	-3.6	-3.8	-3.9
	-315.0	-97.4	-131.0	-4.3	101.2	-8467.7	5.7	13.9	3.1	-1.6	-7.1	-4.3	-2.1
Population (000s)	1,009	1,001	997	995	995	995	995	996	997	997	998	999	1,000
	-0.6	-0.7	-0.5	-0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Labour force (000s)	499	489	497	504	507	511	516	520	523	524	525	525	525
	-0.5	-2.1	1.5	1.5	0.6	0.8	1.0	0.8	0.5	0.2	0.2	0.0	0.0
Employment (000s)	474	461	468	475	480	485	490	496	500	503	504	504	505
	0.4	-2.7	1.7	1.5	1.0	1.1	1.1	1.2	0.8	0.6	0.2	0.1	0.1
Unemployment rate (percentage)	5.2	5.8	5.7	5.7	5.3	5.1	5.0	4.7	4.5	4.1	4.0	3.9	3.7
Retail sales (current \$)	8,359	8,726	9,389	9,858	10,259	11,279	11,854	12,257	12,707	13,152	13,597	14,104	14,624
	5.1	4.4	7.6	5.0	4.1	9.9	5.1	3.4	3.7	3.5	3.4	3.7	3.7
Housing starts (units)	2,513	2,381	2,963	3,315	3,781	3,085	2,949	2,740	2,671	2,640	2,652	2,567	2,513
	-18.6	-5.3	24.4	11.9	14.1	-18.4	-4.4	-7.1	-2.5	-1.2	0.5	-3.2	-2.1

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Table 9—Key Economic Indicators: Saskatchewan

(Forecast Completed: Dec. 13, 2005)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
GDP at market prices (current \$)	57,466 3.7	59,495 3.5	61,473 3.3	63,453 3.2	65,703 3.5	67,925 3.4	70,253 3.4	72,657 3.4	75,149 3.4	77,739 3.4	80,428 3.5	83,241 3.5	86,004 3.3
GDP at basic prices (current \$)	54,238 3.6	56,117 3.5	57,939 3.2	59,764 3.1	61,858 3.5	63,910 3.3	66,055 3.4	68,275 3.4	70,583 3.4	72,983 3.4	75,470 3.4	78,069 3.4	80,611 3.3
GDP at basic prices (constant 1997 \$)	36,952 1.9	37,624 1.8	38,254 1.7	38,865 1.6	39,514 1.7	40,113 1.5	40,728 1.5	41,366 1.6	41,989 1.5	42,621 1.5	43,300 1.6	44,020 1.7	44,682 1.5
Consumer price index (1992=1.0)	1,548 2.0	1,579 2.0	1,609 1.9	1,640 1.9	1,672 1.9	1,707 2.1	1,742 2.1	1,780 2.1	1,818 2.1	1,857 2.1	1,896 2.1	1,937 2.1	1,980 2.2
Implicit price deflator— GDP at basic prices (1997=1.0)	1,468 1.7	1,491 1.6	1,515 1.5	1,538 1.5	1,565 1.8	1,593 1.8	1,622 1.8	1,650 1.8	1,681 1.8	1,712 1.9	1,743 1.8	1,773 1.8	1,804 1.7
Average weekly wages (level \$)	786 2.7	809 2.8	832 3.0	858 3.1	884 3.1	912 3.1	940 3.1	970 3.2	1,001 3.2	1,032 3.2	1,065 3.2	1,099 3.2	1,133 3.1
Personal income (current \$)	36,175 3.2	37,326 3.2	38,532 3.2	39,778 3.2	41,093 3.3	42,465 3.3	43,907 3.4	45,413 3.4	46,979 3.4	48,609 3.5	50,305 3.5	52,058 3.5	53,873 3.5
Personal disposable income (current \$)	28,594 3.1	29,474 3.1	30,388 3.1	31,331 3.1	32,324 3.2	33,358 3.2	34,443 3.3	35,574 3.3	36,749 3.3	37,968 3.3	39,235 3.3	40,542 3.3	41,893 3.3
Personal savings rate	-4.0 -1.8	-4.0 0.0	-3.9 0.7	-3.9 1.0	-3.9 -0.7	-4.0 -1.2	-4.0 -0.3	-4.0 -0.1	-4.0 -0.5	-4.0 -0.7	-4.1 -1.0	-4.1 -1.7	-4.2 -1.2
Population (000s)	1,001 0.1	1,002 0.1	1,004 0.1	1,005 0.1	1,006 0.1	1,007 0.1	1,008 0.1	1,009 0.1	1,010 0.1	1,011 0.1	1,012 0.1	1,012 0.1	1,013 0.0
Labour force (000s)	524 0.0	524 -0.1	524 -0.1	523 -0.2	522 -0.2	521 -0.2	520 -0.2	518 -0.2	517 -0.2	516 -0.2	515 -0.2	515 -0.2	514 -0.2
Employment (000s)	506 0.1	506 0.0	505 -0.1	504 -0.2	504 -0.1	502 -0.3	501 -0.3	500 -0.2	499 -0.3	498 -0.2	497 -0.2	496 -0.2	495 -0.2
Unemployment rate (percentage)	3.5	3.4	3.5	3.5	3.5	3.5	3.6	3.5	3.6	3.6	3.6	3.6	3.6
Retail sales (current \$)	15,156 3.6	15,702 3.6	16,268 3.6	16,851 3.6	17,477 3.7	18,126 3.7	18,811 3.8	19,517 3.8	20,233 3.7	20,970 3.6	21,737 3.7	22,526 3.6	23,343 3.6
Housing starts (units)	2,438 -3.0	2,339 -4.1	2,220 -5.1	2,084 -6.1	1,956 -6.1	1,823 -6.8	1,717 -5.8	1,635 -4.8	1,562 -4.4	1,490 -4.6	1,421 -4.6	1,352 -4.8	1,286 -5.0

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Table 10—Key Economic Indicators: Alberta

(Forecast Completed: Dec. 13, 2005)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
GDP at market prices (current \$)	144,746 23.7	151,591 4.7	150,205 -0.9	170,275 13.4	186,858 9.7	201,987 8.1	211,833 4.9	221,425 4.5	231,502 4.6	241,650 4.4	253,442 4.9	264,978 4.6	277,928 4.9
GDP at basic prices (current \$)	139,001 24.7	148,613 6.9	144,028 -3.1	163,620 13.6	180,226 10.1	194,949 8.2	204,396 4.8	213,627 4.5	223,345 4.5	233,127 4.4	244,548 4.9	255,659 4.5	268,160 4.9
GDP at basic prices (constant 1997 \$)	116,040 6.5	118,321 2.0	120,507 1.8	124,371 3.2	129,659 4.3	135,642 4.6	140,700 3.7	145,507 3.4	150,115 3.2	154,056 2.6	158,232 2.7	162,579 2.7	167,524 3.0
Consumer price index (1992=1.0)	1.174 3.5	1.201 2.3	1.242 3.4	1.297 4.4	1.315 1.4	1.341 2.0	1.368 2.1	1.395 1.9	1.425 2.2	1.456 2.2	1.487 2.2	1.518 2.1	1.552 2.2
Implicit price deflator— GDP at basic prices (1997=1.0)	1.197 17.1	1.256 4.9	1.195 -4.9	1.316 10.1	1.390 5.6	1.437 3.4	1.453 1.1	1.468 1.1	1.488 1.3	1.513 1.7	1.545 2.1	1.572 1.7	1.601 1.8
Average weekly wages (level \$)	674 3.1	692 2.7	703 1.6	711 1.2	734 3.1	769 4.9	798 3.7	820 2.8	844 2.9	871 3.2	893 2.5	917 2.7	943 2.9
Personal income (current \$)	89,126 9.8	97,944 9.9	101,020 3.1	105,172 4.1	112,362 6.8	119,370 6.2	126,534 6.0	132,716 4.9	138,696 4.5	144,640 4.3	150,927 4.3	157,156 4.1	163,872 4.3
Personal disposable income (current \$)	67,795 9.6	75,618 11.5	78,431 3.7	81,738 4.2	87,093 6.6	91,905 5.5	97,302 5.9	102,070 4.9	106,624 4.5	111,151 4.2	115,958 4.3	120,777 4.2	125,754 4.1
Personal savings rate	4.5 45.0	9.5 113.3	6.7 -29.9	5.1 -22.8	5.7 11.0	3.5 -39.4	3.7 7.4	4.3 14.6	4.4 2.8	4.3 -0.8	4.1 -4.7	4.0 -3.1	4.0 -1.3
Population (000s)	2,997 1.7	3,051 1.8	3,108 1.9	3,153 1.4	3,196 1.4	3,241 1.4	3,283 1.3	3,322 1.2	3,358 1.1	3,394 1.1	3,430 1.1	3,466 1.1	3,503 1.1
Labour force (000s)	1,666 1.8	1,709 2.6	1,765 3.2	1,810 2.6	1,844 1.9	1,859 0.8	1,900 2.2	1,935 1.8	1,963 1.4	1,988 1.3	2,013 1.2	2,035 1.1	2,055 1.0
Employment (000s)	1,584 2.7	1,630 2.9	1,671 2.5	1,717 2.8	1,758 2.4	1,787 1.7	1,827 2.2	1,861 1.9	1,889 1.5	1,914 1.3	1,940 1.3	1,961 1.1	1,984 1.2
Unemployment rate (percentage)	5.0	4.6	5.3	5.1	4.6	3.9	3.8	3.8	3.7	3.7	3.6	3.7	3.5
Retail sales (current \$)	31,738 7.8	34,560 8.9	37,663 9.0	39,318 4.4	43,372 10.3	48,596 12.0	51,683 6.4	53,857 4.2	56,122 4.2	58,447 4.1	61,135 4.6	64,026 4.7	67,009 4.7
Housing starts (units)	26,266 3.2	29,174 11.1	38,754 32.8	36,171 -6.7	36,270 0.3	37,986 4.7	32,679 -14.0	30,237 -7.5	27,555 -8.9	25,435 -7.7	24,768 -2.6	23,739 -4.2	22,812 -3.9

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Table 10—Key Economic Indicators: Alberta

(Forecast Completed: Dec. 13, 2005)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
GDP at market prices (current \$)	290,403 4.5	302,816 4.3	315,499 4.2	329,614 4.5	342,950 4.0	357,637 4.3	372,221 4.1	387,532 4.1	403,831 4.2	420,997 4.3	438,572 4.2	456,807 4.2	475,015 4.0
GDP at basic prices (current \$)	280,178 4.5	292,116 4.3	304,303 4.2	317,926 4.5	330,770 4.0	344,915 4.3	358,921 4.1	373,649 4.1	389,366 4.2	405,929 4.3	422,865 4.2	440,421 4.2	457,927 4.0
GDP at basic prices (constant 1997 \$)	172,152 2.8	176,527 2.5	180,724 2.4	185,548 2.7	189,554 2.2	194,480 2.6	198,694 2.2	203,183 2.3	207,807 2.3	212,650 2.3	217,584 2.3	222,697 2.3	227,638 2.2
Consumer price index (1992=1.0)	1.585 2.2	1.619 2.2	1.654 2.1	1.689 2.1	1.725 2.1	1.762 2.2	1.802 2.2	1.842 2.2	1.884 2.3	1.928 2.3	1.972 2.3	2.017 2.3	2.063 2.3
Implicit price deflator— GDP at basic prices (1997=1.0)	1.627 1.7	1.655 1.7	1.684 1.8	1.713 1.8	1.745 1.8	1.773 1.6	1.806 1.9	1.839 1.8	1.874 1.9	1.909 1.9	1.943 1.8	1.978 1.8	2.012 1.7
Average weekly wages (level \$)	973 3.1	1004 3.3	1040 3.5	1077 3.5	1114 3.4	1152 3.5	1193 3.6	1238 3.7	1282 3.6	1328 3.6	1376 3.6	1425 3.6	1476 3.6
Personal income (current \$)	170,942 4.3	178,201 4.2	185,978 4.4	193,984 4.3	202,090 4.2	210,818 4.3	219,746 4.2	229,349 4.4	239,251 4.3	249,566 4.3	260,308 4.3	271,446 4.3	282,916 4.2
Personal disposable income (current \$)	130,970 4.1	136,349 4.1	142,068 4.2	147,936 4.1	153,862 4.0	160,217 4.1	166,709 4.1	173,673 4.2	180,835 4.1	188,271 4.1	196,002 4.1	203,996 4.1	212,216 4.0
Personal savings rate	3.9 -1.1	3.9 0.5	4.0 1.2	4.0 1.4	4.0 -0.2	4.0 -0.6	4.0 0.1	4.0 0.4	4.0 0.0	4.0 -0.2	4.0 -0.5	4.0 -1.1	3.9 -0.8
Population (000s)	3,539 1.0	3,575 1.0	3,610 1.0	3,645 1.0	3,680 0.9	3,714 0.9	3,747 0.9	3,781 0.9	3,813 0.9	3,845 0.8	3,876 0.8	3,907 0.8	3,937 0.8
Labour force (000s)	2,074 0.9	2,090 0.8	2,106 0.8	2,120 0.7	2,133 0.6	2,146 0.6	2,157 0.5	2,168 0.5	2,179 0.5	2,190 0.5	2,201 0.5	2,211 0.5	2,221 0.5
Employment (000s)	2,003 1.0	2,020 0.8	2,035 0.7	2,051 0.8	2,062 0.5	2,076 0.7	2,085 0.4	2,095 0.5	2,106 0.5	2,117 0.5	2,128 0.5	2,139 0.5	2,148 0.4
Unemployment rate (percentage)	3.4	3.3	3.4	3.3	3.3	3.3	3.4	3.4	3.4	3.3	3.3	3.3	3.3
Retail sales (current \$)	70,136 4.7	73,384 4.6	76,851 4.7	80,419 4.6	84,080 4.6	88,010 4.7	92,040 4.6	96,335 4.7	100,666 4.5	105,139 4.4	109,803 4.4	114,614 4.4	119,569 4.3
Housing starts (units)	21,957 -3.7	21,242 -3.3	20,564 -3.2	19,977 -2.9	19,475 -2.5	18,995 -2.5	18,630 -1.9	18,263 -2.0	17,916 -1.9	17,589 -1.8	17,282 -1.7	16,989 -1.7	16,700 -1.7

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Table 11—Key Economic Indicators: British Columbia

(Forecast Completed: Dec. 13, 2005)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
GDP at market prices (current \$)	131,296 8.6	134,178 2.2	137,999 2.8	145,395 5.4	156,266 7.5	164,607 5.3	172,016 4.5	179,700 4.5	187,447 4.3	196,155 4.6	205,383 4.7	214,524 4.5	222,601 3.8
GDP at basic prices (current \$)	120,719 8.9	123,460 2.3	126,383 2.4	133,108 5.3	143,241 7.6	150,785 5.3	157,410 4.4	164,386 4.4	171,429 4.3	179,419 4.7	187,917 4.7	196,222 4.4	203,419 3.7
GDP at basic prices (constant 1997 \$)	113,958 4.5	115,800 1.6	119,990 3.6	122,711 2.3	127,900 4.2	132,159 3.3	136,711 3.4	140,788 3.0	144,612 2.7	148,612 2.8	152,830 2.8	156,626 2.5	159,977 2.1
Consumer price index (1992=1.0)	1.133 1.8	1.152 1.7	1.179 2.3	1.204 2.2	1.228 2.0	1.253 2.0	1.278 1.9	1.302 1.9	1.329 2.1	1.357 2.1	1.385 2.1	1.415 2.2	1.442 1.9
Implicit price deflator— GDP at basic prices (1997=1.0)	1.059 4.2	1.066 0.6	1.053 -1.2	1.085 3.0	1.120 3.3	1.141 1.9	1.151 0.9	1.168 1.4	1.185 1.5	1.207 1.8	1.230 1.8	1.253 1.9	1.272 1.5
Average weekly wages (level \$)	657 1.9	658 0.1	660 0.3	667 1.0	677 1.5	696 2.9	716 2.8	736 2.8	756 2.7	777 2.8	796 2.4	818 2.8	843 3.0
Personal income (current \$)	107,660 6.1	110,444 2.6	113,322 2.6	116,818 3.1	121,856 4.3	128,159 5.2	134,646 5.1	141,062 4.8	147,185 4.3	153,613 4.4	160,010 4.2	166,532 4.1	173,369 4.1
Personal disposable income (current \$)	81,908 5.8	85,044 3.8	88,095 3.6	90,976 3.3	94,570 4.0	98,825 4.5	103,745 5.0	108,708 4.8	113,385 4.3	118,303 4.3	123,201 4.1	128,297 4.1	133,453 4.0
Personal savings rate	-1.5 29.3	-1.4 5.6	-3.6 -158.7	-5.1 -41.8	-6.8 -34.4	-7.1 -3.9	-6.2 13.5	-5.6 9.4	-5.5 2.0	-5.5 -1.0	-5.8 -4.4	-5.9 -2.7	-6.0 -1.2
Population (000s)	4,037 0.7	4,073 0.9	4,111 0.9	4,147 0.9	4,191 1.1	4,237 1.1	4,276 0.9	4,313 0.9	4,350 0.9	4,387 0.9	4,424 0.9	4,463 0.9	4,504 0.9
Labour force (000s)	2,079 0.7	2,082 0.2	2,144 2.9	2,190 2.2	2,219 1.3	2,260 1.8	2,302 1.9	2,345 1.9	2,378 1.4	2,407 1.2	2,434 1.1	2,454 0.8	2,470 0.7
Employment (000s)	1,930 1.9	1,922 -0.4	1,960 2.0	2,014 2.8	2,060 2.3	2,123 3.1	2,169 2.2	2,211 1.9	2,243 1.5	2,276 1.4	2,308 1.4	2,333 1.1	2,348 0.7
Unemployment rate (percentage)	7.2	7.7	8.6	8.1	7.2	6.0	5.8	5.7	5.7	5.5	5.2	4.9	5.0
Retail sales (current \$)	38,435 5.7	40,719 5.9	43,265 6.3	44,421 2.7	47,217 6.3	49,971 5.8	52,133 4.3	54,302 4.2	56,486 4.0	58,863 4.2	61,402 4.3	64,267 4.7	67,150 4.5
Housing starts (units)	14,418 -11.6	17,234 19.5	21,625 25.5	26,174 21.0	32,925 25.8	33,617 2.1	31,371 -6.7	30,551 -2.6	29,434 -3.7	28,570 -2.9	28,295 -1.0	28,103 -0.7	27,854 -0.9

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Table 11—Key Economic Indicators: British Columbia

(Forecast Completed: Dec. 13, 2005)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
GDP at market prices (current \$)	231,469 4.0	240,511 3.9	249,375 3.7	258,633 3.7	268,315 3.7	278,182 3.7	288,856 3.8	299,936 3.8	311,245 3.8	323,090 3.8	335,275 3.8	347,959 3.8	361,134 3.8
GDP at basic prices (current \$)	211,390 3.9	219,498 3.8	227,388 3.6	235,681 3.6	244,394 3.7	253,200 3.6	262,737 3.8	272,672 3.8	282,839 3.7	293,499 3.8	304,429 3.7	315,780 3.7	327,577 3.7
GDP at basic prices (constant 1997 \$)	163,535 2.2	166,989 2.1	170,313 2.0	173,574 1.9	176,816 1.9	180,058 1.8	183,398 1.9	186,773 1.8	190,108 1.8	193,550 1.8	196,997 1.8	200,531 1.8	204,081 1.8
Consumer price index (1992=1.0)	1,472 2.1	1,501 2.0	1,532 2.1	1,563 2.0	1,594 2.0	1,628 2.1	1,662 2.1	1,699 2.2	1,738 2.3	1,778 2.3	1,818 2.3	1,860 2.3	1,903 2.3
Implicit price deflator— GDP at basic prices (1997=1.0)	1,293 1.7	1,314 1.7	1,335 1.6	1,358 1.7	1,382 1.8	1,406 1.7	1,433 1.9	1,460 1.9	1,488 1.9	1,516 1.9	1,545 1.9	1,575 1.9	1,605 1.9
Average weekly wages (level \$)	868 3.1	897 3.3	927 3.4	959 3.4	991 3.3	1,023 3.3	1,059 3.5	1,096 3.5	1,133 3.4	1,172 3.4	1,212 3.4	1,253 3.4	1,295 3.4
Personal income (current \$)	180,669 4.2	188,272 4.2	196,167 4.2	204,320 4.2	212,636 4.1	221,320 4.1	230,540 4.2	240,252 4.2	250,174 4.1	260,441 4.1	271,172 4.1	282,235 4.1	293,750 4.1
Personal disposable income (current \$)	138,906 4.1	144,627 4.1	150,493 4.1	156,558 4.0	162,726 3.9	169,142 3.9	175,939 4.0	183,092 4.1	190,383 4.0	197,906 4.0	205,770 4.0	213,859 3.9	222,256 3.9
Personal savings rate	-6.0 -0.9	-6.0 0.2	-6.0 0.7	-5.9 0.9	-6.0 -0.3	-6.0 -0.7	-6.0 0.0	-6.0 0.1	-6.0 -0.2	-6.0 -0.4	-6.1 -0.6	-6.1 -1.0	-6.2 -0.7
Population (000s)	4,545 0.9	4,587 0.9	4,628 0.9	4,670 0.9	4,711 0.9	4,753 0.9	4,794 0.9	4,835 0.9	4,876 0.9	4,917 0.8	4,957 0.8	4,997 0.8	5,037 0.8
Labour force (000s)	2,487 0.7	2,504 0.7	2,517 0.6	2,531 0.5	2,542 0.4	2,551 0.4	2,558 0.3	2,567 0.3	2,574 0.3	2,579 0.2	2,586 0.3	2,593 0.3	2,597 0.2
Employment (000s)	2,366 0.8	2,380 0.6	2,394 0.6	2,405 0.5	2,413 0.3	2,422 0.3	2,430 0.3	2,437 0.3	2,444 0.3	2,450 0.3	2,456 0.2	2,461 0.2	2,468 0.3
Unemployment rate (percentage)	4.9	4.9	4.9	5.0	5.1	5.1	5.0	5.0	5.0	5.0	5.0	5.1	5.0
Retail sales (current \$)	70,189 4.5	73,400 4.6	76,687 4.5	80,087 4.4	83,594 4.4	87,231 4.4	91,110 4.4	95,153 4.4	99,166 4.2	103,270 4.1	107,578 4.2	111,985 4.1	116,573 4.1
Housing starts (units)	27,566 -1.0	27,304 -0.9	26,943 -1.3	26,482 -1.7	26,025 -1.7	25,599 -1.6	25,216 -1.5	24,832 -1.5	24,454 -1.5	24,076 -1.5	23,706 -1.5	23,341 -1.5	22,978 -1.6

White area represents forecast data.

All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.

For each indicator, the first line is the level and the second line is the percentage change from the previous period.

Sources: The Conference Board of Canada; Statistics Canada; Canada Mortgage and Housing Corporation.

Provincial Outlook: Long-term Forecast 2006
by *Marie-Christine Bernard*

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Consensus Economics, Consensus Forecasts
February 12, 2007

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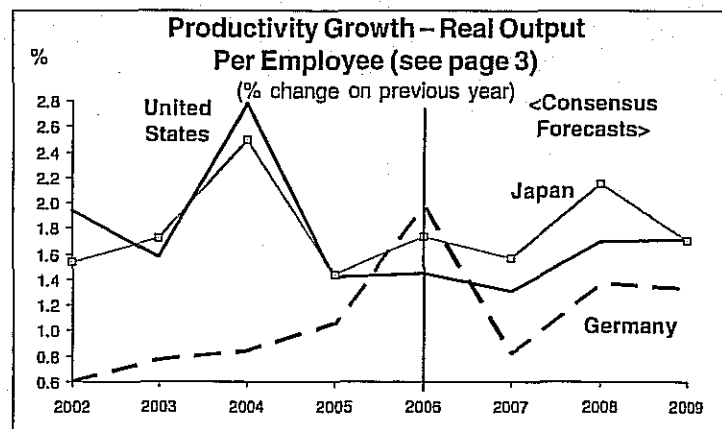
**Survey Date
February 12, 2007**

Every month, Consensus Economics surveys over 240 prominent financial and economic forecasters for their estimates of a range of variables including future growth, inflation, interest rates and exchange rates. More than 20 countries are covered and the reference data, together with analysis and polls on topical issues, is rushed to subscribers by express mail and e-mail.

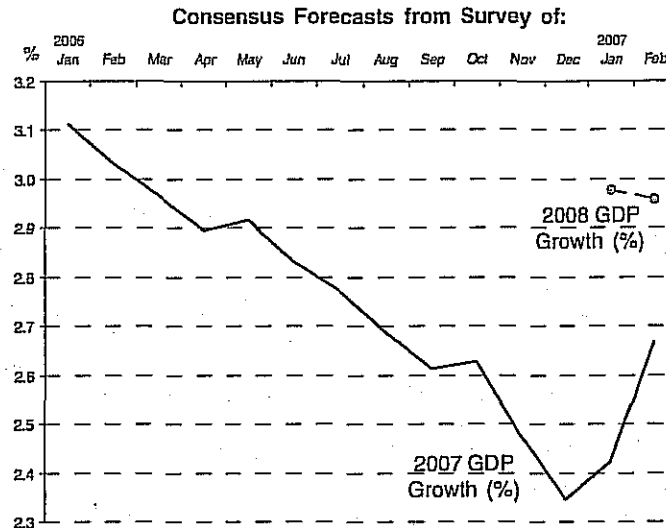
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Survey Highlights

- ❖ A stronger-than-expected fourth quarter 2006 performance by the **US** economy has led to 2007 forecasts for GDP and personal consumption growth being upgraded this month. The threat of a significant downturn in activity now appears less likely, although a modest slowdown is expected this year. Meanwhile, projections for the federal budget deficit have been reduced following robust tax receipts and a less expansionary draft budget for FY2008 (see pages 2, 4 and 5).
- ❖ 2007 GDP growth forecasts for **Germany** have seen an upgrade following indications that the strong expansion seen in 2006 will extend into 2007. Industrial production forecasts look especially upbeat (pages 2, 8 and 9).
- ❖ The outlook for the **UK** has also improved over the past month, with strong fourth quarter GDP growth and early evidence of further robust gains in early 2007. However, interest rate rises over the past six months may eventually lead to more subdued activity (see pages 12 and 13).
- ❖ Our special survey this month includes analysis and forecasts for **Productivity and Wages**, comparing long-term trends in **output per employee**, as well as **unit wage costs**, in all our featured countries (pages 3, 28 and 29).

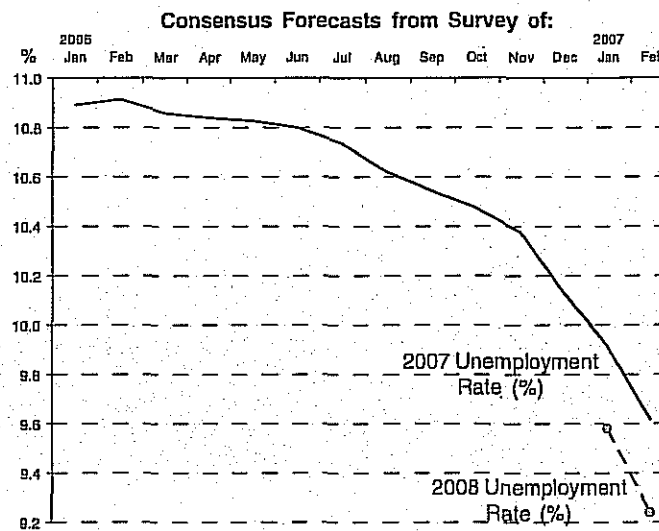


In the United States (page 4), forecasts for 2007 GDP growth have jumped markedly this month. This follows the release of the advance national accounts for the fourth quarter of 2006 which showed an acceleration in GDP growth from 2.0% in the third quarter to 3.5% (in q-o-q annualized terms), boosted by a 4.4% surge in personal consumption. Our panel's expectations for consumption have also risen this month. Spending has been supported by stock market gains and firmer hiring; moreover, concerns that the housing downturn would smother consumer activity appear to have receded. Headline inflation remains benign, despite the economy picking up steam. Core personal consumption expenditures (PCE) price inflation stood at an annualized 2.1% during the fourth quarter, but the Fed chairman's recent congressional testimony laid out the expectation that core price increases would fall to 2% or below next year.



* % change on previous year	Historical Data				Consensus Forecasts for 2007 from Survey of					
	2003	2004	2005	2006	Sep '06	Oct	Nov	Dec	Jan '07	Feb
Gross Domestic Product*	2.5	3.9	3.2	3.4	2.6	2.6	2.5	2.3	2.4	2.7
Personal Consumption*	2.8	3.9	3.5	3.2	2.7	2.8	2.8	2.7	2.9	3.1
Consumer Prices*	2.3	2.7	3.4	3.2	2.7	2.5	2.3	2.0	1.8	1.7

In Germany (page 8), as evidence of the economy's robust performance continues to accumulate, forecasts for GDP growth have moved higher. With the economy having expanded at its fastest pace since 2000 last year (together with data revealing steep drops in the unemployment rate and surging industrial production) our panel has been steadily revising its projections for 2007 upward. It was initially expected that an increase in value-added tax (VAT) from 16% to 19% (introduced on January 1) would severely constrict activity. However, business confidence surveys have shown only a slight decline in sentiment from the high levels seen over the course of 2006, buoying hopes that underlying improvements in economic conditions can withstand the negative effects of the tax hike. Indeed, with unemployment falling fast and the likelihood of higher wage growth, consumer spending may begin to pick-up in spite of the rise in VAT.



* % change on previous year	Historical Data				Consensus Forecasts for 2007 from Survey of					
	2003	2004	2005	2006	Sep '06	Oct	Nov	Dec	Jan '07	Feb
Gross Domestic Product*	-0.2	1.2	0.9	2.7	1.2	1.2	1.3	1.5	1.5	1.7
Industrial Production*	0.1	2.5	2.8	5.6	2.4	2.6	2.8	3.0	3.0	3.2
Unemployment Rate (% year ave.)	10.5	10.5	11.7	10.8	10.5	10.5	10.4	10.1	9.9	9.6

NOTES AND ABBREVIATIONS

- GDP - Gross Domestic Product
- na - not available
- OECD - Organisation for Economic Co-operation and Development
- y-o-y - year-on-year
- q-o-q - quarter-on-quarter
- IMF - International Monetary Fund
- Emu - European economic and monetary union
- ECB - European Central Bank
- m-o-m - month-on-month

Measures of GDP, Consumption, Business Investment and Industrial Production are expressed in real (i.e. inflation-adjusted) terms. These variables, and certain others as indicated, are expressed as percentage changes over the previous year.

In addition to their regular forecasts, this month we asked for our panellists' projections for growth in numbers of employees and wage or employment costs between now and 2019, along with real and nominal GDP growth forecasts over the same period. Using indices derived from these projections, we have calculated forecasts for broad measures of **productivity growth** (real and nominal GDP per employee) and an indicator of **unit wage costs** (calculated by dividing the employment cost indices by the indices of real GDP per employee). Although some of the wage definitions used are imperfect measures for total compensation per employee, our calculated indices do provide a general indication of future trends in unit wage costs. **Figures in normal type are official data, with consensus forecasts – based on the averages of our panels' forecasts – shown in italics.**

United States											
% change over previous year	- Ann. Avge -						- Annual Averages -				
	1997-01	2002	2003	2004	2005	2006	2007	2008	2009	2010-14	2015-19
Real GDP	3.5	1.6	2.5	3.9	3.2	3.4	2.7	3.0	3.0	3.0	3.0
Total Employment	1.6	-0.3	0.9	1.1	1.8	1.9	1.3	1.2	1.3	1.2	1.1
Real Output (GDP) per Employee	1.9	1.9	1.6	2.8	1.4	1.4	1.3	1.7	1.7	1.8	1.9
Employment Costs	3.7	3.6	3.8	3.7	3.3	3.1	3.4	3.3	3.3	3.3	3.2
Unit Wage Costs	1.8	1.7	2.1	0.9	1.8	1.6	2.0	1.6	1.6	1.5	1.3
Nominal GDP	5.3	3.4	4.7	6.9	6.3	6.4	4.8	5.0	5.3	5.1	5.1
Nominal Output per Employee	3.7	3.7	3.7	5.7	4.5	4.4	3.4	3.7	4.0	3.9	4.0

Japan											
% change over previous year	- Ann. Avge -						- Annual Averages -				
	1997-01	2002	2003	2004	2005	2006	2007	2008	2009	2010-14	2015-19
Real GDP	0.5	0.3	1.5	2.7	1.9	2.2	1.9	2.3	1.8	1.8	1.6
Total Employment	-0.2	-1.3	-0.3	0.2	0.4	0.4	0.3	0.1	0.1	-0.2	-0.3
Real Output (GDP) per Employee	0.7	1.5	1.7	2.5	1.4	1.7	1.6	2.1	1.7	1.9	1.9
Total Cash Earnings	-0.3	-2.3	-0.4	-2.7	0.6	0.2	0.9	1.4	2.1	2.1	2.1
Unit Wage Costs	-1.0	-3.8	-2.1	-5.1	-0.8	-1.6	-0.6	-0.8	0.4	0.2	0.2
Nominal GDP	-0.3	-1.3	-0.2	1.6	0.6	1.2	1.8	2.6	3.2	2.8	2.7
Nominal Output per Employee	0.0	0.0	0.1	1.4	0.2	0.8	1.5	2.5	3.0	2.9	3.0

Our twice-yearly special survey on trends in productivity – measured as **real output per employee** – coincides with the release of the **US** productivity report for the final quarter of 2006. The Bureau of Labor Statistics showed **output per hour** in the non-farm business sector soaring by 3.0% in q-o-q annualized terms. This compares with a 0.1% contraction in the previous quarter, but the rebound also stems from a relatively low base: output per hour for the year as a whole was up by just 2.1%, its lowest rate of increase since 1997. Our panel's own projections suggest that the pace of **real output per US worker** will hover around 1.7-1.8%, with **Japanese** productivity expected to surpass US rates for much of the forecast horizon. However, when compared with the **Euro zone**, for example, US GDP and productivity growth remain on a relatively high gradient, thanks in part to the speed with

which firms have been able to incorporate new technology. In contrast, many Euro zone countries like **Germany**, **France** and **Italy** face structural impediments to faster productivity growth. For one thing, over-regulation (including France's 35-hour week law which limits working hours) is considered a hindrance. Higher labour costs and unemployment are also holding back potential GDP growth and, therefore, productivity. In addition, the region faces an aging working population and declining labour force. **Japan**, too, suffers from a similar demographic problem. However, our panel's forecasts for real output per employee suggest that years of restructuring in the corporate sector have contributed to a leaner and more competitive industrial structure and financial system. Last year's corporate profits windfall has also helped.

Tables continued on page 28

Germany											
% change over previous year	- Ann. Avge -						- Annual Averages -				
	1997-01	2002	2003	2004	2005	2006	2007	2008	2009	2010-14	2015-19
Real GDP	2.1	0.0	-0.2	1.2	0.9	2.7	1.7	2.0	1.8	1.7	1.6
Total Employment	1.0	-0.6	-0.9	0.4	-0.1	0.7	0.9	0.6	0.5	0.3	0.2
Real Output (GDP) per Employee	1.1	0.6	0.8	0.8	1.1	2.0	0.8	1.4	1.3	1.4	1.4
Wages & Salaries per Employee	1.2	1.4	1.3	0.6	0.4	0.6	1.3	1.7	1.5	1.5	1.5
Unit Wage Costs	0.1	0.8	0.5	-0.3	-0.7	-1.3	0.5	0.3	0.2	0.1	0.0
Nominal GDP	2.4	1.4	0.9	2.1	1.5	3.0	3.1	3.1	3.0	3.0	3.0
Nominal Output per Employee	1.4	2.0	1.8	1.7	1.7	2.2	2.2	2.4	2.6	2.7	2.8

	Average % Change on Previous Calendar Year										Annual Total									
	Gross Domestic Product		Personal Consumption		Business Investment		Pre - Tax Corporate Profits		Industrial Production		Consumer Prices		Producer Prices		Employment Costs		Auto and Light Truck Sales (mn units)		Housing Starts (mn units)	
Economic Forecasters	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008
Bear Stearns	3.1	na	3.3	na	5.9	na	6.2	na	2.5	na	2.0	na	na	na	na	na	17.0	na	1.75	na
Wells Capital	3.1	3.0	3.3	2.8	4.9	4.9	6.1	6.6	3.2	3.6	1.9	2.5	2.5	3.6	3.6	3.5	16.4	16.6	1.55	1.71
The Conference Board	2.9	2.5	3.4	3.0	8.5	-1.0	6.0	-1.3	3.6	4.2	2.1	3.3	2.5	2.3	3.8	3.8	16.5	16.2	1.52	1.61
Univ of Michigan - RSQE	2.9	2.7	3.6	3.4	5.1	5.3	5.0	3.0	2.8	4.0	1.4	2.0	1.0	2.0	na	na	16.6	16.7	1.61	1.68
JP Morgan	2.9	2.6	3.3	2.4	6.0	6.0	6.9	2.4	2.1	2.8	1.7	2.5	0.3	1.8	3.5	3.6	16.4	16.1	1.51	1.65
Eaton Corporation	2.8	3.6	3.0	2.6	4.7	7.6	7.6	9.9	3.0	4.2	2.2	2.0	-0.6	1.1	3.3	3.3	16.2	16.6	1.53	1.67
Macroeconomic Advisers	2.8	3.2	3.4	3.0	6.1	5.1	1.4	3.7	2.9	3.3	1.7	2.5	2.2	1.7	na	na	16.3	16.3	1.49	1.54
Morgan Stanley	2.8	3.0	3.2	2.7	5.2	5.3	3.0	4.4	2.9	4.6	1.6	1.9	0.8	1.2	na	na	16.3	16.2	1.47	1.50
Bank America Corp	2.8	3.5	3.3	3.1	4.5	5.3	na	na	2.1	3.7	1.1	2.3	0.8	1.6	na	na	16.4	16.8	1.60	1.66
General Motors	2.8	3.0	3.3	3.0	5.7	4.1	1.4	4.0	2.7	3.3	2.0	2.5	1.9	2.0	3.3	3.2	na	na	1.49	1.49
Nat Assn of Home Builders	2.8	3.1	3.2	3.0	5.0	4.5	5.0	5.0	2.6	3.5	1.8	2.3	1.0	1.9	3.1	3.1	16.4	16.5	1.56	1.71
Swiss Re	2.7	3.1	3.2	2.5	4.8	5.8	na	na	2.8	3.1	1.3	1.9	0.8	1.0	na	na	16.0	16.0	1.56	1.62
Lehman Brothers	2.7	2.8	3.0	2.0	6.7	7.6	6.4	6.9	2.3	2.3	1.9	2.5	na	na	3.6	3.8	16.1	16.0	1.59	1.71
Moody's Economy.com	2.7	3.3	3.1	2.4	5.8	5.5	5.3	6.8	2.1	2.6	1.8	2.1	1.1	1.4	3.6	3.5	16.2	15.9	1.53	1.65
Fannie Mae	2.7	3.0	3.2	2.7	6.3	4.9	2.5	5.8	2.9	3.7	1.7	2.4	0.3	1.4	na	na	na	na	1.57	1.58
Global Insight	2.7	3.0	3.3	3.0	5.7	4.5	6.4	3.2	2.2	2.1	1.5	2.3	1.2	2.9	3.1	3.1	16.4	16.6	1.54	1.58
Standard & Poor's	2.6	2.9	3.2	2.8	5.6	4.3	na	na	2.1	2.0	1.5	2.3	1.2	2.9	3.1	3.1	16.4	16.6	1.52	1.56
Daimler Chrysler	2.6	3.2	3.3	3.3	5.1	4.4	6.2	6.2	3.0	3.6	1.8	2.2	1.9	1.7	na	na	na	na	1.43	1.40
Inforum - Univ of Maryland	2.6	2.8	2.8	2.2	4.4	4.6	-3.8	2.8	2.4	3.3	1.5	2.6	0.3	2.0	na	na	16.3	16.4	1.61	1.67
Wachovia Corp	2.6	3.0	3.1	2.6	3.8	4.9	7.6	8.9	1.8	2.8	2.0	2.0	1.4	1.4	3.3	2.9	16.4	16.6	1.52	1.55
Georgia State University	2.6	2.8	2.9	2.7	6.1	4.4	4.9	3.9	2.6	5.5	1.4	1.8	1.8	1.3	3.3	3.2	15.8	16.1	1.48	1.54
Northern Trust	2.5	na	3.0	na	5.5	na	na	na	1.1	na	1.8	na	na	na	na	na	16.1	na	1.43	na
DuPont	2.4	3.4	2.8	2.9	5.6	7.0	4.6	6.0	2.1	3.2	1.8	2.4	1.0	1.5	3.2	3.3	16.4	16.9	1.60	1.65
Econ Intelligence Unit	2.3	2.6	2.7	2.3	na	na	na	na	1.3	2.5	2.1	2.6	2.3	2.0	na	na	16.2	16.1	na	na
Goldman Sachs	2.3	2.5	3.0	2.4	4.3	4.0	1.5	3.8	2.2	2.6	1.8	2.0	1.0	1.3	3.6	3.4	16.0	16.4	1.43	1.59
Merrill Lynch	2.3	2.6	3.1	2.4	6.4	4.7	na	na	-0.1	1.9	1.6	1.8	na	na	na	na	16.0	16.3	1.22	1.22
United States Trust	2.3	na	2.9	na	5.1	na	4.7	na	0.7	na	1.7	na	na	na	na	na	15.1	na	1.31	na
Ford Motor Corp	2.3	na	2.7	na	6.1	na	na	na	2.3	na	2.0	na	1.2	na	na	na	na	na	1.43	na
Consensus (Mean)	2.7	3.0	3.1	2.7	5.5	4.9	4.5	4.8	2.3	3.3	1.7	2.3	1.2	1.8	3.4	3.3	16.2	16.4	1.51	1.59
Last Month's Mean	2.4	3.0	2.9	2.7	6.1	5.2	4.8	6.0	2.5	3.2	1.8	2.3	0.9	1.7	3.4	3.4	16.2	16.3	1.52	1.58
3 Months Ago	2.5		2.8		6.9		4.4		2.9		2.3		1.7		3.4		16.3		1.59	
High	3.1	3.6	3.6	3.4	8.5	7.6	7.6	9.9	3.6	5.5	2.2	3.3	2.5	3.6	3.8	3.8	17.0	16.9	1.75	1.71
Low	2.3	2.5	2.7	2.0	3.8	-1.0	-3.8	-1.3	-0.1	1.9	1.1	1.8	-0.6	1.0	3.1	2.9	15.1	15.9	1.22	1.22
Standard Deviation	0.2	0.3	0.2	0.4	0.9	1.6	2.7	2.5	0.8	0.9	0.3	0.3	0.8	0.6	0.2	0.3	0.3	0.3	0.10	0.11
Comparison Forecasts																				
CBO (Jan. '07)	2.3	3.0									1.9	2.3								
OMB (Feb. '07)	2.7	3.0									2.1	2.6								
IMF (Sep. '06)	2.9		2.6								2.9									
OECD (Nov. '06)	2.4	2.7	3.0	2.8							2.3	2.3								

Government and Background Data

President - Mr. George W. Bush (Republican). Congress -The Democrats have majorities in both the House of Representatives (lower house) and the Senate (upper house). Next Elections - November 4, 2008 (Presidential and Congressional). Nominal GDP - \$12,456bn (2005). Population - 298.2mn (mid-year, 2005).

Quarterly Consensus Forecasts

Historical Data and Forecasts (bold *italics*) From Survey of December 11, 2006

	2006				2007				2008			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Gross Domestic Product	3.7	3.5	3.0	3.0	2.2	2.2	2.3	2.7	2.9	3.0		
Personal Consumption	3.4	3.0	2.7	3.3	2.8	2.8	2.7	2.6	2.7	2.7		
Consumer Prices	3.7	4.0	3.3	2.0	2.2	1.6	1.5	2.6	2.5	2.4		

Historical Data

* % change on previous year	2003	2004	2005	2006
Gross Domestic Product*	2.5	3.9	3.2	3.4
Personal Consumption*	2.8	3.9	3.5	3.2
Business Investment*	1.0	5.9	6.8	7.4
Pre - Tax Corporate Profits*	12.1	19.1	12.5	21.1 e
Industrial Production*	1.1	2.5	3.2	4.1
Consumer Prices*	2.3	2.7	3.4	3.2
Producer Prices*	3.2	3.6	4.9	2.9
Employment Costs*	3.8	3.7	3.3	3.1
Auto & Light Truck Sales, mn	16.6	16.9	16.9	16.5
Housing Starts, mn	1.85	1.95	2.07	1.82
Unemployment Rate, %	6.0	5.6	5.1	4.7
Current Account, US\$ bn	-528	-665	-792	-860 e
Federal Budget Balance, fiscal years, US\$ bn	-378	-413	-318	-248
3 mth Treasury Bill, % (end yr)	0.9	2.2	4.0	4.9
10 Year Trsy Bond, % (end yr)	4.4	4.2	4.4	4.7

Year Average	Annual Total		Fiscal Years (Oct-Sep)		Rates on Survey Date				
					5.0%		4.8%		
Unemployment Rate (%)	Current Account (US\$ bn)		Federal Budget Balance (US\$ bn)		3 month Treasury Bill Rate (%)		10 Year Treasury Bond Yield (%)		
2007 2008	2007 2008	FY 06-07	FY 07-08	End May'07	End Feb'08	End May'07	End Feb'08		
4.4	na	na	na	-175	na	5.1	na	5.0	na
4.5	4.4	-845	-858	-178	-200	5.2	5.5	5.0	5.1
4.7	4.8	-877	-875	-172	-225	5.5	6.5	5.0	5.0
4.5	4.4	-781	-796	-171	-167	5.0	5.0	4.9	5.3
4.5	4.5	-850	-896	-225	-260	na	na	na	na
4.4	4.2	na	na	-175	-145	4.9	4.6	4.8	4.7
4.7	4.8	-831	-896	-204	-240	5.2	5.2	5.0	5.2
4.8	5.0	-748	-704	-210	-285	5.1	5.0	5.0	4.8
4.7	4.5	-850	-855	-275	-230	5.1	5.3	4.9	5.2
4.7	4.9	-725	-695	-205	-252	5.2	5.1	5.0	5.3
4.8	4.9	-815	-850	-210	-240	5.0	4.8	4.8	4.9
4.5	4.2	-765	-754	-180	-160	5.0	4.8	4.9	5.0
4.7	4.8	-884	-950	-200	-200	5.1	5.2	4.8	4.8
4.7	4.8	-811	-781	-337	-309	5.0	5.0	4.8	5.2
4.8	5.0	na	na	-256	-297	5.0	4.7	4.8	4.9
4.7	4.7	-807	-812	-225	-230	5.0	4.9	4.9	4.9
4.7	4.8	-803	-792	na	na	na	na	na	na
5.0	4.9	na	na	na	na	5.0	5.0	4.9	5.0
4.7	4.9	na	na	na	na	5.0	4.9	4.9	5.0
4.7	4.7	-862	-818	-195	-197	5.0	5.2	4.7	4.9
4.8	4.8	-783	-742	-146	-189	4.9	4.4	5.0	5.2
4.8	na	na	na	na	na	5.1	na	4.7	na
4.8	4.9	na	na	-300	-260	na	na	na	na
4.8	5.0	-855	-864	-305	-397	na	na	na	na
4.9	5.3	-893	-930	-200	-175	4.5	4.5	4.5	4.7
5.1	5.3	-767	-707	-300	na	5.3	3.8	4.6	4.4
4.9	na	-840	na	-265	na	4.8	na	4.6	na
5.1	na	na	na	-252	na	4.8	na	4.8	na
4.7	4.8	-820	-820	-223	-233	5.0	5.0	4.8	5.0
4.8	4.9	-834	-820	-260	-277				
4.9		-848		-272					
5.1	5.3	-725	-695	-146	-145	5.5	6.5	5.0	5.3
4.4	4.2	-893	-950	-337	-397	4.5	3.8	4.5	4.4
0.2	0.3	47	76	51	60	0.2	0.5	0.2	0.2
4.7	4.9			-172	-98				
4.6	4.8			-244	-239				
4.9		-959							
4.8	5.1								

Consumer Spending Behind Improvement in Outlook

Following a slowdown in the second and third quarters, the advance GDP release for the final three months of 2006 showed a marked turnaround in activity. The strength of the outturn countered previous fears that the sharp correction in the housing market, coupled with lacklustre job creation and soaring oil prices, would rein in consumer spending throughout the rest of 2006. GDP growth jumped from 3.0% in the previous quarter to 3.4% y-o-y, powered by a 3.7% surge in personal consumption and leading to a significant upgrade in the 2007 consensus forecasts for GDP and consumption growth this month. Furthermore, the news has underscored the ongoing resilience in household spending, fostered by improving labour and income fundamentals. In addition, last year's buoyant stock market and upbeat profits announcements by many listed companies offset some of the adverse impact from the property retrenchment on consumers' equity-based assets. December did see a 1.6% (m-o-m) decline in residential construction while pending home sales contracted by 7.6% y-o-y, underscoring the general slump in the homesellers market over the past year. However, in m-o-m terms, sales surged by massive 4.9%, suggesting that the slowdown in the housing sector may already have troughed.

Good news on the consumer spending front, though, has been tempered by a 0.1% (q-o-q) fall in business investment over the fourth quarter. 2007 and 2008 consensus forecasts for business spending have slipped this month although they remain in line with similar rates of growth seen over the past three years. Elsewhere, the White House has submitted its draft FY2008 budget for congressional review. The prospect of no further tax cuts, coupled with non-discretionary expenditure (excluding defence spending) kept to a minimum represent part of an effort to balance the budget by 2012. Whether the shortfall can be wiped out given pressing uncertainties like the war in Iraq remains to be seen, while an opposition-controlled Congress could push for increased spending on social programs. Our panel predicts a modest widening of the deficit next year, although forecasts have seen a sharp downgrade from last month's survey, due in part to recent robust tax receipt data.

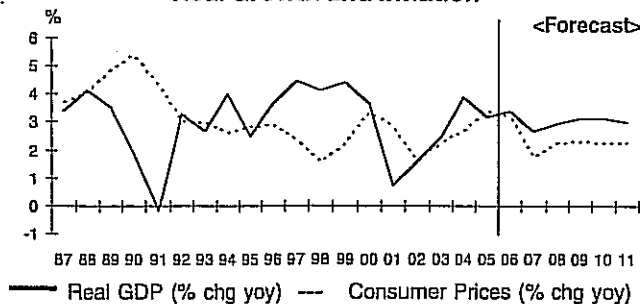
Direction of Trade – First Half 2006

Major Export Markets (% of Total)		Major Import Suppliers (% of Total)	
Canada	23.0	Canada	16.9
Mexico	13.2	China	14.6
Japan	5.7	Mexico	10.6
Latin America	21.4	Asia (ex. Japan)	27.2
Asia (ex. Japan)	18.7	Latin America	18.1
Middle East	4.1	Middle East	4.2

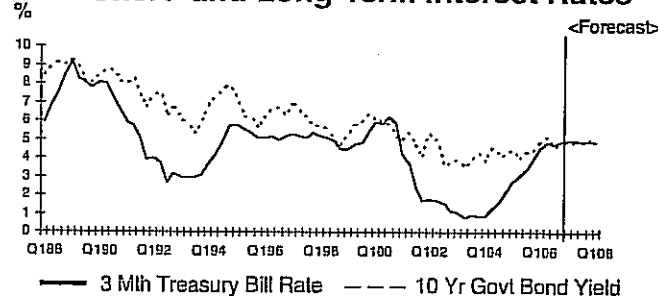
US Fed Funds Rate – February 12, 2007 = 5.25%

FORECASTS	End Mar. 2007	End June 2007	End Sep. 2007	End Dec. 2007
Consensus Mean Average:	5.26%	5.25%	5.16%	5.11%
Mode (most frequent forecast):	5.25%	5.25%	5.25%	5.25%

Real Growth and Inflation



Short- and Long-Term Interest Rates



	Average % Change on Previous Calendar Year												Annual Total					
	Gross Domestic Product		Private Consumption		Business Investment		Industrial Production		Consumer Prices		Domestic Corporate Goods Prices		Total Cash Earnings (nominal)		New Car Registrations (mn)		Housing Starts (mn)	
	国内総生産		民間消費		民間設備投資		鉱工業生産		消費者物価		卸売物価		現金給与総額(名目)		新車登録台数(百万台)		親設住宅着工(百万戸)	
Economic Forecasters	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008
JP Morgan - Japan	2.5	2.6	1.6	2.3	7.1	5.7	3.2	3.4	0.1	0.5	2.0	2.2	na	na	na	na	na	na
Nikko Citigroup	2.3	2.6	1.6	2.0	6.8	5.7	3.8	2.5	0.1	0.4	2.7	2.1	na	na	na	na	na	na
Goldman Sachs	2.2	2.8	1.4	2.0	7.8	8.5	2.6	3.8	0.4	0.8	1.6	2.2	na	na	na	na	na	na
Merrill Lynch - Japan	2.2	2.0	1.1	2.1	5.3	5.8	3.4	3.4	0.3	0.9	na	na	na	na	na	na	na	na
Credit Suisse	2.1	2.7	1.2	1.9	5.1	7.3	3.3	na	0.0	0.4	na	na	na	na	na	na	na	na
UBS	2.1	2.3	1.6	2.1	4.0	6.3	4.4	4.7	0.2	1.0	2.2	1.7	1.0	2.2	3.1	3.2	1.32	1.30
Toyota Motor Corporation	2.0	2.0	1.6	1.5	4.0	3.0	2.0	2.0	0.2	0.2	1.5	1.0	na	na	3.2	3.2	1.20	1.20
Nomura Securities	2.0	na	1.8	na	5.5	na	3.8	na	-0.1	na	1.1	na	0.4	na	na	na	na	na
Global Insight	1.9	2.1	2.4	2.7	4.6	2.5	0.8	0.6	-0.4	1.2	0.3	-0.5	na	na	na	na	1.29	1.29
Mitsubishi Research Institute	1.9	na	1.4	na	5.5	na	2.2	na	0.3	na	1.1	na	na	na	na	na	1.31	na
Daiwa Institute of Research	1.8	na	1.1	na	4.4	na	0.9	na	na	na	0.4	na	0.7	na	na	na	na	na
Econ Intelligence Unit	1.8	1.6	1.1	1.2	na	na	1.6	1.1	0.8	1.0	na	na	na	na	na	na	na	na
Bank of Tokyo-Mitsubishi UFJ	1.7	na	1.5	na	4.8	na	2.1	na	0.1	na	1.2	na	0.5	na	na	na	1.29	na
Mizuho Research Institute	1.7	2.4	1.5	1.7	3.9	5.5	2.7	3.2	0.1	0.5	1.2	1.2	1.0	1.2	na	na	1.27	1.25
NLI Research Institute	1.7	na	2.1	na	4.6	na	2.4	na	0.3	na	0.6	na	na	na	na	na	1.27	na
Mitsubishi UFJ Research	1.5	2.3	0.7	2.2	7.7	8.5	0.0	4.6	0.4	0.6	2.1	2.2	1.6	1.0	na	na	1.26	1.34
HSBC	1.5	1.8	1.2	1.4	4.8	4.6	1.7	2.0	0.3	0.4	0.9	0.1	na	na	na	na	na	na
ITOCHU Institute	1.5	2.2	1.1	2.3	5.4	4.1	2.3	2.4	0.2	0.6	1.5	0.7	1.7	1.6	3.1	3.1	1.29	1.30
Deutsche Securities	1.5	2.5	1.3	2.3	1.9	3.8	0.5	3.1	0.5	0.4	0.7	0.0	0.5	0.8	na	na	na	na
Consensus (Mean)	1.9	2.3	1.4	2.0	5.2	5.5	2.3	2.8	0.2	0.6	1.3	1.2	0.9	1.4	3.1	3.2	1.28	1.28
Last Month's Mean	1.8	2.3	1.4	2.0	5.1	5.3	2.3	2.8	0.3	0.7	1.4	1.2	1.0	1.4	3.2	3.3	1.26	1.28
3 Months Ago	2.0		1.8		5.1		2.3		0.4		1.1		1.3		3.3		1.26	
High	2.5	2.8	2.4	2.7	7.8	8.5	4.4	4.7	0.8	1.2	2.7	2.2	1.7	2.2	3.2	3.2	1.32	1.34
Low	1.5	1.6	0.7	1.2	1.9	2.5	0.0	0.6	-0.4	0.2	0.3	-0.5	0.4	0.8	3.1	3.1	1.20	1.20
Standard Deviation	0.3	0.4	0.4	0.4	1.5	1.9	1.2	1.2	0.3	0.3	0.7	1.0	0.5	0.6	0.1	0.1	0.03	0.05
Comparison Forecasts																		
IMF (Sep. '06)	2.1		2.0						0.7									
OECD (Nov. '06)	2.0	2.0	1.4	1.6					0.3	0.8								

Government and Background Data

Prime Minister - Mr. Shinzo Abe (LDP). Parliament - The LDP-led coalition, with the New Komeito party, has a majority in the lower House of Representatives, or *Shugin* (323 out of 480 seats). Next Elections - by 2010 (lower house). Nominal GDP - ¥502.6trn (2005). Population - 128.1mn (mid-year, 2005). Yen/\$ Exchange Rate - 110.2 (average, 2005).

Quarterly Consensus Forecasts

Historical Data and Forecasts (bold italics) From Survey of December 11, 2006

	2006				2007				2008				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Gross Domestic Product	2.7	2.2	1.7	2.0	1.9	1.9	2.1	2.1	2.1	2.1	2.3		
Private Consumption	1.9	1.5	0.0	0.6	1.1	1.1	2.4	1.9	1.9	2.2			
Consumer Prices	-0.1	0.2	0.6	0.2	0.3	0.3	0.2	0.3	0.4	0.6			

Historical Data

* % change on previous year	2003	2004	2005	2006
Gross Domestic Product*	1.5	2.7	1.9	2.2
Private Consumption*	0.4	1.6	1.5	0.9
Business Investment*	4.7	5.4	6.6	7.3
Industrial Production*	3.3	5.2	1.5	4.2
Consumer Prices*	-0.2	0.0	-0.3	0.2
Domestic Corporate Goods Prices* ^e	-0.8	1.2	1.7	3.0
Total Cash Earnings (nominal)*	-0.4	-2.7	0.6	0.2
New Car Registrations, mn	3.2	3.4	3.4	3.1
Housing Starts, mn	1.16	1.19	1.24	1.29
Unemployment Rate, %	5.3	4.7	4.4	4.1
Current Account, ¥tn	15.8	18.6	18.3	19.1 e
General Govt Budget Balance, SNA basis, fisc. years, ¥tn	-36.0	-33.9	-28.6 e	-20.4 e
3 mth CD's, % (end yr)	0.1	0.1	0.1	0.5
10 Yr Govt Bond, % (end yr)	1.4	1.4	1.5	1.7

e = consensus estimate based on latest survey

Year Average	Annual Total		Fiscal Years (Apr-Mar)		Rates on Survey Date				
					0.6%		1.7%		
Unemployment Rate (%)	Current Account (¥tn)	General Government Budget Balance (¥tn)		3 month Yen Cert of Deposit (%)		10 Year Govt Bond Yield (%)			
失業率	経常収支	一般政府財政収支 (SNA ベース、兆円)		3ヵ月物円建譲渡性預金		10年物国債利回り			
2007 2008	2007 2008	FY 07-08	FY 08-09	End May'07	End Feb'08	End May'07	End Feb'08		
3.9	3.7	18.1	16.3	na	na	0.4	0.9	1.8	1.9
3.9	3.8	19.2	20.0	na	na	na	na	1.9	2.0
3.8	3.4	21.2	19.1	-15.1	-14.1	0.7	1.1	1.8	2.1
3.7	3.3	21.8	22.5	na	na	0.6	0.9	1.8	2.0
na	na	18.2	na	na	na	na	na	na	na
4.0	3.9	22.8	22.9	-19.3	-19.3	0.6	0.9	1.9	2.4
3.8	3.4	16.0	16.0	na	na	0.6	0.7	1.7	1.7
4.0	na	25.7	na	-9.5	na	0.6	0.8	1.7	2.2
3.8	4.1	16.1	14.9	na	na	0.7	1.2	1.8	2.3
4.0	na	17.8	na	na	na	na	na	na	na
4.0	na	20.5	na	na	na	na	na	na	na
3.8	3.5	na	na	na	na	na	na	na	na
3.9	na	20.3	na	na	na	na	na	1.8	2.1
3.8	3.6	23.1	25.4	na	na	0.8	1.2	1.8	2.1
3.9	na	18.8	na	na	na	0.8	0.9	1.8	2.3
3.9	3.9	18.9	19.5	na	na	0.6	0.6	1.6	1.9
4.3	4.3	15.5	16.7	na	na	0.6	0.8	1.4	1.5
3.8	3.5	22.0	24.6	na	na	0.8	1.2	1.8	2.0
4.1	4.2	24.9	30.0	-22.8	-21.6	0.6	0.8	1.7	1.9
3.9	3.7	20.1	20.7	-16.7	-18.3	0.6	0.9	1.7	2.0
3.9	3.8	20.3	20.3	-17.9	-20.0				
3.9		18.4		-16.1					
4.3	4.3	25.7	30.0	-9.5	-14.1	0.8	1.2	1.9	2.4
3.7	3.3	15.5	14.9	-22.8	-21.6	0.4	0.6	1.4	1.5
0.1	0.3	3.0	4.6	5.7	3.8	0.1	0.2	0.1	0.2
4.0									
3.9	3.6								

Divergent Data Present Uncertain Outlook for 2007

The preliminary national accounts for the final quarter of 2006 were released after our survey deadline, but initial estimates show GDP growth rebounding following a muted outturn in the July-September period. Going forward, however, it is hard to say whether the pick-up in momentum evidenced at the end of last year will carry over into 2007, especially given the ongoing divergence in data from the household and corporate sectors. Department store sales, for example, saw a sharp 2.7% y-o-y drop in December while retail trade also suffered declines. Sales were affected by the unseasonably warm weather which hit demand for winter clothes and heating products. Consumers have not been helped by the lack of support coming from income fundamentals: contracted wages fell by 0.6% y-o-y in December while special payments (which usually reflect end-year bonuses) declined by 0.5%. Given that job creation is relatively firm and companies have benefited from strong profit gains over the past year, the weakness in wages indicates that firms have chosen to reinvest their earnings in technological upgrading and R&D. Consequently, projections for 2007 cash earnings are slightly down this month. The outlook for business investment, though, remains robust following the January Tankan's upbeat assessment of near-term profits and spending. Moreover, signs of positive manufacturing activity and firm export demand also bode well.

Soft consumption data may have played a part in the Bank of Japan's decision to leave interest rates unchanged at its January 18 meeting. The announcement, however, prompted speculation over whether the government had pressured the bank to remain on hold. The bank's decision, though, is backed by data showing core consumer prices rising by a mere 0.1% (y-o-y) in December. Given the weakness in consumer activity and wages, there are renewed concerns that prices could slip back into deflation. Headline inflation forecasts have consequently been downgraded this month, although our panel continues to expect a modest rise in prices this year. However, observers have also suggested that an upbeat fourth quarter GDP showing could spur a rate hike at the BoJ's next meeting (see box, below).

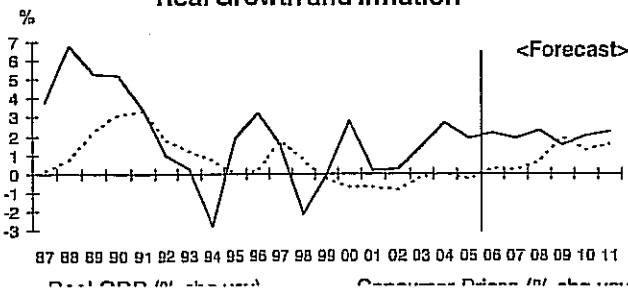
Direction of Trade – First Half 2006

Major Export Markets (% of Total)		Major Import Suppliers (% of Total)	
United States	22.9	China	20.1
China	13.9	United States	12.1
South Korea	7.9	Saudi Arabia	6.5
Asia (inc. the above)	47.4	Asia (inc. the above)	43.6
Latin America	4.2	Middle East	19.3
Middle East	3.0	Latin America	3.2

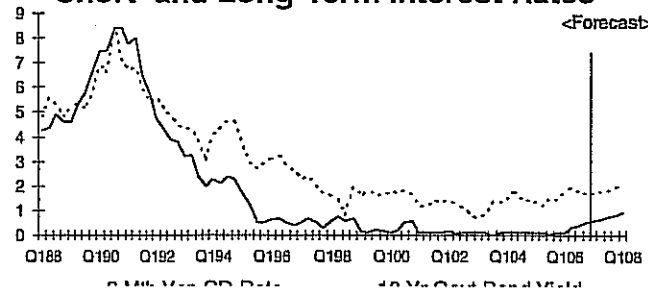
Japan Uncollateralized Overnight Call rate – February 12, 2007 = 0.25%

FORECASTS	End Mar. 2007	End June 2007	End Sep. 2007	End Dec. 2007
Consensus Mean Average:	0.42%	0.50%	0.55%	0.74%
Mode (most frequent forecast):	0.50%	0.50%	0.50%	0.75%

Real Growth and Inflation



Short- and Long-Term Interest Rates



	Average % Change on Previous Calendar Year													
	Gross Domestic Product		Private Consumption		Machinery & Equipment Investment		Industrial Production		Consumer Prices		Producer Prices		Negotiated Wages and Salaries	
	<i>Bruttoinlandsprodukt</i>		<i>Privater Verbrauch</i>		<i>Ausrüstungs-investitionen</i>		<i>Produktion im Produzierenden Gewerbe</i>		<i>Preisindex für die Lebenshaltung</i>		<i>Index für Erzeugerpreise</i>		<i>Tariflohn- und gehaltsniveau</i>	
Economic Forecasters	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008
Citigroup	2.4	2.7	1.3	1.5	10.0	3.4	4.5	5.0	2.0	1.5	2.9	2.0	1.8	2.0
MM Warburg	2.3	1.8	0.9	1.1	4.7	3.9	2.9	2.4	1.7	1.4	2.6	2.0	2.2	2.2
Goldman Sachs	2.1	2.3	0.9	0.5	3.4	2.9	3.6	3.7	1.7	1.3	1.7	1.9	na	na
IfW - Kiel Institute	2.1	1.8	0.9	1.3	10.0	1.3	na	na	2.2	1.7	na	na	1.8	2.3
UBS	2.0	2.4	1.3	1.9	3.4	4.0	3.1	3.2	1.5	1.4	2.4	1.6	na	na
DekaBank	1.9	1.9	0.2	0.7	4.6	2.1	2.4	1.8	2.3	1.5	1.6	1.2	2.4	2.2
IFO - Munich Institute	1.9	2.3	0.5	1.5	6.8	8.0	na	na	2.3	1.5	na	na	2.5	2.5
RWI Essen	1.9	na	0.3	na	6.5	na	na	na	1.9	1.5	2.3	1.7	na	na
Global Insight	1.8	2.0	1.0	1.7	5.2	3.3	4.5	2.3	2.0	1.3	2.3	1.4	3.0	3.3
Sal Oppenheim	1.8	2.1	0.4	2.2	7.5	4.7	na	na	2.0	1.7	na	na	na	na
SEB	1.8	2.2	0.7	1.5	4.8	3.8	3.0	3.0	1.9	1.7	2.0	1.5	2.4	2.5
WestLB	1.8	2.0	0.5	1.5	5.2	3.3	4.5	4.0	2.0	1.5	3.0	3.0	2.3	2.5
WGZ Bank	1.8	2.3	0.9	2.0	5.0	3.0	3.5	2.5	2.0	1.5	2.0	1.0	2.5	3.3
BHF-Bank	1.7	1.7	0.8	1.0	3.8	3.6	3.0	2.5	1.7	1.6	2.0	1.8	2.8	2.5
DIW - Berlin	1.7	2.5	0.2	1.8	4.7	6.2	na	na	2.2	1.5	na	na	2.3	2.3
HWWI	1.7	2.0	0.0	1.3	6.3	4.2	2.3	2.8	2.0	1.4	2.5	1.5	2.2	2.4
Econ Intelligence Unit	1.6	1.9	0.2	1.2	na	na	2.2	2.9	2.3	1.8	2.4	1.7	na	na
Bank Julius Baer	1.6	2.0	0.5	1.1	3.5	2.8	3.0	2.2	2.0	1.7	2.0	2.3	1.8	1.8
BayernLB	1.6	2.1	0.3	1.5	5.0	6.0	4.0	4.0	2.2	1.5	3.5	3.0	2.2	2.3
Helaba Frankfurt	1.6	2.2	0.0	1.0	5.0	4.0	2.5	2.0	1.9	1.5	2.0	2.0	2.3	2.5
Landesbank Berlin	1.6	1.1	0.2	0.6	7.3	1.7	3.6	0.9	1.6	1.5	2.4	1.5	2.7	2.0
UniCredit MIB	1.6	1.5	0.6	1.2	3.5	3.2	na	na	2.1	1.6	na	na	2.5	2.5
HSBC Trinkaus	1.5	1.3	0.1	0.9	4.1	2.8	2.4	1.9	1.7	1.0	2.4	1.3	1.8	1.8
DZ Bank	1.5	2.0	0.4	1.4	5.6	3.9	3.6	3.2	1.9	1.6	1.9	1.6	na	na
Commerzbank	1.4	2.0	1.2	1.9	6.6	6.8	2.6	3.0	1.4	1.0	1.5	0.8	2.8	2.8
Dresdner Bank	1.4	2.3	0.3	2.0	6.6	6.4	2.5	3.3	1.9	1.5	2.0	2.3	1.8	2.5
Lehman Brothers	1.3	2.0	-0.3	1.1	na	na	3.2	1.3	1.6	1.5	3.3	3.1	na	na
Deutsche Bank	1.0	1.4	-0.3	0.8	2.2	2.6	2.6	3.1	2.1	1.2	2.0	1.8	2.0	1.8
Consensus (Mean)	1.7	2.0	0.5	1.3	5.4	3.9	3.2	2.8	1.9	1.5	2.3	1.8	2.3	2.4
Last Month's Mean	1.5	2.0	0.4	1.3	5.3	3.9	3.0	2.7	2.2	1.5	2.4	1.8	2.2	2.3
3 Months Ago	1.3		0.1		5.0		2.8		2.2		2.4		2.1	
High	2.4	2.7	1.3	2.2	10.0	8.0	4.5	5.0	2.3	1.8	3.5	3.1	3.0	3.3
Low	1.0	1.1	-0.3	0.5	2.2	1.3	2.2	0.9	1.4	1.0	1.5	0.8	1.8	1.8
Standard Deviation	0.3	0.4	0.4	0.5	1.9	1.6	0.7	0.9	0.2	0.2	0.5	0.6	0.4	0.4
Comparison Forecasts														
Government (Jan. '07)	1.7		0.3		5.0									
Eur Commission (Nov. '06)	1.2	2.0	-0.1	1.9	4.8	2.7								
IMF (Sep. '06)	1.3		0.3											
OECD (Nov. '06)	1.7	2.4	0.3	1.8	6.0	4.1								

Government and Background Data

Chancellor - Mrs. Angela Merkel (Christian Democratic Party or CDU).
 Parliament - A coalition of the CDU/CSU and SPD has a large majority in the 614-seat Bundestag (lower house); the CDU/CSU has a majority in the Bundesrat (upper house). Next Elections - 2009 (Bundestag).
 Nominal GDP - Euro2,247bn (2005). Population - 82.7mn mid-year (2005). \$/Euro Exchange Rate - 1.244 (average, 2005).

Quarterly Consensus Forecasts

Historical Data and Forecasts (bold italics) From Survey of December 11, 2006

	2006				2007				2008	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Gross Domestic Product	1.9	2.7	2.8	3.2	2.3	1.6	1.5	1.1	1.7	1.8
Private Consumption	0.9	0.7	0.8	2.4	0.5	0.9	0.5	-0.1	1.1	1.3
Consumer Prices	2.0	1.9	1.6	1.4	2.5	2.2	2.1	2.1	1.3	1.4

Percentage Change (year-on-year).

Historical Data

* % change on previous year	2003	2004	2005	2006
Gross Domestic Product*	-0.2	1.2	0.9	2.7
Private Consumption*	-0.1	0.1	0.1	0.6
Machinery & Eqpt Investment*	-0.1	4.2	6.1	7.3
Industrial Production*	0.1	2.5	2.8	5.6
Consumer Prices*	1.1	1.7	2.0	1.7
Producer Prices*	1.7	1.6	4.6	5.5
Negotiated Wages & Salaries*	2.5	1.9	1.5	1.7 e
Unemployment Rate, %	10.5	10.5	11.7	10.8
Current Account, Euro bn	40.3	81.9	90.3	99.4 e
General Govt. Budget Balance				
(Maastricht definition), Euro bn	-86.9	-82.5	-72.4	-46.3 e
3 mth Euro, % (end yr)	2.1	2.2	2.5	3.7
10 Yr German Govt Bond, % (end yr)	4.3	3.7	3.3	4.0

e = consensus estimate based on latest survey

Year Average		Annual Total				Rates on Survey Date			
Unemployment Rate (%)		Current Account (Euro bn)	General Govt Budget Bal (Maastricht) (Euro bn)		3.8%		4.1%		
Arbeitslosenquote, % der Erwerbspers. insgesamt		Leistungsbilanz (Euro bn)	Finanzierungs-saldo des Staates (Maastricht) (Euro bn)		3 month Euro Rate (%)		10 Year German Govt Bond Yield (%)		
2007	2008	2007	2008	2007	2008	End May'07	End Feb'08	End May'07	End Feb'08
9.5	9.2	94.2	114.6	-36.6	-32.0	4.0	4.2	4.0	4.0
9.7	9.6	108.0	110.0	-30.0	-28.0	4.0	4.0	4.1	3.8
9.2	8.5	87.0	79.0	-39.0	-28.2	4.2	4.5	4.2	4.2
9.8	9.3	109.0	115.0	-28.6	-31.1	3.9	3.8	4.2	4.5
9.7	8.7	78.0	80.3	-35.5	-36.5	4.0	4.3	3.9	4.2
9.3	9.2	125.5	145.7	-40.3	-36.4	3.9	4.3	4.1	4.1
10.0	9.6	na	na	-30.2	-26.3	3.8	na	4.0	na
9.7	na	95.0	na	-34.0	na	3.9	4.0	4.0	4.3
9.2	8.7	111.6	115.8	-23.9	-22.0	4.0	3.9	4.2	4.1
9.4	9.0	na	na	na	na	4.0	4.3	4.0	4.3
9.5	9.2	95.0	90.0	-30.0	-25.0	3.9	4.1	4.2	4.4
9.7	9.0	na	na	-37.0	-30.0	3.9	4.1	4.0	4.2
9.3	8.9	95.0	90.0	na	na	3.9	4.2	4.1	4.1
9.6	9.0	105.0	110.0	-35.0	-35.0	na	na	na	na
9.8	9.1	109.4	115.6	-27.9	-15.0	3.9	4.1	4.1	4.3
10.0	9.5	115.0	120.0	-31.9	-30.5	3.9	4.0	4.1	4.3
10.1	9.8	na	na	na	na	na	na	na	na
9.6	9.7	na	na	-47.0	-48.0	4.0	3.7	4.1	4.3
9.4	9.2	105.0	110.0	-30.0	-25.0	4.1	4.2	4.2	4.2
9.7	9.4	110.0	118.0	-35.0	-35.0	4.2	4.2	4.3	4.2
9.8	10.1	115.0	127.0	-42.0	-38.0	3.9	3.7	3.9	4.0
9.7	9.4	85.0	88.0	-30.0	-28.0	3.9	4.3	4.0	4.4
10.2	10.0	88.0	86.0	-35.0	-30.0	3.8	3.6	3.7	3.7
9.4	9.2	107.0	96.0	-35.0	-32.0	4.2	4.2	3.9	4.0
9.4	8.8	110.0	95.0	-25.0	-26.0	3.9	3.9	3.9	4.2
9.3	8.8	100.0	90.0	-35.0	-39.0	3.9	4.0	3.9	4.1
9.5	8.9	112.7	120.5	-28.8	-31.0	3.9	3.9	4.0	3.6
9.9	9.7	114.4	138.6	-31.7	-29.7	3.9	3.4	3.9	3.8
9.6	9.2	103.3	107.0	-33.4	-30.7	4.0	4.0	4.0	4.1
9.9	9.6	98.4	101.6	-35.2	-31.9				
10.4		92.5							
10.2	10.1	125.5	145.7	-23.9	-15.0	4.2	4.5	4.3	4.5
9.2	8.5	78.0	79.0	-47.0	-48.0	3.8	3.4	3.7	3.6
0.3	0.4	11.7	18.4	5.3	6.5	0.1	0.3	0.1	0.2
9.6									

Early Signs Point to Limited Impact from Tax Hike

Preliminary figures from the Federal Statistics Office estimate the economy to have expanded by 2.7% in 2006, its fastest rate of growth since 2000, as a strong industrial sector, upbeat corporate balance sheets and recovering domestic demand bolstered activity. Private consumption, however, increased by only 0.6% compared with 2005, although this was an improvement following years of stagnation. In contrast, machinery and equipment investment soared by 7.3% in 2006, building on the previous year's 6.1% rise. The relatively buoyant performance of the economy, though, is not expected to extend into 2007. Consensus forecasts project GDP growth of 1.7% before a recovery to 2.0% in 2008. The most prominent factor behind the expected slowdown in activity this year is the increase in the value-added tax (VAT) rate from 16% to 19%, which came into effect on January 1. Analysts predict that this will impact negatively on private consumption, especially in the first few months of the year. The hike was also expected to result in a spike in consumer spending towards the end of 2006. Early evidence from retail data appears to confirm this: December sales (including cars) rose sharply by 4.4% m-o-m, advancing by a firm 1.4% q-o-q for the fourth quarter as a whole. Looking ahead, however, January's consumer price outturn suggested only a slight impact from the VAT hike: inflation accelerated to 1.6% y-o-y from 1.4% in December, which was much lower than expected by most economists. Consequently, forecasts for consumer prices this year have been downgraded sharply.

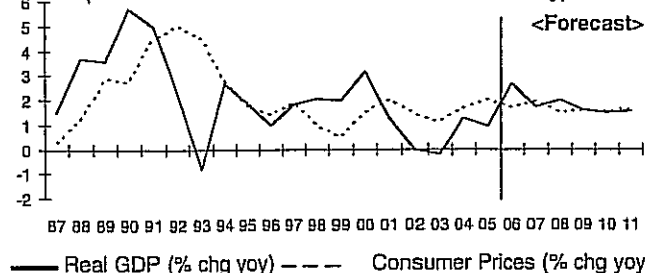
Industrial production weakened in the fourth quarter after exceptionally high outturns in the second and third quarters. Output was up by 0.1% q-o-q in the final quarter, compared with 2.6% and 2.1% growth, in the second and third, respectively. Our panel predicts more subdued activity in 2007, despite business confidence surveys having remained remarkably firm over recent months and pointing to a continued upbeat performance so far this year. Given the downside threat to the outlook posed by the VAT increase, uncertain global demand and rising interest rates, our panel's relatively upbeat shift in sentiment underscores the resilience of economic activity at the moment.

Direction of Trade – First Half 2006

Major Export Markets (% of Total)		Major Import Suppliers (% of Total)	
France	10.0	Netherlands	12.0
United States	8.5	France	8.7
United Kingdom	7.5	Belgium	7.2
Eastern Europe	15.3	Eastern Europe	16.6
Asia (ex. Japan)	7.2	Asia (ex. Japan)	10.9
Middle East	2.7	Latin America	1.9

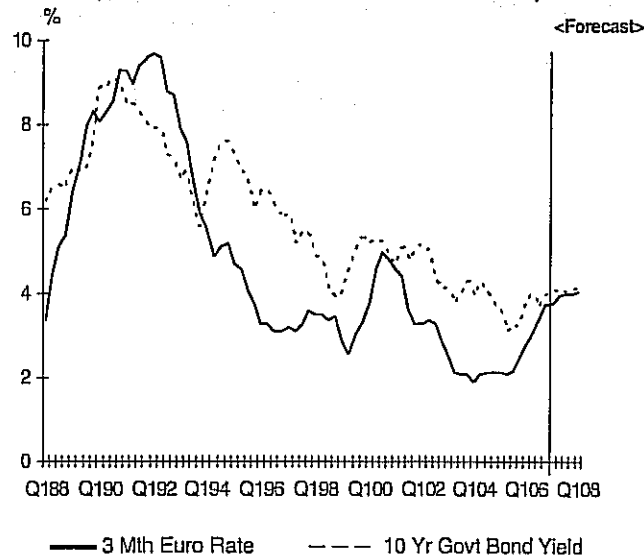
Real Growth and Inflation

(data for 1986-1991 are for former West Germany)



Short- and Long-Term Interest Rates

(short rate = 3 mth Euro-Dm for Q187 to Q498)



	Average % Change on Previous Calendar Year											
	Gross Domestic Product		Household Consumption		Business Investment		Industrial Production (excl. construction, energy and food)		Consumer Prices		Hourly Wage Rates	
	<i>Produit Intérieur Brut</i>		<i>Consommation des Ménages</i>		<i>Investissements des Entreprises</i>		<i>Production Industrielle (hors énergie et IAA)</i>		<i>Prix à la Consommation</i>		<i>Taux de Salaire Horaire</i>	
Economic Forecasters	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008
Goldman Sachs	2.2	2.1	2.3	1.8	4.3	4.1	1.8	1.7	1.3	1.7	na	na
OFCE	2.2	na	2.5	na	3.5	na	na	na	1.7	na	3.3	na
Credit Agricole	2.1	2.1	2.6	2.3	4.1	3.6	1.4	1.6	1.6	1.7	na	na
JP Morgan	2.1	2.0	2.6	2.2	4.7	3.7	na	na	1.3	1.7	na	na
Total	2.1	2.2	2.2	2.3	3.6	3.8	1.6	1.6	1.6	1.6	na	na
Societe Generale	2.0	2.0	2.4	2.3	3.5	3.3	na	na	1.5	1.6	3.0	2.8
UBS	2.0	2.1	2.5	2.3	2.9	3.1	-0.1	2.0	1.5	1.8	na	na
ING Financial Markets	1.9	2.1	2.4	2.6	2.9	2.7	0.5	0.7	1.7	1.6	na	na
Econ Intelligence Unit	1.8	1.9	2.2	1.9	na	na	na	na	1.6	1.8	na	na
BIPE	1.8	2.1	2.5	2.6	3.7	4.7	1.9	2.2	1.5	1.5	2.6	2.8
BNP-Paribas	1.8	1.8	2.6	2.4	2.8	3.5	0.4	1.2	1.1	2.0	2.7	2.8
Centre Prev l'Expansion	1.8	na	2.3	na	5.1	na	1.0	na	1.5	na	na	na
Exane	1.8	na	2.3	na	2.8	na	1.7	na	1.8	na	2.5	na
GAMA	1.8	1.5	2.0	2.1	3.6	3.5	-0.3	na	1.6	1.5	3.0	3.0
Coe-Rexecode	1.7	1.8	2.3	2.2	3.7	3.6	na	na	1.4	1.5	2.6	2.6
IXIS CIB	1.7	1.6	2.4	2.0	3.0	2.8	na	na	1.3	1.7	na	na
Natixis	1.7	1.9	2.2	2.1	3.6	3.0	0.8	1.2	1.6	1.8	2.7	2.6
HSBC France	1.5	1.7	2.2	1.9	2.1	3.1	0.9	1.2	1.6	1.7	2.5	2.4
Consensus (Mean)	1.9	1.9	2.4	2.2	3.5	3.5	1.0	1.5	1.5	1.7	2.8	2.7
Last Month's Mean	1.9	2.0	2.3	2.2	3.4	3.4	1.1	1.7	1.5	1.6	2.8	2.7
3 Months Ago	2.0		2.3		3.5		1.5		1.6		2.8	
High	2.2	2.2	2.6	2.6	5.1	4.7	1.9	2.2	1.8	2.0	3.3	3.0
Low	1.5	1.5	2.0	1.8	2.1	2.7	-0.3	0.7	1.1	1.5	2.5	2.4
Standard Deviation	0.2	0.2	0.2	0.2	0.7	0.5	0.7	0.5	0.2	0.1	0.3	0.2
Comparison Forecasts												
Government (Sep. '06)	2.3		2.7						1.9			
Eur Commission (Nov. '06)	2.3	2.1	2.5	2.3								
IMF (Sep. '06)	2.3		2.5									
OECD (Nov. '06)	2.2	2.3	2.5	2.6								

Government and Background Data

President - Mr. Jacques Chirac (UMP). Prime Minister - Mr. Dominique de Villepin (UMP). Parliament - The centre-right Union for a Popular Movement (UMP) has 353 out of the 577 seats in the National Assembly. Next Elections - April/May 2007 (presidential). Nominal GDP - Euro1,707bn (2005). Population - 60.5mn (mid-year, 2005). \$/Euro Exchange Rate - 1.244 (average, 2005).

Quarterly Consensus Forecasts

Historical Data and Forecasts (bold italics) From Survey of December 11, 2006

	2006		2007				2008			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Gross Domestic Product	1.4	2.6	1.8	2.4	2.3	1.6	2.1	1.8	2.0	2.0
Household Consumption	2.4	3.1	2.8	2.6	2.5	2.3	2.2	2.2	2.2	2.3
Consumer Prices	1.8	2.0	1.7	1.6	1.6	1.3	1.4	1.8	1.7	1.7

Historical Data

* % change on previous year	2003	2004	2005	2006
Gross Domestic Product*	1.1	2.0	1.2	2.0
Household Consumption*	2.3	2.5	2.2	2.7 e
Business Investment*	0.3	4.2	3.8	3.9 e
Industrial Production*	-1.0	2.4	0.3	1.3
Consumer Prices*	2.1	2.2	1.7	1.7
Hourly Wage Rates*	2.8	2.9	3.0	3.0 e
Unemployment Rate, %	9.9	10.0	10.0	9.1
Current Account, Euro bn	7.0	-5.6	-27.0	-28.1 e
General Govt. Budget Balance (Maastricht definition), Euro bn	-66.6	-60.6	-49.3	-47.4 e
3 mth Euro, % (end yr)	2.1	2.2	2.5	3.7
10 Yr French Govt Bond, % (end yr)	4.4	3.7	3.3	4.0

e - consensus estimate based on latest survey

Year Average	Annual Total				Rates on Survey Date				
					3.8%		4.2%		
Unemployment Rate (%)	Current Account (Euro bn)	General Govt Budget Balance (Maastricht) (Euro bn)		3 month Euro Rate (%)	10 Year French Govt Bond Yield (%)				
Taux de Chômage (%)	Solde Courant (Euro md)	Balance Budgétaire (Maastricht) (Euro md)		Taux d'intérêt 3 mois Euro (%)	Rendement des obligations d'Etat, 10 ans (%)				
2007 2008	2007 2008	2007 2008		End May'07	End Feb'08	End May'07	End Feb'08		
8.5	8.3	-9.7	-1.0	-55.8	-58.2	4.2	4.5	4.2	4.2
8.4	na	-44.2	na	-53.4	na	3.8	3.8	4.1	4.2
8.4	8.1	-18.4	-40.0	-45.9	-47.7	4.1	4.2	4.3	4.2
8.2	7.8	-16.0	-16.0	-54.0	-54.0	4.0	4.2	3.9	3.7
8.6	8.2	-25.0	-20.0	-42.0	-40.0	3.9	4.0	4.0	4.1
8.4	8.2	-29.0	-28.0	-48.0	-40.0	4.0	4.2	4.2	4.0
8.6	8.3	-36.6	-36.1	-42.4	-38.4	4.0	4.3	3.9	4.2
8.4	8.4	na	na	na	na	3.9	4.2	3.9	4.2
8.9	8.9	na	na	na	na	na	na	na	na
8.3	8.2	-33.0	-33.0	-54.1	-51.5	3.8	4.0	4.0	4.4
8.3	7.9	-30.0	-33.0	-45.0	-48.0	4.0	3.3	3.9	3.5
8.5	na	-30.0	na	-45.9	na	3.9	4.2	4.2	4.2
8.6	na	-29.0	na	-50.0	na	na	na	na	na
8.5	8.6	-30.0	na	na	na	4.0	4.2	4.0	4.2
8.7	8.6	-28.5	-35.0	-53.3	-49.3	3.9	3.8	4.1	4.0
8.7	8.6	na	na	-47.0	na	3.9	3.6	4.0	3.9
8.4	8.3	-28.0	-28.0	-45.7	-43.6	4.1	3.5	3.9	3.9
8.8	8.8	na	na	na	na	3.7	3.2	3.7	3.7
8.5	8.3	-27.7	-27.0	-48.7	-47.1	3.9	3.9	4.0	4.0
8.5	8.3	-28.5	-29.1	-47.8	-44.9				
8.5		-25.5							
8.9	8.9	-9.7	-1.0	-42.0	-38.4	4.2	4.5	4.3	4.4
8.2	7.8	-44.2	-40.0	-55.8	-58.2	3.7	3.2	3.7	3.5
0.2	0.3	8.6	11.7	4.6	6.5	0.1	0.4	0.2	0.2
8.5	8.2								

Industry Shows Modest Signs of Improvement

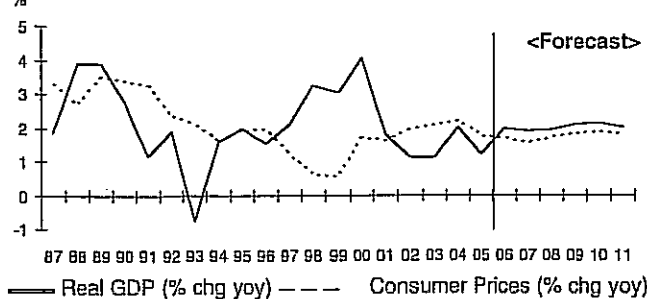
Latest data suggest that the economy finished 2006 on an upbeat note, with the "flash estimate" of GDP showing growth between 0.6–0.7% q-o-q during the fourth quarter. No breakdown was available with the release, but the news comes on the back of stagnant growth in the previous three-month period and clearly points to an acceleration in activity. Elsewhere, production registered a 1.0% (m-o-m) jump in December, rebounding from November's 0.4% decline. A 1.2% rise in auto output helped to boost production but, for the fourth quarter as a whole, industry barely expanded, rising by only 0.1% q-o-q after the third quarter's 0.8% contraction. Consequently, it is still unclear whether the December outturn represents the beginning of an entrenched turnaround in the sector. Our panel's production forecasts, though, have edged down from last month. Forward-looking surveys of manufacturing confidence, however, point to firm sentiment on the back of falling energy prices, a weaker euro and solid domestic demand. Indeed, December indicators of consumer spending surpassed initial expectations, with manufactured goods' consumption soaring from 0.9% m-o-m in November to 1.3%, lifting the y-o-y figure from an already buoyant 4.2% pace to 6.8%. Car sales rebounded by 2.4% m-o-m after plunging in November, while non-automobile-related spending was also up, underscoring the broad-based nature of the expansion in spending. Given that durable goods' consumption accounts for a significant part of total spending, household consumption during the October-December period most likely drove the recovery for yet another quarter. Trade data further underscores the firmness in domestic demand, with import growth advancing in November. Consequently, the 2007 household consumption forecast has risen this month.

Latest tax receipts could indicate that the 2006 budget deficit may even have narrowed from €49.3bn in the previous year. The final outturn has yet to be confirmed, but the recovery in domestic demand, coupled with some deficit-cutting measures, most likely helped. However, the forthcoming presidential election has led to uncertainty over both main candidates' economic and social programmes, and our panel expects the fiscal deficit to widen in 2007 and 2008.

Direction of Trade – First Half 2006

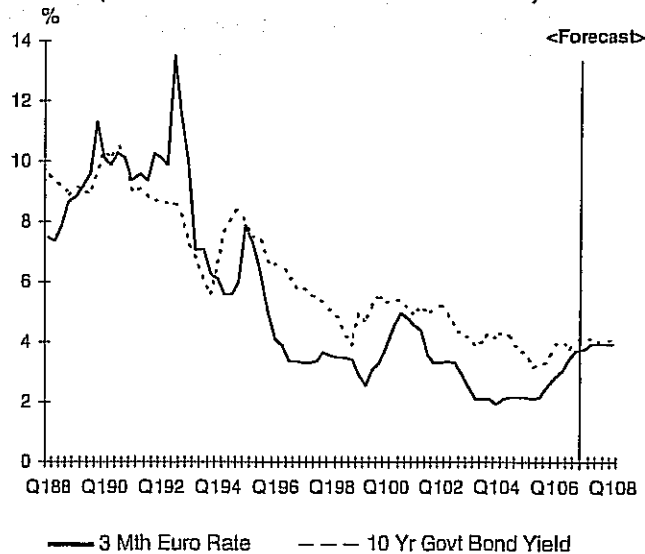
Major Export Markets (% of Total)		Major Import Suppliers (% of Total)	
Germany	15.2	Germany	18.9
Spain	10.1	Belgium	10.9
Italy	9.0	Italy	8.3
Eastern Europe	8.6	Eastern Europe	7.9
Asia (ex. Japan)	6.4	Asia (ex. Japan)	7.0
Africa	4.8	Africa	4.0

Real Growth and Inflation



Short- and Long-Term Interest Rates

(short rate = 3 mth Euro-Fir for Q187 to Q498)



	Average % Change on Previous Calendar Year																	
	Gross Domestic Product		Household Consumption		Gross Fixed Investment		Company Trading Profits		Manufacturing Production		Retail Prices (underlying rate)		Consumer Prices Index (HICP)		Output Prices		Average Earnings	
Economic Forecasters	2007 2008		2007 2008		2007 2008		2007 2008		2007 2008		2007 2008		2007 2008		2007 2008		2007 2008	
ITEM Club	2.9	2.9	2.9	3.0	6.5	3.2	9.0	8.0	1.5	1.6	3.0	2.3	2.5	1.9	2.1	2.0	5.0	5.1
Lloyds TSB Financial Markets	2.9	2.6	2.5	2.3	5.0	3.6	8.6	5.0	1.0	1.8	2.9	2.5	2.4	2.2	1.3	1.5	4.5	4.2
Citigroup	2.9	2.8	2.6	2.6	9.3	9.3	12.2	7.1	1.0	0.8	3.2	3.3	2.4	2.2	1.5	1.5	4.0	4.1
Credit Suisse	2.8	2.8	2.6	2.5	5.3	5.0	na	na	na	na	2.7	2.3	2.3	2.0	na	na	na	na
Goldman Sachs	2.8	2.7	2.7	2.7	5.0	3.2	8.7	2.4	1.2	1.5	3.0	2.5	2.2	1.8	2.2	2.0	4.9	4.5
JP Morgan	2.8	2.6	2.2	2.1	4.6	4.5	na	na	na	na	na	na	2.2	1.8	2.6	2.5	na	na
Lombard Street Research	2.8	1.8	2.4	2.0	4.6	1.8	na	na	na	na	2.4	na	2.3	na	na	na	4.6	4.4
Merrill Lynch	2.8	2.3	2.5	2.1	4.7	2.8	na	na	1.6	1.8	2.8	2.6	2.0	1.8	na	na	4.1	4.2
NIESR	2.8	2.4	2.6	1.9	5.9	2.8	na	na	3.4	2.8	3.2	2.6	2.6	2.2	na	na	na	na
UBS	2.8	2.7	2.4	2.5	4.8	4.2	na	na	1.1	1.0	3.2	2.9	2.4	1.9	na	na	3.9	4.4
Oxford Economics	2.7	2.5	2.3	2.4	4.8	3.5	8.1	3.5	0.1	1.3	3.0	2.5	2.4	2.0	1.8	1.5	4.4	3.9
Confed of British Industry	2.7	2.5	2.4	2.5	4.7	2.9	8.5	2.4	1.0	1.0	3.2	2.8	2.4	1.9	2.4	2.0	4.3	4.1
RBS Financial Markets	2.7	2.7	2.0	2.2	5.5	3.9	5.7	4.6	1.3	1.2	2.9	2.5	2.2	1.9	1.7	1.9	4.4	4.4
Barclays Capital	2.7	2.6	2.6	2.4	3.9	2.8	na	na	3.5	3.7	2.9	2.5	2.2	2.1	na	na	4.5	4.4
Beacon Econ Forecasting	2.6	2.0	3.2	2.2	3.7	2.4	na	na	-0.2	-0.3	3.2	2.6	2.4	1.9	2.0	2.0	4.3	4.5
DTZ Research	2.6	1.9	2.6	2.2	3.5	2.5	na	na	na	na	2.8	2.5	2.2	1.6	na	na	4.7	3.8
Global Insight	2.6	2.7	2.5	2.7	4.1	4.5	na	na	1.1	1.8	2.8	2.4	2.3	2.0	2.0	1.8	4.4	4.3
Cambridge Econometrics	2.4	2.5	2.4	2.6	4.1	3.3	2.9	6.1	0.6	1.2	2.4	2.0	2.0	2.0	na	na	4.4	4.6
Liverpool Macro Research	2.4	2.2	2.0	2.1	na	na	na	na	na	na	2.4	2.2	na	na	na	na	5.0	4.7
Schroders	2.4	2.3	2.3	2.1	3.1	2.8	na	na	1.2	1.7	2.7	2.2	2.1	1.7	na	na	4.1	4.2
Experian Business Strategies	2.4	2.6	2.2	2.2	2.5	3.1	9.9	7.1	1.4	1.5	3.0	2.0	2.4	1.7	1.0	1.3	4.7	4.2
Lehman Brothers	2.3	2.2	2.2	1.4	6.6	2.3	na	na	1.0	0.2	3.0	2.4	2.3	2.0	1.1	2.7	4.2	3.5
HBOS	2.3	2.8	2.0	2.6	4.0	3.5	na	na	1.2	1.5	2.7	2.5	2.1	2.0	2.0	1.5	4.4	4.2
ING Financial Markets	2.3	2.2	1.7	2.3	3.8	3.1	na	na	1.6	2.2	2.7	2.3	2.1	1.8	2.0	2.2	4.2	4.3
Capital Economics	2.2	2.5	2.5	2.5	5.0	4.0	3.5	3.5	0.5	1.5	2.9	2.5	2.2	2.0	1.5	2.5	4.5	4.3
HSBC	2.2	2.1	2.0	2.1	3.7	1.2	na	na	0.0	0.7	2.7	na	2.1	2.1	na	na	4.3	4.4
Economic Perspectives	1.3	-0.3	1.4	-0.3	2.4	-2.3	-2.0	-5.0	0.5	-0.4	2.4	2.4	2.4	2.4	2.0	2.0	4.2	4.0
Consensus (Mean)	2.6	2.4	2.4	2.2	4.7	3.2	6.8	4.1	1.2	1.4	2.9	2.5	2.3	2.0	1.8	1.9	4.4	4.3
Last Month's Mean	2.5	2.4	2.2	2.3	4.5	3.5	6.2	4.2	1.2	1.3	2.8	2.5	2.2	2.0	2.0	2.0	4.3	4.2
3 Months Ago	2.4		2.3		3.5		6.0		1.3		2.7		2.2		2.1		4.2	
High	2.9	2.9	3.2	3.0	9.3	9.3	12.2	8.0	3.5	3.7	3.2	3.3	2.6	2.4	2.6	2.7	5.0	5.1
Low	1.3	-0.3	1.4	-0.3	2.4	-2.3	-2.0	-5.0	-0.2	-0.4	2.4	2.0	2.0	1.6	1.0	1.3	3.9	3.5
Standard Deviation	0.3	0.6	0.4	0.6	1.4	1.8	4.0	3.6	0.9	0.9	0.3	0.3	0.2	0.2	0.4	0.4	0.3	0.3
Comparison Forecasts																		
Treasury (Dec. '06)	3.0	2.8	2.5	2.5	5.5	3.5			1.9	2.0								
Eur Commission (Nov. '06)	2.6	2.4	2.3	2.2	4.7	3.1							2.2	2.0				
IMF (Sep. '06)	2.7		2.8		4.1								2.4					
OECD (Nov. '06)	2.6	2.8	2.1	2.2	6.2	6.0							2.0	1.9				

Government and Background Data

Prime Minister - Mr. Tony Blair (Labour). Parliament - The Labour party has a majority of 64 in the 646-seat House of Commons (lower house).
 Next Election - By June 2010 (general election). Nominal GDP - £1,225bn (2005). Population - 59.7mn (mid-year, 2005).
 \$/£ Exchange Rate - 1.820 (average, 2005).

Quarterly Consensus Forecasts

Historical Data and Forecasts (bold italics) From Survey of December 11, 2006

	2006			2007				2008		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Gross Domestic Product	2.3	2.6	2.7	2.7	2.5	2.4	2.3	2.3	2.1	2.1
Household Consumption	1.4	2.3	2.4	2.2	2.4	2.2	2.2	2.3	2.0	2.0
Consumer Prices Index	1.9	2.2	2.4	2.5	2.6	2.3	1.9	2.0	2.1	2.0

Historical Data

*% change on previous year	2003	2004	2005	2006
Gross Domestic Product*	2.7	3.3	1.9	2.7
Household Consumption*	3.0	3.5	1.3	2.0 e
Gross Fixed Investment*	0.4	6.0	3.4	5.6 e
Company Trading Profits*	8.3	10.3	2.0	4.3 e
Manufacturing Production*	0.2	2.0	-1.1	1.4 e
Retail Prices (underlying rate)*	2.8	2.2	2.3	3.0
Consumer Prices Index (HICP)*	1.4	1.3	2.1	2.3
Output Prices*	1.5	2.5	2.8	2.4
Average Earnings*	3.5	4.3	4.1	4.1
Unemployment Rate, %	3.0	2.7	2.7	3.0
Current Account, £ bn	-14.9	-19.3	-29.5	-35.6 e
Public Sector Net Cash Requirement, fiscal yrs, £ bn	39.7	38.6	40.0	39.4 e
3 mth Interbank, % (end yr)	4.0	4.8	4.6	5.3
10 Yr Gilt Yields, % (end yr)	4.8	4.5	4.1	4.7

Year Average	Annual Total		Fiscal Years (Apr-Mar)		Rates on Survey Date						
	Unemployment Rate (%)		Current Account (£ bn)		Public Sector Net Cash Requirement (£ bn)		5.5%		5.0%		
2007	2008	2007	2008	FY 07-08	FY 08-09	3 month Interbank Rate (%)	10 Year Gilt Yield (%)	End May'07	End Feb'08	End May'07	End Feb'08
2.7	2.3	-39.0	-37.0	38.0	32.0	5.7	5.3	5.1	5.1		
2.9	2.9	-36.3	-35.2	37.7	36.6	5.8	5.4	5.2	5.3		
3.0	3.2	-56.9	-73.4	36.7	36.0	5.7	5.7	5.0	5.0		
na	na	-34.0	na	na	na	5.5	5.5	5.1	na		
2.9	2.9	-34.9	-41.6	35.9	36.0	5.4	5.4	4.7	4.8		
na	na	-46.3	-43.8	na	na	na	na	na	na		
3.2	3.4	-36.7	-45.0	37.0	35.0	5.7	5.3	5.1	4.8		
2.9	2.8	na	na	na	na	5.7	5.7	na	na		
3.1	3.2	-42.4	-40.2	40.0	38.5	5.8	5.7	4.9	4.9		
3.2	3.1	-34.0	-35.8	38.4	35.8	5.6	5.6	4.9	5.1		
2.9	3.0	-32.1	-35.3	38.1	37.2	5.5	5.0	5.0	5.0		
2.9	2.8	-34.7	-39.1	na	na	na	na	na	na		
3.0	3.0	-34.6	-37.1	34.4	31.2	5.7	5.5	4.7	4.5		
3.0	2.9	-40.5	-37.0	35.2	34.2	5.7	5.7	5.0	5.1		
3.0	3.1	-41.4	-62.3	38.7	47.5	5.5	5.9	4.9	4.8		
2.8	3.2	-38.6	-40.2	na	na	5.7	5.6	5.2	5.2		
3.1	3.1	-35.0	-35.0	37.0	31.7	5.7	5.4	4.9	4.7		
3.0	3.2	-31.0	-29.1	na	na	na	na	na	na		
3.3	3.7	-35.3	-34.9	38.7	35.3	4.8	4.6	na	na		
3.1	3.2	-34.0	-36.0	40.0	40.0	5.6	5.4	4.9	4.8		
3.0	3.0	-38.4	-41.8	31.7	28.8	5.1	4.9	4.6	4.7		
3.2	3.4	-42.2	-53.9	43.0	40.0	5.8	5.4	4.9	4.6		
3.1	3.1	-35.0	-33.5	38.5	35.0	5.5	5.2	4.9	4.5		
3.3	3.2	na	na	na	na	5.6	5.1	4.6	4.7		
3.0	3.0	-50.0	-38.0	36.0	30.0	5.8	5.3	4.9	4.6		
3.6	3.9	na	na	na	na	5.4	4.8	4.4	4.2		
3.7	4.5	-32.0	-28.0	46.0	52.0	5.5	4.5	4.7	4.5		
3.1	3.2	-38.1	-40.6	37.9	36.5	5.6	5.3	4.9	4.8		
3.1	3.3	-36.5	-38.5	38.0	35.5						
3.1		-34.8		38.9							
3.7	4.5	-31.0	-28.0	46.0	52.0	5.8	5.9	5.2	5.3		
2.7	2.3	-56.9	-73.4	31.7	28.8	4.8	4.5	4.4	4.2		
0.2	0.4	6.1	10.2	3.1	5.7	0.2	0.4	0.2	0.3		
		-37.5	-38.8	32.6							

Strong Economic Performance Continuing

In the three months to December, the economy expanded at its fastest pace since spring 2004, putting pressure on the Bank of England to raise interest rates for the fourth time since last August. The fourth quarter's 0.8% q-o-q increase in GDP followed gains of 0.7% in each of the previous four quarters, pointing to an upbeat picture of activity heading into 2007. A very slight slowdown in 2007 GDP growth is forecast by our panel, though, from 2.7% in 2006 to 2.6%, largely due to weaker investment. However, early indications suggest the year started on a positive note with surveys of retailers in January showing large increases in sales. Furthermore, the purchasing managers' index for the services industry remained at elevated levels in January. The services sector – which accounts for nearly 75% of GDP – is the key driver of activity in the economy, with a 1.0% q-o-q rise in the fourth quarter the principal contributor to the 0.8% GDP growth rate. Manufacturing production, meanwhile, has increased at a much more subdued pace, managing only a 0.1% q-o-q advance between October and December. Consensus forecasts predict similarly modest gains in 2007 and 2008 production to that seen last year of just over 1%.

With consumer price inflation reaching 3.0% y-o-y in January – a full 1 percentage point above its target – and the economy's strong performance, the Bank of England raised interest rates at its January 10-11 policy meeting. The 25 basis-point hike took the benchmark rate to 5.25%, its highest level since August 2001. While lower energy prices are likely to be reflected in inflation easing over the course of 2007, concerns over the effect a strong economy will have on price pressures – combined with the fear that the current above-target rate of inflation may increase households' longer-term price expectations – led to January's interest rate increase. More recently, the February 7-8 policy meeting saw the bank leave rates unchanged. However, many economists predict a further rate hike is in the pipeline. To that end, details of January wage settlements will be crucial. Wage growth has recently been fairly benign, but the bank's monetary policy committee is especially wary of the possibility of rising inflation stoking higher wage deals.

Direction of Trade – First Half 2006

Major Export Markets (% of Total)		Major Import Suppliers (% of Total)	
United States	13.1	Germany	12.7
Germany	10.9	United States	9.2
France	10.7	France	7.6
Asia (ex. Japan)	7.2	Asia (ex. Japan)	13.4
Eastern Europe	5.2	Eastern Europe	6.8
Middle East	5.0	Africa	2.8

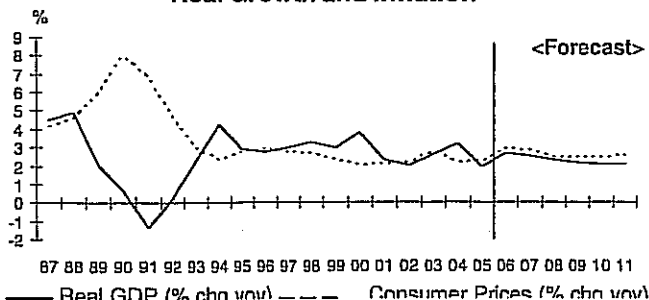
Likelihood of a Bank of England Interest Rate Change

Our panel's estimated average probability of a change in the repo rate (5.25% on survey date) at or before the next Monetary Policy Committee meeting is:

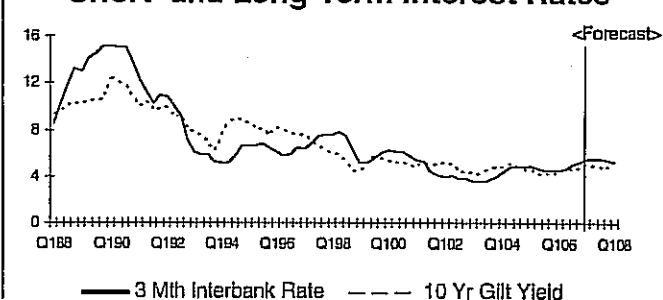
INCREASE	NO CHANGE	DECREASE	
40.8	+ 55.7	+ 3.5	= 100 %

Most likely rate change mentioned: +0.25 %

Real Growth and Inflation



Short- and Long-Term Interest Rates



	Average % Change on Previous Calendar Year													
	Gross Domestic Product		Household Consumption		Gross Fixed Investment		Industrial Production		Consumer Prices		Producer Prices		Contractual Hourly Earnings	
	<i>Prodotto Interno Lordo</i>		<i>Consumi delle Famiglie</i>		<i>Investimenti Fissi Lordi</i>		<i>Produzione Industriale</i>		<i>Prezzi al Consumo</i>		<i>Prezzi alla Produzione</i>		<i>Ritribuzione Orarie Contrattuali</i>	
Economic Forecasters	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008
Banca IMI	1.8	2.0	1.7	1.8	3.0	2.0	3.0	1.7	1.8	2.0	2.9	2.0	2.6	2.6
JP Morgan	1.7	1.6	1.8	1.8	1.5	2.0	2.9	2.0	1.9	2.0	2.3	2.0	na	na
Ref.	1.7	1.8	2.0	2.5	2.1	2.8	0.5	1.0	1.8	na	1.3	na	3.2	2.8
ENI	1.6	1.5	1.3	1.4	2.0	1.9	0.9	1.2	1.9	1.9	2.3	1.8	2.9	2.7
Confindustria	1.4	1.5	1.7	1.5	2.3	2.6	na	na	2.0	1.9	na	na	na	na
UniCredit MIB	1.4	1.3	1.5	1.6	1.9	1.7	1.2	1.3	1.7	1.9	2.7	3.0	na	na
ISAE	1.3	na	1.2	na	2.2	na	1.0	na	1.9	na	2.3	na	na	na
Prometeia	1.3	1.5	1.8	1.5	2.1	2.6	0.7	1.1	1.7	2.1	0.1	1.4	2.3	2.2
Intesa Sanpaolo	1.3	1.4	1.9	1.8	1.7	1.6	1.6	1.7	1.7	2.0	3.1	0.9	2.8	2.8
Banca Nzie del Lavoro	1.2	1.2	1.6	1.3	2.9	2.0	1.5	2.2	1.8	2.0	4.0	3.0	3.4	2.8
Capitalia	1.2	1.7	1.4	1.8	1.5	2.6	1.0	1.6	1.9	1.9	2.4	2.2	2.7	2.5
Centro Europa Ricerche	1.2	1.3	1.0	1.2	1.5	1.8	na	na	2.0	2.1	na	na	na	na
ING Financial Markets	1.2	1.4	1.6	1.5	2.3	2.3	1.4	1.6	1.8	1.9	2.3	1.5	2.7	2.5
Econ Intelligence Unit	1.1	1.6	1.4	1.5	2.6	2.5	1.6	2.2	1.8	1.8	2.6	1.3	na	na
Goldman Sachs	1.1	1.5	1.4	1.6	0.7	2.1	1.4	2.0	2.0	2.0	3.7	2.7	na	na
HSBC	0.8	1.0	1.5	1.1	0.5	0.9	0.8	0.8	2.2	1.9	na	na	2.7	2.4
Consensus (Mean)	1.3	1.5	1.6	1.6	1.9	2.1	1.4	1.6	1.9	2.0	2.5	2.0	2.8	2.6
Last Month's Mean	1.3	1.4	1.4	1.5	1.9	2.1	1.1	1.4	1.9	1.9	2.4	1.9	2.7	2.5
3 Months Ago	1.3		1.3		1.8		1.0		1.9		2.5		2.7	
High	1.8	2.0	2.0	2.5	3.0	2.8	3.0	2.2	2.2	2.1	4.0	3.0	3.4	2.8
Low	0.8	1.0	1.0	1.1	0.5	0.9	0.5	0.8	1.7	1.8	0.1	0.9	2.3	2.2
Standard Deviation	0.3	0.2	0.3	0.3	0.7	0.5	0.7	0.5	0.1	0.1	1.0	0.7	0.3	0.2
Comparison Forecasts														
Government (Jul. '06)	1.5	1.2	1.3	1.2	1.9	1.6								
Eur Commission (Nov. '06)	1.4	1.4	1.0	1.3	2.2	2.0								
IMF (Sep. '06)	1.3		1.5		2.0									
OECD (Nov. '06)	1.4	1.6	1.0	2.0	3.9	2.9								

Government and Background Data

Prime Minister - Mr. Romano Prodi (*L'Ulivo* party).
Parliament - A centre-left coalition, known as the *Unione*, has majorities in both the Chamber of Deputies (lower house) and the Senate (upper house). Next Elections - By 2011 (parliamentary). Nominal GDP - Euro1,418bn (2005). Population - 58.1mn (mid-year, 2005). \$/Euro Exchange Rate - 1.244 (average, 2005).

Quarterly Consensus Forecasts

Historical Data and Forecasts (bold italics) From Survey of December 11, 2006

	2006				2007				2008	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Gross Domestic Product	1.7	1.7	1.7	1.9	1.4	1.2	1.2	1.4	1.6	1.6
Household Consumption	2.1	1.7	1.9	2.2	1.5	1.4	1.4	1.5	1.6	1.7
Consumer Prices	2.1	2.2	2.2	1.9	2.0	1.8	1.8	2.0	2.0	2.0

Historical Data

* % change on previous year	2003	2004	2005	2006
Gross Domestic Product*	0.1	0.9	0.1	2.0
Household Consumption*	1.0	0.5	0.1	2.0 e
Gross Fixed Investment*	-1.5	1.9	-0.4	2.8 e
Industrial Production*	-0.6	-0.6	-0.8	2.4
Consumer Prices*	2.7	2.2	2.0	2.1
Producer Prices*	1.6	2.7	4.0	5.6
Contractual Hourly Earnings*	2.2	2.8	3.1	2.8
Unemployment Rate,%	8.4	8.0	7.7	6.9 e
Current Account, Euro bn	-17.4	-12.5	-22.1	-31.8 e
General Govt. Budget Balance (Maastricht definition), Euro bn	-46.8	-47.6	-58.2	-61.3 e
3 mth Euro, % (end yr)	2.1	2.2	2.5	3.7
10 yr Italian Govt Bond, % (end yr)	4.5	3.8	3.5	4.2

e = consensus estimate based on latest survey

Year Average	Annual Total				Rates on Survey Date				
	Current Account (Euro bn)		General Govt Budget Bal (Maastricht) (Euro bn)		3.8%		4.3%		
Unemployment Rate (%)					3 month Euro Rate (%)		10 Year Italian Govt Bond Yield (%)		
Tasso di Disoccupazione (%)	Partite Correnti (Euro mld)		Indebitamento netto (Maastricht) (Euro mld)		Interessi Euro Trimestrali (%)		Buoni del Tesoro Decennali (%)		
	2007	2008	2007	2008	End May'07	End Feb'08	End May'07	End Feb'08	
6.8	6.7	-26.0	-25.0	-40.0	-38.0	4.0	4.0	4.5	4.2
6.5	6.3	-34.9	-35.4	na	na	na	na	na	na
6.2	5.7	-21.2	-26.2	-41.8	-37.8	3.9	4.3	4.4	4.7
6.7	6.7	-25.0	-22.0	-44.7	-43.3	3.7	3.8	4.4	4.5
6.7	6.6	-29.5	-26.9	na	na	na	na	na	na
6.6	6.5	na	na	-42.0	-45.0	na	na	na	na
6.5	na	na	na	na	na	na	na	na	na
6.7	6.4	-27.0	-31.0	-43.0	-43.0	3.6	3.4	4.0	4.0
6.8	7.1	-33.5	-31.6	-45.2	-43.9	4.0	4.1	3.7	3.7
7.0	7.0	-42.0	-36.0	na	na	4.0	3.4	4.2	3.8
7.0	6.9	-25.0	-25.0	-42.5	-40.0	3.9	3.9	4.3	4.2
7.2	6.9	na	na	na	na	3.8	3.8	4.3	4.3
6.8	6.7	-18.0	-15.0	-32.4	-29.0	3.9	4.3	4.1	4.5
6.6	6.1	na	na	na	na	na	na	na	na
7.4	7.5	-20.0	-22.0	-51.3	-47.2	4.2	4.5	4.2	4.2
7.4	7.6	-21.0	-21.0	na	na	3.8	3.2	3.6	3.7
6.8	6.7	-26.9	-26.4	-42.5	-40.8	3.9	3.9	4.2	4.2
6.9	6.8	-26.7	-25.0	-43.8	-42.4				
7.1		-23.8							
7.4	7.6	-18.0	-15.0	-32.4	-29.0	4.2	4.5	4.5	4.7
6.2	5.7	-42.0	-36.0	-51.3	-47.2	3.6	3.2	3.6	3.7
0.3	0.5	7.0	6.2	5.0	5.4	0.2	0.4	0.3	0.3
7.5	7.5			-52.4	-58.9				
7.0	7.0								
6.8	6.5								

Buoyant Industrial Sector Boosts Economic Growth

Although the economy is likely to slow this year on the back of tighter fiscal conditions, less supportive external demand and rising interest rates, a surprisingly strong December performance in industry helped to bolster the outlook. Industrial production ended 2006 on an especially positive note, as output surged by 2.0% m-o-m and was further boosted by upward revisions to previous months' data. In the fourth quarter, production increased by 1.6% q-o-q, its fastest pace since the third quarter of 1999. Analysts commented that some of the pick-up in momentum was likely due to increased demand from Germany, as orders were registered before January's value-added tax rise there. Consumer goods production advanced by 2.2% q-o-q in the fourth quarter, while output of investment goods was up by 3.0%. Indeed, buoyant GDP growth (as released in a 'flash estimate' by the statistics office, one day after our survey date) of 1.1% q-o-q in the fourth quarter was boosted by the industrial sector's performance. Consensus forecasts for production this year have been upgraded as a result, although a slowdown from a 2.4% rise in 2006 is anticipated. Falling business confidence in recent months – as fears over the strength of foreign orders, married with the effects of higher taxes on domestic demand, take hold – seems to support the view that the economy will lose steam in early 2007.

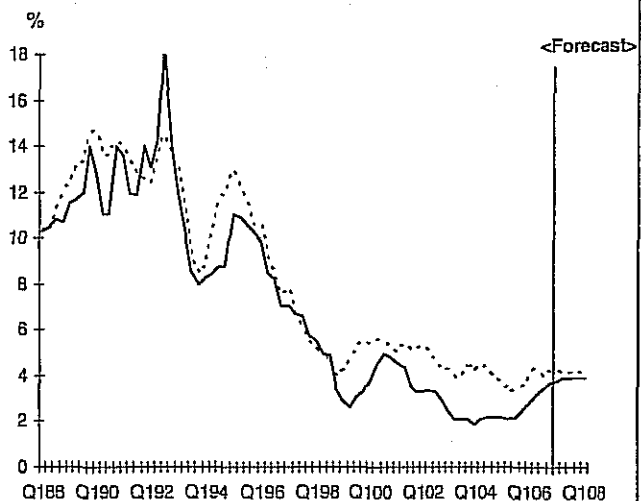
A series of measures to increase competition and protect consumers' rights was approved by the centre-left governing coalition in late January. Some of the changes relate to the removal of laws limiting the days when some shops are allowed to open (for example, hairdressers can now choose to open on Sundays and Mondays), while others aim to increase competition in previously protected sectors (i.e., supermarkets will now be allowed to sell petrol). Prime Minister Romano Prodi hopes that the latest efforts to deregulate the economy will help spur consumer spending and increase the competitiveness of Italian business. However, a number of the measures need to be approved by parliament, and protests from those opposed to the changes (including petrol retailers) are planned. Economists broadly favour the proposals but warn that deeper reforms of the pension system and labour market are still needed.

Direction of Trade – First Half 2006

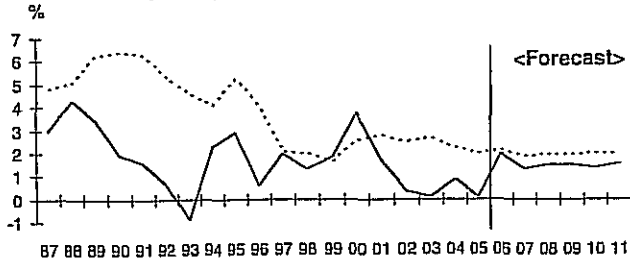
Major Export Markets (% of Total)		Major Import Suppliers (% of Total)	
Germany	14.2	Germany	16.7
France	13.1	France	9.2
United States	8.5	Netherlands	5.5
Eastern Europe	15.9	Eastern Europe	14.8
Asia (ex. Japan)	6.5	Asia (ex. Japan)	9.4
Middle East	5.2	Middle East	7.7

Short- and Long-Term Interest Rates

(short rate = 3 mth Treasury Bill for Q187 to Q498)



Real Growth and Inflation



87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11

	Average % Change on Previous Calendar Year														Annual Total			
	Gross Domestic Product		Personal Expenditure		Machinery & Equipment Investment		Pre - Tax Corporate Profits		Industrial Production		Consumer Prices		Industrial Product Prices		Average Hourly Earnings		Housing Starts (thousand units)	
	<i>Produit Intérieur Brut</i>		<i>Dépenses de Consommation des Ménages</i>		<i>Investissement Productif</i>		<i>Bénéfices des Sociétés avant impôts</i>		<i>Production Industrielle</i>		<i>Prix à la Consommation</i>		<i>Prix des Produits Industriels</i>		<i>Rémunération Horaire Moyenne</i>		<i>Construction de Logements mises en chantier, milliers</i>	
Economic Forecasters	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008
Conf Board of Canada	2.7	3.3	3.3	3.1	8.6	9.4	3.0	5.9	na	na	1.2	2.0	0.4	1.8	na	na	203	195
Informetrica	2.7	2.9	3.1	2.9	8.0	9.5	4.0	8.5	2.0	1.8	1.7	2.0	1.4	1.9	3.0	3.1	195	190
JP Morgan	2.6	2.4	2.6	2.0	6.9	5.2	5.1	3.0	2.0	1.6	1.9	2.4	2.7	1.9	3.0	3.5	210	200
Royal Bank of Canada	2.5	3.0	3.0	3.1	6.1	7.2	4.5	4.1	na	na	1.6	2.2	na	na	na	na	203	206
Caisse de Depot	2.4	2.8	3.0	3.3	8.2	9.0	na	na	na	na	1.7	2.0	na	na	na	na	200	195
University of Toronto	2.4	2.8	2.9	2.2	6.6	5.5	0.7	3.7	na	na	1.0	1.9	na	na	na	na	203	180
BMO Capital Markets	2.3	2.9	3.0	2.7	7.5	6.5	3.6	3.5	-0.5	1.5	1.7	2.1	2.5	2.0	2.6	3.0	205	185
Economap	2.3	2.8	3.0	2.9	6.5	5.0	4.0	3.5	-0.5	1.7	1.8	2.0	1.5	2.5	2.5	2.7	200	185
EDC Economics	2.2	2.9	3.6	3.2	7.4	6.9	2.9	5.3	-0.8	3.0	1.9	2.0	na	na	2.6	2.1	206	193
Scotia Economics	2.2	2.7	3.0	2.7	7.2	6.9	4.0	3.5	1.5	2.5	1.8	2.1	na	na	na	na	200	185
Toronto Dominion Bank	2.2	3.2	3.3	3.0	8.6	8.6	3.1	4.2	na	na	1.6	2.1	na	na	na	na	205	195
CIBC World Markets	2.1	2.7	2.7	2.6	6.6	6.7	4.9	8.0	na	na	1.9	2.3	na	na	na	na	213	200
Desjardins	2.1	2.8	3.6	3.7	7.9	7.3	6.5	7.5	na	na	1.6	2.4	1.9	3.1	na	na	205	195
Global Insight	2.1	3.0	3.2	3.2	7.0	4.4	-7.4	-0.6	0.1	2.6	1.5	2.1	0.4	-0.5	2.4	3.0	214	204
National Bank Financial	2.0	2.3	2.8	2.7	6.5	7.2	-9.8	-6.7	na	na	0.9	1.4	na	na	na	na	190	175
Merrill Lynch Canada	1.7	3.5	3.1	3.3	6.5	7.4	na	na	na	na	1.5	1.8	na	na	na	na	213	193
Consensus (Mean)	2.3	2.9	3.1	2.9	7.3	7.0	2.1	3.8	0.5	2.1	1.6	2.1	1.5	1.8	2.7	2.9	204	192
Last Month's Mean	2.3	2.9	3.2	2.9	7.7	7.0	2.6	3.3	0.2	2.1	1.7	2.0	1.7	1.9	2.7	2.8	204	192
3 Months Ago	2.6		3.1		8.0		2.7		1.3		1.8		1.8		2.8		199	
High	2.7	3.5	3.6	3.7	8.6	9.5	6.5	8.5	2.0	3.0	1.9	2.4	2.7	3.1	3.0	3.5	214	206
Low	1.7	2.3	2.6	2.0	6.1	4.4	-9.8	-6.7	-0.8	1.5	0.9	1.4	0.4	-0.5	2.4	2.1	190	175
Standard Deviation	0.3	0.3	0.3	0.4	0.8	1.5	4.7	3.8	1.2	0.6	0.3	0.2	0.9	1.1	0.3	0.5	7	9
Comparison Forecasts																		
IMF (Sep. '06)	3.0		3.1								1.9							
OECD (Nov. '06)	2.7	3.1	3.4	3.1							1.5	2.0						

Government and Background Data

Prime Minister - Mr. Stephen Harper (Conservative). Government - The Conservatives lead a minority government, with 124 out of 308 seats in parliament (155 seats are needed for a clear majority). Next Election - By 2011 (general election). Nominal GDP - C\$1,371bn (2005). Population - 32.3mn (mid-year, 2005). C\$/\\$ Exchange Rate - 1.212 (average, 2005).

Quarterly Consensus Forecasts

Historical Data and Forecasts (bold italics) From Survey of December 11, 2006

	2006		2007				2008			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Gross Domestic Product	3.2	2.9	2.5	2.5	2.2	2.3	2.5	2.7	2.8	2.9
Personal Expenditure	3.6	3.7	4.1	4.0	3.4	3.3	3.0	2.9	2.9	2.9
Consumer Prices	2.5	2.6	1.6	1.5	1.6	1.3	1.7	2.1	2.0	2.0

Historical Data

* % change on previous year	2003	2004	2005	2006
Gross Domestic Product*	1.8	3.3	2.9	2.7 e
Personal Expenditure*	3.0	3.3	3.9	3.8 e
Machinery & Eqpt Investment*	7.9	10.3	10.5	8.6 e
Pre - Tax Corporate Profits*	7.1	18.3	10.6	5.3 e
Industrial Production*	0.2	1.8	1.0	-0.3 e
Consumer Prices*	2.7	1.8	2.2	2.0
Industrial Product Prices*	-1.4	3.2	1.5	2.3
Average Hourly Earnings*	1.6	3.2	3.4	2.2 e
Housing Starts, '000 units	218	233	225	227
Unemployment Rate, %	7.6	7.2	6.8	6.3
Current Account, C\$ bn	14.1	27.6	31.8	24.8 e
Federal Govt Budget Balance, fiscal years, C\$ bn	9.1	1.5	13.2	5.1 e
3 mth Trsy Bill, % (end yr)	2.6	2.5	3.4	4.2
10 Yr Govt Bond, % (end yr)	4.8	4.3	4.0	4.1

Year Average		Annual Total		Fiscal Years (Apr-Mar)		Rates on Survey Date			
						4.2%		4.2%	
Unemployment Rate (%)		Current Account (C\$ bn)		Federal Govt Budget Balance (C\$ bn)		3 month Treasury Bill Rate (%)		10 Year Government Bond Yield (%)	
Taux de Chômage (%)		Balance Courante (C\$ md)		Balance Budgétaire (C\$ md)		Rendement sur les Bons du Trésor de 3 mois %		Rendement des Obligations d'État de 10 ans %	
2007	2008	2007	2008	FY 07-08	FY 08-09	End May'07	End Feb'08	End May'07	End Feb'08
6.6	6.4	24.5	30.0	1.0	6.1	4.2	4.4	4.0	4.1
6.1	6.0	18.0	24.0	6.0	6.0	4.2	4.3	4.1	4.4
6.1	6.5	24.2	28.3	3.0	3.0	4.5	na	4.2	na
6.4	6.4	17.4	17.1	na	na	4.1	4.2	4.0	4.7
6.4	6.5	20.0	20.0	5.0	3.0	4.0	4.0	4.1	4.5
6.4	6.4	15.6	17.2	na	na	4.2	4.4	4.2	4.8
6.3	6.4	14.0	10.5	4.0	3.0	4.2	4.2	4.2	4.6
6.3	6.4	14.5	11.0	5.0	8.0	4.2	4.3	4.2	4.5
6.5	6.4	21.8	22.1	na	na	3.8	3.8	4.1	4.3
6.2	6.3	12.0	6.0	7.3	6.4	4.0	3.6	4.0	3.9
6.4	6.3	17.1	17.0	3.0	5.0	4.2	4.3	4.3	4.5
6.3	6.3	25.7	30.0	3.0	3.0	4.0	3.4	4.0	3.5
6.4	6.2	16.4	14.7	5.0	6.0	4.1	3.8	4.0	4.8
6.4	6.5	16.9	20.7	3.0	3.0	4.2	4.3	4.3	4.8
6.4	6.6	12.0	9.0	3.0	0.0	4.5	3.7	4.5	4.3
6.8	6.6	na	na	na	na	4.0	3.8	3.9	4.4
6.4	6.4	18.0	18.5	4.0	4.4	4.1	4.0	4.1	4.4
6.4	6.4	17.5	16.3	3.8	4.4				
6.4		14.6		3.8					
6.8	6.6	25.7	30.0	7.3	8.0	4.5	4.4	4.5	4.8
6.1	6.0	12.0	6.0	1.0	0.0	3.8	3.4	3.9	3.5
0.2	0.2	4.4	7.5	1.7	2.2	0.2	0.3	0.2	0.3
6.3									
6.6	6.5								

Industry Shows Flickering Signs of Improvement

The recent retrenchment in this year's GDP growth outlook appears to have halted on the back of indications of modest improvement in the beleaguered goods-producing industries. Indeed, following three consecutive quarters of q-o-q contractions in industrial production, November data now point to a possible turnaround in output during the final quarter of 2006. GDP growth advanced by 0.2% (m-o-m) in the penultimate month of last year after a stagnant October showing, with the increase due in large part to a 1.6% resurgence in manufacturing. A massive 14% expansion in motor vehicle production helped to lift the sector, suggesting that the car industry may have finally shaken off its recent slump. Industrial production as a whole, however, managed only a modest 0.2% rise because the gain in manufacturing was offset by a sharp 2.5% (m-o-m) loss in energy output and a 0.2% decline in retail trade. Elsewhere, though, November's factory report confirms a bounceback in industry, with durables' shipments up by an impressive 2.3% m-o-m and new orders 3.9% higher as the result of a strong showing in transportation equipment. Canadian industry has also been reassured by news from the US. While manufacturing there traversed a weak period recently, renewed strength in other parts of the economy—namely consumer spending—has renewed hopes of ongoing demand and business from south of the border. Consequently, our panel's 2007 forecast for production has regained ground following last month's sharp downgrade.

In contrast with industrial indicators, the retail sector performed poorly in November, with a rebound in car sales unable to lift overall trade. Mild weather contributed to a sharp drop in clothing and general merchandise purchases. The outlook for personal expenditure in 2007, though, stands at 3.1% this month, down from last month and somewhat slower than the 3.8% expansion expected for 2006, but still above-trend. Domestic demand this year is likely to be helped by moderate inflation pressures. Core prices, for example, fell by 0.2% m-o-m in December. A firm housing market is also helping to support household spending, with the warmer weather prompting developers to start building projects early as well as contributing to a sharp rebound in housing starts last month to 249,300 units, its highest level since August 2004.

Direction of Trade – First Half 2006

Major Export Markets (% of Total)		Major Import Suppliers (% of Total)	
United States	83.6	United States	56.3
United Kingdom	2.1	China	7.8
Japan	2.0	Japan	4.0
Asia (ex. Japan)	3.9	Asia (ex. Japan)	13.4
Latin America	2.1	Latin America	7.1
Middle East	0.7	Africa	1.9

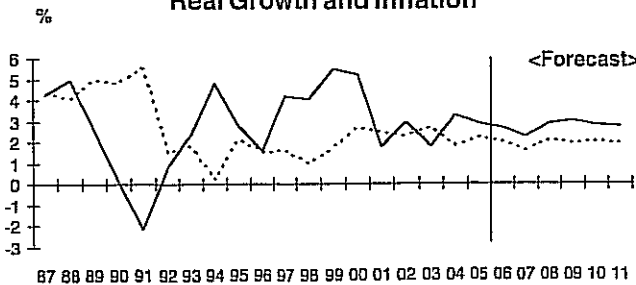
Likelihood of a Bank of Canada Interest Rate Change

Our panel's estimated average probability of a change in the overnight lending rate (4.25% on survey date) at or before the next key policy meeting is:

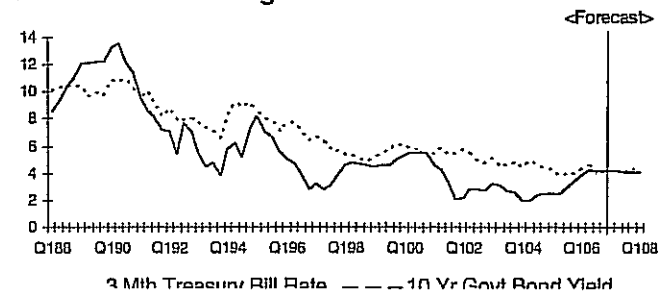
INCREASE	NO CHANGE	DECREASE	
3.2	+ 88.9	+ 7.9	= 100 %

Most likely rate change mentioned: None

Real Growth and Inflation



Short- and Long-Term Interest Rates



The EURO ZONE is: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain and Slovenia.	Average % Change on Previous Calendar Year								Annual Total		Average % Change on Previous Calendar Year						Year Average				
	Gross Domestic Product		Private Consumption		Govt Consumption		Gross Fixed Investment		Change in Inventories (Euro bn)		Industrial Production		Consumer Prices		Industrial Producer Prices		Hourly Labour Costs - Total		Unemployment Rate (%)		
	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	
Economic Forecasters	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	
SEB	2.5	2.3	2.1	2.0	1.7	1.4	3.9	3.7	na	na	2.8	2.5	1.8	2.0	2.2	2.5	2.5	2.7	7.2	7.0	
Banca IMI	2.4	2.2	1.8	2.1	1.6	1.5	4.9	3.5	na	na	3.0	1.4	2.0	1.9	2.7	2.0	2.2	2.4	7.4	7.3	
BBVA	2.3	2.3	2.0	2.2	2.0	1.9	4.0	3.7	na	na	2.9	2.5	1.8	1.8	1.6	1.5	na	na	7.5	7.6	
Lloyds TSB Financial Mkts	2.3	2.2	2.0	2.1	1.3	1.2	4.0	3.0	na	na	2.3	2.0	2.0	2.1	2.5	1.8	na	na	7.2	7.1	
Oxford Economics	2.3	2.1	1.8	2.2	1.5	1.3	3.9	3.0	35.1	34.3	2.2	2.0	1.9	2.0	1.9	1.5	na	na	7.2	7.1	
Intesa Sanpaolo	2.3	2.3	1.7	1.9	1.7	1.6	3.3	3.0	na	na	2.5	2.6	2.2	2.1	2.0	2.4	na	na	7.4	7.2	
Citigroup	2.2	2.5	1.5	1.9	0.6	0.8	4.6	3.6	na	na	na	na	1.8	1.9	na	na	2.4	2.6	7.6	7.5	
European F'cast Network	2.2	2.1	2.4	1.9	1.0	1.2	3.6	2.3	na	na	2.1	2.0	1.9	1.8	na	na	3.4	3.8	7.5	7.3	
Fortis	2.2	2.3	1.8	2.2	1.5	1.7	4.5	3.2	na	na	2.3	2.0	2.2	1.9	2.0	1.7	2.8	3.5	7.3	7.0	
Goldman Sachs	2.2	2.4	1.9	2.2	2.0	2.3	3.2	2.7	na	na	2.2	2.8	1.7	1.8	4.7	1.8	na	na	7.5	7.4	
JP Morgan	2.2	1.9	2.0	1.9	1.2	1.0	na	na	38.6	50.5	2.7	2.2	1.8	1.7	2.5	2.1	na	na	7.5	7.5	
Merrill Lynch	2.2	2.2	1.4	1.8	1.5	1.4	4.7	4.3	na	na	2.2	2.0	2.1	2.0	2.1	2.4	2.6	2.8	7.3	6.9	
WestLB	2.2	2.2	1.9	2.1	1.2	0.8	3.4	3.0	na	na	2.0	na	2.1	1.9	na	na	na	na	7.3	7.0	
ETLA	2.2	2.3	1.7	1.8	1.5	1.5	3.6	2.9	na	na	2.1	2.1	2.1	1.9	na	na	na	na	7.4	7.4	
Dresdner Bank	2.1	2.2	1.6	2.0	1.8	1.5	3.6	3.2	na	na	2.2	2.5	1.8	1.8	2.2	2.0	na	na	7.4	7.0	
Global Insight	2.1	1.9	2.0	2.0	1.2	1.4	3.3	2.6	na	na	2.3	2.0	2.2	1.9	2.4	1.8	2.7	2.7	7.3	7.1	
ING Financial Markets	2.1	2.3	1.9	2.2	1.2	1.2	3.4	3.5	na	na	2.0	2.2	1.8	1.8	na	na	na	na	7.6	7.5	
UBS	2.1	2.3	2.0	2.2	1.1	0.7	2.9	3.3	na	na	1.8	2.4	1.9	1.9	2.1	2.1	na	na	7.2	6.7	
Grupo Santander	2.0	2.0	1.7	2.0	1.8	1.1	3.0	2.8	na	na	na	na	1.9	1.8	na	na	na	na	7.5	7.5	
Bank Austria	2.0	2.0	1.7	1.7	1.4	1.4	3.9	3.5	na	na	2.2	2.2	2.0	1.9	2.2	1.9	2.6	2.5	7.4	7.4	
Commerzbank	2.0	1.8	2.0	2.0	1.9	2.0	3.3	3.0	na	na	1.8	2.0	1.7	1.6	2.2	2.0	2.5	2.5	7.5	7.2	
Credit Agricole	2.0	2.2	1.7	1.9	1.8	1.3	3.3	2.7	na	na	1.9	1.8	2.0	1.8	1.9	1.7	2.3	2.2	7.3	7.1	
UniCredit MIB	2.0	2.1	1.8	2.1	1.3	1.3	3.7	3.6	na	na	na	na	1.9	1.9	na	na	na	na	7.5	7.2	
Econ Intelligence Unit	1.9	2.0	1.5	1.7	1.3	1.3	3.4	3.4	na	na	na	na	2.0	1.9	2.5	1.8	na	na	na	na	
Bank Julius Baer	1.9	2.3	0.7	1.3	1.2	0.8	4.4	5.9	na	na	2.3	1.9	2.0	2.0	2.9	2.0	2.3	2.5	7.5	7.6	
Societe Generale	1.9	2.1	1.6	2.1	1.5	1.9	3.4	2.3	na	na	na	na	1.8	2.0	na	na	na	na	7.5	7.2	
BNP-Paribas	1.8	1.6	1.8	1.8	1.9	1.6	4.3	2.5	18.8	25.5	0.8	1.3	2.1	2.0	1.3	1.7	na	na	7.7	7.7	
Deutsche Bank	1.7	1.9	1.3	1.8	1.6	1.4	3.0	2.8	na	na	2.2	2.8	2.1	1.9	2.2	1.2	2.5	2.4	7.5	7.0	
HSBC	1.7	1.7	1.4	1.4	2.0	1.7	2.6	2.1	na	na	1.9	1.7	2.1	1.6	na	na	2.5	2.4	7.9	8.0	
Lehman Brothers	1.7	1.6	1.4	1.4	1.6	1.6	3.1	2.7	-8.0	-31.5	2.0	0.9	1.8	1.9	2.5	3.3	2.6	2.2	7.2	6.6	
IXIS CIB	1.7	1.6	1.5	1.5	1.7	1.7	2.1	2.6	24.0	na	na	na	2.0	1.9	na	na	2.1	1.9	7.6	7.6	
Consensus (Mean)	2.1	2.1	1.7	1.9	1.5	1.4	3.6	3.1	21.7	19.7	2.2	2.1	2.0	1.9	2.3	2.0	2.5	2.6	7.4	7.3	
Last Month's Mean	2.0	2.1	1.6	1.9	1.5	1.4	3.6	3.1	29.4	41.9	2.2	2.1	2.1	1.9	2.2	1.8	2.6	2.7	7.5	7.3	
3 Months Ago	1.9	1.9	1.5	1.9	1.4	1.4	3.4	3.4	33.2	na	2.2	2.1	2.1	1.9	2.1	1.8	2.6	2.7	7.5	7.3	
High	2.5	2.5	2.4	2.2	2.0	2.3	4.9	5.9	38.6	50.5	3.0	2.8	2.2	2.1	4.7	3.3	3.4	3.8	7.9	8.0	
Low	1.7	1.6	0.7	1.3	0.6	0.7	2.1	2.1	-8.0	-31.5	0.8	0.9	1.7	1.6	1.3	1.2	2.1	1.9	7.2	6.6	
Standard Deviation	0.2	0.2	0.3	0.3	0.3	0.4	0.6	0.7	18.5	35.6	0.4	0.5	0.2	0.1	0.7	0.4	0.3	0.5	0.2	0.3	
Comparison Forecasts																					
Eur Commission (Nov. '06)	2.1	2.2	1.6	2.1	1.4	1.4	3.0	3.0					2.1	1.9					7.7	7.4	
IMF (Sep. '06)	2.0		1.7		1.5		3.6						2.4						7.7		
OECD (Nov. '06)	2.2	2.3	1.7	2.3	1.6	1.7	4.2	3.2					1.9	1.8					7.4	7.1	

European Monetary Union

Euro zone - The thirteen European countries (listed at the top of this page) are united by a common currency (the euro), monetary policy and adherence to the Maastricht Treaty. Monetary Policy - is set by the European Central Bank's (ECB) governing board, headed currently by Jean-Claude Trichet. Nominal GDP - Euro7,991.7bn (2005). Population - 310.2mn (mid-year, 2005). \$/Euro Exchange Rate - 1.244 (average, 2005).

Quarterly Consensus Forecasts

Historical Data and Forecasts (bold italics) From Survey of December 11, 2006

	2006				2007				2008			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Gross Domestic Product	2.2	2.8	2.7	3.0	2.5	1.9	1.9	1.8	2.1	2.1		
Private Consumption	1.8	1.8	1.8	2.5	1.8	1.8	1.6	1.4	1.8	1.9		
Consumer	2.2	2.5	2.2	1.8	2.2	1.9	1.9	2.2	1.8	1.9		

Historical Data

* % change on previous year

	2003	2004	2005	2006
Gross Domestic Product*	0.8	1.7	1.5	2.7
Private Consumption*	1.2	1.3	1.4	1.9 e
Government Consumption*	1.8	1.1	1.3	2.2 e
Gross Fixed Capital Formation*	1.1	1.8	2.7	4.8 e
Change in Inventories, Euro bn (nominal)	1.9	6.0	21.5	26.8 e
Industrial Production*	0.3	2.0	1.3	3.8
Consumer Prices*	2.1	2.1	2.2	2.2
Industrial Producer Prices*	1.4	2.3	4.1	5.1
Hourly Labour Costs - Total*	3.2	2.4	2.4	2.3 e
Unemployment Rate, (%)	8.7	8.8	8.6	7.8
Exports - Goods & Services*	1.1	6.3	4.5	8.2 e
Imports - Goods & Services*	3.1	6.2	5.5	8.2 e
Current Account, Euro bn	32.6	52.0	-6.8	-26.5 e
General Govt. Budget Balance (Maastricht definition), Euro bn	-228	-216	-194	-165 e

Average % Change on Previous Calendar Year		Annual Total				Average % Change on Prev. Year			
Exports of Goods & Services	Imports of Goods & Services	Current Account (Euro bn)		General Govt Budget Balance (Maastricht) (Euro bn)		Money Supply, M3, end period			
2007	2008	2007	2008	2007	2008	2007	2008		
6.2	4.9	5.9	5.1	-10.0	0.0	-125	-110	6.0	5.5
4.6	5.2	4.5	5.2	-22.0	-10.0	-140	-140	8.2	6.6
5.8	5.1	6.2	5.7	-35.0	-20.0	-160	-150	na	na
6.4	6.0	5.7	5.8	-4.3	-2.5	-132	-132	8.8	6.2
5.7	5.4	5.5	5.5	-4.1	-2.1	-133	-133	na	na
5.3	4.9	5.5	4.7	-26.4	-18.2	-150	-137	6.5	5.5
6.5	5.8	6.3	4.9	-10.0	-5.0	-130	-130	na	na
4.4	5.2	4.9	4.6	na	na	na	na	na	na
5.8	5.5	6.3	5.6	-57.0	-60.0	-147	-126	5.3	4.6
6.1	4.0	6.3	4.1	-18.0	-17.2	na	na	6.0	5.0
6.3	5.5	6.7	6.0	-54.8	-69.2	na	na	na	na
5.0	5.0	5.3	5.3	-10.0	-10.0	na	na	5.0	na
4.9	4.4	4.9	4.0	-11.0	-8.0	na	na	8.9	na
6.1	5.8	5.4	5.3	na	na	na	na	na	na
5.3	5.8	5.1	6.0	-20.0	-20.0	na	na	na	na
4.8	3.7	5.0	4.1	-18.5	-13.5	-126	-117	6.0	6.3
4.0	3.8	4.7	4.0	na	na	na	na	na	na
4.0	3.4	4.0	3.9	6.2	18.6	-138	-135	7.6	6.4
4.8	6.2	5.1	6.2	-15.0	20.0	-157	-163	na	na
na	na	na	na	na	na	na	na	7.2	6.5
4.6	4.3	5.9	5.9	-10.0	10.0	-140	-135	6.5	6.0
5.2	5.4	5.6	4.9	9.2	21.1	-139	-127	6.5	6.1
5.6	5.9	5.8	6.6	na	na	na	na	na	na
5.0	5.1	5.1	5.2	na	na	-135	-137	na	na
6.6	7.1	5.6	7.2	na	na	na	na	na	na
4.7	4.8	4.9	5.0	-29.0	-18.0	-112	-90	na	na
4.9	5.3	6.6	6.2	-5.0	-37.0	-140	-140	5.5	7.1
5.1	5.4	5.1	5.4	-10.0	0.0	-121	-115	4.7	4.5
4.6	3.9	5.1	3.8	na	na	na	na	7.1	5.7
6.0	5.6	6.1	5.8	10.6	30.1	-124	-136	6.9	4.7
5.8	4.5	5.7	5.1	na	na	-138	-134	6.2	6.2
5.3	5.1	5.5	5.2	-15.6	-9.6	-136	-131	6.6	5.8
5.2	5.1	5.3	5.2	-13.9	-5.4	-142	-139	6.1	5.7
4.6		4.7		-27.9		-154		5.9	
6.6	7.1	6.7	7.2	10.6	30.1	-112	-90	8.9	7.1
4.0	3.4	4.0	3.8	-57.0	-69.2	-160	-163	4.7	4.5
0.7	0.8	0.6	0.8	17.4	24.1	12	15	1.2	0.8

The Recovery Continues Apace

The fourth quarter GDP "flash estimate" (released after our survey deadline) showed growth accelerating from 0.5% q-o-q to 0.9%, underscoring the improvement in activity over the latter part of last year. Our panel's 2007 GDP forecast has seen an upgrade this month. Industrial production was also upbeat, soaring from 0.3% m-o-m to 1.0% in December, bringing the y-o-y rate up to 4.0%. However, January's purchasing managers' index for manufacturing dipped to its lowest level since February 2006, and production forecasts remain unchanged this month. Despite this, the ECB has indicated that interest rates will most likely rise at the next policy meeting on March 8, given the bank's concerns about wage and money supply growth.

Euro Zone Interest Rates

Forecasts are provided by a total of more than 80 panelists for **Germany** (page 9), **France** (page 11), **Italy** (page 15), the **Netherlands** (page 20) and **Spain** (page 22). This allows the analysis of forecasts for different yields on individual country 10-year benchmark bonds. Forecasts for 3-month interest rates are all for the EURIBOR rate.

	Actual Feb 12 '07	Consensus End May '07	Consensus End Feb '08
Euribor: 3-mth, %	3.8	3.9	4.0
German 10-yr Govt Bond, %	4.1	4.0	4.1

Likelihood of an ECB Interest Rate Change

Our panel's estimated average probability of a change in the refinancing rate (3.50% on survey date) at or before the next policy meeting is:

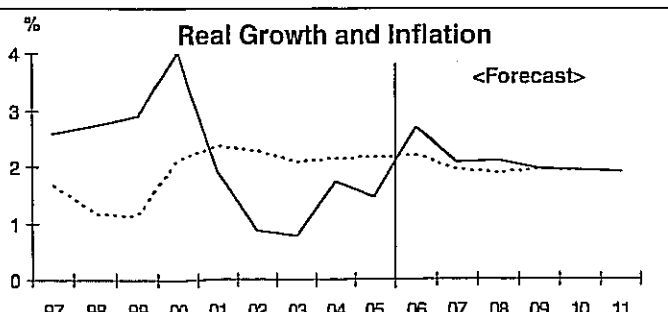
INCREASE	NO CHANGE	DECREASE	
88.7	+ 11.3	+ 0.0	= 100 %
Most likely rate change mentioned:			+0.25 %

Euro Exchange Rates

Forecasts are provided by more than 100 panellists and are shown on page 27.

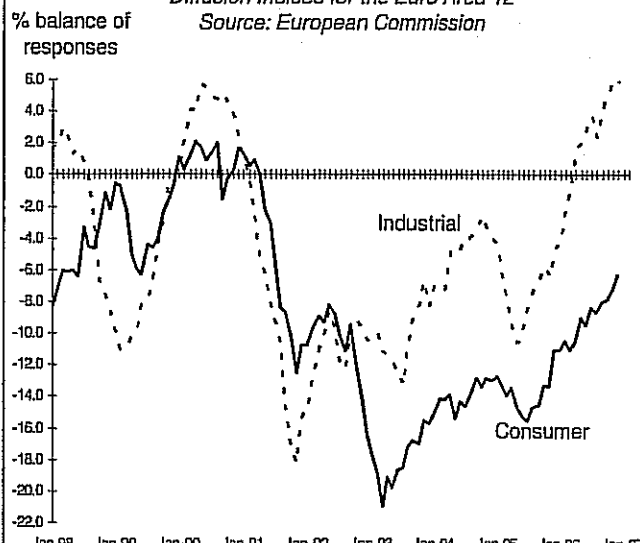
Euro Zone Economic Statistics

The source of all Historical Data (facing page) is Eurostat, with the exception of the Current Account and the Money Supply, M3, which are from the European Central Bank. The base years and statistics methodologies used by Eurostat may differ from those used by individual Euro zone-member countries included in *Consensus Forecasts*. Eurostat data is often drawn from the national statistical agencies within the Euro zone but is adjusted to achieve standard classifications.



Consumer and Industrial Confidence

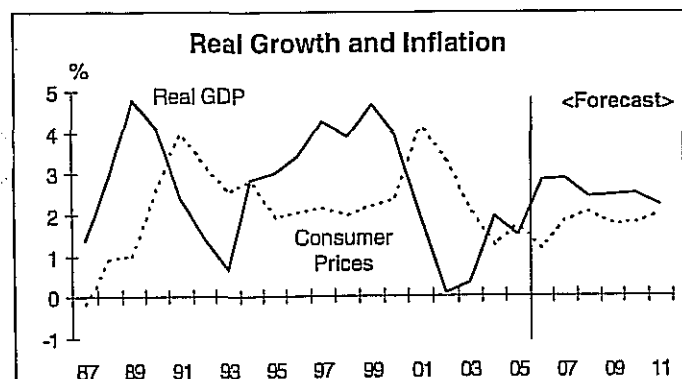
Diffusion Indices for the Euro Area 12
Source: European Commission



	Average % Change on Previous Calendar Year												Annual Total		Rates on Survey Date			
	Gross Domestic Product		Private Consumption		Gross Fixed Investment		Manufacturing Production		Consumer Prices		Hourly Wages (Manufacturing)		Current Account (Euro bn)		3.8%		4.1%	
	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	End May'07		End Feb'08	
Economic Forecasters	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	End May'07	End Feb'08	End May'07	End Feb'08
NIBC	3.7	2.5	3.0	2.3	7.0	3.0	4.5	1.5	1.8	2.5	2.7	3.5	na	na	4.1	4.4	4.2	4.6
Kempen & Co.	3.3	2.8	2.8	2.0	5.0	4.0	3.2	3.5	2.2	2.7	2.5	2.0	na	na	4.0	4.0	4.2	4.5
Rabobank Nederland	3.3	na	2.6	na	6.9	na	na	na	2.0	na	2.5	na	na	na	3.9	4.1	3.9	4.1
ABN AMRO	3.2	2.8	2.0	2.0	6.0	3.7	2.5	1.8	1.7	2.0	2.0	3.0	na	na	4.2	4.1	3.9	4.4
Fortis	3.1	2.6	2.6	2.9	6.2	4.7	2.5	2.0	1.9	2.2	2.4	2.9	41.5	42.1	3.9	4.1	4.2	4.5
ING	2.8	2.6	2.3	2.2	5.0	2.3	2.4	1.9	1.8	2.2	2.5	2.1	na	na	3.9	4.3	3.9	4.3
Moody's Economy.com	2.7	2.1	2.0	2.0	4.0	4.1	2.1	2.0	1.9	1.6	na	na	na	na	na	na	na	na
Theodoor Gillissen	2.6	2.3	2.2	2.0	5.6	3.3	3.0	2.4	1.9	2.2	2.5	3.0	40.0	43.0	3.8	3.8	4.2	4.0
Econ Intelligence Unit	2.6	2.7	1.9	2.0	6.0	6.2	2.4	2.4	1.6	1.5	na	na	na	na	na	na	na	na
Deutsche Bank	2.4	2.5	2.2	2.1	4.4	2.8	1.8	1.7	1.4	1.8	2.0	2.5	42.5	44.5	3.9	3.4	3.9	3.8
HSBC	2.0	1.6	1.5	1.6	3.8	3.0	na	na	1.9	1.6	na	na	na	na	3.8	3.2	3.6	3.7
Consensus (Mean)	2.9	2.4	2.3	2.1	5.4	3.7	2.7	2.1	1.8	2.0	2.4	2.7	41.3	43.2	3.9	3.9	4.0	4.2
Last Month's Mean	2.9	2.6	2.3	2.1	5.3	3.4	2.7	2.2	1.8	2.1	2.4	2.7	40.3	41.3				
3 Months Ago	2.8		2.2		4.4		2.6		1.9		2.3		38.1					
High	3.7	2.8	3.0	2.9	7.0	6.2	4.5	3.5	2.2	2.7	2.7	3.5	42.5	44.5	4.2	4.4	4.2	4.6
Low	2.0	1.6	1.5	1.6	3.8	2.3	1.8	1.5	1.4	1.5	2.0	2.0	40.0	42.1	3.8	3.2	3.6	3.7
Standard Deviation	0.5	0.4	0.4	0.3	1.1	1.1	0.8	0.6	0.2	0.4	0.3	0.5	1.3	1.2	0.1	0.4	0.2	0.3
Comparison Forecasts																		
CPB (Dec. '06)	2.9		2.2		4.3				1.3				38.6					
Eur Commission (Nov. '06)	2.9	2.6	1.8	2.1	4.4	2.3												
IMF (Sep. '06)	2.9																	
OECD (Nov. '06)	3.1	3.0	1.2	1.5	4.6	1.8												

❖ National accounts data for the fourth quarter (released one day after our survey date) showed the economy expanding by 0.6% q-o-q, supported by strong gains in exports. For 2006 as a whole, GDP growth was 2.9%, with our panel forecasting a similarly positive outturn for 2007, bolstered by a 5.4% rise in investment.

❖ Manufacturing production surged by 2.4% q-o-q in the fourth quarter, taking full-year 2006 growth to 2.3%. The pick-up in momentum is expected to carry over into 2007, with consensus forecasts for production pointing to an acceleration in growth to 2.7%.



Historical Data				
* % change on previous year	2003	2004	2005	2006
Gross Domestic Product*	0.3	2.0	1.5	2.9
Private Consumption*	-0.2	0.6	0.7	-1.2
Gross Fixed Investment*	-1.5	-0.8	3.6	6.1
Manufacturing Production*	-1.1	1.6	0.2	2.3
Consumer Prices*	2.1	1.2	1.7	1.1
Hourly Wages (manufacturing)*	2.7	1.5	0.9	1.8
Current Account, transactions basis, Euro bn	26.2	41.8	39.0	41.8 ^e
3 mth Euro, % (end yr)	2.1	2.2	2.5	3.7
10 Yr Dutch Govt Bond Yield, % (end yr)	4.3	3.7	3.3	4.0

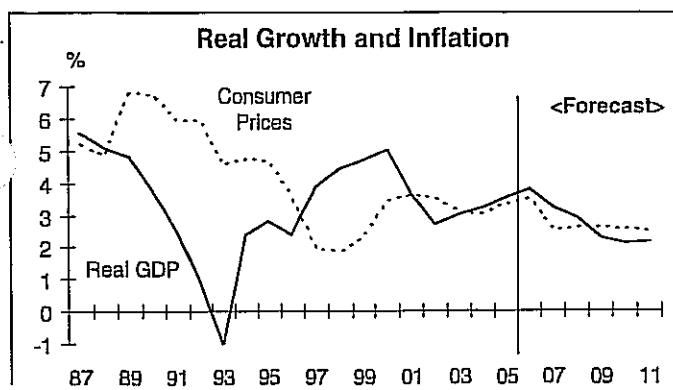
e = consensus estimate based on latest survey
 Nominal GDP - Euro505.6bn (2005). Popn - 16.3mn (mid-year, 2005). \$/Euro Exch. Rate - 1.244 (average, 2005).

Quarterly Consensus Forecasts										
Historical Data and Forecasts (bold italics) From Survey of December 11, 2006										
	2006		2007				2008			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Gross Domestic Product	2.4	3.0	2.9	3.4	3.3	2.9	2.8	2.6	2.3	2.4
Consumer Prices	1.1	1.3	1.3	1.2	1.7	1.7	1.8	2.1	2.0	2.0

	Average % Change on Previous Calendar Year												Annual Total		Rates on Survey Date			
	Gross Domestic Product		Household Consumption		Gross Fixed Investment		Industrial Production		Consumer Prices		Salary Cost per Hour		Current Account (Euro bn)		3.8%		4.2%	
	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	End May'07	End Feb'08	End May'07	End Feb'08
Economic Forecasters	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	End May'07	End Feb'08	End May'07	End Feb'08
FUNCAS	3.8	3.1	3.6	3.2	6.2	4.3	3.8	3.0	2.1	2.6	2.8	2.9	-96.9	-109.8	4.2	4.3	4.1	4.3
BBVA	3.5	3.0	3.3	2.7	5.2	4.4	4.2	4.0	2.2	2.4	3.1	2.9	-72.8	-74.1	3.7	3.7	4.2	4.2
La Caixa	3.5	3.0	3.2	3.0	6.0	4.5	3.5	3.2	2.5	2.6	2.7	2.8	-99.3	-107.2	4.0	4.2	4.2	4.6
AFI	3.4	3.0	2.9	2.8	5.3	5.0	3.5	3.1	2.2	2.4	2.8	2.5	-80.1	-76.4	3.9	4.1	4.1	4.3
Caja Madrid	3.4	2.9	3.1	2.8	5.2	3.5	3.3	2.8	2.6	2.6	3.2	2.9	-88.5	-87.0	3.9	3.8	3.9	3.5
IFL-Univers Carlos III	3.4	3.3	3.4	3.3	5.7	5.5	3.8	3.8	2.2	2.6	na	na	-90.0	-92.2	3.9	4.1	4.2	4.3
Instituto de Credito Oficial	3.4	3.2	3.3	3.1	5.3	4.7	3.3	3.0	2.5	2.7	3.2	3.1	-88.1	-93.5	3.9	4.0	4.1	4.2
CEPREDE	3.4	2.8	3.2	2.6	5.9	4.7	3.4	2.6	2.8	2.5	3.2	2.6	-105.0	-116.0	3.9	4.0	4.2	4.6
Goldman Sachs	3.3	2.9	3.6	2.9	3.5	2.7	na	na	2.4	3.0	na	na	-95.6	-100.7	4.2	4.2	4.2	4.2
Inst Estud Economicos	3.3	na	3.0	na	5.5	na	3.2	na	2.7	na	3.0	na	-81.5	na	3.9	4.1	4.1	3.9
Inst L R Klein (Gauss)	3.2	3.2	3.6	3.4	6.6	5.2	2.8	2.5	2.8	2.5	3.0	2.8	-80.0	-77.0	4.0	4.2	4.2	4.4
ING Financial Markets	3.2	2.6	3.2	2.8	3.5	3.4	2.8	2.5	2.4	2.6	na	na	na	na	3.9	4.3	3.9	4.3
UBS	3.2	2.9	3.9	3.1	3.5	2.3	2.5	1.9	2.7	2.9	na	na	-93.8	-89.0	4.0	4.3	3.9	4.2
Grupo Santander	3.2	3.0	3.0	na	5.0	na	na	na	2.6	na	3.5	na	-90.0	na	3.9	4.1	4.0	4.2
Banesto	3.1	3.0	3.3	2.8	3.7	3.5	3.2	2.5	2.4	2.5	na	na	na	na	3.9	3.8	4.0	3.7
Econ Intelligence Unit	2.7	2.4	2.6	2.4	3.2	2.4	2.2	1.4	2.7	2.5	na	na	na	na	na	na	na	na
HSBC	2.4	2.4	3.0	2.7	3.6	3.1	2.5	2.0	3.0	2.9	3.3	3.2	-106.0	-83.0	3.8	3.2	3.6	3.7
Consensus (Mean)	3.3	2.9	3.2	2.9	4.9	3.9	3.2	2.7	2.5	2.6	3.1	2.9	-90.5	-92.2	3.9	4.0	4.1	4.2
Last Month's Mean	3.2	2.9	3.2	2.9	5.0	4.1	3.1	2.7	2.7	2.6	3.1	2.9	-86.7	-91.6				
3 Months Ago	3.1		3.0		4.6		2.9		2.8		3.2		-86.2					
High	3.8	3.3	3.9	3.4	6.6	5.5	4.2	4.0	3.0	3.0	3.5	3.2	-72.8	-74.1	4.2	4.3	4.2	4.6
Low	2.4	2.4	2.6	2.4	3.2	2.3	2.2	1.4	2.1	2.4	2.7	2.5	-106.0	-116.0	3.7	3.2	3.6	3.5
Standard Deviation	0.3	0.3	0.3	0.3	1.1	1.0	0.6	0.7	0.3	0.2	0.2	0.2	9.7	13.8	0.1	0.3	0.2	0.3
Comparison Forecasts																		
Eur Commission (Nov. '06)	3.4	3.3	3.4	3.1	5.2	4.7												
IMF (Sep. '06)	3.0		3.4		4.1													
OECD (Nov. '06)	3.3	3.1	3.3	3.2	4.9	4.5												

❖ First estimates of fourth quarter GDP growth revealed a further acceleration in the pace of activity. The economy's 1.1% q-o-q expansion was higher than the previous quarter's 0.9% increase and the largest rise in nearly six years. Further robust activity is predicted for 2007, although a forecasted mild slowdown in domestic demand will rein in GDP growth compared with 2006.

❖ Helped by more upbeat activity in the Euro zone, industrial production increased by 3.7% in 2006. Looking at early 2007, business confidence remains high, boding well for further strong advances in production.



Historical Data				
* % change on previous year	2003	2004	2005	2006
Gross Domestic Product*	3.0	3.2	3.5	3.8
Household Consumption*	2.8	4.2	4.2	3.6 e
Gross Fixed Investment*	5.9	5.0	7.0	6.2 e
Industrial Production*	1.6	1.8	0.1	3.7
Consumer Prices*	3.0	3.0	3.4	3.5
Salary Cost per Hour*	4.3	3.5	3.2	3.3 e
Current Account, Euro bn	-27.5	-44.2	-66.6	-84.3 e
3 mth Euro, % (end yr)	2.1	2.2	2.5	3.7
10 Yr Spanish Govt Bond Yield, % (end yr)	4.3	3.7	3.3	4.0

e = consensus estimate based on latest survey

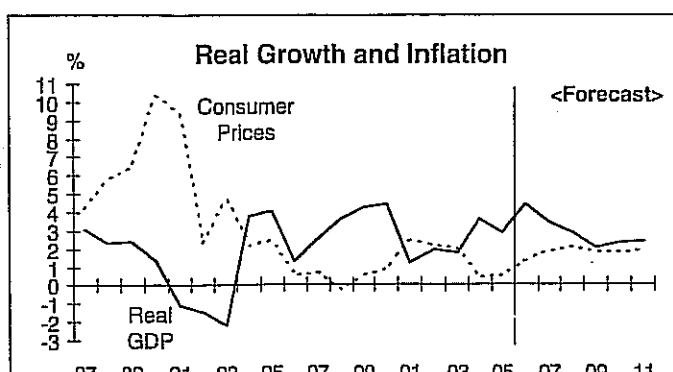
Nominal GDP - Euro904.3bn (2005). Popn - 43.1mn (mid-year, 2005). \$/Euro Exch. Rate - 1.244 (av., 2005).

Quarterly Consensus Forecasts										
Historical Data and Forecasts (bold italics) From Survey of December 11, 2006										
	2006		2007				2008			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Gross Domestic Product	3.6	3.7	3.8	3.8	3.5	3.3	3.2	3.1	3.0	2.9
Consumer Prices	4.0	3.9	3.5	2.8	2.7	2.5	2.5	2.9	2.9	2.8

	Average % Change on Previous Calendar Year												Annual Total		Rates on Survey Date			
	Gross Domestic Product		Household Consumption		Gross Fixed Investment		Mining & Manufacturing Production		Consumer Prices		Hourly Earnings (Mining & Manuf.)		Current Account (Skr bn)		3.4%		4.0%	
	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	End May'07	End Feb'08	End May'07	End Feb'08
Economic Forecasters																		
JP Morgan	4.1	2.7	3.1	2.7	5.1	3.1	na	na	1.7	1.9	na	na	193	204	na	na	na	na
Svenska Handelsbanken	3.8	2.7	4.0	3.2	7.1	5.8	5.0	4.9	2.2	2.4	4.2	4.2	177	160	3.5	4.3	3.8	4.4
Goldman Sachs	3.7	2.8	3.6	3.1	3.9	3.7	4.8	4.0	2.2	2.4	na	na	184	161	3.8	4.5	4.2	4.3
National Institute - NIER	3.6	3.2	3.9	3.3	6.3	4.5	5.2	4.3	1.9	1.9	3.3	4.0	205	217	na	na	3.7	4.1
Öhman	3.5	3.1	3.5	3.2	6.0	5.0	5.0	4.5	2.1	2.4	3.8	4.6	205	195	3.7	4.1	4.2	4.4
SE Banken	3.5	2.9	3.8	3.4	5.5	3.5	4.7	3.8	1.5	2.4	na	na	224	220	3.7	4.1	4.2	4.5
Econ Intelligence Unit	3.5	3.0	3.8	3.2	5.0	3.3	3.5	2.5	1.7	1.9	na	na	na	na	na	na	na	na
Confed of Swed Enterprise	3.4	2.7	3.3	2.5	4.0	2.0	3.8	3.1	1.9	2.0	na	na	190	200	3.8	4.0	4.1	4.1
HQ Bank	3.4	2.9	4.0	2.5	7.1	4.3	3.0	2.9	1.6	1.8	3.5	3.8	na	na	3.5	4.0	4.0	4.3
Nordea	3.4	2.5	3.5	2.4	5.1	2.5	na	na	1.4	1.3	na	na	na	na	3.8	4.0	3.9	4.2
SBAB	3.3	2.9	3.3	2.8	4.3	2.3	4.0	3.5	2.3	2.2	3.4	3.5	210	220	3.7	4.0	4.1	4.3
Swedbank	3.3	3.1	3.8	3.2	5.5	4.0	4.0	4.5	1.9	2.1	3.7	3.5	205	218	4.0	4.3	4.1	4.4
UBS	3.3	3.5	2.6	2.4	3.7	4.3	3.6	3.0	1.5	1.8	na	na	192	187	4.0	4.3	3.9	4.2
ING Financial Markets	3.2	2.8	2.8	2.5	6.8	4.2	4.0	3.4	1.8	1.8	3.4	3.7	190	195	3.5	3.9	4.0	4.3
Merrill Lynch	3.2	3.0	3.8	3.5	4.3	3.0	4.0	3.3	2.2	2.0	3.7	4.0	210	225	3.6	4.3	4.0	4.0
Consensus (Mean)	3.5	2.9	3.5	2.9	5.3	3.7	4.2	3.7	1.9	2.0	3.6	3.9	199	200	3.7	4.1	4.0	4.3
Last Month's Mean	3.3	2.8	3.4	2.9	5.2	3.4	4.0	3.4	2.0	2.0	3.6	3.9	193	201				
3 Months Ago	3.1		3.2		4.8		3.9		2.0		3.5		185					
High	4.1	3.5	4.0	3.5	7.1	5.8	5.2	4.9	2.3	2.4	4.2	4.6	224	225	4.0	4.5	4.2	4.5
Low	3.2	2.5	2.6	2.4	3.7	2.0	3.0	2.5	1.4	1.3	3.3	3.5	177	160	3.5	3.9	3.7	4.0
Standard Deviation	0.2	0.2	0.4	0.4	1.2	1.0	0.7	0.7	0.3	0.3	0.3	0.4	13	22	0.2	0.2	0.2	0.1
Comparison Forecasts																		
Riksbank (Oct. '06)	3.1	2.7	3.6	3.5	3.6	3.3			2.0	1.9								
Eur Commission (Nov. '06)	3.3	3.1	3.5	3.4	4.5	3.3												
IMF (Sep. '06)	2.2																	
OECD (Nov. '06)	3.6	2.9	3.2	2.9	5.7	4.7			2.2	2.5								

❖ Booming GDP growth in 2006, and signs that global activity is likely to be stronger than previously thought this year, has resulted in our panel upgrading its 2007 forecasts for GDP growth. An indication of the strength of domestic demand came from retail sales in December, which were up by 10.7% y-o-y.

❖ The industrial sector enjoyed a particularly strong year of growth in 2006, with latest data revealing production surged by 2.5% m-o-m in December. Consensus forecasts for mining and manufacturing production in both 2007 and 2008 have, as a result, risen this month.



Historical Data

* % change on previous year	2003	2004	2005	2006
Gross Domestic Product*	1.8	3.6	2.9	4.5 e
Household Consumption*	1.8	2.2	2.4	3.0 e
Gross Fixed Investment*	1.1	6.4	8.1	7.4 e
Min. & Manufacturing Prodn*	2.5	3.2	1.6	4.8
Consumer Prices*	1.9	0.4	0.5	1.4
Average Hourly Earnings (Mining & Manufacturing)*	2.9	2.7	3.0	3.2 e
Current Account, Skr bn	181	176	190	196 e
3 mth Interbank Rate, % (end yr)	2.9	2.2	2.0	3.3
10 Yr Govt Bond Yield, % (end yr)	4.8	4.0	3.3	3.8

e = consensus estimate based on latest survey

Nominal GDP - Skr 2,673.0bn (2005). Population - 9.0mn (mid-year, 2005). Skr/\$ Exchange Rate - 7.473 (average, 2005).

Quarterly Consensus Forecasts

Historical Data and Forecasts (bold *italics*) From Survey of December 11, 2006

	2006				2007				2008	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Gross Domestic Product	4.4	5.0	4.7	4.1	3.7	3.2	3.0	2.8	2.8	2.8
Consumer Prices	0.8	1.5	1.6	1.5	2.1	1.8	1.8	2.2	2.2	2.1

Forecasts for the countries in Western Europe, the Middle East and Africa shown on the next two pages were provided by the following leading economic forecasters:

Bank Austria Creditanstalt

D&B

Handelsbanken Markets

Bank Leumi

Economist Intelligence Unit

Moody's Economy.com

Royal Bank of Scotland

Danske Bank

Forecaster ECOSA

Oxford Economics

e = consensus estimate based on latest survey

AUSTRIA	Population - 8.2mn (2005, mid-year)	Historical Data				Consensus Forecasts	
	Nominal GDP - US\$306.6bn (2005)	2003	2004	2005	2006	2007	2008
Gross Domestic Product (% change on previous year)		1.1	2.4	2.0	3.3 e	2.4	2.3
Industrial Production (% change on previous year)		4.1	6.1	4.5	6.6 e	4.5	3.2
Consumer Prices (% change on previous year)		1.3	2.1	2.3	1.5	1.6	1.7
Current Account (US Dollar bn)		-0.5	1.3	4.0	7.0 e	6.7	7.4

BELGIUM	Population - 10.4mn (2005, mid-year)	Historical Data				Consensus Forecasts	
	Nominal GDP - US\$371.5bn (2005)	2003	2004	2005	2006	2007	2008
Gross Domestic Product (% change on previous year)		1.0	2.7	1.5	2.9 e	2.2	2.2
Industrial Production (% change on previous year)		0.7	3.1	-0.1	5.1	2.6	2.1
Consumer Prices (% change on previous year)		1.6	2.1	2.8	1.8	1.7	1.7
Current Account (US Dollar bn)		12.8	12.6	9.3	9.2 e	8.7	8.6

DENMARK	Population - 5.4mn (2005, mid-year)	Historical Data				Consensus Forecasts	
	Nominal GDP - US\$259.2bn (2005)	2003	2004	2005	2006	2007	2008
Gross Domestic Product (% change on previous year)		0.4	2.1	3.1	3.3 e	2.5	2.2
Manufacturing Production (% change on previous year)		-0.7	-0.3	1.7	4.2	2.6	1.9
Consumer Prices (% change on previous year)		2.1	1.2	1.8	1.9	2.0	2.1
Current Account (US Dollar bn)		6.1	6.0	9.8	6.6	6.6	6.8

EGYPT	Population - 74.0mn (2005, mid-year)	Historical Data				Consensus Forecasts	
	Nominal GDP - US\$93.6bn (2005) ¹	2003	2004	2005	2006	2007	2008
Gross Domestic Product (% change on previous year) ¹		3.2	4.1	4.5	6.8	6.4	5.7
Consumer Prices (% change on previous year)		4.5	11.3	4.9	7.6	7.6	4.8
Current Account (US Dollar bn)		3.7	3.9	2.1	3.1 e	3.2	2.9

¹ year(s) ending June 30

FINLAND	Population - 5.2mn (2005, mid-year)	Historical Data				Consensus Forecasts	
	Nominal GDP - US\$196.2bn (2005)	2003	2004	2005	2006	2007	2008
Gross Domestic Product (% change on previous year)		1.9	3.3	3.0	5.4 e	3.0	2.6
Industrial Production (% change on previous year)		1.3	5.4	-0.3	7.8	3.7	3.4
Consumer Prices (% change on previous year)		0.9	0.2	0.6	1.6	1.8	1.8
Current Account (US Dollar bn)		10.6	14.7	9.7	11.6 e	12.5	12.1

GREECE	Population - 11.1mn (2005, mid-year)	Historical Data				Consensus Forecasts	
	Nominal GDP - US\$225.6bn (2005)	2003	2004	2005	2006	2007	2008
Gross Domestic Product (% change on previous year)		4.9	4.7	3.7	4.1 e	3.5	3.3
Industrial Production (% change on previous year)		0.3	1.2	-0.9	0.7	2.5	2.3
Consumer Prices (% change on previous year)		3.5	2.9	3.5	3.2	2.9	2.7
Current Account (US Dollar bn)		-12.7	-13.3	-17.9	-24.1 e	-22.3	-19.7

IRELAND	Population - 4.1mn (2005, mid-year)	Historical Data				Consensus Forecasts	
		2003	2004	2005	2006	2007	2008
	Nominal GDP - US\$200.8bn (2005)						
	Gross Domestic Product (% change on previous year)	4.3	4.3	5.5	5.5 e	4.9	4.3
	Industrial Production (% change on previous year)	4.8	0.5	3.0	5.1 e	4.1	4.0
	Consumer Prices (% change on previous year)	3.5	2.2	2.5	4.0	3.2	2.7
	Current Account (US Dollar bn)	0.0	-1.1	-5.2	-7.3 e	-7.5	-7.1

ISRAEL	Population - 6.7mn (2005, mid-year)	Historical Data				Consensus Forecasts	
		2003	2004	2005	2006	2007	2008
	Nominal GDP - US\$129.8bn (2005)						
	Gross Domestic Product (% change on previous year)	1.5	4.8	5.2	5.0	4.3	4.2
	Industrial Production (% change on previous year)	-0.3	6.9	3.6	5.0 e	4.5	4.6
	Consumer Prices (% change on previous year)	0.7	-0.4	1.3	2.1	2.0	2.5
	Current Account (US Dollar bn)	1.7	3.2	3.8	5.1 e	4.1	3.9

NIGERIA	Popn - 131.5mn (2005, mid-year)	Historical Data				Consensus Forecasts	
		2003	2004	2005	2006	2007	2008
	Nominal GDP - US\$94.8bn (2005)						
	Gross Domestic Product (% change on previous year)	10.7	6.0	6.9	5.3 e	5.9	5.6
	Consumer Prices (% change on previous year)	14.0	15.0	17.9	9.8 e	10.1	8.9
	Current Account (US Dollar bn)	3.4	16.8	24.2	20.2 e	19.6	20.9

PORTUGAL	Population - 10.5mn (2005, mid-year)	Historical Data				Consensus Forecasts	
		2003	2004	2005	2006	2007	2008
	Nominal GDP - US\$183.6bn (2005)						
	Gross Domestic Product (% change on previous year)	-1.1	1.2	0.4	1.1 e	1.5	1.8
	Industrial Production (% change on previous year)	0.1	-2.6	0.1	2.6	1.9	1.5
	Consumer Prices (% change on previous year)	3.3	2.4	2.3	3.1	2.2	2.1
	Current Account (US Dollar bn)	-9.2	-12.9	-17.0	-17.0 e	-15.3	-13.1

SAUDI ARABIA	Popn - 24.6mn (2005, mid-year)	Historical Data				Consensus Forecasts	
		2003	2004	2005	2006	2007	2008
	Nominal GDP - US\$309.8bn (2005)						
	Gross Domestic Product (% change on previous year)	7.7	5.3	6.5	5.1 e	4.3	3.9
	Consumer Prices (% change on previous year)	0.6	0.5	0.5	1.9 e	2.1	1.5
	Current Account (US Dollar bn)	28.0	51.9	87.1	105.5 e	94.2	85.7

SOUTH AFRICA	Popn - 47.4mn (2005, mid-year)	Historical Data				Consensus Forecasts	
		2003	2004	2005	2006	2007	2008
	Nominal GDP - US\$239.5bn (2005)						
	Gross Domestic Product (% change on previous year)	3.1	4.8	5.1	4.8 e	4.4	4.7
	Manufacturing Production (% change on previous year)	-1.8	4.2	3.6	5.0	5.7	5.3
	Consumer Prices (% change on previous year)	5.8	1.4	3.4	4.7	5.0	4.3
	Current Account (US Dollar bn)	-1.9	-7.0	-9.1	-13.6 e	-13.5	-11.0

Foreign Exchange Rates

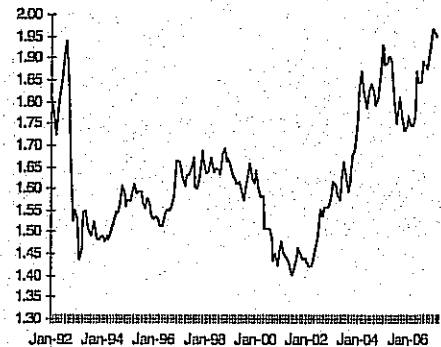
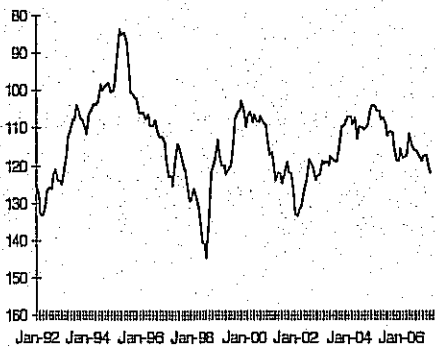
All US\$ rates are amounts of currency per dollar, except the UK pound and the euro which are reciprocals. A positive (+) sign for the % change implies an appreciation of the currency against the US Dollar and vice versa.

	Historical Data				Latest Spot Rate (Feb. 12)	Consensus Forecasts					
	Rates at end of:					Forecast End May 2007	Percent Change	Forecast End Feb. 2008	Percent Change	Forecast End Feb. 2009	Percent Change
	2003	2004	2005	2006							
Rates per US Dollar¹											
Canadian Dollar	1.292	1.204	1.165	1.164	1.175	1.167	+0.7	1.164	+1.0	1.154	+1.8
Egyptian Pound	6.153	6.131	5.732	5.711	5.705	5.737	-0.6	5.798	-1.6	5.918	-3.6
European Euro	1.263	1.362	1.180	1.319	1.296	1.316	+1.6	1.313	+1.3	1.310	+1.1
Israeli Shekel	4.379	4.308	4.603	4.216	4.228	4.323	-2.2	4.344	-2.7	4.455	-5.1
Japanese Yen	107.1	104.1	118.0	119.2	121.8	117.2	+3.9	112.0	+8.8	108.4	+12.3
Nigerian Naira	136.5	132.4	129.0	128.8	128.2	129.8	-1.2	132.4	-3.2	136.8	-6.3
Saudi Arabian Riyal	3.750	3.750	3.745	3.750	3.751	3.749	+0.1	3.749	+0.1	3.749	+0.1
South African Rand	6.640	5.630	6.325	7.058	7.284	7.243	+0.6	7.319	-0.5	7.563	-3.7
United Kingdom Pound	1.785	1.931	1.722	1.957	1.948	1.969	+1.1	1.910	-2.0	1.888	-3.1
Rates per Euro											
Danish Krone	7.525	7.447	7.461	7.455	7.453	7.458	-0.1	7.451	0.0	7.447	+0.1
Norwegian Krone	8.436	8.227	7.987	8.210	8.093	7.972	+1.5	7.839	+3.2	7.830	+3.4
Swedish Krona	9.080	9.010	9.389	9.024	9.116	9.006	+1.2	8.914	+2.3	8.824	+3.3
Swiss Franc	1.562	1.541	1.550	1.610	1.624	1.599	+1.5	1.580	+2.8	1.540	+5.4

Yen per US\$

US\$ per Euro¹

US\$ per UK Pound



¹ historical rates up to January 1, 1999, are calculated as "synthetic" euro exchange rates based on a weighted average of the eleven original component currencies.

West Texas Intermediate, US\$ per barrel		
Range 1985-2007	77.0 - 10.4	
Spot Rate (Feb. 12)	57.8	
February Survey	Forecast for	
	End May 2007	End Feb. 2008
Mean Forecast	59.0	60.7
High	68.4	80.0
Low	52.5	50.0
Standard Deviation	3.2	5.4
No. of Forecasts	71	65

A Shift in Oil Price Sentiment?

A spell of markedly colder weather in the US and Europe has led to a rally in oil prices over the past few weeks. This follows significant losses during an exceptionally mild autumn, with prices even dropping to the US\$50-mark as recently as mid-January. However, crude oil futures have since recovered, rising by more than 5% at the end of last month. Some observers have speculated that the rebound could represent a more sustained upward shift in market sentiment. For example, despite recent increases in US crude and gasoline stockpiles, market traders focused on a fall in distillate inventories as the freezing weather increased demand for heating oil. The Saudi oil minister's announcement that OPEC might leave output unchanged at its next meeting sparked some market litters on our survey date, though

continued from page 3

France											
% change over previous year	- Ann. Avge -						- Annual Averages -				
	1997-01	2002	2003	2004	2005	2006	2007	2008	2009	2010-14	2015-19
Real GDP	2.8	1.1	1.1	2.0	1.2	2.0	1.9	1.9	2.2	2.1	2.2
Total Employment	1.7	0.6	0.1	0.0	0.5	0.8	0.7	0.6	0.7	0.7	0.8
Real Output (GDP) per Employee	1.1	0.5	1.0	2.0	0.8	1.2	1.2	1.3	1.5	1.5	1.4
Hourly Wage Rates	3.4	3.6	2.8	2.9	3.0	3.0	2.8	2.7	2.9	2.7	2.8
Unit Wage Costs	2.2	3.1	1.8	0.9	2.2	1.8	1.6	1.4	1.4	1.2	1.4
Nominal GDP	4.0	3.5	3.0	3.8	3.1	3.9	3.7	3.8	4.0	3.9	4.0
Nominal Output per Employee	2.3	2.9	2.8	3.7	2.6	3.1	3.0	3.1	3.3	3.2	3.2

United Kingdom											
% change over previous year	- Ann. Avge -						- Annual Averages -				
	1997-01	2002	2003	2004	2005	2006	2007	2008	2009	2010-14	2015-19
Real GDP	3.1	2.1	2.7	3.3	1.9	2.7	2.6	2.4	2.2	2.4	2.4
Total Employment	1.2	0.5	1.0	1.0	0.8	0.7	0.8	0.6	0.5	0.5	0.6
Real Output (GDP) per Employee	1.9	1.6	1.7	2.3	1.1	1.9	1.8	1.7	1.6	1.8	1.8
Average Earnings	4.7	3.6	3.5	4.3	4.1	4.1	4.4	4.3	4.4	4.4	4.4
Unit Wage Costs	2.7	2.0	1.8	2.0	2.9	2.1	2.6	2.5	2.7	2.5	2.5
Nominal GDP	5.4	5.2	5.9	6.0	4.1	5.2	5.5	4.6	4.8	4.9	4.9
Nominal Output per Employee	4.2	4.7	4.8	5.0	3.3	4.4	4.7	4.0	4.3	4.4	4.3

Italy											
% change over previous year	- Ann. Avge -						- Annual Averages -				
	1997-01	2002	2003	2004	2005	2006	2007	2008	2009	2010-14	2015-19
Real GDP	2.1	0.3	0.1	0.9	0.1	2.0	1.3	1.5	1.5	1.5	1.6
Total Employment	1.3	1.4	1.0	1.5	0.7	1.7	0.6	0.7	0.5	0.6	0.7
Real Output (GDP) per Employee	0.8	-1.1	-0.9	-0.6	-0.6	0.3	0.7	0.8	1.0	0.9	0.9
Contractual Hourly Earnings	2.6	2.1	2.2	2.8	3.1	2.8	2.8	2.6	2.5	2.5	2.5
Unit Wage Costs	1.8	3.2	3.1	3.5	3.8	2.5	2.1	1.8	1.5	1.6	1.6
Nominal GDP	4.5	3.7	3.1	4.0	2.0	3.9	3.6	3.9	3.5	3.5	3.6
Nominal Output per Employee	3.1	2.3	2.1	2.5	1.3	2.2	2.9	3.2	3.0	2.9	2.9

Canada											
% change over previous year	- Ann. Avge -						- Annual Averages -				
	1997-01	2002	2003	2004	2005	2006	2007	2008	2009	2010-14	2015-19
Real GDP	4.2	2.9	1.8	3.3	2.9	2.7	2.3	2.9	3.0	2.7	2.5
Total Employment	2.2	2.4	2.4	1.8	1.4	2.0	1.5	1.4	1.5	1.2	0.9
Real Output (GDP) per Employee	2.0	0.5	-0.5	1.5	1.5	0.7	0.7	1.5	1.5	1.5	1.6
Average Hourly Earnings	1.5	2.2	1.6	3.2	3.4	2.2	2.7	2.9	3.1	3.0	3.1
Unit Wage Costs	-0.4	1.7	2.1	1.6	1.9	1.5	1.9	1.4	1.6	1.5	1.5
Nominal GDP	5.8	4.0	5.2	6.4	6.2	4.8	3.9	4.8	4.9	4.6	4.4
Nominal Output per Employee	3.6	1.6	2.8	4.5	4.8	2.8	2.3	3.4	3.3	3.3	3.5

Euro zone											
% change over previous year	- Ann. Avge -						- Annual Averages -				
	1997-01	2002	2003	2004	2005	2006	2007	2008	2009	2010-14	2015-19
Real GDP	2.8	0.9	0.8	1.7	1.5	2.7	2.1	2.1	2.0	1.9	1.9
Total Employment	1.7	0.7	0.4	0.7	0.8	1.3	1.1	1.0	0.8	0.7	0.5
Real Output (GDP) per Employee	1.1	0.2	0.3	1.0	0.7	1.4	0.9	1.1	1.2	1.2	1.3
Hourly Labour Costs	2.9	3.5	3.2	2.4	2.4	2.3	2.5	2.6	2.5	2.5	2.5
Unit Wage Costs	1.8	3.3	2.8	1.4	1.7	0.8	1.6	1.5	1.3	1.2	1.1
Nominal GDP	4.1	3.5	2.9	3.7	3.3	4.5	4.1	4.1	4.0	4.0	4.0
Nominal Output per Employee	2.3	2.8	2.4	3.0	2.6	3.2	3.0	3.2	3.2	3.3	3.4

Netherlands

% change over previous year	- Ann. Avge -						- Annual Averages -				
	1997-01	2002	2003	2004	2005	2006	2007	2008	2009	2010-14	2015-19
Real GDP	3.8	0.1	0.3	2.0	1.5	2.9	2.9	2.4	2.5	2.2	2.0
Total Employment	2.8	0.2	-0.5	-1.2	0.0	1.5	1.5	0.9	0.8	0.5	0.4
Real Output (GDP) per Employee	0.9	-0.1	0.8	3.2	1.5	1.3	1.3	1.5	1.7	1.7	1.6
Hourly Wages (Total)	3.4	3.7	2.8	1.2	0.7	2.0	2.5	3.0	3.0	2.6	2.6
Unit Wage Costs	2.5	3.8	1.9	-1.9	-0.8	0.7	1.2	1.4	1.4	0.9	1.0
Nominal GDP	6.9	3.9	2.5	2.7	3.2	4.4	4.9	4.5	4.5	3.9	4.0
Nominal Output per Employee	4.0	3.7	3.0	3.9	3.2	2.9	3.3	3.6	3.6	3.4	3.6

Norway

% change over previous year	- Ann. Avge -						- Annual Averages -				
	1997-01	2002	2003	2004	2005	2006	2007	2008	2009	2010-14	2015-19
Real GDP (Total Economy)	2.8	1.4	0.7	3.7	2.7	2.7	2.8	2.6	1.8	2.0	2.2
Total Employment	1.4	0.5	-0.8	0.4	0.7	2.8	1.5	0.6	0.5	0.5	0.4
Real Output (GDP) per Employee	1.3	0.9	1.5	3.4	2.0	-0.1	1.2	2.0	1.3	1.5	1.8
Wages and Salaries per Employee	5.3	5.4	3.7	4.6	3.7	4.4	5.1	5.1	4.6	4.8	4.5
Unit Wage Costs	3.9	4.5	2.1	1.2	1.7	4.5	3.9	3.0	3.2	3.3	2.7
Nominal GDP	8.4	-0.3	4.0	9.4	11.3	8.4	2.4	2.4	3.2	4.8	5.2
Nominal Output per Employee	6.9	-0.8	4.9	9.0	10.5	5.4	0.8	1.9	2.7	4.2	4.8

Spain

% change over previous year	- Ann. Avge -						- Annual Averages -				
	1997-01	2002	2003	2004	2005	2006	2007	2008	2009	2010-14	2015-19
Real GDP	4.4	2.7	3.0	3.2	3.5	3.8	3.3	2.9	2.5	2.6	2.7
Total Employment	4.6	3.0	4.0	3.9	5.6	3.8	3.2	2.7	1.9	1.7	1.8
Real Output (GDP) per Employee	-0.3	-0.3	-0.9	-0.6	-2.0	0.0	0.1	0.2	0.6	0.8	0.9
Salary Cost per Hour	3.1	4.1	4.3	3.5	3.2	3.3	3.1	2.9	2.8	2.8	2.9
Unit Wage Costs	3.4	4.4	5.2	4.2	5.3	3.2	3.0	2.6	2.1	2.0	2.0
Nominal GDP	7.5	7.1	7.3	7.4	7.8	7.7	6.9	6.5	5.5	5.1	5.2
Nominal Output per Employee	2.8	4.0	3.2	3.3	2.0	3.8	3.7	3.7	3.5	3.3	3.3

Sweden

% change over previous year	- Ann. Avge -						- Annual Averages -				
	1997-01	2002	2003	2004	2005	2006	2007	2008	2009	2010-14	2015-19
Real GDP	3.2	2.0	1.8	3.6	2.9	4.5	3.5	2.9	2.8	2.6	2.8
Total Employment	1.4	0.1	-0.3	-0.4	1.0	1.9	1.8	1.1	1.1	0.9	1.0
Real Output (GDP) per Employee	1.8	1.9	2.1	4.1	1.9	2.5	1.7	1.8	1.7	1.6	1.8
Average Hourly Earnings (Total)	3.2	3.4	2.9	2.7	3.0	3.4	4.0	4.0	3.7	3.7	3.9
Unit Wage Costs	1.4	1.5	0.8	-1.3	1.1	0.8	2.2	2.2	2.0	2.1	2.1
Nominal GDP	4.6	3.6	3.7	4.3	4.1	6.0	5.2	4.9	5.0	4.4	4.8
Nominal Output per Employee	3.2	3.6	4.0	4.7	3.1	4.0	3.4	3.7	3.9	3.5	3.7

Switzerland

% change over previous year	- Ann. Avge -						- Annual Averages -				
	1997-01	2002	2003	2004	2005	2006	2007	2008	2009	2010-14	2015-19
Real GDP	2.1	0.3	-0.2	2.3	1.9	2.8	2.0	1.9	1.8	1.7	1.6
Total Employment	1.0	0.4	-0.2	0.3	0.4	1.2	1.1	0.8	0.6	0.5	0.1
Real Output (GDP) per Employee	1.1	-0.2	0.0	2.0	1.5	1.6	0.9	1.0	1.2	1.2	1.5
Total Nominal Salaries	1.0	1.7	1.4	0.9	1.0	1.7	1.8	1.8	1.9	1.7	1.5
Unit Wage Costs	-0.1	1.9	1.5	-1.1	-0.5	0.1	0.9	0.7	0.7	0.5	0.0
Nominal GDP	2.5	1.9	1.0	2.9	1.9	3.9	2.9	2.9	3.1	2.9	2.8

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February Survey	Real GDP % increase			Consumer Prices % increase			Current Account Balance, US\$bn		
	2006	2007	2008	2006	2007	2008	2006	2007	2008
Belgium	2.9	2.2	2.2	1.8	1.7	1.7	9.2	8.7	8.6
Canada	2.7	2.3	2.9	2.0	1.6	2.1	21.6	15.4	16.0
France	2.0	1.9	1.9	1.7	1.5	1.7	-35.2	-36.3	-35.4
Germany	2.7	1.7	2.0	1.7	1.9	1.5	124.7	135.4	140.5
Italy	2.0	1.3	1.5	2.1	1.9	2.0	-39.9	-35.3	-34.7
Japan	2.2	1.9	2.3	0.2	0.2	0.6	164.5	171.5	186.4
Netherlands	2.9	2.9	2.4	1.1	1.8	2.0	52.5	54.2	56.7
Norway	4.2	3.2	2.7	2.3	1.3	2.1	57.6	56.7	57.3
Spain	3.8	3.3	2.9	3.5	2.5	2.6	-105.9	-118.7	-120.9
Sweden	4.5	3.5	2.9	1.4	1.9	2.0	26.5	29.0	29.6
Switzerland	2.8	2.0	1.9	1.1	0.6	1.0	60.3	61.5	65.4
United Kingdom	2.7	2.6	2.4	2.3	2.3	2.0	-65.6	-74.4	-77.2
United States	3.4	2.7	3.0	3.2	1.7	2.3	-860	-820	-820
North America ¹	3.3	2.6	3.0	3.1	1.7	2.3	-838	-804	-804
Western Europe ²	2.8	2.2	2.2	2.0	1.9	1.9	61.2	61.4	76.1
European Union ²	2.9	2.4	2.3	2.1	2.1	1.9	-104.7	-109.1	-101.4
Euro zone ²	2.7	2.1	2.1	2.2	2.0	1.9	-33.3	-20.5	-12.6
Asia Pacific ³	5.1	4.7	4.8	1.9	1.8	2.0	428	441	464
Eastern Europe ⁴	6.5	5.7	5.6	6.9	6.6	5.6	13.7	-4.8	-30.0
Latin America ⁵	5.0	4.3	4.1	4.9	5.0	5.0	48.2	24.0	6.6
Other Countries ⁶	5.2	4.7	4.5	4.2	4.4	3.6	120.3	107.6	102.3
Total	3.9	3.3	3.4	2.8	2.3	2.4			

Regional totals, as well as the grand total for GDP growth and inflation, are weighted averages calculated using 2005 GDP weights, converted at average 2005 exchange rates. Current account forecasts given in national currencies on pages 7-24 have been converted using consensus exchange rate forecasts for the purposes of comparison. ¹USA and Canada. ²The Euro zone aggregate is taken from our panel's latest forecasts (pages 18-19). The Euro zone current account data and forecasts are based on extra-euro zone data, i.e., they are compiled from an aggregate of the Euro zone member states' transactions only with nonresidents of the Euro zone. The European Union data includes the Euro zone countries listed on page 18 plus Denmark, Sweden and the United Kingdom, as well as May 2004 entrants the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia, plus Romania and Bulgaria who entered in January 2007 (data taken from Eastern Europe Consensus Forecasts). Western Europe comprises the Euro zone plus Denmark, Sweden and the United Kingdom, along with Norway and Switzerland. ³Survey results for Japan plus fourteen other countries taken from Asia Pacific Consensus Forecasts. ⁴Nineteen countries, including eleven European Union countries taken from the latest issue of Eastern Europe Consensus Forecasts. ⁵Fourteen countries taken from the latest issue of Latin American Consensus Forecasts (inflation figures are on a December/December basis). ⁶Egypt, Israel, Nigeria, Saudi Arabia and South Africa.

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**Marlene K. Puffer, “Back to Basics”
Canadian Investment Review
Fall 2006**

STEP 1

Back TO Basics

An overview of fixed income products and new trends.



Ask some Canadian plan sponsors about the value that bonds add to a pension portfolio and you might get the following response: “Bond managers don’t add much value, so there’s not much to be gained by paying attention to that part of our portfolio. Besides, I glaze over with all the technical detail of bonds. The fixed income allocation of my investment portfolio is there to hedge liabilities anyway, so we are better off focusing on alternative investments and equities to add value.”

But this is wrong. It is true that many top-quartile domestic bond managers add only about 30 basis points (bps) over their benchmarks, leaving even less net of fees. However, they leave money on the table because they ignore opportunities to add value through more innovative fixed income strategies. Foreign pension plans have long recognized the value of accessing global bonds and credit strategies on a tactical basis, reaping alpha rewards well over 100 bps versus domestic benchmarks with a similar risk profile. Fees may be slightly higher for some of these strategies, but a net addition of 70 bps for a \$500 million-dollar fixed income portfolio adds up to \$3.5 million every year. This extra return potential is well worth the investment of some time and effort to learn more about the opportunities and understand the risks.

The fixed income world is indeed technical, and many sectors require specialized expertise to find profitable trading and investment opportunities and to skillfully monitor and manage risk. Plan sponsors have much to gain from becoming educated consumers of this sector and investi-

BY MARLENE K. PUFFER

gating new strategies to add value in this significant portion of their portfolio. To help them along the way, this section of the Fixed Income Primer will outline the latest trends and topics in domestic bonds and some of the more complex foreign fixed income securities.

KEY TERMS

Government of Canada Bonds – The government regularly issues money market, 2- 5- 10- and 30-year bonds in the public market through an auction process. Fiscal surpluses have eliminated the need for net new financing, but maintaining a liquid government market across the yield curve is important for financial market health and future market access. To support the size and liquidity of new benchmark issues, the government began buying back less liquid bonds by reverse auction. The Government of Canada is currently reviewing how they will issue bonds and continue to maintain a liquid bond and money market.

Federal Agency Bonds – In Canada, these are bonds issued by agencies and they are fully guaranteed by the Government of Canada. Examples are Canada Mortgage and Housing Corporation (CMHC), Farm Credit Corporation, and Export Development Corporation. Despite the full guarantee, these bonds have higher yields than Canadas, so the government is considering rolling these debt programs into general funding.

Canada Mortgage Bonds (CMB) are a new category of Federal Agency bonds and make up the bulk of this issuance. The CMB program began in 2001 and consists of five-year bonds issued by the Canada Mortgage Trust,

Marlene K. Puffer is managing director, Twist Financial Corp.

which holds residential mortgages issued by banks and other financial institutions as backing assets. These bonds are fully guaranteed by the Government of Canada and, from an investor perspective, are large semi-annual coupon bonds with no prepayment risk (that risk is retained by the originating banks). They yield about 13 bps higher than Government of Canada bonds for the same AAA credit quality and similar liquidity. This market has limited the issuance of other prepayable mortgage-backed securities in Canada. Overweighting these bonds is an easy, low-risk way to add value.

Provincial Bonds and Guarantees – The biggest provincial issuers are Ontario and Quebec, which make up nearly 70% of the provincial market, and are the only issuers with significant issuance of long-term bonds. There is some disagreement about how “quasi-provincial” issuers without guarantees, such as school boards, should be classified for Index purposes. Provincial spreads are tight and relatively stable, driven primarily by overall credit market fundamentals and liquidity, with minimal differentiation by province, particularly since political risk in Quebec has subsided. Active strategies within provincials have limited value added capacity.

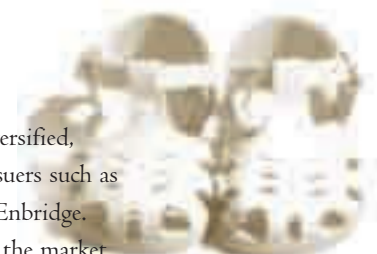
Municipal Bonds – Municipal bonds (munis) are under 2% of the Index in Canada. Many municipalities now combine forces and issue debt through trusts for cheaper funding with greater liquidity. The B.C. municipal finance authority has a higher rating than the province, while others are guaranteed by their province to improve their ratings.

Many munis are issued as serial bonds, whereby a series of maturities, each with a small amount outstanding, are issued simultaneously. The small individual issue size limits liquidity and usually excludes these from bond indexes. Yield spreads on munis are correlated with provincial spreads, and opportunities for active strategies are limited.

Corporate Bonds – In Canada, corporate bonds have grown from about 10% of the market in 1990 to nearly 30% as government issuance has shrunk and investors have become more receptive to corporate credit to add yield to their portfolios. Diversification in this sector is still poor, with financials representing a full 48% of the market, made up of only a handful of bank and insurance issuers along with a few financing

companies. The long end is also poorly diversified, dominated by a few major non-financial issuers such as Trans Canada Pipelines, GTAA, Bell, and Enbridge.

The BBB sector has expanded to 4% of the market (mainly under 10 years), but is still small in Canada.



FIXED INCOME FUNDAMENTALS AND STRATEGIES

Price/yield relationship

As yields, or interest rates, rise, the price of a bond falls. For a simple pure discount bond, this formula shows the relationship between price and yield.

$$\text{Price} = \frac{\text{Face Value}}{(1 + \text{yield})^T}$$

Yield curve

The relationship between Government of Canada bond yields and maturity. The yield curve is usually upward sloping, so rates are generally higher for longer maturity bonds. This makes the “carry trade” possible, where investors can borrow short-term and invest long-term and make a profit as long as rates don’t rise too much.

In Canada the difference between 2-year and 30-year rates has averaged about 150 bps (or 1.5%) over the past 10 years. This is currently only a few bps, and so the curve is flat. An “inverted” yield curve means short rates are higher than long rates, which usually signals a recession and does not last very long.

Duration

Sensitivity (% change) of a bond’s price to changes in yield. A bond with nine years to maturity has a duration of about 6.4 years (which is the Canadian Index duration). When rates rise by 1%, the bond’s price will fall by 6%. Longer duration bonds outperform as rates fall. Duration can also be defined as a weighted average time until cash flows are received. Duration measures sensitivity to parallel yield curve movements.

Longer-term bonds have longer duration. For the same maturity, lower coupons mean longer duration. This is illustrated in Chart 1, on page 25. For strips, duration and term to maturity are the same. For callable bonds, “option-adjusted” duration is the relevant measure, which accounts for changes in the value of the option to call the bond when rates move in various ways.

Yield curve steepener/flattener

A steepener is a trade that pays off if the yield curve steepens. It can involve selling, or underweighting, long-term bonds and buying, or overweighting, short-term bonds. This trade is usually implemented duration neutral so that it

pays off as long as the curve steepens, no matter what happens to the level of interest rates. A bullet usually has a steepening bias.

A flattener pays off if the yield curve flattens, i.e. if short rates rise relative to long rates, or if long yields fall more than short-term rates. Sell short bonds, buy long bonds to implement.

A barbell usually has a flattening bias, but can be a negative carry trade (one that gives up running yield) when the yield curve is very steep. If managers are wrong about the timing of a flatter curve, and have to wait too long, they can underperform even if their view is correct.

Bullet/barbell

A bulleted portfolio is overweight the belly (mid-term 5- to 10-year maturities) vs. the benchmark, and underweight the wings (short and long maturities). This portfolio generally outperforms if the curve steepens (short rates fall and long rates rise, or both rise but the short end goes up less etc.).

A barbelled portfolio is overweight the wings, and underweight the belly. This generally outperforms if the yield curve flattens, but depends on the specific holdings in the short end and the exact change in the curve shape.

Credit spread

The difference between the yield on a non-Government of Canada bond and a Government of Canada bond with similar term to maturity or duration. The decision to invest in provincials or corporates is driven by the view of whether spreads are expected to tighten or widen.

When credit spreads widen, corporate bond yields go up relative to Canada’s, so corporates underperform government bonds. When credit spreads tighten, corporates outperform governments.

Sector allocation

The decision to over or underweight specific sectors (such as Provincials, Corporates) vs. the benchmark.

If managers believe corporate bonds will outperform, so corporate spreads will tighten, they will overweight corporate bonds vs. the benchmark, and/or select corporate bonds with longer duration (which will have greater sensitivity to spread movement) than the benchmark.

Canadian pension plans are increasingly allowing BBB-rated bonds since corporate credit analysis by money managers has improved. This trend has contributed to tight credit spreads in all global markets.

Many managers follow a simple strategy of overweighting short-term corporate securities since spread volatility in that sector is relatively limited and investment-grade default rates are very low. But this strategy can backfire in severe credit environments, as was the case in 2001.

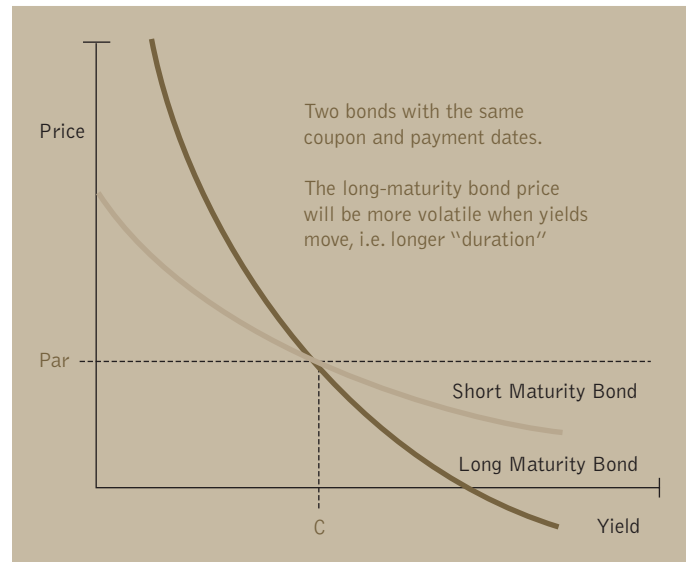
Maple Bonds – Maples are foreign (corporate or sovereign) bonds issued in the Canadian market, in Canadian dollars. Approximately half of new corporate issuance in Canada in 2006 has been Maple bonds, a major trend since the removal of the Foreign Property Rule. These bonds eliminate foreign interest rate and currency risk and offer some credit diversification versus domestic issuers. So far, however, high-quality financial issuers dominate Maples. Manager understanding and monitoring of foreign credit risk are essential despite the fact that most of these issuers are highly rated. Secondary market liquidity can be a concern since only the lead dealer supports some deals, with little or no syndicate participation. Other concerns include extra custodial fees for bonds not settled by Canadian Depository Services (CDS), and legal structure since many deals are private placements and investors are subject to a foreign jurisdiction in the event of default.

Foreign Investment Grade Credit – Foreign currency and interest rate risk, but this sector offers much better diversification. Manager expertise in credit and derivatives markets is important, and some players can effectively translate their domestic experience into foreign markets. One surmountable barrier to managing currency and interest rate risk through asset swaps or other strategies, is that pension plans must implement a derivatives policy and International Swaps and Derivatives Association (ISDA) agreements.

High Yield – The junk bond market started in the 1980's and has evolved into a large, liquid marketplace with over 1600 issues and nearly \$600 billion outstanding in the U.S. alone. That is about the same size as the entire Canadian bond market. Typical U.S. pension plan allocations remain modest, with hedge funds being the most active players. Some Canadian plans are strategically active in the speculative market. The best

A Closer Look at Duration

CHART 1



risk and reward tends to be in the BB-rated sector.

Mortgage-backed Securities (MBS) – These are pools of mortgages whose payments are securitized in a trust structure and passed through to bond investors. They usually have monthly coupons and most have prepayment risk. The AAA rating comes from guarantees by CMHC in Canada (i.e. the Federal Government) or Ginnie Mae or Fannie Mae in the U.S. (private agencies, not government-guaranteed). The U.S. MBS market is 20% of the global bond market and is bigger than U.S. Treasuries, so U.S. MBS are highly liquid. The behaviour of this market and hedging by major mortgage players is well recognized as a driver of bond market movements, but specialized expertise is required to successfully invest in MBS on a tactical basis. Prepayable MBS effectively allow managers to bet on interest rate volatility, which is the main driver of relative value in this market and is a diversifying exposure for Canadian bond portfolios. This market can be an excellent substitute for expensive Canadian corporate bonds, with comparable yields for higher-quality credit. However, it may not be attractive in some environments once currency hedging is taken into account.

Credit Default Swaps (CDS) – CDS are like an insurance policy where the buyer of default protection pays a premium, and receives a specified notional value in the event of default of the reference asset (usually corporate bonds or loans). Alan White's article on page 37 provides a detailed

description. These liquid contracts isolate credit or spread risk, with no interest rate risk. Currency risk is minimal, or can be eliminated cheaply if CDS is denominated in Canadian dollars. In Canada, relatively few large Canadian names are actively traded, with the majority of trades being in global ones. The benefit of this sector for Canadian portfolios comes from the diversification, liquidity, and the pure credit play with limited currency exposure.

Structured Finance – This category includes asset-backed securities (ABS), commercial mortgage-backed securities (CMBS), and collateralized debt obligations (CDOs). Portfolios of fixed income assets, pooled in a trust structure, are tranching into pieces (senior, mezzanine, and equity which bears the first to default risk), with varying levels of protection from default of the underlying assets. Some structures have enhancements to improve credit ratings, such as overcollateralization. Each tranche is rated AAA and below. Underlying assets may include credit card or loan receivables (ABS), commercial mortgages (CMBS, where mortgages are not federally guaranteed), bonds (CBOs), loans (CLSs), and/or credit default swaps (synthetic CDOs), and other assets, ABS, and CDOs made of CDOs (CDO-squared). ABS are the simplest structures, but other structured finance investments require specific expertise, especially when investing in lower-rated tranches.

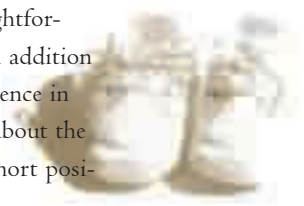
Structured finance markets are growing in Canada and globally. Investors must carefully assess the risk and diversification of underlying assets. Ratings depend on quantitative modelling and simplifying assumptions. The CDO market was tested in 2000 and 2001 with high yield bond defaults, and structures were strengthened, but model risk remains relatively untested.

Global Government Bonds and Related Derivatives –

Duration and yield curve strategies can be expanded into global government markets by domestic or global managers. Limiting managers to a long-only approach restricts relative value strategies to those where the foreign market is expected to outperform Canada. Allowing short positions boosts potential returns without necessarily increasing risk. Derivatives such as futures and swaps can also be used to implement these strategies, freeing up cash for other value added strategies, such as enhanced money market (a relatively low-risk, yield-enhancing strategy investing in very short-term credit, or extending to six to 18 month maturities to take advantage of an

upward-sloping yield curve).

Implementation of these strategies is straightforward and can be done well by small teams. In addition to evaluating a manager's expertise and experience in these markets, plan sponsors should inquire about the manager's tools for monitoring the risks of short positions or derivatives.



Emerging Markets – This sector includes most markets outside the G10 countries. The credit quality of many issuers has improved dramatically in the past few years as major issuers like Russia and Mexico and others are now investment grade. Contagion among markets has also decreased, which enhances diversification benefits. Corporate issuance is expanding rapidly as government supply dwindles. Most bonds are traded in U.S. dollars, but increasing issuance of local currency debt raises the spectre of managing the currency risk, which may be difficult in some markets. Spreads in emerging market debt have tightened in recent years along with all credit markets, but opportunities remain due to improving credit quality.

Strips – Bonds can be stripped into coupons and residuals (the par amount due at maturity). Each piece is then traded as a separate security. The strips can be reconstituted into bonds at any time. As long as a coupon has the same date (e.g. June 1st), it can be used to reconstitute any bond from the same issuer with that same coupon date. A strip has much more interest rate risk (longer duration) than a bond of similar maturity. Convexity risk, or sensitivity to the shape of the curve, differs from bonds. In Canada, only a handful (10 or so out of nearly 600 securities) of strips trade actively. The remaining ones tend to be purchased and held long-term to directly hedge liabilities.

Inflation-linked bonds – Linkers, or real return bonds, have a coupon and principal that increase with inflation and earn a real yield that protects purchasing power. Prices of inflation-linked bonds reflect investor opinions about the direction and magnitude of inflation, but in Canada's small, illiquid market, the relative value is also subject to severe market demand forces. The Canadian market is limited to only four Government of Canada issues, all in the long end, and a few provincials. That is small compared to the U.S. and the U.K., where these bonds are issued with a wide range of maturities and trade more actively. ■

**DBRS Credit Rating Report
Newfoundland Power Inc.
January 6, 2006**

Newfoundland Power Inc.

Report Date: January 6, 2006
 Press Released: January 6, 2006
 Previous Report: December 13, 2004

RATING

<u>Rating</u>	<u>Trend</u>	<u>Rating Action</u>	<u>Debt Rated</u>
A	Stable	Confirmed	First Mortgage Bonds
Pfd-2	Stable	Confirmed	Preferred Shares – cumulative, redeemable

Nick Dinkha, CFA/Matthew Kolodzie, CFA
 416-593-5577 x2314/x2296
 ndinkha@dbrs.com

(All figures in Canadian dollars, unless otherwise noted.)

<u>RATING HISTORY</u>	<u>Current</u>	<u>2005</u>	<u>2004</u>	<u>2003</u>	<u>2002</u>	<u>2001</u>	<u>2000</u>
First Mortgage Bonds	A	A	A	A	A	A	A
Preferred Shares – cumulative, redeemable	Pfd-2	Pfd-2	Pfd-2	Pfd-2	Pfd-2	Pfd-2	Pfd-2

RATING UPDATE

The consistent operating results and financial profile of Newfoundland Power Inc. (“Newfoundland Power” or the “Company”) continue to be supported by the Company’s regulated transmission and distribution operations.

Higher electricity sales – due to residential construction activity, growth in average use per customer, and increasing activity related to both off-shore oil development and growth in the service sector of the economy – has contributed to modest earnings growth. Furthermore, various favourable regulatory mechanisms that absorb fluctuations between estimated and actual cost of fuel oil to the Company’s primary electricity supplier and stabilize earnings during extreme weather conditions (as well as a favourable deemed equity ratio to a maximum of 45%) contribute to the Company’s strong financial profile.

Annual capital expenditures are expected to be in the area of \$50 million for 2006, as the Company further upgrades the reliability and efficiency of its electrical system. As a result,

the Company will continue to incur gross free cash flow deficits, exacerbated somewhat by the return to full dividends in 2005. However, DBRS expects the Company will manage dividends, as it has in the past, in order to maintain its equity level near the 45% maximum deemed by the regulator and that key cash flow and coverage ratios will also remain stable over the medium term and continue to support the ratings.

The key challenge for the Company remains managing the demand energy rate, implemented on January 1, 2005. The Company’s ability to forecast, and manage, peak demand will have a direct impact on earnings, although the regulatory environment limits the downside risk to approximately \$588,000 in 2005 and \$714,000 (pre-tax) in 2006. Amounts in excess of these thresholds are charged/rebated to a purchased power cost reserve account, which will be disposed of in a manner to be determined by the Newfoundland and Labrador Board of Commissioners of Public Utilities (“PUB”).

RATING CONSIDERATIONS

Strengths:

- Regulation contributes to earnings/financial stability
- Weather normalization account reduces short-term earnings volatility
- Strong balance sheet and favourable financial profile
- Geographic isolation limits competitive pressures

Challenges:

- Reliance on Newfoundland and Labrador Hydro (“NLH”) for the majority of power supplied
- Earnings sensitive to interest rates
- Managing forecast risk

FINANCIAL INFORMATION

	<u>12 months ended</u>		<u>For the year ended December 31</u>			
	<u>Sept. 2005</u>	<u>2004</u>	<u>2003</u>	<u>2002</u>	<u>2001</u>	<u>2000</u>
Fixed-charges coverage (times)	2.55	2.43	2.36	2.54	2.57	2.47
% adjusted debt in capital structure (1)	54.0%	54.7%	55.1%	55.3%	56.2%	54.0%
Cash flow/total adjusted debt (times) (1)	15.2%	14.7%	16.1%	17.9%	20.5%	18.8%
Cash flow/capital expenditures (times)	1.15	0.97	0.96	1.08	1.81	1.36
Net income (\$ millions) (bef. extras., after pfd. div.)	32.0	31.2	29.5	28.8	30.9	28.5
Operating cash flows (\$ millions) (after pfd. div.)	59.4	57.2	60.6	63.4	70.1	56.9
Electricity sold (GWh)	5,048	4,979	4,882	4,765	4,667	4,555
Approved return on equity (ROE)	9.24%	9.75%	9.75%	9.05%	9.59%	9.59%

(1) Preferred shares treated as 70% equity equivalents.

THE COMPANY

Newfoundland Power transmits and distributes electricity to approximately 227,000 customers throughout the island of Newfoundland. The Company purchases over 90% of its electricity needs from government-owned NLH and generates the balance from owned generation facilities (approximately 146 MW). Fortis Inc. (“Fortis”), (see separate report) owns all the common shares of Newfoundland Power.

REGULATION

- The PUB regulates the Company under a cost-of-service methodology.
- The application of the automatic adjustment formula (the “Formula”) in November 2004 resulted in a reduction of the Company’s return on equity (ROE) for the purpose of setting rates from 9.75% to 9.24% effective January 1, 2005.
- Following the June 2005 settlement (“2005 Tax Settlement”) of its long-standing dispute with the Canada Revenue Agency (the “CRA”) on its revenue recognition for income tax purposes, the Company filed the 2006 Accounting Policy Application (“2006 APA”) with the PUB. The 2006 APA deals with the Company’s revenue recognition policy for regulatory purposes and matters related to the proposed transition from accounting for revenue on a billed basis (revenue recognized as customers are billed), to an accrual basis (revenue is recognized as power is delivered to customers, regardless of whether a bill is rendered or payment received), beginning in 2006. On December 23, 2005, the Company received approval from the PUB to change its accounting policy to the accrual method effective January 1, 2006. In its Order, the PUB also:
 - Approved the recognition in 2006 of approximately \$3.1 million of a one-time accounting accrual arising as a result of the accounting policy change. Recognition of this amount will offset increased income taxes in 2006 arising from the tax settlement with the CRA.
 - Ordered the deferred recovery of approximately \$5.8 million related to increased depreciation expense in 2006, which is expected to be dealt with at the Company’s next general rate proceeding.
 - The ROE for 2006 has not yet been set. An application for setting 2006 rates must be filed to the PUB by January 15, 2006. However, a reduction of the Company’s ROE for the purposes of setting rates for 2006 is not anticipated.
 - The Company anticipates filing a General Rate Application in 2006 for 2007 rates.
- The Company’s approved equity component remains one of the highest of all Canadian regulated utilities at a maximum of 45%.
- The Company continues to write off, until 2007, a non-reversing portion \$5.6 million amount (after tax) of the weather normalization reserve (WNR). This has the effect of increasing purchased power expense by approximately \$1.7 million per year over that time, which is recoverable in rates.
- The Formula, applied annually between test years in November, is used to determine customer rates, effective January 1 of the following year, by adjusting the ROE component of the return-on-rate base in response to changes in long-term Canada bond yields. The key differences between this mechanism and

formulas used in other jurisdictions are: (1) that this ROE is set based on a ten-day average of the three most recent series of long-term Canada bonds rather than a consensus forecast; and (2) the approved return-on-rate base is adjusted in the event that the calculated rate-of-return on rate base falls outside the current approved range (+/-18 basis points) for the return-on-rate base. If it does not fall outside this range there is no adjustment to the Company’s ROE for the purpose of setting rates.

- In addition, Newfoundland Power purchases substantially all of its energy requirements from NLH, which is also regulated by the PUB. The PUB allows the Company to pass along any rate increases from NLH directly to Newfoundland Power’s customers. Thus, rate increases from NLH are expected to have a neutral effect on Newfoundland Power’s earnings over the long run.

Demand Energy Rate

- The PUB required the establishment of a demand energy rate (DER) structure on January 1, 2005, for the power NLH sells to Newfoundland Power.
 - The goal of the DER is to provide an incentive to the Company to reduce its peak demand on the system through conservation and demand management.
 - The Company will be billed on a demand component which is based on its highest actual demand requirements from the previous winter season. The highest actual demand will be adjusted to reflect normal weather conditions, which will tend to reduce the forecast risk to the Company.
 - The billing demand charge will be phased in over three years, with the demand rate increasing from \$4.65/kW in 2005, to \$5.64/kW in 2006, and to \$6.64/kW in 2007.
 - In the event that actual billing demand results in annual purchased power costs that differ from the forecasted purchased power costs, on a cents per kWh basis, there will be a cap/floor of approximately +/- \$714,000 (pre-tax) in 2006. The remainder of the difference will be charged/rebated to a purchased power cost reserve account, which will be disposed of in a manner to be determined by the PUB.
 - The DER and the reserve account will be reviewed subsequent to the filing of a marginal cost study by NLH, which must be completed by June 30, 2006.

RATING CONSIDERATIONS

Strengths: (1) Newfoundland Power is permitted by the PUB to pass through increases in power costs from NLH to customers. A Rate Stabilization Account has been established to absorb fluctuations between estimated and actual costs of fuel oil used to generate electricity. While regulated electricity transmission and distribution operations provide relatively stable earnings and financial stability, the periodic adjustments in allowed returns and customer rates, provided for by the automatic adjustment formula, increase earnings sensitivity to interest rates between test years. The automatic adjustment mechanism does, however, minimize the related cost burden associated with regulatory reviews.

(2) The Company was ordered by the PUB to maintain a WNR to adjust for variances in temperature, wind, and stream flows against long-term averages, reducing short-term earnings volatility. This provides Newfoundland Power with a mechanism to stabilize earnings, particularly during periods of extreme weather conditions. While earnings volatility is reduced by the WNR, cash flows continue to remain affected by weather patterns. For instance, in periods when the weather is warmer than normal, customers will consume less energy, resulting in lower revenues and consequently lower purchased power costs than is normal for the Company. As a result, the revenues and purchase power costs are adjusted to normalize to a “regular consumption pattern”, through the WNR. The WNR does not, however, impact cash as the adjustment to the cash flow statement is a non-cash item.

(3) The Company has one of the highest allowed equity components of all utilities in Canada, at 45%. This contributes to relatively strong financial ratios compared to other regulated utilities with lower approved equity ratios.

(4) Geographic isolation acts as an effective barrier against external competitors. The lack of availability of natural gas also limits competitive pressures. Any tangible prospect of bringing natural gas to the island, given the physical barriers to construction, is not expected.

(5) Corporate independence from parent company, Fortis, such that the Company is able to manage its dividend policy as necessary to maintain its capital structure in line with that approved by the regulators. This was evidenced by the scaling back on dividends to the parent during the 100% debt-financed acquisition of the joint-use poles from Aliant Telecom Inc. (“Aliant”) in 2002, which caused a levering up in the Company’s capital structure. Newfoundland Power, for all intents, is considered ring-fenced from its parent, and though Newfoundland Power is a key contributor to earnings at Fortis, it will not be to the detriment of the Company. Furthermore, the legislated utility regulatory regime under which the Company operates, including the *Electrical Power Control Act*, lends further support to this independence.

Challenges: (1) Newfoundland Power relies heavily on NLH for its power requirements, as it purchases over 90% of its power from NLH. Purchased power costs represent approximately 60% of Newfoundland Power’s revenues from its customers. The cost of power from NLH is highly influenced by the market price of Bunker C fuel oil, due to

NLH’s significant amount of oil-fired generation capacity. Any increase in the price of oil for NLH is accumulated into a rate stabilization account and recovered over a one-year period through rate increases to Newfoundland Power. While increases in purchased power rates from NLH are passed directly on to Newfoundland Power’s customers (which does not impact the Company’s margins), higher rates may lead to energy conservation by customers, which could have an adverse impact on earnings. Furthermore, energy conservation is the motivating force behind the implementation and establishment of the DER, which is expected to result in slight reductions in energy consumption per customer going forward. The risk of the DER is currently limited by the maximum cap on losses, or gains, that would be incurred by the Company.

(2) Under the current regulatory regime, earnings are sensitive to interest rates. The approved ROE for 2005 is 9.24%, compared with 9.75% in 2004. The approved ROE is dependent on a ten-day average (calculated in November) rate on long-term Government of Canada bonds, which does not capture any expected upward trend in interest rates (as would be the case with utilizing a consensus forecast interest rate). In its June 2003 order, the PUB rejected Newfoundland Power’s proposal to move to a consensus forecast of interest rates.

(3) Newfoundland Power has one of the highest weighted-average coupon rates on outstanding long-term debt of all investor-owned utilities (8.54% compared to a 7.30% average for electric utilities in Canada). This high debt cost is not likely to change in the near future, although the Company was able to privately place a 30-year, \$60 million bond in Q3 2005 for 5.44%. Early redemption remains uneconomical for much of the Company’s remaining bond issues – close to 50% of the Company’s outstanding debt averages a rate of 9.22%. A higher cost of debt contributes to comparatively higher cost-of-service and weaker coverage ratios.

(4) Since 1992, the province’s population has declined continuously as a result of out-migration (population declined by approximately 11.0% during the period between 1992 and 2005). This decline negatively impacts the Company’s customer and energy sales growth. While out-migration has negatively impacted all areas of the province, the impact has been much greater on rural areas than urban areas as some people are moving from rural areas to cities such as St. John’s. However, since 1997, the Newfoundland economy has expanded and out-performed all other Canadian provinces (real gross domestic product increased by approximately 6% annually between 1997 and 2004). This growth is directly related to the development of the off-shore oil, in particular Hibernia, Terra Nova, and White Rose, along with development of the Voisey’s Bay nickel deposit in Labrador. Over the medium term, natural resource development will continue to have a major impact on economic growth with the development of Hebron offshore oil, hydroelectricity in Labrador, and the construction of the Voisey’s Bay hydromet processing facility at Argentina.

(5) The key challenge with respect to the DER will be the Company's ability to accurately and consistently forecast, and influence, electricity demand going forward. However, the maximum loss that the Company could experience in the event that actual demand is greater than forecast demand

will be limited to approximately \$714,000 (pre-tax), in 2006, with the balance recoverable from a variance reserve account. However, disposition of annual balances in the reserve account are to be determined by the PUB.

EARNINGS AND OUTLOOK

(\$ millions)	12 mos. ended	For the year ended December 31				
	Sept. 2005	2004	2003	2002	2001	2000
Net revenues (1)	166.7	160.5	156.2	158.8	156.8	149.2
Operating costs	84.9	82.7	81.2	86.2	83.4	78.7
EBITDA	115.1	109.7	105.5	108.9	110.0	101.5
EBIT	82.8	78.7	76.1	73.5	74.5	71.8
Gross interest expense	32.1	31.4	31.3	27.9	27.9	28.0
Net income (before extras. & after prefs.)	32.0	31.2	29.5	28.8	30.9	28.5
Net income available to common	31.2	31.2	29.5	28.8	28.9	26.5

(1) Net of purchased power.

Summary:

- EBIT remained relatively unchanged for the 12 months ended September 30, 2005.
 - While electricity sales increased by 1.4% during this period, the 0.5% rate decrease, effective January 1, 2005, had the effect of dampening earnings growth.
 - Higher operating costs during the period, including pension costs and expenses associated with the Company's early retirement program, also kept earnings relatively flat.

Outlook:

- The Company's regulated transmission and distribution operations will continue to generate relatively stable earnings over the medium to longer term.
 - Sales growth in the 1%-2% range, which is typical for a mature utility, will primarily occur in St. John's and the surrounding area, with the remainder of the province having little sales growth.
 - The majority of new home construction is being installed with electrical heating. The cost of, and various regulations surrounding, home heating oil is influencing the conversion of homes to electric heating.

- As the Company is not applying for a rate increase for 2006, EBIT should remain relatively unchanged.
- The implementation of the DER will have an impact on earnings, although DBRS notes that the maximum amount it could impact earnings is in the area of +/- \$714,000 (pre-tax) in 2006, with the balance recoverable from variance reserve account. Disposition of annual balances in the reserve account are to be determined by the PUB.
- The change in accounting policy for revenue recognition from the billed method to the accrual method effective January 1, 2006, will have limited cash impacts on the Company. Both revenues and expenses will be recognized on an accrual basis for tax and regulatory purposes, which only impacts the timing of the recognition of the unbilled revenue.
 - The cash impact will be limited to actual taxes paid, approximately \$3 million per year for three years, as part of the 2005 Tax Settlement.
 - Unbilled revenue will be reported on the Company's balance sheet as an account receivable.
- A strong housing market over the past couple of years has also contributed to a favourable level of sales growth. Conversion of existing homes, which currently utilize oil-based heating, to electrical heating, will also provide some positive earnings contribution.

FINANCIAL PROFILE

	12 mos. ended					
	Sept. 30, For the year ended December 31					
(\$ millions)	2005	2004	2003	2002	2001	2000
Cash Flow Statement						
EBITDA	114.1	108.7	104.4	108.1	108.9	100.2
Net income (before extras. & after prefs.)	31.2	31.2	29.5	28.8	28.9	26.5
Depreciation & amortization	32.3	31.0	29.4	35.4	35.5	29.6
Weather normalization account (1)	1.9	0.0	0.5	(1.0)	(1.2)	(1.4)
Other non-cash adjustments	(5.9)	(4.9)	1.3	0.2	6.9	2.2
Cash Flow From Operations	59.4	57.2	60.6	63.4	70.1	56.9
Dividends	(22.1)	(14.2)	(9.5)	(9.5)	(19.0)	(19.0)
Capital expenditures	(51.9)	(58.9)	(63.0)	(58.8)	(38.8)	(41.9)
Free Cash Flow Before Working Capital Changes	(14.5)	(16.0)	(11.9)	(4.9)	12.4	(3.9)
Change in working capital	3.6	3.1	(2.9)	4.5	(13.4)	16.2
Free Cash Flow	(10.9)	(12.9)	(14.8)	(0.4)	(1.0)	12.3
Acquisitions/divestitures	-	-	-	1.0	2.0	3.0
Other	(0.4)	0.2	(8.9)	(9.3)	(36.9)	(8.8)
Cash flow before financing	(11.3)	(12.7)	(23.7)	(8.7)	(35.9)	6.5
Net change in equity financing	-	-	-	-	-	-
Net change in debt: new/(repayments)	5.5	14.6	20.3	12.3	39.5	0.1
Net change in preferred equity	-	-	(0.3)	-	(0.2)	-
Change in Net Cash	(5.8)	1.8	(3.7)	3.6	3.4	6.6
Key Figures and Ratios						
Adjusted debt in capital structure	391.4	389.5	376.2	354.8	341.9	302.3
Per cent adjusted debt in capital structure	54.0%	54.7%	55.1%	55.3%	56.2%	54.0%
EBITDA interest coverage (times)	3.59	3.49	3.37	3.90	3.94	3.62
EBIT interest coverage (times)	2.58	2.50	2.44	2.63	2.67	2.57
Cash flow/total adj. debt	15.2%	14.7%	16.1%	17.9%	20.5%	18.8%

(1) DBRS breaks out the movement in the weather normalization account, however, it is a non-cash adjustment.

Summary:

- For the 12 months ended September 30, 2005, cash flow from operations continued to be insufficient to fully fund dividends and capital expenditures, and this contributed to free cash flow deficits.
- Capital expenditures, while remaining relatively higher than prior periods in 2001 and 2000, are somewhat lower than the past few years, and are attributable to:
 - Projects associated with the refurbishment and improvement in the reliability of the Company's transmission and distribution system.
 - Refurbishment of a number of aging hydroelectric generating plants and substations, and installation of power transformers.
- The Company utilized short-term borrowings to service the shortfall without adversely affecting its financial profile or its key financial ratios.
 - Debt-to-capitalization remained relatively unchanged during this period.
 - The Company continues to manage dividends as required in order to maintain the amount of equity in the capital structure close to the 45% upper limit allowed by the PUB.
 - In 2002, the Company reduced its dividend payment, from \$0.46 to \$0.23 per share, to maintain its 45% equity level in light of the joint-use poles, acquired with 100% debt from Aliant, and other maintenance capital expenditures.
 - During 2004, the Company returned its dividend to \$0.46 per share.

- For a regulated utility, Newfoundland Power's financial profile is relatively strong, with low leverage, and favourable cash flow-to-debt and interest coverage ratios, which continues to support the rating.

Outlook:

- Cash flow from operations should continue to grow over the medium term, in line with growth in the rate base.
 - However, cash flows are not expected to be sufficient to cover capital expenditures and dividends, resulting in continuing gross free cash flow deficits over the medium term.
 - The cash flow shortfall will be funded with new debt.
- The Company anticipates investing an average of \$50 million per year by 2010, including approximately \$49 million in 2006 (approximately \$50 million was approved for 2005).
 - Approximately 20% of this, or \$10 million on average, pertains to customer growth, with the balance being maintenance capital expenditures.
 - Slightly higher capital expenditures are expected over 2007 and 2008 due to the replacement of the penstock, and related projects, at the Rattling Brook facility.
- As such, interest coverage and cash flow ratios should remain relatively stable over the medium term and continue to support the rating.

LONG-TERM DEBT MATURITIES AND BANK LINES

As at September 30, 2005	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009 & Thereafter</u>
Long-term debt (\$ millions) (includes sinking fund payments)	3.65	4.25	4.25	35.12	4.6	282.888

Operating Lines of Credit:

- Newfoundland Power has a \$100 million, syndicated committed revolving/non-revolving credit facility and a \$20 million uncommitted demand facility.
 - As of September 30, 2005, no amounts were outstanding under either facility.
 - These facilities were more than adequate to fund working capital fluctuations and free cash flow deficits.

Long-Term Debt

- Newfoundland Power's long-term debt consists of first mortgage bonds, which are secured by a first fixed and specific charge on property, plant, and equipment owned or to be acquired by the Company and by a floating charge on all other assets.
- Debt maturities are well spread out over the longer term, with maturity dates extending to 2035.
 - The Company recently privately placed \$60 million in 30-year bonds at 5.441%.

Newfoundland Power Inc.

Balance Sheet

(\$ millions)	As at			As at December 31		
	Sept. 30, 2005	2004	2003	Sept. 30, 2005	2004	2003
Assets				Liabilities & Equity		
Cash & equivalents	0.9	0.5	0.0	Short-term debt	0.0	58.1
Accounts receivable	26.4	37.1	33.8	A/P & accr'd liab	54.0	67.1
Materials & supplies	5.1	5.4	5.3	L.t.d. due in one year	4.3	3.7
Rate stabilization account	9.6	8.8	6.5	Current Liabilities	58.2	128.8
Current Assets	42.0	51.8	45.5	Long-term debt	384.3	324.9
Corporate tax deposit	0.0	6.9	6.9	Other liabilities	3.3	3.1
Net fixed assets	640.9	630.1	602.1	Preferred shares	9.4	9.4
Deferred charges	100.8	95.3	89.8	Shareholders' equity	328.4	317.9
Total	783.7	784.1	744.4	Total	783.7	744.4

Ratio Analysis

	12 mos. ended For the year ended December 31							
	Sept. 2005	2004	2003	2002	2001	2000	1999	1998
Liquidity Ratios								
Current ratio	0.72	0.40	0.44	0.60	0.33	0.48	0.58	0.65
Accumulated depreciation/gross fixed assets	40.7%	40.0%	40.4%	40.1%	40.4%	40.8%	42.3%	41.7%
Cash flow/total adjusted debt (1) (2)	15.2%	14.7%	16.1%	17.9%	20.5%	18.8%	16.5%	16.5%
Debt/EBITDA	3.38	3.52	3.54	3.23	3.08	2.95	3.07	3.15
Cash flow/capital expenditures (1) (3)	1.15	0.97	0.96	1.08	1.81	1.36	1.19	1.09
Cash flow-dividends/capital expenditures (1) (3)	0.72	0.73	0.81	0.92	1.32	0.91	0.97	0.65
% adjusted debt in capital structure (2)	54.0%	54.7%	55.1%	55.3%	56.2%	54.0%	55.0%	55.5%
Average coupon on long-term debt	8.54%	9.10%	9.18%	9.18%	9.56%	9.66%	9.66%	9.66%
Allowed equity	45%	45%	45%	45%	45%	45%	45%	45%
Common dividend payout (before extras.)	36.1%	45.7%	32.2%	33.0%	61.5%	66.6%	40.5%	90.9%
Coverage Ratios (4)								
EBIT interest coverage	2.58	2.50	2.44	2.63	2.67	2.57	2.49	2.43
EBITDA interest coverage	3.59	3.49	3.37	3.90	3.94	3.62	3.56	3.48
Fixed-charges coverage	2.55	2.43	2.36	2.54	2.57	2.47	2.39	2.33
Earnings Quality/Operating Efficiencies & Statistics								
Operating margin	49.1%	48.4%	48.0%	45.7%	46.8%	47.3%	45.5%	44.0%
Net margin (before extras., after pfd. div's)	19.2%	19.4%	18.9%	18.1%	19.7%	19.1%	15.7%	15.0%
Return on average equity (before extras.)	9.9%	10.1%	10.2%	10.7%	12.1%	11.6%	9.9%	9.4%
Allowed ROE (mid-point) (5)	9.75%	9.24%	9.75%	9.75%	9.59%	9.59%	9.25%	9.25%
Degree days - % normal	96%	96%	96%	100%	94%	85%	85%	93%
GWh sold/employee	8.2	8.3	8.1	7.9	7.6	7.1	6.5	6.3
Customers/employee	368	376	369	363	352	333	307	301
Operating costs/average customer (\$)	377	371	368	395	386	367	382	382
Growth in customer base	2.1%	1.3%	1.2%	1.0%	0.8%	0.7%	0.7%	0.7%
Rate base (\$ millions)	740	714	676	573	545	521	506	488
Rate base growth	3.6%	5.6%	18.0%	5.1%	4.6%	3.0%	3.7%	2.3%

Electricity Sales - Breakdown

Residential	3,012	2,972	2,909	2,843	2,775	2,707	2,672	2,652
General service	2,037	2,007	1,973	1,922	1,892	1,848	1,828	1,788
Total sales (GWh)	5,049	4,979	4,882	4,765	4,667	4,555	4,500	4,440
Growth in volume throughputs	1.4%	2.0%	2.5%	2.1%	2.5%	1.2%	1.4%	0.0%

Energy Generated

Energy generated	425	424	425	424	416	423	450	429
Energy purchased	4,918	4,841	4,725	4,604	4,495	4,432	4,292	4,259
Energy generated + purchased	5,343	5,265	5,150	5,028	4,911	4,855	4,742	4,688
Less: transmission losses + internal use	295	286	268	263	244	300	242	248
Total sales (GWh)	5,048	4,979	4,882	4,765	4,667	4,555	4,500	4,440
System losses and internal use	5.8%	5.7%	5.5%	5.5%	5.2%	6.6%	5.4%	5.6%

Installed Generation Capacity (MW)

Hydroelectric	65.0%	94.6	94.6	94.6	94.5	94.5	93.8	94.5
Gas turbine	30.2%	43.9	43.9	43.9	46.9	46.9	46.9	46.9
Diesel	4.8%	7	7	5.9	6.9	6.9	6.9	6.9
Total	100.0%	145.5	145.5	144.4	148.3	148.3	147.6	148.3
Peak demand (MW)		1,167	1,118	1,194	1,001	1,041	1,025	1,063

Customers

Residential	195,562	193,912	191,314	188,925	186,828	185,287	183,921	182,324
Commercial	30,656	30,552	30,339	30,147	30,051	29,923	29,720	29,786
Total	226,218	224,464	221,653	219,072	216,879	215,210	213,641	212,110

(1) Cash flows are after preferred dividends.

(2) Preferred shares treated as a 70% equity equivalent.

(3) Capital expenditures are net of customer contributions. (4) Before capitalized interest, AFUDC, and debt amortizations.

(5) ROE is adjusted annually, but Newfoundland Power is regulated based on a return-on-rate base effective 2000. See Regulation section in this report.

Income Statement (\$ millions)	12 months ended	For the year ended December 31				
	<u>Sept. 2005</u>	<u>2004</u>	<u>2003</u>	<u>2002</u>	<u>2001</u>	<u>2000</u>
Revenues						
Residential	-	237.5	225.7	217.6	211.0	207.2
General service	-	158.1	150.4	145.1	141.0	138.7
Gross electricity revenues	414.1	395.6	376.1	362.7	352.0	345.9
Power purchases	258.8	244.0	228.0	210.8	202.5	199.2
Net electricity revenues	155.2	151.6	148.1	151.9	149.5	146.7
Other	11.5	8.9	8.1	6.9	7.3	2.5
Total revenues	166.7	160.5	156.2	158.8	156.8	149.2
Expenses						
Fuel	-			-	-	0.1
Operating + administration	52.6	51.8	51.8	50.8	47.9	48.9
Depreciation	32.3	31.0	29.4	35.4	35.5	29.6
Total operating costs	84.9	82.7	81.2	86.2	83.4	78.7
Operating income	81.9	77.7	75.1	72.6	73.4	70.6
Interest expense	32.1	31.4	31.3	27.9	27.9	28.0
Non-cash financial charges	(0.1)	(0.1)	(0.2)	(0.2)	(0.1)	(0.1)
Other (income)/expense	(1.0)	(1.0)	(1.1)	(0.9)	(1.1)	(1.3)
Net interest costs	31.0	30.4	30.0	26.9	26.7	26.6
Net income before taxes	48.2	47.4	45.1	45.8	46.7	44.0
Income taxes	15.6	15.6	14.9	16.4	15.2	14.8
Net income before extras.	32.6	31.8	30.1	29.4	31.5	29.1
Less: extraordinary items	0.8	-	-	-	2.0	2.0
Net income	31.8	31.8	30.1	29.4	29.5	27.1
Preferred dividends	0.6	0.6	0.6	0.6	0.6	0.6
Net income available to common shldrs.	31.2	31.2	29.5	28.8	28.9	26.5

DESCRIPTION OF OPERATIONS

- Newfoundland Power’s electrical system is comprised of the following:
 - Over 10,000 kilometres of transmission and distribution lines;
 - 137 substations; and
 - 23 hydroelectric generating stations and seven thermal generation plants with a total capacity of 146 MW, listed below.

Plant Name	<u>Year Commissioned</u>	<u>Output Capacity (MW)</u>	<u>Number of Units</u>	<u>Average Output (GWh)</u>
Hydroelectric:				
Petty Harbour	1900	5.25	3	15.9
Pierres Brook	1931	4.30	1	25.3
Tors Cove	1942	6.50	3	26.3
Rocky Pond	1943	3.25	1	14.1
Mobile	1950	12.00	1	41.8
Morris	1984	1.14	1	7.2
Cape Broyle	1953	6.28	1	34.2
Horsechops	1953	8.13	1	43.7
Topsail	1931	2.60	1	14.2
Seal Cove	1923	3.18	2	8.8
Hearts Content	1918	2.37	1	8.2
Victoria	1904	0.55	1	3.0
New Chelsea	1957	3.70	1	15.4
Pitmans	1959	0.63	1	3.0
Fall Pond	1939	0.35	1	1.0
West Brook	1942	0.68	1	2.8
Lawn	1929	0.60	1	2.6
Rattling Brook	1958	11.50	2	69.4
Sandy Brook	1963	6.31	1	28.5
Lockston	1956	3.00	2	8.4
Port Union	1918	0.51	2	2.3
Lookout Brook	1945	5.80	2	29.5
Rose Blanche Brook	1998	6.00	1	20.5
Total Hydroelectric		<u>94.62</u>		426.1
Thermal:				
Greenhill Gas Turbine	1975	22.00	1	
Wesleville Gas Turbine	1969	14.70	1	
Portable Gas Turbine	1974	7.20	1	
Port Union Diesel	1962	0.50	1	
Port Aux Basques Diesel	1969	2.50	1	
Portable Diesel	2004	2.50	1	
Contract Diesel	1999	1.50	1	
Total Thermal		<u>50.90</u>		
Total Generating Capacity		<u>145.52</u>		

**DBRS Publication
Guidelines for A/BBB ratings**

*DBRS Methodology
in Rating Utilities*

*Dominion
Bond
Rating
Service
Limited*



Industry Study

Energy

JUNE 2002

WALTER SCHROEDER, CFA

Electrical and Gas Companies

CONCLUSION

Although there are quantitative ratios that can be used to measure performance of electric utilities, there are many other meaningful non-quantitative considerations that can also influence the final rating. DBRS does not restrict itself to any fixed and inflexible quantitative standards when rating an electric utility. Instead, DBRS uses a judicious mixture of both quantitative and qualitative factors to produce a final rating.

In general, regulated companies have less business risk than deregulated companies. Accordingly, the debt levels that a specific company can carry vary according to what segment

of the industry it is in, and to what degree it is regulated or unregulated. However, regulation by itself does not assure income stability. There are many examples of regulatory lag that can slow cost recovery and negatively impact firm performance. Therefore, while the quantitative ratios below can be used as rough guides, the qualitative factors also greatly influence the final rating. In the final analysis, electricity is a commodity that is subject to great swings in price and, as such, the industry has characteristics that rate it BBB. However, a combination of the various other factors also influences the rating.

THE FINANCIAL MODEL

General Standards Rating BBB to “A” (Quantitative Factors)

	Regulated	Mixed	Unregulated
% debt	60%-70%	50% - 60%	50%
Fixed-charge coverage	1.5 x	1.5 - 2.0 x	2.0 x +
Cash flow / debt	0.10	0.10 - 0.15	0.15 - 0.20

The following qualitative factors below also influence the rating:

- Proportion of regulated versus non-regulated activity
- Fuel mix – hydro, nuclear, coal, oil, gas
- Hedging policy – fuel and electric and gas sales contracts
- Counterparty risk, and policies in this respect
- Condition of the transmission and distribution grid
- Forward pricing curve for electricity (assumptions + outlook)
- Economic strength of the franchise area – growing or shrinking
- Size of the utilities
- Diversification, and the degree of diversification
- International investments of the Company
- The quality of regulation - is there regulatory lag?
- Availability and market pricing of natural gas
- Environmental issues, especially for coal generation
- Growth – long-term growth in electricity demand
- Income mix, including percentage of income from trading
- Intensity of competition in the marketplace
- Sales mix between residential/commercial/industrial
- Company sensitivity to temperature (residential and commercial customers) and economic factors (industrial customers)
- Reliance on off-system versus self-generated power
- Use of short-term debt and liquidity supports
- Company costs of generating electricity versus regional costs of generating electricity, and regional electricity prices

THE FINANCIAL MODEL – A DISCUSSION

General quantitative factors (subject to adjustments due to qualifying or subjective considerations) used by DBRS for “A”/BBB ratings are as follows:

	Regulated Generation Transmission & Distribution	Mixed (Part regulated & part unregulated)	Unregulated
% debt	60% -70%	50% - 60%	50%
Fixed charge coverage	1.5	1.5 - 2.0	2.0 +
Cash flow / debt	0.10	0.10 - 0.15	0.15 - 0.20

DISCUSSION

The amount of debt that a given industrial company can carry for an “A”/BBB rating varies with the sectors where it operates. A regulated entity, with the greater certainty and stability, can generally carry more debt than an organization operating in the riskier unregulated area, other things being equal. The “Regulated” category includes generation,

transmission, and distribution; “mixed” includes companies that have both regulated and unregulated components; and “unregulated” includes both pure merchant power (usually generation and retail) and traditional utilities operating in unregulated environments.

% DEBT

The percentage of debt is defined as short- and long-term debt, divided by short- and long-term debt, plus equity. When leases are significant, the capitalized value of the lease is added to both the numerator and denominator.

Regulated entities, which generally operate in transmission and distribution, can usually carry 60% - 70% debt. However, this declines to 50% - 60%, as activity becomes more unregulated and subject to greater instability, uncertainty, and business risk. Historically, utilities were able to carry more debt than industrial companies because of the stability and certainty inherent to a regulated environment. This changed when deregulation and the break-up of the traditional functions of generation, distribution, and transmission occurred. New standards for the debt levels that can be carried by utilities are needed, and DBRS has isolated some general and rough standards, as shown. Debt levels establish the strength of related

ratios. For example, cash flow/debt with 60% debt levels is often near 0.10. However, if debt levels fall to 50%, the cash flow/debt ratio often improves sharply to the 0.15 - 0.20 range. Debt levels below 50% usually result in a cash flow/debt ratio of 0.15 – 0.20 or better. Thus, once the proportion of debt is established, most other ratios move in tandem. The basic theory behind the standards is simple. The riskier, completely unregulated area, which includes merchant power, can carry less debt (50%), versus higher debt (60% - 70%) for a less risky, completely regulated generation transmission distribution company, other things being equal. A mixed company can carry 50% - 60% debt, depending on the degree of deregulation. However, as discussed later, this scenario is oversimplified, and there are many other qualitative factors that establish the final rating, and often supersede rigid quantitative standards.

FIXED-CHARGE COVERAGE

Fixed-charges coverage is defined as earnings before interest and taxes, divided by interest, plus tax-adjusted preferred share dividends. If leases are large, one-third of the minimum lease payment is added to the numerator and denominator of this ratio. Regulated entities standards for an “A”/BBB rating are 1.5 times, while unregulated entities

should have a higher safety margin, with coverage above 2 times. The mixed group (deregulation/regulation) is in between, at 1.5 – 2.0 times coverage. The ratio is measured over a period of time, so a temporary dip outside these standards may not affect the rating.

CASH FLOW / DEBT

Cash flow is defined as income before extraordinary income, plus depreciation, plus normal deferred taxes, divided by total debt. This ratio is consistent with the other ratios shown. With debt levels above 60%, it is difficult to bring this ratio above 0.10 times. As debt levels approach 50%, this ratio’s strength usually improves to the 0.15-0.20

range. The riskier unregulated area should have a ratio of 0.20 times, while stable regulated sectors can be closer to 0.10 times for “A”/BBB ratings, provided that the qualitative factors previously mentioned do not influence results.

The Qualitative Factors

There are a substantial number of qualitative factors that go into the final rating that can override the actual strength of these ratios. For example:

- (1) What is the proportion of unregulated and regulated revenue and income for a mixed utility?
- (2) What is the fuel mix? Coal, hydro, and nuclear are superior to more costly natural gas and oil, which are usually used for peaking.
- (3) What is hedging policy, and are the fuel source and final electricity prices received hedged? To what degree? For how long, and with what counterparties?
- (4) What is the quality of counterparty risk for fuel and final electricity sold. What is the rating of the counterparties?
- (5) What are the conditions and general characteristics of the transmission grid and distribution network?
- (6) What is the forward price curve for electricity in the market in question? (often regional)
- (7) What is the economic strength of the franchise area, and is it growing or shrinking?
- (8) What is the size of the utility? Smaller utilities are less diversified and more affected if one generator goes down, versus large utilities.
- (9) What investments does the Company have internationally, which are subject to political, currency, regulatory, and counterparty risk?
- (10) What is the general long-term outlook for electricity in the marketplace, and how have electricity prices behaved since inception of deregulation.
- (11) What is regulation like for a mixed utility? Does regulation operate on future looking performance or is there regulatory lag? Does performance-based regulation exist and, if so, are there “rebasings” issues on future sharing of efficiency gains?
- (12) What is the nature of demand between peak and trough, and how seasonal is demand?
- (13) Are rates between residential, commercial, and industrial equitable, and is there potential new rate balancing needed?
- (14) What is the average cost for electricity, versus the average costs in the country. Regionally?
- (15) What other transmission constraints exist, and can these constraints limit new supply?
- (16) What is the availability of natural gas into the market place, and at what prices can greenfield power be produced in the marketplace?
- (17) What is the proportion of coal generation, and do environmental issues exist? What is the degree to which future capital expenditure will have to be raised for environmental reasons?
- (18) What is the long-term projected growth in electricity demand in the regional market?
- (19) What percentage of total income is derived from the riskier trading area and how aggressive is the utility?
- (20) What is the nature and characteristic of competition in the marketplace? Is the power generated in the franchise area, or does it come from outside the market area? Do power purchase agreements exist?
- (21) What is the sole mix of the demand for electricity between residential, commercial, and industrial? Is there one large dominant customer?
- (22) How dense is the concentration of customers, and are there vast areas with relatively few customers?
- (23) How sensitive to temperature (residential customers) and economic factors (industrial customers) is the franchise area?
- (24) How much reliance is there on outside power, versus self-generated power?
- (25) How dependant is the utility on short-term debt, and what liquidity supports exist?

Discussion of the Four Areas

The Non-Regulated Generation Area (Merchant Energy) – The Nature of the Market

SUMMARY

The deregulated area appealed to many utilities that were tired of lengthy rate application hearings, regulatory lag, and intervener conflicts. However, after the California and Enron experiences, as well as the transition through the “initial stages” of a deregulated environment, some of the utilities are longing for the “good old days.” The simple fact is that deregulation means more competition and price instability. The “security” provided by a regulator is gone.

In Europe, electricity prices in deregulated environments have fallen 30% - 50% in areas such as the U.K. and Germany. The more regulated areas such as France and Italy have experienced very minimal price decreases, as the traditional utilities maintain immense market clout, and competition is limited. In addition, the higher risk, non-regulated area has the capacity to carry lower debt levels.

THE UNREGULATED ENVIRONMENT – STRENGTHS AND CHALLENGES

Strengths:

- Deregulation raises growth prospects
- Consolidation of generation raises size, critical mass and efficiency for a utility
- Larger size improves diversification, geographically and by fuel type
- Liquidity concerns overcome by new equity (on mergers), asset sales, capex cuts and covenant renegotiations
- Technological improvements in generation improve efficiency for new generators
- Coal and nuclear are two lower-cost and desirable fuels, accounting for over 70% of U.S. generation. In a competitive deregulated environment, these fuels will be favoured for existing plants
- Stranded cost recovery has been assured in most jurisdictions, assuming the stranded costs result from deregulation

Challenges:

- New generation capacity uses gas, the most expensive fuel
- Transmission grid limitations restrict smooth electricity flow
- Regulation in merchant power still persists where company has excess market clout
- Excess additions of generation capacity create over-supply
- Balance sheets of many companies weakened by aggressive expansion in the 1998 – 2001 period
- Asian and Latin American expansion presents substantial political, currency, regulatory, and counter-party risk
- Loss of stable transmission, distribution sectors for mixed companies reduce control in this area
- Illiquid nature of derivative instruments makes it easier to manage earnings under FASB 133

STRENGTHS AND CHALLENGES

Strengths: (1) Separation of electricity into its four main components (generation, transmission, distribution, and retail) has given the electric companies scope for much greater growth and profitability. Deregulated electric generation does not have the degree of earnings restrictions that exist in the regulated transmission and distribution area.

(2) Consolidation and size have given the larger companies critical mass and efficiency. The large U.S. electric industry was extremely fragmented, relative to Europe and Canada. Now, mergers are creating more specialized (i.e., power generators) and larger companies.

(3) Larger size is also improving diversification by geographical area and fuel type, although the merchant energy producers have reduced influence in the regulated and stable transmission and distribution sector.

(4) Companies are adjusting to liquidity concerns by (a) issuing new equity, (b) selling assets, (c) reducing capex, and (d) renegotiating covenants, especially rating trigger covenants.

(5) Technological improvements, especially those related to natural gas generation, are reducing the cost of generation. For example, more recent gas turbines can produce electricity using 7,000 Btus per KWH, versus over 10,000 Btus for many of the coal-based generators.

(6) Coal and nuclear generation account for over 70% of U.S. generation. Both fuels have been highly stable in price, and lock in stable cost structures for the utility.

(7) Stranded costs resulting from deregulation are usually due to two main factors: (a) recovery of costs related to under-depreciation of nuclear plants; and (b) third-party power contracts above market prices. As the transition from regulated to deregulated prices occurs, most utilities are able to recover these capitalized “stranded” costs. Recovery is usually over ten years, and is assessed as a surcharge added to the cost of transmission.

Challenges: (1) Deregulation has resulted in construction of too many new plants. This increases the electrical supply, and has been instrumental in reducing the price of electricity in certain regional markets. Electricity is a pure commodity, and sensitive to any excess supply, just like oil.

(2) Lack of transmission interconnection, and the difficulty in building new transmission networks restricts the ability to transmit power. It can also result in stranded electricity, where the lack of transmission facilities forces a utility to “dump” power at prices as low as its variable costs.

(3) Regulation has not been completely eliminated in generation. For example, FERC and state regulators are still influencing prices if a given company is deemed to have too much market power, as in California.

(4) New capital expenditure in generation is almost totally using a natural gas base. Since gas is the most expensive fuel today, these new plants will be the first to be shut down when demand falls (i.e., in a recession). Thus, many of the new gas-based plants will be peaking plants rather than generating base load requirements, operating only a few

hundred hours a year with the hope that peaking prices will be high enough to earn favourable returns and justify their investment.

(5) Balance sheets have been weakened through aggressive expansion in new generation capacity. Through the use of limited partnerships, the companies have been able to finance some of these projects “off the balance sheet.” This off-balance sheet financing is justified as long as the Company does not support the trust in some fashion, and the Company can, in effect, walk away from a given project without supplying additional support. Leasing and securitization are two other off-balance sheet items that must be watched.

(6) Some companies have made investments in third world countries in Asia and Latin America. This presents these companies with unique political, currency, regulatory, and counterparty risk, as proven by recent examples in India and Brazil. U.S. companies have also not fared well in developed countries such as the U.K. and Australia, where regulatory restrictions have severely cut returns.

(7) The electrical companies are subject to price risk, and the recent decline in electric prices in the U.S. severely restricts profitability on plants without long-term power contracts.

(8) The merchant power generators generally have reduced control in the stable transmission and distribution area.

(9) The quality of accounting of merchant power generators allows companies greater scope to manage earnings, due to the illiquid nature of forward price curves. In particular, FASB 133 gives companies substantial scope in managing future income through the valuation of derivative contracts.

Regulated: Generation, Transmission/Distribution

Strengths:

- Regulation assures stability, and limited competition usually exists
- Volume variance and fuel price flow-through protection often exists
- Performance-based regulation shares future efficiencies
- Most stranded cost flow recovery is allowed, in most jurisdictions, except for stranded costs not common in a regulated environment

Challenges:

- Risk of “bad” regulation as regional transmission organizations formed
- Transmission control shifting to independent system operators
- Lack of new transmission line construction
- Lack of “synchronization” of the power grid
- Technological improvements in gas generation may “strand” transmission and distribution grids
- Electric growth is stable and mature, at only 1% - 2% per franchise area under normal conditions

SUMMARY

While regulation usually assures stability of income, the rates of return earned are usually “normal,” and not as high as in the unregulated area, and there are a number of regulatory issues that are in conflict. Growth is mature and

slow, and transmission control is gradually shifting to regional transmission grids. Being in a regulated area is not always that attractive, if regulation is not flexible.

REGULATED COMPANIES: GENERATION, TRANSMISSION, AND DISTRIBUTION

Strengths:

- (1) The area is regulated with “protection,” assuring stability of income.
- (2) Protection, depending on jurisdiction includes: (a) volume variance protection due to temperatures, with reserve accounts to smooth out fluctuations; and (b) fuel price protection, with pass-throughs of fuel price variances. Fuel price fluctuations may be recovered over long time periods in the rates.
- (3) Performance-based regulation shares the benefits of efficiency between customers and the Company. Although agreements often exist for five-year periods, extensions have been occurring after the five-year period without “rebasings” old efficiencies, which then remain shared into the future.
- (4) Interest costs are generally flowed through to the customer.
- (5) Line losses in transmission and distribution are passed on to the customer in the form of higher rates.

Challenges:

(1) Transmission control is gradually changing. The mixed electric companies are being encouraged to transfer control of their transmission grids to a regional transmission company, which cuts across various states, and allows open access to all generators of power. The transmission grid is usually controlled by an independent system operator. This increases the level of competition in the electric industry, and allows for transmission of power over a much larger economic area, to the benefit of the consumer and the power company.

(2) Environmental factors and a “not in my back yard” mentality prevent the extension of the North American transmission grid. This prevents build-up of the rate base, and restricts growth of transmission company profitability.

(3) Lack of synchronization of power in the four major power sectors in North America prevents free flow of electricity. The four major regions are U.S. East, U.S. West, Texas, and Quebec. It is difficult to get power between these four North American regions. Also, the flow of transmission grids in North America is North/South. East/West interconnections in North America are weak.

(4) Falling interest rates are also resulting in lower allowed return on equity.

(5) Regulation can be in conflict, as inter-state electricity flow is governed by FERC regulation, and retail distribution is regulated by the states. This leads to regulatory lag, turf wars between regulators, costly and lengthy rate hearings, and frustration on the part of the utilities.

(6) Electricity growth is mature, and seldom exceeds 1% - 2% per year per market, unless the franchise area has unusually high growth. With limited rate base growth and falling interest rates (which also cuts allowed return on equity), the growth rate of transmission/distribution companies is not high, unless the franchise area is booming. Acquisitions are needed to show growth.

(7) Technological improvements in gas-based generation may “strand” some of the transmission capacity which exist.

(8) There can be “bad” regulation, with regulatory lag and unfavourable decisions.

Mixed: Regulation and Deregulation
Strengths:

- Provides some stability, some growth
- Capacity exists for greater than regulated returns, especially with performance-based regulation

Challenges:

- Generation in new jurisdictions raises business risk
- Subject to greater competition in unregulated area
- “Mixed” often means that the area has not yet deregulated, but will eventually

 SUMMARY

The mixed area of deregulation/regulation is often an area that has not yet deregulated, but will eventually. However, the utility holding company may have purchased a merchant generation plant in another market area. Thus, the adjustments that remain must still be made. Business risk and competition are greater in the mixed environment, but so is the potential profitability of unregulated activity. The experience with Enron and California has slowed the degree

of deregulation, but eventually most of North America will, in our opinion, be deregulated. As the Regional Transmission Organizations are created, generators of power will have scope to ship electricity to more customers over greater distances with more competition. This will raise competition, and contribute to deregulation throughout North America.

Strengths:

(1) This area combines all the strengths of regulated and deregulated operations. It offers some growth and some stability, and is a balance between the two areas. The deregulated area is usually generation, while transmission and distribution usually remain regulated.

Challenges:

(1) The challenges include all the factors discussed under the sections of regulated and deregulated entities.

(2) The business risk involved with companies in the deregulated area is greater than with the regulated sector.

(3) The deregulated area is subjected to greater competition than regulated, and greater price fluctuations.

(4) The mixed area is often a jurisdiction that has not yet deregulated, and will eventually do so. Utility holding companies may purchase merchant power plants in a totally independent market area.

The Retail Sector

DEFINITION

Retail is defined as the sale of the commodity, electricity. Electricity is purchased in raw form and sold to retail customers, with the Company initiating the sale:

- (1) not having generation facilities;
- (2) not having transmission facilities;
- (3) not having distribution facilities.

The Company makes money by (a) breaking bulk (buying high volume for fixed prices for several years, and reselling smaller volumes to customers) for shorter periods, (b) playing time spreads, by selling electricity under two- to three-year contracts, but buying it under much shorter term contracts, and (c) using financial derivatives to hedge its positions and trading the commodity.

Strengths:

- Area acts as another profit centre
- Superior software and administration skills needed
- Usually involves all energy products – gas, electricity

Challenges:

- Hedging policy key
- Severe counter party risk can result
- Size needed to be competitive
- Severe energy price fluctuations raise problems

STRENGTHS AND CHALLENGES

Strengths:

(1) The area acts as another profit centre for the Company, as it makes money off the raw commodity. Many utilities, especially in Canada, have chosen not to do this, and hedge their fuel/electricity positions instead.

(2) Most companies in this area have superior software technology to control hedging, and to bill clients. Receivable collection is key, and companies need excellent administration skills.

(3) Most companies in this area trade not only electricity, but gas as well. This gives them a second profit centre.

Challenges:

(1) Hedging policy is key to the long-term profitability and stability of income. There is no such thing as a perfect hedge, so the Company has degrees of hedging risk.

(2) Significant counter-party risk exists with respect to (a) electricity and gas supply, and (b) customer contracts for electricity and natural gas.

(3) Large size is needed to (a) buy gas and electricity, (b) create the sophisticated software to administer and control, and (c) attain enough capital to have the clout to overcome price fluctuations, and to market the products properly.

(4) Severe energy price fluctuations cause problems with buyers and sellers

**Moody's Investor Services
Rating Methodology: Global Regulated Electric Utilities
March 2005**

Contact	Phone
<i>London</i>	
Stuart Lawton	44.20.7772.5454
<i>New York</i>	
Daniel Gates	1.212.553.1653
<i>Sydney</i>	
Brian Cahill	61.2.9270.8100
<i>Tokyo</i>	
Takahiro Morita	81.3.5408.4000

Rating Methodology: Global Regulated Electric Utilities

Summary

This rating methodology covers electric utility companies worldwide whose credit profile is significantly affected by the presence of regulation. In order for a company to be included within this classification, at least 40% of its business should derive from regulated electric activities. The methodology thus excludes all other electric and power companies operating in the unregulated market, such as generators or power retailers, and other regulated industries such as water and gas utilities.

Based upon this definition, Moody's rates over 100 companies that either are electric utilities or are the parent holding companies for subsidiaries that operate predominantly in the electric utility business. In addition, Moody's rates a large number of utility operating subsidiaries of the ultimate parent companies. Figure 1 offers a breakdown of the ultimate parent companies by geographic region and rating category as of 1 February 2005:

	Aaa	Aa	A	Baa	Ba	B	TOTAL
Asia/Pacific		2	8	6	1	1	18
Europe	1	7	16	9	1		34
Japan		3	6				9
Americas			10	30	10	5	55
Totals	1	12	40	45	12	6	116

Moody's concludes that – despite the considerable number of common characteristics shared by electric utilities on a worldwide basis – country-by-country regulatory differences and cultural and economic considerations make this a local industry seen globally rather than a truly global industry.

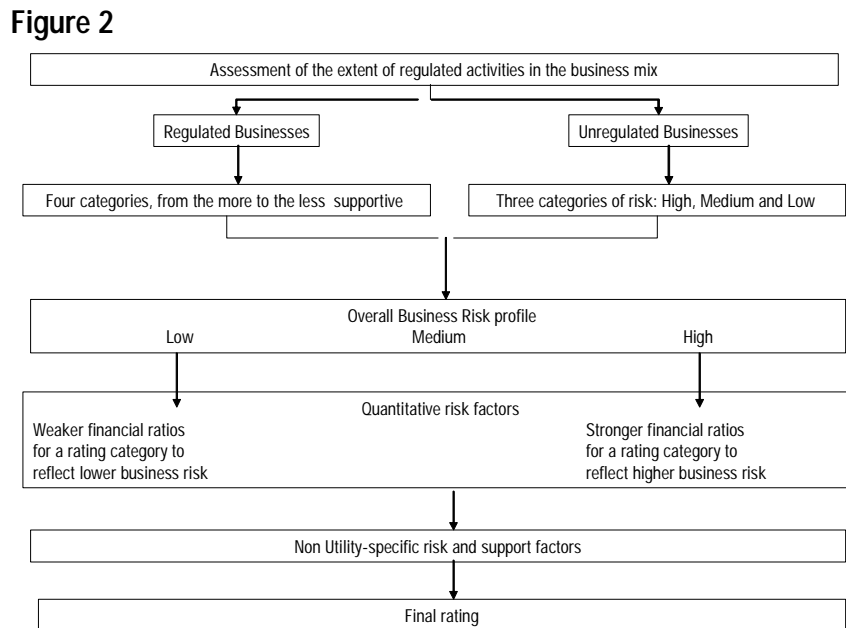
In general, regulated electric utilities offer lenders some of the lowest business risks seen amongst corporate entities. However, many of the companies in question may also be active in unregulated businesses, such as speculative trading with exposure to unhedged commodity prices, which can be highly risky and may lead to serious financial difficulties despite the presence of a regulator.

In addition, there is little consistency in the approach and application of regulatory frameworks around the world. Some are highly supportive of the “system” and those that operate within them, often offering implied sovereign support to ensure reliability of supply. Others are designed to protect the end-consumers from abuse of a monopoly supplier – a priority that may work to the detriment of companies operating in the system if they cannot meet regulators' expectations, or if the regulator fails to achieve the appropriate balance in the regulatory framework.

Under this rating methodology, Moody's:

1. Assesses the extent of a “regulated” company’s exposure to its unregulated businesses. The strongest credit risk position is enjoyed by a company whose business is wholly regulated. Where non-utility activities are substantial, the main credit driver will be the assessment of these businesses.
2. Assesses the credit support that is gained from operating within a particular regulatory framework.
3. Considers the exact level of risk posed by the unregulated businesses to the overall credit.
4. Looks at six specific financial ratios which are considered the most useful when assessing an electric utility and the adjustments made to calculate these.
5. Considers more generic risk factors that are not specific to utility companies, e.g. the adequacy of liquidity arrangements, appetite for acquisitions.

Figure 2 depicts the broad methodology for regulated utilities:



Profile of Key Characteristics by Rating Category

Figure 3 below describes the key characteristics of regulated electric utilities falling within each rating category.

Figure 3

Rating Category	Ownership	Market and Regulatory Position	Non-Regulatory Risks
Aaa	Wholly owned by a Aaa-rated sovereign with unquestioned support if needed	Regulatory framework allows full cost recovery. No evidence of a regulator ever blocking regulated price rises. Large and well-protected service area. Support for the electric transmission system outweighs customer considerations. No or very limited competition. If owned by a Aaa-rated sovereign, the risk is deemed equivalent to that of the Aaa parent.	Zero or immaterial when considering revenue, earnings, cashflow and assets.
Aa	Wholly or majority owned by a Aaa or Aa rated sovereign or investor-owned with an effective monopoly and highly supportive regulation	Regulatory framework allows full cost recovery. No evidence of a regulator ever blocking regulated price rises. Large and well-protected service area. Support for the electric transmission system outweighs user considerations. No or very limited competition. Financially robust under all scenarios with unquestioned access to the financial markets and very strong liquidity. Many companies in this category are either sovereign-owned or are deemed to have certain support from the regulatory system or government in times of stress.	Non-electric utility businesses are predominantly low-risk businesses such as natural gas distribution

Figure 3

Rating Category	Ownership	Market and Regulatory Position	Non-Regulatory Risks
A	Wholly or partially owned by a Aa or A rated sovereign or rating is based on intrinsic strength without factoring in any uplift for sovereign ownership; or investor-owned with highly predictable and reliable regulation.	Medium to large-sized companies where the core operation is a stable, regulated electric utility business. Well-capitalized companies with moderately strong financials, that face more business risk and/or have weaker financial metrics than the issuers in the Aa category. If exposed to substantial competition, cost structure and rates are highly competitive for their region. Companies in this category often face greater competitive pressures than those in the Aa rating category. The regulatory environment has above-average stability and reliability. Recovery of costs under regulated rates is fairly predictable with automatic fuel and purchased power recovery provisions in some jurisdictions. Service territory has moderate to strong demographics. Customer base is predominantly commercial and residential, and issuer has only modest potential for harm from loss of important industrial customers. There may be some history of a lack of support by regulators on large spending decisions for the regulated business but any amounts disallowed have had only a modest impact on the issuer's creditworthiness.	Larger companies in this category may have substantial non-regulated businesses but the overall profile remains dominated by regulation. Smaller companies in this category are likely to have very limited unregulated activities.
Baa	Wholly or partially owned by a A or Baa rated sovereign or rating is based on intrinsic strength without factoring in any uplift for sovereign ownership; or investor-owned with highly predictable regulation that has modest potential for unexpected rate outcomes.	Medium-sized and smaller companies with average to below-average capitalization and cash flow coverages, that face more business risk and have weaker financial metrics than the issuers in the A category. Core operations are dominated by fairly stable integrated electric utility businesses. Issuers may be more exposed to competition, less competitive in costs and rates in their region, and may be at risk for the loss of large industrial customers. There may be substantial competition for wholesale customers and some competition for retail and small commercial customers. The regulatory environment has average to below-average stability and reliability. The regulatory environment may sometimes be challenging and politically charged. Recovery of costs under regulated rates is usually predictable with fuel and purchased power recovery provisions in some jurisdictions, but there is a greater tendency for regulatory surprises. There may be some history of regulators disallowing large spending decisions for the regulated business and disallowed amounts may have had a meaningful impact on the issuer's creditworthiness.	Issuers may have other utility and energy businesses, especially natural gas distribution. Unregulated non-utility businesses may be substantial in size relative to the regulated business, and unregulated businesses may have a higher risk profile than is the case for most issuers in the A category. Some issuers in this rating category have substantial investments in higher-risk unregulated businesses, including merchant power, energy trading, oil and gas production, real estate, telecom.
Ba	Most of the issuers that are rated Ba are holding companies for regulated utility subsidiaries that are rated in the Baa category. Excluding emerging markets, very few regulated utility operating companies have speculative grade senior ratings.	Medium-sized and smaller companies with below-average capitalization and cash flow coverages, that face more business risk and have weaker financial metrics than the issuers in the Baa category. Core operations may include fairly stable integrated electric utility businesses, but these are offset by substantial debt-financed investments in unregulated activities that are higher risk or have performed poorly. Liquidity is likely to be weak, especially at the parent holding company. Bank financing may be secured and the issuer may have limited headroom under its covenants. Some issuers in this rating category are substantially more exposed to competition, less competitive in costs and rates in their region, and may be at risk for the loss of large industrial customers. There may be substantial competition for all types of customers: wholesale, retail, and small commercial. Regulatory environment may be inconsistent, with surprisingly unfavorable rate decisions or regulatory unwillingness to make timely changes to address unexpected market volatility. Issuer has below-average relationship with regulators. There may be uncertainty of recovery for spikes in costs such as for fuel or purchased power.	Compared to those Baa issuers that also have substantial riskier unregulated investments, the investments are proportionately larger in relation to the regulated utility business and have performed more poorly. Issuers may have other utility and energy businesses, especially natural gas distribution. Unregulated businesses have a higher risk profile than is the case for most issuers in the Baa category. Issuers in this rating category usually have substantial investments in higher-risk unregulated businesses, including merchant power, energy trading, oil and gas production, real estate, telecom.
B	Some issuers in this rating category are majority owned by low-rated sovereign entities	Medium-sized and smaller companies with well below-average capitalization and cash flow coverages, that face more business risk and have weaker financial metrics than the issuers in the Ba category. Core operations may include fairly stable integrated electric utility businesses in some cases, but these are outweighed by large highly risky unregulated activities that were debt-financed and have performed extremely poorly. Some issuers have very poor regulatory relationships. Regulators may have engaged in second-guessing of spending decisions and denied recovery of amounts that jeopardize the issuer's ability to fund its ongoing business activities. Liquidity is likely to be very weak, especially at the parent holding company. Bank financing may be secured and the issuer may have limited headroom under its covenants. There is a significant risk of detrimental sovereign actions such as: politically motivated interference in the ratemaking process, actions based on social/political needs rather than financial returns. There may be a history of using the utility as a government funding source. These issuers also face higher potential for disruption in power and financial markets. The financial profile of these issuers may be relatively strong but susceptible to rapid deterioration.	Unregulated businesses tend to be higher-risk activities, including merchant power and energy trading.

Stand-Alone Company Credit Risk Factors

QUALITATIVE FACTORS

General rating methodology

Moody's framework for rating regulated electric utilities is constructed around a number of credit risk factors rather than on any one particular metric such as a financial ratio.

The first step is to assess the extent of a "regulated" company's exposure to unregulated businesses. The strongest position is enjoyed by those companies operating in a wholly regulated business. However, the majority of the companies we consider in this sector have additional exposure to unregulated businesses, whether those are unregulated power generation or supply activities or non-electric unregulated businesses.

The second step in the methodology is to assess the credit support that is gained from operating within a particular regulatory framework. Moody's considers each regulatory system and assesses whether there is a high or low expectation of predictability in the system and whether operators can reasonably expect to recover their costs and investments through regulator-approved revenue increases.

The third step is to consider the exact level of risk posed by the unregulated business. Note that a relatively small, but high-risk, unregulated business has the capacity to cause a major credit deterioration for the entity as a whole.

This then leads to an overall assessment of the qualitative business risk of the company's activities.

Each of these steps is now considered in more detail.

Assessment of the extent of regulation around a business

Moody's classifies companies into four categories to determine how much their business risk is influenced by regulated activities.

This is a measure of the relative weight of regulated to unregulated business within a rated entity. Weighting is based on the element of earnings, cashflows and assets that fall within or outside a regulatory framework. In order to define the "unregulated business" percentage, Moody's takes the highest percentage out of the three measures respectively based on earnings, cashflows and assets. This then allows us to derive the regulated business percentage and to assign the entity to one of the four categories as below:

- Category 1: A wholly regulated business
- Category 2: 80-99% of the business is regulated
- Category 3: 60-80% of the business is regulated
- Category 4: 40-60% of the business is regulated

Assessment of the supportiveness of the regulatory framework

We also classify entities into the following four categories based on a comparative assessment of the predictability and stability of regulated cashflows for a company operating under a particular regulatory framework – or the Supportiveness of Regulatory Environment (SRE):

- SRE 1: Regulatory framework is fully developed, has shown a long track record of being highly predictable and stable and there is a very high expectation of timely recovery of costs and investments.
- SRE 2: Regulatory framework is fully developed, is predictable and stable and there is a high expectation of timely recovery of costs and investments.
- SRE 3: Regulatory framework is well developed but there is a lower assurance of timely recovery of costs and investments; there may also be evidence of some inconsistency or unpredictability in the way that the regulatory framework has been applied.
- SRE 4: Regulatory framework is still being developed, is unclear, is undergoing considerable change or has a history of being unpredictable.

Consideration is given to the substance of a regulatory ringfence including restrictions on dividends, restrictions on capex and investments, separate financings, separate legal structure, and limits on the ability of the regulated entity

to support its parent company. There is more credit uplift if these provisions are contained within a license or clear regulatory rules rather than in financing documents that can be renegotiated.

In general, Moody's sees regulatory frameworks as being fundamentally designed to achieve a balance between supply reliability and service, efficiency, prices, and financial returns to the utilities. All jurisdictions consider all of these factors, but there are regional differences in their application and degree of emphasis, as discussed below:

- Protecting the “system” to ensure a reliable supply. In such cases, the company receives considerable implied support from the government, which may be at the expense of the end-user. Japan is an example of a system that emphasizes these factors more heavily. Other examples would include systems where considerable infrastructure build-out is needed and incentives for investment outweigh the need to control customer prices. Italy and Spain are examples of jurisdictions that emphasize these factors more strongly.
- Protecting consumers from monopoly over-charging or from sudden large rate increases that could be imposed more gradually. When these concerns are more heavily weighted, companies are at financial risk if they cannot economically deliver a service at the regulated price. Some degree of financial deterioration of the utility may be accepted in the interests of protecting consumers from higher prices. California demonstrated a heavier weighting of these factors when wholesale market prices spiked in 2000-2001.
- Attempting to achieve a balance between satisfying the need of companies to be able to provide a return to their stakeholders and endeavoring to encourage efficiency and hold down prices. The regulatory systems of Australia and the UK are good examples of models that consistently stress these factors most heavily.

Examples of regulatory frameworks in each category:

- SRE 1: Australia, Canada, Iceland, Finland, Hong Kong, Japan, UK
- SRE 2: Austria, France, Germany, Italy, New Zealand, Portugal, Netherlands, Norway, Singapore, Spain, Sweden, U.S. states: Alabama, Delaware, District of Columbia, Florida, Georgia, Hawaii, Indiana, Iowa, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Nebraska, New York, North Carolina, Oklahoma, Oregon, Rhode Island, South Carolina, Tennessee, Utah, Virginia, Washington, Wisconsin
- SRE 3: Chile, Czech Republic, Estonia, Greece, Israel, Korea, Latvia, Malaysia, Taiwan, Thailand, U.S. states: Arizona, Arkansas, California, Colorado, Connecticut, Idaho, Illinois, Kansas, Louisiana, Maine, Michigan, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, North Dakota, Ohio, Pennsylvania, South Dakota, Texas, Vermont, West Virginia, Wyoming
- SRE 4: Brazil, Bulgaria, China, Colombia, India, Indonesia, Philippines, Romania, South Africa

Assessment of the risk of the unregulated businesses

A key component of Moody's ratings of electric utility companies is an individual assessment of the business risks as well as the financial risks for each company. The regulated activities of electric utility companies generally are more stable and carry lower risk than the business activities of most other corporate entities. As a result, utility companies are rated substantially higher than industrial companies that have a similar financial profile.

However, as noted above, many companies in the electric utility industry have a mix of regulated and unregulated businesses. These companies typically combine a low-risk electric utility business and what is in most cases a higher-risk unregulated business. The risk contribution from the unregulated businesses is determined by:

- 1) The relative proportion of the total company's business that comprises unregulated activities; and
- 2) The degree of risk of the particular unregulated activities.

Companies that have substantial unregulated activities that carry high or medium risk require stronger financial ratios to achieve a particular rating level than companies whose unregulated activities are small in size or are low in risk. Note that a company with a low-risk business profile will be rated more highly than a company that has the same financial profile but which has larger or higher-risk unregulated activities. The presence of a high proportion of risky non-regulated businesses could account for as much as a six rating notch differential over another company that was in a wholly regulated business.

Figure 4 shows a broad categorization of the relative riskiness of unregulated activities that are commonly part of the business of electric utility companies. These are grouped into broad categories of high, medium and low business risk. These classifications are general and do not fully capture individual company characteristics or differences in regional markets. For example, uncontracted wholesale power generation is likely to be riskier in the US, where the market is fragmented, than in Germany, where a smaller number of companies have relatively large market shares.

This categorization of the risks of unregulated businesses can be summarized as follows:

- Category 1 – High
- Category 2 – Medium
- Category 3 – Low

Figure 4
High Business Risk
Merchant power generation that is located in highly competitive markets or merchant power generation that is high-cost and is not sold under long-term contract to a highly creditworthy counterparty.
Energy trading and marketing that is speculative or market-making in nature.
Investments in unregulated international power assets in unfamiliar markets.
Various investments outside the core area of industry expertise. Frequent areas for such diversified investment include: telecommunications; oil and gas exploration and production; and real estate development.
Medium Business Risk
Merchant power generation in markets in which competition is limited by the large market share of each participant, by geographic isolation, or by the utility's control of critical production and transmission infrastructure, or because the unregulated generation is relatively low-cost.
Affiliated energy generation and supply businesses that sell primarily under contract to the regulated utility or within the utility's core market area.
Energy trading and marketing that is strictly limited to trading around the utility's physical generation and transmission assets, with little or no market making trading.
Operation of coal mines or natural gas pipelines that are closely integrated with the utility's regulated generation business as the source of fuel for the regulated power plants.
Low Business Risk
Unregulated electricity generation that is wholly sold under long-term contract to highly creditworthy counterparties which assume all risk of fluctuation in the market prices of fuel and electricity.
Unregulated or lightly regulated electricity generation that is very well insulated from competition because of the utility's high market share or its ownership and tight control of the key infrastructure assets that are needed to generate or deliver electricity.
Selling and maintaining customer equipment that is related to the core utility business, or contractual arrangements to manage customers' fuel and electricity needs, under which the customer retains all risk of fluctuation in market prices.

High-Business-Risk Unregulated Activities

This higher business risk category includes merchant generation in highly competitive markets, energy trading and marketing that is speculative or market-making in nature, and unregulated electric generation investments in unfamiliar or poorly developed markets.

Merchant energy is considered to include unregulated power generation for which the output is not sold under long-term contract with a creditworthy counterparty. In the merchant model, power is sold into the competitive or merchant market, and cash flows are subject to market price volatility. The absence of contracts results in less predictable cash flows and higher business risk.

Energy marketing and trading is a related activity that often has a high level of risk associated with it. There can be substantial differences in the riskiness of energy trading and marketing, depending upon the strategy and size of this activity. Speculative trading activity has the potential to produce large swings in income or loss, has limited risk transparency, and may result in large swings in liquidity needs. Trading and marketing activities that are ancillary to a core utility business (trading around the physical assets) are considered to be much less risky than pure proprietary or speculative trading. However, all energy trading is viewed as having a higher business risk profile than regulated activities.

A number of other investments outside the core sector of industry expertise are likely to fall into the high business risk category. Such areas of diversification may include telecommunications, equity investments in leases, oil and gas exploration and production, miscellaneous manufacturing and real estate development.

Some companies have high-risk businesses that are sizeable in comparison to the more stable regulated business. These companies are expected to have financial ratios that are closer to those of an unregulated industrial company in the same rating category, in contrast to the financial ratios typical for a lower-risk regulated utility company. Companies with substantial high-risk activities will need lower leverage, and stronger cash flow coverage ratios to qualify for a particular rating category.

Medium-Business-Risk Unregulated Activities

Unregulated electricity generation may be medium-risk if competition is substantially limited by the structure of the market or by the generators' control over production and transmission infrastructure that is needed to reach customers, or if the unregulated generation has costs that are well below-average.

Also likely to fall into this category is unregulated generation that is largely sold back to the regulated utility without long-term contracts. This activity has a lower risk than merchant sales to third parties if the generating assets are advantageously located for the regulated utility. This is particularly likely when generating assets have been legally separated from the regulated utility. As part of the transition to deregulation, many utilities were required to disaggregate their generation, and these plants were often put into affiliated supply companies under a common parent holding company, but continue to sell a large portion of their output to the affiliated regulated utility.

Medium-risk unregulated generation is likely to have significant exposure to fluctuations in the price of fuel, or capital spending needs to maintain competitiveness or to meet environmental requirements.

Lower-Business-Risk Unregulated Activities

This category includes unregulated generation of electricity that is sold under long-term contract to highly creditworthy counterparties, with the purchaser bearing the risk of any change in the market price of fuel and wholesale power.

Unregulated electricity generation may also be low-risk if there is little competition due to the structure of the market or the generators' exclusive control over critical production and transmission infrastructure that is needed to reach customers.

Below-average costs are not necessarily sufficient for unregulated generation to be classified in the low-risk category. Without other mitigating factors being present, low-cost merchant generation is likely to be classified as medium-risk due to the potential for changes in relative cost competitiveness as market conditions change.

Conclusion on Qualitative factors

This analysis of qualitative factors – the split of regulated versus non regulated activities and the respective risk analysis of those businesses – allows us to determine how stable and predictable we feel the cashflows of the company should be. The lowest business risk will be a company with wholly regulated activities in a supportive regulatory framework. The highest business risk will be a company with a high degree of exposure to non-regulated businesses when those businesses are viewed to be relatively high-risk.

Companies with a lower business risk can have weaker financial metrics than one with higher business risk for the same rating category.

QUANTITATIVE FACTORS

Key ratios

Moody's uses financial ratio analysis as part of our quantitative analysis of all corporates, including electric utilities. Ratio analysis is a helpful way of comparing one company's performance to that of another and the performance in one year to that in another.

However, the importance of ratio analysis can be overstated. No two companies look exactly alike from a qualitative assessment standpoint and each company we rate is constantly changing. It is impossible to assign an accurate credit rating on the basis of financial ratio analysis alone, even less so on the basis of any one ratio. Therefore, Moody's does not have any specific "hurdle rate" to explain which ratio will make the difference between any two rating categories.

Nonetheless, we have identified six core ratios which we consider to be the most useful when looking at an electric utility company. These are supplemented by other ratios which are particularly useful for various local regulatory frameworks.

The six core ratios¹ are as follows:

Primary:

1. Retained Cashflow² / Adjusted gross debt³
2. FFO / Adjusted gross debt
3. FFO / Interest
4. Adjusted gross debt / Regulated Asset Value⁴, or Capitalization

Secondary:

5. EBITDA Margin
6. Retained Cashflow / Capex

While other factors considered in this report may outweigh pure quantitative analysis, it is possible to provide broad guidance on the ratio ranges that may generally be seen at different rating levels.

In general, other factors – such as the degree of likely support from a sovereign – tend to outweigh financial ratios for companies operating in a very low business risk environment such as Japan or Finland. Similarly, considerations such as an undeveloped regulatory framework, potential political risk or relatively opaque corporate governance may outweigh financial ratios for companies operating in a high business risk environment. Our analysis also considers prospective future performance, which may differ from historic ratios.

Financial ratios are more useful for companies operating in a low business risk environment where there is a high degree of regulated activities and a supportive regulatory system. This might include the UK, US transmission and distribution utilities (T&Ds), Canada or many European countries. Medium-business-risk operating environments would include US integrated utilities.

As noted above, this is a local industry found globally rather than one where companies compete with each other outside their own local area. While companies in, say, Japan or in the US or in Germany, all tend to have similar profitability dynamics, there is little global similarity. Hence, measures of profitability are helpful in rank-ordering companies within their own local regulatory operating environment, but not helpful as a global indicator of ratings.

Measures of interest cover, cashflow to debt and balance sheet measures tend to be more consistent across the whole universe of global regulated electric utility companies.

As a guide, the following primary ratios, as set out in Figure 5, might be expected for a utility company without factoring in any uplift for possible sovereign support.

Figure 5								
	Aa	Aa	A	A	Baa	Baa	Ba	Ba
Business risk	Medium	Low	Medium	Low	Medium	Low	Medium	Low
FFO int. cov. (X)	> 6	>5	3.5-6.0	3.0-5.7	2.7-5.0	2-4.0	<2.5	<2
FFO/Debt (%)	>30	>22	22-30	12-22	13-25	5-13	<13	<5
RCF/Debt (%)	>25	>20	13-25	9-20	8-20	3-10	<10	<3
Debt/Capital (%)	<40	<50	40-60	50-75	50-70	60-75	>60	>70

Other utility-specific issues relevant to quantitative analysis

Power Purchase Agreements (“PPAs”)

Although many utilities own and operate power stations, some have entered into PPAs to source electricity from third parties to satisfy retail demand. The motivation for these PPAs may be one or more of the following: to outsource operating risks to parties more skilled in power station operation, to provide certainty of supply, to reduce balance sheet debt or to fix the cost of power. While Moody’s regards these risk reduction measures positively, some aspects of PPAs may negatively affect the credit of utilities.

1. Please see Appendix 2 for definitions.

2. Retained Cashflow (RCF) is FFO less dividends

3. Moody’s concentrates on gross debt but will also consider net debt ratios if the cash is clearly being held for future debt maturities or for reasons such as hedging. A good example of this would be a company that has hedged the exchange risk of an overseas investment with the local currency debt despite having surplus cash at the parent level. In such cases, the net ratio will take predominance over the gross ratio.

4. The Regulated Asset Value (RAV) or Regulated Asset Base (RAB)

Under most PPAs, a utility is obliged to pay a capacity charge to the power station owner (which may be another utility or an Independent Power Producer – IPP); this charge covers the portion of the IPP's fixed costs in relation to the power available to the utility. These fixed payments cover debt service and are made irrespective of whether the utility requires the IPP to generate. When the utility requires generation, a further energy charge, to cover the variable costs of the IPP, will also be paid by the utility. Some other arrangements are characterized as tolling agreements, or long-term supply contracts, but most have similar features to PPAs and are thus analyzed by Moody's as PPAs.

Factors determining the treatment of PPAs

PPAs have a wide variety of financial and regulatory characteristics and are thus each particular circumstance may be treated differently by Moody's. The most conservative treatment would be to treat the PPA as a debt obligation of the utility as, by paying the capacity charge, the utility is effectively providing the funds to service the debt associated with the power station. At the other end of the continuum, the financial obligations of the utility could also be regarded as an ongoing operating cost, with no long-term capital component recognized. Factors which determine where on the continuum Moody's treats a particular PPA are as follows:

- **Risk management**: An overarching principle is that PPAs have been used by utilities as a risk management tool and Moody's recognizes that this is the fundamental reason for their existence. Thus, Moody's will not automatically penalize utilities for entering into contracts for the purpose of reducing risk associated with power price and availability. Rather, we will look at the aggregate commercial position, evaluating the risk to a utility's purchase and supply obligations. In addition, PPAs are similar to other long-term supply contracts used by other industries and their treatment should not therefore be fundamentally different from that of other contracts of a similar nature.
- **Pass-through capability**: Some utilities have the ability to pass through the cost of purchasing power under PPAs to their customers. As a result, the utility takes no risk that the cost of power is greater than the retail price it will receive. Accordingly Moody's regards these PPA obligations as operating costs with no long-term debt-like attributes. PPAs with no pass-through ability have a greater risk profile for utilities. In some markets, the ability to pass through costs of a PPA is enshrined in the regulatory framework, and in others can be dictated by market dynamics. As a market becomes more competitive, the ability to pass through costs may decrease and, as circumstances change, Moody's treatment of PPA obligations will alter accordingly.
- **Price considerations**: The price of power paid by a utility under a PPA can be substantially below the current spot price of electricity. This will motivate the utility to purchase power from the IPP even if it does not require it for its own customers, and to sell excess electricity in the spot market. This can be a significant source of cash flow for some utilities. On the other hand, utilities that are compelled to pay capacity payments to IPPs when they have no demand for the power or when the spot price is lower than the PPA price will suffer a financial burden. Moody's will particularly focus on PPAs that have mark-to-market losses that may have a material impact on the utility's cash flow.
- **Excess Reserve Capacity**: In some jurisdictions there is substantial reserve capacity and thus a significant probability that the electricity available to a utility under PPAs will not be required by the market. This increases the risk to the utility that capacity payments will need to be made when there is no demand for the power. For example, Tenaga, the major Malaysian utility, purchases a large proportion of its power requirement from IPPs under PPAs. PPA payment totalled 42.5% of its operating costs in FY2004. In a high reserve margin environment existing in Malaysia, capacity payment under these PPAs are a significant burden on Tenaga, and some account must be made for these payments in its financial metrics.
- **Risk-sharing**: Utilities that own plant bear the associated operational, fuel procurement and other risks. These must be balanced against the financial and liquidity risk of contracting for the purchase of power under a PPA. Moody's will examine on a case-by case basis which of these two sets of risk poses greatest concern from a ratings standpoint.
- **Default provisions**: In most cases, a default under a PPA will not cross-default to the senior facilities of the utility and thus it is inappropriate to add the debt amount of the PPA to senior debt of the entity. The PPA obligations are not senior obligations of the utility as they do not behave in the same way as senior debt. However, it may be appropriate in some circumstances to add the PPA obligation to Moody's adjusted debt, in the same way as other off-balance sheet items.⁵

5. See "The Analysis of Off-Balance Sheet Exposures – A Global Perspective", Rating Methodology, July 2004.

Each of these factors will be weighed by Moody's analysts and a decision made as to the importance of the PPA to the risk analysis of the utility.

Methods of accounting for PPAs in our analysis

According to the weighting and importance of the PPA to each utility and the level of disclosure, Moody's may analytically assess the total obligations for the utility using one of the methods discussed below.

Operating Cost: If a utility enters into a PPA for the purpose of providing an assured supply and there is reasonable assurance that regulators will allow the costs to be recovered in regulated rates, Moody's may view the PPA as being most akin to an operating cost. In this circumstance, there most likely will be no imputed adjustment to the obligations of the utility.

Annual Obligation x 8: In some situations, the PPA obligation may be estimated by multiplying the annual payments by a factor of eight. This method is sometimes used in the capitalization of operating leases.⁶ This method may be used as an approximation where the analyst determines that the obligation is significant but cannot be quantified otherwise due to limited information.

Net Present Value: Where the analyst has sufficient information, Moody's may add the NPV of the stream of PPA payments to the adjusted obligations of the utility. The discount rate used will be the cost of capital of the utility.

Debt Look-Through: In some circumstances, where the debt incurred by the IPP is directly related to the off-taking utility, there may be reason to allocate the entire debt (or a proportional part related to share of power dedicated to the utility) of the IPP to that of the utility.

Mark-to-Market: In situations in which Moody's believes that the PPA prices exceed the spot price and thus a liability is arising for the utility, Moody's may use a net mark-to-market method, in which the NPV of the net cost to the utility will be added to its total obligations.

Consolidation: In some instances where the IPP is wholly dedicated to the utility, it may be appropriate to consolidate the debt and cash flows of the IPP with that of the utility. Again, if the utility purchases only a portion of the power from the IPP, then that portion of debt might be consolidated with the utility.

In some circumstances, Moody's will adopt more than one method to estimate the potential obligations imposed by the PPA. This approach recognizes the subjective nature of analyzing agreements that can extend over a long period of time and can have a different credit impact when regulatory or market conditions change. In all methods the Moody's analyst will account for the revenue from the sale of power bought from the IPP. We will focus on the term to maturity of the PPA obligation, the ability to pass through costs and curtail payments, and the materiality of the PPA obligation to the overall cash flows of the utility in assessing the affect of the PPA on the credit of the utility.

Nuclear liabilities

In several integrated European companies, nuclear power generation form a significant component of their power generation activities. These activities will usually be unregulated but comprise an important element of the analysis of these companies. The analysis is complicated by the lack of consistency in treating nuclear related items in different countries.

In general, nuclear waste management obligations are factored into debt using Moody's methodology for unfunded pensions. This recognizes the uncertainty of final amounts and timing in assessing the likely call on future cash flows. The methodology simulates a pre-funding of the obligation, taking into account access to the equity market and management's probable funding strategy. The existing debt-to-equity mix is generally used as a starting point.

For ratio analysis purposes, Moody's excludes reprocessing provisions from its calculation of total nuclear liability provisions if such provision is expected to remain a permanent component of the nuclear liabilities that will continually be replenished as fuel is used in the production process in line with the expectation that nuclear power will remain an important component of the company's generation portfolio for the foreseeable future.

For nuclear provisions that are recorded and funded on balance sheet, Moody's does consider the impact of their inclusion on adjusted debt ratio. However, we do recognize that their inclusion does understate the company's degree of financial flexibility for meeting financial debt obligations given the long duration of those provisions. This

6. For further discussion of the methodology of rating lease obligations see "Off-Balance Sheet Leases: Capitalization and Ratings Implications – Out of Sight But Not Out of Mind", October 1999.

is because the cash outflows for these liabilities will not occur for a number of years and will then extend out in a form similar to operating expenses over a further extended period of time. This is taken into account by looking at both gross and net debt ratios.

U.S. Securitization

Beginning in the late 1990s, legislatively approved stranded cost securitization has become an increasingly used financing technique among investor-owned electric utilities. In its simplest form, a stranded cost securitization isolates a dedicated stream of cash flow into a separate special purpose entity (SPE) and uses that stream of cash flow to provide annual debt service for the securitized debt instrument.

Moody's generally treats securitization debt of industrial and financial issuers as being on-credit debt. The debt that is being securitized usually carries a rating that is higher than that of the issuing entity, and the assets that are being sold to the separate SPE are often of better quality than the assets that remain with the issuer.

Stranded cost securitization differs somewhat from other generic securitizations because the asset being sold is often of poor quality prior to the passage of legislation and the completion of a securitization. In most cases, the asset represents stranded costs that would have been written off by the utility in the absence of legislation allowing for recovery through a surcharge on regulated customers.

Instead, the state regulator – and sometimes the state legislature – establishes the authority for a surcharge on customers' bills, and authorizes the sale of securitized debt. The utility then sells the right to collect a dedicated stream of future cash flows from its regulated customer base that is sufficient to provide debt service on the securitized piece of debt. The issuing utility is typically required to use the proceeds of the debt offering to retire both debt and equity in a manner intended to maintain a predetermined capital structure. The securitization generally has language that enables the tariff to be unilaterally raised in the event that future sales turn out to be lower than originally planned.

Generally speaking, Moody's views stranded cost securitization as being credit-neutral to credit-positive since it typically addresses a major credit overhang, some form of potential stranded costs, and legislatively requires the utilities to use the proceeds for debt and equity reduction in a manner that targets a relatively conservative capital structure.

For the most part, the securitization tariff is separate from the "general tariff" charged to customers and any increase in the size of the securitization tariff is not at the expense of the general tariff. However, in two states, Illinois and Michigan, the utilities operate under a rate freeze, which precludes them from raising rates until the termination of their respective rate freeze. As such, any increase in the securitization tariff is at the expense of revenues and cash flow that would be available to service debt of the remaining creditors of the utility.

Along the same lines, Moody's notes that the size of the securitization tariff relative to the total tariff is an important element in evaluating the credit implications of a securitization because it can impact the future ability of a utility to obtain subsequent rate relief for other costs of service. In effect, customers do not discriminate between the securitization tariff and the general tariff when paying their bills. Consequently, to the extent that the securitization tariff needs to be increased, the financial flexibility and associated credit quality of the utility may be compromised, particularly if the securitization tariff is large relative to the general tariff and if the increase is taken from the cash flow of the utility. As a consequence, Moody's considers the impact that a securitization may have on the ability of the utility to raise rates in the future.

In calculating balance sheet leverage, Moody's treats the securitized bonds as being fully non-recourse to the utility even though accounting guidelines require the debt to appear on the utility's balance sheet. Consistent with this view, all balance sheet capitalization metrics exclude the securitized debt from the capital structure given the legal separateness that exists between the debt of the utility and the debt of the SPE, and the fact that regulators set future rates based upon a capital structure that does not include the securitization debt.

However, in looking at cash flow coverages, Moody's analysis stresses ratios that include the securitized debt in the company's total debt as being the most consistent with the analysis of comparable companies. This recognizes that regulatory approval for recovery of stranded costs and securitization are not always inextricably linked. Many utilities have approval for recovery of stranded costs but do not execute a securitization financing. Regulatory approval of stranded costs can be a credit transforming event when there is substantial doubt about recovery. However, the subsequent completion of a securitization financing does not change the amounts that are expected to be recovered. A securitization transaction does make it extremely unlikely that regulators can later disavow an agreement to allow recovery, and regulatory approval is often packaged together with a securitization with the view that ratepayers will benefit from low borrowing costs.

While our standard credit ratios for funds from operations to total debt and funds from operations interest coverage include the securitization debt, Moody's also looks at these two metrics without the securitization debt, to ensure that the benefits of securitization are not ignored. In making this adjustment, funds from operations is adjusted downward by the amount of principal amortization that is annually paid to the SPE in support of the securitization. Consistent with that adjustment, Moody's excludes the principal amount of securitization debt in the denominator in calculating a company's Adjusted FFO/Adjusted Total Debt and excludes the portion of a company's interest costs relating to the securitized debt when calculating a company's Adjusted FFO/Adjusted Interest. The analytical benefit of making this adjustment helps to determine the amount of residual cash flow (cash flow after satisfying securitization debt service) that is available to service the debt of general creditors.

The recent bankruptcy of Pacific Gas and Electric Company (PG&E) fortifies the strength of the legal separation among cash flows available to the SPE and cash flows available to the utility. Throughout the bankruptcy, funds dedicated to the securitization debt were collected by the utility and transferred on a daily basis to the trustee for the SPE creditors and PG&E's general creditors and the bankruptcy judge never challenged the continued transfer of such funds to the SPE. For this reason, the securitization debt of PG&E remained rated Aaa while the company operated in bankruptcy for more than three years.

ADDITIONAL RISK CONSIDERATIONS

Analysis of Multiple Legal Entities within a Single Issuer Family

Utility companies may have multiple legal entities within a single consolidated organization. This is the prevalent legal structure in the US, even for small utilities. The multiple-entity legal structure is also common in Canada and the UK and is employed by a number of the larger international utilities in other countries. In the US, most utility families have an unregulated holding company. The holding company will have one or more regulated operating subsidiaries, and may have one or more unregulated subsidiaries. Most utility families in the US issue debt at multiple legal entities within the organizational family.

In the case of multiple legal entities within a single issuer family, our approach is to assess each issuer on a stand-alone basis as well as evaluating the creditworthiness of the consolidated entity. We then assess the degree of legal and regulatory insulation that exists between the lower-risk regulated entities and the higher-risk unregulated entities.

The degree of notching (i.e. the rating differential) between entities in a single family of companies depends upon the degree of insulation that exists between regulated and unregulated entities. If the regulatory framework or regulatory practice establishes that there is substantial ring-fencing type insulation for the regulated entity, there may be three or more notches of rating differential between the regulated and the unregulated entities. If there is little or no ring-fencing, there will usually be only a one- or two-notch differential between the unregulated entity (in most cases a holding company) and the regulated entity (in most cases an operating company).

Regulatory ring-fencing for utilities may include minimum equity requirements, limitations on the movement of funds from regulated entities to unregulated entities, and prohibitions against credit support by regulated entities for unregulated entities. This may exist by statute, but most typically takes the form of rules that are established by the regulator. In the United States, where these provisions are most common, the rules may differ for individual utilities in the same state.

Many regulators restrict the ability of utilities to extend intercompany loans, guarantees, or to make payments to unregulated affiliates and parent holding companies. For example, utilities in the state of Wisconsin may only pay dividends to their unregulated holding company (the ultimate parent company in these organizations) in excess of an amount established in each rate case if common equity falls below an authorized level.

Regulators also often have wide discretion to impose new restrictions on regulated entities when the utility appears to be threatened by weakness of its unregulated affiliates. For example, the state regulatory commission in Oregon established tight limitations on any movement of funds by Portland General to its parent company when the parent company filed for bankruptcy protection. These ring-fencing protections were a key reason that Portland General did not default or experience substantial financial distress while its parent was in bankruptcy.

Where regulated utility entities are not well insulated from unregulated affiliates, the ratings of these entities will be notched fairly closely, generally within one or two notches. This will be the case even when one entity has substantially stronger financial ratios than its affiliate, if there is little or no restriction upon movement of funds between the two entities, or if there is a substantial operational interdependence. For example, where the regulated utility is highly dependent upon contractual purchases of power from its unregulated generating affiliate, the ratings of

these two entities will likely be one or two notches apart even if their individual financial profiles would suggest different ratings on a stand-alone basis.

Where regulated utility entities are strongly insulated from unregulated affiliates through prohibitions on loans and credit support, where there are strong regulatory limitations on dividends, and where there is little or no operational interrelationship between regulated and unregulated affiliates, the ratings will be driven more by the stand-alone credit quality of each entity, and may be three or more notches apart.

Non-specific utility risk factors

The majority of the risks considered in this rating methodology are specific to utilities. However, lenders to utilities are also exposed to many of the risks that are common to all industrial companies. These are not covered in detail here as a full analysis can be found in the relevant Moody's research. However, it should be noted that such factors may potentially outweigh the utility-specific considerations covered in depth in this report.

For example, a company that currently shows very strong financial ratios and operates in a supportive regulatory framework could still have a relatively low rating if it had very weak liquidity arrangements or high "event risk" such as if it were pursuing an acquisition policy that was very likely to result in a change in the company's business risk policy going forward.

The generic industrial company risks to which a utility may also be exposed include the following:⁷

- An assessment of the adequacy of the company's liquidity arrangements⁸
- An assessment of the quality of its corporate governance arrangements⁹
- An assessment of the quality of its management – their experience, appetite for risk and ability to fulfill the company's stated strategy
- An assessment of event risk and the probability that this could lead to a change in the company's financial position, business risk profile or its regulatory and political operating environment¹⁰
- Exposure to off-balance sheet risks¹¹
- The potential support of or interference by a sovereign or sub-sovereign entity¹²

Regional Considerations

RATING DIVERGENCE LIMITED AMONG JAPANESE UTILITIES

Japanese electric utilities are rated in a relatively narrow range from Aa3 to A1. This reflects Moody's view that the conservative and predictable regulatory regime, and the individual companies' solidly established franchises in their operating regions, will not lead to major differences in credit risks among the rated utilities. Their financial profiles are more or less comparable, and they have simple corporate structures and limited business diversification exposures.

Moody's rates the three utilities that cover Japan's three largest economic areas at Aa3 (Chubu Electric Power, Kansai Electric Power, and Tokyo Electric Power), and six other utilities at A1 (Chugoku Electric Power, Hokkaido Electric Power, Hokuriku Electric Power, Kyushu Electric Power, Shikoku Electric Power, and Tohoku Electric Power).

Japan's regulator makes the maintenance of supply security its primary policy objective, followed in priority by environmental protection and, finally, allowing market mechanisms to work. This approach preserves utilities' integrated operations and makes them responsible for final supply to users in the liberalized market.

The government is gradually deregulating the industry and expanding the liberalized market. This market, which was partially introduced in 2000, was expanded from about 26% of the total to about 40% in April 2004, and will be

7. See, for example, "Industrial Company Rating Methodology", July 1998

8. See, for example, "Moody's Liquidity Risk Assessments – Q&A", March 2002, "Moody's Analysis of US Corporate Rating Triggers Heightens the Need for Increased Disclosure" and "Rating Triggers in Europe: Limited Awareness but Widely Used Among Corporate Issuers", September 2002

9. See, for example, "U.S. and Canadian Corporate Governance Assessment", August 2003 and "Moody's Findings on Corporate Governance in the United States and Canada: August 2003 - September 2004", October 2004

10. See, for example, "Event Risk's Four Horsemen of the Apocalypse: Decapitalization, Cash-financed M&A, Litigation, and Accounting Irregularities", November 2000 and "Event Risk For European Corporates 2003 – Still A Credit Risk, Still Part Of Our Analysis", February 2003

11. See, for example, "The Analysis Of Off-Balance Sheet Exposures: a Global Perspective", July 2004

12. Note: Moody's paper "The Incorporation of Joint-Default Analysis into Moody's Corporate, Financial and Government Rating Methodologies" February 2005 which may effect the ratings of, for example, a municipality supported by a regional or national government.

further expanded to about 63% in April 2005. However, the pace of deregulation has been set as moderate so that the regulator can monitor the risks and the effects on the power companies, especially in the context of supply security.

The Japanese utilities hold strongly established franchises in their operating regions, maintaining dominant market shares despite the market for large customers being deregulated. Some utilities still hold 100% shares.

Direct competition among integrated utilities has been very limited. This is mainly because: (1) each integrated operator holds a solid franchise in its operating region due to effective regional monopolies; (2) the companies display similar cost positions, and achievement of any meaningful differentiation in pricing is difficult; (3) the utilities are fully aware that an aggressive challenge by one utility in another's franchise would trigger industry-wide competition, which would, in turn, significantly weaken the industry's overall profitability; and (4) all the utilities exhibit similarly leveraged balance sheet positions and place priority on debt reduction, having completed most of their major investments.

In addition, the ability of power producers and suppliers (PPSs) to take utilities' shares has been restrained by limitations on: (1) their ability to purchase power from, for example, captive power plants; (2) their opportunities to build competitive plants on their own; and (3) their marketing abilities.

Although PPSs have been gaining minor shares in some utilities' franchise areas, and some are constructing their own power plants, their aggregate share is expected to remain insignificant over the intermediate term, due to power companies' rate strategies aimed at protecting their franchises and PPSs' ongoing limited access to power sources.

As such, although the rates are to be further lowered through the ongoing deregulation process, we expect the utilities' franchises to remain solid and stable over the intermediate term.

Government energy policy has made nuclear generation a core power source, while leaving actual implementation of the policy – construction and operation of nuclear power plants – to privately owned and managed utilities. Thus, these companies play an important role in the nation's energy policy, although the government remains the main driver by establishing and maintaining their nuclear power operation systems.

The government is now reviewing the economic feasibility of the nuclear fuel cycle, the allocation of back-end costs, and power utilities' reserves for back-end costs. While the outcome of the review could affect utilities' investment, cost, and balance sheet positions to some extent, we do not expect any significant changes in their policy role, business risks or cost competitiveness.

EUROPE

EU policy is the driver for regulatory development in Europe

The EU Electricity Directive of 1999, subsequently amended by the EU Energy Council in 2002, set the roadmap towards full supply liberalization in the European Union as well as addressing issues such as non-discriminatory access to the transmission grid and the granting of new generation licenses. The current aim is to have full liberalization within the EU by 2007.

Despite EU policy, there is a regulatory patchwork across Europe

Despite the EU directive, there is some flexibility in its implementation, leading to different regulatory models. The process has in most cases led to the establishment of an independent regulator, although the degree of independence from government influence varies significantly. In some countries, such as Spain and Greece, the government maintains control for final setting of tariffs and the regulator acts in an advisory capacity, whilst at the other end of the spectrum are those countries where there is a fully independent regulator, such as in the UK.

Having achieved full supply liberalization, the regulator can focus on regulating the monopoly wires activities – transmission and distribution. The UK has adopted an ex-ante approach, with a tight regulatory framework for wires activities. “Ex-ante” means setting the tariffs in advance, normally for a 3-5 year period, and the regulator allows the company to recover operating and capital expenditures as well as a return on capital. Normally the regulator will benchmark companies against their peers and will allow certain revenues (a revenue or price cap), often adjusted for inflation and an efficiency incentive, depending on how efficient the company is perceived to be.

By contrast, Sweden and Finland initially adopted a much lighter “ex-post” system, which allows companies to set their own prices to achieve a reasonable return on a cost-plus basis, with an arbitration mechanism to allow for complaints and remedies. Despite this looser regime, prices in these markets have been some of the lowest in Europe, benefiting no doubt from the overall greater price transparency from a fully liberalized market. However, under

further direction from the EU, Finland and Sweden (and Denmark) are now moving towards an ex-ante regime and this we would expect to become the norm in Europe.

Germany has yet to establish an independent regulator – although it is now moving in this direction – with network tariffs being set within the context of a voluntary agreement between utilities. Access tariffs are set on a negotiated basis, but in practice the German market is difficult and expensive for new entrants to access.

In Moody's view, power shortages in 2003 have led to an easing in regulatory pressure as security of supply displaces cost as a key aim

Regulators initially introduced quite harsh efficiency incentives or tariff caps, with tariffs reduced in real terms as companies have become more efficient. However, recent tariff pressure has been upward, e.g. Spanish tariffs fell in real terms between 1996 and 2002 but the current tariff framework now allows for gradual increases. This can be explained by greater concern over security of supply, with Europe having experienced blackouts during 2003. Moody's believes that regulators wish to ensure that an incentive to invest remains, particularly as some aged thermo capacity and a number of nuclear plants are earmarked for decommissioning in the next few years.

In Central and Eastern European countries, regulation is following in a similar direction but at a slower pace

Central and Eastern European countries and the Baltic states are following EU directives, but are at an earlier stage of regulatory evolution. Whilst most have put in place at least the first Energy Law, implementation is often at an early stage under an extended implementation timetable or relatively new and untested. Many of these countries have now established an independent regulator although there is still a state-owned incumbent with a dominant or monopoly position.

These countries typically face privatization, structural separation (generation, transmission, distribution and supply), tariff increases and issues concerning cross-subsidization – with accession states such as Romania and Bulgaria aiming to have completed the process by 2007. Electricity market development is often linked to the economic and structural development of the country in which they operate. Indeed, the requirements of the IMF or World Bank may allow for only a gradual increase in tariffs (Romania and Bulgaria).

From a credit perspective, whilst the timely recovery of all costs may be delayed or constrained, the impact of such can be mitigated by the dominant market position of these key utilities and/or their strategic importance to the State and the role they play in the development of the economy.

Rating the UK regulated transmission and distribution companies

The UK electricity system is divided into a number of monopoly areas for the high-voltage transmission and lower-voltage local distribution of electricity. There is one monopoly transmission area and 12 Distribution Network Operators (DNOs) covering England and Wales. Two additional companies have the monopoly rights to transmission and distribution in distinct areas within Scotland. As these businesses are monopolies they are subject to price control regulation primarily aimed at protecting the consumer's interests.

All of these businesses are regulated by the Office of Gas and Electricity Markets (OFGEM). OFGEM itself is an independent body governed by an authority made up of independent, non-executive Directors and an Executive team. OFGEM is not part of the UK government but its duties and powers were established by Acts of Parliament and they must have regard to guidance from the government on issues such as protecting the environment.

The revenue that a monopoly business can earn on its regulated business is restricted by an RPI-X price control formula that is reviewed every five years. The formula is designed to allow a company to increase prices to reflect inflation while encouraging efficiency through a “-X” from the RPI. In addition, at the start of each regulatory period, prices are raised or reduced by a one-off price adjustment known as the P_0 adjustment. In order to calculate the “X” and the “ P_0 ” for each company, OFGEM considers the Regulatory Asset Base of each company and sets a formula to provide a fair rate of return on those assets, typically around 6-7%. The next regulatory period for the transmission companies starts in 2007 and for distribution companies in 2005.

The practical regulation system involves a very detailed analysis of each company's regulated asset base and operating and capital expenditures. The output is a very detailed and highly predictable cashflow forecast for the next regulatory period. If the companies can improve efficiency, then they can retain most of the benefit. However, if they lose efficiency or the regulatory outcome proves unachievable, then this is a risk for the stakeholders in that company.

For Moody's, the ratings of these businesses depend upon two key factors:

1. The projected financial position of the company once the final regulatory outcome is known. This is measured by a number of financial ratios including FFO interest cover and Debt/Regulated Asset Value.
2. The additional burdens placed on the regulated entity's cash flows by its parent, mainly in the form of additional parental debt which needs to be serviced by dividends from the regulated operating company.
3. DNO-specific issues such as unfunded pension deficits unrelated to the distribution business, debt maturity profile and debt capital structure considerations.

According to OFGEM, after these adjustments, the intention is that all companies will earn the same baseline return of 6.6% on a pre-tax, real basis if they perform in line with the regulator's projections. The main issues are expected to be the need to increase capex to replace network assets and improve network performance, to put a greater emphasis on quality of service, and to respond to the growth in sources of renewable energy. These final determinations for the 2005-2010 price control period will become effective in April 2005.

The main rating implication from these proposals is likely to fall on companies whose overall financial profile is burdened by the need to pay large dividends to service and repay debt at holding company levels. While this can lead to a significant cash drain, the debt at the holding companies is outside the regulatory ringfence and is not protected by the OFGEM framework. One such holding company, Avon Energy Partners, has already defaulted on its debt obligations, while the operating company Midlands Electricity had no financial difficulties, thus illustrating that lending to such holding companies is significantly more risky than lending to the regulated entity itself.

When looking at the financial ratios for regulated UK DNOs, there are a number of important considerations to bear in mind:

1. The Regulated Asset Value (RAV) is an important reference point as allowable revenues and allowable capital expenditures both feed from or into this. Hence, the Debt/RAV ratio is one of the more critical financial ratios to consider.
2. OFGEM's scope of regulation is limited to the regulated entity, while Moody's rating of the DNO also factors in debt which must be serviced by cash flows from the DNO. This means that an RCF number (cashflow after dividends) is an important one for a DNO. It also means that ratios factoring in any "Holdco" debt tend to outweigh pure "stand-alone" DNO ratios. In practice, there are no remaining stand-alone DNOs.
3. Some DNOs retain cash to meet future debt maturities and where this is the case, the emphasis falls on net rather than gross debt numbers.

As a guideline and ignoring other considerations, the following ratios might be expected for UK DNOs at various rating levels, without factoring the need to support other group debt (if there is such debt, stronger ratios would be needed for the same rating level):

Figure 6			
DNO	RCF/Net debt	Net debt/RAV	FFO interest cover
Aa	> 17%	< 45%	> 4.5 X
A	7 - 18%	40 - 68%	2.8 - 5.0X

AUSTRALIAN T&D RATINGS ARE HIGHER THAN UK RATINGS FOR COMPARABLE ENTITIES

Differences in regulatory philosophy between Australia and the UK mean that Moody's on average rates Australian electricity transmission and distribution (T&D) companies one notch above the ratings of their UK peers, even though both parties may have approximately the same level of debt coverage measures.

Furthermore, the impact of the regulatory differences is such that when Australian and UK companies share the same rating level, the Australian companies conversely exhibit weaker debt coverage measures. Moody's believes that the financial profiles of Australian T&D companies are sustainable within their present ratings, given their benign regulatory environments.

Moody's compared – on a senior unsecured basis – Baa-rated T&D companies in Australia and those in the UK. The projected average financial ratios for Australian T&D companies over the next few years are as follows:

Debt-to-Regulated-Asset-Base	103%
RCF-to-Debt	4%
FFO-to-Interest	2.3 times

The UK T&D companies – on the other hand – have higher financial ratio hurdles at the Baa rating range. For instance, UK Baa-rated T&D companies are expected to have Debt-to-RAB ratio in the range of 60-90%, RCF-to-Debt 10-15%, and FFO-to-Interest of above 2.8 times.

On one level, the Australian and UK regulatory regimes are close matches. For example, regulators in both countries have adopted similar frameworks for determining revenues and returns. However, on a practical level, regulators in Australia have assumed a more benign stance on requirements for revenues and returns.

Moody's believes that this situation reflects the Australian regulators' approach in the following areas: (1) more generous cost allowances for maintaining minimum levels of service and system reliability for T&D assets; (2) appropriate levels of return for regulated T&D companies; (3) regulators' willingness to allow the retention of efficiency out-performances; and (4) greater certainty in regulatory outcomes at the next resets.

A comparison of recent tariff resets in both countries supports the conclusion that the Australian environment is more benign, a situation which Moody's believes will prevail over the medium term. Consequently, we do not expect an aggressive tariff decision at the next reset, scheduled for 2006 for electricity distributors in the state of Victoria.

In the UK, electricity distributors are undergoing a tariff reset for the five-year period commencing April 2005. The expected outcome for this reset is still evolving. However, the UK electricity distributors' cash flows could come under some pressure as the regulator restricts the ability of distributors to carry through to the next regulatory period the efficiency savings achieved. At the same time, distributors are expected to face higher cash commitments as a consequence of increased tax obligations and capital expenditure requirements to support various policy initiatives. As a result, UK T&D companies would need a more prudent set of financial policies to preserve their credit profiles.

While there is relative certainty in the Australian regulatory environment over the next reset period, it is more difficult to predict with confidence developments in regulatory thinking over the longer term. Consequently, Australian T&D companies must adopt prudent financial policies in readiness for a possible evolution in regulatory thinking at the end of the next regulatory period in 2010.

In this regard, companies that persist with highly leveraged capital structures on a Debt-to-RAB basis – that is, a ratio of over 100% – and exhibit no ability or commitment to de-leverage over the longer term may be more exposed to severe regulatory outcomes.

The ability of a company to de-leverage is indicated by the extent of free cash flow generation – relative to debt levels – after servicing all operational, debt, and dividend obligations.

UNITED STATES

The US electric utilities are characterized by a substantial diversity in both their business models and their regulatory risk. Business models vary from the lowest-risk companies that have purely regulated activities and which operate in states that have supportive regulation, to the highest-risk companies that have substantial unregulated activities and which operate in states that have less supportive or less predictable regulation.

Moody's views the business risk of US utilities as being higher in most cases than that of utilities in some other developed countries, including Japan, Australia, and the United Kingdom. This difference in risk reflects the following factors:

1. State regulation is seen as less predictable than national regulation. State regulation is the primary form of regulation in the US. Compared to national regulators, state regulators represent a smaller economic region. As a result, Moody's believes that state regulators may be more likely to be responsive to the objections of local customers and politicians when a utility seeks a large rate increase to address a large increase in costs or capital expenditures. As noted in the default section in Appendix 3, failure to obtain timely rate increases was a key factor in four recent defaults by US utilities. In addition, various parties may seek to intervene in U.S. state regulatory proceedings, which can cause delay and increased uncertainty.

2. A large fragmented market structure results in stronger competition in unregulated wholesale power markets. The US electric utility industry is fragmented in comparison to Japan and major countries in Europe. Although the US represents over one fourth of global electricity consumption, none of the US utilities ranks in the top ten in terms of revenues among global utility companies. As portions of the market have become deregulated, US utilities are more vulnerable to changes in wholesale power costs because their market share and market power is more limited than those of comparable utilities in most other countries. Regulators have strived to limit market power to protect consumers, resulting in longstanding legal and regulatory impediments to industry mergers and consolidation.
3. More volatile fuel and wholesale power markets. Natural gas prices are completely unregulated in the US, which can result in rapid and wide swings in prices. There is a large unregulated power market in the US, which responds quickly to changes in fuel costs and passes these changes through to wholesale power prices. This combination of factors can result in more rapid and wider swings in prices than in more controlled markets.
4. Low likelihood of extraordinary political action to support a failing company. Utilities provide an essential service, so financial distress has a high political profile. Governments in the US have broadly demonstrated a reluctance to intervene on behalf of troubled investor-owned utilities when this could be viewed as providing economic assistance to private shareholders. This approach is in sharp contrast to the large US municipal utility sector, in which supportive government action is far more likely. Governments in many other countries (for example, Japan or Canada) are perceived as being more likely to work with regulators and financial institutions to support electric utilities as highly visible entities that provide a critical service.
5. Holding company structures limit regulatory oversight. State regulators only have authority over the regulated operating utility. The vast majority of companies have established unregulated holding companies that have the ability to engage in higher-risk unregulated businesses in the hopes of earning shareholder returns that are higher than the returns provided for the regulated business.
6. Overlapping or unclear regulatory jurisdiction. The electric utilities industry in the US is characterized by regulation at both the federal and state levels. Traditionally, the federal government has regulated the interstate and wholesale transmission of electricity, while distribution and retail services to consumers have been regulated by the states. Each state exhibits its own unique regulatory characteristics which set the parameters and define the environment in which a particular utility operates. In some instances the jurisdictions can overlap, such as in the case of mergers and transactions with affiliates.

Federal Energy Regulatory Commission (FERC)

The key federal regulatory agency governing utilities in the US is the Federal Energy Regulatory Commission (FERC), an independent agency that regulates the interstate transmission of natural gas, oil, and electricity, as well as natural gas and hydroelectric power projects. In the electric market, the FERC's responsibilities include the approval of rates for the wholesale sale of electricity and transmission on an interstate basis for utilities, power marketers, power pools, power exchanges, and independent system operators. The FERC sets the price for those utility transmission systems that fall within its jurisdiction, although many portions of utility transmission systems fall under the jurisdiction of the state regulatory agencies.

In recent years, FERC has issued several orders aimed at opening the transmission lines of utilities in the US. In 1996, FERC Order 888 provided rules for open access of transmission lines to all suppliers and for competition in the wholesale market and set standards for regional transmission organizations (RTOs). In 1999, FERC Order 2000 encouraged utilities with transmission assets to voluntarily transfer control of their transmission systems to these RTOs, which could either be non-profit independent system operators (ISOs) or for-profit transmission companies. Although some utilities have transferred their transmission assets into RTOs, others have thus far resisted attempts to place their transmission assets under outside control.

Public Utility Holding Company Act (PUHCA)

The most significant piece of legislation governing public utility holding companies at the federal level is the Public Utility Holding Company Act, more commonly known as PUHCA. The Act was passed in 1935 to regulate interstate utility holding companies in response to the financial collapse of a number of such holding companies following the stock market crash of 1929. When utilities in different states combine or merge under a holding company, the new

entity becomes registered under PUHCA, which provides for SEC regulation of their financing activities, including the sale and purchase of securities and assets. PUHCA gives the SEC the power to exercise broad oversight over business combinations that result in functional or geographic diversification of utilities.

Historically, the SEC has severely restricted the types of business activities in which registered holding companies may engage. The National Energy Policy Act of 1992 (NEPA) eased some of the regulatory restrictions imposed by PUHCA by allowing registered holding companies to establish non-utility generating subsidiaries and to purchase foreign utilities without seeking prior SEC approval. However, registered holding companies are still prohibited from owning both electric and gas operations or possessing unregulated businesses without SEC approval. Although there have been a number of attempts over the last few years to repeal PUHCA, most recently as part of comprehensive energy legislation considered but not passed in 2003, it remains a key federal regulatory constraint and limitation for those holding companies registered under PUHCA.

State Regulatory Commissions

The most important regulatory factor affecting the sale of electricity by utilities at the retail level are state agencies generally known as Public Utility Commissions or Public Service Commissions. These commissions comprise elected or appointed officials in each state who determine, among other things, whether utility expenditures are reasonable and how they should be passed on to consumers through their electric rates. They also regulate each utility's rates of return and monitor the quality and reliability of a utility's electric service. The state-level factors that Moody's takes into consideration when evaluating the credit quality of utilities include the following:

- **Status of Deregulation/Retail Access**

Since industry restructuring began in the mid-1990s, states have taken a variety of approaches to the question of whether they should deregulate their electricity markets. Some states have passed comprehensive deregulation legislation and completely restructured. Some have avoided it entirely, while others have introduced some elements of deregulation into their markets. Over the last several years, 18 states have undertaken some form of deregulation or retail open access, while 32 others have elected not to deregulate after studying and debating restructuring initiatives (see Figure 8 for details).

- **Ring-Fencing Provisions**

State commissions sometimes attempt to insulate and protect regulated operating utilities from the often riskier activities of their parent companies or unregulated subsidiaries. Some so-called "ring-fencing" provisions that have been adopted at the state level include: dividend limitations, minimum equity requirements, limits on unregulated activities, credit rating requirements, the maintenance of collateral, limitations on intercompany transactions, and restrictions on asset sales.

- **Transition Periods and Rate Caps**

Some utilities are subject to price limitations or rate freezes which were put in place as states implemented transition plans to deregulate their electric markets. These rates were often thought to be adequate to permit the utilities to both recover stranded costs and earn an adequate rate of return until a fully competitive environment developed. Many of these transition periods and associated rate caps are now ending without a fully competitive market having developed, and the likelihood that these transition periods will be extended is an important credit consideration.

- **Cost Recovery Provisions**

States have various policies with respect to fuel and wholesale power cost recovery, and the recent volatility in commodity prices have made these provisions important elements of a utility's cost management capability. Such provisions make it possible for utilities to quickly adjust rates in the event of an unexpected hike in fuel costs. Although the number of states permitting such recovery has declined, particularly in those that have transitioned to a competitive market, they remain critical risk mitigants to those utilities still operating in regulated environments.

- **Incentive- or Performance-Based Rates (Earnings Sharing)**

Utilities in the US have traditionally operated under "cost of service"-based rates under which revenues were set to permit the utility to cover its costs and provide for an acceptable rate of return. However, a number of state regulatory commissions have implemented incentive- or performance-based rates which give utilities incentives to operate better and more efficiently. Often, these incentives take the form of an earnings sharing mechanism, allowing a utility to keep some of the profits earned above a predetermined range, while returning any excess to ratepayers.

Figure 8 – Regulatory Characteristics of States in The U.S.

State	Deregulation	Rate Cap	Cost Recovery	Earnings Sharing
Alabama			X	X
Alaska	N/A	N/A	N/A	N/A
Arizona	X	X	X	
Arkansas			X	
California	X		X	X
Colorado			X	X
Connecticut	X	X	X	X
Delaware	X	X	X	
DC	X	X		
Florida			X	X
Georgia			X	X
Hawaii			X	
Idaho			X	
Illinois	X	X	X	X
Indiana			X	X
Iowa			X	
Kansas			X	
Kentucky			X	
Louisiana			X	
Maine	X		X	
Maryland	X	X		
Massachusetts	X		X	X
Michigan	X	X	X	
Minnesota			X	
Mississippi			X	X
Missouri				X
Montana				
Nebraska	N/A	N/A	N/A	N/A
Nevada			X	
New Hampshire	X	X	X	
New Jersey	X		X	
New Mexico		X		
New York	X		X	X
North Carolina			X	
North Dakota			X	X
Ohio	X	X		
Oklahoma			X	
Oregon			X	
Pennsylvania	X	X		
Rhode Island	X		X	
South Carolina			X	
South Dakota			X	
Tennessee			X	
Texas	X		X	
Utah				
Vermont				
Virginia	X	X		
Washington			X	
West Virginia			X	
Wisconsin			X	
Wyoming			X	

Source: Moody's, Regulatory Research Associates.

APPENDICES

Appendix 1 – Three Year Average Ratios and Current Ratings

Company name	Country	Rating	Revenues \$bn equiv	EBITA margin %	FFO interest times coverage	FFO/TD %	RCF/TD %	RCF/ Capex %	TD/ Capitalization %
EUROPE									
Landsvirkjun	Iceland	Aaa	0.2	28.2	2.7	6.7	6.4	67.7	68.2
EVN	Austria	Aa3	1.1	11.9	10.3	30.0	26.2	111.8	43.6
Fingrid	Finland	Aa3	0.3	33.9	2.6	8.1	7.5	165.2	78.4
Electricite de France	France	Aa3	45.4	13.4	4.3	20.1	16.9	93.6	64.2
E.on	Germany	Aa3	41.1	12.1	4.7	13.7	9.6	76.2	37.4
Terna	Italy	Aa3	1.2	50.8	3.8	17.7	15.7	43.9	50.0
Statnett	Norway	Aa3	0.5	30.8	3.1	15.6	9.7	92.3	57.6
Scottish & Southern Energy	UK	Aa3	7.2	15.4	8.5	38.6	20.7	94.9	45.3
			hi	50.8	10.3	38.6	26.2	165.2	78.4
			avg	24.1	5.3	20.6	15.2	96.9	53.8
			med	15.4	4.3	17.7	15.7	93.6	50.0
			low	11.9	2.6	8.1	7.5	43.9	37.4
Verbund	Austria	A1	2.3	21.9	2.1	8.7	7.6	311.4	74.4
RWE	Germany	A1	42.0	11.5	3.6	15.8	13.6	58.3	40.3
ENEL	Italy	A1	38.1	15.1	5.0	21.9	14.7	69.1	53.3
			hi	21.9	5.0	21.9	14.7	311.4	74.4
			avg	16.2	3.6	15.5	12.0	146.3	56.0
			med	15.1	3.6	15.8	13.6	69.1	53.3
			low	11.5	2.1	8.7	7.6	58.3	40.3
Suez	France	A2	45.2	9.3	2.3	12.0	7.8	42.0	68.8
EWE	Germany	A2	2.9	7.3	22.4	77.5	69.4	100.8	42.9
Essent	Netherlands	A2	8.8	10.4	5.6	28.4	25.5	152.5	61.3
Nuon	Netherlands	A2	4.7	9.4	7.0	28.6	25.2	93.9	40.8
Red Electrica de Espana	Spain	A2	0.5	36.6	8.2	25.2	18.1	37.0	56.9
Iberdrola	Spain	A2	7.0	18.7	3.3	14.4	9.9	72.3	57.9
National Grid Company	UK	A2	2.5	0.4	4.0	0.2	0.1	1.2	0.6
United Utilities Electricity	UK	A2	0.5	53.6	4.5	22.2	14.4	75.8	52.4
			hi	53.6	22.4	77.5	69.4	152.5	68.8
			avg	18.2	7.2	26.1	21.3	71.9	47.7
			med	9.9	5.0	23.7	16.3	74.0	54.6
			low	0.4	2.3	0.2	0.1	1.2	0.6
Eesti Energia	Estonia	A3	0.3	12.6	10.9	49.6	49.6	71.2	23.3
Energie Baden-Wuerttemberg (EnBW)	Germany	A3	9.7	6.9	2.3	5.8	3.6	21.9	80.3
Electricidade de Portugal	Portugal	A3	8.7	11.8	3.6	10.8	7.3	65.2	58.3
Endesa	Spain	A3	21.0	19.4	3.3	12.7	9.2	-971.8	66.6
Vattenfall	Sweden	A3	13.6	16.5	4.0	15.6	14.0	84.1	53.9
			hi	19.4	10.9	49.6	49.6	84.1	80.3
			avg	13.4	4.8	18.9	16.7	-145.9	56.5
			med	12.6	3.6	12.7	9.2	65.2	58.3
			low	6.9	2.3	5.8	3.6	-971.8	23.3

Appendix 1 – Three Year Average Ratios and Current Ratings

Company name	Country	Rating	Revenues \$bn equiv	EBITA margin %	FFO interest times coverage	FFO/TD %	RCF/TD %	RCF/ Capex %	TD/ Capitalization %
CEZ	Czech Republic	Baa1	2.2	18.7	8.4	50.0	45.6	145.7	21.8
Public Power Corp (PPC)	Greece	Baa1	3.5	19.6	4.9	15.8	14.4	101.6	69.3
Latvenergo	Latvia	Baa1	0.3	11.8	14.6	63.2	59.0	63.0	25.3
Eskom	South Africa	Baa1/A3	3.5	37.3	3.4	24.2	23.8	202.7	53.2
Scottish Power plc	UK	Baa1	9.3	19.5	3.8	16.2	8.7	30.6	56.6
			hi	37.3	14.6	63.2	59.0	202.7	69.3
			avg	21.4	7.0	33.9	30.3	108.7	45.2
			med	19.5	4.9	24.2	23.8	101.6	53.2
			low	11.8	3.4	15.8	8.7	30.6	21.8
Israel Electric Corporation (IEC)	Israel	Baa2	2.6	17.3	2.2	7.5	7.4	65.1	69.9
Union Fenosa	Spain	Baa2	5.6	15.7	2.1	4.4	2.3	54.8	65.1
WPD Holdings UK	UK	Baa3	0.5	47.7	2.4	9.1	6.7	50.0	68.3
CE Electric	UK	Baa3	1.1	36.8	2.6	10.5	8.1	-1.1	75.0
			hi	47.7	2.6	10.5	8.1	65.1	75.0
			avg	29.4	2.3	7.9	6.1	42.2	69.6
			med	27.0	2.3	8.3	7.1	52.4	69.1
			low	15.7	2.1	4.4	2.3	-1.1	65.1
Transelectrica	Romania	Ba3	0.2	-1.4	7.3	77.1	76.4	122.6	10.1
			hi	-1.4	7.3	77.1	76.4	122.6	10.1
			avg	-1.4	7.3	77.1	76.4	122.6	10.1
			med	-1.4	7.3	77.1	76.4	122.6	10.1
			low	-1.4	7.3	77.1	76.4	122.6	10.1
ASIA/PACIFIC									
Singapore Power	Singapore	Aa1	2.6	26.0	7.0	32.0	-8.0	-362.0	48.0
SP PowerAssets		Aa1	0.4	44.0	6.0	8.0	8.0	625.0	61.0
			hi	44.0	7.0	32.0	8.0	625.0	61.0
			avg	35.0	6.5	20.0	0.0	131.5	54.5
			med	35.0	6.5	20.0	0.0	131.5	54.5
			low	26.0	6.0	8.0	-8.0	-362.0	48.0
CLP Holdings		A1	3.4	35.0	14.0	22.0	49.0	94.0	20.0
			hi	35.0	14.0	22.0	49.0	94.0	20.0
			avg	35.0	14.0	22.0	49.0	94.0	20.0
			med	35.0	14.0	22.0	49.0	94.0	20.0
			low	35.0	14.0	22.0	49.0	94.0	20.0
Australian Gas Light Company	Australia	A2	3.8	13.0	4.1	23.0	14.0	96.0	49.0
			hi	13.0	4.1	23.0	14.0	96.0	49.0
			avg	13.0	4.1	23.0	14.0	96.0	49.0
			med	13.0	4.1	23.0	14.0	96.0	49.0
			low	13.0	4.1	23.0	14.0	96.0	49.0

Appendix 1 – Three Year Average Ratios and Current Ratings

Company name	Country	Rating	Revenues \$bn equiv	EBITA margin %	FFO interest times coverage	FFO/TD %	RCF/TD %	RCF/ Capex %	TD/ Capitalization %
KEPCO		A3	18.0	24.0	6.0	33.0	31.0	112.0	40.0
Citipower		A3	0.5	39.0	3.0	10.0	7.0	132.0	88.0
ETSA		A3	0.7	42.0	2.0	4.0	-2.0	69.0	64.0
Powercor		A3	0.6	42.0	4.0	12.0	12.0	111.0	51.0
SPI Powernet		A3	0.3	62.0	2.0	10.0	10.0	258.0	71.0
TXU Australia		A3		24.0	3.0	10.0	8.0	171.0	57.0
			hi	62.0	6.0	33.0	31.0	258.0	88.0
			avg	38.8	3.3	13.2	11.0	142.2	61.8
			med	40.5	3.0	10.0	9.0	122.0	60.5
			low	24.0	2.0	4.0	-2.0	69.0	40.0
United Energy		Baa1	0.4	32.0	3.0	13.0	7.0	71.0	60.0
Vector		Baa1	0.5	39.0	3.0	8.0	5.0	117.0	67.0
Electranet		Baa1	0.1	46.0	2.0	3.0	3.0	151.0	74.0
Gasnet		Baa1	0.1	61.0	2.0	6.0	4.0	687.0	68.0
			hi	61.0	3.0	13.0	7.0	687.0	74.0
			avg	44.5	2.5	7.5	4.8	256.5	67.3
			med	42.5	2.5	7.0	4.5	134.0	67.5
			low	32.0	2.0	3.0	3.0	71.0	60.0
Tenaga		Baa2	4.1	18.0	3.0	11.0	10.0	82.0	61.0
			hi	18.0	3.0	11.0	10.0	82.0	61.0
			avg	18.0	3.0	11.0	10.0	82.0	61.0
			med	18.0	3.0	11.0	10.0	82.0	61.0
			low	18.0	3.0	11.0	10.0	82.0	61.0
National Thermal Power Corporation		Baa3	4.1	20.5	5.5	31.2	25.7	93.8	29.1
			hi	20.5	5.5	31.2	25.7	93.8	29.1
			avg	20.5	5.5	31.2	25.7	93.8	29.1
			med	20.5	5.5	31.2	25.7	93.8	29.1
			low	20.5	5.5	31.2	25.7	93.8	29.1
Tata Power		Ba1	1.1	17.9	3.6	28.6	25.1	133.3	42.7
			hi	17.9	3.6	28.6	25.1	133.3	42.7
			avg	17.9	3.6	28.6	25.1	133.3	42.7
			med	17.9	3.6	28.6	25.1	133.3	42.7
			low	17.9	3.6	28.6	25.1	133.3	42.7
National Power Corporation		B1	2.1	29.7	2.1	3.6	1.9	129.0	94.5
			hi	29.7	2.1	3.6	1.9	129.0	94.5
			avg	29.7	2.1	3.6	1.9	129.0	94.5
			med	29.7	2.1	3.6	1.9	129.0	94.5
			low	29.7	2.1	3.6	1.9	129.0	94.5

Appendix 1 – Three Year Average Ratios and Current Ratings

Company name	Country	Rating	Revenues \$bn equiv	EBITA margin %	FFO interest times coverage	FFO/TD %	RCF/TD %	RCF/ Capex %	TD/ Capitalization %
AMERICAS									
WPS Resources Corp	USA	A1	2.4	9.1	4.1	18.4	11.9	51.1	51.7
			hi	9.1	4.1	18.4	11.9	51.1	51.7
			avg	9.1	4.1	18.4	11.9	51.1	51.7
			med	9.1	4.1	18.4	11.9	51.1	51.7
			low	9.1	4.1	18.4	11.9	51.1	51.7
Consolidated Edison Inc	USA	A2	9.2	16.7	4.1	20.3	14.0	80.3	45.3
FPL Group, Inc.	USA	A2	8.7	17.0	6.0	29.0	23.0	57.0	47.0
Hydro One, Inc	CAN	A2	3.3	25.1	3.0	13.0	9.3	83.3	60.3
NSTAR	USA	A2	2.9	16.0	3.5	16.7	12.8	127.0	52.7
Otter Tail Corporation	USA	A2	0.7	13.3	4.3	17.6	11.9	84.9	53.0
			hi	25.1	6.0	29.0	23.0	127.0	60.3
			avg	17.6	4.2	19.3	14.2	86.5	51.7
			med	16.7	4.1	17.6	12.8	83.3	52.7
			low	13.3	3.0	13.0	9.3	57.0	45.3
Ameren Corporation	USA	A3	4.1	24.3	5.0	19.5	11.1	51.2	44.0
Scana Corporation	USA	A3	3.3	18.3	3.1	13.2	9.7	99.3	54.3
Southern Company (The)	USA	A3	10.7	24.3	4.7	19.7	12.3	67.0	50.0
Wisconsin Energy Corp	USA	A3	3.9	18.1	3.8	15.3	13.1	124.1	60.1
			hi	24.3	5.0	19.7	13.1	124.1	60.1
			avg	21.3	4.2	16.9	11.6	85.4	52.1
			med	21.3	4.2	17.4	11.7	83.2	52.2
			low	18.1	3.1	13.2	9.7	51.2	44.0
Constellation Energy	USA	Baa1	6.1	18.7	3.7	16.3	14.0	135.0	52.0
Dominion Resources	USA	Baa1	11.0	23.0	3.3	14.4	10.3	45.7	54.3
Duke Energy Corp	USA	Baa1	18.7	15.0	3.4	17.3	12.7	166.0	49.3
OGE Energy Corp.	USA	Baa1	3.3	9.2	3.9	16.5	11.4	117.6	53.0
Sempra Energy	USA	Baa1	7.2	15.1	4.0	18.6	18.1	76.3	56.3
Xcel Energy Inc.	USA	Baa1	7.9	15.8	4.6	18.8	14.0	114.3	61.6
			hi	23.0	4.6	18.8	18.1	166.0	61.6
			avg	16.1	3.8	17.0	13.4	109.1	54.4
			med	15.4	3.8	16.9	13.3	116.0	53.7
			low	9.2	3.3	14.4	10.3	45.7	49.3

Appendix 1 – Three Year Average Ratios and Current Ratings

Company name	Country	Rating	Revenues \$bn equiv	EBITA margin %	FFO interest times coverage	FFO/TD %	RCF/TD %	RCF/ Capex %	TD/ Capitalization %
Cinergy Corp	USA	Baa2	4.1	22.3	4.2	14.4	9.5	55.8	56.3
DTE Energy Company	USA	Baa2	6.5	24.0	2.8	11.0	7.5	NM	58.0
Emera Inc.	CAN	Baa2	1.0	27.8	2.7	10.5	7.0	151.7	64.9
Empire District Electric Company	USA	Baa2	0.3	21.0	3.0	15.0	8.0	51.0	51.0
Energy East Corporation	USA	Baa2	4.1	16.0	2.6	11.1	8.3	127.0	58.0
Exelon Corp	USA	Baa2	15.2	25.8	4.4	24.7	14.0	86.1	39.9
Great Plains Energy Inc.	USA	Baa2	1.8	16.9	4.3	17.4	11.9	139.1	56.6
IDACORP, Inc.	USA	Baa2	1.0	14.3	4.3	19.7	14.0	98.7	44.0
Northeast Utilities	USA	Baa2	5.7	18.1	2.9	11.0	9.6	124.7	42.9
Pepco Holdings, Inc.	USA	Baa2	5.8	12.5	3.3	10.8	8.4	136.2	56.5
Pinnacle West Capital Corp.	USA	Baa2	2.6	21.7	4.8	18.8	15.3	81.2	50.8
Progress Energy	USA	Baa2	8.3	15.1	3.4	14.4	10.1	68.6	59.1
Public Service Enterprise Group Inc.	USA	Baa2	8.7	23.7	2.4	10.0	6.3	52.7	59.0
			hi	27.8	4.8	24.7	15.3	151.7	64.9
			avg	19.9	3.5	14.5	10.0	97.7	53.6
			med	21.0	3.3	14.4	9.5	92.4	56.5
			low	12.5	2.4	10.0	6.3	51.0	39.9
American Electric Power Co	USA	Baa3	13.5	19.6	3.4	13.2	9.0	208.0	58.5
Cleco Corp	USA	Baa3	0.8	22.0	3.4	16.0	12.0	132.3	57.0
Duquesne Light Holdings	USA	Baa3	1.0	16.9	3.9	18.9	13.4	428.4	54.4
Edison International	USA	(P)Baa3	11.6	33.6	3.0	17.7	17.6	NM	59.8
Entergy Corporation	USA	Baa3	9.0	19.0	4.1	21.1	18.0	100.4	41.3
FirstEnergy Corp.	USA	Baa3	10.8	18.1	3.0	10.9	8.3	108.6	60.1
MidAmerican Energy Holding Co.	USA	Baa3	5.1	25.1	2.2	8.6	8.6	128.4	75.7
PG&E Corporation	USA	Baa3	10.4	28.7	2.9	14.4	14.3	142.4	76.4
PNM Resources, Inc.	USA	Baa3	1.6	11.4	4.4	17.4	14.8	83.0	52.5
PPL Corporation *	USA	Baa3	5.4	21.6	2.5	13.6	11.1	104.5	67.1
UIL Holdings Corporation	USA	Baa3	1.0	12.3	4.0	16.0	10.3	100.7	50.3
			hi	33.6	4.4	21.1	18.0	428.4	76.4
			avg	20.8	3.3	15.3	12.5	153.7	59.4
			med	19.6	3.4	16.0	12.0	118.5	58.5
			low	11.4	2.2	8.6	8.3	83.0	41.3
Avista Corp	USA	Ba1	1.2	15.7	2.3	10.0	8.7	128.0	54.3
Empresa Nacional de Electricidad S.A.	Chile	Ba1	1.5	35.3	2.1	8.2	6.3	217.7	56.0
Enersis S.A.	Chile	Ba1	4.0	17.7	2.3	11.5	9.3	207.0	76.0
Puget Energy, Inc.	USA	Ba1	2.6	15.0	2.8	13.3	10.0	94.7	56.3
TXU Corp	USA	Ba1	10.3	17.0	2.9	13.0	10.0	160.3	62.0
Westar Energy	USA	Ba1	1.4	26.2	2.1	8.9	7.0	93.1	60.7
			hi	35.3	2.9	13.3	10.0	217.7	76.0
			avg	21.1	2.4	10.8	8.5	150.1	60.9
			med	17.3	2.3	10.8	9.0	144.2	58.5
			low	15.0	2.1	8.2	6.3	93.1	54.3

* Rating on guaranteed debt issued by PPL Capital

Appendix 1 – Three Year Average Ratios and Current Ratings

Company name	Country	Rating	Revenues \$bn equiv	EBITA margin %	FFO interest times coverage	FFO/TD %	RCF/TD %	RCF/ Capex %	TD/ Capitalization %
Centerpoint Energy, Inc.	USA	Ba2	9.4	17.0	2.4	9.7	7.0	90.0	65.0
DPL Inc.	USA	Ba2	1.2	35.8	2.6	12.6	8.1	107.2	67.0
TECO Energy	USA	Ba2	2.6	8.8	2.7	11.0	5.6	24.3	59.4
			hi	35.8	2.7	12.6	8.1	107.2	67.0
			avg	20.5	2.6	11.1	6.9	73.8	63.8
			med	17.0	2.6	11.0	7.0	90.0	65.0
			low	8.8	2.4	9.7	5.6	24.3	59.4
COELCE	Brazil	Ba3	0.3	22.3	6.3	43.5	28.9	113.3	35.8
			hi	22.3	6.3	43.5	28.9	113.3	35.8
			avg	22.3	6.3	43.5	28.9	113.3	35.8
			med	22.3	6.3	43.5	28.9	113.3	35.8
			low	22.3	6.3	43.5	28.9	113.3	35.8
Allegheny Energy Inc.	USA	B1	2.2	2.4	1.9	6.2	4.1	40.6	62.0
CEMIG	Brazil	B1	1.8	16.8	2.4	15.7	11.8	66.7	43.9
CMS Energy Company	USA	B1	7.4	6.5	1.8	5.2	5.2	-46.8	84.0
			hi	16.8	2.4	15.7	11.8	66.7	84.0
			avg	8.6	2.0	9.0	7.0	20.2	63.3
			med	6.5	1.9	6.2	5.2	40.6	62.0
			low	2.4	1.8	5.2	4.1	-46.8	43.9
Sierra Pacific Resources	USA	B2	3.5	5.2	-0.1	-6.3	-7.0	NM	64.7
			hi	5.2	-0.1	-6.3	-7.0	NM	64.7
			avg	5.2	-0.1	-6.3	-7.0	NM	64.7
			med	5.2	-0.1	-6.3	-7.0	NM	64.7
			low	5.2	-0.1	-6.3	-7.0	NM	64.7
EDELNOR	Chile	B3	0.1	6.0	1.8	3.0	3.0	343.6	49.1
			hi	6.0	1.8	3.0	3.0	343.6	49.1
			avg	6.0	1.8	3.0	3.0	343.6	49.1
			med	6.0	1.8	3.0	3.0	343.6	49.1
			low	6.0	1.8	3.0	3.0	343.6	49.1

Note: The listed U.S. issuers are all holding company parent entities. Almost all have regulated operating utility subsidiaries that have higher ratings.

Appendix 1 – Three Year Average Ratios and Current Ratings

Company name	Country	Rating	Revenues \$bn equiv	EBITA margin %	FFO interest times coverage	FFO/TD %	RCF/TD %	RCF/ Capex %	TD/ Capitalization %
JAPAN									
Tokyo Electric Power Company, Inc.	Japan	Aa3	46.6	13.1	6.0	15.8	12.3	150.3	92.7
Chubu Electric Power Company, Inc.	Japan	Aa3	20.2	14.5	5.4	17.4	13.5	153.9	81.7
Kansai Electric Power Co., Inc.	Japan	Aa3	24.4	13.5	7.1	19.3	15.4	156.7	77.9
			hi	14.5	7.1	19.3	15.4	156.7	92.7
			avg	13.7	6.2	17.5	13.8	153.7	84.1
			med	13.5	6.0	17.4	13.5	153.9	81.7
			low	13.1	5.4	15.8	12.3	150.3	77.9
Hokuriku Electric Power Co., Inc.	Japan	A1	4.3	15.2	4.8	15.1	13.0	128.1	85.5
Chugoku Electric Power Co., Inc.	Japan	A1	9.3	12.9	5.5	15.9	11.6	167.3	80.7
Tohoku Electric Power Company, Inc.	Japan	A1	15.0	13.1	5.4	18.2	14.0	142.3	80.6
Shikoku Electric Power Company, Inc.	Japan	A1	5.4	13.3	6.6	21.0	17.4	199.7	76.0
Kyushu Electric Power Company, Inc.	Japan	A1	13.4	13.7	6.0	18.2	16.2	154.8	81.6
Hokkaido Electric Power Co., Inc.	Japan	A1	5.0	15.5	5.9	20.3	16.3	137.0	72.1
			hi	15.5	6.6	21.0	17.4	199.7	85.5
			avg	13.9	5.7	18.1	14.7	154.9	79.4
			med	13.5	5.7	18.2	15.1	148.5	80.7
			low	12.9	4.8	15.1	11.6	128.1	72.1

Appendix 2 – Definition of Ratios

FFO Interest cover

(Cash Flow from Operations – Changes in Working Capital + Interest Expense) / (Interest Expense + Capitalized Interest Expense)

FFO / Adjusted gross debt

(Cash Flow from Operations – Changes in Working Capital) / (Total debt + operating lease adjustment + under-funded pension liabilities + basket-adjusted hybrids + securitizations + guarantees + other debt-like items)

Retained Cash Flow / Adjusted gross debt

(Cash Flow from Operations – Changes in Working Capital – Common and Preferred Dividends) / (Total debt + operating lease adjustment + under-funded pension liabilities + basket-adjusted hybrids + securitizations + guarantees + other debt-like items)

Adjusted gross debt / Regulated Asset Value or Capitalization

(Total debt + operating lease adjustment + under-funded pension liabilities + basket-adjusted hybrids + securitizations + guarantees + other debt-like items) / RAV or (Shareholders' equity + minority interest + deferred taxes + goodwill write-off reserve + Total debt + operating lease adjustment + under-funded pension liabilities + basket-adjusted hybrids + securitizations + guarantees + other debt-like items)

EBITA / Sales (margin)

(Net operating income + Equity Earnings of Affiliates + Income from Financial Asset Investments + Goodwill amortization + Interest Component of Operating Lease (1/3 of Rent) + Interest Income – Other expense) / Total revenues

Retained Cash Flow / Capex

(Cash Flow from Operations – Changes in Working Capital – Common and Preferred Dividends) / (Capex + Acquisitions – Divestitures)

Appendix 3 – Description of Utilities Bond Default History

Electric utilities have historically enjoyed a relatively strong credit quality thanks to their stable and predictable cash flows and the tendency of regulators to be supportive when a utility experiences financial stress. Over the past 70 years (since the Great Depression), only five rated investor-owned utilities have experienced bond defaults in highly developed countries; these were all US-domiciled issuers:

- 1988 Public Service Company of New Hampshire (bankruptcy)
- 1992 El Paso Electric (bankruptcy)
- 2001 Pacific Gas & Electric Company (bankruptcy)
- 2001 Southern California Edison Company (payment default)
- 2003 Northwestern Corporation (bankruptcy)

Two principal factors contributed to these defaults. In four of the five defaults, a state regulatory commission failed to provide sufficient and timely rate relief for recovery of costs or capital investment in utility plant. This reflected regulatory commission concerns about the impact of large rate increases on customers, as well as debate about the appropriateness of the regulatory relief being sought by the utility. In two of these four cases, transition towards deregulation of the electricity market was a key contributing factor in that it exposed the utilities to dramatic increases in wholesale market prices for purchased power. These two California utilities also lacked long-term contracts such as PPAs, leaving them highly exposed to sharp spikes in market prices. In the remaining case, the default resulted from a failed diversification into unregulated businesses that were totally unrelated to the basic utility business.

These defaults resulted in an average recovery for bondholders that is well above the average for corporate bonds. Holders of secured debt recovered 100% of principal and interest in all five cases. In the case of Pacific Gas & Electric and Southern California Edison Company, 100% of all debt holder claims were ultimately paid.

Figure 9 below lists each of the five bond defaults within the sector and categorizes the reasons for the defaults as the “Principal Factor” or a “Contributing Factor”.

Figure 9 – Bond Defaults of US Investor-Owned Utilities: Principal and Contributing Factors			
Issuer	Regulators/ Legislators Failed to Respond on a Timely Basis	Transition from a Regulated Environment to a Unregulated Marketplace	Poor-Performing Unregulated Investments
Public Service Company of New Hampshire	Principal Factor		
El Paso Electric Company	Principal Factor		Contributing Factor
Pacific Gas and Electric Company	Principal Factor	Principal Factor	
Southern California Edison Company	Principal Factor	Principal Factor	
Northwestern Corporation			Principal Factor

LESSONS FROM THE ELECTRIC UTILITY INDUSTRY’S DEFAULT HISTORY

Among rated utilities in developed countries, only US utilities have experienced defaults in the last 70 years. In addition to the five US defaulting utilities, several US utilities have narrowly avoided default. In 2002, Allegheny Energy and Centerpoint Energy each experienced a serious liquidity crisis and only avoided defaulting on debt payments due to last-minute agreements with bank lenders that allowed all payments to be made on a timely basis. The greater historic tendency for US companies to default is consistent with Moody’s view that regulatory risk is greater in the US than in a number of other highly developed countries.

Related Research

Rating Methodology:

[The Analysis of Off-Balance Sheet Exposures – A Global Perspective, Rating Methodology, July 2004, #87408](#)

[Off-Balance Sheet Leases: Capitalization and Ratings Implications, October 1999, #48591](#)

[Industrial Company Rating Methodology, July 1998, #36188](#)

Special Comment:

[Moody's Liquidity Risk Assessments – Q&A, March 2002, #74571](#)

[Moody's Analysis of US Corporate Rating Triggers Heightens the Need for Increased Disclosure, July 2002, #75412](#)

[Rating Triggers in Europe: Limited Awareness but Widely Used Among Corporate Issuers, September 2002, #76199](#)

[U.S. and Canadian Corporate Governance Assessment, August 2003, #78666](#)

[Moody's Findings on Corporate Governance in the United States and Canada: August 2003 - September 2004, October 2004, #89113](#)

[Event Risk's Four Horsemen of the Apocalypse: Decapitalization, Cash-financed M&A, Litigation, and Accounting Irregularities, November 2000, #61838](#)

[Event Risk For European Corporates 2003 – Still A Credit Risk, Still Part Of Our Analysis, February 2003, #77436](#)

[The Analysis Of Off-Balance Sheet Exposures: a Global Perspective, July 2004, #87408](#)

[The Incorporation of Joint-Default Analysis into Moody's Corporate, Financial and Government Rating Methodologies, February 2005, #91617](#)

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Authors

Stuart Lawton
Daniel Gates

Editor

Justin Neville

Production Associate

Alba Ruiz

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**Standard & Poor's Key Credit Factors:
Assessing U.S. Vertically Integrated Utilities' Business Risk Drivers
September 2006**

RESEARCH

Key Credit Factors:**Assessing U.S. Vertically Integrated Utilities' Business Risk Drivers**

Publication date: 14-Sep-2006
Primary Credit Analyst: Barbara A Eiseman, New York (1) 212-438-7666;
barbara_eiseman@standardandpoors.com
Secondary Credit Analyst: Richard W Cortright, Jr., New York (1) 212-438-7665;
richard_cortright@standardandpoors.com

The methodology that Standard & Poor's Ratings Services uses to rate vertically integrated electric, gas, and combination investor-owned utilities in the U.S. is based on the same precepts that we have used for many years, though the emphasis has changed as the utility industry has evolved. The fundamental methodology encompasses two basic components--business risk and financial risk--and their relationship. Where a utility presents a strong business risk profile, the financial profile can be less robust for any given rating. Likewise, where a utility's business risk profile is weaker, its financial performance must be stronger for any given rating. For combination utilities, the gas operations may have a stabilizing influence on credit quality, but since the electric business is typically significantly larger, it is the major credit driver. (For details on Standard & Poor's analytical approach to gas utilities, see "Key Credit Factors For Natural Gas Distributors" published Feb. 28, 2006.)

Often, an integrated utility is a part of a larger holding company structure that also owns other businesses, frequently unregulated electricity generation. This fact does not alter how we analyze the utility, but it may affect the ultimate rating outcome due to any credit drag that the unregulated activities may have on the utility. Such considerations include the freedom and practice of management with respect to shifting cash resources among subsidiaries and the presence of ring-fencing mechanisms that may protect the utility.

Five Factors Determine The Business Profile

Five basic characteristics define a vertically integrated utility's business profile:

- Regulation,
- Markets,
- Operations,
- Competitiveness, and
- Management.

Standard & Poor's is most concerned about how these elements contribute individually and in aggregate to the predictability and sustainability of financial performance, particularly cash flow generation relative to fixed obligations. While considerable attention has focused in recent years on companies in states that deregulated in the late 1990s and the early part of this decade and the related credit consequences of disaggregation and nonregulated generation, 27 states (plus four that formally reversed, suspended, or delayed restructuring) have retained the traditional regulated model. For utilities operating in those states, the quality of regulation and management loom considerably larger than markets, operations, and competitiveness in shaping overall financial performance. Policies and practices among state and federal regulatory bodies will be key credit determinants. Likewise, the quality of management, defined by its posture towards creditworthiness, strategic decisions, execution and consistency, and its ability to sustain a good working relationship with regulators, will be key. Importantly, however, it is virtually impossible to completely segregate each of these characteristics from the others; to some extent they are all interrelated.

On Standard & Poor's business profile scale (where '1' is excellent and '10' is vulnerable), vertically integrated utilities generally have satisfactory business profiles of '5' or '6'. (See tables 1 and 2 in the Appendix below for business profile benchmarks plus a list of utilities we rate and their business profile scores.) We view a company that owns regulated generation, transmission, and distribution operations, as positioned between companies with relatively low-risk transmission and distribution operations and companies with higher-risk diversified activities on the business profile spectrum. What typically distinguishes one vertically integrated utility's business profile score from another is the quality of regulation and management.

Regulation

Regulation is a critical aspect that underlies integrated utilities' creditworthiness. Decisions by state public service commissions can profoundly affect financial performance. Standard & Poor's assessment of the regulatory environments in which a utility operates is guided by certain principles, most prominently consistency and predictability, as well as efficiency and timeliness. For a regulatory scheme to be considered supportive of credit quality, commissions must limit uncertainty in the recovery of a utility's investment. They must also eliminate, or at least greatly reduce, the issue of rate-case lag, especially when a utility engages in a sizable capital expenditure program and incurs substantial deferrals of fuel costs.

Standard & Poor's evaluation encompasses the administrative, judicial, and legislative processes involved in state and federal regulation, and includes the political environment in which commissions render decisions. Regulation is assessed in terms of its ability to satisfy the particular needs of individual utilities. Rate-setting actions are reviewed case-by-case with regard to the potential effect on credit quality. As frequently postulated in prior years, our evaluation of regulation focuses on the willingness and ability of regulation to provide cash flow and earnings quality adequate to meet investment needs, earnings stability through timely recognition of volatile cost components such as fuel and satisfactory returns on invested capital and equity. Regulators' authorization of high rates of return is of little value unless returns are realistic and achievable. Allowing high returns based on noncash items does not benefit bondholders. A regulatory jurisdiction that permits incentives whereby utilities are allowed to earn a return based on their ability to sustain rates at competitive levels is viewed favorably. In addition to performance-based rewards or penalties, flexible plans could include market-based rates, price caps, index-based prices, and rates premised on the value of customer service. Also important is the ability to enter into long-term arrangements at negotiated rates without having to seek regulatory approval for each contract.

Because the bulk of a utility's operating expenses relate to fuel and purchased power, of primary importance to rating stability is the level of support that state regulators provide to utilities for fuel cost recovery, particularly as gas and coal costs have risen. Utilities that are operating under rate moratoriums, or without access to fuel and purchased-power adjustment clauses or with fixed-fuel mechanisms, or face significant regulatory lag, also are subject to reduced operating margins, increased cash flow volatility, and greater demand for working capital. Companies that are granted fuel true-ups may be required to spread recovery over many years to ease the pain for the consumer. Standard & Poor's notes that fuel-adjustment mechanisms have become more common in the industry, but not all are created equal. While some jurisdictions permit recovery on a dollar-for-dollar basis over a defined time period, certain jurisdictions, such as Washington State, impose a deadband in which the company absorbs all the risk and rewards of fuel costs above and below the established recovery rate. Beyond the deadband there is a sharing of risks and rewards with ratepayers. In Arizona, Arizona Public Service Co. has a 90/10 sharing mechanism between the company and ratepayers, respectively, for all costs passed through the power supply adjuster. The mechanism is triggered based on a date (once a year in February 2006) and not on a threshold level of deferrals. The annual adjustment is also subject to a lifetime cap of 4 mils per kilowatt-hour, which has led to power deferrals.

In addition to fuel cost recovery filings, regulators will have to address significant rate increase requests related to new generating capacity additions, environmental modifications, and reliability upgrades. Current cash recovery and/or return by means of construction work in progress support what would otherwise be a sometimes significant cash flow drain and reduces the utility's need to issue debt during construction.

Moreover, allowing rate recovery of projected costs with subsequent periodic updates for actual results reduces lags in cost recovery. Also supportive of credit quality is the ability of the utility, commission staff,

consumer advocates, and other major interveners to reach a comprehensive settlement before construction of new base load capacity. Certain states, such as Indiana, Texas, Kansas, and Minnesota, have adopted environmental tracking mechanisms and other riders that allow companies to reflect in rates capital costs associated with environmental compliance equipment without having to file a formal rate case. In Florida, utilities may issue securitized debt to recover storm costs after the public service commission completes a prudency review. However, if the utilities do not choose securitization, then they may file a request with the regulatory commission to get a surcharge. In either situation, there will be some delay in recovering the costs, but the delay should be minimized compared with previous years.

Creditworthiness can also be enhanced when a company has the authority to timely recover unanticipated costs, such as those incurred for repairing storm damage, as in Florida and Mississippi. While the Alabama Public Service Commission does not currently employ a separate storm repair cost recovery mechanism to ensure rapid recovery of storm repair costs, it has shown a willingness to work with utilities to help them recover at least some of these costs on a timely basis and to start replenishing storm reserves. Finally, the greater the percentage of a utility's rates that are recovered through fixed charges rather than volume-based charges, the greater the support for credit quality.

For utilities that own a natural gas business, automatic and timely pass-through of commodity costs provides the strongest level of credit support. Lesser clauses, including mechanisms that require after-the-fact sign-off by regulators, introduce the potential for disallowance if the regulator deems gas to be purchased at imprudent cost levels.

Due to the extreme volatility and high gas prices over the past few heating seasons, more regulators have revised gas adjustment clauses to provide monthly gas adjustments rather than awaiting the end of the heating season to begin reimbursement. This expedited treatment helps the utility to reduce any regulatory lag to recover costs and streamlines working capital needs, which in turn should allow the firm to modestly temper rising gas bills to their customers.

Both regulators and natural gas companies are increasing customer-education programs on energy efficiency and conservation. Lawmakers, state regulators, and companies are in preliminary discussions to potentially restructure the current rate structures to encourage these goals of energy conservation and efficiency without hurting the company's bottom line and still allow utilities to achieve their approved regulated rate of return. In essence, "conservation tariffs" would aim to decouple earnings and rates of return from delivered volumes and should eliminate a current major disincentive for utilities to develop such conservation programs. This would also better align the interest of consumers with utility shareholders by implementing innovative rate designs that would encourage energy conservation and efficiency.

Key success factors include:

- Alternative ratemaking/flexibility,
- Attention to credit quality,
- Timely and consistent rate treatment,
- Support for fuel cost recovery,
- Support for a reasonable cash return on investment, and
- Support for rapid return on investment.

Markets

Assessing market dynamics begins with an economic and demographic evaluation of the service area in which a utility operates. Strength of long-term demand for energy is examined from a macroeconomic perspective, which enables Standard & Poor's to measure the affordability of rates and the staying power of demand. Distribution by classification according to total number of customers, revenues, and margins is closely scrutinized to assess the depth and diversity of the utility's customer mix. For example, heavy industrial concentration is viewed with some caution because the utility may be exposed to cyclical volatility and face competitive alternatives. A large residential component, on the other hand, produces a more stable and predictable revenue stream. The utility's largest customers are identified to determine their stability and importance to the bottom line because the loss of one large customer could adversely affect the utility's financial position. Moreover, large customers may turn to self-generation, potentially

leading to less financial protection for the utility.

Standard & Poor's also analyzes any long-term consumption trends and the reasons behind them. Factors addressed include the market's size and growth rate, the franchise's strength, historical and projected growth rates, income levels and trends in population, employment, and per capita income. A utility with a healthy economy and customer base, as illustrated by diverse employment opportunities, average or above-average wealth and income statistics, and low unemployment, will be better able to support its operations.

For the gas business, Standard & Poor's also examines customer saturation. Firms that operate in service areas with low growth potential still can expand at healthy rates if a relatively low level of customer saturation permeates the service territory. For example, customers who convert to natural gas from other fuel sources (such as oil) provide growth opportunities to companies operating in low population growth service areas.

Despite the review of market characteristics, they are clearly a secondary consideration to regulation. In Nevada, for years the country's fastest growing state, Nevada Power Co. and Sierra Pacific Power Co. struggled to recover capital expenditures on a timely basis, and were accordingly rated as low investment-grade credits. In Florida, which has competed with Nevada for years in its pace of growth, the Florida Public Service Commission established policies of quick recovery of capital investments and, on a stand-alone basis, the state's utilities' credit metrics have remained strong.

Critical success factors include:

- A healthy and growing economy,
- Growth in population and number of customers,
- An attractive business environment, and
- An above-average residential base.

Operations

Standard & Poor's focuses on cost, reliability, safety, and quality of service when assessing a utility's operations. Management is always under pressure to optimize the use of resources, and if it is not cost-effective in meeting service standards and reliability, regulatory or competitive pressures are likely to increase. Consequently, Standard & Poor's emphasizes areas that require heightened and ongoing management attention, in the absence of which political, regulatory, or competitive problems are likely to arise.

The status of utility plant investment is reviewed with regard to generating station availability, efficiency, and utilization, as well as for compliance with existing and potential environmental and other regulatory standards. The record of plant outages, system losses, equivalent availability, load factors, heat rates, and capacity factors are examined. Important considerations include the projected capital improvements and plant additions necessary to provide high-quality, reliable service. The general condition of the assets and how well such assets are maintained are also important considerations.

Emphasis is placed on reserve margins, fuel mix, fuel contract terms, purchased-power arrangements, and system operators. Moreover, the quality and concentration of capacity is just as important as the size of reserves. Standard & Poor's recognizes that reserve requirements differ among companies, depending upon individual operating and load characteristics.

Fuel diversity provides flexibility in a changing environment. Supply disruptions and price hikes can raise rates and ignite political and regulatory pressures that ultimately lead to erosion in financial performance. Thus, the ability to switch generating sources to take advantage of cheaper fuels is viewed favorably. Dependence on any single fuel, or asset concentration in one or two large generating stations, can cause significant swings in a company's financial performance. Similarly, utilities that rely on nuclear generation receive an elevated degree of attention due to the scale, technical complexity, and politically sensitive nature of nuclear facilities. Indeed, the sound operation of nuclear units can define a utility's operational risk profile and its ability to achieve projected financial results. Standard & Poor's seeks to distinguish between those operators that have exhibited sound and stable operational performance, and the likelihood

that it will continue, and those whose nuclear operations are vulnerable to problems that may impair financial results.

But having a large concentration of capacity based on fossil fuels also imposes certain risks. Coal-fired capacity is burdened with increased environmental costs related to reducing sulfur dioxide, nitrogen oxide, mercury, and eventually carbon dioxide emissions. Gas-fired capacity presents its own challenges, particularly the extreme volatility and significant increase in gas prices over the past few years. Buying power may be a more appropriate option for a utility than new plant construction because the utility avoids construction costs and the financial risks posed by regulatory lag when seeking recovery of costs. Purchasing power may enhance supply flexibility, fuel resource diversity, and maximize load factors. Utilities that plan to meet demand projections with a portfolio of supply-side options also may be better able to adapt to future growth uncertainties. Despite these benefits, such a strategy does commit the utility to a fixed obligation, which Standard & Poor's captures analytically through certain adjustments to financial statements. We calculate the net present value of future annual capacity payments (discounted at the company's cost of debt) over the life of the contract. Standard & Poor's then applies a risk factor against this value and adds the result to the utility's balance sheet. The risk factor is largely a function of the strength of the regulatory recovery mechanisms established to address procurement costs.

Other operational characteristics that will support an above-average evaluation for vertically integrated companies are assets that are in good physical condition and are well maintained. In addition, capital expenditures for necessary system improvements must be at manageable levels, yet sufficient to provide for constant renewal and refurbishment of the system. Operating performance, reliability statistics (such as outage duration and frequency), and efficiency measures are expected to meet industry and regional averages. Having interconnections that provide access to low-cost and diverse power supply sources is viewed favorably, as is limited environmental exposure.

For a gas company, drawing from a single interstate pipeline or relying on a particular gas basin exposes it to event risk and negative supply shocks, respectively. The ability to access multiple sources of gas supply through multiple pipelines protects the utility from such disruptions. Adequate storage access not only helps supply incremental gas needed to meet peak demand, but also provides opportunities without purchased-gas adjustment clauses to arbitrage seasonal pricing fluctuations. Gas distributors benefit from storage if the cost of buying peak gas exceeds the cost of making off-season purchases and the associated carrying cost. Outdated systems requiring extensive maintenance and capital expenditures lower profitability and efficiency metrics. Newly installed systems mainly consisting of plastic pipe require limited expenditures over the long term compared with older, cast-iron systems that need replacing as they age. In addition, operational efficiencies can be obtained through the use of new technology.

Critical success factors include:

- Well-maintained assets,
- Solid plant performance,
- Fuel diversity,
- Adequate generating reserves, and
- Compliance with environmental standards.

Competitiveness

For vertically integrated utilities, competitive factors include percentage of firm wholesale revenues that are most vulnerable to competition, industrial load, and revenue concentrations, particularly in energy intensive industries; exposure of key customers to alternative suppliers; commercial concentrations; rates charged to various customer classes; rate design and flexibility; production costs, both marginal and fixed; the regional capacity situation; and transmission constraints. A regional focus is evident, but high costs and rates relative to national averages are also of significant concern because of the potential for electricity substitutes over time.

Electricity competes with other fuels--particularly natural gas--for certain segments of the market like space heating, water heating, and cooking. Thus, high electricity prices, which can be attributed to inefficient operations, are cause for concern if customers have access to alternative energy sources. Self-generation has been a risk, as large commercial and industrial customers may take advantage of cogeneration

technologies to reduce their reliance on, and in some cases to disconnect from the system. In the future, technology could pose a greater threat. Bypass risk, too, may grow if distributed generation, microgeneration, and self-generation prove more economically attractive for smaller customers.

Due to their proximity to interstate gas pipelines, some large customers can directly tie into a transmission line and completely bypass gas distributors' services. Although such pipelines provide key sources of gas supply for these companies, it is important to recognize this bypass risk. Ideally located gas companies have adequate transmission access but have industrial customers far from interstate pipelines.

Critical success factors include:

- Low cost structure,
- Limited bypass risk, and
- Management's commitment to lowering costs.

Management

Evaluating management is of paramount importance to Standard & Poor's analysis because management decisions affect all areas of a company's operations and financial health. Although regulation, the economy, and other outside factors certainly influence results, the quality of management ultimately determines a company's success. Standard & Poor's private meetings with senior management significantly augment the public record in the effort to appraise management. Meetings are very useful for the candid interpretation of recent developments and, importantly, to provide executives with a forum for the presentation of goals, objectives, and strategies.

Management assessment is based on tenure, turnover, industry experience, financial track record, corporate governance, a grasp of industry issues, and knowledge of regulation, of customers, and their needs. Management's ability and willingness to develop workable strategies to address system needs, and to execute reasonable and effective long-term plans are assessed. Management quality is also indicated by thoughtful balancing of multiple--and often incompatible--priorities; a record of credibility; and effective communication with the public, regulatory bodies, and the financial community.

Standard & Poor's also focuses on management's ability to achieve cost-effective operations and commitment to maintaining credit quality. This can be assessed by evaluating accounting and financial practices, capitalization and common dividend objectives, and the company's philosophy regarding growth and risk-taking.

In addition, a company's accounting and financing practices are critical to Standard & Poor's analysis. For example, proactive management will likely adopt accounting practices that are more appropriate in a competitive environment such as higher depreciation rates for electric generation equipment. Large, growing cost deferrals or regulatory assets are viewed more negatively. Management can enhance its financial condition by taking any number of discretionary actions, such as selling common equity, reducing the common dividend payout, and deleveraging. A utility's management will also be evaluated on cost-cutting ability and creativity in entering into strategic alliances that improve efficiency.

Strong corporate governance, reflected in active, independent board of directors that participate in determining and monitoring corporate controls, help to support management's credibility and corporate financial disclosure. If it is evident that a company's board is passive and does not exercise proper oversight, it weakens the checks and balances of the organization and may detract from credit quality. Included in Standard & Poor's review of corporate governance is the proportion of independent directors on the board, the breadth and depth of the directors' experience, the proportion of independent directors on the board's audit committee, and directors' compensation.

Some vertically integrated utilities have felt compelled to invest outside their traditional businesses to increase earnings, especially as stock prices have underperformed market indices. Participation in higher-risk, unregulated activities such as merchant generation, exploration and development, gathering and processing, or marketing and trading can significantly detract from the consolidated entity's credit profile. In this regard, credit ratings are not based on the regulated business only, but on the qualitative and quantitative fundamentals of the consolidated entity. Standard & Poor's considers the ratings of the

regulated businesses as being less vulnerable to the negative credit influence of other affiliates and holding company activities, as relevant, where very strong structural and/or regulatory insulation exists, which tends to be more the exception than the rule.

Critical success factors include:

- Commitment to credit quality,
- Credibility,
- Strong corporate governance, and
- Conservative financial policies, especially regarding nonregulated activities, if relevant.

Effect On Ratings

In summary, Standard & Poor's examines the key business risk drivers for vertically integrated utilities--regulation, markets, operations, competitiveness, and management--in conjunction with financial measures when assigning credit ratings. The credit quality of most vertically integrated utilities is solidly investment grade. This is a primarily a function of the existence of regulation. As discussed above, the factors that further differentiate ratings among this sector include their markets, operational track record, competitive posture, and management's risk appetite. Vertically integrated utilities generally have satisfactory business risk profile scores, with only a few having strong or weak business positions.

Appendix

Table 1

Industry Benchmarks

Business Profile	AA		A		BBB		BB		
Adjusted FFO interest coverage (x)									
1	3.0	2.5	2.5	1.5	1.5	1.0	< 1.0	< 1.0	
2	4.0	3.0	3.0	2.0	2.0	1.0	< 1.0	< 1.0	
3	4.5	3.5	3.5	2.5	2.5	1.5	1.5	1.0	
4	5.0	4.2	4.2	3.5	3.5	2.5	2.5	1.5	
5	5.5	4.5	4.5	3.8	3.8	2.8	2.8	1.8	
6	6.0	5.2	5.2	4.2	4.2	3.0	3.0	2.0	
7	8.0	6.5	6.5	4.5	4.5	3.2	3.2	2.2	
8	10.0	7.5	7.5	5.5	5.5	3.5	3.5	2.5	
9	N/A	N/A	10.0	7.0	7.0	4.0	4.0	2.8	
10	N/A	N/A	11.0	8.0	8.0	5.0	5.0	3.0	
Adjusted FFO/average total debt (%)									
1	20.0	15.0	15.0	10.0	10.0	5.0	< 5.0	< 5.0	
2	25.0	20.0	20.0	12.0	12.0	8.0	< 8.0	< 8.0	
3	30.0	25.0	25.0	15.0	15.0	10.0	10.0	5.0	
4	35.0	28.0	28.0	20.0	20.0	12.0	12.0	8.0	
5	40.0	30.0	30.0	22.0	22.0	15.0	15.0	10.0	
6	45.0	35.0	35.0	28.0	28.0	18.0	18.0	12.0	
7	55.0	45.0	45.0	30.0	30.0	20.0	20.0	15.0	
8	70.0	55.0	55.0	40.0	40.0	25.0	25.0	15.0	
9	N/A	N/A	65.0	45.0	45.0	30.0	30.0	20.0	
10	N/A	N/A	70.0	55.0	55.0	40.0	40.0	25.0	
Adjusted total debt/total capital (%)									
1	48.0	55.0	55.0	60.0	60.0	70.0	> 70.0	> 70.0	
2	45.0	52.0	52.0	58.0	58.0	68.0	> 68.0	> 68.0	
3	42.0	50.0	50.0	55.0	55.0	65.0	65.0	70.0	
4	38.0	45.0	45.0	52.0	52.0	62.0	62.0	68.0	

5	35.0	42.0	42.0	50.0	50.0	60.0	60.0	65.0
6	32.0	40.0	40.0	48.0	48.0	58.0	58.0	62.0
7	30.0	38.0	38.0	45.0	45.0	55.0	55.0	60.0
8	25.0	35.0	35.0	42.0	42.0	52.0	52.0	58.0
9	N/A	N/A	32.0	40.0	40.0	50.0	50.0	55.0
10	N/A	N/A	25.0	35.0	35.0	48.0	48.0	52.0

Note: Business profile scores are characterized from '1' (excellent) to '10' (weak). FFO--Funds from operations. N/A--Not applicable.

Table 2

Vertically Integrated Utilities

Company	Corporate credit rating	Business profile score
Aquila Inc.	B/CW-Pos/B-2	6
AGL Resources Inc.	A-/Negative/A-2	4
Alabama Power Co.	A/Stable/A-1	4
ALLETE Inc.	BBB+/Stable/A-2	5
Ameren Corp.	BBB+/CW-Neg/A-2	6
Appalachian Power Co.	BBB/Stable/--	5
Arizona Public Service Co.	BBB-/Stable/A-3	6
Atmos Energy Corp.	BBB/Stable/A-2	4
Black Hills Power Inc.	BBB-/Negative/--	6
Central Illinois Light Co.	BBB+/CW-Neg/--	7
Central Vermont Public Service Corp.	BB+/Stable/--	6
CILCORP Inc.	BBB+/CW-Neg/--	7
Cincinnati Gas & Electric Co.	BBB/Positive/A-2	6
Cleco Power LLC	BBB/Negative/--	6
Cleveland Electric Illuminating Co.	BBB/Stable/--	6
Consolidated Natural Gas Co.	BBB/Stable/A-2	6
Consumers Energy Co.	BB/Stable/--	6
Dayton Power & Light Co.	BB+/Positive/--	5
Detroit Edison Co.	BBB/Stable/A-2	6
Duke Power Co. LLC	BBB/Positive/A-2	4
El Paso Electric Co.	BBB/Stable/--	6
Empire District Electric Co.	BBB-/Stable/A-3	6
Energy East Corp.	BBB+/Negative/A-2	3
Enogex Inc.	BBB+/Stable/--	7
Entergy Arkansas Inc.	BBB/Negative/--	5
Entergy Gulf States Inc.	BBB/Negative/--	6
Entergy Louisiana LLC	BBB/Negative/--	5
Entergy Mississippi Inc.	BBB/Negative/--	6
Entergy New Orleans Inc.	D/--/--	8
Equitable Resources Inc.	A-/CW-Neg/A-2	8
Florida Power & Light Co.	A/CW-Neg/A-1	4
Georgia Power Co.	A/Stable/A-1	4
Green Mountain Power Corp.	BBB/CW-Pos/--	5
Gulf Power Co.	A/Stable/--	4
Hawaiian Electric Co. Inc.	BBB+/Negative/A-2	5
IDACORP Inc.	BBB+/Negative/A-2	5
Idaho Power Co.	BBB+/Negative/A-2	5
Indiana Michigan Power Co.	BBB/Stable/--	6
Indianapolis Power & Light Co.	BB+/Positive/--	4
Interstate Power & Light Co.	BBB+/Stable/A-2	5
IPALCO Enterprises Inc.	BB+/Positive/--	4

Kansas City Power & Light Co.	BBB/Stable/A-2	6
Kansas Gas & Electric Co.	BB+/Positive/--	6
Kentucky Power Co.	BBB/Stable/--	5
Kentucky Utilities Co.	BBB+/Stable/A-2	5
Louisville Gas & Electric Co.	BBB+/Stable/--	5
Madison Gas & Electric Co.	AA-/Stable/A-1+	4
Michigan Consolidated Gas Co.	BBB/Stable/A-2	4
MidAmerican Energy Co.	A-/Stable/A-1	5
Mississippi Power Co.	A/Stable/A-1	4
Monongahela Power Co.	BB+/Positive/--	5
Montana-Dakota Utilities Co.	BBB+/Stable/--	6
National Fuel Gas Co.	BBB+/Stable/A-2	7
Nevada Power Co.	B+/Positive/--	6
New York State Electric & Gas Corp.	BBB+/Negative/A-2	3
NiSource	BBB/Stable/--	4
Northern Indiana Public Service Co.	BBB/Stable/--	5
Northern States Power Co.	BBB/Stable/A-2	5
Northern States Power Wisconsin	BBB+/Stable/--	4
Ohio Edison Co.	BBB/Stable/A-2	6
Oklahoma Gas & Electric Co.	BBB+/Stable/A-2	5
Pacific Gas & Electric Co.	BBB/Stable/A-2	5
PacifiCorp	A-/Stable/A-1	5
Pennsylvania Power Co.	BBB/Stable/--	6
Pinnacle West Capital Corp.	BBB-/Stable/A-3	6
PNM Resources Inc.	BBB/Negative/A-3	6
Portland General Electric Co.	BBB+/Negative/A-2	5
Progress Energy Carolinas Inc.	BBB/Positive/A-2	5
Progress Energy Florida Inc.	BBB/Positive/A-2	4
PSI Energy Inc.	BBB/Positive/A-2	4
Public Service Co. of Colorado	BBB/Stable/A-2	4
Public Service Co. of New Hampshire	BBB/Stable/--	5
Public Service Co. of New Mexico	BBB/Negative/A-3	6
Public Service Co. of Oklahoma	BBB/Stable/--	5
Puget Energy Inc.	BBB-/Stable/--	4
Puget Sound Energy Inc.	BBB-/Stable/A-3	4
Questar Market Resources Inc.	BBB+/Stable/---	8
Rochester Gas & Electric Corp.	BBB+/Negative/--	3
San Diego Gas & Electric Co.	A/Stable/A-1	5
Savannah Electric & Power Co.	A/Stable/--	4
SCANA Corp.	A-/Stable/--	4
Sierra Pacific Power Co.	B+/Positive/--	6
Sierra Pacific Resources	B+/Positive/B-2	6
South Carolina Electric & Gas Co.	A-/Stable/A-2	4
Southern California Edison Co.	BBB+/Stable/A-2	6
Southern Co.	A/Stable/A-1	4
Southern Indiana Gas & Electric Co.	A-/Stable/--	4
Southwestern Electric Power Co.	BBB/Stable/--	5
Southwestern Public Service Co.	BBB/Stable/A-2	5
System Energy Resources Inc.	BBB-/Negative/--	7
Tampa Electric Co.	BBB-/Stable/A-3	4
Toledo Edison Co.	BBB/Stable/--	6
Tucson Electric Power Co.	BB/Stable/B-2	6

TXU U.S. Holdings Co.	BBB-/Negative/--	8
Union Electric Co.	BBB+/CW-Neg/A-2	5
Union Light Heat & Power Co.	BBB/Positive/--	5
Vectren Utility Holdings Inc.	A-/Stable/A-2	3
Virginia Electric & Power Co.	BBB/Stable/A-2	5
Westar Energy Inc.	BB+/Positive/--	5
Wisconsin Electric Power Co.	A-/Negative/A-2	4
Wisconsin Energy Corp.	BBB+/Negative/A-2	5
Wisconsin Power & Light Co.	A-/Stable/A-2	4
Wisconsin Public Service Corp.	A+/CW-Neg/A-1	4
Xcel Energy Inc.	BBB/Stable/A-2	5

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**Standard & Poor's, Research:
Key Ratings Factors for U.S. Electric Transmission Companies
November 10, 2005**

	
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Research:

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Key Rating Factors For U.S. Electric Transmission Companies

Publication date: 10-Nov-2005
Primary Credit Analyst: Gerrit Jepsen, CFA, New York (1) 212-438-2529;
gerrit_jepsen@standardandpoors.com

(Editor's note: This article type had been known as "Keys to Success," but is being renamed to more accurately reflect its content and purpose. All articles previously published as "Keys to Success" will retain their original titles on RatingsDirect.)

Standard & Poor's Ratings Services assesses the credit risk of a variety of companies with electric transmission operations in the U.S. Electric transmission providers include a handful of investor-owned transmission-only utilities, cooperatives, government-owned transmission utilities, merchant entities, and the transmission operations of electricity transmission and distribution (T&D) providers and vertically integrated utilities. However, the following commentary largely is about stand-alone transmission providers.

When rating the creditworthiness of transmission providers, we review key business risk factors in conjunction with multiple financial metrics and a qualitative assessment of other financial issues. The business risk of transmission-only companies is generally considered low relative to T&D providers and vertically integrated utilities. This is based on currently supportive regulation, low operating risk, and minimal competition. After establishing a business risk profile, Standard & Poor's assesses a company's financial profile and other relevant factors, after which a rating is assigned.

■ Business Risk

Standard & Poor's categorizes the business profiles of utilities from '1' (excellent) to '10' (vulnerable). Generally, Standard & Poor's considers electric transmission utilities without major weaknesses as having excellent ('1' and '2') business profiles, whereas a company with a weakness such as poor operations may have a business profile of '3' or higher. Like other corporate issuers, the business risk profile is a defining attribute of an electric transmission utility's creditworthiness. To determine a company's business risk, Standard & Poor's analyzes how key factors affect cash flow, including:

- Regulation,
- Markets,
- Operations,
- Competition, and
- Management.

Regulation

Regulation is the major factor affecting a transmission company's business risk profile. Standard & Poor's considers timely and predictable rate recovery positive for credit quality because this provides for steady internally generated cash flow. The regulatory environment in which a company operates and management's ability to limit regulatory risk are important considerations. The FERC, which regulates substantial electric transmission, has been encouraging capital spending on the electric transmission grid to improve reliability and reduce constraints. To support creditworthiness, regulatory rulings should be transparent and provide timely cost recovery and a healthy return on investment. Standard & Poor's reviews multiple regulatory issues, including:

- Allowed rate recovery of costs, and

- Authorized returns and capital structure.

Recovery of costs in rates. A transmission company's credit quality can be strengthened through various regulatory measures. During a large capital spending period such as the one currently under way in the transmission sector, timely and efficient rate recovery bolsters companies' credit quality because greater internally generated cash flow during construction results in lower liquidity needs and reduced external financing. Cash flow could be strengthened if a company's rates are updated annually for new costs, including plant additions, operating costs, and depreciation. In addition, allowing rate recovery of projected costs with subsequent updates for actual results reduces lags in cost recovery. The FERC authorizes allowance for funds used during construction on new plant additions, thereby providing for capitalization of financing costs during construction that are recoverable in future rates. But earning a current return on construction work in progress, which has also been approved in FERC-adopted settlements, is better for credit quality because it increases internal cash flow during construction and reduces the utility's need to issue debt during construction. A company's creditworthiness also benefits from timely completion of rate cases by regulators without major delays or controversy. Credit is also supported when a company has the authority to recovery unanticipated costs, such as for repairing storm damage, on a timely basis without significant delay. Finally, a greater percentage of a company's rates in fixed charges would be more supportive of credit than a higher percentage of rates being recovered through variable charges.

Authorized returns and capital structure. A higher authorized return on equity (ROE) and a higher equity component in the capital structure for setting rates are favorable for credit quality, assuming that the ROE can actually be earned. A higher equity component in a company's regulated capital structure is favorable because it results in higher revenues and cash flow. Therefore, Standard & Poor's considers the healthy ROEs authorized by the FERC to be supportive of credit quality. The FERC authorizes incremental ROE adders to the base ROE as incentives for joining a regional transmission organization (50 basis points), new infrastructure investment (100 basis points), and being an independent transmission company not owned by members (150 basis points).

Markets

The service territory and customer mix affects a transmission company's cash flow stability. A geographically large service territory may lead to higher cash flow stability because of greater options for moving power through more interconnections resulting in higher revenue. A geographically smaller service territory is not necessarily less favorable because it could be more densely populated and may have greater electricity demand. Therefore, Standard & Poor's assessment of a company's markets will include a review of the service territory's geographic size and population density.

Transmission companies' customers, mostly distribution entities, are evaluated to determine the depth and mix of their end-use customers and contribution to revenues. The customer mix of a distribution utility that consists of a combination of industrial, commercial, and residential customers will likely result in more stable and growing cash flows than a service territory that is highly concentrated with industrial and large commercial customers because industrial load can be more cyclical. Also, large customers could self-generate on site, relocate operations, or shut down during an economic downturn.

Operations

Standard & Poor's evaluates a transmission company's operations, including service quality, reliability, and costs. Operations are an important part of our analysis because physically sound and well-maintained electric transmission systems can move more power resulting in higher cash flow, leads to better customer service, better regulatory relations, and therefore, more supportive treatment by regulators.

When reviewing reliability, we compare a transmission utility's outages with peer and system averages, the maintenance of a transmission utility's infrastructure, such as vegetation management (tree trimming), and replacement and upgrades of existing plant. The FERC has encouraged a more reliable and efficient transmission system through regional coordination and planning via independent system operators and regional transmission organizations (RTO). The U.S. Congress

enacted the Electricity Modernization Act of 2005 authorizing development and enforcement of mandatory reliability standards and the imposition of penalties. This would be useful for comparing reliability and operational performance. After such standards are implemented, Standard & Poor's will closely monitor transmission utilities' compliance.

A transmission-owning company can reduce exposure to operational risks by transferring operating control of its system to an RTO. On a regional level, an RTO can monitor and minimize congestion, approve transmission outages, and coordinate generator maintenance outages. These services may improve the transmission grid's efficiency and may free up resources for grid-related maintenance and incremental capital improvements. It is imperative that transmission infrastructure be well maintained and upgraded to provide customers with sound and reliable transmission service that also has multiple interconnection points from which electricity can be transferred.

Capital expenditures

Electric transmission is highly capital intensive. The aging and undercapitalized transmission grid in the U.S. requires significant reinvestment to replace wires, substations, and other equipment, such as computer systems. Companies are investing in transmission, but much more capital spending is needed to strengthen reliability, connect new generation, reduce costs incurred because of congestion, improve access to lower-cost power, and replace aging plant. Although there has been underinvestment, capital spending for improvements should be at manageable levels that do not result in significant cash drains before rate recovery. Standard & Poor's assesses the construction risks, regulatory challenges such as siting of facilities, and other constraints on cash flow and liquidity experienced by companies as they invest in infrastructure. Long construction periods are typical because of delays generally from siting issues of new transmission lines or upgrades at existing sites. The construction costs and delays require companies to have strong balance sheets and adequate liquidity to withstand extended start-up periods.

Competition

Competition in the transmission business is usually minimal because the companies are generally the sole provider of transmission service. Standard & Poor's considers this limited competition in electric transmission as supportive of credit. Significant barriers to entry exist for prospective competitors because of:

- Government-authorized monopoly status (franchise monopolies),
- High start-up or entry costs,
- Difficulty in siting facilities, and
- Environmental concerns.

Management and corporate governance

Management is important to a company's credit quality. Standard & Poor's assesses management quality through meetings, conversations, and reviews of company plans. When assessing management, Standard & Poor's reviews:

- Management's experience, track record, and turnover;
- Knowledge of regulation and ability to manage regulatory and political risks;
- Financial policies and consistency with business strategies; and
- Ability to balance public and private priorities, and effectively communicate with the public, regulatory agencies, and the financial community.

Strong corporate governance, reflected in an active, independent board of directors that participates in determining and monitoring corporate controls, could support management's credibility and corporate financial disclosure. If it is evident a company's board is passive and does not exercise proper oversight, it weakens the checks and balances of the organization and could be considered a negative credit factor. Included in Standard & Poor's review of corporate governance is the proportion of independent directors on the board, the breadth and depth of the directors' experience, the proportion of independent directors on the board's audit committee, and the directors' compensation.

■ Financial Risk

Standard & Poor's review of a company's financial risk profile includes the analysis of many financial measures. A utility's strength to generate consistent cash flow for debt service, investment funding, and operations financing are measures used to determine financial profiles. Standard & Poor's reviews historical and projected financial performance. In addition to reviewing transmission companies' financial and accounting policies, Standard & Poor's analyzes:

- Cash flow adequacy and quality,
- Capital structure, and
- Liquidity.

Cash flow adequacy and quality

The majority of a transmission company's revenue is from network customers that reserve transmission capacity. A nominal revenue source is from delivering power over a specific path between two points on a company's system. Customer bills in even monthly installments based on their historical usage should result in more stable cash flow for transmission companies as compared with the revenues of a utility subject to seasonal variations and weather conditions. Standard & Poor's will review earnings, but because it is an accounting concept that can be affected by noncash transactions and accounting entries, cash flow adequacy and quality are key. Debt-service obligations are satisfied with cash and analyzing cash flow patterns can indicate a debt-servicing capability that can be stronger or weaker than may be apparent when reviewing earnings. Analyzing cash flow adequacy includes reviewing financial ratios, particularly funds from operations (FFO) interest coverage and FFO to total debt. Because utilities are capital intensive and capital spending is increasing for transmission companies, Standard & Poor's analyzes free operating cash flow, which is cash flow from operations after capital expenditures. Capital spending is also separated into discretionary and maintenance buckets. Standard & Poor's also considers a company's free operating cash flow after paying dividends, or discretionary cash flow, because a positive level implies an additional cushion for debt service, which is favorable. Negative free operating cash flow may not be considered unfavorable for credit quality if a transmission entity has supportive regulation during a heavy construction phase. To finance capital spending greater than internal cash flow, a utility may seek external financing during a construction phase. This may be necessary and prudent when regulatory agencies like the FERC are encouraging new investment in transmission infrastructure with supportive regulation such as favorable ratemaking.

Capital structure

Standard & Poor's analysis of capital structure includes a transmission company's financing needs, plans, alternatives, and its ability to complete financing during difficult economic circumstances without harming creditworthiness. To retain access to external financial markets, a capital-intensive transmission utility would be expected to maintain a sound capital structure. Market access at reasonable rates is restricted if a sound capital structure is not maintained and the company's operational and financial prospects subsequently decline. The term structure of a company's debt and the ratio of variable to total debt are important. Amortizing debt is less risky than bullet maturities, which have refinancing risk. Large maturities are considered a significant credit risk, particularly if they are bullet maturities. However, we expect that access to capital will continue for many of the transmission companies and it has not penalized any company because of refinancing risk. A high level of variable to total debt is considered more risky for credit, particularly when interest rates are rising.

The willingness and ability to issue common equity is important when determining a financial risk profile. For investor-owned companies that are publicly traded, the capacity and willingness to issue common equity is affected by numerous factors, including stock price, relative value, dividend policy, investor demand, and any regulatory restrictions of capital structure components. For privately owned transmission companies, Standard & Poor's analysis focuses on investors' willingness and ability to infuse equity when needed and their support for reducing or eliminating dividends. Dividend policy directly affects liquidity and financing flexibility because it will affect internal cash flow for reinvestment. A high dividend payout ratio may not be considered negative, but it could be during a large construction program, an acquisition, or other events when additional internally generated funds would benefit credit quality.

When assessing a transmission company's capital structure, Standard & Poor's will principally analyze total debt relative to total capital. Included in the calculation may be debt-like instruments such as operating leases and parental guarantees that may be considered debt equivalents when calculating capital structure ratios and may be included in the calculation. For rating purposes, Standard & Poor's uses the consolidated rating methodology. Therefore, when a holding company owns a transmission utility, Standard & Poor's would review the consolidated capital structure, including that of the holding company, which may be more highly leveraged than the regulated utility.

Liquidity

Transmission companies generally do not have trading operations or commodity exposure, but because they are replacing the existing grid and building new electricity infrastructure, adequate liquidity is required during construction and before permanent financing. When assessing a company's liquidity, the following points are considered:

- Internal sources of liquidity (working capital, timing of capital expenditures, curtailing negative cash flow operations);
- External sources of liquidity (commercial paper, public debt, bank credit, and equity issuances);
- Relationships with banks and the availability of bank lines;
- Uses of liquidity (working capital);
- Changes in liquidity requirements under stress scenarios (credit events); and
- Management's skill to address a potential liquidity crisis.

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Standard & Poor's, Corporate Criteria
October 2004

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Standard & Poor's Role in the Financial Markets

Standard & Poor's Ratings Services traces its history back to 1860. It currently is the leading credit rating organization and a major publisher of financial information and research services on U.S. and foreign corporate and municipal debt obligations. Standard & Poor's was an independent, publicly owned corporation until 1966, when all of its common stock was acquired by McGraw-Hill Inc., a major publishing company. Standard & Poor's is now a business unit of McGraw-Hill. In matters of credit analysis and ratings, Standard & Poor's Credit Market Services operates entirely independently of McGraw-Hill. Investment Services and Corporate Value Consulting are the other units of Standard & Poor's. They provide investment, financial, and trading information, data, and analyses—including on equity securities—but operate separately from the ratings group.

Standard & Poor's now rates more than \$13 trillion in bonds and other financial obligations of obligors in more than 50 countries. Standard & Poor's rates and monitors developments pertaining to these issues and issuers from an office network based in 21 world financial centers.

Despite its tremendous growth over the years, Standard & Poor's core values remain the same: to provide high-quality, objective, value-added analytical information to the world's financial markets.

What is Standard & Poor's?

Standard & Poor's is an organization of professionals that provides analytical services and operates under the basic principles of:

- Independence;
- Objectivity;
- Credibility; and

Primary Credit Analysts

Solomon B Samson
New York
(1) 212-438-7653
sol_samson@
standardandpoors.com

Scott Sprinzen
New York
(1) 212-438-7812
scott_sprinzen@
standardandpoors.com

Emmanuel Dubois-Pelerin
Paris
(33) 1-4420-6673
emmanuel_dubois-pelerin@
standardandpoors.com

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▪ Disclosure.

Standard & Poor’s operates with no government mandate and is independent of any investment banking company, bank, or similar organization.

Standard & Poor’s recognition as a rating agency ultimately depends on investors’ willingness to accept its judgment. We believe it is important that all users of our ratings understand how we arrive at those ratings, and regularly publish ratings research and detailed reports on ratings criteria and methodology.

Credit ratings.

Standard & Poor’s began rating the debt of corporate and government issuers decades ago. Our credit rating criteria and methodology have grown in sophistication and have kept pace with the introduction of new financial products. For example, Standard & Poor’s was the first major rating agency to assess the credit quality of, and assign credit ratings to, the claims-paying ability of insurance companies (1971); financial guarantees (1971); mortgage-backed bonds (1975); mutual funds (1983); asset-backed securities (1985); and secured loan recovery (2003).

A credit rating is Standard & Poor’s opinion of the general creditworthiness of an obligor, or the creditworthiness of an obligor with respect to a particular debt security or other financial obligation, based on relevant risk factors. Over the years, these credit ratings have achieved wide investor acceptance as easily usable tools for differentiating credit quality, because a Standard & Poor’s credit rating is judged by the market to be reliable and credible. A rating does not constitute a recommendation to purchase, sell, or hold a particular security. In addition, a rating does not comment on the suitability of an investment for a particular investor.

Standard & Poor’s credit ratings and symbols originally applied to debt securities. As described below, we have developed credit ratings that may apply to an issuer’s general creditworthiness or to a specific financial obligation. Standard & Poor’s historically has maintained separate and well-established rating scales for long-term and short-term instruments. (A separate scale for preferred stock was integrated with the debt scale in February 1999. There is an additional scale exclusively for medium-term municipal notes.)

Credit ratings are based on information furnished by the obligors or obtained by us from other sources we consider reliable. Standard & Poor’s does not perform an audit in connection with any credit rating and may, on occasion, rely on unaudited financial information. Credit ratings may be changed, suspended, or withdrawn as a result of changes in, or unavailability of, such information.

Long-term credit ratings are divided into several categories, ranging from ‘AAA’—reflecting the strongest credit quality—to ‘D’, reflecting the lowest. Long-term ratings from ‘AA’ to ‘CCC’ may be modified by the addition of a plus or minus sign to show relative standing within the major rating categories.

A short-term credit rating is an assessment of an issuer’s credit quality with respect to an instrument considered short term in the relevant market. Short-term ratings range from ‘A-1’, for the highest-quality obligations, to ‘D’, for the lowest. The ‘A-1’ rating may also be modified by a plus sign to distinguish the strongest credits in that category.

Issue-specific credit ratings.

A Standard & Poor’s issue credit rating is a current opinion of the creditworthiness of an obligor with respect to a specific financial obligation, a specific class of financial obligations, or a specific financial program. This opinion may reflect the creditworthiness of guarantors, insurers, or other forms of credit enhancement on the obligation, and takes into account statutory and regulatory preferences.

On a global basis, Standard & Poor’s issue credit-rating criteria have long identified the added country-risk factors that give external debt a higher default probability than domestic obligations. In 1992, we revised our criteria to define external rather than domestic obligations by currency instead of by market of issuance. This

led to the adoption of the local currency/foreign currency nomenclatures for issue credit ratings. Because rating coverage now has expanded to a growing range of emerging-market countries, the analysis of political, economic, and monetary risk factors are even more important.

Long-term credit ratings.

Notes, note programs, certificate of deposit programs, syndicated bank loans, bonds and debentures ('AA', 'AA'...'D'); shelf registrations (preliminary).

Debt Types:

- Equipment trust certificates;
- Secured;
- Senior unsecured;
- Subordinated;
- Junior subordinated; and
- Preferred stock and deferrable payment debt.

Recovery Ratings (1-5)

Municipal Note Ratings (tenor: less than three years) ('SP-1+', 'SP-1'...'SP-3')

Short-Term Ratings ('A-1+', 'A-1'...'D'):

- Commercial paper programs;
- Put bonds/demand bonds; and
- Certificate of deposit programs.

Issuer credit ratings.

Long-Term Ratings and Short-Term Ratings

- Corporate credit ratings;
- Counterparty ratings; and
- Certificate of deposit programs.

Other rating products.

- Mutual Bond Fund Credit Quality Ratings ('AAAF'...'CCCf');
- Money Market Fund Safety Ratings ('AAAm'...'BBBm');
- Mutual Bond and Managed Fund Risk Ratings ('aaa', 'aa',...'ccc');
- Financial strength ratings for insurance companies (also, pi ratings based on quantitative model);
- Ratings estimates; and
- National-scale credit ratings.

Issuer credit ratings.

In response to a need for rating evaluations on a company when no public debt is outstanding, Standard & Poor's provides an issuer credit rating—an opinion of the obligor's overall capacity to meet its financial obligations. This opinion focuses on the obligor's capacity and willingness to meet its financial commitments as they come due. The opinion is not specific to any particular financial obligation, because it does not take into account the specific nature or provisions of any particular obligation. Issuer credit ratings do not take into account statutory or regulatory preferences, nor do they take into account the creditworthiness of guarantors, insurers, or other forms of credit enhancement that may pertain to a specific obligation.

Counterparty ratings, corporate credit ratings, and sovereign credit ratings are all forms of issuer credit ratings.

Because a corporate credit rating provides an overall assessment of a company’s creditworthiness, it is used for a variety of financial and commercial purposes, such as negotiating long-term leases or minimizing the need for a letter of credit for vendors.

If the credit rating is not assigned in conjunction with a rated public financing, the company can choose to make its rating public or to keep it confidential.

Rating process.

Standard & Poor’s provides a rating only when there is adequate information available to form a credible opinion, and only after applicable quantitative, qualitative, and legal analyses are performed.

The analytical framework is divided into several categories to ensure that salient qualitative and quantitative issues are considered. For example, with industrial companies, the qualitative categories are oriented to business analysis, such as the company’s competitiveness within its industry and the caliber of management; the quantitative categories relate to financial analysis.

The rating process is not limited to an examination of various financial measures. Proper assessment of credit quality for an industrial company includes a thorough review of business fundamentals, including industry prospects for growth and vulnerability to technological change, labor unrest, or regulatory actions. In the public finance sector, this involves an evaluation of the basic underlying economic strength of the public entity, as well as the effectiveness of the governing process to address problems. In financial institutions, the reputation of the bank or company may have an impact on the future financial performance and the institution’s ability to repay its obligations.

Standard & Poor’s assembles a team of analysts with appropriate expertise to review information pertinent to the rating. A lead analyst is responsible for conducting the rating process. Members of the analytical team meet with the organization’s management to review, in detail, key factors that have an impact on the rating, including operating and financial plans and management policies. The meeting also helps analysts develop the qualitative assessment of management itself, an important factor in many rating decisions.

Following this review and discussion, a rating committee meeting is convened. At the meeting, the committee discusses the lead analyst’s recommendation and the pertinent facts supporting the rating. Finally, the committee votes on the recommendation.

The issuer subsequently is notified of the rating and the major considerations supporting it. A rating can be appealed prior to its publication—if meaningful new or additional information is to be presented by the issuer. Obviously, there is no guarantee that any new information will alter the rating committee’s decision.

Once a final rating is assigned, it is disseminated to the public through the news media. In the U.S., Standard & Poor’s assigns and publishes its ratings irrespective of issuer request, if the financing is a public deal. In the case of private transactions, the company has publication rights. (Most 144A transactions are viewed as public deals.) In most markets outside the U.S., ratings are assigned only on request, so the company can choose to make its rating public or to keep it confidential. (Confidential ratings are disclosed by Standard & Poor’s only to parties designated by the rated entity.) After a public rating is released to the media by Standard & Poor’s, it is published in CreditWeek or another Standard & Poor’s publication, with the rationale and other commentary.

Surveillance and review.

All ratings are monitored, including continual review of new financial or economic information. Our surveillance is ongoing, which means staying abreast of all current developments. Moreover, it is routine to schedule annual review meetings with management, even in the absence of the issuance of new obligations. These meetings enable analysts to discuss potential problem areas and be apprised of any changes in the issuer’s plans.

As a result of the surveillance process, it is sometimes necessary to reassess a rating. When this occurs, the analyst undertakes a review, which may lead to a CreditWatch listing, if the likelihood of change is sufficiently high. This is followed by a comprehensive analysis—including, if warranted, a meeting with management—and a presentation to a rating committee. The rating committee evaluates the circumstances, arrives at a rating decision, notifies the issuer, and entertains an appeal, if one is made. After this process, the rating change or affirmation is announced.

Issuers' use of ratings.

It is common for companies to structure financing transactions to reflect rating criteria so they qualify for higher ratings. However, the actual structuring of a given issue is the function and responsibility of an issuer and its advisors. We will react to a proposed financing, publish and interpret its criteria for a type of issue, and outline the rating implications for an issuer, underwriter, bond counsel, or financial advisor, but do not function as an investment banker or financial advisor. Adoption of such a role ultimately would impair the objectivity and credibility that are vital to our continued performance as an independent rating agency.

Standard & Poor's guidance also is sought on credit quality issues that might affect the rating opinion. For example, companies solicit our view on hybrid preferred stock, the monetization of assets, or other innovative financing techniques before putting these into practice. Nor is it uncommon for debt issuers to undertake specific and sometimes significant actions for the sake of maintaining their ratings. For example, one large company faced a downgrade of its 'A-1' commercial paper rating because of a growing component of short-term, floating-rate debt. To keep its rating, the company chose to restructure its debt maturity schedule in a way consistent with our view of what was prudent.

In 1998, Standard & Poor's formalized its ratings advisory role under the name Rating Evaluation Service (RES). Standard & Poor's will analyze the potential credit impact of alternative strategic initiatives, establish a definitive rating outcome for each, and share these with management. This service entails an engagement letter from the company with respect to a specific plan or multiple plans.

Many companies go one step further and incorporate specific rating objectives as corporate goals. Indeed, possessing an 'A' rating, or at least an investment-grade rating, affords companies a measure of flexibility and may be worthwhile as part of an overall financial strategy. Beyond that, we do not encourage companies to manage themselves with an eye toward a specific rating. The more appropriate approach is to operate for the good of the business as management sees it and to let the rating follow. Ironically, managing for a very high rating can sometimes be inconsistent with the company's ultimate best interests, if it means being overly conservative and forgoing opportunities.

Ratings Definitions

Credit ratings can be either long term or short term. Short-term ratings are assigned to those obligations considered short term in the relevant market. In the U.S., for example, that means obligations with an original maturity of no more than 365 days—including commercial paper.

Commercial paper ratings pertain to the program established to sell these notes. There is no review of individual notes. Nonetheless, such program ratings characterize the notes as "rated paper."

Short-term ratings also are used to indicate the creditworthiness of an obligor with respect to put features on long-term obligations. The result is a dual rating, in which the short-term rating addresses the put feature in addition to the usual long-term rating.

Medium-term notes are assigned long-term ratings. The ratings on medium-term notes pertain to the program established to sell these notes. There is no review of individual notes, and, accordingly, the rating does not apply to specific notes (with certain exceptions).

Issue and issuer credit ratings use the identical symbols (shown below), and the definitions closely correspond to each other. Issuer ratings and short-term issue ratings focus entirely on the default risk of the entity. Long-term issue ratings also take into account risks pertaining to loss-given-default. However, both the issuer and issue rating definitions are expressed in terms of default risk, which refers to the capacity and willingness of the obligor to meet its financial commitments on time, in accordance with the terms of the obligation. As noted, issue credit ratings also take into account the protection afforded by, and relative position of, the obligation in the event of bankruptcy, reorganization, or other arrangement under the laws of bankruptcy and other laws affecting creditors’ rights.

Therefore, in the cases of junior debt and secured debt, the rating may not conform exactly with the category definition. Junior obligations typically are rated lower than the issuer credit rating (i.e., default risk) to reflect the lower priority in bankruptcy, as noted above. (Such differentiation applies when an entity has both senior and subordinated obligations, secured and unsecured obligations, operating company and holding company obligations, or preferred stock.) Debt that provides good prospects for ultimate recovery (such as secured debt) often is rated higher than the issuer credit rating.

Long-term credit ratings.

‘AAA’: An obligation rated ‘AAA’ has the highest rating assigned by Standard & Poor’s. The obligor’s capacity to meet its financial commitment on the obligation is extremely strong.

‘AA’: An obligation rated ‘AA’ differs from the highest-rated obligations only to a small degree. The obligor’s capacity to meet its financial commitment on the obligation is very strong.

‘A’: An obligation rated ‘A’ is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligations in higher rated categories. However, the obligor’s capacity to meet its financial commitment on the obligation is still strong.

‘BBB’: An obligation rated ‘BBB’ exhibits adequate protection parameters. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment on the obligation.

Obligations rated ‘BB’, ‘B’, ‘CCC’, ‘CC’, and ‘C’ are regarded as having significant speculative characteristics. ‘BB’ indicates the least degree of speculation, and ‘C’ the highest. While such obligations likely will have some quality and protective characteristics, these may be outweighed by large uncertainties or major exposure to adverse conditions.

‘BB’: An obligation rated ‘BB’ is less vulnerable to nonpayment than other speculative issues. However, it faces major ongoing uncertainties or exposure to adverse business, financial, or economic conditions that could lead to the obligor’s inadequate capacity to meet its financial commitment on the obligation.

‘B’: An obligation rated ‘B’ is more vulnerable to nonpayment than obligations rated ‘BB’, but the obligor currently has the capacity to meet its financial commitment on the obligation. Adverse business, financial, or economic conditions likely will impair the obligor’s capacity or willingness to meet its financial commitment on the obligation.

‘CCC’: An obligation rated ‘CCC’ currently is vulnerable to nonpayment and is dependent on favorable business, financial, and economic conditions for the obligor to meet its financial commitment on the obligation. In the event of adverse business, financial, or economic conditions, the obligor is not likely to have the capacity to meet its financial commitment on the obligation.

‘CC’: An obligation rated ‘CC’ currently is highly vulnerable to nonpayment.

‘C’: The ‘C’ rating may be used when a bankruptcy petition has been filed or similar action has been taken but payments on this obligation are being continued. ‘C’ is also used for a preferred stock that is in arrears (as well as for junior debt of issuers rated ‘CCC-’ and ‘CC’).

'D': The 'D' rating, unlike other ratings, is not prospective; rather, it is used only when a default actually has occurred—not when a default is only expected. Standard & Poor's changes ratings to 'D':

- On the day an interest and/or principal payment is due and is not paid. An exception is made if there is a grace period and we believe a payment will be made, in which case the rating can be maintained;
- Upon voluntary bankruptcy filing or similar action. An exception is made if we expect debt-service payments will continue to be made on a specific issue. In the absence of a payment default or bankruptcy filing, a technical default (i.e., covenant violation) is not sufficient for assigning a 'D' rating;
- Upon the completion of a distressed exchange offer, whereby some or all of an issue is either repurchased for an amount of cash or replaced by other securities having a total value that clearly is less than par; or
- In the case of ratings on preferred stock or deferrable payment securities, upon nonpayment of the dividend, or deferral of the interest payment.

With respect to issuer credit ratings (i.e., corporate credit ratings, counterparty ratings, and sovereign ratings), failure to pay a financial obligation—rated or unrated—leads to a rating of either 'D' or 'SD'. Ordinarily, an issuer's distress leads to general default, and the rating is 'D'. 'SD' (selective default) is assigned when an issuer can be expected to default selectively, i.e., continue to pay certain issues or classes of obligations while not paying others. In the corporate context, selective default might apply when a company conducts a distressed or coercive exchange with respect to one or some issues, while intending to honor its obligations regarding other issues. (In fact, it is not unusual for a company to launch such an offer precisely with such a strategy—to restructure part of its debt to keep the company solvent.)

Nonpayment of a financial obligation subject to a bona fide commercial dispute or a missed preferred stock dividend does not cause the issuer credit rating to be changed.

Plus (+) or minus (-): The ratings from 'AA' to 'CCC' may be modified by the addition of a plus or minus sign to show relative standing within the major rating categories.

r: In 1994, Standard & Poor's initiated a symbol to be added to an issue credit rating when the instrument could have significant non-credit risk. The symbol "r" was added to such instruments as mortgage interest-only strips, inverse floaters, and instruments that pay principal at maturity based on a non-fixed source, such as a currency or stock index. The symbol was intended to alert investors to non-credit risks and emphasizes that an issue credit rating addressed only the credit quality of the obligation. Use of the r was discontinued in July 2000.

Short-term credit ratings.

'A-1': A short-term obligation rated 'A-1' is rated in the highest category by Standard & Poor's. The obligor's capacity to meet its financial commitment on the obligation is strong. Within this category, certain obligations are designated with a plus sign (+). This indicates that the obligor's capacity to meet its financial commitment on these obligations is extremely strong.

'A-2': A short-term obligation rated 'A-2' is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligations in higher rating categories. However, the obligor's capacity to meet its financial commitment on the obligation is satisfactory.

'A-3': A short-term obligation rated 'A-3' exhibits adequate protection parameters. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment on the obligation.

'B': A short-term obligation rated 'B' is regarded as having significant speculative characteristics. The obligor currently has the capacity to meet its financial commitment on the obligation; however, it faces major ongoing uncertainties that could lead to the obligor's inadequate capacity to meet its financial commitment on the obligation.

‘C’: A short-term obligation rated ‘C’ currently is vulnerable to nonpayment and is dependent on favorable business, financial, and economic conditions for the obligor to meet its financial commitment on the obligation.

‘D’: The same as the definition of ‘D’ under “Long-term credit ratings.”

Investment and speculative grades.

The term “investment grade” originally was used by various regulatory bodies to connote obligations eligible for investment by institutions such as banks, insurance companies, and savings and loan associations. Over time, this term gained widespread use throughout the investment community. Issues rated in the four highest categories—‘AAA’, ‘AA’, ‘A’, and ‘BBB’—generally are recognized as being investment grade. Debt rated ‘BB’ or below generally is referred to as “speculative grade.” The term “junk bond” is merely an irreverent expression for this category of more risky debt. Neither term indicates which securities we deem worthy of investment, because an investor with a particular risk preference may appropriately invest in securities that are not investment grade.

Ratings continue as a factor in many regulations, both in the U.S. and abroad, notably in Japan. For example, the Securities & Exchange Commission (SEC) requires investment-grade status in order to register debt on Form-3, which, in turn, is one way to offer debt via a Rule 415 shelf registration. The Federal Reserve Board allows members of the Federal Reserve System to invest in securities rated in the four highest categories, just as the Federal Home Loan Bank System permits federally chartered savings and loan associations to invest in corporate debt with those ratings, and the Department of Labor allows pension funds to invest in commercial paper rated in one of the three highest categories. In similar fashion, California regulates investments of municipalities and county treasurers; Illinois limits collateral acceptable for public deposits; and Vermont restricts investments of insurers and banks. The New York and Philadelphia stock exchanges fix margin requirements for mortgage securities depending on their ratings, and the securities haircut for commercial paper, debt securities, and preferred stock that determines net capital requirements is also a function of the ratings assigned.

Currency.

Standard & Poor’s devised two types or ratings in order to comment on the risks associated with payment in currencies other than the entity’s home country. These ratings types are defined as follows:

Local Currency Credit Rating: A current opinion of an obligor’s overall capacity to generate sufficient local currency resources to meet its financial obligations (both foreign and local currency), absent the risk of direct sovereign intervention that may constrain payment of foreign currency debt. Local currency credit ratings are provided on Standard & Poor’s global scale or on separate national scales, and they may take the form of either issuer or specific issue credit ratings. Country or economic risk considerations pertain to the impact of government policies on the obligor’s business and financial environment, including factors such as the exchange rate, interest rates, inflation, labor market conditions, taxation, regulation, and infrastructure. However, the opinion does not address transfer and other risks related to direct sovereign intervention to prevent the timely servicing of cross-border obligations.

Foreign Currency Credit Rating: A current opinion of an obligor’s overall capacity to meet its foreign-currency-denominated financial obligations. It may take the form of either an issuer or an issue credit rating. As in the case of local currency credit ratings, a foreign currency credit opinion on Standard & Poor’s global scale is based on the obligor’s individual credit characteristics, including the influence of country or economic risk factors. However, unlike local currency ratings, a foreign currency credit rating includes transfer and other risks related to sovereign actions that may directly affect access to the foreign exchange needed for timely servicing of the rated obligation. Transfer and other direct sovereign risks addressed in such ratings

include the likelihood of foreign-exchange controls and the imposition of other restrictions on the repayment of foreign debt.

National scale ratings.

Standard & Poor's produces national scale ratings in several countries, including Mexico, Brazil, and Argentina. These ratings are expressed with the traditional letter symbols, but the rating definitions do not conform to those employed for the global scale. The rating definitions of each national scale and its correlation to global scale ratings are unique, so there is no basis for comparability across national scales.

CreditWatch listings and rating outlooks.

A Standard & Poor's rating evaluates default risk over the life of a debt issue, incorporating an assessment of all future events to the extent they are known or can be anticipated. But we also recognize the potential for future performance to differ from initial expectations. Rating outlooks and CreditWatch listings address this possibility by focusing on the scenarios that could result in a rating change.

Ratings appear on CreditWatch when an event or deviation from an expected trend has occurred or is expected, and additional information is necessary to take a rating action. For example, an issue is placed under such special surveillance as the result of mergers, recapitalizations, regulatory actions, or unanticipated operating developments. Such rating reviews normally are completed within 90 days, unless the outcome of a specific event is pending.

A listing does not mean a rating change is inevitable. However, in some cases, it is certain that a rating change will occur, and only the magnitude of the change is unclear. In those instances—and generally, whenever possible—the range of alternative ratings that could result is shown.

An issuer cannot automatically appeal a CreditWatch listing, but analysts are sensitive to issuer concerns and the fairness of the process.

Rating changes also can occur without the issue appearing on CreditWatch beforehand. In fact, if all necessary information is available, ratings should immediately be changed to reflect the changed circumstances; there should be no delay merely to signal via a CreditWatch placement that a ratings change is to occur.

A rating outlook is assigned to all long-term debt issuers and assesses the potential for a rating change. Outlooks have a longer time frame than CreditWatch listings—typically, two years—and incorporate trends or risks with less certain implications for credit quality. An outlook is not necessarily a precursor of a rating change or a CreditWatch listing.

CreditWatch designations and outlooks may be “positive,” which indicates a rating may be raised, or “negative,” which indicates a rating may be lowered. “Developing” is used for those unusual situations in which future events are so unclear that the rating potentially may be raised or lowered.

“Stable” is the outlook assigned when ratings likely will not be changed, but it should not be confused with expected stability of the company's financial performance.

The Rating Process

Most corporations approach Standard & Poor's to request a rating prior to sale or registration of a debt issue. That way, first-time issuers can receive an indication of what rating to expect. Issuers with rated debt outstanding also want to know in advance the impact on their ratings of the company's issuing additional debt. (In any event, as a matter of policy, in the U.S., we assign and publish ratings for all public corporate debt issues over \$100 million—with or without a request from the issuer. Public transactions are defined as those registered with the SEC, those with future registration rights, and other 144A deals that have broad distribution.)

In all instances, Standard & Poor’s staff will contact the issuer to elicit its cooperation. The analysts with the greatest relevant industry expertise are assigned to evaluate the credit and commence surveillance of the company. Our analysts generally concentrate on one or two industries, covering the entire spectrum of credits within those industries. (Such specialization allows accumulation of expertise and competitive information better than if junk-bond issuers were followed separately from high-grade issuers.) While one industry analyst takes the lead in following a given issuer and typically handles day-to-day contact, a team of experienced analysts is always assigned to the rating relationship with each issuer.

Meeting with management.

A meeting with corporate management is an integral part of Standard & Poor’s rating process. The purpose of such a meeting is to review in detail the company’s key operating and financial plans, management policies, and other credit factors that have an impact on the rating. Management meetings are critical in helping to reach a balanced assessment of a company’s circumstances and prospects.

Participation.

The company typically is represented by its chief financial officer. The chief executive officer usually participates when strategic issues are reviewed (usually the case at the initial rating assignment). Operating executives often present detailed information regarding business segments. Outside advisors may be helpful in preparing an effective presentation. We neither encourage nor discourage their use: it is entirely up to management whether advisors assist in the preparation for meetings, and whether they attend the meetings.

Scheduling.

Management meetings usually are scheduled at least several weeks in advance, to assure mutual availability of the appropriate participants and to allow adequate preparation time for our credit analysts. In addition, if a rating is being sought for a pending issuance, it is to the issuer’s advantage to allow about three weeks following a meeting for Standard & Poor’s to complete its review process. More time may be needed in certain cases, for example, if extensive review of documentation is necessary. However, where special circumstances exist and a quick turnaround is needed, we will endeavor to meet the requirements of the marketplace.

Facility tours.

Touring major facilities can be very helpful for Standard & Poor’s in gaining an understanding of a company’s business. However, this is generally not critical. Given the time constraints that typically arise in the initial rating exercise, arranging facility tours may not be feasible. As discussed below, such tours may well be a useful part of the subsequent surveillance process.

Preparing for meetings.

Corporate management should feel free to contact its designated Standard & Poor’s credit analyst for guidance in advance of the meeting regarding the particular areas that will be emphasized in the analytic process. Published ratings criteria, as well as industry commentary and articles on peer companies from CreditWeek, may also be helpful to management in appreciating the analytic perspective. However, Standard & Poor’s prefers not to provide detailed, written lists of questions, because these tend to constrain spontaneity and artificially limit the scope of the meeting.

Well in advance of the meeting, the company should submit background materials (ideally, several sets), including:

- five years of audited annual financial statements;

- the last several interim financial statements;
- narrative descriptions of operations and products; and
- if available, a draft registration statement or offering memorandum, or equivalent.

Apart from company-specific material, relevant industry information also may be useful. While not mandatory, written presentations by management often provide a valuable framework for the discussion. Such presentations typically mirror the format of the meeting discussion, as outlined below. Where a written presentation is prepared, it is particularly useful for Standard & Poor's analytical team to be afforded the opportunity to review it in advance of the meeting. There is no need to try to anticipate all questions that might arise. If additional information is necessary to clarify specific points, it can be provided subsequent to the meeting. In any case, our credit analysts generally will have follow-up questions that arise as the information covered at the management meeting is further analyzed.

Confidentiality.

A substantial portion of the information set forth in company presentations is highly sensitive and is provided by the issuer to Standard & Poor's solely for the purpose of arriving at ratings. Such information is kept strictly confidential by the ratings group. Even if the assigned rating is subsequently made public, any rationales or other information Standard & Poor's publishes about the company will refer only to publicly available corporate information. It is not to be used for any other purpose, nor by any third party, including other Standard & Poor's units. Standard & Poor's maintains a "Chinese Wall" between its rating activities and its equity information services.

Conduct of meeting.

The following is an outline of the topics we typically expect issuers to address in a management meeting:

- the industry environment and prospects;
- an overview of major business segments, including operating statistics and comparisons with competitors and industry norms;
- management's financial policies and financial performance goals;
- distinctive accounting practices;
- management's projections, including income and cash flow statements and balance sheets, together with the underlying market and operating assumptions;
- capital spending plans; and
- financing alternatives and contingency plans.

It should be understood that Standard & Poor's ratings are not based on the issuer's financial projections or management's view of what the future may hold. Rather, ratings are based on our assessment of the company's prospects. However, management's financial projections are a valuable tool in the rating process, because they indicate management's plans, how management assesses the company's challenges, and how it intends to deal with problems. Projections also depict the company's financial strategy in terms of anticipated reliance on internal cash flow or outside funds, and they help articulate management's financial objectives and policies.

Management meetings with companies new to the rating process typically last two to four hours—or longer if the company's operations are particularly complex. If the issuer is domiciled in a country new to ratings or participates in a new industry, more time is usually required. When, in addition, there are major accounting issues to be covered, meetings can last a full day or two. Short, formal presentations by management may be useful to introduce areas for discussion. Our preference is for meetings to be largely informal, with ample time allowed for questions and responses. (At management meetings, as well as at all

other times, we welcome the company’s questions regarding our procedures, methodology, and analytical criteria.)

Rating committee.

Shortly after the issuer meeting, a rating committee, normally consisting of five to seven voting members, is convened. A presentation is made by the industry analyst to the rating committee, which has been provided with appropriate financial statistics and comparative analysis. The presentation follows the methodology outlined in the methodology section of Corporate Ratings Criteria. Thus, it includes analysis of the nature of the company’s business and its operating environment; evaluation of the company’s strategic and financial management; financial analysis; and a rating recommendation. When a specific issue is to be rated, there is an additional discussion of the proposed issue and terms of the indenture.

Once the rating is determined, the company is notified of the rating and the major considerations supporting it. It is our policy to allow the issuer to respond to the rating decision prior to its publication by presenting new or additional data. Standard & Poor’s entertains appeals in the interest of having available the most information possible and, thereby, the most accurate ratings. In the case of a decision to change an extant rating, any appeal must be conducted as expeditiously as possible, i.e., within a day or two. The committee reconvenes to consider the new information. After notifying the company, the rating is disseminated via the media, or released to the company for dissemination in the case of private placements or corporate credit ratings.

In order to maintain the integrity and objectivity of the rating process, Standard & Poor’s internal deliberations and the identities of those who sat on a rating committee are kept confidential, and not disclosed to the issuer.

Surveillance.

Corporate ratings on publicly distributed issues are monitored for at least one year. The company can then elect to pay Standard & Poor’s to continue surveillance. Ratings assigned at the company’s request have the option of surveillance, or being on a “point-in-time” basis. Surveillance is performed by the same industry analysts who work on the assignment of the ratings. To facilitate surveillance, companies are requested to put the primary analyst on mailing lists to receive interim and annual financial statements, press releases, and bank documents, including compliance certificates.

The primary analyst is in periodic telephone contact with the company to discuss ongoing performance and developments. Where these vary significantly from expectations, or where a major, new financing transaction is planned, an update management meeting is appropriate. We also encourage companies to discuss hypothetically—again, in strict confidence—transactions that perhaps are only being contemplated (e.g., acquisitions, new financings), and we endeavor to provide frank feedback about the potential ratings implications of such transactions.

In any event, management meetings routinely are scheduled at least annually. These meetings enable analysts to keep abreast of management’s view of current developments, discuss business units that have performed differently from original expectations, and be apprised of changes in plans. As with initial management meetings, Standard & Poor’s willingly provides guidance in advance regarding areas it believes warrant emphasis at the meeting. Typically, there is no need to dwell on basic information covered at the initial meeting.

Apart from discussing revised projections, it is often helpful to revisit the prior projections and to discuss how actual performance varied, and why.

A significant and increasing proportion of meetings with company officials takes place on the company’s premises. There are several reasons: to facilitate increased exposure to management personnel—particularly

at the operating level; obtain a first-hand view of critical facilities; and achieve a better understanding of the company by spending more time reviewing the business units in depth. While we actively encourage meetings on company premises, time and scheduling constraints on both sides dictate that arrangements for these meetings be made some time in advance.

Because the staff is organized by specialty, credit analysts typically meet each year with most major companies in their assigned area to discuss the industry outlook, business strategy, and financial forecasts and policies. This way, competitors' forecasts of market demand can be compared with one another, and we can assess implications of competitors' strategies for the entire industry. The credit analyst can judge management's relative optimism regarding market growth and relative aggressiveness in approaching the marketplace.

Importantly, the analyst compares business strategies and financial plans over time and seeks to understand how and why they changed. This exercise provides insights regarding management's abilities with respect to forecasting and implementing plans. By meeting with different managements over the course of a year and the same management year after year, analysts learn to distinguish between those with thoughtful, realistic agendas and those with wishful approaches.

Management credibility is achieved when the record demonstrates that a company's actions are consistent with its plans and objectives. Once earned, credibility can help to support continuity of a particular rating level, because Standard & Poor's can rely on management to do what it says to restore creditworthiness when faced with financial stress or an important restructuring. The rating process benefits from the unique perspective on credibility gained by extensive evaluation of management plans and financial forecasts over many years.

Rating changes.

As a result of the surveillance process, it sometimes becomes apparent that changing conditions require reconsideration of the outstanding debt rating. When this occurs, the credit analyst undertakes a preliminary review, which may lead to a CreditWatch listing. This is followed by a comprehensive analysis, communication with management, and a presentation to the rating committee. The rating committee evaluates the matter, arrives at a rating decision, and notifies the company—after which Standard & Poor's publishes the rating. The process is exactly the same as the rating of a new issue.

Reflecting this surveillance, the timing of rating changes depends neither on the sale of new debt issues nor on our internal schedule for reviews.

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Corporate Ratings Criteria—Rating Methodology: Industrials & Utilities; Cyclicity; Loan Covenants; Country Risk

Primary Credit Analysts

Solomon B Samson
New York
(1) 212-438-7653
sol_samson@
standardandpoors.com

Scott Sprinzen
New York
(1) 212-438-7812
scott_sprinzen@
standardandpoors.com

Emmanuel Dubois-Pelerin
Paris
(33) 1-4420-6673
emmanuel_dubois-pelerin@
standardandpoors.com

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Rating Methodology: Industrials & Utilities

Standard & Poor's uses a format that divides the analytical task, so that all salient issues are considered. The framework we use looks first at fundamental business analysis; then comes financial analysis. There are several categories underlying both the business and financial risk assessment. These can vary by industry, in order to focus on the most relevant factors.

As a further analytical discipline, each category is scored in the course of the ratings process, and there are also scores for the overall business risk profile and the overall financial risk profile. (Analytical groups choose various ways to express these scores: Some use letter symbols, while others prefer to use numerical scoring systems. For example, utilities scoring is from 1 to 10, with 1 representing the best. Companies with a strong business profile—typically, transmission/distribution utilities—are scored 1 through 4; those facing greater competitive threats—such as power generators—would wind up with an overall business profile score of 7 to 10.) But there are no formulae for combining scores to arrive at a rating conclusion: ratings are an art as much as a science. A rating is, in the end, an opinion.

Corporate credit analysis factors.

- Business risk
- Industry characteristics
- Competitive position: Marketing; Technology; Efficiency; Regulation
- Management
- Financial risk: Financial characteristics; Financial policy; Profitability; Capital Structure, Cash-flow protection; Financial flexibility.

Indeed, it is critical to understand that the rating process is not limited to the examination of various financial measures. Proper assessment of debt protection levels requires a broader framework, involving a thorough review of business fundamentals, including judgments about the company's competitive position and evaluation of management and its strategies. Clearly, such judgments are highly subjective; indeed, subjectivity is at the heart of every rating.

At times, a rating decision may be influenced strongly by financial measures. At other times, business risk factors may dominate. If a company is strong in one respect and weak in another, the rating will balance the different factors. The degree of a company's business risk sets the expectations for the financial risk it can afford at any rating level. In other words, the analysis of industry characteristics and how a company is positioned to succeed in that environment establish the financial benchmarks used in the quantitative part of the analysis (see "Ratio Guidelines").

Industry risk.

Each rating analysis begins with an assessment of the company's environment. The degree of operating risk facing a participant in a given business depends on the dynamics of that business. This analysis focuses on the strength of industry prospects, as well as the competitive factors affecting that industry.

The many factors assessed include industry prospects for growth, stability, or decline, and the pattern of business cycles (see "Cyclicalities"). It is critical, for example, to determine vulnerability to technological change, labor unrest, or regulatory interference. Industries that have long lead times or that require fixed plant of a specialized nature face heightened risk. The implications of increasing competition obviously are crucial. Standard & Poor's knowledge of investment plans of the major players in any industry offers a unique vantage point from which to assess competitive prospects.

While any particular profile category can be the overriding rating consideration, the industry risk assessment can be a key factor in determining the rating to which any participant in the industry can aspire. It would be hard to imagine assigning 'AA' and 'AAA' debt ratings to companies with extensive participation in industries of above-average risk, regardless of how conservative their financial posture. Examples of these industries are integrated steel makers, tire and rubber companies, home-builders, and most of the mining sector.

Conversely, some industries are regarded favorably. They are distinguished by such traits as steady demand growth, ability to maintain margins without impairing future prospects, flexibility in the timing of capital outlays, and moderate capital intensity. Industries possessing one or more of these attributes include manufacturers of branded consumer products, drug companies, and publishing and broadcasting. High marks in this category do not translate into high ratings for all industry participants, but the cushion of strong industry fundamentals provides helpful support.

Again, the industry risk assessment sets the stage for analyzing specific company risk factors and establishing the priority of these factors in the overall evaluation. For example, if technology is a critical competitive factor, R&D prowess is stressed. If the industry produces a commodity, cost of production assumes major importance.

Keys to success.

As part of the industry analysis, key rating factors are identified: the keys to success and areas of vulnerability. A company's rating is, of course, crucially affected by its ability to achieve success and avoid pitfalls in its business.

The nature of competition is, obviously, different for different industries. Competition can be based on price, quality of product, distribution capabilities, image, product differentiation, service, or some other factor. Competition may be on a national basis, as is the case with major appliances. In other industries, such

as chemicals, competition is global, and in still others, such as cement, competition is strictly regional. The basis for competition determines which factors are analyzed for a given company.

For any particular company, one or more factors can hold special significance, even if that factor is not common to the industry. For example, the fact that a company has only one major production facility normally is regarded as an area of vulnerability. Similarly, reliance on one product creates risk, even if the product is highly successful. For example, a pharmaceutical company has reaped a financial bonanza from just two medications. The company's debt is reasonably highly rated, given its exceptional profits and cash flow, but it would be viewed still more favorably were it not for the dependence on only two drugs (which are, after all, subject to competition and patent expiration).

Diversification factors.

When a company participates in more than one business, each segment is separately analyzed. A composite is formed from these building blocks, weighting each element according to its importance to the overall organization. The potential benefits of diversification, which may not be apparent from the additive approach, are then considered.

A truly diversified company will not have a single business segment that is dominant. One major automobile company received much attention for "diversifying" into aerospace and computer processing. But it never became a diversified company, because its success was still determined substantially by one line of business.

Limited credit is given if the various lines of business react similarly to economic cycles. For example, diversification from nickel into copper cannot be expected to stabilize performance; similar risk factors are associated with both metals.

Most critical is a company's ability to manage diverse operations. The skills and practices needed to run a business differ greatly among industries, not to mention the challenge posed by participation in several different industries. For example, a number of old-line industrial companies rushed to diversify into financial services, only to find themselves saddled with unfamiliar businesses they had difficulty managing.

Some companies have adopted a portfolio approach to their diverse holdings. The business of buying and selling businesses is different from running operations and is analyzed differently. The ever-changing character of the company's assets typically is viewed as a negative. On the other hand, there is often an offsetting advantage: greater flexibility in raising funds if each line of business is a discrete unit that can be sold off.

Size considerations.

Standard & Poor's has no minimum size criterion for any given rating level. However, size turns out to be significantly correlated to ratings. The reason: size often provides a measure of diversification, and/or affects competitive position.

Small companies also can possess the competitive benefits of a dominant market position, although that is not common. Obviously, the need to have a broad product line or a national marketing structure is a factor in many businesses and would be a rating consideration. In this sense, sheer mass is not important; demonstrable market advantage is.

Market-share analysis often provides important insights. However, large shares are not always synonymous with competitive advantage or industry dominance. For instance, if an industry has a number of large but comparably sized participants, none may have a particular advantage or disadvantage. Conversely, if an industry is highly fragmented, even the large companies may lack pricing leadership potential. The textile industry is an example.

Small companies are, almost by definition, more concentrated in terms of product, number of customers, or geography. In effect, they lack some elements of diversification that can benefit larger companies. To the extent that markets and regional economies change, a broader scope of business affords protection. This consideration is balanced against the performance and prospects of a given business.

In addition, lack of financial flexibility is usually an important negative factor in the case of very small companies. Adverse developments that would simply be a setback for companies with greater resources could spell the end for companies with limited access to funds.

There is a controversial notion that small, growth-oriented companies represent a better credit risk than older, declining companies. While this is intuitively appealing to some, it ignores some important considerations. Large companies have substantial staying power, even if their businesses are troubled. Their constituencies—including large numbers of employees—can influence their fates. Banks' exposure to these companies may be quite extensive, creating a reluctance to abandon them. Moreover, such companies often have accumulated a lot of peripheral assets that can be sold. In contrast, the promise of small companies can fade very quickly and their minuscule equity bases will offer scant protection, especially given the high debt burden some companies deliberately assume.

Fast growth often is subject to poor execution, even if the idea is well conceived. There also is the risk of overambition. Moreover, some companies tend to continue high-risk financial policies as they aggressively pursue ever-greater objectives, limiting any credit-quality improvement. There is little evidence to suggest growth companies initially receiving speculative-grade ratings have particular upgrade potential. Many more defaulted over time than achieved investment grade. Oil exploration, retail, and high technology companies especially have been vulnerable, even though their great potential was touted at the time they first came to market.

Management evaluation.

Management is assessed for its role in determining operational success and also for its risk tolerance. The first aspect is incorporated in the business-risk analysis; the second is weighed as a financial policy factor.

Subjective judgments help determine each aspect of management evaluation. Opinions formed during the meetings with senior management are as important as management's track record. While a track record may seem to offer a more objective basis for evaluation, it often is difficult to determine how results should be attributed to management's skills. The analyst must decide to what extent they are the result of good management; devoid of management influence; or achieved despite management.

Plans and policies are judged for their realism. How they are implemented determines the view of management consistency and credibility. Stated policies often are not followed, and the ratings may reflect skepticism until management has established credibility. Credibility can become a critical issue when a company is faced with stress or restructuring, and the analyst must decide whether to rely on management to carry out plans for restoring creditworthiness.

Other organizational/corporate culture considerations.

Standard & Poor's evaluation is sensitive to potential organizational problems. These include situations where:

- The company has a highly aggressive business model, e.g., growing through large acquisitions or expansion into unproven markets;
- The company has made frequent and significant changes to its strategy;
- The company has a history of retrenchment and restructuring;
- There is significant organizational reliance on an individual, especially one who may be nearing retirement;

- The transition from entrepreneurial or family-bound to professional management has yet to be accomplished;
 - Management compensation is excessive or poorly aligned with the interests of stakeholders;
 - There is excessive management turnover;
 - The company is involved in legal, regulatory, or tax disputes to a significantly greater extent than its peers;
 - The company has an excessively complex legal structure, perhaps employing intricate off-balance-sheet structures;
 - The relationship between organizational structure and management strategy is unclear;
 - Shareholders impose constraints on management prerogatives;
 - The finance function and finance considerations do not receive high organizational recognition;
 - The company is particularly aggressive in the application of accounting standards, or demonstrates a lack of opaqueness in its financial reporting (see also “Accounting Characteristics,” below), and;
 - Management’s financial policy is exceptionally aggressive, as evidenced by heavy debt usage or a history of aggressive actions to directly reward shareholders (see also “Financial Policy,” below).
- (See also “The Evolving Role of Corporate Governance in Credit Rating Analysis.”)

Measuring performance and risk.

Having evaluated the issuer’s competitive position and operating environment, the analysis proceeds to several financial categories. To reiterate: the company’s business-risk profile determines the level of financial risk appropriate for any rating category.

Financial risk is portrayed largely through quantitative means, particularly by using financial ratios (see “Key Utility Financial Ratios and Ratio Guidelines”). Profitability benchmarks vary greatly by industry, but broad measures of financial risk are correlated to the company’s level of business risk (which incorporates both the industry and position within the industry).

Several analytical adjustments typically are required to calculate ratios for an individual company. Cross-border comparisons require additional care, given the differences in accounting conventions and local financial systems.

Accounting characteristics and information risk.

Financial statements (and related disclosures) serve as our primary source of information regarding the financial condition and financial performance of industrial or utility companies. The analysis of financial statements begins with a review of accounting characteristics. The purpose is to determine whether ratios and statistics derived from the statements can be used appropriately to measure a company’s performance and position relative to both its direct peer group and the larger universe of corporates. The rating process is, in part, one of comparisons, so it is important to have a common frame of reference.

The starting point of accounting quality analysis is an understanding of different national and international accounting frameworks, as these vary widely. Recent moves to adopt International Financial Reporting Standards (IFRS) in many countries—including Australia, Canada, and across the European Union—as well as an ongoing effort to effect convergence between U.S. GAAP and IFRS, ultimately could enhance comparability among companies. However, this ought not be seen as a panacea. Within IFRS, just as within the separate national accounting systems, companies are called upon to choose among numerous alternative methods—for example, cost as opposed to fair-value methods—and the resulting differences can have a significant effect on comparability among peers. In addition, even in applying the same methods within the same accounting frameworks, companies show varying degrees of aggressiveness in the underlying estimates and judgments they employ. Moreover, the carrying value of assets can be greatly influenced by the historical development of a company—for example, whether it has grown primarily through internal development or

through acquisitions, or whether it previously underwent a leveraged buyout or bankruptcy reorganization—and this also affects many of the quantitative measures employed in financial analysis.

Some of the accounting issues to be reviewed include:

- Consolidation basis. The accounting approach to consolidation may differ from how we define the economic entity for analytical purposes.
- Revenue and expense recognition. For example, percentage of completion compared with completed contract in the construction industry;
- Cash and investments. For example, are investments valued at cost or market?
- Receivables—trade and finance. For example, how conservative are loss provisions?
- Inventory valuation methods. For example, FIFO or LIFO;
- Fixed assets—including depreciation methods and asset lives;
- Intangible assets, including treatment of goodwill;
- Postretirement benefits obligations (see discussion in the “Criteria Topics” section);
- Other liabilities and contingent obligations, recognized on the balance sheet and otherwise, such as operating leases, environmental liabilities, asset retirement obligations, guarantees, litigation;
- Derivatives and hedges;
- Foreign currency;
- Inflation accounting;
- Cash-flow matters. For example, to what extent are R&D and interest costs expensed rather than capitalized? To what extent is operating cash flow affected by nonrecurring items?
- Segment reporting. How are segments defined, and how are transfer prices for transactions between segments determined?

To the extent possible, analytical adjustments are made to better portray reality and to level the differences among companies. Although it is rarely possible to completely recast a company’s financial statements, it is important to at least have some notion of the extent to which different financial measures are overstated or understated. Apart from its importance to the quantitative aspects of the analysis, conclusions regarding accounting characteristics and financial transparency can also influence qualitative aspects of the analysis, such as the assessment of management, including financial policy and internal information systems.

As part of its surveillance process, Standard & Poor’s closely monitors the potential impact of pending changes in accounting standards. Such changes do not have any direct impact on credit quality; however, accounting changes may reveal new information about a company—information that then needs to be factored into our understanding of the company. For example, the ratings for a few U.S. companies were lowered following the implementation of new accounting for retiree medical liabilities in the early 1990s, because little information previously was available about these obligations. It also is possible accounting changes could trigger financial covenant violations or regulatory or tax consequences, and could even influence changes in business behavior, such as a change in hedging policy.

Standard & Poor’s typically relies on audited financial statements, and does not view its role as “auditing the auditors.” However, a rating can sometimes be assigned even in the absence of audited statements. This especially is the case when a new company is formed from a division of another company that did produce audited financials. In other cases, there may be unaudited physical data—such as oil-production data—that corroborates company results. In any event, to the extent “information risk” exists, it can influence the level of the rating assigned. In cases where the information uncertainty is so significant that it precludes a meaningful analysis, we would decline to assign a rating.

An increasing number of companies are faced with the finding of accounting and financial reporting irregularities of various types. Their auditors may identify “material weakness” in the accounting systems. Actual mistakes—or even fraud—may have been uncovered. The SEC or other regulatory agencies may

order “formal” or “informal” investigations of the accuracy and/or adequacy of financial reporting. In many instances, there is no way for us to immediately know how serious any of these troubling events will turn out to be. The underlying reality can range from an almost trivial problem to complete audit and financial failure. (And, occasionally, a small problem can turn into a large one, as “headline risk” takes a toll on the company’s access to financing.)

Standard & Poor’s seeks to assess the potential ramifications, possibly through further discussions with management, in-house or external legal counsel, auditors, independent members of the board and the audit committee. However, in some such cases, detailed information may not be available for some time, and we will react, if necessary, based on the best available information, through CreditWatch actions, intermediate rating changes or in extreme cases with the suspension or withdrawal of the ratings.

Financial policy.

Standard & Poor’s attaches great importance to management’s philosophies and policies involving financial risk. A surprising number of companies have not given this question serious thought, much less reached strong conclusions. For many others, debt leverage (calculated without any adjustment to reported figures) is the only focal point of such policy considerations. More sophisticated business managers have thoughtful policies that recognize cash-flow parameters and the interplay between business and financial risk.

Even companies that have set goals may not have the wherewithal, discipline, or management commitment to achieve these objectives. A company’s leverage goals, for example, need to be viewed in the context of its past record and the financial dynamics affecting the business. If management states, as many do, that its goal is to operate with a 35% debt-to-capital ratio, we factor that into our analysis only to the extent it appears plausible. For example, if a company has aggressive spending plans, that 35% goal would carry little weight, unless management has committed to a specific program of asset sales, equity sales, or other actions that in a given time period would produce the desired results.

Standard & Poor’s does not encourage companies to manage themselves with an eye toward a specific rating. The more appropriate approach is to operate for the good of the business as management sees it, and let the rating follow. Certainly, prudence and credit quality should be among the most important considerations, but financial policy should be consistent with the needs of the business rather than an arbitrary constraint.

If opportunities are foregone merely to avoid financial risk, the company is making poor strategic decisions. In fact, it may be sacrificing long-term credit quality for the facade of low risk in the near term. One financial article described a company that curtailed spending expressly “to become an ‘A’-rated company.” As a result, “...the company’s business responded poorly to an increase in market demand. Needless to say, the sought-after ‘A’ rating continued to elude the company.”

In any event, pursuit of the highest rating attainable is not necessarily in the company’s best interests. ‘AAA’ may be the highest rating, but that does not suggest that it is the “best” rating. Typically, a company with virtually no financial risk is not optimal as far as meeting the needs of its various constituencies. An underleveraged company is not minimizing its cost of capital, thereby depriving its owners of potentially greater value for their investment. In this light, a corporate objective of having its debt rated ‘AAA’ or ‘AA’ is at times suspect. Whatever a company’s financial track record, an analyst must be skeptical if corporate goals are implicitly irrational. A company’s “conservative financial philosophy” must be consistent with its overall goals and needs.

Profitability and coverage.

Profit potential is a critical determinant of credit protection. A company that generates higher operating margins and returns on capital has a greater ability to generate equity capital internally, attract capital

externally, and withstand business adversity. Earnings power ultimately attests to the value of the company's assets, as well. In fact, a company's profit performance offers a litmus test of its fundamental health and competitive position. Accordingly, the conclusions about profitability that are reached at this stage should confirm the subjective earlier assessment of business risk.

The more significant measures of profitability are:

- Pretax, preinterest return on capital;
- Operating income as a percentage of sales; and
- Earnings on business segment assets.

While the absolute levels of ratios are important, it is equally important to focus on trends and compare these ratios with those of competitors. Various industries follow different cycles and have different earnings characteristics. Therefore, what may be considered favorable for one business may be relatively poor for another. For example, the drug industry usually generates high operating margins and high returns on capital. Defense contractors generate low operating margins, but high returns on capital. The pipeline industry has high operating margins and low returns on capital. Comparisons with a company's peers influence our perception of its competitive strengths and pricing flexibility.

The analysis proceeds from historical performance to projected profitability. Because a rating is an assessment of the likelihood of timely payments in the future, the evaluation emphasizes future performance. However, the rating analysis does not attempt to forecast performance precisely or to pinpoint economic cycles. Rather, the forecast analysis considers variability of expected future performance based on a range of economic and competitive scenarios.

Particularly important are management's plans for achieving earnings growth. Can existing businesses provide satisfactory growth, especially in a low-inflation environment, and to what extent are acquisitions or divestitures necessary to achieve corporate goals? At first glance, a mature, cash-generating company offers a great deal of bondholder protection, but Standard & Poor's assumes a corporation's central focus is to augment shareholder value over the long run. In this context, a lack of indicated earnings growth potential is considered a weakness. By itself this may hinder a company's ability to attract financial and human resources. Moreover, limited internal earnings growth opportunities may lead management to pursue growth externally, implying greater business and financial risks.

Earnings also are viewed in relation to a company's burden of fixed charges. Such ratios link profit performance with pure financing considerations, such as aggressiveness of debt usage. The two primary fixed-charge coverage ratios are:

- Earnings before interest and taxes (EBIT) coverage of interest; and
- Earnings before interest and taxes and rent (EBITR) coverage of interest plus total rents.

If preferred stock is outstanding and material, coverage ratios are calculated both including and excluding preferred dividends, to reflect the company's discretion over paying the dividend when under stress. Similarly, if interest payments can be deferred, adjustments to the calculation help capture the company's flexibility in making payments.

To reflect more accurately the ongoing earnings power of the company, reported profit figures are adjusted. These adjustments remove the effect of foreign-exchange gains and losses; litigation reserves; writedowns and other nonrecurring or extra-ordinary gains and losses; and unremitted equity earnings of a subsidiary.

In some countries it is not uncommon for industrial companies to establish their treasury operations as a profit center. In Japan, for example, the term "zaiteku financing" refers to the practice of generating profits through arbitrage and other financial-market transactions. If financial position-taking is a material part of a company's aggregate earnings, Standard & Poor's segregates those earnings to assess the profitability of the

core business. We also may view with skepticism the ability to realize such profits on a sustained basis and may treat them like nonrecurring gains.

Similarly, there are numerous analytical adjustments to the interest amounts. Interest that has been capitalized is added back. An interest component is computed for debt equivalents such as operating leases and receivable sales. Amounts may be subtracted to recognize the impact of borrowings in hyperinflationary environments or borrowings to support cash investments as part of a tax arbitrage strategy. And interest associated with finance operations is segregated in accordance with the methodology spelled out in “Finance Subsidiaries’ Rating Link to Parent”.

Earnings differences.

Shareholder pressures and accounting standards in certain countries—such as the U.S.—can result in companies seeking to maximize profits on a quarter-to-quarter or short-term basis. In other regions—aided by local tax regulation—it is normal practice to take provisions against earnings in good times to provide a cushion against downturns, resulting in a long-run “smoothing” of reported profits. Given local accounting standards, it is not rare to see a Swiss or German company vaguely report “other income” or “other expenses”—largely provisions or provision reversals—as the largest line items in a profit and loss account. In meetings with management, Standard & Poor’s discusses provisioning and depreciation practices to see to what extent a company employs noncash charges to reduce or bolster earnings.

Capital structure/leverage and asset protection.

Ratios employed by Standard & Poor’s to capture the degree of leverage used by a company include:

- Total debt/total debt + equity;
- Total debt + off-balance-sheet liabilities/total debt + off-balance-sheet liabilities + equity; and
- Total debt/total debt + market value of equity.

Traditional measures focusing on long-term debt have lost much of their significance, because companies rely increasingly on short-term borrowings. It is now commonplace to find permanent layers of short-term debt, which finance not only seasonal working capital but also an ongoing portion of the asset base.

In many countries, notably in Japan and Europe, local practice is to maintain a high level of debt while holding a large portfolio of cash and marketable securities. Many companies manage their finances on a “net-debt” basis. In these situations, we focus on net debt to capital—and, similarly, net interest coverage, and cash flow to net debt. When a company consistently demonstrates such excess liquidity, debt leverage is calculated by netting out excess liquidity from short-term borrowings. Each situation is analyzed on a case-by-case basis, subject to additional information regarding a company’s liquidity position, normal working cash needs, nature of short-term borrowings, and funding philosophy. Funds earmarked for future use, such as an acquisition or a capital project, are not netted out. This approach also is used, for example, in the case of cash-rich U.S. pharmaceutical companies that enjoy tax arbitrage opportunities with respect to these cash holdings.

What is considered “debt” and “equity” for the purpose of ratio calculation is not always so simple (See “Equity Credit: What It Is, And How To Get It”). In the case of hybrid securities, the analysis is based on their features—not the accounting or the nomenclature. Pension and retiree health obligations are similar to debt in many respects. Their treatment is explained in “Postretirement Obligations.”

Indeed, not all subtleties and complexities lend themselves to ratio analysis. Original-issue discount debt, such as zero coupon debt, is included at the accreted value. However, since there is no sinking fund provision, the debt increases with time, creating a moving target. (The need, eventually, to refinance this growing amount represents another risk.) In the case of convertible debt, it is somewhat presumptuous to predict whether and when conversion will occur, making it difficult to reflect the real risk profile in ratio form.

A company's asset mix is a critical determinant of the appropriate leverage for a given level of risk. Assets with stable cash flow or market values justify greater use of debt financing than those with clouded marketability. For example, grain or tobacco inventory would be viewed positively, compared with apparel or electronics inventory; transportation equipment is viewed more favorably than other equipment, given its suitability for use by other companies.

Accordingly, we believe it is critical to analyze each type of business and asset class in its own right. While FASB and IAS now require consolidation of nonhomogenous business units, we analyze each separately. This is the basis for our methodology for analyzing captive finance companies (See "Finance Subsidiaries' Rating Link to the Parent").

Asset valuation.

Knowing the true values to assign a company's assets is key to the analysis. Leverage as reported in the financial statements is meaningless if the assets' book values are materially undervalued or overvalued relative to economic value. Standard & Poor's considers the profitability of an asset as an appropriate basis for determining its economic value. Market values of a company's assets or independent asset appraisals can offer additional insights. However, there are shortcomings in these methods of valuation (just as there are with historical cost accounting) that prevent reliance on any single measure. Similarly, ratios using the market value of a company's equity in calculations of leverage are given limited weight as analytical tools. The stock market emphasizes growth prospects and has a short time horizon; it is influenced by changes in alternative investment opportunities and can be very volatile. A company's ability to service its debt is not affected directly by such factors.

The analytical challenge of which values to use is especially evident in the case of merged and acquired companies. Accounting standards allow the acquired company's assets and equity to be written up to reflect the acquisition price, but the revalued assets have the same earning power as before; they cannot support more debt just because a different number is used to record their value. Right after the transaction, the analysis can take these factors into account, but down the road the picture becomes muddled. We attempt to normalize for purchase accounting, but the ability to relate to pre-acquisition financial statements and to make comparisons with peer companies is limited.

Presence of a material goodwill account indicates the impact of acquisitions and purchase accounting on a company's equity base. Intangible assets are no less "valuable" than tangible ones. But comparisons are still distorted, because other companies cannot record their own valuable business intangibles, i.e., those that have been developed, rather than acquired. This alone requires some analytical adjustment when measuring leverage. In addition, analysts are entitled to be more skeptical about earning prospects that rely on turnaround strategies or "synergistic" mergers.

Off-balance-sheet financing.

Analysis of liabilities is not limited to those shown on the company's balance sheet. Off-balance-sheet items factored into the leverage analysis include:

- Operating leases;
- Guarantees, debt of joint ventures, and unconsolidated subsidiaries;
- Take-or-pay contracts and obligations under throughput and deficiency agreements;
- Receivables that have been factored, transferred, or securitized; and
- Contingent liabilities, such as potential legal judgments or lawsuit settlements.

Various methodologies are used to determine the proper adjustment value for each off-balance-sheet item. In some cases, the adjustment is straightforward. For example, the amount of guaranteed debt can simply be

added to the guarantor's liabilities to reflect the potential burden of this contingent liability. Other adjustments are more complex or less precise.

Nonrecourse debt of a joint venture may be attributed to the parent companies, especially if they have a strategic tie to the operation. The analysis may burden one parent with a disproportionate amount of the debt if that parent has the greater strategic interest or operating control or its ability to service the joint-venture debt is greater. Other considerations that affect a company's willingness to walk away from such debt—and other nonrecourse debt—include shared banking relationships and common country location. In some instances, the debt may be so large in relation to the owner's investment that the incentives to support the debt are minimized. In virtually all cases, however, the parent likely would invest additional amounts before deciding to abandon the venture. Accordingly, adjustments would be made to reflect the owner's current and projected investment, even if the venture's debt were not added to the parent's balance sheet.

In the case of contingencies, estimates are developed. Insurance coverage is estimated, and a present value is calculated if the payments will stretch over many years. The resulting amount is viewed as a corporate liability from an analytical perspective. The sale or securitization of accounts receivable represents a form of off-balance-sheet financing (i.e., whenever such assets continue to be generated on an ongoing basis for the company). If proceeds are used to reduce other debt, the impact on credit quality is neutral. (There can be some incremental benefit to the extent that the company has expanded access to capital, and this financing may be lower in cost. However, there may also be an offset in the higher cost of unsecured financing.) For ratio calculations, Standard & Poor's adds back the amount of receivables and a like amount of debt. This eliminates the distorting, cosmetic effect of using an off-balance-sheet technique and allows better comparison with other companies that have chosen other avenues of financing. Similarly, if a company uses proceeds from receivables sales to invest in riskier assets—and not to reduce other debt—the adjustment will reveal this increase in financial risk.

The debt-equivalent value of operating leases is determined by calculating the present value of minimum operating lease obligations as reported in the annual report's footnotes. The lease amount beyond five years is assumed to mature at a rate approximating the minimum payment due in year five.

The variety of lease types may require the analyst to obtain additional information or use estimates to evaluate lease obligations. This is needed whenever lease terms are shorter than the assets' expected economic lives. For example, retailers report only the first period of a lease written with an initial period and several renewal options over a long term. Another limitation develops when a portion of the lease payment is contingent, e.g., a percentage of sales, as is often the case in the retailing industry.

(Traditionally, operating leases were recognized by the "factor method": annual lease expense is multiplied by a factor that reflects the average life of the company's leased assets. This method is an attempt to capitalize the asset, rather than just the use of the asset for the lease period. However, the method can overstate the asset to be capitalized by failing to recognize asset use over the course of the lease. It also is too arbitrary to be realistic.)

Preferred stock.

Preferred stocks can qualify for treatment as equity or be viewed as debt—or something between debt and equity—depending on their features and the circumstances. The degree of equity credit for various preferreds is discussed in "Equity Credit." Preferred stocks with a maturity receive diminishing equity credit as they progress toward maturity. In the same vein, sinking-fund preferreds are less equity-like. The sinking fund requirements themselves are of a fixed, debt-like nature. Moreover, they usually are met through debt issuance, which results in the sinking-fund preferred being just the precursor of debt. It would be misleading to view sinking-fund preferreds—particularly that portion coming due in the near to intermediate term—as equity, only to have each payment convert to debt on the sinking fund's payment date.

A preferred that may eventually be refinanced with debt is viewed as a debt equivalent, not equity, all along. Auction preferreds, for example, are “perpetual” on the surface. However, they often represent merely a temporary debt alternative for companies that are not current taxpayers—until they once again can benefit from tax deductibility of interest expense. Moreover, the holders of these preferreds would pressure for a redemption in the event of a failed auction or even a rating downgrade.

Redeemable preferred stock issues may also be refinanced with debt once an issuer becomes a taxpayer. Preferreds that can be exchanged for debt at the company’s option also may be viewed as debt in anticipation of the exchange. However, the analysis also would take into account offsetting positives associated with the change in tax status. Often the trigger prompting an exchange or redemption would be improved profitability. Then, the added debt in the capital structure would not necessarily imply lower credit quality. The implications are different for many issuers that do not pay taxes for various other reasons, including availability of tax-loss carry-forwards or foreign tax credits. For them, a change in taxpaying status is not associated with better profitability, while the incentive to turn the preferred into debt is identical.

Cash-flow adequacy.

Interest or principal payments cannot be serviced out of earnings, which is just an accounting concept; payment has to be made with cash. Although there usually is a strong relationship between cash flow and profitability, many transactions and accounting entries affect one and not the other. Analysis of cash-flow patterns can reveal a level of debt-servicing capability that is either stronger or weaker than might be apparent from earnings.

Cash-flow analysis is the single most critical aspect of all credit rating decisions. It takes on added importance for speculative-grade issuers. While companies with investment-grade ratings generally have ready access to external financing to cover temporary cash shortfalls, junk-bond issuers lack this degree of flexibility and have fewer alternatives to internally generated cash for servicing debt.

Cash-flow ratios.

Ratios show the relationship of cash flow to debt and debt service, and also to the company’s needs. Because there are calls on cash other than repaying debt, it is important to know the extent to which those requirements will allow cash to be used for debt service or, alternatively, lead to greater need for borrowing.

Some of the specific ratios considered are:

- Funds from operations/total debt (adjusted for off-balance-sheet liabilities);
- Debt/EBITDA;
- EBITDA/interest;
- Free operating cash flow + interest/interest;
- Free operating cash flow + interest/interest + annual principal repayment obligation (debt-service coverage);
- Total debt/discretionary cash flow (debt payback period);
- Funds from operations/capital spending requirements, and
- Capital expenditures/capital maintenance.

Where long-term viability is more assured (i.e., higher in the rating spectrum) there can be greater emphasis on the level of funds from operations and its relation to total debt burden. These measures clearly differentiate between levels of protection over time. Focusing on debt service coverage and free cash flow becomes more critical in the analysis of a weaker company. Speculative-grade issuers typically face near-term vulnerabilities, which are better measured by free cash flow ratios.

Interpretation of these ratios is not always straightforward; higher values can sometimes indicate problems rather than strength. A company serving a low-growth or declining market may exhibit relatively strong free

cash flow, because of minimal fixed and working capital needs. Growth companies, in comparison, often exhibit thin or even negative free cash flow because investment is needed to support growth. For the low-growth company, credit analysis weighs the positives of strong current cash flow against the danger that this high level of protection might not be sustainable. For the high-growth company, the problem is just the opposite: weighing the negatives of a current cash deficit against prospects of enhanced protection once current investment begins yielding cash benefits. There is no simple correlation between creditworthiness and the level of current cash flow.

Measuring cash flow.

Discussions about cash flow often suffer from lack of uniform definition of terms. Table 1 illustrates Standard & Poor’s terminology with respect to specific cash flow concepts. At the top is the item from the funds flow statement usually labeled “funds from operations” (FFO) or “working capital from operations.” This quantity is net income adjusted for depreciation and other noncash debits and credits factored into it. Back out the changes in working capital investment to arrive at “operating cash flow.” Next, capital expenditures and cash dividends are subtracted out to arrive at “free operating cash flow” and “discretionary cash flow,” respectively. Finally, cost of acquisitions is subtracted from the running total, proceeds from asset disposals added, and other miscellaneous sources and uses of cash netted together. “Prefinancing cash flow” is the end result of these computations, which represents the extent to which company cash flow from all internal sources has been sufficient to cover all internal needs. The bottom part of the table reconciles prefinancing cash flow to various categories of external financing and changes in the company’s own cash balance. In the example, XYZ Inc. experienced a \$35.7 million cash shortfall in year one, which had to be met with a combination of additional borrowings and a drawdown of its own cash.

Table 1

—Measuring Cash Flow—		
<i>Cash flow summary: XYZ Corp.</i>		
	Year One	Year Two
<i>(Mil. \$)</i>		
Funds from operations (FFO)	18.6	22.3
Dec. (inc.) in noncash current assets	(33.1)	1.1
Inc. (dec.) in nondebt current liabilities	15.1	(12.6)
Operating cash flow	0.5	10.8
(Capital expenditures)	(11.1)	(9.7)
Free operating cash flow	(10.5)	1.0
(Cash dividends)	(4.5)	(5.1)
Discretionary cash flow	(15.0)	(4.1)
(Acquisitions)	(21.0)	0.0
Asset disposals	0.7	0.2
Net other sources (uses) of cash	(0.4)	(0.1)
Prefinancing cash flow	(35.7)	(4.0)
Inc. (dec.) in short-term debt	23.0	0.0
Inc. (dec.) in long-term debt	6.1	13.0
Net sale (repurchase) of equity	0.3	(7.1)
Dec. (inc.) in cash and securities	6.3	(2.0)

Table 1

—Measuring Cash Flow— (cont.'d)	
	35.7
	4.0

The need for capital.

Standard & Poor’s analysis of cash flow in relation to capital requirements begins with an examination of a company’s capital needs, including both working and fixed capital. While this analysis is performed for all debt issuers, it is critically important for fixed capital-intensive companies and growth companies. Most companies seeking working capital are able to finance a significant portion of current assets through trade credit. However, rapidly growing companies typically experience a buildup in receivables and inventories that cannot be financed internally or through trade credit.

Improved working-capital management techniques have, over the recent past, greatly reduced the investment that might otherwise have been required. This makes it difficult to base expectations on extrapolating recent trends. In any event, improved turnover experience would not be a reason to project continuation of such a trend to yet better levels.

Because we evaluate companies as ongoing enterprises, our analysis assumes companies continually will provide funds to maintain capital investments as modern, efficient assets. Cash flow adequacy is viewed from the standpoint of a company’s ability to finance capital-maintenance requirements internally, as well as its ability to finance capital additions. To quantify the requirements for capital maintenance, data typically are provided by the company.

An important dimension of cash flow adequacy is the extent of a company’s flexibility to alter the timing of its capital requirements. Expansions are typically discretionary. However, large plants with long lead times usually involve, somewhere along the way, a commitment to complete the project.

There are companies with cash flow adequate to the needs of their existing businesses, but that are known to be acquisition-minded. Their choice of acquisition as an avenue for growth means this activity must also be anticipated in the credit analysis. Management’s stated acquisition goals and past takeover bids—including those not consummated—provide a basis for judging prospects for future acquisitions.

Liquidity analysis: Key factors for consideration.

Debt characteristics:

- Maturity structure;
- Dependence on commercial paper and other confidence-sensitive forms of debt;
- Exposure to interest rate fluctuations – i.e., fixed/floating mix;
- Credit triggers;
- Rating triggers;
- Financial covenants;
- Material adverse change (MAC) clauses; and
- Defined events of default.

Other potential calls on cash:

- Postretirement benefits obligations;
- Environmental liabilities;
- Asset retirement obligations;
- Take or pay obligations;
- Obligations arising from guarantees and support agreements;
- Obligations arising from derivatives;

- Litigation; and
- Other contingent liabilities.

Operating sources of liquidity:

- Expected near-term free cash flow;
- Ability to liquidate working capital; and
- Flexibility to curtail spending.

Bank credit facilities:

- Total amount of facilities;
- Nature of bank commitments;
- Availability under facilities;
- Facility maturities;
- Bank group quality;
- Evidence of support/lack of support of bank group; and
- Credit triggers (see above).

Other alternative sources of liquidity:

- Cash and other liquid assets;
- Ability to tap debt and equity markets;
- Ability to sell nonstrategic assets;
- Flexibility to curtail common and preferred stock dividends; and
- Parental support.

Financial flexibility and liquidity.

The previously discussed financial factors (profitability, capital structure, cash flow) and liquidity considerations are combined to arrive at an overall view of financial health. In addition, sundry considerations that do not fit in other categories are examined, including serious legal problems, lack of insurance coverage, or restrictive covenants in loan agreements that place the company at the mercy of its bankers. The potential impact of such contingencies is considered, along with the company's contingency plans. Access to various capital markets, affiliations with other entities, and ability to sell assets are important factors in determining a company's options under stress.

Flexibility can be jeopardized when a company is overly reliant on bank borrowings or commercial paper. Reliance on commercial paper without adequate backup facilities is a big negative. An unusually short maturity schedule for long-term debt and limited-life preferred stock also is a negative. In general, a company's experience with different financial instruments gives management better access to capital markets. A company's size and its financing needs can play a role in whether it can raise sufficient funds in the public debt markets. Similarly, a company's role in the national economy—and this is particularly true outside the U.S.—can enhance its access to bank and public funds.

Access to the common stock market may primarily be a question of management's willingness to accept dilution of earnings per share, rather than a question of whether funds are available. (However, in some countries, including Japan and Germany, equity markets may not be so accessible.) When a new common stock offering is projected as part of a company's financing plan, Standard & Poor's tries to measure management's commitment to this plan, and its sensitivity to changes in share price.

As going concerns, companies should not be expected to repay debt by liquidating operations. Clearly, there is little benefit in selling natural resource properties or manufacturing facilities if these must be replaced in a few years. Nonetheless, a company's ability to generate cash through asset disposals enhances its financial flexibility.

Pension obligations, environmental liabilities, and serious legal problems restrict flexibility, apart from the obligations' direct financial implications. For example, a large pension burden can hinder a company's ability to sell assets, because potential buyers will be reluctant to assume the liability, or to close excess, inefficient, and costly manufacturing facilities, which might require the immediate recognition of future pension obligations and result in a charge to equity.

When there is a major lawsuit against a company, suppliers or customers may be reluctant to continue doing business, and the company's access to capital may also be impaired, at least temporarily.

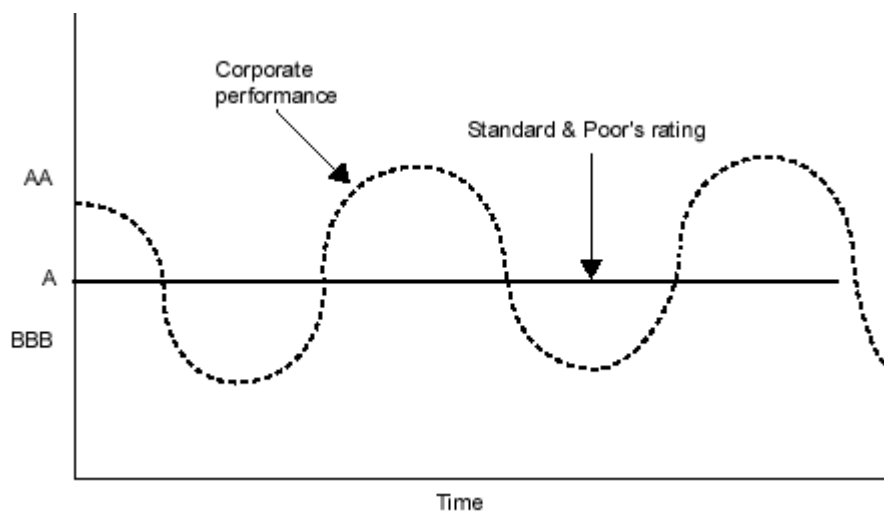
Factoring Cyclical into Corporate Ratings

Standard & Poor's credit ratings are meant to be forward-looking, and their time horizon extends as far as is analytically foreseeable. Accordingly, the anticipated ups and downs of business cycles—whether industry-specific or related to the general economy—should be factored into the credit rating all along. Ratings should never be a mere snapshot of the present situation. Accordingly, ratings are held constant throughout the cycle, or, alternatively, the rating does vary—but within a relatively narrow band.

Cyclical and business risk.

Cyclical is, of course, a negative incorporated in the assessment of a company's business risk. The degree of business risk, in turn, becomes the basis for establishing ratio standards for a given company for a given rating category. The analysis then focuses on a company's ability to meet these levels, on average, over a full business cycle and the extent to which it may deviate and for how long.

The ideal is to rate “through the cycle.”

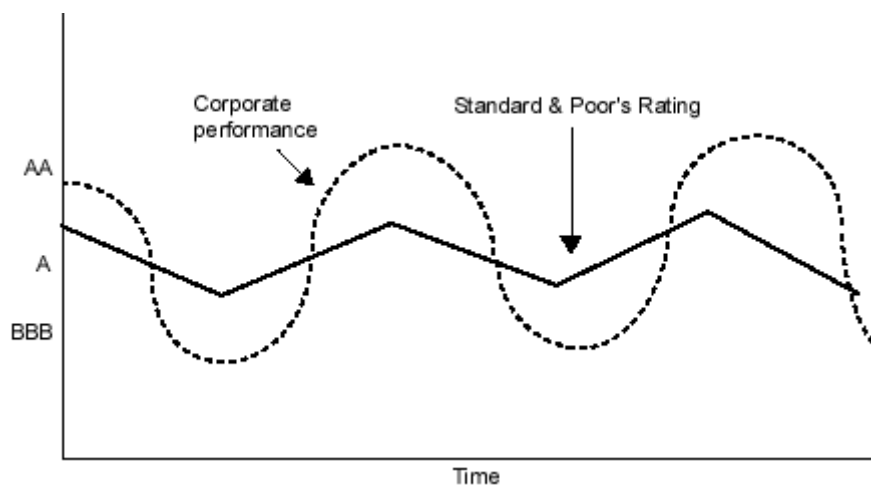


There is no point in assigning high ratings to a company enjoying peak prosperity if that performance level is expected to be only temporary. Similarly, there is no need to lower ratings to reflect poor performance as long as one can reliably anticipate that better times are just around the corner.

However, rating through the cycle requires an ability to predict the cyclical pattern—usually, difficult to do. The phases of a cycle probably will be longer or shorter, steeper or less severe, than just repetitions of earlier cycles. Interaction of cycles from different parts of the globe and the convergence of secular and cyclical forces are further complications.

Moreover, even predictable cycles can affect individual companies in ways that have a lasting impact on credit quality. For example, a company may accumulate enough cash in the upturn to mitigate the risks of the next downturn. (Auto manufacturers have been able—during cyclical upswings—to accumulate huge cash hoards that should exceed cash outflows anticipated in future recessions.) Conversely, a company's business can be so impaired during a downturn that its competitive position may be permanently altered. In the extreme, a company will not survive a cyclical downturn to participate in the upturn!

Accordingly, ratings may well be adjusted with the phases of a cycle. Normally, however, the range of the ratings would not fully mirror the amplitude of the company's cyclical highs or lows, given the expectation that a cyclical pattern will persist. The expectation of change from the current performance level—for better or worse—would temper any rating action. In most cases, then, the typical relationship of ratings and cycles might look more like that below.



Sensitivity to cyclical factors—and ratings stability—also varies considerably along the rating spectrum. As the credit quality of a company becomes increasingly marginal, the nature and timing of near-term changes in market conditions could mean the difference between survival and failure. A cyclical downturn may involve the threat of default before the opportunity to participate in the upturn that may follow. In such situations, cyclical fluctuations usually will lead directly to rating changes—possibly, even several rating changes in a relatively short period. Conversely, a cyclical upturn may give companies a breather that may warrant a modest upgrade or two from those very low levels.

In contrast, companies viewed as having strong fundamentals—i.e., those enjoying investment-grade ratings—are unlikely to see their ratings changed significantly because of factors deemed to be purely cyclical, unless the cycle is either substantially different from what was anticipated or the company's performance is somehow exceptional relative to what had been expected.

Analytical challenges.

Cyclicalities encompass several different phenomena that can affect a company's performance. General business cycles, marked by fluctuations in overall economic activity and demand, are only one type. Demand-driven cycles may be specific to a particular industry, e.g., product-replacement cycles lead to volatile swings in demand for semiconductors. Other types of cycles arise from variations in supply, as seen in the pattern of capacity expansion and retrenchment that is characteristic of the chemicals, forest products, and metals sectors. In some cases, natural phenomena are the driving forces behind swings in supply. For example, variations in weather conditions result in periods of shortage or surplus in agricultural commodities.

The confluence of different types of cycles is not unusual: a general cyclical upturn could coincide with an industry's construction cycle that has been spurred by new technology. The interrelationship of different national economies is an additional complicating factor.

All these cycles can vary considerably in their duration, magnitude, and dynamics. For example, the unprecedented eight years of uninterrupted, robust economic expansion in the U.S. that followed the 1982 trough was totally unforeseen. On the other hand, there was no basis to assume in advance that the downturn that followed would be so severe, albeit relatively brief. Indeed, at any given point, it is difficult to know the stage in the cycle of the general economy, or a given industrial sector. A "plateau" following a period of demand growth might indicate the peak has been reached—or represent a pause before the resumption of growth.

Even general downturns vary in their dynamics, affecting industry sectors differently. For example, the soaring interest rates that accompanied the recession of 1980-1981 had a particularly adverse effect on sales of consumer durables such as autos. Sometimes, sluggish demand for large-ticket items can spur demand for other, less costly consumer products.

In any case, purely cyclical factors are difficult to differentiate from coincident secular changes in industry fundamentals, such as the emergence of new competitors, changes in technology, or shifts in customer preferences. Similarly, it may be tempting to view cyclical benefits—such as good capacity utilization—as a secular improvement in an industry's competitive dynamics.

A high degree of rating stability for a company throughout the cycle also should entail consistency in business strategy and financial policy. In reality, management psychology is often strongly influenced by the course of a cycle. For example, in the midst of a prolonged, highly favorable cyclical rebound, a given management's resolve to pursue a conservative growth strategy and financial policy may be weakened. Shifts in management psychology may affect not just individual companies, but entire industries. Favorable market conditions may spur industrywide acquisition activity or capacity expansion.

Standard & Poor's understands that public sentiment about cyclical credits may fluctuate between extremes over the course of the cycle, with important ramifications for financial flexibility. Whatever our own views about the long-term staying power of a given company, the degree of public confidence in the company's financial viability is critical for it to have access to capital markets, bank credit, and even trade credit. Accordingly, the psychology and the perceptions of capital providers must be taken into account.

Loan Covenants

Public-market participants long ago stopped demanding significant covenant protection, perhaps because poorly written covenant packages with weak tests and significant loopholes enabled managements to circumvent them. Furthermore, in a widely held transaction, a covenant violation that normally would be waived could deteriorate into a payment default, because of the difficulty of having all the investors act in unison. Moreover, investors in publicly traded debt instruments have little interest in working with borrowers and probably have fewer resources to do so. Their primary protection is their ability to sell their investments if things should turn sour.

Traditional private-placement investors and bank lenders do have the resources and the expertise to work out problem credits. Such investors negotiate covenant packages carefully, to give themselves the most advantageous position from which to exercise control, and they expect to be compensated adequately for accepting covenants that are weak, i.e., those that might allow management more leeway to cause a deterioration in credit quality. In general, however, covenant packages are more relaxed than in the past, because liquidity has increased, and financial markets broadened.

Covenants' intended functions include:

- Preservation of repayment capacity. Some covenants limit new borrowings or assure lenders that cash generated both from ongoing operations and from asset sales will not be diverted from servicing debt. Credit quality is preserved by share-repurchase and dividend restrictions, which seek to maintain funds available for debt service.
- Protection against financial restructurings. All lenders are concerned with the risk of a sudden deterioration in credit quality that can result from a takeover, a recapitalization, or a similar restructuring. Properly crafted covenants may prevent some of these credit-damaging events from occurring without the debt's first having been repaid or the pricing's first having been adjusted.
- Protection in the event of bankruptcy or default. These covenants preserve the value of assets for all creditors and—what is particularly important—safeguard the priority positions of particular lenders. Protection is provided through negative-pledge clauses, cross-acceleration (or cross-default) provisions, and limits on obligations that either are more senior or rank equally.
- Signals and triggers. Signals and triggers assure the steady flow of information, provide early warning signals of credit deterioration, and place the lender in a position of influence should deterioration occur. Since triggers can bring the parties to the table, to enable the lender to decide whether it might be appropriate to modify or waive restrictions, they must therefore be set at appropriate levels, to signal deterioration before the credit drops to unacceptable levels.

Enforcement is dubious. A company determined to do so can often, with the assistance of its lawyers, find ways to evade the letter of the agreement embodied in covenants. They could even choose to ignore them altogether. A court usually will not force a company to comply with covenants. Rather, the court will award damages—if the breach of covenants is considered the cause of the damages. As long as the company continues to pay principal and interest, the court is unlikely to recognize any damages as having occurred. In the event of a breach of the covenant, the usual remedy is the ability to declare an event of default and accelerate the loan. However, this remedy is so severe that, more often than not, lenders choose not to precipitate a default by demanding immediate repayment—despite a stipulated right to do so. Instead, the lender may prefer to take a security position or to get additional collateral, to raise rates, to obtain a waiver fee, or to provide more input into the company's decisions. In reality, these are the benefits of covenant protection.

Covenants and ratings.

Covenants play a limited enhancing role in determining the corporate credit rating:

- Covenants do not address fundamental credit strength. Covenants do not and cannot affect the potential for facing business adversity, competitive reverses, and other risks that are outside the control of the company.
- The level of a covenant is often inconsistent with the rating level desired. For example, a covenant that allows a company to leverage itself no more than 60% has little bearing on the company's achieving a 'BBB' rating, if 40% is the maximum leverage tolerated for that specific company as a 'BBB'.
- In practice, lenders waive covenants for a variety of reasons. Waivers might result from company/bank relationship issues, a lack of understanding of the magnitude of problems, or a realization that the original levels were unnecessarily tight. The bankers normally waive the covenant for a fee, or extract higher interest rates. This benefits the banker, without enhancing the credit quality for the benefit of all creditors.
- Finally, if the covenants appear only in certain issues, those issues could be refinanced.

For all these reasons, in most cases, Standard & Poor's does not believe particular covenant or group of covenants can improve a particular borrower's ability to meet its obligations in a timely fashion.

The main reason to be aware of a rated entity's covenants is quite the opposite: Tight covenants could imperil credit quality by causing a default that might otherwise have been avoided. When bankers have the

discretion to accelerate debt because of a covenant breach, they might do so to preserve the advantage held (e.g., based on being secured).

Covenants can, however play a valuable role in a more limited fashion. First, they may protect the specific debt issue that includes the covenants—particularly with respect to ultimate recovery. Second, they may prevent certain deliberate actions that could hurt credit quality, and that would be meaningful in cases where the credit-rating assessment is specifically concerned about the potential for those actions.

Covenants may be more effective at protecting the credit quality of a subsidiary from its parent company or group. Nonetheless, the parent could always choose to file the subsidiary into bankruptcy, unless it were legally structured to be “bankruptcy remote.” The benefit would then be in terms of better recovery for the creditors of the subsidiary. We usually would not rate a subsidiary based on its strong “stand-alone” profile, even if there were significant covenant restrictions, because of the concerns noted above.

Moreover, a covenant package can be helpful as an expression of management’s intent. Since most companies (especially public companies) would be expected to honor—not evade—commitments they make, covenants can provide an insight into management’s plans. An analyst would consider how complying with covenants were consistent with other articulated strategic goals. Management’s willingness to agree to certain restrictive covenants, in essence, “puts their money where their mouth is.” For example, if a company had traditionally been highly leveraged but planned to deleverage in the future, the analyst would expect to see a debt test that ratcheted down over time.

Country Risk

It has long been Standard & Poor’s view that country risk plays a critical role in determining all ratings within a given domicile. Sovereign-related stress can have an overwhelming impact upon company creditworthiness, both direct and indirect. This was demonstrated vividly most recently in the Republic of Argentina (2001-2002), as well as in the Russian Federation (1998-1999) and in the Republics of Indonesia (1997-1998) and Ecuador (1998-1999).

Sovereign credit ratings are suggestive of general risk faced by local entities, but they may not fully capture risk applicable to the private sector. As a result, when rating corporate or infrastructure companies or projects, we look beyond the sovereign ratings to evaluate the specific economic or country risk that may impact the entity’s creditworthiness. Such economic or country risk pertains to the impact of government policies upon the obligor’s business and financial environment, and a company’s ability to insulate itself from these risks.

Economic risk.

The macroeconomic factors most relevant to corporate credit analysis when determining economic risk include:

- Country growth prospects;
- Volatility of the economy;
- Inflation and real interest rate trends;
- Devaluation/overvaluation risk;
- Political stability;
- Banking-system and payment-system risk;
- Local capital-market depth; and
- The extent of integration into global trade and capital markets, and relative sensitivity of foreign direct investment and portfolio flows.

Industry risk.

Country risk analysis also covers industry risk specific to corporates, including:

- Labor issues;
- Infrastructure challenges;
- Accounting and transparency; and
- Institutional risk (i.e., legal and regulatory risk and credit culture issues, tax risk, and corruption levels).

Depending on the country, there can be strong, creditworthy companies that demonstrate they are significantly sheltered from sovereign and country risk, and would be unlikely to default on their local currency obligations during a sovereign local- and foreign-currency default scenario. On the other hand, we also would expect there to be cases where default levels will be much higher than the sovereign rating benchmark would indicate. Therefore, depending upon the country, the degree of country risk, and relative strength of the corporate sector in a given jurisdiction, there can be cases where a company's local currency ratings can exceed the foreign currency, or even the local currency, sovereign credit rating. Otherwise, where country risk is very high, most corporate ratings will be below that of the sovereign. In all cases, local currency ratings are determined in reference to our country risk framework.

It should be noted that in recent cases of sovereign stress, corporate default levels have been very high. The most notable example is Argentina, where a rather extreme sovereign default scenario has ensued. Nearly every entity rated by Standard & Poor's has defaulted on bond, bank, or supplier debt. The key country risk factors in that case were:

- Maxi-devaluation of the currency;
- Price controls in the form of frozen utility tariffs;
- Frozen bank deposits, and a banking system in crisis;
- Currency controls that restricted the ability of companies to make payments abroad and interrupted supply chains; and
- A recession more than four years old.

Regulated utilities were perhaps the most affected, although exporters also suffered both a severe contraction in credit and multiple levels of taxes imposed by a government in desperate need of revenue sources.

Foreign exchange-rate risk/Foreign-exchange controls.

There are many risk factors in this category, related to both the rate and availability of foreign exchange.

Exposure to exchange-rate risk includes:

- Operating margin. Where costs have a significant dollar/hard currency component while revenue is denominated in the local currency, the company will suffer margin compression in a currency devaluation. Examples would be manufacturing companies that must import raw materials, media companies that import content, or wireless companies that import handsets. Assuming the devaluation occurs during a time of economic recession—as often is the case—the company typically will not be able to pass on increased costs directly, at least not immediately. The flip side of this is where costs are in the local currency while revenue is in or linked to a hard currency; these companies will be affected when the currency is overvalued. Commodity exporters based in countries with overvalued local currencies have been harshly affected by this risk, particularly when it coincided with periods of weak commodity prices. Analysts should carefully evaluate any currency mismatch between revenue and expenses.
- Capital expenditures. A related risk is where companies generate local currency cash flows, but have hard currency capital expenditures, e.g., must rely on imported capital equipment.
- Mismatch between local currency revenue and foreign debt. Companies with largely local currency cash flows, but depend on dollar or dollar-linked debt (or another hard currency) are most vulnerable.

Most recent cases of sovereign distress have included sharp currency devaluations, including Argentina (where the currency lost nearly 75% of its value against the U.S. dollar, with the exchange rate falling from a fixed 1:1 at Dec. 31, 2001, to near 3.6 Argentine pesos per U.S. dollar by October 2002); Russia (where the currency lost 65% of its value in U.S. dollar terms between July 1998 and November 1998); and Indonesia (where the currency lost 58% of its value over a three-month period in early 1998).

Exposure to foreign-exchange availability risk pertains when a company is heavily dependent on imported supplies or imported capital equipment. The company's operations could be interrupted if foreign-exchange controls are imposed by the sovereign (which is plausible in the case in event of a sovereign foreign-currency default). For example, the imposition of exchange controls in Argentina, together with a prolonged period of uncertainty over the implementation of controls and relevant exchange rate, caused widespread disruption in distribution chains because of sharply curtailed imports (and exports).

Hedging/Financial policy.

Does the company hedge foreign-exchange risk, to the extent it is within its control to do so? In many emerging markets, it is not practicable to hedge foreign-exchange exposure over the long term because of the unavailability or cost of long-term hedging instruments. Does the company show a propensity to speculate with financial arbitrage opportunities? (For example, does the company borrow in U.S. dollars to invest in high interest rate local currency instruments, exposing itself to devaluation risk?)

Political risk.

Is there a history or likelihood of civil unrest in the region or country where the company operates that could disrupt operations? Does the company operate in a politically sensitive industry that could be subject to expropriation?

Macroeconomic volatility risk.

Are the company's prospects tied to local economic conditions? Volatile growth rates or extended periods of economic recession/depression could reduce predictability of cash flows or severely hamper sales volumes, pricing power, etc.

Institutional risk: Legal system risk/Credit culture/Corruption.

How dependable is the rule of law? Is there an independent judicial system? Are creditors' rights respected? Is the bankruptcy code transparent? Are there credit-culture issues whereby companies have a cultural incentive to default on debt? Are corruption levels generally high in the country?

Accounting and reporting transparency.

Is there a strong regulatory enforcement agency for publicly reporting companies in the country? Are accounts generally audited by top international accounting companies? Are quarterly and annual financial statements typically available within a reasonable time after a period closes? Are disclosure levels generally adequate, or is significant supplemental information required? In jurisdictions where majority family ownership is common, disclosure often lags. In addition, particularly where there is majority family ownership, the entire family group of companies should be analyzed, and intercompany operations and relationships should be scrutinized.

Taxes/Royalties/Duties.

Does the company or its key investments enjoy tax subsidies or royalty arrangements that have renegotiation risk at the federal or regional level? Does the government have a history of micromanaging the current account balance through changing taxes or duties on imports/exports/foreign borrowings?

Government regulation.

Is there a particular risk to the company that the government may change the rules through import/export restrictions; direct intervention in service quality or levels; redefining boundaries of competition (such as service areas); altering existing barriers to entry; changing subsidies; changing antitrust legislation; changing the maximum percentage level of foreign ownership participation; or changing terms to concession contracts for utilities? For extractive industries, is there a risk of government contract renegotiation?

Infrastructure and labor problems.

To what extent might the company be vulnerable to the reduced public services and labor strife that could accompany the sovereign default scenario? Are there potential bottlenecks, poor transport, high-cost/inefficient port services? Is there a need to supply electricity or other basic services/infrastructure?

Inflation risk.

Where existing or potential high/accelerating inflation is an issue, does the company have the pricing flexibility, systems, and know-how to keep revenue increasing in line with or ahead of costs? How much price elasticity is typical for the product of the company, particularly during times of economic weakness?

Price controls particularly are a threat for regulated industries, such as telephone/electric services, and possibly for some basic commodities such as gasoline sales. At times of rising inflation, governments often try to appease consumers by failing to allow full-cost passthroughs on prices in regulated industries, and under severe stress may freeze all prices in an effort to control inflation. For example, Argentina froze utility tariffs for gas, electric, and local telephone services in January 2002, which effectively cut the earnings power of those companies by 60%-75% relative to their dollar debt, because of the concurrent currency devaluation. In other cases, sovereigns have more indirectly constrained price increases on politically sensitive goods or services, or have moved to impose even broader price controls (such as Venezuela did in mid-1994).

Interest-rate risk.

Does the country have a history of high real interest rates, which can make local borrowing expensive? If local borrowings are indexed to local reference (such as bank deposit rates or inflation) or foreign exchange rates, the company can be subject to sudden and large rate hikes at times of sovereign stress. Such borrowings may originally have appeared cheaper, only in that the risk was not fully recognized.

Restricted access to capital.

Does the company have a large concentration of assets in a particular emerging market country? The risk that access to cash flows of foreign subsidiaries could be constrained by potential transfer/convertibility risk should be reviewed.

Access to capital.

Is the company a top-tier name in the local market, that would benefit from a “flight to quality” from local bank lending during crises? Does the company have committed lines of credit from international banks that are not subject to sovereign-related “material adverse change” clauses? Does the company have ample access to trade credit? Can the company withstand the cuts in trade lines and increase in costs that typically occur

during periods of sovereign stress? (An example was the sharp reduction in trade-line availability from foreign banks for Brazilian corporates during 2002). Where short-term debt can be rolled over, it should be assumed that substantially higher interest rates would be incurred in a stress scenario. Limited access to capital often is a key constraint for emerging-market issuers: it broadly penalizes their credit quality relative to those of companies in developed markets. Even the strongest Latin American private-sector issuers had difficulties accessing local or international capital markets during periods of stress. Companies are affected by volatile international investor confidence in emerging markets. While economic problems may originate in a particular country or region, we have seen many cases of regional or emerging market contagion. Thin domestic capital markets also prevent companies from accessing local markets at reasonable rates; in times of stress, the local banking system would be suffering illiquidity because of high capital flight. A weak or poorly regulated local banking system can introduce additional volatility. Moreover, many emerging-market-based companies typically do not have access to committed credit lines.

Debt maturity structure.

For emerging-market issuers, concentration in short-term debt, whether dollar- or local-currency denominated, exposes the company to critical rollover risk. This risk is highest for companies with large upcoming bullet maturities on capital market debt, although the quality and likelihood of continued bank support also is analyzed. Emerging-market companies partially can mitigate this risk by prefunding the refinancing of large bullet maturities well in advance. It cannot be assumed availability under uncommitted lines—or programs such as euro-denominated commercial paper or medium-term notes—where pricing and availability always are subject to market sentiment.

Liquidity.

Is the company's near-term financial flexibility supported by substantial liquidity? If so, is the company's liquid asset position held in local government bonds, local banks, or local equities, and will the issuer have access to these assets in times of stress on the sovereign? Local banks broadly are affected by sovereign stress scenarios, with the extreme case demonstrated by Argentina's bank-deposit freeze. Similarly, Ecuador froze deposits in 1998 in an effort to halt a run on its banks. Ideally, the company should have liquidity positions that are well diversified among top local and foreign financial institutions. Having liquidity outside the country of domicile is also a significant enhancement (although the risk that companies may be required by the sovereign to repatriate funds/export proceeds is also be considered).

Foreign-currency ratings.

The local-currency credit rating, by definition, excludes the risk of direct sovereign intervention that may constrain payment of foreign currency debt. The foreign-currency credit rating is a current opinion of an obligor's overall capacity to meet its obligations in foreign currency. In many cases, sovereign default and sovereign intervention risk are assumed to be roughly equivalent, and most foreign-currency credit ratings in these jurisdictions are limited by that of the sovereign. However, in some countries, we may determine that sovereign intervention risk is different (i.e., less likely) than sovereign default risk. In these cases, foreign-currency credit ratings for private-sector entities may be higher than that of the sovereign. Examples include currency unions such as the European Monetary Union (EMU), where the 'AAA' rating of the European Central Bank indicates an 'AAA' ability to convert euros to foreign currency and transfer foreign currency. Thus, no ratings of entities within the EMU are constrained by transfer and convertibility risk. There are other company- or issue-specific reasons why the entity's foreign-currency rating may be higher than that of the sovereign. For example, companies domiciled in a given country but with substantial offshore operations, or companies that are subsidiaries of offshore parents, could have a rating higher than the country of

domicile. In addition, transactions can be structured to reduce transfer and convertibility (T&C) risk by capturing transaction flows off shore, through insurance for T&C risk, or using other structural techniques, and therefore receive a rating higher than the foreign-currency sovereign credit rating. (For additional comments, see “Sovereign Risk and Ratings Above the Sovereign,” RatingsDirect, July 23, 2001.)

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Corporate Ratings Criteria—Ratings and Ratios: Ratio Medians; Ratio Guidelines

Ratings and Ratios: Ratio Medians

The key ratio medians for U.S. corporates by rating category and their definitions are displayed below. The ratio medians are purely statistical, and are not intended as a guide to achieving a given rating level. The ratio guidelines that follow more faithfully represent the role of ratios in the ratings process.

In any event, ratios are helpful in broadly defining a company's position relative to rating categories. They are not intended to be hurdles or prerequisites that should be achieved to attain a specific debt rating.

Caution should be exercised when using the ratio medians for comparisons with specific company or industry data because of differences in method of ratio computation, importance of industry or business risk, and the impact of mergers and acquisitions. Because ratings are designed to be valid over the entire business cycle, ratios of a particular company at any point in the cycle may not appear to be in line with its assigned debt ratings. Particular caution should be used when making cross-border comparisons, because of differences in accounting principles, financial practices, and business environments.

Company data are adjusted for the following:

- Nonrecurring gains or losses are eliminated from earnings. This includes gains on asset sales, significant transitory income items, unusual losses, losses on asset sales, and charges because of asset writedowns, plant shutdowns, and retirement programs. These adjustments chiefly affect interest coverage, return, and operating margin ratios.
- Unusual cash-flow items similar in origin to the nonrecurring gains or losses also are reversed.
- The operating lease adjustment is performed for all companies. Companies that buy all plant and equipment are put on a more comparable basis with those that lease part or all of their operating assets. The lease adjustment affects all ratios.

Primary Credit Analysts

Solomon B Samson
New York
(1) 212-438-7653
sol_samson@
standardandpoors.com

Scott Sprinzen
New York
(1) 212-438-7812
scott_sprinzen@
standardandpoors.com

Emmanuel Dubois-Pelerin
Paris
(33) 1-4420-6673
emmanuel_dubois-pelerin@
standardandpoors.com

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- The net debt adjustment affects median ratios largely for the ‘AAA’ rating category, composed almost entirely of cash-rich pharmaceutical companies.
- The captive-finance adjustment has a great effect, mainly on automobile, department store, and some capital goods companies.

The adjusted ratio median universe for industrials includes about 1,000 companies. The data exclude transportation companies that exhibit different financial-ratio profiles.

The medians themselves are affected by economic and environmental factors, as well as mergers and acquisitions. The universe of rated companies constantly is changing, and in certain rating categories, adding or deleting a few companies also can affect the financial-ratio medians.

Strengths and weaknesses in different areas have to be balanced and qualitative factors evaluated. There are many nonnumeric distinguishing characteristics that determine a company’s creditworthiness (see Tables 1, 2, and 3).

Table 1

Key Industrial Financial Ratios, Long-Term Debt							
<i>Three-Year (2001 to 2003) Medians</i>							
	AAA	AA	A	BBB	BB	B	CCC
EBIT interest coverage (x)	23.8	13.6	6.9	4.2	2.3	0.9	0.4
EBITDA interest coverage (x)	25.3	17.1	9.4	5.9	3.1	1.6	0.9
FFO/total debt (%)	167.8	77.5	43.2	34.6	20.0	10.1	2.9
Free operating cash flow/total debt (%)	104.1	41.1	25.4	16.9	7.9	2.6	(0.9)
Total debt/EBITDA (x)	0.2	1.1	1.7	2.4	3.8	5.6	7.4
Return on capital (%)	35.1	26.9	16.8	13.4	10.3	6.7	2.3
Total debt/capital (x)	6.2	34.8	39.8	45.6	57.2	74.2	101.2

Table 2

Key Utility Financial Rates, Long-Term Debt					
<i>2003 Medians</i>					
	AA	A	BBB	BB	B
EBIT interest coverage (x)	5.0	3.2	2.3	1.9	0.8
FFO interest coverage (x)	8.8	4.7	3.9	2.7	1.4
FFO/Average total debt (%)	35.7	21.5	17.0	13.5	5.0
Net cash flow/Capital expenditures (%)	137.9	101.2	119.9	105.5	92.4
Total debt/Capital (%)	55.7	54.9	59.1	75.2	74.6
Return on common equity (%)	12.0	9.5	7.3	6.1	(26.1)

Table 3

Key Ratios	
<i>Formulas</i>	
1. EBIT interest coverage	Earnings from continuing operations* before interest and taxes/Gross interest incurred before subtracting capitalized interest and interest income
2. EBITDA interest coverage	Adjusted earnings from continuing operations** before interest, taxes, depreciation, and amortization/Gross interest incurred before subtracting capitalized interest and interest income

Table 3

Key Ratios (cont.'d)	
3. Funds from operations (FFO)/total debt	Net income from continuing operations, depreciation and amortization, deferred income taxes, and other non-cash items/Long-term debt\$ + current maturities + commercial paper, and other short-term borrowings
4. Free operating cash flow/total debt	FFO - capital expenditures - (+) increase (decrease) in working capital (excluding changes in cash, marketable securities, and short-term debt)/Long-term debt\$ + current maturities, commercial paper, and other short-term borrowings
5. Return on capital	EBIT/Average of beginning of year and end of year capital, including short-term debt, current maturities, long-term debt\$, non-current deferred taxes, minority interest, and equity (common and preferred stock)
6. Operating income/sales	Sales - cost of goods manufactured (before D&A), SG&A costs, and R&D costs/Sales
7. Long-term debt/capital	Long-term debt\$/Long-term debt\$ + shareholders' equity (including preferred stock) + minority interest
8. Total debt/capital	Long-term debt\$ + current maturities, commercial paper, and other short-term borrowings/Long-term debt\$ + current maturities, commercial paper, and other short-term borrowings + shareholders' equity (including preferred stock) + minority interest
9. Total debt/EBITDA	Long-term debt\$ + current maturities, commercial paper, and other short-term borrowings/Adjusted earnings from continuing operations before interest, taxes, and D&A
10. Discretionary cash flow/total debt	FFO - capital expenditures - (+) increase (decrease) in working capital (excluding changes in cash, marketable securities, and short-term debt) - common and preferred dividends/Long-term debt\$ + current maturities, commercial paper, and other short-term borrowings

*Including interest income and equity earnings; excluding nonrecurring items. **Excludes interest income, equity earnings, and nonrecurring items; also excludes rental expense that exceeds the interest component of capitalized operating leases. §Including amounts for operating lease debt equivalent, and debt associated with accounts receivable sales/securitization programs.

Ratio Guidelines

Risk-adjusted ratio guidelines depict the role financial ratios play in Standard & Poor's rating process, because financial ratios are viewed in the context of a company's business risk. A company with a stronger competitive position, more favorable business prospects, and more predictable cash flows can afford to undertake added financial risk while maintaining the same credit rating.

The guidelines displayed in the matrices make explicit the linkage between financial ratios and levels of business risk. For example, consider a U.S. industrial—which includes manufacturing, service, and transportation sectors—with an average business-risk profile. Cash-flow coverage of 60% would indicate an 'A' rating. If a company were below average, it would need about 85% cash flow coverage (which could be achieved through extremely conservative financial policies) to qualify for the same rating.

Similarly, for the 'A' category, a company with an above-average business risk profile could tolerate about 40% leverage, and an average company, only 30%. The matrices also show that a company with only an average business position could not aspire to an 'AAA' rating, even if its financial ratios were extremely conservative.

The ratio medians Standard & Poor's has been publishing for more than two decades are merely statistical composites. They are not rating benchmarks, precisely because they gloss over the critical link between a company's financial risk and its business risk. Medians are based on historical performance, while Standard & Poor's risk-adjusted guidelines refer to expected future performance.

Guidelines are not meant to be precise. Rather, they are intended to convey ranges that characterize levels of credit quality as represented by the rating categories. Obviously, strengths evidenced in one financial measure can offset, or balance, relative weakness in another (see Tables 4 and 5).

Table 4

U.S. Industrials—Manufacturing, Service and Transportation Companies*Funds from Operations/Total Debt Guidelines (%)*

Company business risk profile	—Rating category—				
	AAA	AA	A	BBB	BB
Well above average business position	80	60	40	25	10
Above average	150	80	50	30	15
Average	—	105	60	35	20
Below average	—	—	85	40	25
Well below average	—	—	—	65	45

Total Debt/Capitalization Guidelines (%)

Company business risk profile	—Rating category—				
	AAA	AA	A	BBB	BB
Well above average business position	30	40	50	60	70
Above average	20	25	40	50	60
Average	—	15	30	40	55
Below average	—	—	25	35	45
Well below average	—	—	—	25	35

Table 5

U.S. Utilities*Funds From Operations/Interest (x)*

Company business profile	—Rating Category—			
	AA	A	BBB	BB
1	2.5-3	1.5-2.5	1-1.5	—
2	3-4	2-3	1-2	—
3	3.5-4.5	2.5-3.5	1.5-2.5	1-1.5
4	4.2-5	3.5-4.2	2.5-3.5	1.5-2.5
5	4.5-5.5	3.8-4.5	2.8-3.8	1.8-2.8
6	5.2-6	4.2-5.2	3-4.2	2-3
7	6.5-8	4.5-6.5	3.2-4.5	2.2-3.2
8	7.5-10	5.5-7.5	3.5-5.5	2.5-3.5
9	—	7-10	4-7	2.8-4
10	—	8-11	5-8	3-5

Funds From Operations/Total Debt (%)

1	15-20	10-15	5-10	—
2	20-25	12-20	8-12	—
3	25-30	15-25	10-15	5-10
4	28-35	20-28	12-20	8-12
5	30-40	22-30	15-22	10-15
6	35-45	28-35	18-28	12-18

Table 5

U.S. Utilities (cont.'d)				
7	45-55	30-45	20-30	15-20
8	55-70	40-55	25-40	15-25
9	—	45-65	30-45	20-30
10	—	55-70	40-55	25-40
<i>Total Debt/Total Capital (%)</i>				
1	48-55	55-60	60-70	—
2	45-52	52-58	58-68	—
3	42-50	50-55	55-65	65-70
4	38-45	45-52	52-62	62-68
5	35-42	42-50	50-60	60-65
6	32-40	40-48	48-58	58-62
7	30-38	38-45	45-55	55-60
8	25-35	35-42	42-52	52-58
9	—	32-40	40-50	50-55
10	—	25-35	35-48	48-52

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Corporate Ratings Criteria—Rating Each Issue: Distinguishing Issuers and Issues; Junior Debt: Notching Down; Well-Secured Debt: Notching Up; Commercial Paper; Preferred Stock

Rating Each Issue: Distinguishing Issuers and Issues

Standard & Poor's Ratings Services assigns two types of credit ratings—one to corporate issuers and the other to individual corporate debt issues (or other financial obligations). The first type is called a Standard & Poor's corporate credit rating. It is a current opinion on an issuer's overall capacity to pay its financial obligations—i.e., its fundamental creditworthiness. This opinion focuses on the issuer's ability and willingness to meet its financial commitments on a timely basis. It generally indicates the likelihood of default regarding all financial obligations of the company, because, in most countries, companies that default on one debt type or file under the Bankruptcy Code virtually always stop payment on all debt types. It does not reflect any priority or preference among obligations. In the past, we published the “implied senior-most rating” of corporate obligors—a different term for precisely the same concept. “Default risk rating” and “natural rating” are additional ways of referring to this issuer rating.

Generally, a corporate credit rating is published for all companies that have issue ratings—in addition to those companies that have no ratable issues, but request just an issuer rating. Where it is germane, both a local currency and foreign currency issuer rating are assigned.

Standard & Poor's also assigns credit ratings to specific issues. In fact, the vast majority of credit ratings pertain to specific debt issues. Issue ratings are a blend of default risk (sometimes referred to as “timeliness”) and the recovery prospects associated with the specific debt being rated.

Accordingly, junior debt is rated below the corporate credit rating. Preferred stock is rated still lower (see “Preferred Stock”). Well-secured debt can be rated above the corporate credit rating.

Primary Credit Analysts

Solomon B Samson
New York
(1) 212-438-7653
sol_samson@
standardandpoors.com

Scott Sprinzen
New York
(1) 212-438-7812
scott_sprinzen@
standardandpoors.com

Emmanuel Dubois-Pelerin
Paris
(33) 1-4420-6673
emmanuel_dubois-pelerin@
standardandpoors.com

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Recovery ratings were added in 2003. These ratings address only recovery prospects, using a scale of one to five, rather than the letter ratings.

Notching down; notching up.

The practice of differentiating issues in relation to the issuer's fundamental creditworthiness is known as "notching." Issues are notched up or down from the corporate credit rating level.

Payment on time as promised obviously is critical with respect to all debt issues. The potential for recovery in the event of a default—i.e., ultimate recovery, albeit delayed—also is important, but timeliness is the primary consideration. That explains why issue ratings are still anchored to the corporate credit rating. They are notched—up or down—from the corporate credit rating in accordance with established guidelines explained here.

As default risk increases, the concern over what can be recovered takes on greater relevance and, therefore, greater rating significance. Accordingly, the loss-given-default aspect of ratings is given more weight as one moves down the rating spectrum. For example, subordinated debt can be rated up to two notches below a noninvestment grade corporate credit rating, but one notch at most if the corporate credit rating is investment grade. In the same vein, the 'AAA' rating category need not be notched at all, while at the 'CCC' level the gaps may widen.

There is also an important distinction between notching up and notching down. Whenever a financial obligation is judged to have a materially worse recovery prospect than other debt of that issuer—by being unsecured, subordinated, or because of a holding-company structure—the issue rating is notched down. Thus, priority in bankruptcy is considered in broad, relative terms; there is no full-blown attempt to quantify the potential severity of loss. And, because the focus is relative to the various obligations of the issuer, no comparison between unsecured issues of different companies is warranted. For example, the fact that a senior issue of company A is not notched at all does not imply anything about its recovery prospects relative to the junior debt of company B—with the same corporate credit rating—which is notched down.

In contrast, issue ratings are not enhanced above the corporate credit rating unless a comprehensive analysis indicates the likelihood of full recovery—100% of principal—for that specific issue. The degree of confidence of full recovery that results from this more rigorous analysis is reflected in the extent to which the issue is notched up. If the analysis concludes that recovery prospects may be less than 100%, the issue is not deemed deserving of any rating enhancement, even though it can be valuable indeed to realize, say, 80% or 90% of one's investment and avoid a greater loss.

The entire notion of junior obligations—and the related difference it makes with respect to recovery prospects—is specific to the applicable legal system. Notching guidelines are, therefore, a function of the bankruptcy law and practice in the legal jurisdiction that governs a specific instrument. For example, distinguishing between senior and subordinated debt can be meaningless in India, where companies may be allowed to continue paying even common dividends at the same time they are in default on debt obligations; accordingly, notching is not applied in India. The majority of legal systems broadly follow the practices underlying Standard & Poor's criteria for notching—but it always is important to be aware of nuances of the law as they pertain to a specific issue.

Junior Debt: Notching Down

When a debt issue is judged to be junior to other debt issues of the company, and, therefore, to have relatively worse recovery prospects, that issue is assigned a lower rating than—i.e., it is "notched down" from—the corporate credit rating. As a matter of rating policy, the differential is limited to one rating designation in the investment-grade categories. For example, when the corporate credit rating is 'A', junior

debt may be rated ‘A-’. In the speculative-grade categories, where the possibility of a default is greater, the differential is up to two rating designations.

Notching relationships are based on broad guidelines that combine consideration of asset protection and ranking. The guidelines are designed to identify material disadvantage for a given issue by virtue of the existence of better-positioned obligations. The analyst does not seek to predict specific recovery levels, which would involve knowing the exact asset mix and values at a point well into the future.

Notching relationships are subject to review and change when actual developments vary from expectations. Changes in notching do not necessarily have to be accompanied by changes in default risk.

Guidelines for notching.

To the extent that certain obligations have a priority claim on the company’s assets, lower-ranking obligations are at a disadvantage because a smaller pool of assets will be available to satisfy the remaining claims. One case is when the issue is contractually subordinated—that is, the terms of the issue specifically provide that debt holders will receive recovery in a reorganization or liquidation only after the claims of other creditors have been satisfied. Another case is when the issue is unsecured, while assets representing a significant portion of the company’s value collateralize secured borrowings.

A third form of disadvantage can arise if a company conducts its operations through an operating subsidiary/holding-company structure. In this case, if the whole group declares bankruptcy, creditors of the subsidiaries—including holders of even contractually subordinated debt—would have the first claim to the subsidiaries’ assets, while creditors of the parent would have only a junior claim, limited to the residual value of the subsidiaries’ assets remaining after the subsidiaries’ direct liabilities have been satisfied. The disadvantage of parent-company creditors owing to the parent/subsidiary legal structure is known as “structural subordination.” Even if the group’s operations are splintered among many small subsidiaries, the individual debt obligations of which have only dubious recovery prospects, the parent-company creditors may still be disadvantaged compared with a situation in which all creditors would have an equal claim on the assets (see Table 1).

Table 1

Investment-Grade Example		
<i>Corporate Credit Rating: ‘A’</i>		
		Issue Ratings
Assets \$100	Priority debt \$30	A
	Lower-priority debt \$10	A-
	Equity \$60	

The lower-priority debt is rated one notch below the corporate credit rating of ‘A’, because the ratio of priority debt to assets (30 to 100) is greater than 20%.

As a rough generic measure of asset availability, we look at the cumulative percentage of priority debt and other liabilities relative to all available assets. When this ratio reaches certain threshold levels, the next, more junior, debt is considered disadvantaged debt, and is rated one or two notches below the corporate credit rating. These threshold levels take into account that it normally takes more than \$1 of book assets—as valued today—to satisfy \$1 of priority debt. (In the case of secured debt—which limits the priority to the collateral pledged—the remaining assets are still less likely to be sufficient to repay the unsecured debt, inasmuch as the collateral ordinarily consists of the company’s better assets and often substantially exceeds the amount of the debt.)

For investment-grade companies with a typical asset mix, the threshold is 20%. That is, if priority debt and liabilities equal 20% or more of the company’s assets, the lower-priority debt (unsecured, subordinated, or holding company) is rated one notch below the corporate credit rating (see Table 2).

Table 2

Speculative-Grade Example		
<i>Corporate Credit Rating: 'BB+'</i>		
		Issue Ratings
Assets \$100	Priority debt \$35	BB+
	Lower-priority debt \$20	BB-
	Equity \$45	

The lower-priority debt is rated two notches below the corporate credit rating of 'BB+', because the ratio of priority debt to assets (35 to 100) is greater than 30%.

If the corporate credit rating is speculative grade, there are two threshold levels. If priority obligations equal even 15% of the assets, the lower-priority debt is penalized one notch. When priority debt and other liabilities amount to 30% of the assets, lower-priority debt is substantially disadvantaged and is, therefore, differentiated by two notches.

The concept behind these thresholds is to measure material disadvantage with respect to the various layers of debt. At each level, as long as the next layer of debt still enjoys plenty of asset coverage, we do not consider the priority of the top layers as constituting a real disadvantage for the more junior issuers. Accordingly, the nature of the individual company’s asset is important: If a company has an atypical mix of assets, the thresholds could be higher or lower to reflect the relative amounts of better or worse assets.

The relative size of the next layer of debt also is important. If the next layer is especially large—in relation to the assets assumed to remain after satisfying the more senior layers—then coverage is impaired. There are numerous LBOs financed with outsized issues just below the senior layers. Although the priority debt issues may be small (below the threshold levels), they pose a real disadvantage for the junior issues, given the paucity of coverage remaining—so the junior debt should be notched down.

Multiple layers.

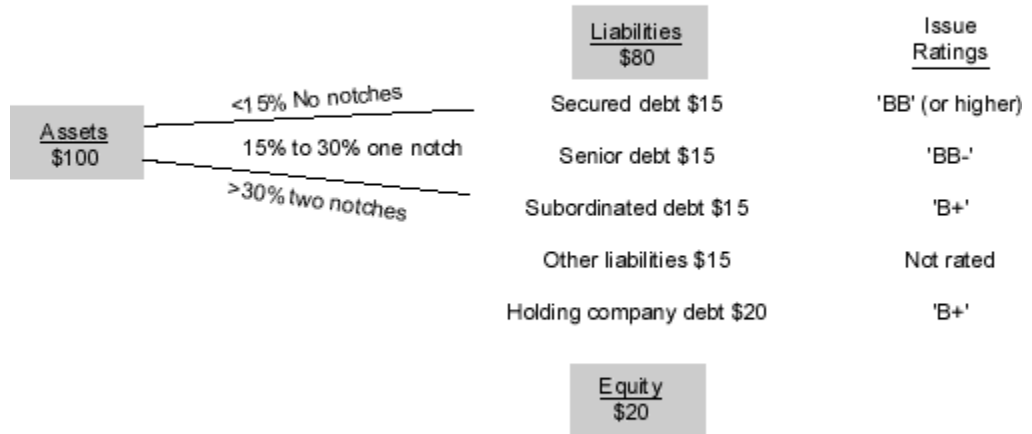
A business entity can have many levels of obligations, each ranking differently with respect to priority of claim in a bankruptcy. For analytical purposes, debt levels are ranked as follows, from highest priority to lowest:

- Debt secured with higher-quality operating asset collateral;
- Debt secured with lesser-quality operating asset collateral;
- Senior debt of the operating company;
- Senior liabilities (ranked *pari passu* with senior debt);
- Subordinated debt;
- Junior subordinated debt;
- All other operating company liabilities;
- Senior debt of the holding company; and
- Subordinated debt of the holding company.

Once a notching threshold level is crossed—aggregating successive layers of priority claims—notching applies to the remaining, lower-ranking issues.

XYZ Corp. and XYZ Holdings Inc.

Corporate Credit Ratings 'BB'



The reason notching is constrained to one notch for investment-grade companies and two notches for speculative-grade companies is to maintain the important weighting of timeliness in all ratings. Remember, notching pertains only to differentiating recovery prospects: it is presumed a default will interrupt payment on all of a company's debt issues. The very highest-ranking issues receive the corporate credit rating, or sometimes a higher rating, if full recovery is confidently expected; the lowest-ranking issues will never be rated lower than one notch under the investment-grade corporate credit rating, or two notches in the case of noninvestment-grade corporate credit ratings.

This rating convention often results in debt issues of significantly different standing being rated the same. If, for example, a two-notch distinction is indicated for a senior subordinated issue, that issue and the worse-positioned issues at the holding company are all rated at the same two-notch gap relative to the corporate rating. No distinction is made to highlight the differences between junior issues (see Table 3).

Table 3

Speculative-Grade Example

Corporate Credit Rating: 'BB+'

		Issue Ratings
Assets \$100	Priority debt \$25	BB+
	Lower-priority debt \$15	BB
Equity \$60		

Here, assuming the issuer was speculative grade, the lower-priority debt might be rated one notch below the corporate credit rating, rather than two notches, although the ratio of priority debt to assets (25 to 100) is close enough to the guideline threshold of 30% to make this a borderline case.

		Issue Ratings
Assets \$100	Priority debt \$25	BB+
	Lower-priority debt \$30	BB-
Equity \$45		

In this case, the lower-priority debt should be rated two notches below the corporate credit rating. Although the ratio of priority debt to assets is still 25 to 100, the substantial amount of lower-priority debt would dilute recoveries for all lower-priority debtholders.

Senior secured debt.

Not all senior secured debt of an issuer is necessarily equally secured. Second-mortgage debt, for example, has only a junior claim to an asset also securing first-mortgage debt, making it inferior to a first-mortgage issue secured by the same asset. The second-mortgage debt issue would receive the corporate credit rating only if the amount of first-mortgage debt outstanding was sufficiently small relative to the assets.

In general, secured debt is notched according to the expected recovery associated with its specific collateral (see “Bank Loan Methodology” and “Recovery Ratings”). If the collateral that secures a particular debt issue is of dubious value, while the more valuable collateral is pledged to another loan, even secured debt may be notched down from the corporate credit rating.

Application of guidelines.

- Perspective. Notching takes into account expected future developments. For example, a company may be in the process of refinancing secured debt so that it would have little or no secured debt within a year. If there is confidence that the plan will be carried out, a notching differential should not be needed, even currently. Conversely, if companies have open first-mortgage indentures or the leeway to increase secured borrowings under negative pledge covenants (or if no negative pledge covenants are in place), Standard & Poor’s attempts to determine the likelihood that the company will incur additional secured borrowings.

But the analyst would not automatically base notching on the harshest assumptions.

If an issuer has a secured bank credit facility, such borrowings would be reflected in notching to the extent that the issuer was expected to draw on the facility. Typically, as a company approaches a financial crisis, it will need to tap its sources of financing. In the absence of expectations to the contrary, Standard & Poor’s takes a conservative approach, assuming available bank borrowing capacity is fully utilized. Likewise, if a company typically uses bank borrowings to fund seasonal working capital requirements, we focus on expected peak borrowing levels, rather than the expected average amount.

- Adjustments. Book values are used as a starting point; analytic adjustments are made if assets are considered significantly overvalued or undervalued for financial accounting purposes. This analysis focuses on the varying potential of different types of assets to retain value over time and in the default context based on their liquidity characteristics, special-purpose nature, and dependence on the health of the company’s business. Goodwill especially is suspect, considering its likely value in a default scenario. In

applying the notching guidelines, Standard & Poor's generally eliminates from total assets goodwill in excess of a "normal" amount—10% of total assets. The particular characteristics of specific intangibles, as distinct from goodwill, are considered. (For example, some credit typically is given for the enduring value of well-established brands in the consumer products sector.) We do not, however, perform detailed asset appraisals or attempt to postulate specifically about how market values might fluctuate in a hypothetical stress scenario (except in the case of secured debt).

In applying the guidelines above, lease obligations—whether capitalized in the company's financial reporting or kept off balance sheet as operating leases as priority debt—and the related assets are included on the asset side. Similarly, sold trade receivables and securitized assets are added back, along with an equal amount of priority debt. Other creditors are just as disadvantaged by such financing arrangements as by secured debt. In considering the surplus cash and marketable securities of companies that presently are financially healthy, Standard & Poor's assumes neither that the cash will remain available in the default scenario, nor that it will be totally dissipated, but rather that, over time, this cash will be reinvested in operating assets that mirror the company's current asset base, subject to erosion in value of the same magnitude.

- **Local- and foreign-currency issue ratings.** In determining local-currency issue ratings, the point of reference is the local-currency corporate credit rating: local-currency issue ratings may be notched down one notch from the local-currency corporate credit rating in the case of investment-grade issuers, or one or two notches in the case of speculative-grade issuers. A company's foreign-currency corporate credit rating is often lower than its local-currency corporate credit rating, reflecting the risk that a sovereign government could take actions that would impinge on the company's ability to meet foreign-currency obligations. But junior foreign-currency issues are not notched down from the foreign-currency corporate credit rating, because the government action would apply regardless of the senior/junior character of the debt. Of course, the issue would never be rated higher than if it had been denominated in local currency. For example, if a company's local-currency corporate credit rating were 'BB+' and its foreign-currency corporate credit rating were 'BB-', subordinated foreign currency-denominated issues could be rated 'BB-'. But, if a company's local-currency corporate credit rating were 'BB+' and its foreign currency corporate credit rating were 'BB', subordinated foreign-currency denominated issues would be rated 'BB-', as would subordinated local-currency denominated issues.
- **Short-term ratings.** All short-term ratings, including commercial paper ratings, are linked to the issuer's corporate credit rating. Although commercial paper generally is unsecured, commercial paper ratings focus exclusively on default risk. For example, if an issuer has an 'A' corporate credit rating and secured debt issue rating, and an 'A-' unsecured rating, its commercial paper rating would still be 'A-1'—the commercial paper rating associated with the 'A' issuer default rating—not 'A-2', the commercial paper rating ordinarily appropriate at the 'A-' default risk rating level.

Parents and subsidiaries: Structural subordination.

At times, a parent and its affiliate group have distinct default risks. The difference in risk may arise from covenant restrictions, regulatory oversight, or other considerations. This is the norm for holding companies of insurance operating companies and banks. In such situations, there are no fixed limits governing the gaps between corporate credit ratings of the parent and its subsidiaries. The holding company has higher default risk, apart from post-default recovery distinctions. If such a holding company issued both senior and junior debt, its junior obligations would be notched relative to the holding company's corporate credit rating by one or two notches.

Often, however, a parent holding company with one or more operating companies is viewed as a single economic entity. When the default risk is considered the same for the parent and its principal subsidiaries, they are assigned the same corporate credit rating. Yet, in a liquidation, holding-company creditors are

entitled only to the residual net worth of the operating companies remaining after all operating company obligations have been satisfied.

Parent-level debt issues are notched down to reflect structural subordination when the priority liabilities create a material disadvantage for the parent's creditors, after taking into account all mitigating factors. In considering the appropriate rating for a specific issue of parent-level debt, priority liabilities encompass all third-party liabilities (not just debt) of the subsidiaries—including trade payables, pension and retiree medical liabilities, and environmental liabilities—and any relatively better-positioned parent-level liabilities. (For example, parent-level borrowings collateralized by the stock of the subsidiaries would be disadvantaged relative to subsidiary liabilities, but would rank ahead of unsecured parent-level debt.)

Potential mitigating factors include:

- **Guarantees.** Guarantees by the subsidiaries of parent-level debt (i.e., upstream guarantees) may overcome structural subordination by putting the claims of parent company creditors on a *pari passu* basis with those of operating company creditors. Such guarantees have to be enforceable under the relevant national legal system(s), and there must be no undue concern regarding potential allegations of fraudulent conveyance (see “Upstream Guarantees”, below). Although joint and several guarantees from all subsidiaries provide the most significant protection, several guarantees by subsidiaries accounting for a major portion of total assets would be sufficient to avoid notching of parent debt issues in most cases.
- **Operating assets at the parent.** If the parent is not a pure holding company, but rather also directly owns certain operating assets, this gives the parent's creditors a priority claim to the parent-level assets. This offsets, at least partially, the disadvantage that pertains to being structurally subordinated with respect to the assets owned by the subsidiaries.
- **Diversity.** When the parent owns multiple operating companies, more liberal notching guidelines may be applied to reflect the benefit the diversity of assets might provide. The threshold guidelines are relaxed (but not eliminated) to correspond with the extent of business and/or geographic diversification of the subsidiaries. For bankrupt companies that own multiple, separate business units, the prospects for residual value remaining for holding company creditors improve as individual units wind up with shortfalls and surpluses. Also, holding companies with diverse businesses—in terms of product or geography—have greater opportunities for dispositions, asset transfers, or recapitalization of subsidiaries. If, however, the subsidiaries are operationally integrated, economically correlated, or regulated, the company's flexibility to reconfigure is more limited.
- **Concentration of debt.** If a parent has a number of subsidiaries, but the preponderance of subsidiary liabilities are concentrated in one or two of these, e.g., industrial groups having finance or trading units, this concentration of liabilities can limit the disadvantage for parent-company creditors. Although the net worth of the leveraged units could well be eliminated in the bankruptcy scenario, the parent might still obtain recoveries from its relatively unleveraged subsidiaries. In applying the notching guideline in such cases, it may be appropriate to eliminate the assets of the leveraged subsidiary from total assets, and its liabilities from priority liabilities. (The analysis then focuses on the assets and liabilities that remain, but the standard notching guideline must be substituted by other judgments regarding recovery prospects.) However, to the extent the company is viewed as one consolidated entity, the presumption that the healthier subsidiaries would remain healthy is questionable. This also would dilute the value of guarantees from individual subsidiaries.
- **Downstream loans.** If the parent's investment in a subsidiary is not just an equity interest, but also takes the form of downstream senior loans, this may enhance the standing of parent-level creditors because they would have not only a residual claim on the subsidiary's net worth, but also a debt claim that would generally be *pari passu* with other debt claims. Standard & Poor's gives weight to formal, documented loans—not to informal advances, which are highly changeable. (On the other hand, if the parent has

borrowed funds from its subsidiaries, the resulting intercompany parent-level liability could further dilute the recoveries of external parent-level creditors.) As with guarantees, the assessment of downstream advances must take into account the applicable legal framework.

- Adjustments. Additional adjustments are necessary in assessing structural subordination. We eliminate from the notching calculations subsidiaries' deferred tax assets and liabilities and other accounting accruals and provisions that are not likely to have clear economic meaning in a default (see Table 4).

Table 4

Single Economic Entity Example

Parent—Corporate Credit Rating: 'BB+'

Debt type*	Issue rating
Senior secured	BB-
Senior unsecured	BB-
Subordinated	BB-

Subsidiary—Corporate Credit Rating: 'BB+'

Debt type*	Issue rating
Senior secured	BB+
Senior unsecured	BB
Subordinated	BB-

Parent—Corporate Credit Rating: 'BB+'

Debt type*	Issue rating
Senior secured	BB+
Senior unsecured	BB
Subordinated	BB-

Subsidiary—Corporate Credit Rating: 'B+'

Debt type*	Issue rating
Senior secured	B+
Senior unsecured	B
Subordinated	B-

*Debt types are used here merely as illustrative of typical results for different priority debt; notching actually depends on the guidelines explained above. In the first example, because the parent and subsidiary are viewed as having the same default risk, the lowest rating at either is two notches below the single corporate credit rating. If the parent is a holding company without assets other than its ownership interest in the subsidiary, the parent's debt is viewed as junior and notched down. In contrast, in the second example, the parent and subsidiary are viewed as having different default risks, so each has a different corporate credit rating (assumed to be 'BB+' at the parent and 'B+' at the subsidiary), and the two-notch limit is relative to the corporate credit ratings at each entity; there is no limit on the span of ratings that applies across the two legal entities.

Exceptions to the rule.

If the recovery prospects for a specific junior issue equate to the level associated with senior debt generally, notching is dispensed with. As long as recovery of 80 cents on the dollar reasonably can be anticipated, the junior debt is not notched below the senior debt.

Only a handful of rated junior issues provide for such good recovery prospects. In each case, the junior debt is secured, and the value of the assets that serve as collateral is independent of the fate of the issuer. As in all cases of secured debt, the specific collateral is subjected to analysis of its recovery prospects.

With respect to these and similar cases, we do not presume any specific level of recovery for the senior creditors of the company in question. The senior debt could still, in the end, fare better than the collateralized subordinated issue. The key: As long as the subordinated debt should recover as much as the vast majority of defaulted senior debt, it is not discernibly disadvantaged and does not deserve to be notched down. After all, recovery of 75%-85% would compare favorably with that experienced by roughly three-quarters of senior creditors.

Note that it is not necessary to conclude that holders will be made whole to eliminate the notching down of subordinated obligations. Obligations that are likely to provide full ultimate recovery are rated above the corporate credit rating (see “Notching Up”).

Upstream Guarantees

When a subsidiary guarantees the debt of its parent, it commonly is referred to as an upstream guarantee. The object of the exercise is to address the structural subordination that would otherwise apply to parent-company debt if the debt, liabilities, and preferred stock of the operating company are material. Upstream guarantees, if valid, eliminate the rating distinction, since the operating company becomes directly responsible for the guaranteed parent debt. However, the validity of the guarantee is subject to legal risk. An upstream guarantee may be voided in court, if it is deemed to constitute a fraudulent conveyance. The outcome depends on the specific fact pattern, not legal documentation—so one cannot standardize the determination. But, if either the guarantor company received value or was solvent for a sufficiently long period subsequent to issuing the guarantee, the upstream guarantee should be valid. Accordingly, we consider upstream guarantees valid if any of these conditions are met:

- The proceeds of the guaranteed obligation are provided to (downstreamed to) the guarantor. It does not matter whether the issuer downstreams the money as an equity infusion or as a loan. Either way, the financing benefits the operations of the subsidiary, which justifies the guarantee;
- The legal risk period—ordinarily, one or two years from entering into the guarantee—has passed;
- There is a specific analytical conclusion that there is little default risk during the period that the guarantee validity is at risk; or
- The rating of the guarantor is at least ‘BB-’ in jurisdictions that involve a two-year risk, or at least ‘B+’ in jurisdictions with one-year risk.

Accordingly, there will be cases where we decline to recognize the upstream guarantee at the time of issuance—because of legal risk—but would upgrade the issue a year (or two) later. Standard & Poor’s accepts an upstream guarantee whenever the guarantor obtained value. As long as the guarantor is the recipient of the funds, it meets this test.

Well-Secured Debt: Notching Up

In 1996, Standard & Poor’s first published its framework for weighting both timeliness and recovery prospects in a default or bankruptcy scenario when assigning ratings to well-secured debt. The extent of any rating enhancement depends on the following three considerations:

Economics.

Will the “second way out” provide 100% recovery? Of principal only, or interest, as well? When the collateral value exceeds the amount of the claim, the creditor could receive postpetition interest. Managing the legal nuances of bankruptcy would be an important aspect of achieving postpetition interest. Although accurately predicting this outcome is extremely difficult, the criteria recognize the potential for such payment. (If all accrued interest, from before and after the default, can be recovered, the length of any delay in recovery is less consequential.)

There can be different degrees of confidence with respect to recovery. For example, excess collateral translates into a greater likelihood that there will be enough value to recover the entire obligation—although obviously, the creditor will never get more than the obligation amount. Subjective judgments are critical in deciding how to stress collateral values in hypothetical postdefault scenarios.

How long will the delay be?

The time it takes to realize ultimate recovery of the loan obligation can be critical. At best, the recovery would be highly valued because of its nearly timely character—almost like a grace period. At worst, we would not give any credit for a very delayed payment. In estimating the length of any delay in recovery, the analysis would focus on:

- How the legal system resolves bankruptcies or provides access to collateral. This varies by legal jurisdiction. In the U.S., 18 to 24 months typically is needed to resolve a Chapter 11 filing. (The analysis would identify and differentiate cases that might take longer than usual because of perceived complexities, such as litigation.) In jurisdictions that are more creditor-oriented, the access to collateral may be expedited.
- The structure of an obligation. The analysis could distinguish between a bond, a lease obligation, and certificates governed by Section 1110 of the U.S. Bankruptcy Code, which provides specific legal rights to obtain certain transportation assets during a bankruptcy proceeding.
- The terms of an obligation. For example, in the case of a guarantee that provided for ultimate—but not necessarily timely—payment, it would be important to know within what period payment must be made.

Weighting.

The higher the rating, the more weight one should give to timeliness; the lower the rating, the more it should incorporate a postdefault perspective. (This principle is the basis for the policy of rating junior debt of investment-grade issuers one notch below the issuer credit rating, but differentiating junior debt of speculative-grade borrowers by two notches.) Therefore, the degree of rating enhancement generally depends on the starting point—i.e., the level of the issuer credit rating.

Guidelines for notching.

To get even one notch above the corporate rating, a debt issue must have at least reasonable prospects for full recovery. As the prospects improve, based on the nature and/or amount of the collateral, another notch may be added. If the analysis indicates great confidence in full recovery, three or four notches are possible. This reflects the highest expectations for full recovery, following more rigorous stressing of collateral values in various scenarios. This level of strong collateral protection ordinarily would imply decent prospects for recovering post-petition interest, as well.

These guidelines pertain to the speculative-grade portion of the rating spectrum. At the upper end, notching generally is less generous. For example, in the case of first mortgage bonds of investment-grade companies, it takes greater enhancement to achieve the same notch or two.

With respect to short-term ratings, timeliness of payment is paramount. Accordingly, there is no enhancement of short-term ratings based on ultimate recovery.

To reiterate, the policy of enhancing issue ratings based on ultimate recovery prospects applies only if the expected recovery is 100%. Standard & Poor's does not attempt to differentiate unsecured debt, even though some defaults will result in recovery of 80 cents on the dollar, and others will result in only 30 cents.

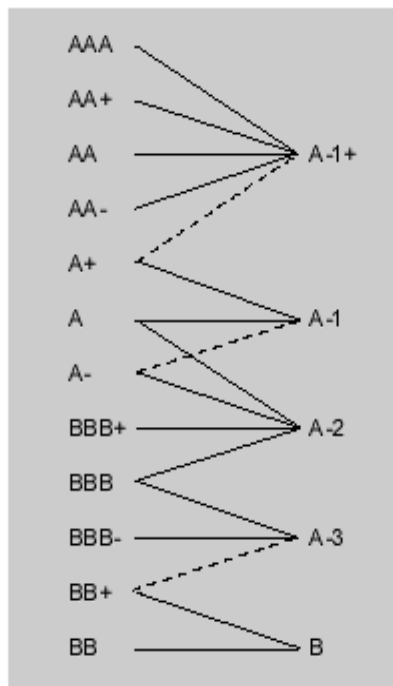
Commercial Paper

Commercial paper (CP) consists of unsecured promissory notes issued to raise short-term funds. CP ratings pertain to the program established to sell such notes. There is no review of individual notes. Typically, only companies of strong credit standing can sell their paper in the money market, although there periodically is some issuance of lesser-quality, unrated paper (notably, prior to the junk bond market collapse late in 1989). Alternatively, companies sell commercial paper backed by letters of credit (LOC) from banks. Credit quality of such LOC-backed paper rests entirely on the transaction's legal structure and the bank's creditworthiness. As long as the LOC is structured correctly, credit quality of the direct obligor can be ignored.

Rating criteria.

Evaluation of an issuer's commercial paper reflects Standard & Poor's opinion of the issuer's fundamental credit quality. The analytical approach is virtually identical to the one followed in assigning a long-term corporate credit rating, and there is a strong link between the short-term and long-term rating systems.

Correlation of CP Ratings With Long-Term Corporate Credit Ratings*



*Dotted lines indicate combinations that are highly unusual.

Indeed, the time horizon for CP ratings is not a function of the typical 30-day life of a commercial-paper note, the 270-day maximum maturity for the most common type of commercial paper in the U.S., or even the one-year tenor typically used to determine which instrument gets a short-term rating in the first place.

To achieve an 'A-1+' CP rating, the company's credit quality must be at least the equivalent of an 'A+' long-term corporate credit rating. Similarly, for commercial paper to be rated 'A-1', the long-term corporate credit rating would need to be at least 'A-'. (In fact, the 'A+'/'A-1+' and 'A-'/'A-1' combinations are rare. Ordinarily, 'A-1' CP ratings are associated with 'A+' and 'A' long-term ratings.)

Conversely, knowing the long-term rating will not fully determine a CP rating, considering the overlap in rating categories. However, the range of possibilities is always narrow. To the extent that one of two CP ratings might be assigned at a given level of long-term credit quality (e.g., if the long-term rating is ‘A’), overall strength of the credit within the rating category is the main consideration. For example, a marginal ‘A’ credit likely would have its commercial paper rated ‘A-2’, whereas a solid ‘A’ would almost automatically receive an ‘A-1’.

Exceptional short-term credit quality would be another factor that determines which of two possible CP ratings are assigned. For example, a company may possess substantial liquidity—providing protection in the near or intermediate term—but suffer from less-than-stellar profitability, a longer-term factor. Or, there could be a concern that, over time, the large cash holdings may be used to fund acquisitions. (Having different time horizons as the basis for long- and short-term ratings implies either one or the other rating is expected to change.)

Backup policies.

Ever since the Penn Central bankruptcy roiled the commercial-paper market and some companies found themselves excluded from issuing new commercial paper, Standard & Poor’s has deemed it prudent for companies that issue commercial paper to make arrangements in advance for alternative sources of liquidity. This alternative, backup liquidity protects companies from defaulting if they are unable to roll over their maturing paper with new notes, because of a shrinkage in the overall commercial-paper market or some cloud over the company that might make commercial-paper investors nervous. Many developments affecting a single company or group of companies—including bad business conditions, a lawsuit, management changes, a rating change—could make commercial-paper investors flee the credit.

Given the size of the commercial-paper market, backup facilities could not be relied on with a high degree of confidence in the event of widespread disruption. A general disruption of commercial-paper markets could be a highly volatile scenario, under which most bank lines would represent unreliable claims on whatever cash would be made available through the banking system to support the market. Standard & Poor’s neither anticipates that such a scenario is likely to develop, nor assumes that it never will.

Having inadequate backup liquidity affects both the short- and long-term ratings of the issuer because it could lead to default, which would ultimately pertain to all of the company’s debt. Moreover, the need for backup applies to all confidence-sensitive obligations, not just rated commercial paper. Backup for 100% of rated commercial paper is meaningless if other debt maturities—for which there is no backup—coincide with those of the commercial paper. Thus, the scope of backup must extend to euro-denominated commercial paper, master notes, and short-term bank notes.

The standard for industrial and utility issuers has long been 100% coverage of confidence-sensitive paper for all but the strongest credits. Backup is provided by excess liquid assets or bank facilities in an amount that equals all such paper outstanding.

While the backup requirement relates only to outstanding paper—rather than the entire program authorization—a company should anticipate prospective needs. For example, it may have upcoming maturities of long-term debt that it may want to refinance with commercial paper, which would then call for backup of greater amounts.

Available cash or marketable securities are ideal to provide backup. (Of course, it may be necessary to “haircut” their apparent value to account for potential fluctuation in value or tollgate taxes surrounding a sale. And it is critical that they be immediately saleable.) Yet the vast majority of commercial paper issuers rely on bank facilities for alternative liquidity.

This high standard for back-up liquidity has provided a sense of security to the commercial-paper market—even though backup facilities are far from a guarantee that liquidity will, in the end, be available.

For example, a company could be denied funds if its banks invoked “material adverse change” clauses. Alternatively, a company in trouble might draw down its credit line to fund other cash needs, leaving less-than-full coverage of paper outstanding, or issue paper beyond the expiration date of its lines.

Companies rated ‘A-1+’ can provide 50%-75% coverage. The exact amount is determined by the issuer’s overall credit strength and its access to capital markets. Current credit quality is an important consideration in two respects. It indicates:

- The different likelihood of the issuer’s ever losing access to funding in the commercial-paper market; and
- The timeframe presumed necessary to arrange funding should the company lose access. A higher-rated entity is less likely to encounter business reverses of significance and—in the event of a general contraction of the commercial-paper market—the higher-rated credit would be less likely to lose investors. In fact, higher-rated companies could actually be net beneficiaries of a flight to quality.

In 1999, Standard & Poor’s introduced a new approach that offers companies greater flexibility regarding the amount of backup they maintain, if they are prepared to match their maturities carefully with available liquidity. The new approach differentiated between companies that are rolling over all their commercial paper in just a few days and those that have a cushion by virtue of having placed longer-dated paper. The basic idea was that companies—if and when they lose access to commercial paper—should have sufficient liquidity to cover any paper coming due during the time they would require to arrange additional funding.

However, companies encountered practical difficulties in implementing the new approach. Moreover, changes in the banking environment have since made us more leery about a company arranging new facilities when under stress. Still, notes that come due only 11-12 months from now do not require backup so far in advance. Companies should begin to actively arrange liquidity backup approximately six months prior to maturity. Similarly, 12-month notes that automatically extend their maturity month by month do not require back-up arrangements from day one. They will be able to arrange backup when and if the extensions stop, leaving a full 12 months to do so (see Table 5).

Table 5

Guidelines for U.S. Industrials and Utilities	
	% of total outstanding
A-1+/AAA	50
A-1+/AA	75
A-1	100
A-2	100
A-3	100

Extendible commercial notes (ECN) provide built-in backup by allowing the issuer to extend for several months if there is difficulty in rolling over the notes; accordingly, there is no need to provide backup for them—i.e., until the extension is effected. However, there is no way to prevent the issuer from tapping backup facilities intended for other debt and use the funds to repay maturing ECNs, instead of extending. This risk is known as leakage. Accordingly, for issuers that provide 100% backup, unbacked ECNs must not exceed 20% of extant backup for outstanding conventional commercial paper.

All issuers—even if they provide 100% backup—must always ensure that the first few days of upcoming maturities are backed with excess cash or funding facilities that provide for immediate availability.

For example, a bank backup facility that requires two-day notification to draw down will be of no use in repaying paper maturing in the interim. The same would hold true if foreign exchange is needed, and the facility requires a few days to provide it. Moreover, if a company issuing commercial paper in the U.S. were relying on a bank facility in Europe, differences in time zones or bank holidays could prevent availability when needed. Obviously, a bank facility in the U.S. would be equally lacking with respect to maturing euro-

denominated commercial paper. So-called “swing lines” typically equal 15%-20% of the program size to deal with the maximum amount that will mature in any three- to four-day period.

Quality of backup facilities.

Banks offer various types of credit facilities that differ widely regarding the degree of the bank’s commitment to advance cash under all circumstances. Weaker forms of commitment, while less costly to issuers, provide banks great flexibility to redirect credit at their own discretion. Some lines are little more than an invitation to do business at some future date.

Standard & Poor’s expects all backup lines to be in place and confirmed in writing.

Preapproved lines or orally committed lines are viewed as insufficient. Specific designation for commercial-paper backup is of little significance.

Contractually committed facilities are desirable. In the U.S., fully documented revolving credits represent such contractual commitments. The weaker the credit, the greater the need for more reliable forms of liquidity. As a general guideline, if contractually committed facilities cover 10-15 days’ upcoming maturities of outstanding paper, that should suffice.

Even contractual commitments often include “material adverse change” clauses, allowing the bank to withdraw under certain circumstances. While inclusion of such an escape clause weakens the commitment, Standard & Poor’s does not consider it critical—or realistic—for most borrowers to negotiate removal of “material adverse change” clauses.

In the absence of a contractual commitment, payment for the facility—whether by fee or balances—is important because it generally creates some degree of moral commitment on the part of the bank. In fact, a solid business relationship is key to whether a bank will stand by its client. Standardized criteria cannot capture or assess the strength of such relationships. We therefore are interested in any evidence—subjective as it may be—that might demonstrate the strength of an issuer’s banking relationships. In this respect, the analyst is also mindful of the business cultures in different parts of the world and their impact on banking relationships and commitments.

Dependence on just one or a few banks also is viewed as an unwarranted risk. Apart from the potential that the bank will not have adequate capacity to lend, there is the chance it will not be willing to lend to this issuer. Having several banking relationships diversifies the risk that any bank will lose confidence in this borrower and hesitate to provide funds.

Concentration of banking facilities also tends to increase the dollar amount of an individual bank’s participation. As the dollar amount of the exposure becomes large, the bank may be more reluctant to step up to its commitment. In addition, the potential requirement of higher-level authorizations at the bank could create logistical problems with respect to expeditious access to funds for the issuer. On the other hand, a company will not benefit if it spreads its banking business so thinly that it lacks a substantial relationship with any of its banks.

There is no analytical distinction to be made between a 364-day and a 365-day facility.

Even multiyear facilities will provide commitment for only a short time as they approach the end of their terms. It obviously is critical that the company arrange for the continuation of its banking facilities well in advance of their lapsing.

It is important to reiterate that even the strongest form of backup—a revolver with no “material adverse change” clause—does not enhance the underlying credit and does not lead to a higher rating than indicated by the company’s own creditworthiness. Credit enhancement can be accomplished only through an LOC or another instrument that unconditionally transfers the debt obligation to a higher-rated entity.

Banks providing issuers with facilities for backup liquidity should themselves be sound. Possession of an investment-grade rating indicates sufficient financial strength for the purpose of providing a commercial-

paper issuer with a reliable source of funding. There is no requirement that the bank's credit rating equal the CP issuer's rating. Nonetheless, Standard & Poor's would look askance at situations where most of a company's banks were only marginally investment grade. That would indicate an imprudent reliance on banks that might deteriorate to weaker, non-investment-grade status.

Documentation for commercial-paper program ratings.

- Company letter requesting rating;
- Copy of board authorization for program;
- Indication of authorized amount;
- Indication of program type (e.g., 3(A)3, 4(2), ECN, euro);
- Description of use of proceeds;
- Listing of dealers (unless company is a direct issuer); and
- Description of backup liquidity (including list of bank lines, giving the terms of the facilities, the name of each bank participating, the commitment amount, and the form of the commitment).

Accordingly, we believe the tenor of any backup facility with a hard maturity needs to be at least 180 days. The rating level of the company while it is still issuing commercial paper is not a consideration.

Preferred Stock

Preferred stock carries greater credit risk than debt in two important ways: The dividend is at the discretion of the issuer, and the preferred represents a deeply subordinated claim in the event of bankruptcy. Prior to 1999, Standard & Poor's used a separate preferred stock scale. In February 1999, the debt and preferred stock scales were integrated. Accordingly, now, preferred stock generally is rated below subordinated debt. When a company's corporate credit rating is investment grade, its preferred stock is rated two notches below the corporate credit rating. For example, if the corporate credit rating is 'A+', the preferred stock would be rated 'A-'. (In case of a 'AAA' corporate credit rating, the preferred stock would be rated 'AA+'.) When the corporate credit rating is non-investment grade, the preferred stock is rated at least three notches (one rating category) below the corporate credit rating. Deferrable payment debt is treated identically to preferred stock, given subordination and the right to defer payments of interest.

Financial instruments that have one of these characteristics, but not both (for example, deferrable debt with a senior claim), generally are rated one notch below the corporate credit rating for investment grade credits, and two notches below for speculative grade credits.

There are situations in which the dividend is especially jeopardized, so notching would exceed the guidelines above. For example, state charters restrict payment when there is a deficit in the equity account. This can occur following a write-off, even while the company is healthy and possesses ample cash to continue paying. Similarly, covenants in debt instruments can endanger payment of dividends, even while there is a capacity to pay. Also when there is an unusually large dividend burden, there is greater risk to that dividend. If preferred issues total over 20% of the company's capitalization, it normally would call for greater differentiation of the preferred rating from the corporate credit rating.

On the other hand, the right to defer can in some instances be constrained by virtue of financial covenants. In others, the discretion to defer is limited by the remedy that preferred holders possess to take over the issuing entity and liquidate its assets. Note, however, that such situations are exceptional and normally pertain to negotiated, privately placed transactions. Yet there do exist a handful of preferred issues that are rated *pari passu* with the company's debt (in some cases, senior debt). In all cases, the risk of deferral of payments is analyzed from a pragmatic, rather than a legal, perspective.

If a company defers a payment or passes on a preferred dividend, it is tantamount to default on the preferred issues. The rating is changed to 'D' once the payment date has passed. The rating usually would be

lowered to ‘C’ in the interim, if nonpayment were predictable—e.g., if the company were to announce that its directors failed to declare the preferred dividend. Whenever a company resumes paying preferred dividends but remains in arrears with respect to payments it skipped, the rating is, by definition, ‘C’.

Convertible preferred.

Securities such as PERCS and DECS/PRIDES provide for mandatory conversion into common stock of a company. Such securities vary with respect to the formula for sharing potential appreciation in share value. In the interim, these securities represent a preferred stock claim. Other offerings package a short-life preferred stock with a deferred common stock purchase contract to achieve similar economics.

These issues are viewed very positively in terms of equity credit—assuming conversion will take place in a relatively short time frame and the imbedded floor price of the shares makes it unlikely the company will regret and reverse its decision to sell new common stock.

Ratings on the issue address only the likelihood of interim payments and the solvency of the company at the time of conversion to enable it to honor its obligation to deliver the shares. These ratings do not address the amount or value of the common stock investors ultimately will receive. (We once highlighted this risk by appending an “r” to the ratings of these hybrid securities, but now rely on the market’s familiarity with such instruments and their terms.)

Trust-preferred stock.

When using a trust preferred stock, a company establishes a trust that is the legal issuing entity of the preferred stock. The sale proceeds of the preferred stock are lent to the parent company, and the payments on this intercompany loan are the source for servicing the preferred obligation. In some cases, this financing structure can provide favorable equity treatment for the company, even while the payments enjoy tax-deductibility.

Standard & Poor’s rating of trust-preferred securities is based on the creditworthiness of the parent company and the terms of the intercompany loan. Any equity credit that might be associated with these issues also is a function of the terms of the intercompany loan, especially with respect to payment flexibility.

This variety of preferred was introduced in 1995 as trust originated preferred securities (TOPrS). TOPrS represented a structural alternative for deferrable payment hybrids that had been sold since late 1993 under the appellation MIPS—Monthly Income Preferred Securities.

The use of a trust neither enhances nor detracts from the structure compared to the alternative issuing entities. The legal form of the issuing entity can be a business trust, limited partnership, off-shore subsidiary in a tax haven, or on-shore limited liability corporation. What these structures have in common is an intercompany loan with deferral features (typically five years), no cross-default provision, a long maturity, and deep subordination. The preferred dividend is similarly deferrable, as long as common dividends are not being paid. After the deferral period, the trust preferred holders have legally enforceable creditors rights—in contrast to conventional preferreds, which provide only very limited rights.

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Corporate Ratings Criteria—Secured Debt/Recovery Ratings, Overview; Bank Loan Rating Methodology; Collateral Value Analysis; Debtor-in-Possession (DIP) Financing

Secured Debt/Recovery Ratings, Overview

In 1996, Standard & Poor's Ratings Services introduced criteria that allowed for "notching up" certain debt obligations. If a particular obligation had reasonable prospects for full recovery, given a default, it could be rated above the corporate credit rating.

This innovation coincided with the expansion of rating bank loans—an asset class rarely rated previously. The secured position of many of these loans helped make it possible to analyze ultimate recovery prospects on an absolute basis. In some cases, the collateral's value is independent of the company's business fortunes. In many others, the priority of the secured debt allows one to conclude that there will be sufficient value—even making harsh assumptions about the bankruptcy scenario—to allow for full recovery. Furthermore, the legal protection of the secured debt removes much of the uncertainty associated with the bankruptcy process itself (see Table 1).

Primary Credit Analysts

Solomon B Samson
New York
(1) 212-438-7653
sol_samson@
standardandpoors.com

Scott Sprinzen
New York
(1) 212-438-7812
scott_sprinzen@
standardandpoors.com

Kenneth C Pfeil
New York
(1) 212-438-7889
ken_pfeil@
standardandpoors.com

Emmanuel Dubois-Pelerin
Paris
(33) 1-4420-6673
emmanuel_dubois-pelerin@
standardandpoors.com

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Table 1

Notching Criteria		
<i>Secured, Speculative-Grade Bank Loan Ratings</i>		
Ultimate Recovery of principal	Indicative Recovery Expectation	Issue Rating Relative to Corporate Rating
Highest expectation of full recovery of principal	100% of principal	+ 3 or 4 notches
High expectation of full recovery of principal	100% of principal	+ 1 or 2 notches
Substantial recovery of principal	80-100% of principal	No notching
Meaningful recovery of principal	50-80% of principal	-1 notch—unless most senior
Marginal recovery of principal	25-50% of principal	-2 notches—unless most senior
Negligible recovery of principal	0-25% of principal	-2 notches—unless most senior

We apply the new framework to all secured debt—not just bank loans. This includes first mortgage debt issued by utilities. But, because these issuers primarily are investment-grade companies with more remote likelihood of default, recovery is less relevant as an investment focus, so the weighting of recovery prospects plays a lesser role in the rating. As a corollary, the hurdles for justifying a notch-up are higher as one rises in the credit-rating spectrum. The table below shows how notching standards change as they pertain to first mortgage bonds of companies in the various investment-grade categories (see Table 2).

Table 2

Notching Criteria		
<i>First Mortgage Bonds of Investment-Grade Utilities</i>		
Corporate Rating	Asset Value/Secured Debt (x)	Notches Above Corporate Rating
A and above	2	1
BBB	2	2
	1.5	1
B and BB	2	3
	1.5	2
	1	1

In December 2003, Standard & Poor's launched its recovery ratings for secured debt. Recovery ratings use a new scale—1+ through 5. These ratings do not blend default risk and recovery given default, as the conventional issue ratings do. Rather, they express only our assessment of an issue's recovery prospects. Each rating category corresponds to a specific range of recovery values (see Table 3).

Table 3

Recovery Ratings		
<i>Secured Debt</i>		
Ultimate Recovery of Principal	Indicative Recovery Expectation	Recovery Rating
Highest expectation of full recovery of principal	100% of principal	1+
High expectation of full recovery of principal	100% of principal	1
Substantial recovery of principal	80%-100% of principal	2
Meaningful recovery of principal	50%-80% of principal	3
Marginal recovery of principal	25%-50% of principal	4
Negligible recovery of principal	0%-25% of principal	5

Notice the correlation between the bank loan rating and recovery rating scales. They incorporate a “crosswalk” from the expected recovery percentage to both the degree of notching and the recovery rating level. There are exceptions, however, including cases where we would not notch down even though recovery expectations are rated low, such as poorly secured debt that is the most senior obligation of the entity. Also, there are cases where the notching is less generous—such as secured investment grade debt. It is possible for the secured debt of a highly rated company (i.e., investment grade) to receive a recovery rating of ‘1’ and still not be notched above the corporate rating. Finally, there is a maximum of two notches that are subtracted to reflect the weak recovery prospects of junior debt. Therefore, debt issues with recovery ratings of four and five both get the same two notches when it comes to the conventional rating.

Absolute trumps relative.

Our more recent recovery analysis focuses on the absolute values that may be expected in a potential default scenario. This contrasts with the long-standing convention in the assignment of issue ratings, which differentiated senior and junior debt of a company merely in relative terms. Junior issues were rated a number of notches below the corporate rating based on the relative position of the debt issues of that particular company.

Now, notching up secured debt and notching down junior debt take absolute values into account. For example, if the absolute recovery prospect for a specific junior issue is 80 cents on the dollar or more, notching is dispensed with. In recovery terms, if such recovery can be reasonably anticipated, the junior debt is not considered so disadvantaged that it should be notched below the corporate rating. After all, this level compares favorably with recovery associated with senior debt generally.

(Note, however, that we still will not rate the senior-most debt—and particularly bank loans collateralized with first liens—below the corporate ratings, even in cases where expected recovery is very low. To do so—and be consistent about it—Standard & Poor’s would have to be prepared to rate all senior unsecured debt—even where there is no secured debt—lower than the corporate rating, according to its recovery prospects. Analytically, that is in most cases not feasible: Maybe some day.

Bank Loan Ratings Methodology

Both syndicated bank loans and privately placed debt frequently provide collateral designed to protect the lender against loss if the borrower defaults. In assigning ratings to bank loans and private placements—both the conventional debt ratings and the more recent recovery ratings—Standard & Poor’s takes loss-given-default into account when analyzing the recovery prospects of a specific loan. To the extent a loan is well-secured or contains other loan-specific features that enhance the likelihood of full recovery, the debt rating on that loan can be higher than the borrower’s corporate credit rating—and it will receive a high recovery rating.

Globally, creditor rights vary greatly, depending on legal jurisdiction. Well-secured debt of borrowers subject to the U.S. Bankruptcy Code generally receives a rating one or two notches higher than the corporate credit rating. Even greater weight could be given to collateral elsewhere in the world where legal jurisdictions may be more favorable for secured creditors, allowing an enhancement of three or four notches. On the other hand, no consideration is given for security in many countries such as China, where the bankruptcy process is virtually unpredictable.

Highly rated issuers generally are not expected to provide much collateral or other post-default protection when raising funds in public or private debt markets. Because the probability of their defaulting is low, post-default recovery is of little relevance. For these reasons, it would be unusual to find bank loans of investment-grade companies that deserved a rating higher than the entity's corporate credit rating.

Determining ratings.

The starting point for assigning a bank loan rating is determining the borrower's default risk, based on an analysis of the company's business strength and financial risk. The result is the corporate credit rating. The analysis then proceeds to the recovery aspects of a specific debt issue. Regarding recovery ratings, which purely address the recovery prospects, the likelihood of default is irrelevant. Still, the circumstances surrounding a potential default are highly germane to the recovery outcome. So comprehending the default scenario is part of every analysis.

We analyze the issue's legal structure and the collateral that supports each issue. The recovery risk profile is established by assessing the characteristics of various asset types used as collateral and subjecting the collateral values to stress analysis under different post-default scenarios. High collateral coverage levels can increase confidence that asset values will cover the secured debt, even under adverse conditions, although greater levels of collateral obviously do not entitle a creditor to any more than the amount of the claim.

When the collateral value exceeds the amount of the claim, the creditor could also receive post-petition interest. This excess collateral value is referred to as an "equity cushion." The creditor must carefully manage his legal posture to take advantage of this cushion and receive interest—while still asserting entitlement to the court's "adequate protection" of the collateral. Accordingly, our rating criteria recognize the advantage of a specific issue that may be a candidate to be paid post-petition interest, even though it is almost impossible to accurately predict such an outcome.

Default scenarios.

The analysis of recovery prospects for secured debt—which underpins the assignment of both conventional issue ratings and recovery ratings—focuses exclusively on the value of collateral in the post-default scenario. The current value of the collateral—even if stressed for various economic contingencies—is not relevant. The only meaningful stress scenario is the one consistent with the default. This is true whatever method is used to appraise the collateral's value, be it discounted cash flow of the enterprise, transaction prices of discrete assets, market-multiple conventions, capitalization rates, or some other approach.

Comprehending the default scenario is perhaps the most challenging aspect of loss-given-default analysis. In a limited number of situations, the default may be imminent, so the context is already set. But in most cases, it is necessary to make certain assumptions. The analyst must be creative, but avoid engaging in excessive conjecture or speculation. The higher the company's corporate rating, the more remote its risk of default—and the more obscure the default scenario.

In the absence of a more specific view, we use a generic model for default scenarios: the company's projected cash flow (EBITDA) will have fallen below its interest burden. (When a company engages in significant leasing of assets, the appropriate measure is coverage of interest and rental expense by EBITDAR.)

The model sets a base level for post-default cash flow, while the risk of a still-lower level must be taken into account. The validity of this tool is intuitive, and also is supported by some empirical evidence.

However, the potential cause of such decline in a company's current EBITDA—to the level of EBITDA associated with default—needs to be understood. The implications for the collateral values will vary, depending on the underlying reasons for the company's decline. Figuring all this out—especially well in advance of a company experiencing problems—can be analytically challenging. Moreover, there often are several factors, rather than a single factor, that together cause a default. Accordingly, cash-flow multiple valuations works best for companies that are presently highly leveraged. Their default can be expected to result from the high level of financial burden, even while the company's business fundamentals are not drastically impaired.

The model is less accurate where default risk is associated with potential declines in the business fundamentals. And the model does not apply wherever the risk of default is associated with vulnerabilities such as litigation, acquisition activity, or liquidity crisis. In all such situations, the analysis must substitute other approaches to model a default scenario that is consistent with the thinking behind the current rating. For example, many companies have low ratings because of a perceived propensity to use debt for acquisitions of other businesses—or to buy the company's common stock. In these instances, the company's ability to service its current debt is greater than its rating would indicate. The real concern is that the company will take on more debt, and subsequently lack the cash flow to service that increased corpus of debt. Accordingly, the default scenario to be used in loss-given-default analysis—and the related EBITDA/interest ratio—must focus on the projected increased debt level, rather than the current amounts.

Similarly, in the current low-interest-rate environment, many companies' risk of default—and, in turn, their credit ratings—is based on the assumption that interest rates will rise (unless they have locked in low rates with fixed rate, long-tenor debt). Indeed, current coverage ratios for many companies would otherwise seem out of line with their low ratings. Default scenarios for loss-given-default analysis relating to these companies will, therefore, reflect an inability to service the potentially higher interest amounts.

In these two examples, the enterprise value in the default scenario would be appreciably higher than if current debt or interest amounts are used in the calculation.

In the same vein, a default could occur if creditors accelerate their loans or force a restructuring upon breach of covenants—well before the company 'runs out of money', so to speak. The creditors' motivation would be to preserve recovery values by precipitating an 'early' default, i.e., prior to potential further declines in the business' cash-generating capacity. Default would then be linked to covenant levels—ordinarily a multiple of interest expense—rather than actual interest expense levels.

However, the reality is that bankers normally waive covenant breaches (although they could well extract a payment or obtain security for doing so). It is exceptionally difficult to predict in advance the minority of companies that will find their bankers taking the more radical position of pulling the plug.

Similarly, companies might default if they cannot refinance a large maturity—and, indeed, such a risk does occasionally drive the rating outcome. Yet, most companies that generate enough EBITDA to service their debt do manage to refinance. Especially in the current flush financial markets, it is rare to see companies that cannot attract new debt financing.

Note, too, that if the default scenario were based on presumed intervention upon breach of covenants, the corporate rating would also have to reflect this expectation. As pointed out before, there must be consistency regarding the default scenario underlying the corporate rating and the recovery analysis. The effect of this would be greater default risk and lower corporate ratings. (Any 'notching up' would then be from a lower base.)

Collateral Value Analysis

Collateral can consist of discrete assets (such as accounts receivable, real estate, or vehicles) that have value independent of the business, discrete assets that are linked—directly or indirectly—to the business’ fortunes (inventory, production equipment), or the business enterprise itself. Bank loans to below-investment-grade issuers tend to have a first-priority lien on substantially all of a company’s operating assets: receivables, inventory, trademarks, patents, plants, property, equipment, and pledges of subsidiary stock. In effect, they have the entire enterprise as collateral. Indeed, the whole is usually worth more than the sum of its parts, as long as the business enterprise continues as a going concern. (Private-placement debt issues are more likely to be secured by one or more discrete asset types.)

All types of collateral can enhance a creditor’s rights and help ensure loan recovery, even though it is rare that a creditor will be able to simply foreclose and seize the collateral to liquidate it. In the U.S. at least, a bankruptcy filing imposes a stay on a creditor’s right to the collateral during what is often a long and tortuous reorganization process. Moreover, the bankruptcy judge often has wide discretion (although seldom exercised) to substitute collateral. Indeed, most large company bankruptcies never result in liquidation: the company is usually reorganized. (The decision of whether to reorganize is influenced by a myriad of factors, including the legal system, industry trends, perceived long-term viability of the business, and regulatory or political considerations.) The form the reorganization takes, including the resolution of creditors’ claims, is the result of a negotiated process worked out before or after an actual bankruptcy filing.

Nonetheless, the outcome for creditors ultimately is a function of the collateral’s value going into the reorganization process. For example, bankruptcy judges can substitute collateral, but they must adhere to the principle of “adequate protection” by providing collateral of comparable value to that of the original. So, knowing the value of the collateral—relative to the amount owed—provides an approximation of just how well a creditor is secured.

Consequently, the bank-loan analysis focuses on determining the value of the various asset types. The valuation analysis that produces the higher asset value should be used in determining the bank loan rating. Generally, if the business operating assets are all part of the security package, thinking of the collateral as a going-concern business would yield the highest values. That explains why the enterprise-value analysis is performed regularly. However, given the nature of the enterprise-value methodology, this appropriately is used only when the default scenario can be reasonably visualized, e.g., for highly leveraged companies. In these instances, the business presumably continues without drastic changes, while the financial overextension leads to default when the company can no longer service its entire fixed-charge burden. The enterprise value analysis cannot usually be used for investment-grade companies or for speculative-grade companies with conservatively leveraged balance sheets (and whose default risk is based on some serious business vulnerability). Instead, a liquidation analysis is conducted to determine the projected value of the specific assets that constitute such companies’ collateral.

Enterprise-value analysis.

Enterprise value is established by using a discounted cash flow calculation, or, as a shortcut, a general market-multiple approach. The company’s EBITDA (or, where applicable, EBITDAR) at the hypothetical point of default is multiplied by a representative valuation multiple. (The value established assumes investors would finance the unit with a combination of debt, leasing, and equity). Appropriate discounts are applied to stress both cash flow and capitalization rates used to determine the value of the business.

EBITDA is projected to reflect the decline in cash flow at the time the company defaults. For this analytical exercise, the analyst simulates default scenarios. First, a base case is constructed that represents the minimum decline in EBITDA associated with a potential default. In this scenario, EBITDA falls short of the company’s periodic interest and rental payments. This scenario results in maximum cash flow consistent with a default

and, therefore, equals the highest value for the defaulted company. Second, an alternative scenario is proposed, under which normalized EBITDA is reduced to a greater extent—usually 50% or more—to reflect other possible, more stressful default scenarios. Additional scenarios, with different reductions, can reflect company-specific default factors such as sector risk, political, regulatory, or other factors. The more negative scenario is not automatically used in the rating determination; analysts must judge which scenario is appropriate based on the company's individual circumstances.

As explained earlier, a borrower with a respectable business position but a risky financial profile would be more likely to default (if a default occurs at all) because of its leverage than because of a decline in its business strength. Such an entity would be viable over the long term if it were more appropriately capitalized. The base-case scenario would be weighed more heavily. By contrast, a borrower with a weak business is more likely to default because of a decline in its business (failure to keep up with competition, changes in technology, etc.). The impairment of its business associated with the default scenario could more seriously affect its cash flow and market value. Accordingly, the weighting would lean toward the downside risks—or we would decide to abandon the enterprise-value approach altogether.

The cash-flow multiple used in the enterprise valuation model takes into account the market multiple of the borrower's peer group. (This market multiple would always have to be adjusted to incorporate the negative effect a bankruptcy filing.) Cash-flow multiples, of course, change. If for no other reason, they should fluctuate with prevailing interest rates. For rating purposes, 5x has some empirical validity over the long term—and we cannot predict interest rates at the unspecified time of the simulated default. Actual experience with sales of distressed companies shows the 5x multiple to be widely applicable.

A higher multiple might in some instances be warranted—for example, if an industry has unusual growth potential. However, one must be cautious about arguing for a higher multiple for a company in a very troubled situation—i.e., following a bankruptcy filing. It is hard to be confident that the industry would still have such positive characteristics in that context. When the insolvency risk can be attributed to a cyclical problem, there might be some predictability of a post-default rebound. That should warrant using a higher multiple of the cash flow at a cyclical low point, which presumably would coincide with the point of default.

To be conservative, any priority claims—such as product or environmental liabilities—that are material would be deducted from the enterprise value. Similarly, the value of other existing secured debt, such as industrial revenue bonds, mortgage debt, or secured lease debt, is subtracted from the enterprise value. In some instances, trade creditors could have a perfected first-priority interest in merchandise, and the bank creditors would have a lower-priority claim on inventory. Importantly, to the extent the company relies on operating leases to generate its cash flow, an amount must be subtracted from the capitalization to represent the ongoing lease obligation.

The enterprise value analysis also assumes any revolving portion of a bank credit facility is fully drawn at the time of default. (However, this harsh assumption is not automatically made regarding notching down any unsecured issues.) In some cases, assumed borrowings under the rated facilities are earmarked for acquisitions. In these instances, the default EBITDA levels would be adjusted for the additional cash flow from these acquisitions. The effect is adequately dealt with in the base-case scenario, but adjustment is called for in the downside case. Given the likelihood that most acquisitions will not be totally productive, the full amount of cash flow normally attributable to the borrowings is not added to EBITDA. The conservative position is to add 50% of the new cash flow to the EBITDA figure.

Standard & Poor's default scenario is modeled on EBITDA being insufficient to cover interest and rental payments. As noted, other scenarios may affect the timing of a default. For example, a company may not be able to meet its amortization schedule or a bullet maturity, precipitating a default. Other large required outlays—including nondiscretionary capital expenditure—could have a similar effect on a wobbly company. In such cases, the cash flow associated with the default scenario should be higher than the usual base-case

default assumptions. However, (re)financing risk ultimately is related to a company's prospects. As long as prospects for a company suggest an ongoing ability to service its debt, lenders should make financing available. The distressed-EBITDA default scenario generally reflects conditions that preclude refinancing.

Discrete-asset value analysis.

Standard & Poor's has rated loans backed by a broad range of assets, from real estate and drilling rigs to timberlands and oil and gas reserves. Important considerations include the type and amount of collateral, whether its value can be objectively verified, and how likely will it hold up under various post-default scenarios, along with any legal issues related to perfection and enforcement.

The analytical starting point is the assets' current value. Market value is key, and therefore appraisals often are required. Several methods are used to determine the market value, including recent sales of comparable assets and the assets' replacement cost, adjusted to reflect their age and technology. Other valuation techniques include discounting cash flow, industry norms and multiples of earnings and cash flow, and replacement value and fixed prices per unit of production (for natural resources). Although all valuation methodologies rely on some subjective aspects, the more objective the valuation, the better. (As noted, however, the relevant value is the value of the asset in a distressed scenario. To one degree or another, the company's asset values normally will be affected by the default scenario, when it is not business as usual.)

Book values typically are irrelevant, but may sometimes suffice to establish the starting point—if historical price and depreciation policies are standardized, and depreciation schedules are adequate to keep book value in line with market value. Two examples of assets for which this approach has been used are shipping containers and autos. Appraisals usually are necessary when the collateral is specialized, such as real estate, plants, or equipment.

The assets' potential to retain value over time is critical. Even if not directly linked to the company's fortunes, asset values fluctuate and need to be stressed. Therefore, collateral is judged according to volatility, liquidity, special-purpose nature, and any correlation of its value with the health of the issuer's industry. Even assets that have value independent of the specific owner may still be correlated to industry or market factors. Because the relevant context is the default of the assets' owner, the analyst must be mindful that the circumstances leading to a default might also affect the assets' values. For example, if the borrower were a supermarket chain and the collateral were its fleet of trucks, the assets' value would not be reduced by the company's default. But, if the borrower were an offshore contract driller and the collateral were its fleet of vessels, there might well be a strong correlation between the events leading to the company's default and the market value of its drilling ships.

Also, if proper upkeep is critical to the assets' value, there might be some doubt about how much maintenance a failing company would provide. Any costs that would have to be expended to realize asset values also must be taken into account. These include dismantling installation, transportation, foreclosure, and remarketing costs, among others. On the other hand, the analysis would be based on an orderly liquidation scenario, rather than a fire sale.

Springing liens.

"Springing liens," as the name implies, are liens that become effective once a company's credit quality deteriorates to a predetermined level. This level normally reflects the point at which creditors would become concerned about the possibility of default and bankruptcy. Often, the trigger for springing the lien is tied to a reduction in Standard & Poor's rating.

As far as rating criteria for corporate ratings, these liens ordinarily are considered identical to liens that already have been perfected, because they likely will be in effect by the time that security is relevant—i.e., in bankruptcy. (In the case of structured entities and hybrids, the approach we take is radically different because

such entities might well preemptively file for bankruptcy protection to avoid an elevation in the status of claims against their assets by becoming secured.)

The corporate approach applies to both notching up and notching down. Bank loans containing springing liens can be notched up immediately; unsecured issues are to be notched down immediately to reflect their ultimately disadvantaged position in bankruptcy to loans that contain springing liens.

However, one can never completely take for granted the ability to perfect a lien. This legal risk would force some distinction between security that already has been perfected and security that still requires perfection. In practice, this factor could serve as a damper against assigning a rating two or more notches above the corporate credit rating in cases that would otherwise deserve such substantial enhancement.

A lien also cannot be perfected when a company is in bankruptcy, and problems regarding preference may apply if the lien springs close to a filing. That makes it important to have the trigger level correspond to a point in time that presumably will come well before a default. If a rating trigger for springing the lien is 'BB-' or higher, we would expect the lien to be legally enforceable, expecting such a rating to apply well ahead of any bankruptcy filing.

Conversely, some liens are designed to fall away. The effect of this potential removal of the security feature should be reflected immediately. A typical example would be a five-year loan secured only for the first year or two. In that instance, the rating should ignore the security, given its temporary nature (unless the corporate credit rating is very low, in anticipation of imminent default). Another arrangement allows the lien to fall away when the corporate credit rating is raised. In that case, the loan rating can be enhanced at the outset—to the extent that it would remain at that level even after the security lapses, consistent with the higher corporate credit rating at that point.

Second liens.

The bank loan rating for second-lien debt can range from being notched above the corporate credit rating, to the same as the corporate credit rating, to below the corporate credit rating by one or two notches.

The key is to analyze the expected recovery following any potential default in absolute terms. The methodology outlined below supercedes our earlier approach, which merely addressed the relative disadvantage of the second-lien debt by considering the amount of priority debt.

These steps are followed:

- Analysts should compute coverage levels for the first-lien debt.
- Next, compute the coverage for the aggregate of first- and second-lien debt. The coverage levels will indicate—as a first pass—how confident we are about the recovery for the second-lien debt.
- However, the second-lien debt is not as well protected as the aggregate numbers would suggest, given the priority of the first-lien debt. One way to think about it: There is greater sensitivity to coming up short for the second-lien debt—which is at the bottom rung—than would be the case for one aggregate debt amount. Put differently, even if the coverage levels for the first- and second-lien debt are close—i.e., in the arithmetic sense, for this one crude measure—the actual protection levels are very different in qualitative terms.
- This leads to a simple rule, which can serve as a reality check: We do not rate the first- and second-lien debt the same, for conventional ratings that are above the corporate credit rating. (However, it is acceptable to have the same recovery ratings, given the range of outcomes represented by those ratings. And it is also acceptable to be notched down by the same degree when taking into account the maximum gapping allowed by Standard & Poor's for the various classes of junior debt.)

Once the bank loan rating is assigned based on the steps above, the recovery perspective carries over to the recovery ratings.

Some examples:

If the first-lien debt is two notches above the corporate credit rating, the second-lien debt can be as high as one notch above, assuming we are confident they too would recover 100%. The recovery ratings would be ‘1’ for both.

If the first-lien debt is one notch above the corporate credit rating, the second-lien debt can be the same as the corporate credit rating—as long as we are confident of 80% recovery. The recovery ratings would be ‘1’ for the first-lien debt, and ‘2’ for the second-lien debt. Even if the raw numbers indicate 100% recovery for the second-lien debt, the best it can be rated is equal to the corporate credit rating, i.e., one notch lower than the first-lien debt: therefore, a recovery rating of ‘2’.

In cases where the first-lien debt is rated at the same level as the corporate credit rating, the second-lien debt can be rated at that level—at least theoretically; it could also be rated lower, depending on the fact pattern. The best case would be one where the first-lien debt is relatively small in comparison to the assets of the company, so that the disadvantage it poses to the second-lien debt is below Standard & Poor’s typical threshold levels. If the amount of the second-lien debt also is small, relative to the corporate assets, that could translate into recovery ratings of ‘2’ for both the first- and second-lien debt—i.e., at least 80% recovery.

Normally, however, the second-lien debt recovery prospects would be viewed as worse—the result of coming behind the priority debt or the lack of valuable collateral in the first place. They then could be rated one or more notches behind the first-lien debt. If the analysis indicates they can be expected to recover 50% to 80%—thus corresponding with a recovery rating of ‘3’—then the bank loan rating would presumably be at least one notch down (from a noninvestment grade corporate credit rating). If the recovery prospects were deemed still worse—only 25% to 50%—the recovery rating would be ‘4’; the bank loan rating normally would be two notches below the corporate credit rating.

In some cases, the first-lien debt also may be viewed as weak in terms of recovery prospects, and so might have a recovery rating of ‘3’ or ‘4’. Nonetheless, the first-lien debt—as the senior-most debt—would not be notched down, as noted above.

Borrowing bases.

A borrowing base sets a limit on borrowing based on a percentage of the assets outstanding at a given time. The borrowing-base definitions of eligible assets are used to exclude impaired assets such as overdue receivables or obsolete inventory. If the analyst is comfortable with the borrowing base formula at the outset, its applicability can be relied on over time. The amount of any new borrowings would depend on the quality and value of then-current assets, although risk remains for what has already been borrowed. For example, the borrowing base may require an amount of oil and gas reserves as collateral. But once the advance is extended, the oil is produced, and there can be no guarantee that new oil will be found to replace it.

Ideally, as oil is produced or inventories are sold and receivables are collected, the proceeds must be used to repay bank borrowings, and renewal of borrowing means once again meeting the tests. But often, this is not the case. Nonetheless, the proximity of the valuation to the time of the ultimate default, as well as potential limitation of exposure to further deterioration are advantages. Periodic monitoring allows the banker to exercise some control. It is therefore important to know how frequently compliance with the borrowing base is calculated and what remedies are available if the base is exceeded. The definition of eligible assets obviously is critical.

The path to bankruptcy could involve a major drop in asset values, even if the default scenario incorporates an inventory buildup resulting from a decline in sales. Unit value may slip as inventory piles up. Accumulation of aging, uncollectible receivables also is possible, but less common. Credit agreements often have sublimits on inventory borrowings in relation to total borrowings, to guard against just such unfavorable shifts in the collateral mix.

Stock as collateral.

Being secured by a pledge of a business unit's stock is not the same as being secured by the assets of that unit. The stock represents only the residual value after all claims directly against the unit have been satisfied—and may in the end be worthless.

The criteria, however, do not preclude assigning value when shares are the collateral. Shares of the borrower—which would be bankrupt in the relevant scenario—presumably would have little value. The same would apply to the shares of major subsidiaries of a bankrupt borrower, especially if the companies are in the same general line of business. However, shares of a subsidiary in a different line of business, or of a subsidiary abroad that has independent business prospects, may retain value, even if that subsidiary is drawn into the bankruptcy.

(Standard & Poor's Ratings Services' legal team has researched the risk of substantive consolidation, and concluded that it is remote in nearly all cases.)

The key analytical issue would be the risk the subsidiary is weakened financially by actions of its parent as the parent struggles to stave off its own default. Even if that unit has few liabilities now, there must be legal or regulatory restrictions that prevent incurring additional debt—or the residual value of the shares could be diminished.

Subsidiary stock has been an effective way of providing valuable security in cases when assets could not be pledged directly—e.g., certain licenses and contracts. The licenses are set aside in dedicated subsidiaries, typically as their sole assets—while liabilities are strictly limited.

Tenor/amortization.

Long-term concerns that could constrain a corporate credit rating may extend beyond the time horizon of an issue or bank loan facility. Therefore, a short final maturity may be favorable. (Unsecured debt issues do not benefit similarly from shorter maturities, because they normally are repaid by refinancing. The issue's long-term risk profile would affect the refinancing risk.)

In addition, because confidence in asset valuations diminishes over a longer time span, the ratings benefit that could be given for asset-based recovery potential is greatest for short-term loans. For example, at a given time, the outlook for energy markets may cause little concern for the value of oil rigs for the next two or three years, but great concern about potential loss of value over a 12-year period. Also, the risk of obsolescence or regulatory restrictions increases over time for certain types of assets such as aircraft. Similarly, when assessing a potential bankruptcy scenario, doubts about how operating assets might be affected would be greater if bankruptcy proceedings are anticipated to be lengthier than normal.

Amortization reduces the amount of debt that must be covered by the value of the assets, and thereby improves loan-to-value coverage (unless the security is reduced in tandem via a borrowing-base formula). Accordingly, if one tranche of a loan facility amortizes more quickly or is significantly shorter than another, the two tranches could be rated differently.

Legal considerations.

For collateral to be given weight in the rating process, lenders should have a perfected security interest in the collateral. Perfection can be accomplished in a number of ways, including Uniform Commercial Code filings in the U.S., possession, title, and regulatory filings.

Not all collateral types (e.g., patents and trademarks) readily lend themselves to perfection. And some assets, such as cargo containers, may be easy to perfect but hard to locate and recover if they are in foreign countries at the time of a bankruptcy filing. Uncertainty about gaining possession of part of the collateral can sometimes be offset by providing greater overcollateralization.

“Tight” covenants.

Covenants alone—in the absence of collateral—seldom result in a higher debt rating, although there could be a boost for the recovery rating.

As far as default risk, if the covenant breach were to arise from deterioration in the business, the bank’s enforcement will only compound the problem. If the bank refuses to provide more funds—and especially if it requires immediate repayment—the company’s liquidity will suffer and the risk of default increases. The best-case scenario would be one in which the bank waives or renegotiates the covenant without penalizing the company by way of compensation or tougher terms.

If the potential covenant breach is linked to a proposed credit-harming transaction that is discretionary, the bank could force the company to abandon the transaction. But, if the bank waives the covenant, or if the company manages to refinance the bank loan as part of its deal, the covenant will not have benefited the company’s default-risk profile.

Accordingly, tight covenants theoretically could benefit the corporate credit rating, but more often do not. Rating enhancement would apply only when:

- Concern over a deliberate credit-harming event is the specific rating factor that prevents a higher rating (situations in which the rating explicitly takes into account such an expectation or event risk are uncommon—except in the context of a parent tapping the financial potential of a subsidiary); and
- The covenants would have to be tight enough to prevent any transaction inconsistent with the higher rating level; and
- We could be confident in advance that the bank would not waive the covenant, and could not (easily) be replaced. In reality, the bank’s waiver or alternative financing should be available for reasonable credits—i.e., wherever the rating outcome following the transaction is ‘BB-’ or better.

Enforcement of the covenants and precipitating a bankruptcy might indeed benefit the bank in terms of ultimate recovery of principal from a deteriorating situation. The bank would be seeking repayment early on, while the business retained greater value. However, the rating outcome for the bank loan would not necessarily be higher than it would be without the tight covenants—and might even be lower: Increased notching would presumably be from a lower corporate credit rating, given the increased risk of default.

If the covenant breach arises from a discretionary transaction, the bank could avoid risk—if not by preventing that transaction—by insisting that it be taken out by other financing. The rating benefit to the bank loan itself would still depend on the extent to which such a potential credit-harming transaction plays a role as a rating factor in the first place. The more prominent the transaction’s role in the rating—i.e., to the exclusion of concern for ordinary, fundamental risks—the more the potential that tight covenants could mitigate risk and enhance the assigned rating.

Debtor-In-Possession (DIP) Financing

Because adequate funding is key to a company’s potential for reorganization and emergence from bankruptcy as a viable entity, the U.S. Bankruptcy Code provides incentives for lenders to finance companies operating under the protection of Chapter 11. Such post petition financing is known as debtor-in-possession (DIP) financing.

Our criteria for rating DIP loans extended to companies in bankruptcy employs the conceptual framework developed for bank loan ratings. The analysis for these DIP loans consists of two parts:

- The first focuses on timely repayment;
- The second focuses on the particulars of the specific loan and the potential for recovery on that loan in the event liquidation (a shift to Chapter 7) becomes necessary.

Timely payment.

In the case of DIP loans, timely payment of principal occurs through the debtor-in-possession's reorganization, its emergence from Chapter 11, and repayment of the DIP loan. Such payment is considered "timely" and in accordance with the terms of the agreement—notwithstanding the possibility of a stated earlier maturity—in keeping with the normal expectations. DIP lenders generally are tied in for the duration of the reorganization process.

This part of the analysis considers the likelihood of reorganization. A favorable assessment is likely for viable companies, particularly for large, established entities. If the operation is fundamentally healthy, but the company is saddled with debt because of a leveraged buyout (LBO), a recapitalization, or an overpriced acquisition, its ability to service a more appropriate debt load via reorganization might be quite strong.

However, if there were any significant doubt about the company's viability, the result probably would be a speculative-grade outcome. A failed company in an industry with poor fundamentals or with a seriously flawed business model would be a lesser candidate for rehabilitation and refinancing.

Accordingly, much of the analysis is identical to the fundamental corporate credit analysis relating to a company in the context of its particular industry. This analysis focuses on the supply-and-demand forecasts for the company's products, its market position, operating history, current cash flow, and ability to operate profitably once it has a manageable capital structure. These factors are much the same as would be considered in assigning a credit rating to a non-bankrupt company. Of course, the impact of the bankruptcy itself—on the company's business relationships with its customers, its vendors, and its employees—is critical in the case of a DIP loan.

One important difference from other rated instruments is the relatively short time horizon for a DIP loan (often six months to two years), which obviates some of the longer-term considerations factored into traditional ratings. In rating a DIP loan, we focus on longer-range factors only to the extent they affect the company's ability to reorganize.

Once the company has filed for Chapter 11 protection, pre-petition debt service usually is suspended. Obviously, there will be debt service on the rated loan and there may be other obligations the court has approved for continuing payment. If there is secured debt, the company generally will accrue post-petition interest—even if no cash payments are being made—to the extent the value of the security exceeds the amount of the debt. It is imperative to be aware of any motions that may be filed on behalf of pre-petition creditors to receive payment of their claims, adequate protection for their position, or otherwise contest the DIP loan. The company may be planning asset sales, store closings, or lease cancellations, all of which could have a bearing on the level of cash flow the company can generate and its attractiveness as a viable candidate for fresh financing to take out the DIP lenders.

Collateral and ultimate recovery.

The second part of the rating analysis looks at the particulars of the specific loan and its recovery potential in the event of liquidation. As with collateralized loans to non-bankrupt companies, the rating may be enhanced by one or several notches, if there is a reliable, second way out.

Strong legal protection is a hallmark of DIP lending, and so it would be normal to expect some enhancement of the DIP loan rating: Thus, the rating is anchored by the perceived likelihood of reorganization, and supplemented by the potential for recovery through asset liquidation.

We analyze collateral with a focus on its ability to retain value through a liquidation process. A conservative valuation of the collateral should cover the loan by a safe margin (see "Bank Loan and Private Placement Rating Criteria"). This would be the case if a company entered Chapter 7. Receivables and inventory often are the collateral supporting typical industrial DIP loans. This collateral is among the most liquid types, and typically governed by conservative borrowing bases.

Legal status.

Section 364 of the U.S. Bankruptcy Code provides for “superpriority” status to be given to a claim for payments on the DIP loan if that is the only way to induce lenders to provide credit. Superpriority status—i.e., the right to be repaid from the unencumbered assets of the company—gives the DIP lender substantially the same recovery rights as a direct security interest in the otherwise unencumbered assets of the company would have. In addition, the bankruptcy court may authorize security for the loan through a lien on the company’s unencumbered property. While a debtor-in-possession may obtain unsecured financing in its ordinary course of business without a court order, the bankruptcy court must approve any loan agreement that puts payments ahead of other administrative expenses.

By providing clarity on the status of the lender’s claim to be repaid, court orders authorizing application of these provisions of the bankruptcy code give substantial comfort. Analysis of the loan agreement and court orders can determine the priority of the lender’s claim on the company’s payments. It is important to review any other claims, either on par with or prior to the loan. In addition, there may be liens that can affect the lender’s claim: Taxes and ERISA claims may be of such a priority. Pension Benefit Guaranty Corp. (PBGC) claims normally are treated as junior in priority to any DIP claim. To understand the nature of any significant liens against a company, Standard & Poor’s views a Uniform Commercial Code (UCC) search as important. We will discuss the results of any significant findings with the company, as well as whether new liens have been filed.

A DIP loan with superpriority claim status, and a tight loan agreement and court order, can get the full measure of rating enhancement. A strong court order would state that no other claim having priority over or being on par with the DIP loan should be granted while the DIP loan is outstanding. This is important because the lender may have a security interest in unencumbered collateral. In addition, the court order should explicitly established the superpriority status of the DIP lender’s claim and assure that the automatic stay provisions will not be lifted or modified to the detriment of the DIP loan.

Key DIP documents.

The following are the key documents needed for rating a DIP loan:

- Loan agreement, with all modifications and amendments;
- Updated financial information;
- Interim orders and final order;
- Evidence of a UCC search, with e-mail confirmation of new prior claims, and
- Opinion that the order has become final and is unappealable.

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Corporate Ratings Criteria—Equity Credit: What It Is, and How You Get It; Factoring Future Equity Into Ratings; Tax-Deductible Preferreds and Other Hybrids; A Hierarchy of Hybrid Securities

Equity Credit: What It Is, and How You Get It

Standard & Poor's often is asked "Will the issuer of this hybrid security receive equity credit?" In other words, has the issuer's credit quality improved and has its debt capacity expanded, as is ordinarily the case when equity is added to the balance sheet?

The question of equity credit is not a yes-or-no proposition. The notion of partial credit is very appropriate. When it comes to calculating ratios, a hybrid security may be viewed as debt in some respects, and as equity in others.

What is equity?

What constitutes equity in the first place? Traditional common stock—the paradigm equity—sets the standard. But equity is not a monolithic concept; rather, it has several dimensions. We look for the following positive characteristics in equity:

- It requires no ongoing payments that could lead to default;
- It has no maturity or repayment requirement;
- It provides a cushion for creditors in the case of a bankruptcy; and
- It is expected to remain as a permanent feature of the enterprise's capital structure.

If equity has these distinct defining attributes, it should be apparent that a specific security can have a mixed impact. Hybrid securities, by their very nature, will be equity-like in some respects and

Primary Credit Analysts

Solomon B Samson
New York
(1) 212-438-7653
sol_samson@
standardandpoors.com

Scott Sprinzen
New York
(1) 212-438-7812
scott_sprinzen@
standardandpoors.com

Emmanuel Dubois-Pelerin
Paris
(33) 1-4420-6673
emmanuel_dubois-pelerin@
standardandpoors.com

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debt-like in others. We analyze the specific features of any financing to determine the extent of financial risks and benefits that apply to an issuer.

In any event, the security's economic impact is relevant, its nomenclature is not. A transaction labeled debt for accounting, tax, or regulatory purposes may still be viewed as equity for rating purposes, and vice versa.

Attributes of equity.

Equity provides value for the enterprise. When a company sells equity, it receives money to invest in its business. It is able to do research, buy equipment, or support inventory and receivables growth—all to generate cash flow and keep the enterprise healthy. If issuing a security allows the company to avoid a cash outflow that would have been incurred in the course of business, the beneficial impact is identical. When shares are issued in lieu of employee benefits that otherwise would be paid in cash—for example, as part of an ESOP—this aspect of equity is fulfilled. However, if shares are issued as a new—perhaps unnecessary—form of compensation, the benefit is dubious: the question is whether the enterprise has received anything of value. Soft capital—a commitment from a nonaffiliated provider of capital to inject equity capital at a later date—offers another example of a transaction that falls short in terms of this basic attribute of equity. However valuable it may be to have a call on funds in the future, the business does not have the funds now. And, by making the funds available at the company's discretion, there is the risk that a delay in exercising that option may lead to a situation of “too little, too late.”

- Equity requires no ongoing payments that could lead to default. Equity pays dividends, but has no fixed requirements that could lead to default and bankruptcy if these dividends are not paid. Moreover, there are no fixed charges that might, over time, drain the company of funds that may be needed to bolster operations. A company is under pressure to pay both preferred and common dividends, but ultimately retains the discretion to eliminate or defer payment when it faces a shortage of funds. Of course, a company's reluctance to pass on a preferred dividend is not identical to its reticence to altering its common payout. Accordingly, there is a difference in “equity credit” afforded to common equity relative to preferred equity. Similarly, common equity issued in conjunction with so-called income depository securities (IDSs) is viewed as possessing less discretion over dividends: They are marketed with an expected yield, and investors are promised a payout of virtually all cash flow.

The longer a company can defer dividends, the better. An open-ended ability to defer until financial health is restored is best. As a practical matter, the ability to defer dividend payments for five or six years is most critical in helping to prevent default. If the company cannot restore financial health in five years, it probably never will. The ability to defer payments for shorter periods also is valuable, but equity content diminishes quickly as constraints on the company's discretion increase.

Debt instruments can be devised to provide flexibility with regard to debt service. Deferrable payment debt issued directly to investors—i.e., without a trust structure—legally affords the company flexibility regarding the timing of payments that is analogous to trust preferreds. Yet, by being identified as a debt security, the company's practical discretion to defer payments may be constrained, which diminishes the equity credit attributed to such hybrids compared with deferrable payment preferred stock.

Income bonds—i.e., where the payment of interest is contingent on achieving a certain level of earnings—were designed with this in mind. However, to the extent that cash flow diverges from earnings measures, income bonds tend to be imperfect instruments. A recent variation on the theme is the cash flow bond, which pegs the level of interest payments to the firm's cash flow. The equity content of such instruments is a function of the threshold levels used to determine when payments are diminished. If the level of cash flow that triggers payment curtailment is relatively low, that instrument is not supportive of high ratings. Another straightforward concept entails linking interest payments to the company's dividend, creating an equity-mimicking bond. A number of international financial institutions issued such bonds in the late 1980s.

- Equity has no maturity or repayment requirement. Obviously, the ability to retain the funds in perpetuity offers the company the greatest flexibility. Extremely long maturities are next best. Accordingly, 100-year bonds possess an equity feature in this respect (and only in this respect) until they get much nearer their maturity. To illustrate the point, consider how much, or how little, the company would have to set aside today to defease or handle the eventual maturity. However, cross-default provisions would lead to these bonds being accelerated.

Preferred equity often comes with a maturity—as a limited-life or sinking-fund preferred—which would constitute a clear shortcoming in terms of this aspect of equity. Limited credit would be given for this type of preferred, even if the security had a 10-year life or more. Even if it could be assumed the issue successfully is refinanced at maturity, the potential for using debt in the refinancing would be a concern (see the following discussion on the permanence of equity).

- Equity provides a cushion for creditors in the event of default. What happens in bankruptcy also pertains to the risk of default, albeit indirectly. Companies can continue to raise debt capital only as long as the providers feel secure about the ultimate recovery of their loans in the event of a default. Debtholders' claims have priority in bankruptcy, while equity holders are relegated to a residual claim on the assets. The protective cushion created by such equity subordination allows the company access to capital, enabling it to stave off a default in the first place. Flexible payment bonds, of course, would not qualify on this aspect of equity. Similarly, convertible debt—even mandatorily convertible debt—would not be much help in this regard if the issuer were vulnerable to default during the interim period prior to conversion.
- Equity is expected to remain a permanent feature of the enterprise's capital structure. At any time, a company can choose either to repurchase equity or to issue additional shares. However, some securities are more prone to being temporary than others. Our analysis tries to be pragmatic, looking for insights as to what may ultimately occur. Preferred stock, in particular, is likely to have provisions for redemption or exchange, if not an outright stated maturity. Coupon step-ups are designed to motivate calling the issue. Auction or remarketed preferred stock is designed for easy redemption. Even though the terms of this type of preferred provide for its being perpetual, failed auctions or lowered ratings typically prompt the issuer to repurchase the shares.

Our discussions with management regarding a company's financial policies provide insights into its plans for the securities: whether a company will call or repurchase an issue and what is likely to replace it.

"Replacement language" in the issue that restricts refinancing to issues of similar equity content can provide additional comfort regarding management intent, even though legal enforcement is dubious. Another important consideration is the issuer's tax-paying posture. It is difficult for a nontaxpaying issuer to make the case that the firm will continue to finance with nontax-deductible preferred stock once it becomes a taxpayer and can lower its cost of capital by replacing the preferred with debt. Other clues can come from the nature of investors in the issue (e.g., money market, as opposed to long-term fixed-income investors) and the mode of financing that is typical of the company's peer group. For example, utilities traditionally finance with preferred stock, and industry regulators are comfortable with it. Therefore, the usual concern that limited-life preferred stock will be refinanced with debt does not generally apply in the case of utilities. In the case of so-called tax-deductible preferreds, the issues are different. The risk here is that their favorable tax status is overturned, and—especially with new hybrids—that risk may be substantial. This concern can be mitigated by provisions in the transaction to convert into another equity-like security in the event of loss of tax-deductibility.

Rating methodology.

While many focus on the leverage ratio in thinking about equity credit, a company's leverage is just one of many components of a rating assessment. (In fact, cash flow adequacy and financial flexibility have long

surpassed balance-sheet considerations as important rating factors.) Standard & Poor’s methodology of breaking all the analyses into categories allows each of the several attributes of hybrid securities to be considered separately and in the appropriate analytical category.

The aspect of ongoing payments is considered in fixed-charge coverage and cash-flow adequacy; equity cushion in leverage and asset protection; need to refinance upon maturity in financial flexibility; and potential for conversion in financial policy. The before-tax and after-tax cost of paying for the funds is also a component of both earnings and cash flow analysis.

There is no uniform weighting of the analytical categories to arrive at a rating conclusion. Accordingly, the relative importance of each equity attribute can vary. The critical issues for companies can differ. Moreover, the factors that delineate ‘A’ ratings from ‘AA’ ratings tend to differ from those that determine whether a rating will be ‘B’ or ‘BB’. Similarly, the impact of a hybrid may depend on the specific needs of a given issuer or its place in the rating spectrum. Aspects affecting near-term flexibility usually are of prime importance for low-rated, troubled credits, while long-term considerations are more germane when an already highly rated credit is being reviewed for an upgrade. To illustrate the point: Replacing 20-year debt with 100-year debt is a nonevent for a company facing insolvency in the next several quarters.

We do not simply “haircut” hybrid securities or assign fractional equity credit when calculating financial ratios. There is just no tidy way to adjust financial ratios to reflect the nuances of complex structures. Sometimes, the analyst calculates alternative sets of ratios, reflecting that the truth lies in a gray area between two perspectives.

There are no specific limitations with respect to the amount of hybrid preferred that receives equity treatment. However, at some point, one would question a company’s creating a capital structure with an unusually large proportion of newfangled securities. The analytical comfort range depends on the seasoning of the type of instrument, peer group comparisons, and any potential negatives (in terms of reputation) for the company that might prompt it to reevaluate and restructure.

Factoring Future Equity Into Ratings

There are many ways to arrange for the creation of equity in the future. These methods range from issuing traditional convertible securities to entering forward purchase contracts to establishing grantor trusts for future issuance. The key considerations for receiving credit today for the promise of a positive development in the future are:

- How predictable the outcome is, and
- How soon it will occur.

If the analyst is reasonably assured that an equity infusion will occur over the next two to three years, then that event can be incorporated into the financial analysis on a pro forma basis. On the other hand, analyzing an equity infusion in the distant future, even if one could be certain about this eventuality, requires a different approach. It is not meaningful to overlay such an event on current financial measures. To do so would be to isolate just one transaction from the full picture of the company’s future, in effect, taking it out of context. Yet a program of equity issuance can be a powerful statement about the issuer’s financial policy—an important rating consideration.

Predicting the outcome.

The first dimension of the analysis is assessing the potential for issuance of, or conversion to, equity, and the likelihood of the company’s retaining that equity as permanent capital. The risks vary by the type of instrument and any unique characteristics. The following discussion is arranged in an ascending order, based on the likelihood of a positive outcome.

Convertible debt usually turns into equity at the option of the investor. The issuer can force conversion, but only if the security is “in the money.”

The odds of any specific issue’s converting is a function of the conversion premium and the likelihood of the company’s stock price achieving that level. Standard & Poor’s has been extremely conservative about relying on anticipated stock price movements. Even when the stock is trading very near the strike price and the company’s future seems bright, the risk exists that the stock will fall out of favor or that the market as a whole may turn bearish. There are mechanisms that can increase the odds of conversion. For example, periodic adjustment of the conversion premium is one means. However, the difficulties in statistically assessing the outcomes still would limit any equity credit given for these issues. Conversely, discount bonds, such as LYONs, have a built-in mechanism for always raising the bar as the debt value accretes, thereby making the odds of conversion ever more remote.

In some securities, the issuer holds the option to convert into equity. For example, there may be a provision to pay with cash or stock. This provides a modicum of flexibility; however, no equity credit is given. The analyst is still concerned the issuer might not exercise its prerogative except under dire circumstances. After all, any company can issue equity—if it so chooses—at the prevailing market price. The reality is that companies rarely are satisfied with the market price and are reluctant to add such an expensive form of capital. Even if the share settlement is mandatory, a company disinclined to issue at the market price would merely repurchase those shares.

There is an analogous problem with soft capital from a ratings perspective. The company has a contractual right to demand at any time an equity infusion from some outside provider of capital: The question is at what point the company makes this demand. Moreover, in the interim, the company does not enjoy the use of these funds to invest in maintaining the health of its business.

Covenants offer another way to influence the outcome. One popular method is to require that the repayment of principal upon maturity must be made with funds raised through the issuance of equity. From our perspective, this method of providing equity is flawed. For one thing, enforceability is dubious. Second, as discussed earlier, if the company is not inclined to add equity at the market price, it still can meet the legal requirement of issuing equity while simultaneously repurchasing its shares. (Banks have used this structure to raise Tier 1 regulatory capital. Indeed, considering the regulatory impetus behind the issuance, it is unlikely a bank would cavalierly reverse such an equity issuance. But it would be wrong to generalize for all corporate issuers.)

A different covenant calls for automatic conversion when a trigger event occurs—typically, a rating downgrade or a defined financial setback. The debt would be eliminated at a time when the company might find it difficult to service it. This represents an equity feature and helps to place a floor under the company’s rating if the threshold for conversion is set high enough (e.g., at the investment-grade level).

The most favorable rating consideration is given to issues that are mandatorily convertible at a fixed time and at a fixed price. Preference equity redemption cumulative stock (PERCS) and debt exchangeable for common stock (DECS) are two examples. Conversion is a certainty. At the end of a very short period, the investor receives one share of common stock, or a fractional share, if the price of the common stock has appreciated beyond a certain point. The company’s decision to issue the equity is based on the locked-in floor price for the common stock. Regardless of the movement in the stock price, there is little reason for the company to reconsider its decision.

Synthetic mandatory equity securities can be created by using forward purchase contracts and related options contracts; the impact would be equally positive from a ratings viewpoint. (However, if there is a substantial mismatch between the issuance of the equity and the maturity of the debt, there is no assumption the debt will be cancelled by the equity proceeds. The burden of proof is on the company regarding the use of the equity sums for debt reduction.)

Grantor trusts, ESOPs.

Apart from convertibles, grantor trusts and ESOPs offer avenues for future equity issuance. Many companies have established programs that commit them to issuing shares periodically as a means of dealing with large, unfunded, employee benefit liabilities. The company places shares in a grantor trust or ESOP to be used over a period of time for employee benefits that otherwise would be paid in cash.

The vehicles for these programs differ with respect to the range of benefits that can be covered, the scheduling of issuance and releases of shares, the degree of exposure to changes in share price, and tax treatment. The creation of new equity via such programs is highly predictable. However, the major drawback is the extended period over which this will occur—seven to 10 years for many ESOPs and 10 to 15 years in the case of “rabbi trusts,” such as Flexitrusts. This limits the positive impact on current credit quality, as explained below.

Timing the issuance.

As important as knowing what will occur is knowing its context. Events anticipated in the short term are handled differently in the analytical process than those further out. Anything expected to occur in the next two to three years is factored into the projected financial statements and credit ratios that form a basis for rating assessments. The analyst’s projections cover this period, taking into account all known aspects of an issuer’s business environment, strategy, and financial plans. (Historical financials are relevant only as a guide to what may occur in the future, because ratings address the risks of the future.) Therefore, if equity is expected within two to three years, the transaction can be fully analyzed and incorporated in the current ratings.

The rating review of a company making a large, debt-financed acquisition offers a common example. The analysis would not focus on a snapshot view of the issuer’s financial condition; rather, the rating would take into account the company’s plan to restore financial health, if such a plan exists. New equity is usually part of such plans. The company might issue convertible securities or it might commit to issuing specific amounts of common equity over the short term.

When a positive or negative development is expected farther out in the future, its ratings impact is diminished. As a dynamic entity, the issuer will be affected in many offsetting ways in the interim. To single out one expected event is to take it out of context. To reflect its impact in pro forma financial ratios would be a distortion.

Still, the willingness to issue equity over time to maintain credit quality can be an important element of financial policy. Establishing a program to do so represents tangible evidence that adds credence to a stated commitment. From a ratings perspective, the beneficial impact still can be significant, even if the equity program is not reflected in financial ratios. Indeed, when focusing on the longer term, rating analysis emphasizes a company’s fundamentals—its competitive position and financial policies.

In this light, consider the case of a prominent utility that decided to establish a “rabbi trust” to fund a very substantial amount of employee benefits over a 15-year period. Historically, the company had issued a combination of debt and equity to maintain its leverage at 50% and its debt rating at ‘A’. Standard & Poor’s, relying on the company’s financial policies, was confident the future held more of the same. Based on the legal commitment to add more than \$1 billion of equity via the trust, the company lobbied for a rating upgrade.

However, we concluded that the future equity added little in this instance. The company still plans to issue debt alongside the new equity issued by the trust. The dividend reinvestment plan that was used to issue equity in the past would now be discontinued. In fact, leverage at all times will continue to be 50%. In short, nothing has changed. In this case, the equity program enhances confidence in the ‘A’ rating, rather than suggesting that the rating be upgraded.

Often, companies combine share issuance programs with share repurchase transactions. A company may incur debt to purchase shares already outstanding that will be reissued through a trust or an ESOP. Another option is for the ESOP to borrow to buy shares in the market, with the corporate sponsor guaranteeing the debt. This is known as a leveraged ESOP. Or, a company may repurchase shares and issue convertible debt to limit the credit impact.

The analyst separates the dual aspects of these actions. The negative impact is identical to any debt-financed share repurchase. Separately, the promise of future equity is taken into account, along the lines previously discussed. The positive impact of future equity issuance usually is sufficient to partially offset the credit-harming effects of the share repurchase. The net result can be an affirmation or a smaller downgrade than otherwise would have occurred.

Tax-Deductible Preferred and Other Hybrids

Texaco Capital LLC issued the first of the so-called “tax-deductible” preferred stocks in 1993. This hybrid equity security was a major innovation in corporate finance, creating a modern-day version of the long-existing preferred stock.

Tax-deductible preferred has since enjoyed tremendous issuance volume. Over \$170 billion in public deals has been issued in the U.S. and just over \$100 billion has been issued elsewhere. Together with private transactions, the total is well over \$300 billion. The product has been especially popular with utilities and banks, but has attracted issuers of all stripes.

Equity credit.

The essence of the new financing vehicle’s success is achieving simultaneous treatment as equity for credit-rating purposes, and treatment as debt for the issuer’s tax purposes.

While the new type of preferred sacrifices some of the equity features of conventional preferred stocks, it retains sufficient equity content to warrant partial equity credit in terms of our rating criteria. Importantly, it is effectively tax deductible, which benefits the company’s after-tax profitability and cash flow. This low cost, in turn, enhances the equity content by increasing the expectations for longevity of the instrument.

The financing structure calls for issuance of the preferred by a subsidiary entity that pays no taxes. The funds are then lent to the parent, with the loan terms closely mirroring the terms of the preferred. The interest payments on the intercompany loan are tax deductible.

The Texaco deal used a subsidiary located in the Caribbean tax haven of Turks & Caicos to issue the preferred. Subsequently, Delaware LLCs, partnerships, and trusts were used to accomplish the same tax treatment. Since 1995, the trust structure has emerged as the vehicle of choice, hence the term “trust preferred” coming into use to describe the genre.

The essential equity features that have become standard are:

- Deferral of payments for up to 60 months—as long as no common dividends are being paid. (Conventional preferreds have unlimited potential for nondeclaration of dividends, subject only to board representation by preferred holders after six quarters of nonpayment.)
- Deep subordination.
- 30-year life. (Conventional preferreds are perpetual, although many have call provisions. The new-genre preferreds also are nominally perpetual, but terminate when the intercompany loan matures, normally in 30 years.)

We view preferreds that meet these standards as having 40% of the equity content of common stock, in the parlance that has grown up around equity hybrids. As the remaining life of the specific issue dwindles over time, the equity attribution is reduced. Conventional preferreds, by way of comparison, typically possess 50% equity content, a level which does not diminish over time, given their perpetual tenor. (Bear in mind

that the percentages of equity content do not translate directly into the credit ratio calculations that Standard & Poor's uses in its rating process.)

Some history.

As this financing instrument became very popular, the U.S. Treasury moved to deny its tax-deductible status. In particular, there were attempts to define long-tenor instruments as “equity,” limiting the life of “debt” to 15 years. This would have discouraged issuance of precisely that type of preferred that warrants credit in the rating process, while the short-life versions would get no rating benefit, eliminating the key motivation for companies to issue such hybrids.

It also put at risk the treatment of many extant issues that provided for unwinding in the event of a change in tax treatment. The continuation of equity treatment then depended on expectations the tax treatment of outstanding issues would be grandfathered. (Other deals would result in a parent preferred were a change in tax treatment to occur, and were not a problem.)

In the end, however, Congress did not adopt the proposals, and the tax treatment is now viewed as safe. The tax rules are left with extremely broad and very vague definitions of debt/equity—including how an instrument is viewed by credit rating agencies.

Another issue confronting the new preferreds has been accounting treatment. Initially, these preferreds were displayed on the balance sheet as “minority interest.” As of 2003, however, they must appear as a liability, and the dividend payments show up in the same category as interest expense.

This change probably dampens the enthusiasm of companies for issuing these securities. However, the change in accounting does not drastically affect the equity treatment we afford the preferreds.

Nomenclature and accounting can influence the general perception of the instrument, thereby subtly affecting the company's discretion regarding payment deferral. Still, these factors are secondary to the terms of the instrument and the company's economic incentives, so the equity content is only slightly reduced because of debt accounting.

(Banks and financial institutions face additional issues regarding the acceptance of these preferreds as regulatory capital. Regulators were first reluctant in this respect, but did eventually allow them, with some modifications, to be treated as Tier 1 capital. In light of changes in accounting, changes to the structure may now be needed to continue to get such capital credit in the future.)

Adding features.

Some trust preferreds add convertibility features to make them more equity-like. Investors can convert to common equity, subject to the stock price appreciating by a certain percentage. Indeed, under Standard & Poor's criteria, convertible preferreds are typically viewed as having 60% equity content.

To broaden investor appeal, preferreds with variable rates were introduced. This does not, in our view, alter the equity content, although the exposure to floating rates, if material, can pose a risk that is considered in other aspects of the analysis.

A further “innovation” called for resetting rates after an initial 5- or 10-year period. The idea was to create an incentive for the company to call the issue at that point, to avoid a penalty rate. We regard issues with step-up rates as having an effective maturity at that point, thereby largely undermining their equity content.

A reset that merely captures any change in the issuer's credit spreads is less troublesome, because the company presumably would have little incentive to refinance the issue. That still could be problematic, if, for example, the issuer dropped to non-investment grade: its cost for long-term funds might be expected to widen to the point that only shorter-term alternatives would be palatable. Alternatively, the reset could be a fixed spread over a floating rate that is higher than the current credit spread. Arguably, the extra spread could be

justified as compensation for potential credit deterioration over a long term. Moreover, it cannot be presumed to be higher than the company's credit spread will be at the reset date.

A miniscule rate reset—say, 25 basis points—is not problematic, nor is moving from a fixed to a floating rate, by itself, a problem. However, adding 50 or more basis points to the fixed rate or the reference rate produces a penalty rate. Similarly, if the rate is the higher of two or more reference rates, there is an effective penalty to the issuer. (There can be exceptions, however, depending on the specific rates involved. For example, there is no concern if one is a 30-day rate and the other a 30-year rate, since one can expect the longer-term rate will apply almost all of the time.)

To mitigate the impact of stepped-up rates on the equity credit afforded to that financing, some issues proffer “replacement language,” promising that any refinancing of the instrument will come from proceeds of an equity issuance or a new instrument of equivalent equity content. The legal enforceability of such terms is highly dubious. Nonetheless, Standard & Poor's puts stock in such provisions, as long as the company involved has a decent record of credibility, and the language is highly specific regarding the definition of instruments that would qualify as replacements.

Global variations.

The new genre of preferreds have local variations, reflecting differing capital market preferences and tax considerations.

In the U.K., for example, Inland Revenue allows a tax deduction even if the debt is perpetual and dividends can be deferred without limitation. A handful of deals (notably, from Grand Met PLC and Cadbury PLC) did incorporate those equity enhancements—and the equity content, from our perspective, was boosted to 60%.

On the other hand, European investors are less inclined to make very long-term investments. European deals, therefore, are more likely to incorporate reset provisions—making replacement language critical.

Some European deals introduced greater restrictions on the ability to defer dividends. The issuer can defer only after curtailing its common dividend for some period of time. This translated into seriously lower equity credit afforded to those issues. In the case of companies that do not pay a quarterly common dividend—not unusual in Europe—the problem is compounded, because there might be an even longer period between when the company experiences financial distress and when it can defer preferred dividend payments.

The Japanese put a toe in the water in 2001 with a version of trust preferred securities. NEC Corp. sold a deal that was perpetual, but, after the first five years, had a rate reset that would reflect changes in credit spreads. Standard & Poor's expressed its reservations about the value of such instruments in the Japanese context. Local business culture involves great reticence with respect to altering dividend payments. Indeed, the whole notion of preferred stock of any type is a novelty in Japan. Accordingly, the equity content of Japanese preferreds will evolve over time as local practices may come to resemble Western markets.

Future innovations.

The quest for enhancing preferreds' equity content continues. One idea in the works for some time is making payment deferral automatic upon reaching certain triggers or occurrence of certain events. Indeed, replacing issuer discretion with a formulaic approach to deferral adds significantly to the equity content—if the threshold for stopping payments is set high. Each issuer's situation would require a unique analysis, making standardization impossible. But at least some of the proposed deals we reviewed would qualify for 65%-70% equity content.

Triggers could be based on financial data or ratios or rating levels. Alternatively, the payments could be linked to the company's common dividend. Additionally, it is possible to offer non-cumulative versions that would not require the company to make up for payments skipped because of financial distress. Beyond that, forgiveness of part of the principal in cases of company stress could theoretically be offered.

The rub is that investors would be leery about accepting the risks associated with nonpayment associated with high thresholds. Until now, no one has found the right balance that would be meaningful for the issuer and still acceptable to investors at a reasonable rate.

Some other hybrids.

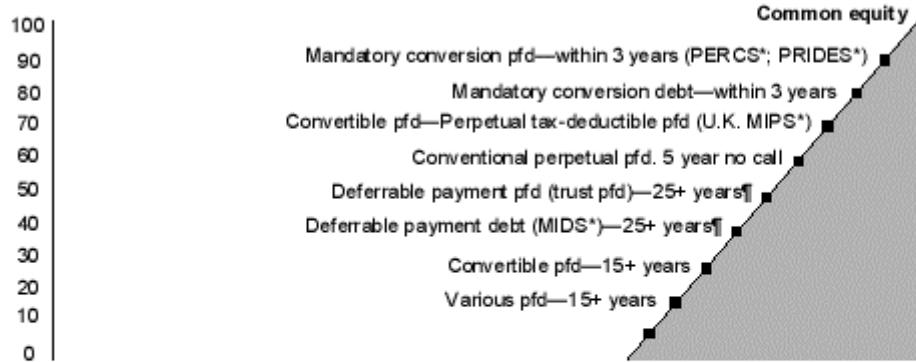
- Mandatory exchangeable debt or preferred (e.g., DECs): If the issue must be settled with the stock of another entity (currently owned by the issuer), the analytical treatment is that of a deferred asset sale. All assets may be positive or negative to credit quality; there is no standardized impact. The factors that determine the credit impact include price achieved and use of after-tax proceeds. Will the proceeds be distributed to shareholders? Or used to pay down debt on a permanent basis? Or be reinvested? If reinvested, is the new asset more or less risky than that which was sold?
- Mismatched mandatory conversion debt (e.g., FELINE PRIDES): Given the mismatch, the equity issuance is not ordinarily netted against the debt obligation. It is equivalent to a company simultaneously issuing deferred equity plus a like amount of debt. The net impact of these two issues would depend on whether leverage is increased or decreased, which, in turn, depends on the company's financial leverage prior to these two issuances.
- Step-up preferred: If an instrument provides for adjustment of terms, the analyst may consider the adjustment date as the expected maturity, with the related diminution of equity credit. If the adjustment is to above-market rates, it is presumed the instrument will be refinanced—and not necessarily with another equity-like security.
- Remarketed convertible trust preferred (e.g., HIGH TIDES): On balance, this hybrid is viewed negatively, despite the potential for conversion to common stock and the rate savings created by the remarketing feature. The need to remarket at a level above par could lead to terms that are unpalatable to the issuer, prompting a refinancing.
- Auction preferred: These frequently remarketed preferreds virtually are treated as debt. They are sold as commercial paper equivalents, which leads to failed auctions if credit quality ever falls to 'A-3'—or even 'A-2'—levels. While the company has no legal obligation to repurchase the paper—i.e., the last holder could be left with this “perpetual” security—the issuer invariably bows to market pressures, and chooses to repurchase the preferred.

A Hierarchy of Hybrid Securities

Issuers and their advisers have requested a handy gauge of the equity credit that Standard & Poor's attributes to specific securities, so they can know what to expect when issuing various hybrids and more easily compare financing alternatives. The scale below is an attempt to convey the measure of equity credit attributed to specific securities. Securities are placed on the scale after taking into account the overall impact of each security by balancing and weighing the beneficial aspects and the drawbacks.

Equity credit of 50% means the effect of issuing that security is half as good as the effect of issuing common stock. (The impact of issuing common stock for a given company can be minimal or substantial, depending on the materiality of the issue and the credit factors specific to that company's situation.)

Relative Equity Impact



Note: The scale presented here is intended as a communication device. It is not a substitute for analysis, nor should it be interpreted as a tool for quantification of hybrids with respect to ratio calculations. Indeed, those seeking to reduce hybrid analysis to formulas could be harboring a delusion regarding the nature of the credit-rating process. The analytical complexity of hybrids reminds us once again that ratings are an art, not a science!

* Trade name of specific banking firm product, for illustration purposes only.
 ¶ Remaining life; initially issued with 30+ years' life.

The main use of this scale should be to appreciate whether and to what extent one security is better or worse than an alternative financing. The rating implications for an existing rating would depend on whether a financing replaces another that is more or less equity-like, i.e., higher or lower on the scale. However, as a practical matter, unless the two financial instruments are 30 percentage points or more apart, the rating impact will in most cases be minimal.

Percentage equity credit has nothing to do with ratio calculations.

There is no way to translate percentage equity credit into ratio calculations; such calculations are determined for each type of instrument—and each of its features—separately. The analyst never divides an instrument's amount into fractions for ratio purposes.

Many hybrids are more debt-like than equity-like. They do not appear on the chart: these instruments have a damaging—or negative—impact on credit quality. Some aspect or aspects of these securities may allow them to be differentiated from plain vanilla debt, but that does not mean the security provides, on balance, a positive rating effect.

For example, bonds with very long maturities are not as harmful to credit as short-term debt. In that sense, they may be said to have an equity component—but the equity content clearly is not very great. Their negative effect is somewhat less than conventional debt—but still nearly as bad.

The scale conveys the relative impact of various securities, given a typical weighting of rating factors for investment-grade companies. As mentioned above, the weighting could vary with company-specific circumstances or with the size of issuance relative to the existing capital structure. Less-than-investment-grade companies are excluded because the analysis of such companies does not lend itself easily to standardization.

There can be variations for two issues of a single type of security that are minor, and therefore do not much matter. For example, the deferral period might be six years in one transaction and seven years in another. Obviously, the longer the deferral option, the better. But it would be wrong to attach too much importance to fine gradations. The finer the distinction, the less meaningful it is in the scheme of things. Note, too, that the self-same security changes as far as equity content over its life. Remaining life is relevant, not the tenor at the time of issuance.

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Corporate Criteria—Parent/Subsidiary Links; General Principles; Subsidiaries/Joint Ventures/ Nonrecourse Projects; Finance Subsidiaries; Rating Link to Parent

Parent/Subsidiary Links

Affiliation between a stronger and a weaker entity will almost always affect the credit quality of both, unless the relative size of one is insignificant. The question is rather how close together the two ratings should be pulled on the basis of affiliation.

General Principles

In general, economic incentive is the most important factor on which to base judgments about the degree of linkage that exists between a parent and subsidiary. This matters more than covenants, support agreements, management assertions, or legal opinions. Business managers have a primary obligation to serve the interest of their shareholders, and it should generally be assumed they will act to satisfy this responsibility. If this means infusing cash into a unit previously termed a stand-alone subsidiary, or finding a way around covenants to get cash out of a protected subsidiary, then management can be expected to follow these courses of action to the extent possible. It is important to think ahead to various stress scenarios and consider how management would likely act under those circumstances. If a parent supports a subsidiary only as long as the subsidiary does not need it, such support is meaningless.

A weak entity owned by a strong parent usually—although not always—will enjoy a stronger rating than it would on a stand-alone basis. Assuming the parent has the ability to support its subsidiary during a period of financial stress, the spectrum of possibilities still ranges from ratings equalization at one extreme to very little or no help from the parent's credit strength at the other. The greater the gap to be bridged, the more evidence of support is necessary.

Primary Credit Analysts

Solomon B Samson
New York
(1) 212-438-7653
sol_samson@
standardandpoors.com

Scott Sprinzen
New York
(1) 212-438-7812
scott_sprinzen@
standardandpoors.com

Emmanuel Dubois-Pelerin
Paris
(33) 1-4420-6673
emmanuel_dubois-pelerin@
standardandpoors.com

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The parent's rating is, of course, assigned when it guarantees or assumes subsidiary debt. Guarantees and assumption of debt are different legal mechanisms that are equivalent from a rating perspective. Cross-default and cross-acceleration provisions in bond indentures also can be important rating considerations. They can provide a powerful incentive for a stronger entity to support debt of a weaker affiliate, because they trigger default of the stronger unit in the event of a default by the weaker affiliate. Bear in mind, however, that cross-default provisions can disappear if the debt that contains the provisions is retired or renegotiated.

A strong subsidiary owned by a weak parent generally is rated no higher than the parent. The key reasons:

- The ability of and incentive for a weak parent to take assets from the subsidiary or burden it with liabilities during financial stress; and
- The likelihood that a parent's bankruptcy would cause the subsidiary's bankruptcy, regardless of its stand-alone strength.

Both factors argue that, in most cases, a "strong" subsidiary is no further from bankruptcy than its parent, and thus cannot have a higher rating. Experience has shown that bankrupt industrial companies file with their subsidiaries more often than not.

For rating purposes, the risk of "substantive consolidation" is a side issue. Consolidation in bankruptcy, sometimes referred to as substantive consolidation, occurs when assets of a parent and its subsidiaries are thrown together by the bankruptcy court into a single pool and their value allocated to all creditors without regard for any distinction between the two legal entities. In such cases, creditors of a subsidiary may lose all claim to the value associated with that particular subsidiary. Much more often, a parent and its subsidiaries will all file, but each legal entity will be kept separate in the bankruptcy proceeding. Creditors keep their claim to the assets of the specific legal entity to which they extended credit. Because corporate ratings address default risk, the key issue is not consolidation, but rather whether a bankruptcy filing will occur.

Nonconsolidation opinions are, therefore, of more value with respect to recovery ratings and issue ratings of subsidiary debt, because those opinions address the likelihood of substantive consolidation, rather than the likelihood of simultaneous bankruptcies for parent and subsidiary. Perhaps the willingness to obtain such an opinion might also serve as some evidence of management intent regarding a subsidiary's independence.

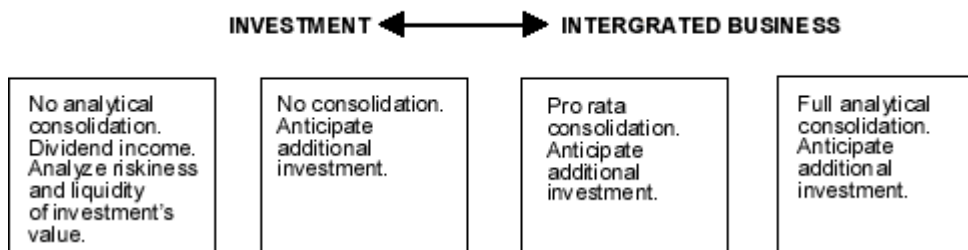
Protective covenants apparently protect a subsidiary from its parent by restricting dividends or asset transfers. In general, this type of covenant is given very limited weight in a rating determination. Reasons for limited value of protective covenants:

- They do not affect the parent's ability to file the subsidiary into bankruptcy;
- It is very difficult to structure provisions that cannot be evaded; and
- Ultimately, courts usually cannot force a company to obey the covenant. During severe financial stress, especially prior to a bankruptcy, a weak parent may have a powerful incentive to strip a stronger subsidiary. The court can, at best, only award monetary damages after the fact to a creditor who has incurred a loss (when the issue defaults) and chooses to sue.

Subsidiaries/Joint Ventures/Nonrecourse Projects

With respect to the parent's credit rating, affiliated businesses' operations and their debt may be treated analytically in several different ways, depending on the perceived relationship between the parent and the operating unit. These alternatives are illustrated by the spectrum below.

The Parent/Operating Unit Relationship



The same alternatives may apply when companies invest in joint ventures that issue debt in their own name, and when companies choose to finance various projects with nonrecourse debt. These analytical issues also may apply when companies take pains to finance some of their wholly owned subsidiaries on a stand-alone, nonrecourse basis, especially in the case of noncore or foreign operations.

Sometimes, the relationship may be characterized as an investment. In that case, the operational results are carved out; the parent gets credit for dividends received; the parent is not burdened with the operation's debt obligations; and the value, volatility, and liquidity of the investment are analyzed on a case-specific basis. The quality of the investment dictates how much leverage at the parent company it can support.

At the other end of the spectrum, operations may be characterized as an integrated business. Then, the analysis would fully consolidate the operation's income sheet and balance sheet; and the risk profile of the operations is integrated with the overall business risk analysis. Or, the business may not fall neatly into either category; it may lie somewhere in the middle of the spectrum. In such cases, the analytical technique calls for partial or pro rata consolidation and usually the presumption of additional investment, that is, the money the company likely would spend to bail out the unit in which it has invested.

This characterization of the relationship also governs the approach to rating the debt of the subsidiary or the project. The size of the gap between the stand-alone credit quality of the project or unit and that of the group, sponsor, or parent is a function of the perceived relationship: the greater the integration, the greater the potential for parent or sponsor support. The reciprocal of burdening the parent with the nonrecourse debt is the attribution of support to that debt. The notion of support extends beyond formal or legal aspects—and can narrow, and sometimes even close, the gap between the rating level of the parent and that of the issuing unit.

If the credit quality of a subsidiary is higher than that of the parent, the ability of the parent to control the unit typically caps the rating at the parent level. Exceptions are made in the case of bankruptcy-remote special purpose vehicles for securitization, regulated entities, independent finance subsidiaries, and the rare instances that have extremely tight covenant protection. The measure of control the parent can exercise is very much a function of ownership, so the percent of ownership of a joint venture or project and the nature of the other owner are critical rating criteria in such situations. Where two owners can prevent each other from harming the credit quality of a joint venture, the debt of the venture can be rated higher than either's rating, if justified on a stand-alone basis.

Formal support—such as a guarantee (not merely a comfort letter)—by one parent or sponsor ensures that the debt will be rated at the level of the support provider. Support from more than one party, such as a joint and several guarantee, can lead to a rating higher than that of either support provider. (See Public Finance Criteria—Jointly Supported Debt.)

Determining factors.

No single factor determines the analytical view of the relationship with the business venture in question. Rather, these are several factors that, taken together, will lead to one characterization or another. These factors include:

- Strategic importance—integrated lines of business or critical supplier;
- Percentage ownership (current and prospective);
- Management control;
- Shared name;
- Domicile in same country;
- Common sources of capital;
- Financial capacity for providing support;
- Significance of amount of investment;
- Investment relative to amount of debt at the venture or project;
- Nature of other owners (strategic or financial; financial capacity);
- Management’s stated posture;
- Track record of parent company in similar circumstances; and
- The nature of potential risks.

Some factors indicate an economic rationale for a close relationship or debt support. Others, such as management control or shared name, pertain also to a moral obligation, with respect to the venture and its liabilities. Accordingly, it can be crucial to distinguish between cases where the risk of default is related to commercial or economic factors, and where it arises from litigation or political factors. (No parent company or sponsor can be expected to feel a moral obligation if its unit is expropriated.)

Percentage ownership is an important indication of control, but it is not viewed in the same absolute fashion that dictates the accounting treatment of the relationship. Standard & Poor’s also tries to be pragmatic in its analysis. For example, awareness of a handshake agreement to support an ostensibly nonrecourse loan would overshadow other indicative factors.

Clearly, there is an element of subjectivity in assessing most of these factors, as well as the overall conclusion regarding the relationship. There is no magic formula for the combination of these factors that would lead to one analytical approach or another.

Regulated companies.

Normal criteria against rating a subsidiary higher than a parent do not necessarily apply to a regulated subsidiary. A regulated subsidiary is indeed rated higher than the parent if its stand-alone strength so warrants and regulatory protection is sufficiently strong. However, the nature of regulation has been changing—and creditors can rely on regulators to a much smaller extent than in the past. For one thing, deregulation is spreading. As competition enters markets, the providers are no longer monopolies—and the basis of regulation is completely different. Most of all, regulators are more concerned with service quality than credit quality.

For example, some regulated utilities are strong credits on a stand-alone basis, but often are owned by companies that finance their holding in the utility with debt at the parent company (known as double leveraging), or that own other, weaker business units. To achieve a rating differential from that of the consolidated group requires evidence—based on the specific regulatory circumstances—that regulators will act to protect the utility’s credit profile.

The analyst makes this determination on a case-by-case basis, because regulatory jurisdictions vary. Implications of regulation are different for companies in Wisconsin and those in Florida or those subject to the scrutiny of the Securities and Exchange Commission under the 1935 Public Utilities Act. Also, regulators

might react differently depending on whether funds that would be withdrawn from the utility were destined to support an out-of-state affiliate or another in-state entity. Finally, while regulators may be inclined to support investment-grade credit quality, there is little basis to believe regulators would insist that a utility maintain an ‘A’ profile. Their mandate is to protect provision of services—which is not a direct function of the provider’s financial health. In fact, if a utility has little debt, the overall cost of capital, and therefore the cost of service, can be higher.

There is a corollary that negatively affects the parent and weaker units whenever a utility subsidiary is rated on its stand-alone strength. If the regulated utility is indeed insulated from the other units in its group, its cash flow is less available to support them. To the extent, then, that a utility is rated higher than the consolidated group’s credit quality, the parent and weaker units are correspondingly rated lower than the group rating level.

Foreign ownership.

Parent/subsidiary considerations are somewhat different when a company is owned by a foreign parent or group. The foreign parent is not subject to the same bankruptcy code, so a bankruptcy of the parent would not, in and of itself, prompt a bankruptcy of the subsidiary. In most jurisdictions, insolvency is treated differently from the way it is treated in the U.S., and various legal and regulatory constraints and incentives need to be considered. Still, in all circumstances, it is important to evaluate the parent’s credit quality. The foreign parent’s creditworthiness is a crucial factor in the subsidiary’s rating to the extent the parent might be willing and able either to infuse the subsidiary with cash or draw cash from it. A separate parent or group rating will be assigned (on a confidential basis) to facilitate this analysis.

Even when subsidiaries are rated higher than foreign parents, the gap usually does not exceed one full rating category. It is difficult to justify a larger gap, because it would entail a clear-cut demonstration that, even under a stress scenario, the parent’s interest would be best served by keeping the subsidiary financially strong, rather than using it as a source of cash.

In the opposite case of weak subsidiaries and strong foreign parents, the ratings gap tends to be larger than if both were domestic entities. Sovereign boundaries impede integration and make it easier for a foreign parent to distance itself in the event of problems at the subsidiary.

“Smoke-and-mirrors” subsidiaries.

Some multibusiness enterprises controlled by a single investor or family are characterized by:

- Unusually complex organizational structures;
- Opportunistic buying and selling of operations, with little or no strategic justification;
- Cash or assets moved between units to achieve some advantage for the controlling party; and
- Aggressive use of financial leverage.

By their nature, these types of companies tend to be highly speculative credits, and it is inadvisable to base credit judgments on the profile of any specific unit at any particular point in time.

The approach to rating a unit of such an organization still begins with some assessment of the entire group. Some of the affiliated units may be private companies; nonetheless, at least some rough assessment must be developed. In general, no unit in the group is rated higher than the consolidated group would be rated. Neither indenture covenants nor nonconsolidation opinions can be relied on to support a higher rating for a particular subsidiary.

At the same time, there is no reason for all entities in a “smoke-and-mirrors” family to receive the identical rating. Any individual unit can be notched down as far as needed from the consolidated rating to reflect stand-alone weakness. This reflects the probability that a weak unit will be allowed to fail if the controlling

party determines no value can be salvaged from it. Complex structures are developed in order to maximize such flexibility for the controlling party.

Finance Subsidiaries' Rating Link to Parent

Finance units are unlike other subsidiaries from a criteria perspective. In turn, there are two types of finance subsidiaries—independent and captive—that are very distinct in terms of the analytical approach employed by Standard & Poor's Ratings Services.

Independent finance subsidiaries.

Independent finance subsidiaries can receive ratings higher than those of the parent, because of the high degree of separation between these subsidiaries and the parent. A finance company's continuous need for capital at a competitive cost creates a powerful incentive to maintain its creditworthiness. Therefore, it can be argued that the parent would be better served, in a stress scenario, by divesting the still-healthy subsidiary than by weakening it or risking drawing it into bankruptcy. In addition, there must be evidence of the parent company's willingness to leave the subsidiary alone, including a history of reasonable dividend and management fee payouts to the parent.

Nonetheless, a finance company subsidiary rating still is linked to the credit quality of the company to which it belongs. If the finance company's credit fundamentals are stronger than those of the consolidated entity, one cannot rule out the risk that this strength could be siphoned off to support weaker affiliates or service the debt burden of the parent. Whatever the rating would be on a stand-alone assessment, it is unlikely an independent finance subsidiary would ever be rated more than one full rating category above the parent rating level. To the extent that part of the receivables portfolio were related to parent company sales, there would be an additional tie to the parent risk profile.

Conversely, if the consolidated entity's rating is higher than the subsidiary's, because of the stronger creditworthiness of the other affiliates, the analysis would attribute some of that strength to the finance company, making possible a higher rating than it could receive on its own. Assessing the degree of credit support includes the usual subjective factors, such as management intentions and shared names of the parent and subsidiary. In the case of a subsidiary that has been formed or acquired only recently, a demonstrable record of support is lacking and questions might remain concerning the long-term strategy for the subsidiary. Some formal support likely will be required. The most frequently used support agreement commits the parent to maintain some minimum level of net worth at its subsidiary. Frequently, the parent also will agree to assume problem assets and to maintain minimum fixed-charge coverage.

Captive finance companies.

A captive finance company—i.e., a finance subsidiary with over 70% of its portfolio consisting of receivables generated by sales of the parent's or group's goods or services—is always assigned the same rating as the parent. Captive finance companies and their operating company parents are viewed as a single business enterprise. The finance company is a marketing tool of the parent, facilitating the sale of goods or services by providing financing to the dealer organization (wholesale financing) and/or the final customer (retail financing).

The business link between an operating-company parent and captive is the key consideration supporting the subsidiary's rating at the parent company level, apart from any support arrangements between the two. The parent's investment in the captive (in the form of equity and advances) may also provide economic incentive to maintain the captive's financial health.

Conversely, a captive that appears strong on a stand-alone basis is not rated higher than its operating company. Because of the operational tie-in, the parent does not have the same options for divesting a healthy

captive as in the case of an independent finance subsidiary. Eventually, then, the captive's bankruptcy risk is closely linked to that of its parent. This viewpoint is based in part on case history. A parent-company bankruptcy filing usually will result in a filing by its captive, either simultaneously or soon thereafter. Captive finance company debtholders may be better off than the parent debtholders with respect to ultimate recovery in a liquidation or reorganization, but bankruptcy would impair the timeliness of payments.

Methodology.

While the captive and parent ratings are equalized, the two are not analyzed on a consolidated basis. Rather, the analysis segregates financing activities from manufacturing activities and analyzes each separately, reflecting the different type of assets they possess. No matter how a company accounts for its financing activity in its financial statements, the analysis creates a pro forma captive unit to apply finance-company analytical techniques to the captive-finance activity, and correspondingly appropriate analytical techniques to the operating company. Finance assets and related debt liabilities are included in the pro forma finance company; all other assets and liabilities are included with the parent company. Similarly, only finance-related revenues and expenses are included in the pro forma finance company.

The debt and equity of parents and captives are apportioned and reapportioned so that both entities will reflect similar credit quality. A tentative rating for the two companies is assumed as a starting point. Next, a leverage factor is determined that is appropriate for the captive at the tentative rating level, based on the quality of the captive's wholesale and retail receivables. With the appropriate leverage determined, the analyst calculates the amount of equity required to support credit quality at the assumed level, and the proper amounts of debt or equity can be transferred either to the parent from the captive or to the captive from the parent. No new debt or equity is created.

Next, the analyst determines levels of revenues and expenses reflective of the captive's receivables and debt. The higher the tentative rating, the greater the level of imputed fixed-charge coverage and return on assets. For purposes of this analysis, any earnings support payments are transferred back to the parent.

The analyst eliminates the parent's investment in the captive to avoid double leveraging. The captive is an integral part of the enterprise, not an investment to be sold. While its assets can be more highly leveraged than those of the parent, the methodology takes that into account when determining an amount of equity that is apportioned to support its debt.

Following the segregation of the finance activity, the operating company profile may not be consistent with the tentative rating. The methodology is repeated, using parameters of a higher or lower rating level. Several iterations may be needed to determine a rating level that reflects the credit quality of both operating and financing aspects of the company.

Leverage guidelines.

The receivables portfolio of the pro forma captive entity is analyzed, as for any finance company. Both quantitative and qualitative assessments are made. Portfolios deemed to be of average quality include consumer credit card, commercial working capital, and agricultural wholesale. Auto retail paper is of higher quality, all other things being equal, while portfolios of commercial real estate and oil credit-card assets are generally less leverageable. Adjustments are made to reflect the performance of a given subportfolio. In addition, factors such as underwriting, charge-off policy, and portfolio concentration or diversity are considered.

Securitization of finance receivables.

An increasingly common funding mechanism for finance companies is the sale or securitization of finance receivables through structured transactions. Where companies sell finance receivables that are regenerative in

nature (such as the operating assets financed by a captive for its parent), Our analytical approach in assessing leverage is to uniformly add back the sold receivables outstanding and a like amount of debt (the same treatment as the sale of regenerating trade receivables of operating companies, as explained in Rating Methodology: Industrials and Utilities).

When the level of assets being financed is truly at the discretion of the finance company, there may be no need to add back receivables sold. The question then is one of permanence of the level of financial activity. No adjustment is made to add back the sold receivables, if the analyst has concluded the unit will continue to operate at a lower asset level. In those cases, the analysis focuses on the actual economic risks remaining with the company relative to the sold receivables.

Depending on the type of transaction, the residual risks take the form of capitalized excess servicing, spread accounts, deposits due from trusts, and retained subordinated interests. If a company retains the subordinated piece of a securitization, or retains a level of recourse close to the expected level of loss, essentially all of the economic risk remains with the seller. There is no rating benefit deserved because there is no significant transfer of risk—and there is no point in analyzing such a company differently from the way it would be analyzed had it kept the receivables on its balance sheet.

Another serious concern is moral recourse, i.e., the reality that companies believe they must bail out a troubled securitization, although there is no legal requirement for them to do so. Companies that depend on securitization as a funding source may be especially prone to taking such actions. In many situations, this expectation undermines the notion of securitization as a risk-transfer mechanism.

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Corporate Ratings Criteria— Postretirement Obligations

Postretirement Obligations

Standard & Poor's Ratings Services views unfunded liabilities relating to defined benefit pension plans and retiree medical plans as debt-like in nature. This also is the case with deferred lump-sum payment schemes, such as termination programs for employees in Italy. By accepting a portion of their compensation on a deferred basis, the employees essentially become creditors of the company. As with conventional debt, these liabilities pose risks to their corporate sponsors from the call on future cash flow they represent. (Defined contribution plans generally are not problematic because they must be funded on a current basis, and the corporate sponsor does not bear ongoing investment performance risk.)

A company's postretirement obligations affect its financial position, and also may be germane to its competitive position. Most problematic is when peers face different retiree costs. Companies that have been relatively generous, have an older workforce, or have a comparatively large number of retirees, cannot raise their own selling prices more than those of their competitors'. Likewise, competitors in different countries often are not saddled with similar costs because of differences in pension and health care systems in their respective countries. Any company more burdened with such retiree costs than its competitors will be penalized in the assessment of its overall cost position. The implications for its competitiveness are no less than if it had older, less efficient manufacturing facilities. Such a competitive advantage—or disadvantage—is an important rating consideration.

Distinguishing characteristics.

Various characteristics distinguish unfunded postretirement liabilities from debt obligations. One is the difficulty of measuring their value. Because of the prospective and variable nature of postretirement obligations, their quantification relies on numerous assumptions, including:

- Employee turnover rates and length of service, whereby the length of time the worker is employed by the company determines eligibility for and the size of the retiree benefit;

Primary Credit Analysts

Solomon B Samson
New York
(1) 212-438-7653
sol_samson@
standardandpoors.com

Scott Sprinzen
New York
(1) 212-438-7812
scott_sprinzen@
standardandpoors.com

Emmanuel Dubois-Pelerin
Paris
(33) 1-4420-6673
emmanuel_dubois-pelerin@
standardandpoors.com

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- Mortality rates, given that the employee’s lifespan determines how long he or she receives the benefit;
- Dependency status, if the plan covers surviving dependents;
- Compensation levels, if the employee’s wages or salary prior to retirement is a factor in determining the amount of the benefit;
- Discount rate, which is required to calculate a present value of the future required cash outflows; and
- Return on benefit plan investments. To the extent that the benefit is prefunded with investment assets, if positive, the returns realized on those assets will help defray the cost of the benefit.

Because retiree medical benefits are not monetary in nature, but rather are in-kind benefits—i.e., the employee is promised future health care services—there is additional uncertainty. Assumptions must be made about future changes in health care inflation and in health care use and delivery patterns. Not simple matters.

Because of these difficulties, the analytical exercise does not try to quantify a precise amount to represent the postretirement obligation. As discussed below, sensitivity analysis is a better way to capture a company’s exposure than by focusing on a single figure.

Further, management’s actions to modify plan benefits or regulatory changes could alter the value of the liability over time. Standard & Poor’s pays close attention to management’s strategies for reducing the cost of the burden and assesses these strategies in the context of the company’s labor relations; however, we naturally are reluctant to prejudice the success of any such strategies, particularly if the workforce is tightly unionized, and determined to resist such cost-cutting efforts. Similarly, in theory, there always is the potential that some significant change in the regulatory framework could enable a corporation to shift some portion of its postretirement benefits, burden to the government, but it hardly is prudent to assume such a solution would emerge. Indeed, there also is the risk governments could tighten funding requirements, as recently did Spain and the Netherlands.

National/Regulatory differences.

Analysis of postretirement benefit obligations must take into account the differences among countries’ regulatory systems. In some countries (e.g., France, Italy, and Spain), corporations do not bear such obligations directly to any material extent; pension and other postretirement benefits are provided largely under governmental, rather than corporate, schemes. Corporations generally must support these schemes indirectly through taxes. Obviously, a company’s overall tax burden must be considered in the analysis of its cash flow.

In other cases, the benefit is provided directly by corporations. Furthermore, strict regulations require the company to prefund the benefit by making contributions to dedicated trusts well in advance of the ultimate disbursement of funds to retirees or third-party insurers. This insulates retirees from the risk that the company might become unable to honor its commitments. Under such regulations, however, the company typically retains some discretion to decide how much to contribute in a given year. This is the case with defined-benefit plans in the U.S., governed by the Employee Retirement and Income Security Act (ERISA) of 1974 and by the tax code, and with such plans in the U.K. and the Netherlands.

In still other cases (e.g., defined-benefit pensions in Germany and retiree medical benefits in the U.S.), the benefit is provided directly by companies, but there is no regulatory requirement to prefund and, typically, no tax incentive for doing so. In such pay-as-you-go systems, the cash burden on the company may be light for many years if the company has a young workforce and few retirees. On the other hand, if the company has a high ratio of retirees to active employees, the ongoing cash outlays may be onerous. Moreover, under this system, there is virtually no flexibility in the timing of payments: the retirees are owed their benefits.

If a company does business in more than one country, Standard & Poor’s pays close attention to the geographic profile of its postretirement benefits obligations and the relevant regulatory requirements.

Assessing the liability.

As a practical matter, the company's financial reporting is the best starting point because of the accessible, timely, and comprehensive nature of financial reporting information compared with other sources. Analysts must be wary, however, of the relatively uncertain nature of accounting for postretirement obligations, given all the assumptions necessary for their measurement, discussed above.

Moreover, in virtually all national accounting systems, as well as under International Accounting Standards (IAS), those setting the accounting standards have sought to avoid volatile swings in earnings and liability values; hence, the extensive use of various smoothing techniques, in which underlying net liability changes and variations in actual performance—rather than assumptions—are recognized on a deferred basis over an extended period. (See “Pitfalls of U.S. Pension Accounting and Disclosure.”)

The first step in analyzing postretirement obligations is to examine key assumptions used to quantify the obligations and determine expense accrual for financial reporting purposes. The discount rate, wage appreciation, expected investment return, and medical inflation rate are all disclosed under U.S. GAAP. The use of actuarial assumptions regarding mortality, dependency status, and turnover can lead to more or less conservative estimations, but these assumptions are not disclosed directly in financial reporting; however, unrecognized losses or gains relating to changes in actuarial assumptions indicate further investigation is warranted.

When assessing assumptions, we focus on differences among companies. Assumptions are considered in light of an issuer's individual characteristics, but also are compared with those of industry peers and general industrial norms. In addition, assumptions are assessed in terms of their internal consistency. For example, both the discount rate and rate of future compensation increases should be closely linked to the rate of inflation. If the discount rate assumption significantly exceeds the assumed rate of compensation increases, this may reflect overoptimism by management about its ability to contain wage and salary increases.

Quantitative adjustments may be made to normalize assumptions. For example, one rough rule of thumb is that for each percentage point increase or decrease in the discount rate, the liability decreases or increases by 10% to 15%. At the very least, any liberal or conservative bias is taken into account when looking at the reported plan obligations and assets.

The next step is to compare the current value of a company's plan assets to the projected benefit obligation (PBO) for pensions, or to the accumulated postretirement benefit obligations (APBO) for retiree medical benefit obligations. In the case of flat-benefit pension plans (i.e., the pension benefit is a fixed amount per year of service, rather than pay-related plans, in which the benefit for each retiree is derived from a formula tied to compensation over a specified period), the PBO likely understates the true economic liability. This is because the PBO does not take account of future benefit improvements for these plans, even if probable, unless provided for in the current labor agreement. In such cases, the analyst estimates the additional economic liability based on the company's pattern of granting benefit improvements and management's current strategies with respect to compensation.

A company's plan assets as a percentage of the PBO or APBO is a simple, basic measure of plan solvency, referred to here as the funding ratio. Companies with the same funding ratios in their benefit plans do not, however, necessarily bear the same risks related to their plans. The size of the gross liability is also important because, where the gross liability is large relative to the company's assets, any given percentage change in the liability or related plan assets will have a much more significant effect than if the gross liability had been less substantial.

To bring the depiction of postretirement-related items in the financial statements more in line with its own analytical perspective, Standard & Poor's has devised certain ratio adjustments (see “Adjusting Financials for Postretirement Liabilities”). These adjustments are intended to undo the smoothing of the accounting treatment and reallocate certain accounting effects in the statements while integrating the analysis of

postretirement obligations with other aspects of the financial analysis. This last point is particularly important because of the different funding approaches and regulations that pertain to different plans. For example, as noted earlier, pension plans in Germany largely are unfunded; however, major German industrial companies commonly hold large cash balances and long-term financial assets on the balance sheet to provide for future pension-related cash requirements. Analytically, as long as Standard & Poor's is comfortable that these assets will be retained over the long term to satisfy the pension-related obligations, the arrangement might well be viewed as if the pension plan had been funded. If, however, such a company's capitalization were analyzed without factoring in the pension liability, one could make the mistake of netting the surplus cash against debt, thereby double-counting the cash position and underestimating the company's financial leverage.

Beyond determining the plans' current level of funding, the analyst must also consider the likelihood of significant changes made in the liability or assets in the future. As an example, workforce downsizing through early retirement programs is a major issue in the current economic environment. The potential for changes in benefits largely is a function of the labor climate and the level of benefits relative to those of direct competitors and other regional employers. Similarly, to take a prospective view of plan assets requires the sponsor's input regarding its funding strategies and asset allocation guidelines. Regarding the latter, we do not have a preferred strategy: heavy weighting toward equities heightens near-term volatility, but—if experience holds true—should enhance long-range returns. Conversely, heavy weighting toward fixed-income holdings should minimize near-term volatility, but may well limit long-range returns.

Although Standard & Poor's views unfunded postretirement obligations as debt-like, the surplus relating to overfunded plans generally cannot be viewed as a cash equivalent. Having a significantly overfunded postretirement benefit plan is, of course, a positive from a credit perspective. If nothing else, it generally means the company can curtail future contributions to the plan, barring changes in asset or liability levels. Companies can use the surplus to enrich the retiree benefits (possibly in lieu of raising wages) or sometimes to fund special workforce reduction programs. In the U.S., a portion of the surplus can also be used to fund retiree medical benefits in some circumstances. But in the U.S.—as in most other countries—companies with overfunded pension plans may have little practical ability to revert the surplus: In the U.S., there are harsh tax consequences for doing so. (Amounts recaptured are subject to ordinary income tax, plus a punitive excise tax.)

Cash-flow implications.

The level of necessary future cash outlays has the most immediate effect on a company's financial health. Standard & Poor's focuses on prospective outlays. Information about the regulatory funding status of the plan, a company's workforce, the makeup of its retiree population, its benefit plan characteristics, and management's cost-cutting and funding strategies helps the analyst understand the likely direction of future cash outlays.

For plans in which prefunding is mandated by regulations, the degree of discretion over payments is critical. The cash requirements for U.S. corporate sponsors are significantly shorter term than the underlying disbursements to retirees, but ERISA usually grants considerable flexibility in the year-to-year timing of contributions, except when the plan is severely underfunded. Near-term minimum funding requirements often are low enough that companies can sharply curtail contributions temporarily if needed to maintain liquidity. (In Japan, pension regulations grant companies significantly greater flexibility to defer contributions over an extended period than the U.S.) When funding is required in the near term to comply with ERISA guidelines, the amounts involved are viewed in a different, more severe, light.

The calculation of minimum pension plan contributions under ERISA is a highly complex matter. Although the ERISA framework has some similarities to the financial reporting framework, ERISA uses its

own distinct methodologies and assumptions for valuing the assets and liabilities of the plan. Funding requirements are not just a function of the current funded status of the plan, but also take into account the past funded status, the level of past contributions relative to requirements, and the nature of the events that gave rise to any underfunding, among other factors.

In theory, it is possible to arrive at a rough estimate of the company's minimum future contribution levels by using the publicly available Annual Return/Report of Employee Benefit Plan on Form 5500, filed by the corporate plan sponsor; however, one such form is filed for each qualified U.S. plan of a company, and large companies may have dozens of separate plans. Moreover, the timeliness of Form 5500 is problematic: it must be filed 210 days after the end of the plan year or after the sponsor has filed its federal income tax form, whichever is later. As a practical matter, then, Standard & Poor's relies on management for information regarding the company's future minimum pension contributions to meet regulatory requirements.

Other factors besides funding regulations can influence funding decisions. For example, in the U.S., benefits provided under qualified, defined-benefit pension plans are guaranteed by a quasi-governmental entity, the Pension Benefit Guaranty Corp. (PBGC), which, in turn, charges plan sponsors an annual premium, currently \$19 per plan participant. If a plan's assets are less than the vested portion of the liability (as measured under the very conservative methodology stipulated by the PBGC, which is different from the ERISA approach), an additional, variable annual premium is assessed of \$9 for each \$1,000 of unfunded liability. Moreover, the plan sponsor must notify plan participants of the plan's underfunded status. Companies often make sufficient contributions to their pension plans to avoid these consequences, even if they are not required to do so under ERISA.

Perversely, perhaps, financial reporting can also drive funding decisions. For example, under U.S. GAAP, if the value of plan assets falls below that of the APBO, a large charge to equity can result ("Pitfalls of U.S. Pension Accounting and Disclosure," again). Companies sometimes make contributions to avoid this reporting effect, particularly if financial covenants might thereby be violated.

In the U.S., there are some tax-effective means of prefunding retiree medical benefits. One funding vehicle is the so-called Voluntary Employees' Beneficiary Association (VEBA) trust. As with pensions, contributions to a VEBA trust generally are tax-deductible up to a certain limit, and earnings on trust investments are tax-exempt. VEBA trusts are more flexible than pension trusts: Although VEBA funds cannot be reverted directly by the corporate sponsor, they can be used to pay for a variety of current benefits-related expenses, thereby freeing up other cash. For this reason, though, if a company is at all inclined to use its VEBA assets in this way, Standard & Poor's tends to view the asset as an extension of the company's ready liquidity position, rather than as offsetting a portion of the retiree medical liability.

In some cases, companies issue debt to finance their benefit plan contributions. In assessing the effect on credit quality, Standard & Poor's considers:

- Any loss of payment-timing flexibility. For example, if the company issues debt with a five-year term to satisfy funding contributions that could otherwise be spread over up to 10 years, this could well be viewed negatively;
- The maturity of the new obligation compared with the terms of the obligations it replaces. For example, if the company is able to eliminate looming, near-term funding requirements with a long-term debt issue, this could be a positive development;
- Tax consequences, such as the cash flow benefit of accelerating a tax-deductible contribution; and
- The implications for the company's debt issuance capacity, to the extent the company might have other borrowing requirements.

In most countries, companies are permitted to contribute limited amounts of their own stock to their benefit plans, substituting for or supplementing cash contributions. Standard & Poor's views such transactions as similar—in their beneficial effect—to the company's issuing common stock and using the proceeds to reduce

financial obligations. One difference, however, is the correlation risk that results: If the company encounters significant setbacks, this would presumably be reflected in a weaker share price, which could cause deterioration in benefit-funding levels and precipitate accelerated funding requirements. (For this reason, funding regulations generally set some limit on contributions of so-called employer securities. For example, under ERISA, such contributions cannot exceed 10% of the fair value of plan assets, as determined through a closely scrutinized valuation process.)

Ultimate recovery considerations.

For companies with significant unfunded postretirement benefit obligations, the standing of such obligations in bankruptcy can be an important consideration for creditors. It may affect their willingness to lend, as it obviously has a bearing on ultimate recovery in a reorganization or liquidation. Analysis of this matter is highly specific to the legal system and type of benefit in question, as well as to the legal structure of the corporation. In the U.S., unfunded pension liabilities typically have the standing of general unsecured claims. (The PBGC or the company generally terminates the plan, and then the PBGC pursues a claim against the company for the funding shortfall.) Companies in financial distress could have been granted funding waivers by government regulators in return for liens on assets in advance of a bankruptcy filing, but this is rare among rated companies.

The standing of retiree medical liabilities in the U.S. is less clear-cut because these do not enjoy the same degree of protection under ERISA. If, however, the benefits are owed under the terms of a labor contract, the company's voiding of the contract in bankruptcy would give rise to a general unsecured claim by employees and retirees. If the company were to reorganize rather than liquidate, this claim would most likely be settled through the continuation of the benefit, albeit perhaps in a reduced form, rather than a monetary payout. This would—at least, in theory—still dilute the recovery of other senior unsecured claims, because the liability in its new capital structure would limit the reorganized company's debt capacity.

Pitfalls of U.S. pension accounting and disclosure.

All areas of financial reporting require management to make estimates and judgments, but this is particularly true of accounting for defined-benefit pension plans. Given the prospective and variable nature of the promise companies make to provide pension benefits to retirees, pension accounting relies on numerous subjective assumptions (e.g., employee turnover, mortality rates, compensation levels, discount rates, and investment returns). Moreover, the standards that currently govern pension accounting under U.S. GAAP—Statement of Financial Accounting Standards No. 87, “Employers’ Accounting for Pensions” (SFAS 87)—were issued in 1985, despite intense opposition from many companies. The Financial Accounting Standards Board (FASB) responded with various compromise provisions to smooth the effect on earnings and on the balance sheet of pension-related factors. Consequently, some aspects of the financial reporting for pensions are incongruent with the analytical perspective.

Aspects of the current accounting framework that represent potential pitfalls for analysts include the following.

Balance-sheet aspects.

SFAS 87 defines the pension liability two ways:

- The accumulated benefit obligation (ABO) is a measure of the present value of all benefits earned to date and includes nonvested and vested benefits attributable to services rendered through the balance sheet date. It approximates the value of benefits that would be payable if the company were to terminate the plan, so it represents a shutdown perspective.

- The projected benefit obligation (PBO) also is a measure of the liability for accumulated service, but, unlike the ABO, it also accounts for the effect of salary and wage increases on benefit payouts that are linked to future compensation levels by some formula (for example, where the benefits are based on a fixed percentage of the average annual compensation over the five years prior to the employee's retirement). The PBO thus values the pension promise at the amount for which it will ultimately be settled as the company continues as a going concern.

Measurement of the ABO and PBO requires the company to make many assumptions. Most important, because the liability is calculated as the present value of estimated future payments to plan beneficiaries, the liability valuation is highly sensitive to the discount rate used. (The lower the discount rate, the higher the liability, and vice versa.) SFAS 87 directs companies to "...look to available information about rates implicit in current prices of annuity contracts that could be used to effect settlement of the obligation [and] also...to rates of return on high-quality fixed-income instruments currently available and expected to be available during the period to maturity of the pension benefits."

The discount rate therefore should differ among companies, to the extent they operate in regions with different prevailing interest rates and have different workforce demographics. In actuality, though, as many observers have noted, discount rate assumptions vary significantly more widely among companies than underlying differences in these variables would justify. If the ultimate pension benefit payout is linked to compensation levels, the assumption regarding salary or wage increases also is crucial. In theory, this assumption should bear a close correlation to the discount rate because both reflect, at least partly, the expected inflation rate. If the discount rate is significantly higher than the rate of compensation increases, this may well reflect an overly optimistic view by management about its ability to contain salary and wage cost increases.

Under the framework of SFAS 87, the PBO is the basis for expense recognition—i.e., the accounting seeks to spread the total cost reflected in the PBO over the working careers of the employees earning pension benefits. In the pension footnote, the PBO is compared with the fair value of plan assets to derive the funded status of the plan. (Note: companies can use a measurement date up to 90 days earlier than the balance sheet date to facilitate preparation of the financial statements. This can distort comparisons between the funded status of different companies.) This PBO-related funded status is the best measure of a company's pension-related liability or surplus, and therefore is the one upon which Standard & Poor's focuses.

However, the ABO, not the PBO, serves as the basis for balance-sheet recognition of any unfunded liability. Under the rules of SFAS 87, the relationship of different balance-sheet accounts to the underlying economic reality of the plan is sometimes tenuous. In the normal course of affairs, a company records a liability on the balance sheet to the extent that its pension expense exceeds its plan contributions. To the extent that a company's plan contributions exceed its accrued expense, the company records a prepaid pension asset on the balance sheet.

Strangely, an asset also can be created as a result of benefits enhancements that increase the value of the liability: This intangible asset reflects the presumed economic benefit the employer derives from the plan improvement—for example, better labor productivity from a happier workforce. From an analyst's perspective, the increase in the amount of the liability is more prudently interpreted as a sunk cost. However, if at the end of a fiscal year the fair value of plan assets is less than the ABO, the company must record a so-called minimum liability by increasing any existing balance sheet liability to the level of the unfunded ABO and eliminating any existing asset accounts, with the offset being an after-tax charge to equity (which flows through "other comprehensive earnings," rather than net income). In other words, the additional liability is ABO less (the market value of plan assets plus already accrued liabilities less already accrued assets).

As Table 1 below illustrates, this requirement means a nominal change in the funding status could result in a huge reduction in equity. Analysts must be especially alert to the potential for a charge to equity in cases

where companies have financial covenants tied to book equity levels. Yet, although the ABO is the crucial benchmark for triggering such a charge, companies are not required to disclose the ABO (except, indirectly, if a company has already had to book a minimum liability)—only the PBO.

Table 1

Quirks of Liability and Asset Recognition

*Under SFAS 87**

Example 1

	—Year ended Dec. 31—	
	2001	2002
<i>(Mil. \$)</i>		
Accumulated benefit obligation (ABO)	80	100
Plan assets	80	80
Unamortized prior service cost	0	15
<i>Pension-related assets</i>		
Prepaid pension assets	0	0
Intangible assets	0	15
Pension-related liability	0	20
Change in net worth	0	(5)

At year-end 2001, the company's pension plan was fully funded relative to the ABO. During 2002, the ABO increased by \$20 million: \$15 million because of plan amendments and \$5 million because of variances from actuarial assumptions. Thus, at year-end 2002, the company recorded a liability of \$20 million. Offsets: the \$15 million of the \$20 million increase in the ABO resulting from plan amendments gives rise to a \$15 million intangible asset, and the balance reduces net worth.

Example 2

	—Year ended Dec. 31—	
	2001	2002
<i>(Mil. \$)</i>		
Accumulated benefit obligation (ABO)	100	
Plan assets	80	80
Unamortized prior service cost	0	
<i>Pension-related assets</i>		
Prepaid pension assets	0	0
Intangible assets	0	0
Pension-related liability	0	20
Change in net worth	0	(20)

In this example, there also was a \$20 million increase in the ABO. The entire increase results from actuarial losses, however. Thus, net worth is reduced by the entire \$20 million.

Example 3

	—Year ended Dec. 31—	
	2001	2002
<i>(Mil. \$)</i>		
Accumulated benefit obligation (ABO)	80	100

Table 1

Quirks of Liability and Asset Recognition (cont.'d)		
Plan assets	80	80
Unamortized prior service cost	0	0
<i>Pension-related assets</i>		
Prepaid pension assets	0	0
Intangible assets	0	0
Pension-related liability	15	20
Change in net worth	0	(5)
In this example, the facts are exactly the same as in Example 2, except that the company already had accrued expense on the balance sheet of \$15 million. Thus, it is necessary to record only another \$5 million to increase the balance sheet liability to a total of \$20 million.		

Example 4

	—Year ended Dec. 31—	
	2001	2002
<i>(Mil. \$)</i>		
Accumulated benefit obligation (ABO)	80	100
Plan assets	100	100
Unamortized prior service cost	0	0
<i>Pension-related assets</i>		
Prepaid pension assets	30	30
Intangible assets	0	0
Pension-related liability	0	0
Change in net worth	0	0

In this example, the company had a \$20 million pension funding surplus at Dec. 31, 2001, and a \$30 million prepaid pension asset account because, historically, its plan contributions had exceeded its accrued expense. (Under SFAS 87, there is no direct connection between the actual size of the surplus and the amount of the prepaid asset account.) During 2002, the ABO increased to \$100 million (because of actuarial losses), eliminating the funding surplus. Because the plan was still fully funded at Dec. 31, 2002, however, there was no write-down of the prepaid asset account. A \$30 million prepaid asset account remains, even though there is no pension funding surplus. (Had this been a \$30 million intangible asset, the treatment would have been the same.)

Example 5

	—Year ended Dec. 31—	
	2001	2002
<i>(Mil. \$)</i>		
Accumulated benefit obligation (ABO)	80	100
Plan assets	100	99
Unamortized prior service cost	0	0
<i>Pension-related assets</i>		
Prepaid pension assets	30	30
Intangible assets	0	0
Pension-related liability	0	31
Change in net worth	0	(31)

Table 1

Quirks of Liability and Asset Recognition (cont.'d)

In this example, the facts are same as in Example 4. However, apart from the increase in the ABO, there was a \$1 million decrease in the value of plan assets. Thus, the plan was underfunded by \$1 million at Dec. 31, 2002, relative to the ABO. The company's balance sheet must now show a \$1 million net liability, the shortfall of plan assets compared with the ABO. Thus, the company must record a \$31 million liability to offset the \$30 million prepayment. Had the \$30 million prepaid asset been an intangible asset instead, this would have been written off against equity, and only a \$1 million liability would have been recorded. *All examples ignore tax effects.

Income-statement aspects.

Although the PBO and ABO are subject to volatile year-to-year fluctuations, SFAS 87 was structured to minimize earnings volatility. Pension expense consists of a number of components, which can be grouped into four categories:

- **Service cost.** This is the value of benefits earned by active employees during the period. From an analytical perspective, this is akin to a normal operating expense;
- **Interest cost.** This results from the “aging” of the liability within the present-value framework. The discount rate is applied to the PBO at the beginning of the period. From an analytical perspective, this is akin to a financing charge;
- **Expected return on plan assets.** This is management's long-range expectation about the performance of the investment portfolio, rather than the actual return generated during the reporting period, based on planned asset allocations. Companies are given little guidance in the accounting literature for setting this assumption, and the assumptions used vary widely. From an analytical perspective, this is a dubious proposition at best. (Imagine if plain vanilla operating earnings were reported based on management's long-range expectations.) Moreover, as an alternative to being based on the fair value of assets at the beginning of the period, the assumed return rate can be applied instead to the market-related value of plan assets—i.e., on a basis that smoothes out market fluctuations over a period of up to five years; and
- **Amortization cost.** Any changes in the liability resulting from plan amendments are generally amortized over the expected average future service of employees who are active at the date of the amendment. In addition, any changes in the liability resulting from actual experience that is different from the assumption—beyond a threshold (i.e., 10% of either the PBO or the market-related value of plan assets, whichever is larger)—also are amortized over an extended period. Examples include shortfalls in investment performance, the effect of unanticipated early retirement programs, variances in mortality, and changes in the discount rate. From an analytical perspective, these all represent items without economic substance: all are losses or gains that have already been realized in economic—if not accounting—terms.

The reliance on expected investment returns is the element of SFAS 87 that has drawn the harshest criticism of late, as companies have clung to return assumptions that seem aggressive after three years of negative actual returns. For one thing, although these assumptions may be justifiable based on a very long-range view, minimum funding requirements under the Employee Retirement Income Security Act (ERISA) will in some instances necessitate substantial funding over much a shorter timeframe, barring a dramatic rebound in the stock market.

Separately, even without making aggressive investment return assumptions, some companies are reporting sizable net pension credits (that is, the expected return on plan assets more than offsets the other cost components), generally reflecting the significant overfunding of their pension plans. Overfunded benefits plans are a positive factor from a credit perspective. Yet, the advantages this provides may well be overstated by the credits (given, for example, the practical inability of most companies to directly revert the surplus), and Standard & Poor's takes this into account when arriving at a rating.

Under SFAS 87, all the cost components are aggregated, although from an analytical perspective, as mentioned above, the interest cost and investment returns are more appropriately viewed as financing items.

In addition, the accounting literature contains no definitive guidance on how to display the pension cost on the income statement, so it is variously classified with cost of goods sold, SG&A, R&D, etc. Companies are not required to disclose how they have allocated pension cost among these accounts.

Cash-flow aspects.

The elements of accrual accounting that make the balance sheet and income statement aspects of SFAS 87 problematic do not have the same effect on the statement of cash flows, which reverses noncash accruals and reflects only the cash flows related to the pension plan. There is no standardization regarding where pension plan contributions should be presented on the statement of cash flows, however, nor any requirement that these be identified separately. As discussed in the related article mentioned above, funding that significantly exceeds or falls short of the normal period pension cost (net of financing costs) is most appropriately viewed from an analytical perspective as a financing item, but adjusting for the distortions that otherwise can result is greatly complicated by the lack of better disclosure.

Ultimately, if a company has a significant unfunded pension liability and faces material required pension fund contributions, its funding position as defined under ERISA—rather than SFAS 87—is the most relevant analytical consideration. Yet, companies are not specifically required by the SEC to disclose their ERISA funding positions or their expected future minimum contributions as determined under ERISA. Likewise, the contributions necessary to avoid Pension Benefit Guaranty Corp. (PBGC) variable-rate premiums, even though avoiding these can also be a powerful incentive for companies to make plan contributions.

Adjusting financials for postretirement liabilities.

Standard & Poor's Ratings uses certain financial adjustments and ratio definitions to help ensure that ratings on industrial companies fully reflect unfunded, defined benefit pension and other postretirement obligations, including health care obligations, retiree lump-sum payment schemes, and other forms of deferred compensation, whether partially funded or completely unfunded. If benefits-related matters are material, Standard & Poor's will calculate capitalization and cash flow protection measures that fully reflect such unfunded benefits obligations. Also, in its analysis of profitability, Standard & Poor's will undo certain distortions that result from current accounting standards and their application.

Given the intricacies of benefits-related regulations and financial reporting, Standard & Poor's must strike a balance between what, on one hand, might seem like the most correct approach and, on the other hand, what is feasible in light of the practical limitations of the analytic process.

In any event, if benefits obligations constitute a major rating consideration, ratio analysis will not substitute for a close consideration of the issuer's particular circumstances and its benefits plans. Note: Funding and liquidity considerations may well be much more important than the financial-statement analysis matters covered here.

In approaching benefits-related adjustments and ratio calculations, the following guiding assumptions are made:

- Standard & Poor's treats unfunded pension liabilities, health care obligations, and all other forms of deferred compensation as debt-like;
- To simplify the analysis, Standard & Poor's combines all benefits plan assets and liabilities, netting a company's overfunded plans against its underfunded plans. In theory, companies with multiple plans can curtail over the long term funding of overfunded plans and direct contributions to underfunded plans. In actuality, there is often little tax incentive to fund certain plans. Also, companies have very limited practical ability to tap funding surpluses; it is even possible for companies to face onerous near-term cash contribution requirements related to certain plans while other plans are overfunded. When near-term cash requirements are the central focus, though, ratio analysis is likely to be of secondary importance; and

- Standard & Poor's emphasizes the fullest measure of the unfunded liability available. Generally, for pensions, this is the so-called projected benefit obligation (PBO) under U.S. GAAP, which takes account of the value at which the liability ultimately will be settled (including the effect of expected wage increases if the benefit is tied to employee compensation according to some formula) and views the company as a going concern. It should be noted, however, that for collectively bargained labor contracts, the PBO does not take account of expected wage increases beyond the term of the existing contract. The PBO is a broader measure than the accumulated benefit obligation (ABO) or vested benefit obligation, which instead reflects a shutdown value perspective. For postretirement medical liabilities, the measure equivalent to the pension PBO under U.S. GAAP is the accumulated postretirement benefit obligation (APBO).

Capital structure analysis.

Standard & Poor's emphasizes the following as an important measure of capitalization:

- (total debt + unfunded benefits obligations) ÷ (total debt + unfunded benefits obligations + adjusted equity)
- Unfunded benefits obligations are factored in as debt equivalents.

Given the point made above, our benefits-adjusted capitalization ratio is based on the unfunded PBO rather than on the amount recognized on the balance sheet. There often is a substantial gap between the two, given the accounting approach of amortizing the effects of variances in investment or actuarial performance compared with assumptions, or of changes in plan benefits, over an extended period. For companies with net underfunded plans, Standard & Poor's increases or reduces the balance sheet liability to equal the unfunded PBO, with the offsets to the incremental change in the liability being to deferred tax assets (where applicable) and equity (see Table 2). Any transition assets, intangible assets stemming from benefits enhancements, or prepaid asset amounts are deducted from equity because Standard & Poor's believes such assets lack economic substance.

Table 2

Capitalization Adjustments

XYZ Co.*

Debt totals \$1.0 billion and equity \$600 million at Dec. 31, 200X. Tax rate: 33%-1/3%. Projected benefits obligation (PBO) exceeds fair value of plan assets by \$1.1 billion at year-end 200X, up from \$700 million at the previous year-end.

Change in benefits obligation (Mil. \$)

PBO, beginning of year	2,000.0
Current service cost	60.0
Interest cost (7% x 2,000)	140.0
Actuarial adjustments	100.0
Benefits paid	(300.0)
PBO, end of year	2,000.0

Change in plan assets

Fair value of plan assets, beginning of year	1,300.0
Actual return on plan assets	(100.0)
Benefits paid	(300.0)
Fair value of plan assets, end of year	900.0
Unfunded PBO	1,100.0

Assuming only \$800 million of the \$1.1 billion unfunded accumulated benefits obligation was recognized on the balance sheet at Dec. 31, 200X, adjusted debt leverage is computed as follows:

Table 2

Capitalization Adjustments (cont.'d)		
Adjusted debt and debt-like liabilities =	Total debt + [(1 - tax rate) x (unfunded PBO)]	\$1.0 bil. + (66-2/3% x \$1.1 bil.) = \$1.733 bil.
Adjusted equity =	Book equity - [(1 - tax rate) x (unfunded PBO - liability already recognized on balance sheet)]	\$600 mil. - [66-2/3% x (\$1.1 bil. - \$800 mil.)] = \$400 mil.
Adjusted debt and debt-like liabilities/total capitalization =		\$1.733 bil./(\$1.733 bil. + \$400 mil.) = 81.2%
This compares with unadjusted total debt to capitalization of:		\$1.0 bil./(\$1.0 bil. + \$600 mil.) = 62.5%

*XYZ Co. operates in a country where benefits plans are prefunded and plan contributions are tax-deductible. Any intangible pension asset account relating to previous service cost would be eliminated against equity. This would also be tax-effected.

We factor benefits liabilities in on an after-tax basis, using the marginal tax rate, in countries where plan contributions—or direct payments to retirees or third-party insurers—are tax-deductible. This distinguishes benefits liabilities from debt, repayment of which does not generate tax credits. Again, the emphasis assumes the company is a going concern and can pay its taxes.

If a company is experiencing financial distress, the tax benefits related to required plan contributions are unlikely to be realized, and the analyst may then choose to exclude a tax benefit from the calculations. (In such cases, liquidity—rather than capitalization—normally would be the main area of emphasis in Standard & Poor's analysis.)

Note: Given the latitude companies have under some accounting systems to choose the discount rate, and the significant sensitivity of the liability measurement to the rate used, it would in theory be desirable to normalize for different discount rate assumptions, putting all companies in the same region, with the same workforce demographics, on the same basis. This is, however, as a practical matter extremely difficult to do with any accuracy, without knowing the underlying cash flow assumptions on which the company's liability measurement are based. Standard & Poor's periodically will survey companies' disclosures to help ascertain which discount rate constitutes the norm. Where companies vary materially from the norm, Standard & Poor's will seek sensitivity information from management to facilitate the analysis.

Cash-flow analysis.

Where benefits obligations are material, Standard & Poor's calculates the following ratio:

- Funds from operations ÷ (Total debt + unfunded benefits obligations)

The denominator is adjusted as described above. Funds from operations (FFO) is defined as net income from continuing operations plus D&A, deferred income taxes, and other non-cash items.

Standard & Poor's makes an additional adjustment to FFO for companies with unfunded benefits obligations that make “catch-up” contributions to reduce their unfunded liabilities. Otherwise, FFO would appear depressed as a result of a cash outflow that Standard & Poor's would view as a finance item (akin to debt amortization) rather than a cash operating expense. Specifically, as shown below, plan contributions that are materially greater than benefits-related service and net interest cost accrued during the period (that is, net of actual pension investment returns) are added back to FFO. (Note that this adjustment is capped at zero, given what would otherwise be the distorting effect of net positive cash inflows.)

Conversely, if the company is funding its postretirement obligations at a level substantially below its accrued expense, this may be interpreted as a form of borrowing that artificially bolsters reported cash flow from operations. Standard & Poor's also adjusts cash flow to normalize for investment return performance viewed as nonrecurring in nature, whether abnormally high or low (see Table 3).

Table 3

Cash Flow Adjustment	
<i>ABC Co. *</i>	
The company makes “catch-up” plan contributions that significantly exceed period expense. Tax rate: 33-1/3%. The company had a sizable unfunded PBO at the previous year-end and contributes \$400 million to benefits plan during 200X. The actual return on plan assets is \$30 million.	
Pension expense for 200X	(Mil. \$)
Service cost	50
Interest cost	150
Expected return on plan assets	(140)
Amortization of previous service cost, other unrecognized gains or losses	40
Net periodic benefits cost	100
By contributing more than the combined service cost and net interest cost (\$50 million + \$150 million - \$30 million), ABC Co. is viewed as retiring a portion of its unfunded benefits obligation. The amount of cash needed to satisfy the combined service and net interest cost is treated as a normal cash operating expense. The balance of the cash flow effect of the \$400 million contribution is reclassified as a financing item.	
<i>Reported 200X statement of cash flows</i>	
Net income	100
<i>Adjustments for items not affecting cash from operating activities</i>	
Depreciation	200
Deferred income taxes	50
Other	100
Funds from operations§	450
Adjustments: The \$400 million contribution depressed reported FFO by \$266 million: \$400 million - (33-1/3% x \$400 million). The tax-effected overage: [(\$400 million - (\$50 million + \$150 million - \$30 million)) x (1 - 33-1/3%)] = \$153 million, is added back to FFO and subtracted from financing sources/uses:	
Reported FFO	450
Adjustment	153
Adjusted FFO	603

*ABC Co. operates in a country where benefits plans are prefunded and plan contributions are tax-deductible. Includes (\$266 million) after-tax effect of \$400 million contribution. §Management input may be required to differentiate FFO effects of the contribution from the working capital effects.

Profitability analysis.

In analyzing profitability (including EBITDA), as illustrated below, it is appropriate to disaggregate the benefits cost components that are combined in financial reporting and eliminate those with no economic substance, in accordance with the approach of Standard & Poor’s Core Earnings framework. The so-called “service cost”—reflecting the present value of future benefits earned by employees for services rendered during the period—is viewed as an operating expense, and treated as such.

The components that represent accounting artifacts and stem from the smoothing approach of the accounting rules—e.g., amortization of variations from previous expectations regarding plan benefits, investment performance, and actuarial experience—are eliminated (consistent with the immediate recognition of these unamortized amounts in the treatment of capitalization discussed above).

Any increase or decrease in the plan liability resulting from plan benefit changes is recognized immediately as an operating expense/credit. Interest expense, which is the result of the application of the discount rate to

the PBO to “age” the liability with the passage of time, is essentially a finance charge and is reclassified as such. (As discussed above, sensitivity analysis taking account of different discount rates is appropriate.)

The expected return on plan assets also is eliminated and replaced by a much more meaningful amount: the actual return on plan assets during the reporting period. The actual return on plan assets is netted against interest expense up to the amount of the interest expense reported, but not beyond in the case of fully funded plans, as the economic benefits to be derived from such overage are limited. If the actual return is negative, though, the full amount in excess of interest expense is treated as an addition to interest expense because, unfortunately, the resulting economic detriment to the company is quite tangible (see Table 4).

Table 4

Application/Expansion of Core Earnings Framework

UVW Co.

The company used 10% in 200X as its expected return on plan assets assumption. Plan assets totaled \$3.5 billion at the beginning of the year. Actual return was 2% (\$70 million).

200X income statement	(Mil. \$)
Net sales	2,000
Operating expenses	—
Pension expense	200
D&A	1,000
All other operating expenses	600
Oper. income (after D&A)	200
Interest expense	120
Pretax income	80

Pension expense for 200X

Current service cost	50
Interest cost	300
Expected return on plan assets (10% x \$3.5 bil.)	(350)
Amortization of unrecognized gains or losses	200
Net pension expense	200

The income statement would be adjusted as follows:

	As reported	Adjustments	Adjusted
Net sales	2,000		2,000
<i>Operating expenses</i>			
Pension expense*	200	(150)	50
D&A	1,000		1,000
All other operating expenses	600		600
EBIT	200		350
Interest expense	120	230	350
Pretax income	80		0
EBIT fixed-charge interest coverage (x)	200/120 = 1.7		350/350 = 1.0

*All but the current service cost (\$50 million) are eliminated from benefits expense. Benefits-related interest cost, less the actual return on plan assets (\$300 million - \$70 million) is combined with other interest expense.

In practice, however, the profitability measures that result from the use of this approach can be extremely volatile, with benefits-related effects often obscuring operating results. For this reason, we view such measures as supplementary. Just as in other aspects of its analysis, we look beyond changes considered temporary in nature. In approaching its conventional profitability ratios, we adjust for the effects of expected investment return assumptions that are significantly higher than the norm, where this has a material effect on reported earnings (see Table 5).

Table 5

Profitability Adjustment for Overly Optimistic Expected Return on Plan Assets

UVW Co.

The company used 10% in 200X as its expected return on plan assets assumption. Standard & Poor's views 8% as a more realistic long-range expected annual return. Plan assets totaled \$3.5 billion at the previous year-end.

200X income statement	(Mil. \$)
Net sales	2,000
Operating expenses	—
Pension expense	200
D&A	1,000
All other operating expenses	600
Oper. income (after D&A)	200
Interest expense	120
Pretax income	80

Pension expense for 200X

Current service cost	50
Interest cost	300

Expected return on plan assets

(10% x \$3.5 billion)*	(350)
Amortization of unrecognized gains and losses	200
Net pension expense	200

The income statement would be adjusted as follows:

	As reported	Adjustments	Adjusted
Net sales	2,000		2,000
<i>Operating expenses</i>			
Pension expense	200	70	270
D&A	1,000		1,000
All other operating expenses	600		600
EBIT	200		130
Interest expense	120		120
Pretax income	80		10
EBIT fixed-charge interest coverage (x)	200/120 = 1.7		130/120 = 1.1

*Under U.S. GAAP, the expected return on plan assets may not be based on the fair value of plan assets at the previous year-end, but on a "market-based value," i.e., a smoothed value averaging values of several previous years. The adjustment should always be based on the fair value of plan assets at the previous year-end. The expected return on plan assets is reduced by $(10\% - 8\%) \times \$3.5 \text{ billion} = \70 million , thereby increasing pension expense by \$70 million.

Moreover, we are alert to cases where companies have net pension credits that are a material source of overall earnings. Net pension credits generally reflect a healthy benefits funding picture, but such credits exaggerate the economic advantage to the company of this overfunding status and can distort period-to-period and peer comparisons.

At this time, we do not intend to recalculate its published key industrial and utility financial ratios as described here. Because most U.S. companies' pension plans were fully funded through the latter half of the 1990s, we believe such adjustments would not make a substantial difference to the published medians. If, however, current, broadly depleted funding levels persist, we will reassess the basis for statistical data.

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Corporate Ratings Criteria— The Evolving Role of Corporate Governance in Credit Rating Analysis

The Evolving Role of Corporate Governance in Credit Rating Analysis

The linkages between credit quality and corporate governance—or, more correctly, certain elements of corporate governance—can be extensive. Governance issues that are germane—such as ownership structure, management practices, and financial disclosure policies—are regularly examined as part of the credit ratings methodology, although they have not traditionally been labeled with corporate governance nomenclature.

Credit rating analysis has focused on many specific corporate governance elements but has not aggregated these into one category or attempted to arrive at an overall assessment of corporate governance.

Until recently, greater emphasis has been placed on corporate governance factors in the rating analysis in countries with less-developed capital markets. However, given the recent spate of management scandals in the U.S. and Europe, Standard & Poor's Ratings Services is subjecting these issues to greater scrutiny globally.

It is clear that weak corporate governance can undermine creditworthiness in several ways and should serve as a red flag or warning indicator to credit analysts. Alternatively, strong corporate governance, demonstrated in part by the presence of an active, independent board that participates in determining and monitoring the control environment, while not an enhancement to creditworthiness, can serve to support the credibility of financial disclosure and, more broadly, management.

Recent examples of poor corporate governance, which contributed to impaired creditworthiness, include:

- Uncontrolled dominant ownership influence that applied company resources to personal or unrelated use.
- Uncontrolled executive compensation programs.

Primary Credit Analysts

Solomon B Samson
New York
(1) 212-438-7653
sol_samson@
standardandpoors.com

Scott Sprinzen
New York
(1) 212-438-7812
scott_sprinzen@
standardandpoors.com

Emmanuel Dubois-Pelerin
Paris
(33) 1-4420-6673
emmanuel_dubois-pelerin@
standardandpoors.com

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- Management incentives that compromised long-term stability for short-term gain.
- Inadequate oversight of the integrity of financial disclosure, which resulted in heightened funding and liquidity risk.

Standard & Poor's Governance Services group offers full-scope corporate governance analysis and scores. These services are geared largely to the equity investor's perspective. In addition, the credit ratings and governance groups at Standard & Poor's may collaborate in the analysis of specific companies. Moreover, to ensure a methodological consistency of approach relating to broad corporate governance issues, collaboration at a technical level between credit and governance analysts does occur to review points of general analytical criteria.

The following elements of corporate governance traditionally have formed part of ratings analysis. The significance of each element as a rating factor can vary greatly.

Ownership.

Identification of the owners is an obvious requirement. It is a fundamental rating criterion that entities are never rated on a stand-alone basis; links to parent companies or affiliates are important considerations. Ownership by stronger or weaker parents substantially affects the credit quality of the rated entity. The nature of the owner—government, family, holding company, or strategically linked business—also can hold significant implications for both business and financial aspects of the rated entity.

Control.

The existence of more than one owner introduces additional issues regarding potential conflicts over control. Joint owners might disagree on how to operate the business. Even minority owners can sometimes exercise effective control or at least frustrate the will of the majority owners. Whenever control is disproportionate to the underlying economic interest, the incentives for the stakeholders could diverge. This could result from existence of classes of shares with super voting rights or from owning 51% in each of multiple layers of holding companies. In either example, control might rest with a party that holds only a relatively small economic stake. Cross-shareholding of industrial groupings and family-controlled networks are commonplace in certain parts of the world. Such group affiliations can have positive or negative implications, depending on the specific situation.

Conventional, equity-oriented corporate governance analysis is very sensitive to share structure (asking, for example, whether each type of share provides representational voting), out of concern that actions will be undertaken to the detriment of minority shareholders. Although this concern is not the direct focus of credit analysis, there is a penalty for companies considered abusive to minority holders. Perception of such conduct would, obviously, impair the company's access to investment capital. Furthermore, if a company mistreated one set of its stakeholders, there would be serious concern that the company could later try to shortchange other stakeholders, including creditors.

Management and organization.

Assessment of management is an especially significant determinant of credit-rating assignments. Rating analysis considers many factors that pertain to management, including:

- Track record and competence;
- Management background and reputation;
- Management depth and turnover;
- Professional or entrepreneurial style of management; and
- Any tensions among operating functions, the finance function, or shareholder interests.

Policies and strategies.

Financial policies are assessed for aggressiveness or conservatism, sophistication, and consistency with business objectives. Policies should optimize for the typically divergent interests of the company's stakeholders—shareholders, creditors, customers, and employees, among others. Specifically, the company's goals with respect to its credit rating need to be consistent with the balancing of those interests.

Business strategies are evaluated for realism, comprehension of competitive risks, and contingency planning. Comparisons of policies and projections with a company's track record form the basis for judging management credibility.

Information disclosure and financial transparency.

Ratings are based on audited financial data plus supplemental data (including detailed financial projections) that might be provided confidentially. Ratings agencies enjoy unique access to data given their status under disclosure regulations in many jurisdictions and their impeccable track record regarding confidentiality.

In judging the reliability of data, we consider the accounting standards used as the basis of the financial statements, the reputation of the auditor, and the degree of openness of the local business practice. Qualms about data quality (dubbed "information risk") would translate into a lower rating and preclude a rating in the upper part of the rating spectrum.

A review of accounting quality is a critical prerequisite of the financial analysis. Comparisons of financial measures need a common frame of reference. Consolidation standards, revenue recognition methods, and depreciation methods are all scrutinized, as is off-balance sheet financing, such as leasing, securitizations, trust vehicles, and contingent liabilities. Adjustments are regularly made to recast the financial statements—and the credit ratios based thereon—to better reflect economic risks and to allow better benchmark comparisons.

However, Standard & Poor's does not conduct audits, and there are limitations to analytical methods. A company bent on deception might succeed in misleading both its auditors and the rating analysts.

Apart from disclosure to Standard & Poor's analysts, though, public disclosure and transparency can be important. If a company maintains an aura of secrecy, investors will be suspicious and skittish. In addition, the company is more prone to so-called headline risk, the consequences of which can be very damaging, especially in the current environment.

Intercompany and affiliated party transactions.

These activities pose special challenges, because it is difficult to ascertain that they are done on a truly arms-length basis. A propensity to engage in deals with inside parties would give rise to skepticism about the company's conduct of its affairs, even if they were fully disclosed.

A component of corporate governance that historically has not figured prominently in the rating process is board structure and involvement. Of course, if it is evident a company's board of directors is passive and does not exercise the normal oversight, it weakens the checks and balances of the organization and represents a negative credit factor. But considerations such as the proportion of independent members on the board of directors, presence of independent directors in board-level audit committee, and direct reporting of internal auditor to board or independent internal audit committee at board level have not been systematically examined.

Similarly, relatively little attention has been paid to the compensation of directors and senior management teams. It can be difficult to determine objectively if a given level of compensation is excessive or will result in a company strategy that is overly aggressive or mainly focused on short-term performance.

As business practices change in the wake of management and accounting abuses—and directors take on a more active role in the company direction and oversight—more weight to the role of the board of directors could be warranted from the perspective of credit rating.

Quite obviously, strong corporate governance does not, by itself, indicate strong credit worthiness—just as a company being open and fair does not equate with the company being well managed. In addition, companies with high credit ratings could have governance standards that are problematic, particularly from the perspective of minority shareholders. In the end, weak corporate governance practices can undermine creditworthiness, but it would depend on the specific aspects of governance that led to the poor assessment.

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**Standard & Poor's, Research:
Newfoundland Power Inc.
April 23, 2004**




RESEARCH

Newfoundland Power Inc.

Publication date: 23-Apr-2004
Credit Analyst: Damian DiPerna, Toronto (1) 416-507-2561; Laurie Conheady, Toronto (1) 416-507-2518

Corporate Credit Rating

BBB+/Negative/--

Business Profile

1 2 **3** 4 5 6 7 8 9 10

Financial policy:

Moderately aggressive

Debt maturities:

2004 C\$3.7 mil.

2005 C\$3.7 mil.

2006 C\$3.7 mil.

2007 C\$35.1 mil.

2008 C\$3.3 mil.

Bank lines/Liquid assets:

Newfoundland Power Inc. has a total of C\$110 million in credit facilities available to address liquidity needs, of which C\$41 million was drawn as of Dec. 31, 2003.

Total rated debt:

As of Dec. 31, 2003, Newfoundland Power had C\$374 million of total debt outstanding, including C\$41 million of short-term debt.

Outstanding Rating(s)

Newfoundland Power Inc.

Sr secd debt

Local currency

A-

Pfd stk

Local currency

BBB-

Fortis Inc.

Corporate Credit Rating

BBB+/Negative/--

Sr unsecd debt

Local currency

BBB

Pfd stk

Local currency

BBB-

Caribbean Utilities Co. Ltd.

Corporate Credit Rating

A/Stable/--

Sr unsecd debt

Foreign currency

A

Pfd stk

Foreign currency

BBB+

Maritime Electric Co. Ltd.

Corporate Credit Rating

BBB+/Negative/--

Sr secd debt

Local currency

BBB+

Corporate Credit Rating History

Mar. 20, 2001

A-

Jan. 7, 2004

BBB+

Company Contact

Lisa Hutchens 1 (709) 737-5282

Major Rating Factors**Strengths:**

- Low-risk distribution and transmission assets
- Monopoly service territory
- Largely supportive regulation

Weaknesses:

- Mature service area in the island portion in the Province of Newfoundland and Labrador
- Relatively high operating costs
- Financial profile is constrained by limits imposed by regulators with respect to equity base and allowed returns

Rationale

The ratings on Newfoundland Power Inc. reflect the consolidated business and financial risk profile of its parent, Fortis Inc., based on Standard & Poor's Rating Services' consolidated rating methodology. The consolidated rating approach captures the relative contribution to business risk and cash flow of Fortis' various operating subsidiaries, including regulated utilities Newfoundland Power, Maritime Electric Co. Inc., Caribbean Utilities Co. Ltd., Fortis Ontario, Belize Electricity Ltd., and Aquila Networks Canada, and higher risk generation businesses, Fortis U.S. Energy, Belize Electric Ltd., and real estate developer Fortis Properties Corp. As a result, the long-term corporate credit rating on wholly owned subsidiary, Newfoundland Power, is equalized with the rating on its parent, Fortis, with any change to the rating on Fortis leading to a change in the rating on Newfoundland Power.

The rating on Fortis, a utility holding company based in St. John's Nfld., reflects its diversified portfolio of utility operations, monopoly electricity distribution activities, largely residential and commercial customer base, and favorable regulation based on cost-of-service and rate-of-return methodology, which provides relatively stable cash flow generation. Offsetting these strengths are somewhat modest growth in sales, operating challenges in its service territories, investments in higher risk commercial and hospitality real estate, independent power generation, and electric power operations in Belize. Fortis' active strategy of pursuing acquisition opportunities in both Canadian and international markets also adds an element of risk.

Fortis is in the process of acquiring transmission, distribution, and generation assets in the provinces of British Columbia and Alberta from Aquila Networks Canada. Once the transaction closes in mid-2004, subject to regulatory approvals, Fortis will more than double its customer base to approximately 900,000 customers and will expand its service territories across Canada to five provinces. This expansion will refocus Fortis' business strategy more toward low-risk, regulated electric distribution services. The pending acquisition should prove moderately beneficial to Fortis' overall business profile as funds from operations (FFO) and assets from the company's regulated operations are projected to increase to approximately 90% and 77%, respectively, by 2005 from 75% and 62%, respectively, in 2003. The C\$1.3 billion acquisition will be financed with a combination of debt and equity, which will support Fortis' target consolidated debt-to-capitalization ratio of approximately 60%. In the near term, the FFO interest coverage ratio is projected to average approximately 2.6x and the FFO to total debt ratio of approximately 13%. Compared with similarly rated global peers, the company's financial profile is considered relatively weak, thus leaving little cushion for possible deterioration in its financial profile.

On a stand-alone basis, the key qualitative aspects supporting Newfoundland Power's business profile include its predominantly low-risk distribution assets, monopoly franchise area with a large residential and commercial customer base, and supportive regulation. These strengths are partially offset by the company's relatively weak service area, low growth prospects, and relatively high operating costs.

Liquidity.

Standard & Poor's assesses Newfoundland Power' liquidity to be adequate given its regulated cash flow, low debt maturities, available bank facilities, and access to capital markets. Cash flows will generally be insufficient, however, to meet approximately C\$50 million to C\$55 million in annual capital expenditures in the near term. With C\$110 million in operating bank facilities, of which C\$41 million was drawn as of Dec. 31, 2003, and access to capital markets, the company has adequate funds available to meet upcoming debt maturities and operating purposes.

Outlook

The negative outlook reflects the risks surrounding several operating and financial challenges faced by Fortis in the next few years as it integrates the relatively large Aquila acquisition. These challenges include dealings with regulatory boards in new markets (British Columbia and Alberta), participating in a generic cost-of-capital hearing in Alberta, managing a heavy capital expenditure program, and accessing the capital markets to help finance its recent acquisition and fund capital expenditures. Any material acquisitions beyond Aquila have not been factored into the ratings.

Business Profile

Although the ratings on Newfoundland Power reflect the consolidated business and financial risk profile of Fortis, this report, with the exception of the Rationale and Outlook sections, focuses exclusively on the stand-alone business and financial profile of Newfoundland Power. For more detailed information on the consolidated business and financial profiles of Fortis, see the credit report on Fortis on RatingsDirect, Standard & Poor's Web-based credit research and analysis system, at www.ratingsdirect.com.

Newfoundland Power operates an integrated generation, transmission, and distribution system throughout the island portion of Newfoundland and Labrador. The company serves approximately 222,000 customers making up approximately 85% of all electrical consumers in the province.

Regulation.

The key component underpinning the company's strong business profile is the supportive regulatory environment in which Newfoundland Power operates. Newfoundland Power operates under cost-of-service and rate-of-return regulation as contained in provincial legislation. Standard & Poor's views the principal components of regulation, specifically provisions for full recovery of prudently incurred costs including operating and financing cost and the absence of commodity risk, as supportive of credit quality and the receipt of stable revenue.

The Newfoundland and Labrador Board of Commissioners of Public Utilities (PUB) ruled in the 2003 general rate application that, for the purpose of rate setting, the company's capital structure remain at a maximum of 45% common equity, with an ROE of 9.75% (compared with 9.05% in 2002), or 4.15% above forecast long-term Government of Canada bond yields. The company's equity base is considered satisfactory and compares favorably with Canadian peers, but is weaker than those of similarly rated utilities outside Canada. Furthermore, the ROE of 9.75% plus or minus 40 basis points is more reasonable after having been below the national average for several years. The PUB also determined an allowed rate of return on rate base of 8.96% in a range of 8.78% to 9.14% to reflect the ROE of 9.75% for 2003. Earnings in excess of this range are refunded to customers.

Markets.

The company's service territory on the island portion of Newfoundland and Labrador is considered mature with modest economic growth forecasted in the near to medium term.

Energy sales growth is primarily influenced by growth in the provincial economy, which has been relatively good in recent years versus historical growth rates. Economic growth in Newfoundland and Labrador has been attributed mainly to growth in the service sector and activity related to offshore oil projects. Although, with reduced construction expenditures and oil production related to the local energy sector, GDP is forecast to grow by 1.9% in 2004.

Newfoundland Power serves about 222,000 small commercial and residential customers constituting 85%

of all electricity customers on the island. Newfoundland Power has little exposure to industrial load, which is serviced directly by provincially owned Newfoundland and Labrador Hydro. Residential energy sales account for approximately 60% of total energy sales and provide the company with a solid foundation for continued stable cash flow generation. New housing starts and high oil prices continue to improve the competitive position of electricity in the space heating market, which is expected to spur 2% growth in energy sales in 2004.

Operations.

Newfoundland Power's operating costs are relatively high versus Canadian and global peers due to its largely rural-based, rugged, sparsely populated service territory and harsh weather conditions; however, regulation allows the company to recover all prudent and approved costs in a timely manner.

Newfoundland Power's electrical system is an isolated, stand-alone system that is not interconnected to the North American grid, and therefore reliability of power supply is critical. Since 1997, the company has invested in excess of C\$350 million, including C\$64 million in 2003, to further improve customer service and reliability while minimizing operating costs. As a result, electrical rates in the province are currently at their lowest in Atlantic Canada but are high relative to other regions in Canada. Capital expenditures are preapproved by the regulator and fully recovered through customer rates. Cost-of-service regulation, therefore, mitigates many operating challenges faced by the company. In the next five years, Newfoundland Power plans to invest a further C\$260 million to refurbish, upgrade, and expand its network, including approximately C\$52 million approved by the PUB for 2004.

Newfoundland Power operates an integrated generation, transmission, and distribution system throughout the island portion of Newfoundland and Labrador. The company's generation assets include 95 MW of hydro, 44 MW of gas turbine, and 6 MW of diesel-fired plants, which are primarily used to address peak needs. The company acquires approximately 90% of its energy requirements from Newfoundland and Labrador Hydro. Newfoundland Power's segmented assets include distribution (56%), transmission (19%), generation (12%), and other (13%).

Table 1

Newfoundland Power Inc. Segmented Operating Statistics

	2003	2002	2001	2000	1999
Sources of energy (mil. kWh)					
Purchased	4,725	4,604	4,495	4,432	4,292
Generated	425	424	416	423	450
Total	5,150	5,028	4,911	4,855	4,742
Sales (mil. kWh)					
Residential	2,909	2,843	2,775	2,707	2,672
Commercial/street lighting	1,973	1,922	1,892	1,848	1,828
Total	4,882	4,765	4,667	4,555	4,500
Percentage growth (%)	2.5	2.1	2.5	1.2	1.4
Energy sales per employee	8.1	7.9	7.6	7.1	6.5
Customers	221,653	219,072	216,879	215,210	213,641
Percentage growth (%)	1.2	1.0	0.8	0.7	0.7
Operating cost per customer (C\$)	225	223	231	230	235
Revenue per employee (C\$)	639,185	612,980	582,342	539,339	492,088
Number of regular employees (year-end)	601	603	617	646	695

kWh--Kilowatt hour.

Competitiveness.

Newfoundland Power faces very little competition except from alternative fuels. Its operations function as a virtual monopoly because alternative electric utility operations have to be preapproved by the local regulators, which is unlikely. As well, given the geographic remoteness of Newfoundland and Labrador and its low population density, industry restructuring or deregulation is very unlikely in the foreseeable future. Electric rates in Newfoundland and Labrador are rising, due to increasing commodity prices, but

nevertheless remain competitive versus oil, which it competes against in the home heating market, while natural gas is not expected to become available in the province anytime soon. Market share of the home heating segment is approximately 55% and continues to modestly improve as approximately 85% of new home construction uses electric-based heating.

Financial Policy: Moderately aggressive

Newfoundland Power's financial profile is constrained by regulatory directives and is considered moderately aggressive compared with similarly rated global peers. The PUB limits the amount of common equity in Newfoundland Power's capital structure that can earn a return and calculates comparatively low authorized ROE versus global peers contributing to a relatively weak financial profile. Based on these constraints, Standard & Poor's does not expect any material improvement in the leverage or coverage ratios for Newfoundland Power.

Financial Profile

Profitability and cash flow.

Regulated utility operations, combined with a slow but steadily growing rate base, provide Newfoundland Power with a solid operating base and consistent earnings growth. The generally supportive features of regulation should support the company's future cash flow stability. Despite the supportive nature of the regulation governing its operations, Newfoundland Power's coverage ratios are relatively weak due in large part to below-average financial returns relative to global peers (9.75% in 2003 and 9.05% in 2002). In 2003, the FFO interest coverage ratio measured 3x, the FFO to total debt 17%, and the net cash flow to capital expenditure ratio was 81%. In the near term, Newfoundland Power's debt coverage ratios are projected to improve modestly from 2003 levels. As well, Standard & Poor's expects post-2005 cash flow generation to be sufficiently strong to cover maintenance capital expenditures of approximately C\$50 million to C\$55 million per year.

Capital structure and financial flexibility.

As of Dec. 31, 2003, Newfoundland Power had C\$332 million in first mortgage bonds and C\$41 million of short-term debt outstanding. The bonds are secured by a first-fixed and specific charge on property, plant, and equipment owned or to be acquired by the company, and by a floating charge on all other assets. Based on the security of the company's low risk utility assets, the first mortgage bonds are rated one notch higher than the long-term corporate credit rating.

Newfoundland Power's capital structure is largely constrained by the regulatory directives of the PUB and is considered moderately aggressive compared with global peers but compares favorably with Canadian peers. The company's operations are financed with a reasonable equity base of 45% versus a 30% to 50% range applicable to most other regulated utilities in Canada. Although the regulatory framework supports the electric utility's low business risk profile, the financial profile associated with the regulated capital structure and allowed ROE is weaker than those of similarly rated utilities outside Canada. Based on these regulatory constraints, Standard & Poor's expects the company's leverage to remain relatively stable at approximately 55%.

Standard & Poor's assesses Newfoundland Power's financial flexibility to be adequate, supported by a stable stream of regulated cash flows, flexible dividend policy (32.5% payout in 2003), available bank lines, and access to capital debt markets. Partially offsetting these factors include Newfoundland Power's heavy capital expenditure program and the unlikelihood of any asset sales given management's commitment to its core business.

Table 2

Newfoundland Power Inc.--Peer Comparison*

Industry Sector: Electric Utility Companies--Canada

--Average of past three fiscal years--

	Sector median¶	Newfoundland Power Inc.	ATCO Ltd.	Emera Inc.	Terasen Inc.
Rating		BBB+/Negative/--	A/Stable/--	BBB+/Stable/--	BBB/Stable/--
(Mil. C\$)					

Sales	811.6	371.0	3,626.8	1,154.0	1,750.0
Net income from cont. oper.	104.9	29.7	146.6	109.0	114.3
Funds from oper. (FFO)	192.3	64.8	559.8	256.0	243.7
Capital expenditures	133.8	62.8	585.4	140.9	362.8
Total debt	1,357.5	365.9	2,905.0	2,002.3	2,688.0
Preferred stock	9.0	9.6	150.0	265.3	125.0
Total capital	2,746.4	655.3	5,446.0	3,593.9	3,899.8

Ratios

EBIT interest coverage (x)	2.4	2.5	1.7	1.8	1.8
FFO interest coverage (x)	3.4	3.3	3.5	2.5	2.2
Return on common equity (%)	8.8	11.4	11.7	8.5	11.6
NCF/capital expenditures (%)	81.3	82.2	74.4	120.6	48.0
FFO/total debt (%)	18.4	19.6	19.5	12.8	9.4
Total debt/capital (%)	55.3	55.8	53.3	57.1	68.9

*Adjusted for off-balance-sheet obligations and capital operating leases. ¶Sector median average is for 2000-2002.

Table 3**Newfoundland Power Inc.--Financial Summary*****Industry Sector: Electric Utility Companies--Canada**

Rating history	--Average of past three fiscal years--		--Fiscal year ended Dec. 31--				
	Sector median¶	Issuer	BBB+/Negative/--§	A-/Negative/--	A-/Stable/--	N.R.	N.R.
			2003	2002	2001	2000	1999
(Mil. C\$)							
Sales	811.6	371.0	384.2	369.6	359.3	348.4	342.0
Net income from cont. oper.	104.9	29.7	30.1	29.4	29.5	27.1	23.5
Funds from oper. (FFO)	192.3	64.8	61.2	64.1	69.2	57.5	51.0
Capital expenditures	133.8	62.8	63.0	58.8	66.4	41.9	42.4
Total debt	1,357.5	365.9	380.4	361.9	355.5	299.4	302.8
Preferred stock	9.0	9.6	9.4	9.7	9.7	9.9	9.9
Total capital	2,746.4	655.3	689.3	651.1	625.4	559.6	555.6
Ratios							
EBIT interest coverage (x)	2.4	2.5	2.4	2.6	2.4	2.4	2.4
FFO interest coverage (x)	3.4	3.3	3.0	3.3	3.5	3.0	2.8
Return on common equity (%)	8.8	11.4	10.0	10.5	11.2	10.6	9.5
NCF/capital expenditures (%)	81.3	82.2	81.1	91.7	74.7	90.6	96.6
FFO/total debt (%)	18.4	19.6	17.4	18.7	23.1	19.1	17.2
Total debt/capital (%)	55.3	55.8	55.2	55.6	56.8	53.5	54.5

*Adjusted by capital operating leases and off-balance-sheet items. ¶Sector median average is for 2000-2002. §Rating is as of Jan. 7, 2004.

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S&P, Peer Comparison:
Consolidated Edison Inc., Hydro One Inc., and
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Research:

Peer Comparison: Consolidated Edison Inc., Hydro One Inc., And National Grid PLC--Same Ratings, Different Basis

Publication date: 11-Oct-2005
Primary Credit Analyst: Laurie Conheady, Toronto (1) 416-507-2518;
laurie_conheady@standardandpoors.com
Secondary Credit Analysts: Paul Lund, London (44) 20-7176-3715;
paul_lund@standardandpoors.com
 Jeffrey Wolinsky, CFA, New York (1) 212-438-2117;
jeffrey_wolinsky@standardandpoors.com

A peer review of Consolidated Edison Inc. (A/Stable/A-1; ConEd), Hydro One Inc. (A/Stable/A-1; Hydro One) and National Grid PLC (A/Stable/A-1; National Grid) shows that despite significant similarities in the nature of their business and the ratings, differences in the factors driving the ratings and the degree to which these factors influence the rating outcome can be considerable. This article highlights the similarities and differences across the three peers, draws out some nuances in Standard & Poor's Ratings Services' ratings criteria as they relate to the three companies, reviews how changes in, and implementation of, strategies have been a major driver of past rating actions, and examines the mix of major rating determinants that support the ratings on the three utilities. Furthermore, the article touches on some of the similar and company-specific challenges facing the utilities in the future, and the capital markets' assessment of the three companies' creditworthiness.

In the assignment of a rating not only are assessments made of an issuer's business risk profile, financial risk profile, and ownership structure, but also the rating is assessed relative to similar industry or business model peers. It is in this context that ConEd, Hydro One, and National Grid are viewed as peers, despite the fact their underlying creditworthiness varies; they are different in size; they operate in separate countries with different markets, regulatory regimes, and legal jurisdictions; and they have different business models, company structures, ownership, business strategies, and risk appetite (see table 1). Despite the number of obvious and not-so-obvious differences, the three utilities are good peers for rating purposes due largely to the similar nature of their businesses and financial risk profiles. A relative assessment of each rating factor shows that while some have a consistent influence on the respective companies' business and financial risk profiles, positively or negatively, for others the impact and extent of influence differs. The outcome, however, is that on balance, the respective credit quality of the three utilities is viewed the same.

Table 1 Summary Data

Company	Consolidated Edison Inc.	Hydro One Inc.*	National Grid PLC¶
Ratings	A/A-1	A/A-1	A/A-1
Outlook	Stable	Stable	Stable
Domiciled	U.S.	Canada	U.K.
Geographic footprint	New York State, and parts of Pennsylvania and New Jersey.	Province of Ontario	England, Wales, and the U.S. states of New York, Massachusetts, New Hampshire, and Rhode Island.
Function	Electricity and gas transmission, distribution, and supply. Some generation.	Electricity transmission, distribution, and supply.	Electricity and gas transmission and distribution, and some telecom.
Ownership	Investor owned	Province of Ontario	Investor owned
No. of employees	14,100	4,200	24,406
No. of distribution customers (000)	4,193	1,259	14,800
Total revenue (mil. US\$)	9,314.3	3,322.4	17,253.00
Total debt (mil. US\$)	6,723.1	4,160.8	25,303.70

*US\$/C\$ exchange rate of 1.25. ¶US\$/UK£ exchange rate of 1.91.

As predominantly transmission and distribution companies ConEd, Hydro One, and National Grid fall into the lowest risk profile of electricity and gas utilities. Some of the more obvious similarities and differences of the three companies are listed below. Although there are as many similarities as differences, of importance is that the similarities are generally the main drivers of the ratings and hence support the peer comparison. With similar financial profiles (including ratio trends), the more pronounced differences in rating factors between the three utilities are their ownership, exposure to nonregulated businesses, markets, management, and to a lesser extent regulatory environments.

Similarities

- Predominately low operating risk transmission and distribution
- Regulated cash flows
- Monopoly positions
- Moderate financial risk profiles
- Operational challenges

Differences

- Influence of ownership and strategy
- Quality of markets
- Level of regulatory support
- Extent of nonregulated operations
- Geographical coverage

ConEd is a holding company that owns electric and gas distribution companies and a steam system, predominately in the State and City of New York, and four unregulated subsidiaries that participate in competitive energy supply and services businesses. The company also owns generation assets that supply steam to the company's steam system. ConEd's strong business profile stems from a historically supportive regulatory environment and a conservative strategy as a transmission and distribution company. The ratings on ConEd were affirmed in May 2005.

Hydro One's operations primarily center on its low-risk electricity transmission and distribution operations in the Canadian Province of Ontario that account for 99% of its consolidated assets and generate virtually all of its funds from operations (FFO). As part of its distribution operations, the company also undertakes regulated delivery of electricity to 1.3 million customers. In addition, the company markets fiber optic capacity. Hydro One's provincial transmission grid accounts for 58% of consolidated assets and is the second largest in Canada, while its distribution operation is one of the country's largest. The Province of Ontario wholly owns the company. The ratings on Hydro One were affirmed in July 2005.

National Grid is a U.K.-based, investor-owned utility. It is the owner and operator of the high-voltage electricity transmission system in England and Wales via its subsidiary National Grid Electricity Transmission PLC; the high-pressure gas transmission system in the UK; and four regional gas distribution networks. National Grid also has a significant presence in electricity transmission and distribution, and some gas distribution, in the northeastern U.S., in the states of Massachusetts, Rhode Island, New York, and New Hampshire, serving about 3.75 million gas and electricity customers. Slightly more than 60% of operating profit is expected to be derived from the company's U.K. operations, and about 30% from the U.S., including Niagara Mohawk Power Corp. (NIMO; A/Stable/--), with the remainder unregulated. The ratings on National Grid were affirmed in February 2005.

■ Rating Nuances: Influence of Methodology, Ownership, Size, And Location

The ratings of ConEd, Hydro One and National Grid are based on Standard & Poor's consolidated rating methodology; however, differences in organizational structure lead to differing debt issue ratings. An important distinction between the three utilities is the rating assigned to the senior unsecured debt at the holding company level. For ConEd and National Grid, structural subordination affects the debt and guarantees at the holding company level such that the senior unsecured debt ratings are one notch lower than the corporate credit rating to reflect the debt's junior claim over operating company assets in the event of insolvency. Hydro One on the other hand issues all its debt at the holding company level, eliminating any structural subordination issue.

A telling difference between ConEd, Hydro One, and National Grid is the influence of ownership on the ratings. More specifically, the Province of Ontario's (AA/Stable/A-1+) ownership of Hydro One enhances the utility's credit quality. Although the province does not formally guarantee Hydro One's debt obligations, the strategic nature of the company within the economy, and the government's

demonstrated willingness to financially support the business leads to a corporate credit rating for Hydro One that is one notch higher than its stand-alone creditworthiness. For ConEd and National Grid, the ownership of these businesses by diverse investors has a neutral impact on the ratings.

As the utilities are largely regulated, the size differential between them is not a differentiating factor for the ratings. The largely regulated nature of the businesses and the absence of material direct competitive pressures means that the per unit cost advantage National Grid would be expected to hold relative to ConEd and Hydro One due to its size, is not a factor that would lead to different rating outcomes for the three companies. In a competitively based global operating environment, the size difference might be more of a factor in the ratings assigned.

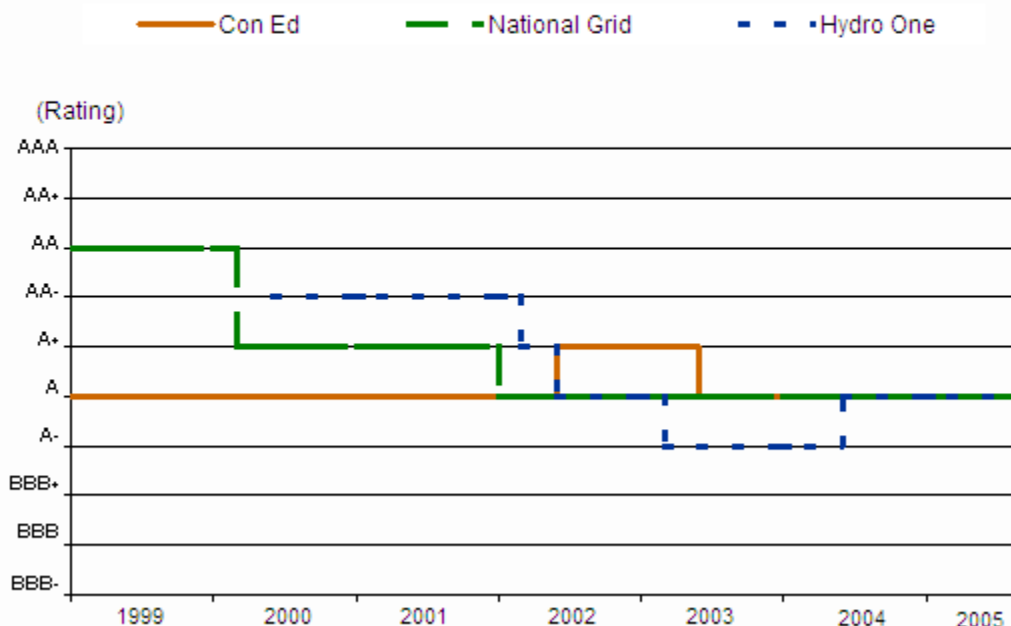
With all three companies operating in developed countries with 'AAA' sovereign ratings, location, like size, is not a distinguishing rating factor. The low sovereign risk associated with the countries in which the three companies operate means that their location is credit neutral in relative terms, apart from some market-specific influences that will be discussed in detail later in the article. What is more of a rating factor is National Grid's scope of operations across two continents, which on one hand enhances its diversity of cash flows, but on the other, introduces foreign exchange risk exposure and the challenges of managing remote operations which are not an issue for ConEd and Hydro One.

■ Ratings History In Part Reflects Consistency And Stability Of Strategy And Management

Influencing the level of ratings on the utilities have been the respective company's long-term strategy, developed internally or imposed by owners, and the stability of management. The strategy adopted by ConEd since the end of last decade has strengthened what was a strong business profile and maintained the stability of the rating. Conversely, National Grid's large debt-funded offshore asset acquisitions have led to deterioration in credit quality. The lack of a consistent strategy by Hydro One and its owner has been a contributing factor in that company's rating volatility.

Reflecting in part a greater consistency of strategy and little variability of business risk profile, the rating on ConEd has remained consistent in the past seven years relative to National Grid, and Hydro One (see chart 1). Apart from a brief foray into the 'A+' territory in 2002, the rating on ConEd has been stable at 'A'. ConEd embarked on the first stage of its strategy to become a major transmission and distribution company in the northeastern U.S. in 1998-1999. The strategic shift from a vertically integrated utility to one that is almost exclusively a highly regulated transmission and distribution company strengthened ConEd's business profile. In addition to the measured approach in the disposal of generation assets, the stability of the rating on ConEd has been supported by the stability of management, which includes an established succession plan for senior personnel.

Chart 1
Ratings History 1999-2005



National Grid has always maintained a strong business profile; however, an increasing financial risk profile associated with largely debt-financed asset acquisitions led to its quick slide down the credit curve in the period 2000-2001. In 2000, the US\$3.2 billion acquisition of New England Electric System led to the downgrade to 'A+'. A further downgrade to the company's current rating level of 'A' followed in 2001 with the acquisition of NIMO. Since that time the company has been relatively inactive with respect to major asset acquisitions, but did undertake a merger with the Lattice Group PLC in 2002 without any impact on its credit profile. National Grid has had a subtle change in strategy with the disposal in mid-2005 of four of its eight regional gas transmission businesses assumed in the merger with Lattice Group. What has not changed is a desire to expand offshore with the company maintaining a strategy of acquiring further transmission and distribution assets outside the U.K. Furthermore, the management positions at National Grid (and Lattice Group) have generally been relatively stable in the past five years, with very little turnover of personnel.

Contrary to its peers, the rating on Hydro One has exhibited significant variability as ownership and regulatory uncertainty has played havoc on the company's credit quality. Since the initial rating of 'AA-' was assigned in 2000, the company has experienced three downgrades, two in 2002 alone, and an upgrade. In early 2002, a weaker-than-expected financial profile due to the introduction of performance-based regulation and an inability to pass on higher power costs previously incurred were the catalyst for the first downgrade. This was followed by a further downgrade in 2002 as issues surrounding a proposed IPO of the company suggested an inability of the company to address weakening financial ratios. A further downgrade in early 2003 reflected increased regulatory risk flowing from political intervention and a government-mandated rate freeze. The recent upgrade in 2004 reflects in part the abandonment of an IPO by a new provincial government, and recognition of implied government support. Significant management and board changes during 2002 and 2003 also created uncertainty about the rating.

Business Risk Profiles

In a comparison of the business risk profiles, ConEd and National Grid are viewed as having a similar business risk profile, while Hydro One's profile is viewed as marginally weaker, largely due to issues surrounding its regulatory environment that have a proportionally greater influence on its business risk profile than those of its peers. An analysis of the more specific aspects of each company's business risk profiles highlights the different influences of each.

The specific influences of each utility's subsidiaries are generally not transparent in the consolidated business risk profiles. Hydro One's business risk profile is essentially reflective of its Ontario-based transmission and distribution operations and while it is relatively disadvantaged by its regulatory environment, and to a lesser extent the market served by its distribution business, its creditworthiness is supported by its lower operating risk profile, and limited direct competition. ConEd's business profile is based on the business risk profile of its two main subsidiaries, Consolidated Edison Co. of New York (CECONY), and Orange & Rockland Utilities Inc. Not surprisingly, these subsidiaries have very similar business risk profiles given the same regulatory regime, similar market, and core business focus. ConEd's good regulation, markets, and operations are offset in part by its nonregulated activities and some competitive pressures. National Grid, on the other hand, is a more complex credit with a business risk profile reflective of five separate business units: the U.K. electricity transmission business; National Grid USA; NIMO; Transco PLC; and nonregulated businesses, the last of which is essentially its Crown Castle (U.K. communication towers) business that has a moderately negative influence on the business risk profile. The diversity of operations supports National Grid's business risk profile such that the negative influence of its weaker NIMO operations and nonregulated operations is offset by the strong business risk profiles of its remaining regulated businesses, in particular the U.K. transmission business. A summary of the major business risk factors and their influences is provided in table 2.

	Consolidated Edison Inc.	Hydro One Inc.	National Grid PLC
Strategy	Consistent strategy focusing on low-risk transmission and distribution assets.	More settled in recent times after period of upheaval.	Aggressive expansion, particularly geared to U.S.
Regulatory Environment	Very supportive. Three-year regulatory period applies from April 2005.	Characterized by the risk of political interference, low equity layer, and low returns. Not viewed as supportive as ConEd's U.S., or National Grid's U.K. electricity regulation.	Supportive regime for U.K. electricity and National Grid USA; weakened somewhat by nascent U.K. gas regulation and NIMO regimes. Benefits from diversity of regimes.
Markets	Robust subsidiary markets primarily based in New York State.	Ontario-based, negatively influenced somewhat by the large rural exposure.	Strong U.K. electricity and gas markets offset weaker markets of NIMO and nonregulated operations.
Operational Risk	Similar risk profile as Hydro One. Largely reflecting low-risk electricity and gas	Reflecting low-risk electricity transmission and distribution.	Relative to peers the operational risk profile could be challenged by pressure to cut costs in regulated activities.

	transmission and distribution.		
Competitiveness	Some competitive pressure in generation and energy services.	No material direct competition.	Some competitive pressure on costs at Transco distribution and pressure on non-regulated businesses including Crown Castle (U.K. communication towers).
Management	Positive influence on risk profile.	Neutral impact.	Neutral impact.
Ownership	Neutral impact.	Positive impact.	Neutral impact.

Regulatory environments

Differentiating features of the three issuers are the regulatory environments in which they operate. With all three utilities earning 90% or more of their cash flows from regulated returns, regulation is a significant rating factor. Varying degrees of stability and transparency, political independence, and allowed capital structures and economic returns translate to different levels of regulatory support for the three utilities. Although the regulatory environments governing the three utilities are generally viewed as supportive of credit quality, some are more supportive than others (see table 3).

Table 3 Summary of Regulatory Environments			
	Consolidated Edison Inc.	Hydro One Inc.	National Grid PLC
Regulator(s)	New York Public Service Commission (PSC)	Ontario Energy Board	OFGEM in the U.K. for gas and electricity, PSC for NIMO, and the respective state regulators for the company's Massachusetts and Rhode Island operations in the U.S.
Methodology	Incentive-based cost of service and rate of return, with an earnings sharing threshold.	Cost of service and rate of return.	Performance-based regulation in the U.K., and a cost of service and rate of return approach in the U.S.
Return on Equity	Potential to earn 11%-13% on maximum equity layer of 50%.	9.88%, moving to 9.0% from May 2006. Deemed equity layer of 36% in capital structure.	Real pretax return on capital of 6.25% on U.K. assets, and return on equity of 10%-14% for U.S. assets.
Comments	Very supportive.	Strained by recent political intervention, and delays in cost recovery.	Good independence, transparency, and stability in the U.K.; very supportive in the U.S.

The New York Public Service Commission which co-incidentally regulates ConEd's main operating subsidiaries, CECONY, and Orange and Rockland Utilities Inc., as well as National Grid's NIMO, is viewed as very supportive of credit quality. For more detailed information on ConEd's regulatory environment, refer to the report "New York Regulators' Consistency Supports Electric Utility Credit Quality" published Aug. 15, 2005, on RatingsDirect, Standard & Poor's Web-based credit research and analysis system, at www.ratingsdirect.com. The stability and independence provided by this regime are in contrast to Hydro One's where political interference and instability have been more often the norm in recent years. Although supportive of credit quality, the regulatory environment in Ontario is viewed as less supportive than those of its peers. In National Grid's case, regulation of its U.K. operations, undertaken by the Office of Gas and Electricity Markets, is viewed as comparable to the New York Public Service Commission in terms of stability, transparency, and independence.

In addition to the different regulatory frameworks, the capital structures and returns allowed by the regulators differ also among the peers. For ConEd's subsidiaries, capital structures of about 50% total debt to total capital are typically the norm, as is the potential to earn double-digit returns on equity of 11%-13%. For National Grid, its U.S. subsidiaries earn similar returns to those of ConEd; however, the returns of the company's U.K. businesses are more modest but still slightly above that earned by Hydro One. The National Grid's regulated U.K. electricity transmission and gas distribution companies are allowed to earn real pretax returns on capital of 6.25% under a performance-based regulatory framework that equates to a nominal return on equity of about 10%, with overall returns further boosted by leverage at the holding company level. The returns on equity at National Grid's operating companies are marginally higher than the allowed return on equity for Hydro One of 9.88%, which is soon to be reduced to 9.0% as a consequence of a scheduled rate determination in late 2005.

Market environment

What separates Hydro One and National Grid from ConEd to varying degrees is their exposure to markets that are not as robust as ConEd's. For Hydro One, it is its exposure to the rural market in Ontario. The largely rural-based market served by Hydro One's electricity distribution business sets it aside relative to the marginally stronger market serviced by ConEd throughout metropolitan and rural New York State and the U.K. markets serviced by National Grid. The more robust markets

served by ConEd and National Grid provide generally higher per capita energy consumption, better growth prospects, and a higher level of protection against the adverse impact of lower electricity consumption stemming from economic downturns. National Grid does, however, have exposure to the weak market of NIMO that is not expected to experience any growth, mainly owing to the sluggish local economy. What differentiates National Grid from Hydro One, however, is that on a consolidated basis National Grid's more favorable markets largely offset the negative influence of the NIMO market.

Supporting a strong market assessment are good growth prospects, diversity of customer base, and limited customer concentration risk, such as exposure to a large industrial customer. To varying degrees all three utilities benefit from low but steady growth rates, customer diversity, and limited, if any, meaningful customer concentration exposure. Though load is not expected to grow rapidly, average annual sales growth for ConEd's regulated service territory in and north of New York City is estimated at 1.6%. For Hydro One, growth in distribution throughput of about 1% is forecast, down from its long-term trend of about 2.0%. In National Grid's case the outlook for electricity and gas demand growth in the U.K. is low, at 1.0%-1.5%, largely driven by the development of new housing and offices; in the U.S., demand growth is more in line with GDP growth forecasts, except for its upstate New York market which is experiencing hardly any growth. Supporting the market profiles of the three peers is the large proportion of residential and commercial customers. For Hydro One, residential and commercial customers account for about 85% of the distribution company's total regulated revenues, while the transmission business serves 95% of the province and is connected to neighboring Canadian provinces, and northern states of the U.S. For National Grid's U.K.-based operations, which cover the whole of England and Wales, and in Transco's case, Scotland, the underlying business demonstrates a high degree of diversity. In the service territory covered by National Grid USA, a residential and commercial customer base accounts for about 80% of revenues, supporting an above-average business profile. ConEd does not aggregate its revenues by residential and commercial classes. None of the peers face any customer concentration risk.

Operational risk

The operational risk profiles are another area where the peers diverge, albeit slightly. As predominantly transmission and distribution companies, ConEd, Hydro One, and National Grid face limited operational risk with respect to these operations. Where the companies differ is their exposure to higher risk nonregulated activities. For ConEd this is predominantly its power generation in the U.S. northeast, while for National Grid it includes its recently acquired Crown Castle (U.K. communication towers). Although representing less than 10% of assets, for these two companies the nonregulated activities increase their operational risk profiles relative to Hydro One that has an immaterial exposure to nonregulated activities through its data network business.

The operational performance of the three companies is similar. National Grid demonstrates high operating performance, frequently outperforms efficiency targets, and globally is viewed as one of the best operators of transmission assets. CECONY's New York City distribution system, which is mainly underground, is one of the most reliable in the U.S. The performance of Hydro One's transmission assets is quite good; however, the performance of its distribution assets are adversely affected by operational challenges not generally faced by more urban-based utilities in the Canadian industry.

An issue for the operations of the three companies is the need to invest heavily in infrastructure. All three companies have forecast large capital expenditure commitments relative to their total capitalization. While National Grid and Hydro One have annual commitments representing about 8% of total capital, ConEd has 10%. The proportions are relatively high for network businesses generally and might in part be reflective of a relatively low capital base at book value. Nevertheless, each utility will be outlaying billions of dollars on transmission and distribution infrastructure in the next few years.

All three utilities face similar operational challenges. A challenge increasingly faced by transmission and distribution peers globally, is the need to meet increasing load growth and in particular peak loads. In part a significant amount of the capital expenditure proposed by the three utilities is to address this issue. A less immediate and obvious challenge is the issue of aging workforces. By 2008, 25% of Hydro One's employees will be eligible for retirement. The need to hire apprentices and investing in co-op power engineering programs with universities are now a focus of Hydro One. ConEd is addressing its aging workforce and loss of experience by increasing its intake of younger personnel and refraining from offering early retirement. The issue of an aging workforce does not appear to be as much of a concern for National Grid as it is for Hydro One and ConEd.

Competitiveness

With respect to the competitor risk, Hydro One as a 99% regulated business does not face material direct competition, unlike its peers. National Grid faces some direct competition in its regulated U.K.

gas businesses and more in its nonregulated businesses. Although not a significant rating factor, National Grid's business risk profile is affected adversely on a relative basis by its nonregulated activities. ConEd also faces some competitive risk in its nonregulated subsidiaries that currently represent a small part of its asset base at about 7% of total assets and, in aggregate, have generated operating losses.

To varying degrees all three companies face regulatory demands for cost transparency, network bypass, and competition from industrial self-generation and alternative fuel sources. High barriers to entry, however, largely mitigate most of these risks and what risk remains is not a significant negative for the ratings.

Financial Risk Profile

Although the financial policies of the utilities are all viewed as "moderate", the financial risk profile of National Grid is slightly weaker than that of Hydro One and ConEd due to the higher leverage (see table 4). All three exhibit similar cash flow credit metrics, which are more of a rating factor than valuation-based leverage, with FFO interest coverage of 3.5x-4.0x and FFO to average total debt of 18%-20%. Of note is the expectation built into the ratings on ConEd and National Grid that the credit metrics will improve to the higher ends of these ranges in the next few years. The biggest difference in the financial profiles of the three peers, however, is leverage as measured by total debt to total capital. ConEd and Hydro One are similarly capitalized between 50%-55%; however, National Grid has a significantly higher leverage at 91%. The higher leverage at National Grid largely reflects negative goodwill from the demerger of Transco from Centrica, where Transco took a charge of £5 billion. If calculated under U.S. GAAP, which excludes the negative goodwill resulting from the Lattice merger in 2002, National Grid's leverage moves closer to its peers at about 60%. It is the relatively higher debt levels of National Grid that comprise the main differentiating feature of the financial profiles. With respect to the companies' liquidity position, liability management, and financial flexibility the risk profiles are viewed as similar.

Table 4 Financial Profiles			
	--Year ended Dec. 31, 2004--		
(Mil. US\$)	Consolidated Edison Inc.	Hydro One Inc.*	National Grid PLC†
Assets	22,560.0	9,380.0	44,688.3
Funds from oper. (FFO)	1,511.0	755.2	4,671.9
Capital expenditures	1,397.0	581.6	3,044.5
Total debt	7,219.0	4,160.8	25,303.7
Preferred stock	213.0	258.4	0.0
Common equity	7,054.0	3,360.8	2,412.3
Total capital	14,525.0	7,780.0	27,716.0
Ratios			
Adj. EBIT interest coverage (x)	2.5	2.8	2.6
Adj. EBITDA interest coverage (x)	3.5	4.2	3.8
Adj. FFO interest coverage (x)	3.9	4.0	3.6
Adj. FFO/avg. total debt (%)	19.8	18.4	15.5
Adj. free oper. cash flow/avg. total debt (%)	(0.9)	3.6	4.2
Disc. cash flow/avg. total debt (%)	(7.2)	(1.6)	0.6
Net cash flow/capital expenditures (%)	73.1	93.4	118.3
Adj. total debt/capital (%)	51.6	53.5	92.1
Return on common equity (%)	7.5	11.6	103.5
Common dividend payout (%)	89.3	53.2	47.1
*US\$/C\$ exchange rate of 1.25. †US\$/UK£ exchange rate of 1.91.			

Cash flow adequacy

The relative stability of cash flows from each company's regulated operations provides for modest variation in cash flow credit metrics. A differentiating point with respect to expected cash flow is that of the three peers, only National Grid is expected to be in a position to fully fund from internal sources its forecast capital expenditure in the next few years.

ConEd's cash flow protection measures are expected to weaken in 2005 and 2006 due to the

regulatory lag in recovery of the high level of capital spending in previous years. Average adjusted FFO interest coverage is projected at about 3.4x in 2005 and 2006. Average FFO to debt is projected at about 15%, which is somewhat weak for the 'A' rating. Nevertheless, the cash flow ratios are forecast to improve by 2007 through a combination of higher electricity rates, load growth, and equity issuance. Standard & Poor's expects adjusted FFO interest coverage to average 3.7x during 2007-2009 and FFO to debt to average about 17%. The primary cause for the weak coverages in 2005 and 2006 is the capital program, much of which will be funded with debt because internal funding only accounts for about 40% of expenditures in 2005-2006.

For Hydro One, FFO interest and debt coverages are expected to show little improvement in the next few years from their 2004 levels of 4.0x and 18%, respectively. Despite the company implementing in 2005 a previously withheld distribution tariff increase, and for the period 2005-2008, recovering C\$144 million in regulatory costs recognized and approved in December 2004 by the provincial regulator, the Ontario Electricity Board, higher interest cost and debt levels will temper any material increase in interest and debt coverages. Net cash flow to capital expenditure will likely be 85%-90% in the next few years.

Like its peers', National Grid's revenues are almost all earned from regulated businesses, and demonstrate very strong and stable characteristics that underpin the rating. Adjusted FFO interest coverage is expected to rise to more than 4.0x within two years from 3.6x in 2004 without taking into account the effect of further acquisitions. Adjusted FFO to debt is also expected to climb to more than 20% in that time from 15.5% in 2004. Despite higher dividends, the company's net cash flows are expected to be positive, with the company expected to be able to fully fund its capital expenditure requirements from internal cash flow without the need to raise additional debt.

Capital structure and liability management

ConEd's target leverage is about 50%. Adjusted total debt to total capital was reasonable for the rating at 52% at year-end 2004. Standard & Poor's expects the average adjusted total debt to total capital ratio to increase through 2006 to about 53% and then decline to about 51% by 2009. ConEd has little incentive to decrease debt to capital levels below 50% because CECONY's earning incentives are based on the company's actual capital structure, subject to a maximum equity ratio of 50%.

Hydro One maintains a smooth debt maturity profile with debt maturities ranging from one year to 40 years. Furthermore, in the next five years maturing debt in any one year will not represent more than 15% of the company's total debt outstanding. The company generally maintains less than 20% of debt (including debt maturing within the year) at floating rates and carries no material foreign exchange exposure with all debt in Canadian dollars. As it has done since 1999, Hydro One's leverage is expected to remain stable in the next few years at about 54%. Total debt is expected to move higher in 2005 by between C\$100 million and C\$150 million as debt is used to partially fund capital expenditure.

National Grid maintains a suitably long-term maturity profile on its debt, with about 50% of debt maturing after five years. Net debt of about £12.6 billion for fiscal 2004 is expected to peak at about £14.0 billion in fiscal 2005 after the £1.1 billion acquisition of Crown Castle. The anticipated completion of the gas distribution networks sale and £2.0 billion return of capital in fiscal 2006 should cause net debt to fall by about £4.0 billion to £10.0 billion, including operating cash inflow. Total debt to total capital is expected to fall gradually because the group is expected to be cash flow positive. National Grid's consolidated capital structure is limited by SEC rulings on the capital structure of the group after the acquisition of NIMO: total debt/total capital must be less than 70%. However, and unlike the other two companies, National Grid has exposure to foreign currency fluctuations. This exposure is largely offset by the sizing of debt similar to cash flows in both the U.S. and U.K. operations, although there can be considerable variation in the size of the asset base and debt balances year on year due to exchange rate fluctuation.

Financial flexibility

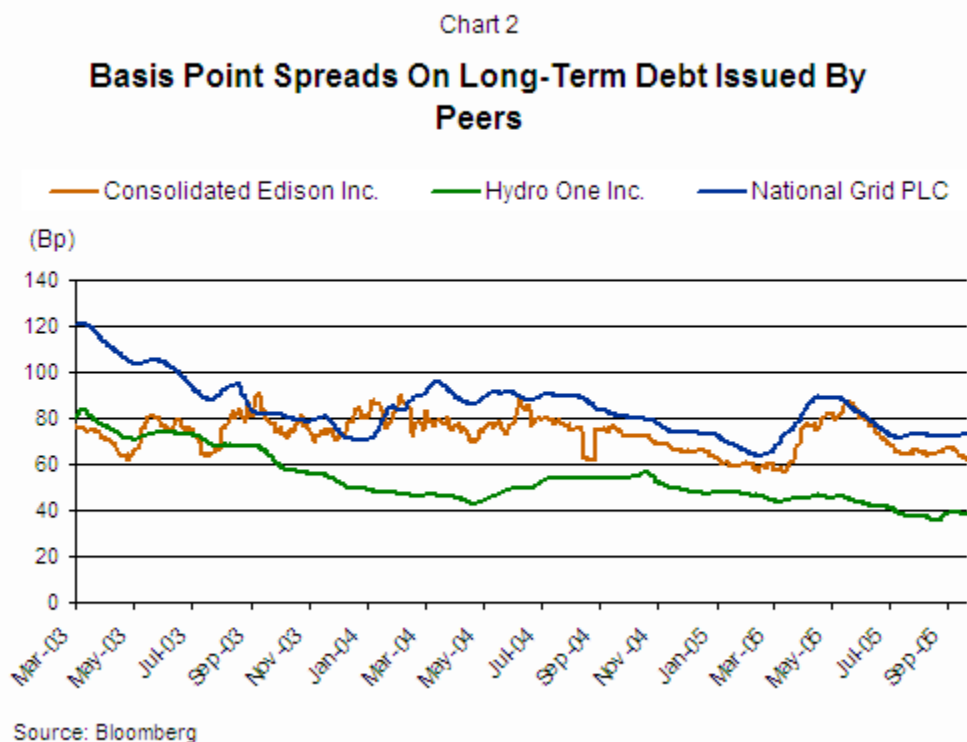
Supporting the financial flexibility of the three peers is good access to capital markets. In the case of ConEd and National Grid, this access is enhanced somewhat by their ability to tap not only the debt capital markets but also the equity market directly. Although Hydro One does not enjoy the same ready access to equity markets as its peers, it does however benefit from its ownership by the Province of Ontario, which in times of financial stress is viewed as a likely provider of capital. A beneficial aspect of Hydro One's relationship with its shareholder is that unlike its peers, it is not beholden to confidence-sensitive equity markets, but rather a higher rated shareholder with the ability to support the company if needed.

As expected with solid investment-grade credits, all three companies have adequate liquidity. Hydro

One has good access to the debt funding through its C\$1 billion CP program, its committed and largely available bank lines of C\$750 million, cash and investments, and C\$2.5 billion unused MTN shelf program. National Grid and its subsidiaries maintain good financial liquidity and flexibility through good access to the international capital markets. Heavy CP use is backed up by committed undrawn bank facilities of about £3.0 billion. National Grid has prudent financial policies, including maintaining average debt maturity at more than four years, not issuing committed paper above the level of its committed backup lines, and matching debt currency to cash flows to manage translation risk. Given the stable nature of the cash flows, ConEd's and its subsidiaries' liquidity is adequate. As of June 30, 2005, ConEd and its subsidiaries had about US\$818 million of cash and short-term investments. In addition, ConEd and its subsidiaries have two revolving credit facilities totaling US\$1.5 billion.

Capital Market Perception

The debt capital market's perception of the three peers points to similar story of a "like for like" comparison between ConEd, Hydro One, and National Grid, but also touches on one of the differentiating rating factors between the peers. Chart 2 tracks the basis point spreads of long-term debt instruments issued by ConEd, Hydro One, and National Grid. In the past two and a half years, the spreads on the three companies have largely traded in line with 'A' rated utilities in terms of basis points over long-term government bond rates. Although there is some difference in the actual spreads, all three have also shown a tightening in spreads over this same period in line with the general tightening of credit spreads for corporates. Of note, however, is the relatively tighter spread on Hydro One's debt, which appears to reflect the company's ownership by the higher rated Province of Ontario. Anecdotal evidence points to investors "looking through" Hydro One's stand-alone creditworthiness to that of the province in their pricing. Debt issued by subsidiaries of ConEd and National Grid has been used in this analysis to avoid any confusion surrounding structural subordination issues and the lower rated debt issued at the holding company level.



The Road Ahead

For two of the peers, ConEd and Hydro One, the stability of the ratings is largely beyond their immediate control; for National Grid however, the fate of the rating largely rests in its hands. The stable outlook on ConEd reflects the expectation that regulation will remain supportive. A similar vein applies to Hydro One, with the stable outlook on its rating dependent on continued positive developments toward greater transparency and predictability of outcomes within the Ontario regulatory environment. ConEd is also expected to demonstrate improvement in its financial ratios, which in part is also dependant on the supportiveness of its regulatory regime. If the rebound in ConEd's credit metrics does not materialize, pressure on the rating is likely. The diversity of National Grid's operations and exposure to a number of regulators means that regulatory issues are not as much of a potential driver of a change in the rating as its peers. Rather, National Grid's strategy of acquiring further transmission and

distribution assets outside the U.K. will be a determining influence on its rating going forward. Financing such acquisitions conservatively and in a manner consistent with the current rating will support the rating and stable outlook. A departure would put pressure on the rating, although the management is protective of the current rating. Like ConEd, an improvement in National Grid's consolidated financial profile is expected.

For more detail information on the individual issuers consolidated business and financial profiles, see the credit reports on Consolidated Edison Inc., Hydro One Inc., and National Grid PLC on RatingsDirect, Standard & Poor's Web-based credit research and analysis system, at www.ratingsdirect.com.

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**S&P, Research: Peer Comparison:
North American Stand-Alone Transmission Companies
April 20, 2006**

RESEARCH

Peer Comparison: North American Stand-Alone Transmission Companies Deliver Electricity...And Profits

Publication date: 26-Apr-2006
Primary Credit Analyst: Terry A Pratt, New York (1) 212-438-2080;
terry_pratt@standardandpoors.com

Much investment in U.S. and Canadian electric transmission is under way, and fairly new, stand-alone transmission-only companies sponsor a decent share of it. Some of these companies were created when large, vertically integrated utilities sold their transmission assets to meet regulatory requirements or respond to favorable financial incentives. The stand-alone transmission company, or transco, is proving to be a good business model for making transmission investments and providing shareholder returns--a favorable combination that could support a virtuous cycle for additional investment in this critical infrastructure.

Standard & Poor's Ratings Services has solid investment-grade ratings on three North American transcos:

- American Transmission Co. (ATC; A+/Stable/-- corporate credit rating and senior unsecured rating),
- Independent Transmission Co. (ITC), a subsidiary of ITC Holdings Corp. (BBB/Stable/-- corporate credit rating; 'BBB+' senior secured rating), and
- AltaLink L.P. (A-/Stable/-- corporate credit rating and senior secured rating).

Despite each having investment-grade creditworthiness, the companies are exposed to notably different business and financial risks, which are compared in depth below.

Background

Wisconsin's electric industry restructuring legislation of 1997 and 1999 supported the creation of ATC when the state's utilities divested their transmission assets. ATC began operation in 2001 and provides high-voltage transmission service to utilities and electric cooperatives using about 8,900 miles of line. ATC is responsible for monitoring the flow of electricity across the transmission system, and performing operations and maintenance, planning, and construction. ATC is owned by numerous parties that contributed transmission assets or cash in exchange for equity stakes. ATC's main owners include Wisconsin Energy Corp. (BBB+/Negative/A-2) with 32%, WPS Resources Corp. (A/Negative/A-1) with 26%, and Alliant Energy Corp. (BBB+/Stable/A-2) with 23%. Northern States Power Wisconsin (BBB+/Stable/--) did not contribute assets and is not an owner.

ITC was created as a business unit of Detroit Edison Co. (BBB/Stable/A-2) in 1999, and started operating as a wholly owned subsidiary of DTE Energy Co. (BBB/Stable/A-2) in 2001. Kohlberg Kravis Roberts & Co. (KKR) and Trimaran Capital Partners LLC purchased ITC from DTE Energy in 2002 for \$610 million and made it a stand-alone transmission company in February 2003. ITC initially relied on DTE Energy for most services, but became truly independent in 2004. ITC provides transmission service primarily to Detroit Edison's southeastern Michigan markets, with about 2,700 miles of line. ITC's parent, ITC Holdings, performed a successful IPO in 2005.

In April 2002, AltaLink purchased the regulated transmission assets of TransAlta Corp. (BBB/Stable/--) in the Province of Alberta (AAA/Stable/A-1+) for C\$830 million and became the first investor-owned independent transmission provider in Canada. AltaLink is wholly owned by AltaLink Investments L.P. (BBB-/Stable/--). The ultimate unitholders of AltaLink Investments are SNC-Lavalin Group Inc.

(BBB+/Stable/--) (50%), the Ontario Teachers' Pension Plan Board (25%), Macquarie Essential Assets Partnership (MEAP) (15%), and developer Trans-Elect Inc. (10%). However, a proposed ownership change to 77% SNC-Lavalin and 23% MEAP is awaiting regulatory approval. AltaLink owns and operates about 7,200 miles of line.

Rating Methodology

ITC and AltaLink have a holding company structure, but ATC does not. For this peer comparison, we are comparing ATC, the consolidated entity of ITC and ITC Holdings, and the nonconsolidated entity AltaLink. The 'BBB' corporate credit rating on ITC and its parent ITC Holdings reflect the consolidated credit profile of the two companies. We rate ITC's senior secured debt one notch above the consolidated corporate credit rating because of the collateral strength; we rate ITC Holdings senior unsecured debt one notch below the corporate credit rating due to structural subordination from ITC. However, for AltaLink, legal and structural ring-fencing measures permit us to insulate its rating somewhat from its parent, and so for this analysis, only the business risk profile and financial risk profile of AltaLink is of primary relevance.

Business Risk Profile

Standard & Poor's assigns corporate utilities a business risk profile score ranging from '1' (excellent) to '10' (vulnerable), based mainly on their regulation, markets, operations, competitiveness, and management. Competitiveness is not a major risk factor for these three transcos. We assign scores of '1' to ATC and '2' to AltaLink and ITC, but we note that AltaLink has a lower business risk profile than ITC due to more favorable regulation and markets.

Regulation

The FERC regulates the rates of ATC and ITC, while the state public service commissions of their service territories regulate their transmission siting. The 2005 Energy Policy Act gave the federal government a wider role in transmission siting, and federal-local turf battles could complicate local regulatory relations for ATC and ITC. Because the Alberta Energy and Utilities Board (Alberta EUB) determines AltaLink's annual revenue requirement and oversees siting activities within the province, AltaLink is not exposed to provincial and national regulatory turf scuffles.

Each company has low regulatory risk, but ATC's risk is lowest among the three. ATC currently operates under a FERC-approved settlement that includes a 12.2% ROE based on a hypothetical capital structure of 50% equity. Other favorable provisions include the ability to earn a return on construction-work-in-progress (CWIP) for projects beginning in 2005, rate setting based on prospective data, and an annual end-of-year true up. The CWIP treatment is an important feature that reduces upfront financing risk and liquidity concerns, given the company's large planned capital expenditure program. Also, ATC charges a fixed monthly fee during a given year, which reduces exposure to cash flow variability that could result from changes in demand caused by weather. ATC's allowed ROE could have been higher--among other things, the FERC reduced it by 18 basis points in exchange for the favorable CWIP treatment to reflect lower risk, and by another 100 basis points because ATC's operations and management are not considered independent from market participants under FERC requirements.

Like its peers, AltaLink operates under traditional cost-of-service and rate-of-return regulation. Favorably, cash flow stability is gained through a fixed cost-of-service revenue cap mechanism, which eliminates cash flow variability during the year that might otherwise occur due to variability of electricity demand from weather or economic events. In this structure, AltaLink receives 12 equal monthly payments during a year. Additionally, the company's revenue cap is based on prospective data. However, AltaLink earns a comparatively low ROE compared with its U.S. counterparts, and like ITC, does not earn a return on CWIP. AltaLink's approved revenue requirement includes an allowed ROE, set through the Alberta EUB's generic annual adjustment mechanism that is valid within a range of possible outcomes of 7.6% to 11.6%, and is based on a 35% equity base. The annual adjustment is directly linked to long-term Treasury bonds, and therefore, the allowed ROE has decreased in recent years due to the current low interest rate environment--AltaLink's allowed ROE is 8.93% in 2006 versus 9.5% in 2005 and 9.6% in 2004. Such low ROEs and thin equity layers are common to Canadian regulated utilities. The Alberta EUB is not likely to review its generic cost of capital until 2009 unless the adjustment falls outside the band.

ITC is also subject to rate-of-return regulation, but is authorized by the FERC to earn a solid 13.88% ROE

with a capital structure that has a 60% equity component. ITC earns 100 basis points of the total ROE by being structured with management and operations completely independent from market participants. ITC began operations under a rate freeze, which concluded at year-end 2004 and which required the company to defer recovery of capital expenditures and related costs. The company began recovering these costs in 2005 with rate increases. The company does not earn a return on CWIP. ITC does benefit from an annual true-up in mid-year, although it is based on data from the most recent rather than the prospective calendar year. Another challenge for ITC is that the current rate paradigm is good through early 2008 and how the FERC will set rates thereafter is unknown.

Markets

Market-risk assessment for transcos focuses primarily on demand uncertainty and counterparty issues. Market risk is a distinguishing characteristic of the three companies, and a critical issue for ITC's credit rating.

ATC provides service to a number of utilities that collectively serve about five million customers in the eastern two-thirds of Wisconsin, including the population centers, the Upper Peninsula of Michigan, and a small enclave in northern Illinois along the Wisconsin border. In these markets, the load growth is favorable at about 2.5% per year. However, ATC is exposed to revenue concentration because about 86% of revenues come from three utility companies, Wisconsin Energy (47%), Alliant Energy (19%), and WPS Resources (20%). Because ATC has limited capacity to remedy a decline in a customer's credit quality, it is exposed to counterparty credit risk, but somewhat offsetting this risk is that the Wisconsin utilities have lower-than-average business risk profiles and are rated in the 'A' category. In addition, ATC enjoys some customer diversity.

In contrast, ITC is very limited in geographic scope. It primarily serves the Detroit Edison service territory of southeastern Michigan, which has about 2.2 million customers. Detroit Edison provides ITC with about 77% of its revenues, which exposes ITC to very high customer concentration risk. For this reason, we limit the ITC rating to that of Detroit Edison. We would not expect ITC to stop serving Detroit Edison if the utility were to stop paying for transmission service due to some adverse business event. Cash flow to ITC would likely resume at some point, but ITC may not have sufficient liquidity to meet its obligations during a protracted period of nonpayment. Moreover, the demand prospects for much of ITC's service territory are uncertain, given current economic conditions for area industrial buyers, mainly the struggling regional automobile industry.

AltaLink owns about 40% of the transmission rate base in Alberta located in the more populated southern half of the province. Forecast growth in Alberta for electricity consumption averages between 2% and 3% per year and is among the highest in Canada, and this growth contributes to AltaLink's growing asset base, which the company expects will almost double in the next five years. In contrast to ATC and ITC, AltaLink's counterparty credit risk is very low; the Alberta Electric System Operator (AESO), an agent of the province, pays AltaLink for all transmission services and bears the counterparty risk exposure associated with the transmission system end-users. The AESO is independent of any industry affiliations and owns no transmission assets.

Operations

Routine operations and maintenance (O&M) risk of the three companies has not emerged as a credit differentiator, but construction performance does present uncertainties and thus remains a factor in the ratings. The utility owners of ATC perform nearly all of its O&M, administrative, and construction activities. Aside from construction risk, we view ATC's business risk as low in this area. Over the next 10 years, ATC expects to invest about \$3.4 billion to improve transmission reliability and capacity, both intrastate and interstate. This plan includes a Wausau, Wis. to Duluth, Minn. transmission line costing about \$420 million that may be built by mid-2008. ATC, Wisconsin Public Service Corp. (A+/Negative/A-1), and ALLETE Inc. (BBB+/Stable/A-2) will jointly fund the construction. Although ATC has the experience to build this line and benefits from CWIP treatment in rates, there are always construction risks associated with large infrastructure projects that could negatively affect cash flow and liquidity balances.

ITC conducts its own routine O&M and administration services. It had until recently relied contractually on Detroit Edison to provide these services. The company contracts out major construction activities. Again, the overall O&M risk is low, but construction risk is ever present. ITC's current plan forecasts capital investments of nearly \$1 billion over the next seven years.

ATC and ITC are members of the Midwest Independent Transmission System Operator Inc. (MISO; A+/Stable/--), which performs a number of key operational and planning functions for the transmission grid. While ATC and ITC retain responsibility for O&M, MISO is responsible for tariff administration, scheduling, and planning, as well as managing the energy and financial transmission rights markets. MISO serves as the billing coordinator, but MISO is not the credit counterparty for ATC or ITC. The situation for ATC and ITC is more risky than for AltaLink, whose sole credit counterparty is the provincial independent grid operator, AESO.

AltaLink is a transmission facilities operator (TFO). The AESO contracts with TFOs to acquire transmission services and provide customer transmission access, and holds responsibility for identifying the need for new transmission facilities in Alberta. The Alberta EUB must approve investment. AltaLink performs its own O&M and administrative functions. The company operates its assets well, with good reliability performance in line with its Canadian peers. About 60% of AltaLink's assets are less than 20 years old, and the favorable age profile will improve with new additions. The company contracts out for major construction services, mostly with its main sponsor, SNC-Lavalin, a Canada-based, global construction firm experienced with utility operations. AltaLink expects capital spending of about C\$200 million per year to 2009, or about double the historical annual investment, to address transmission congestion and high demand growth.

Management

Standard & Poor's continues to gain confidence in the management capability of stand-alone transcos, given their generally favorable track record thus far in sustaining and improving operations and maintaining good regulatory relations. ATC management comes from its utility owners, which are well experienced in transmission operations and regulatory matters. Similarly, ITC management consists of experienced Detroit Edison personnel. However, we believe that ITC's management may be influenced by its key owners KKR and Trimaran, which, by their nature, may not have a long-term investment horizon in mind. AltaLink is managed by experienced personnel, and supported by the substantial utility construction experience of its main owner, SNC-Lavalin. In contrast to ITC's ultimate ownership, SNC-Lavalin may have a longer-term investment horizon.

Financial Risk Profile

Standard & Poor's determines the transcos' financial risk profiles mainly by examining their corporate governance in terms of risk tolerance and financial policies, and their cash flow adequacy, capital structure, and liquidity. Aside from differences on leverage aggressiveness, the companies are generally similar on corporate governance, so the following discussion addresses cash flow and capital structure, where material differences emerge.

Cash flow adequacy

Each company benefits from generally stable cash flow derived entirely from regulated transmission operations. The table provides a comparison of key financial metrics. ATC's financial performance along with its lower business risk score support a higher rating than those of its peers. ITC and AltaLink have similar financial metrics, following an improvement in ITC performance in 2005, with a rise in rates following the end of a price cap. We expect that ATC and ITC to maintain their current performance level in the next two to three years, and we expect AltaLink's 2006 ratios to be in line with those of 2005. We also expect AltaLink's ratios to weaken for 2007 through 2009, but then return to 2005 levels once the build-out period ends.

Table 1

Transco Financial Performance Summary

	ATC		ITC		AtlaLink	
	2005	2004	2005	2004	2005	2004*
FFO to interest coverage (x)	4.4	4.8	3.9	2.5	3.8	3.3
FFO to total debt (%)	23	25	17	9	16	10
Total debt to total capitalization (%)	52	49	66	71	63	61

*Eight months ended Dec. 31, 2004.

ITC's corporate credit rating is two notches below that of AltaLink, and ITC's senior secured debt rating is only one notch below that of AltaLink's. AltaLink's senior secured debt does not benefit from sufficient collateral to warrant being notched up from the company's corporate credit rating. A key reason for this rating differential is ITC's reliance on Detroit Edison for about three-quarters of its cash flow. Another reason is that ITC's market is less favorable for demand growth than southern Alberta's. Furthermore, ITC employs historical costs in rate-setting rather than forward costs as AltaLink does.

Capital structure/asset protection

ATC employs a more conservative financial structure than ITC or AltaLink. ATC's 50% leverage is more than 10% lower than its peers. Again, ITC's leverage is based on leverage at both ITC and its parent--but it is clearly aggressive. Although AltaLink's leverage is also aggressive when compared with ATC and ITC, its level is in line with the typical 60% leverage for Canadian utilities.

ATC's debt amortization schedule is also more favorable than its peers. Most ITC and ITC Holdings debt matures in 2013, resulting in high refinancing risk. AltaLink's schedule is somewhat better, with C\$100 million due in 2008 and another C\$325 million due in 2013, and should improve as the company grows and undertakes new debt issuance. ATC's debt maturities, however, are comparatively well spread out, with \$300 million due in 2011, \$100 million in 2015, and the remainder in later years.

As a result, ATC has greater financial flexibility than ITC or AltaLink, and financial flexibility is important given the very large capital improvements programs that they all envision. ATC lacks direct access to public equity markets, but periodically makes capital calls on its owners who then have the option to make incremental equity investments. ITC Holdings has shown its ability to tap into equity markets through a successful IPO in 2005. While only a small portion of IPO proceeds made it down to ITC, the success demonstrates a level of investor interest in this asset class even at high leverage levels. Because AltaLink has no access to equity markets, however, ongoing equity contributions from the ultimate shareholders during the robust capital program through to 2009 will be required to sustain the rating.

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**DBRS
The Rating Process and the Cost of Capital for Utilities: Five Reasons why
Canadian Utilities have Lower Ratios and Five Changes to Regulation
which should be Introduced in Canada
May 2003**



The Rating Process and the Cost of Capital for Utilities

Five Reasons why Canadian
Utilities Have Lower Ratios,
and Five Changes to
Regulation Which Should be
Introduced in Canada

May 2003

Regulation in Canada

- Regulation in Canada (non-telecommunication) has been heavily influenced by the National Energy Board (NEB)
- The NEB in Canada has the greatest resources available, and ranks among the most sophisticated regulators in Canada
- Provincial regulators have followed many of the NEB practices, including use of the formula – Canada + 325 or so basis points to set return on equity, and also a range of deemed equity near the 35% level
- Encouraging competition where returns are consistent with risk has been a practice followed in Canada and the U.S.
- Performance-based regulation has been followed where customers and the utilities often negotiated how to share the efficiencies and have avoided long arduous regulatory hearings
- Canadian regulators generally have been flexible, and unfavourable decisions can be reversed or altered when the extent of the problem is seen
- No Canadian utility has gone bankrupt due solely to the actions of the regulator
- This is not so in the U.S. with the California incident – a good example

Regulation in Canada (Cont'd...)

- PG+E went bankrupt when:
 - The state regulator forced sale of generation capacity
 - The regulator stopped PG+E from securing long-term power contracts
 - A flow-through of higher wholesale power costs was refused, and kept retail power rates rigid, resulting in the inevitable for PG+E
- Even debt levels of 30% would not have saved PG+E from bankruptcy
- Knowledge of the Regulator's policies, not quantitative ratios, were key to measuring the risk profile of PG+E
- DBRS looks at earnings past, present and future, the balance sheet and cash flows, past, present and future, and a wide range of subjective factors to arrive at a final rating. Regulation is an important component of this
- No one quantitative ratio is "magic," and the many qualitative and subjective factors are looked at in conjunction with quantitative data
- DBRS also stress tests the cash flow statement, looking at the effect different earnings, capital expenditure and dividend patterns have on future financial ratios – to get a worse case quantitative scenario – to complement the qualitative factors

Why Canadian Ratios for Utilities Are Lower Than Ratios in the U.S.

(1) Higher sensitivity to seasonality in Canada than the U.S.

- Canada has extreme temperatures which result in wide swings in accounts receivable and inventories
- Areas such as gas distribution tend to have wide swings in receivables and inventories between September to April
- The swing in debt levels can be 5%-10% between peak and trough

(2) Flow-through versus normalized tax accounting used in Canada

- Canadian regulators usually permit only flow-through accounting, versus the normalized taxation method often used in the U.S.
- Thus, U.S. utilities collect the corporate tax, and have coverage ratios up to 40-50 basis points better than Canadian utilities

Why Canadian Ratios for Utilities Are Lower Than Ratios in the U.S. (Cont'd...)

(3) Lower return on equity

- Canadian utilities earn lower return on equity, which is about 200 basis points below the U.S.
- In Canada, the formula method was initiated by the NEB, and adopted by most of the Provincial Regulators
- The formula generally allows a rate of return equal to 325 basis points over Canada bonds, with some limits on how much returns may change in any one given year
- The lower return on equity reduces interest coverage in Canada by about 20 basis points

Why Canadian Ratios for Utilities Are Lower Than Ratios in the U.S. (Cont'd...)

(4) Lower deemed equity in the capital structure in Canada

- Canadian utilities are generally allowed lower deemed equity to the degree of 5%-10%
- A 10% lower debt proportion can improve interest cost coverage by 50 basis points so this can cause significant savings in interest coverage
- Typically in Canada regulators often allow deemed equity of 30%-35%
- Utilities can partly neutralize this disadvantage to a degree by issuing hybrid capital known as super subordinate debt – which is not as good as pure equity
- If four conditions are met, DBRS will give a high weighting to hybrid securities
 - How subordinated are the instrument securities?
 - Do the securities have a maturity date?
 - Does default occur if the interest payment is not made?
 - Is the intent of the Company to treat the instrument as equity?
- Long-term super-subordinate debt 30 years + which receives good equity treatment by DBRS (which means interest payments also will have to be deferred) represents a cheap way of issuing equity, and may partly but not fully, neutralize the lower deemed equity allowed

Why Canadian Ratios for Utilities Are Lower Than Ratios in the U.S. (Cont'd...)

(5) Higher interest rates in Canada than the U.S.

- Interest rates were 100-200 basis points higher in Canada than the U.S. through much of the 1990s
- The higher interest rates in Canada had a downward effect on key coverage ratios, and much of this debt is still outstanding

Conclusion

- Quantitative ratios in Canada automatically have downward biases
 - Our colder more extreme weather automatically raises debt proportions at the peak of the cycle because of inventory/receivable peaks and troughs
 - The debt levels of Canadian utilities may swing, depending on the date chosen, due to seasonal factors
- 1) Flow-through tax accounting used in Canada costs Canadian utilities approximately 40 basis points on coverage
 - 2) The 200 basis point lower allowed return on equity costs Canadian utilities 15-20 basis points on coverage

Why Canadian Ratios for Utilities Are Lower Than Ratios in the U.S. (Cont'd...)

Conclusion Cont'd...

- 3) The 5%-10% lower deemed equity of Canadian utilities can cost 50 basis points for EBIT coverage ratios
- 4) The 1%-2% higher interest rates which prevailed in Canada through most of the 1980s and 1990s cost Canadian utilities about 20 basis points
 - Thus, Canada's climate, and the nature of Canadian regulation cost Canadian utilities about 130 basis points on average relative to the U.S.
 - About 110 basis points of the 130 basis point difference is caused by regulators
- 5) Where all five variables discussed prevail at the same time (Case 5) the difference in interest coverage is 3.15 times versus 1.54 times, assuming Canada has (a) Deemed equity of 30% versus 40% in the U.S. (b) Return on equity of 12% in the U.S. and 10% in Canada (c) Income tax rates at 43%

The Need for Change in Standards by Canadian Regulators: Reasons for Change

(1) Different standards used between Canada and the U.S. have an immense effect on differences in coverage and other financial ratios which are important in credit ratings. On the whole, in our opinion Canadian regulators should give greater consideration to the effects that their actions have on the credit rating

(2) Competition is growing, raising risk and justifying higher rates of return

Examples:

- Alliance Pipeline provides competition for TransCanada Pipelines
- Restructuring of electricity in Alberta makes the area more competitive

The Need for Change in Standards by Canadian Regulators (Cont'd...)

(3) Regulators make returns in Canada more consistent with the U.S.

- TransCanada's 9.79% return on equity on 33% equity versus PGT's 12% on 35%
- Foothills eastern leg 9.79% on 30% versus Northern Border 12% on 35%
- TransCanada's Mainline 9.79% on 33% versus Great Lakes 13.25% on 44%
- Alliance Pipeline Canada 11.3% on 30% versus Alliance Pipeline U.S. 10.7% on 30%
- Maritime Northeast Pipeline Canada 13% on 25% versus Maritime NE Pipeline U.S. 14% on 25%
- Why is there such a different return between TransCanada versus Great Lakes or Foothills versus Northern Border?

(4) Provide more consistent standards

- A 30% deemed equity gets the same return on equity as a 35% or 40% deemed equity
- The lower the equity component, the higher the risk – so this is inconsistent reasoning

(5) Less of a safety margin in financial ratios if things go wrong in Canada

Positive Factors with Canadian Regulators

- (1) Provincial regulation is quite consistent with NEB regulation. Policies usually do not clash
- (2) Less turf wars between federal and provincial regulators
- (3) (a) Canadian regulators will work with utilities to help them overcome problems.
Example: The TransCanada take or pay gas recovery – over ten years
(b) Contrast this with the California regulator and PG&E experience

Effect of Canadian Style Regulation on Ratings

- DBRS has given Canadian regulation positive marks for consistency and stability (on the downside), and has considered this in the ratings (a subjective factor)
- However, Canadian utilities have less “safety margin” than U.S., and are vulnerable to a quick downgrade if something goes wrong
- There is a significant difference in financial ratio strength between Canadian and U.S. utilities

General Changes in Regulation That DBRS Would Like to See

1. Movement to performance-based regulation, where the customers and the utility work out returns and rewards, and regulatory hearings are reduced
2. Increase the allowed return on equity in order to make it more consistent with U.S. returns
3. Increase the deemed equity component to 35%-40% ranges

Regulation Comparison of OFGEM vs. FERC vs. NEB

Factor	OFGEM (U.K.)	FERC (U.S.)	NEB (Canada)
Regime	Rate cap	Cost-plus	Cost-plus
Philosophy/Objectives	<p>The main objective is to protect the consumer and neutralize monopoly conditions in distribution and transmission. This includes not only establishing rates of return, but also monitoring quality of service, adequacy of capex to satisfy future demand, and measures of efficiency to determine future rates. The regulator is sophisticated, transparent, and has a good understanding of the rating process.</p>	<p>Although FERC historically employed a "laissez faire" approach to company regulation when compared to OFGEM and NEB, recent market events have prompted it to become a more active force in the marketplace. However, in general the rates of return better balance protection to the consumer and returns to the utility. The returns allowed by FERC can be 200 basis points higher than in Canada. Despite this, FERC often has to contend with lawsuits from utilities challenging its decisions. FERC is knowledgeable about the importance of ratings to a utility.</p>	<p>The NEB falls in between OFGEM and FERC in rate of return philosophy. It allows negotiated settlements between utilities and shipper, which makes possible performance-based regulation in Canada. Setting returns high enough to ensure investment-grade ratings is one of the principles followed by OFGEM and FERC. However, the NEB's policies have not strongly considered capital market access for utilities, and the NEB is the least concerned about how credit ratings affect capital access of utilities.</p>

Regulation Comparison of OFGEM vs. FERC vs. NEB (Cont'd...)

Factor	OFGEM (U.K.)	FERC (U.S.)	NEB (Canada)
Consistency	One regulator prevails in the U.K. for all matters relating to onshore downstream natural gas and electricity (offshore and upstream are not regulated by OFGEM). This results in consistent decisions and only one body to conduct hearings.	Individual states have jurisdiction over matters relating to retail gas and electricity, while FERC has jurisdiction over inter-state movements. The result is inconsistency between states, and high costs preparing for many rate hearings.	As in the U.S., there can be inconsistency since the ten provinces and the federal NEB have jurisdiction. (The NEB has jurisdiction for inter-provincial movements of energy) However, practice shows that the provincial regulators work consistently with federal regulators.

Regulation Comparison of OFGEM vs. FERC vs. NEB (Cont'd...)

Factor	OFGEM (U.K.)	FERC (U.S.)	NEB (Canada)
Methodology	<p>Cost of debt is calculated using risk-free rate of return and risk factor related to corporate risk. Cost of equity is calculated using a beta coefficient calculation to arrive at average cost of equity, and finally a weighted-average cost of capital.</p>	<p>Cost of equity calculation is used to arrive at weighted pre-tax cost of capital. Cost of equity return is equal to dividend yield plus growth factor to establish final return on equity. Final allowed return on regulatory assets is a composite cost of capital multiplied by regulatory assets.</p>	<p>Average risk-free return is used, plus a spread to allow for risk. The risk-free return is calculated using the three-year average yield of long-term Canada bond. The risk adjustment is calculated at 325 basis points over forecast 10-year Canada bond yields, with year-over-year adjustments capturing 75% of the movement in interest rates.</p>

Regulation Comparison of OFGEM vs. FERC vs. NEB (Cont'd...)

Factor	OFGEM (U.K.)	FERC (U.S.)	NEB (Canada)
Profitability	<p>Resulting returns on regulatory assets in the real 6.25%-6.50% range are low relative to alternative investments. The regulator subjected companies to sharp rate cuts effective April 1, 2000. Then annual rate changes restricted to RPI (Inflation) minus 1.5%-3%. Finally, cost saving benefits are expected to revert to the consumer in 2005, negatively affecting long-term profitability further. In 1998, the U.K. government also levied surprise windfall profits tax on most utilities.</p>	<p>FERC had an initial conflict when gas and electricity divisions were merged at the FERC level. Returns in the electricity area were 100 basis points higher than what was allowed in the pipeline area. FERC resolved the situation by allowing higher returns for the pipelines, the company's proxy for calculating returns. The six proxy companies used in gas pipelines are now down to three companies due to mergers.</p>	<p>Use of average return on Canadian securities resulted in low returns (below 10% return on a deemed common equity). The allowed return is about 200 basis points below the U.S. utilities.</p>

Regulation Comparison of OFGEM vs. FERC vs. NEB (Cont'd...)

Factor	OFGEM (U.K.)	FERC (U.S.)	NEB (Canada)
Intensity	Regulator watches and controls (with open transparency) most aspects of regulation in a hands-on procedure.	A "laissez-faire" procedure, once the rules have been set.	In between the two regulators. It does not control as intensely as OFGEM.
Lawsuits against regulatory decisions	Lawsuits are rare.	Lawsuits are common. Litigation after a regulatory decision happens quite often.	Lawsuits are rare, but could become more prevalent if there is no change.

Regulation Comparison of OFGEM vs. FERC vs. NEB (Cont'd...)

Factor	OFGEM (U.K.)	FERC (U.S.)	NEB (Canada)
Excess profits and cost savings	The decision to levy a windfall profit tax in 1998 was political, not regulator induced. The cost savings are expected to accrue to the customer after 2005, restricting future growth in profitability.	Regulation allows excess profits beyond allowed returns to accrue to the company. Once the returns have been set, (if through efficiency the company does better) the Company can keep the excess. Under performance-based regulation, the company and customers may negotiate how to share savings.	Profits remain with the company until the next rate hearing. Under performance-based regulation, the NEB has generally approved all agreements negotiated between pipelines and customers.

Examples of Effects of Coverage Ratios

Example:		
<u>Assets</u>	<u>Liabilities + Equity</u>	
1000	Debt	700
	Equity	300
	Total	1,000

Case 1

Effects of 12% return on equity in the U.S. versus 10% returns in Canada, all other things being equal

	<u>Canada</u>	<u>U.S.</u>
Income		
300 x 10%	30	
300 x 12%		36
Taxes (43%)	23	27
Total EBT	53	63
Interest (based on Canadian interest)	56	56
EBIT	109	119
Interest coverage	$\frac{109}{56} = 1.95$	$\frac{119}{56} = 2.13$

- The 200 higher return on equity gives U.S. entities 18 basis points higher interest coverage
- Interest and taxes were deemed to be the same (Canada, U.S.) to show the effect of return on equity only

Examples of Effects of Coverage Ratios (Cont'd...)

Case 2

Illustrate a higher 40% deemed equity versus 30% in Canada. Return on equity of 10% is used in both countries to highlight deemed equity effect

	Canada	U.S.
Income		
300 x 10%	30	
400 x 10%		40
Taxes (43%)	<u>23</u>	<u>30</u>
EBT	53	70
Interest (8% interest rate)	56	48
EBIT	109	118
Interest coverage	1.95	2.46

- Coverage differential is 51 basis points in the example in favour of the U.S.
- This is a major reason why interest coverage between the U.S. and Canada is so big

Examples of Effects of Coverage Ratios (Cont'd..)

Case 3

The U.S. uses normalized taxation, versus the flow-through method used in Canada.
Assume that all the tax can be tax sheltered

	<u>Canada</u>	<u>U.S.</u>
Income	30	30
Taxes (43%)	0	23
EBT	30	53
Interest	56	56
EBIT	86	109
EBIT coverage	1.53	1.95

- Taxation, with a full tax shelter results in 42 basis points difference
- If the tax shelter, due to capital cost allowances exceeding depreciation was 50%, the difference between Canada and the U.S. would be 21 basis points on the coverage ratio, but utilities can often tax shelter most income in the early years of expansion

Examples of Effects of Coverage Ratios (Cont'd..)

Case 4

Higher interest rates in Canada versus the U.S. by 1.5%

Assume 70/30 Debt to Equity

	Canada	U.S.
Income	30	30
Tax	23	23
EBT	53	53
Interest		
700 x 8% - Canada	56	
700 x 6.5% - U.S.		46
EBIT	109	99
Interest coverage	1.95	2.15

- Lower interest rates in the U.S. makes a difference of 20 basis points in coverage
- While interest rates in Canada were lower in the 1990s than the U.S. – the long-term debt issued would take at least ten years to neutralize the interest rate differential

Examples of Effects of Coverage Ratios (Cont'd..)

Case 5

Coverage – U.S. and Canada combining all four variables

	<u>Canada</u>	<u>U.S.</u>
Earnings 300 x 10 - Canada	30	
Earnings 400 x 12 – U.S.		48
Income tax	0	36 *
EBT	30	84
Interest		
Canadian 700 x 8%	56	
U.S. 600 x 6.50%		39
EBIT	86	123
EBIT coverage	1.54	3.15

* In the U.S., assumption is made that all tax is sheltered.

- When all four variables are put together the difference in interest coverage is 161 basis points
- Of the four variables, three variables are directly related to actions of the regulator, including: (1) Return on equity, (2) Capital ratios, and (3) taxation methods

Summary

Differential in interest coverage U.S. higher than Canada due to:

Higher return on equity	0.18
Higher equity base	0.30
Normalized taxation with 100% tax shelter	0.42
Lower interest rates	0.20
Interest rate differential	1.10

- Interest coverage differential between U.S. and Canada is 1.10%
- If all factors are combined at the same time, the interest rate differential becomes 1.61%
- This differential gives Canadian utilities less of a “safety” margin should anything go wrong, because their ratios are much weaker

DBRS
ATCO Ltd.

ATCO Ltd.

Report Date: December 29, 2004
 Press Released: December 29, 2004
 Previous Report: November 25, 2003

RATING

<u>Rating</u>	<u>Trend</u>	<u>Rating Action</u>	<u>Debt Rated</u>
R-1 (low)	Stable	Confirmed	Commercial Paper
A (low)	Stable	Confirmed	Corporate Debt*
Pfd-2 (low)	Stable	Confirmed	Cumulative Redeemable Preferred Shares, Series 3

Nick Dinkha, CFA/Geneviève Lavallée, CFA
 416-593-5577 x2314/x2277
 ndinkha@dors.com

RATING HISTORY	<u>Current</u>	<u>2003</u>	<u>2002</u>	<u>2001</u>	<u>2000</u>	<u>1999</u>	<u>1998</u>
Commercial Paper	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)	NR	NR	NR
Corporate Debt*	A (low)	A (low)	A (low)	A (low)	NR	NR	NR
Preferred Shares	Pfd-2 (low)	Pfd-2 (low)	Pfd-2 (low)	Pfd-2 (low)	NR	NR	NR

*Highest rating applicable to the direct debt obligations of ATCO Ltd.

RATING UPDATE

The financial profile of ATCO Ltd. (“ATCO” or the “Company”) remains Stable, reflecting the primarily regulated operations of its Canadian Utilities Limited (“CUL”) subsidiary and the diversification benefits provided by ATCO’s non-regulated operations.

ATCO’s earnings (excluding gains from the sale of the retail energy supply businesses) for the 12 months ended September 30, 2004, were flat relative to the year-ended December 31, 2003. Higher contributions from the Company’s ATCO Structures entity were offset by lower earnings from the Company’s primary subsidiary, CUL, the result of recent Alberta Energy and Utilities Board decisions (“AEUB Decisions”), as well as lower proceeds from the Company’s Power Generation segment. This reflects the benefits of the Company’s diversified asset base, which helps provide earnings stability. Substantially higher depreciation expense, resulting from higher capital expenditures at various ATCO subsidiaries, contributed to higher operating cash flows during this period. This led to a slight improvement in the Company’s cash flow-to-adjusted net debt coverage ratio.

Over the medium term, ATCO’s earnings and operating cash flows are expected to remain relatively stable, with modest growth

coming from expansion in the franchise area and increases in the rate base of the regulated operations of CUL. ATCO Structures is also expected to provide additional growth due to development activity in natural resource industries. Annual capital expenditures are forecast to be between \$500 million and \$600 million over the medium term due to continued investment in capital projects, primarily at the regulated operations of CUL. DBRS expects that ATCO will continue to incur free cash flow deficits. Key cash flow and coverage ratios, however, are expected to remain stable, primarily due to the Company’s diversified asset base and the fact that approximately 65% to 70% of its earnings are from regulated businesses. The per cent net debt in the capital structure is anticipated to remain below 55%.

While ATCO’s diversified operations, coupled with the Company’s prudent management approach, provide a level of earnings stability, additional challenges over the medium term include the relatively low approved returns on equity (ROE) and deemed equity for the regulated businesses, continuing regulatory risk and lag and ATCO’s merchant power exposure in Alberta.

RATING CONSIDERATIONS

Strengths:

- Investment in regulated utilities (approximately 67% of net earnings) provides stability to dividend payments
- Diversified asset base – by business type and geography
- Very low leverage for a holding company structure
- Strong franchise area, favourable market conditions

Challenges:

- Low regulated rates of return/deemed equity; regulatory risk/lag
- Earnings sensitivity to weather and to interest rates as related to ROEs
- Growing non-regulated portfolio increases business risk profile

FINANCIAL INFORMATION

	<u>12 mos. ended</u>		<u>For the year ended December 31</u>			
	<u>Sept. 2004</u>	<u>2003</u>	<u>2002</u>	<u>2001</u>	<u>2000</u>	<u>1999</u>
Consolidated Basis						
Fixed-charges coverage (times)	2.24	2.47	2.36	2.43	2.43	2.41
% adjusted net debt in capital structure (1)	49.5%	51.3%	53.6%	56.6%	60.3%	60.3%
Cash flow/adjusted net debt (1)	18.1%	17.3%	16.8%	17.7%	16.5%	16.9%
Cash flow/capital expenditures	0.86	0.97	0.76	0.72	0.99	1.21
Segmented Income						
Canadian Utilities (before extras., net of min. int.)	129.7	134.4	123.3	123.1	118.1	103.8
Extraordinary items	28.5	0.0	34.9	0.0	0.0	0.0
Wholly owned subsidiaries	11.1	5.4	13.4	12.6	11.9	13.6
Holding company financing	(8.6)	(8.6)	(8.6)	(11.3)	(17.3)	(16.7)
Net income (\$ millions) (as reported)	160.7	131.2	163.0	124.4	112.7	100.7
Operating cash flow (\$ millions)	488.6	477.9	462.1	472.4	448.0	426.6

(1) Net of uncommitted cash. Retractable prefs. treated as debt; cum. prefs. and prefs. as part of minority interest given 70% equity treatment.

THE COMPANY

ATCO is a holding company whose primary investment is 51.9% of CUL. CUL is a holding company whose principal subsidiaries include regulated electricity and gas transmission and distribution utilities primarily based in Alberta, as well as electricity generation assets in Alberta that are subject to legislatively mandated long-term power purchase arrangements (PPAs). In addition to non-regulated subsidiaries and holdings in England, Australia, and Canada, ATCO’s other investments include wholly owned subsidiaries involved in the manufacture, sale, and lease of transportable shelters throughout the world and in noise management

AUTHORIZED COMMERCIAL PAPER AMOUNT No program in place.

Energy

DOMINION BOND RATING SERVICE

RATING APPROACH

- Key considerations in assessing the credit ratings for ATCO include the following factors:
 - An analysis of the strength of the companies controlled by ATCO. This includes a 51.9%-ownership of CUL, a 100%-ownership of ATCO Structures, ATCO Noise Management, ATCO Resources, and ATCO Investments;
 - The strength of the balance sheet and cash flows at the holding company level;
 - The benefits of business, product, and geographic diversification; and
 - Structural subordination of the holding company. Structural subordination exists between the operating companies and holding company, as the holding company does not have first claim on the assets of the operating companies.

COMPANY PROFILE

ATCO:

ATCO is a holding company whose primary investment is 51.9% of CUL. ATCO's other investments include wholly owned subsidiaries ATCO Structures, ATCO Noise Management, ATCO Resources, and ATCO Investments. In August 2004, the Company reorganized its structure into three business groups: Utilities (which includes the Company's regulated electric, gas, and water businesses); Power Generation (which includes both the non-regulated generating assets and the generating assets that operate under legislatively mandated long-term PPAs; and Global Enterprises (which includes other non-regulated business operations of the Company).

CUL:

CUL (rated "A"/R-1 (low) – see separate report dated December 23, 2004) is a holding company whose principal operating subsidiaries are involved in regulated gas, electricity, and water utility businesses and related non-regulated businesses. CUL's regulated businesses currently comprise about 67% of ATCO's net earnings, providing an important degree of stability to its financial position.

CUL's primary operating businesses consist of the following:

CU Inc. [rated A (high)/R-1 (low)] – see separate report dated November 26, 2004) is a holding company with regulated gas (ATCO Gas and ATCO Pipelines) and electricity (ATCO Electric) utility operations, regulated transmission and distribution of water (CU Water), as well as electricity generation assets that now operate under legislatively mandated long-term PPAs [Alberta Power (2000)]. The PPAs provide relative earnings and cash flow stability, similar to the other regulated businesses, as long as the plants can produce their committed outputs of electricity. ATCO Electric's business franchise covers most of northern Alberta (north of Edmonton and parts of central Alberta), as well as regions in the Yukon and the Northwest Territories. ATCO Gas' franchise covers most of Alberta.

ATCO Power Ltd. is involved in the development, construction, operation, and management of independent power projects (IPPs) in Canada (Alberta, B.C.,

Saskatchewan, and Ontario), the U.K., and Australia. ATCO Power and ATCO Resources (a direct subsidiary of ATCO) own an important portion of these generation assets – 1,539 MW out of the total capacity of 3,302 MW that is currently operational.

ATCO Midstream is involved in gas gathering, processing, storage, and supply management.

ATCO Frontec is involved in project management and technical services for the defence, telecommunications, transportation, and industrial sectors.

Other businesses (non-regulated) consist of the following: (1) information systems and technologies, and customer care services for gas and electricity utilities and marketers (ATCO I-Tek); (2) the sale of fly ash and other combustion by-products produced from coal-based generation (ASHCOR) and a 50% interest in a wood preservation products manufacturer (Genics Inc.); and (3) travel services (ATCO Travel).

Other ATCO Subsidiaries:

ATCO's other investments consist of the wholly owned subsidiaries ATCO Structures, ATCO Noise Management, ATCO Resources, and ATCO Investments. On a combined basis, they generally contribute between 10%-15% of ATCO's net recurring earnings.

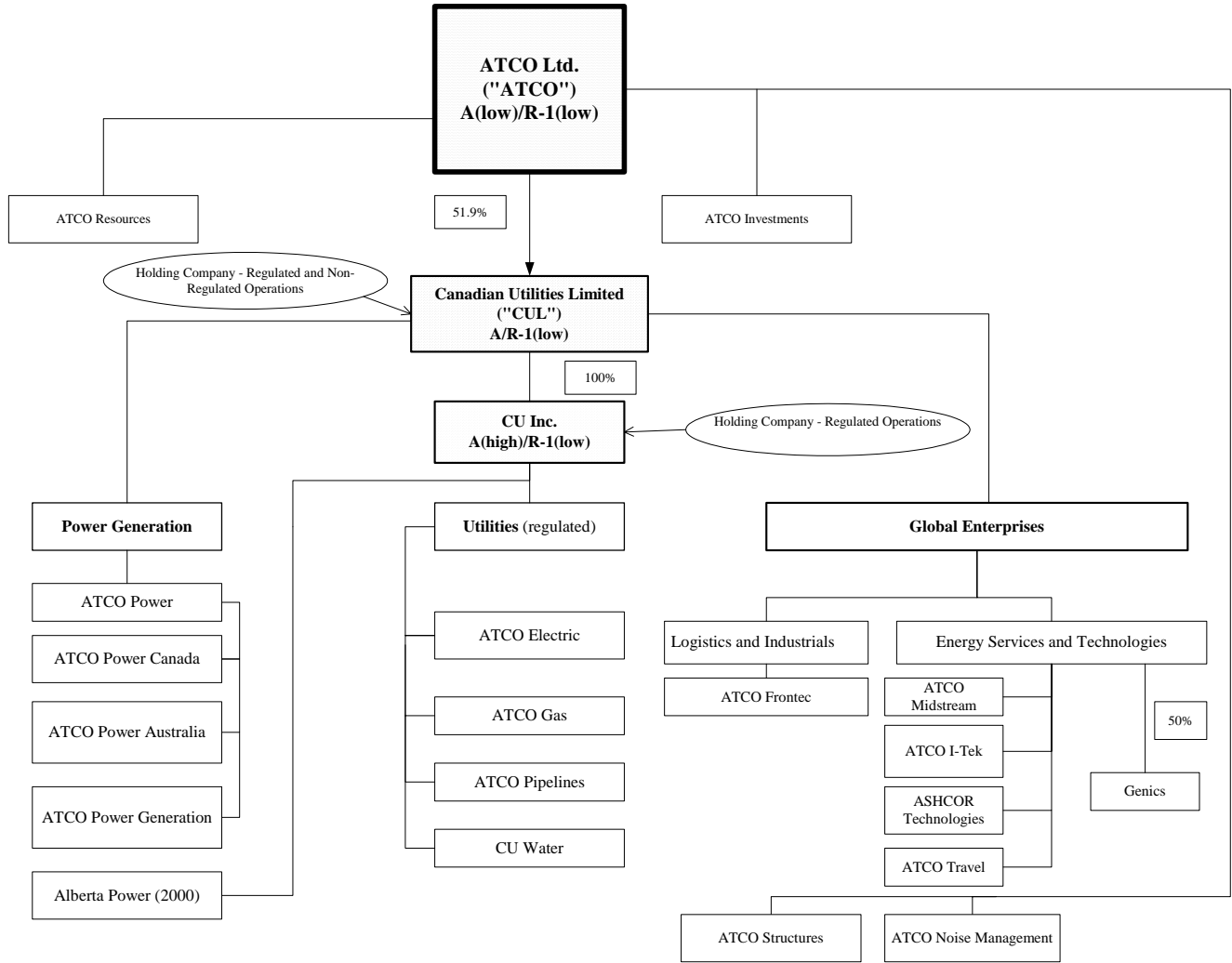
ATCO Structures is engaged in the manufacture, sale, and lease of transportable shelters and related products throughout the world.

ATCO Noise Management provides turnkey solutions for industrial noise, including acoustic enclosures, buildings, barriers, ventilation systems, combustion air intake and exhaust silencers, and other noise abatement components.

ATCO Resources invests directly in independent power projects with ATCO Power, while ATCO Investments currently has investments in real estate in Calgary.

Please refer to Description of Operations – Business Segments for further details on the various business segments.

CORPORATE STRUCTURE



RATING CONSIDERATIONS – please refer to description of operations for discussions of strengths and weaknesses of regulated and non-regulated operations.

EARNINGS AND OUTLOOK

Consolidated basis (\$ millions)	<u>12 mos. ended</u>	<u>For the year ended December 31</u>				
	<u>Sept. 2004</u>	<u>2003</u>	<u>2002</u>	<u>2001</u>	<u>2000</u>	<u>1999</u>
Revenues	3,616.1	3,929.7	3,196.3	3,767.8	3,077.4	2,376.5
EBITDA	916.9	905.1	842.9	858.2	866.9	810.4
EBIT	615.4	620.4	585.8	600.5	613.2	569.3
Gross interest expense	218.6	217.8	214.2	212.4	206.6	187.3
Net interest expense	176.2	162.8	162.6	157.3	163.4	153.3
Net income (before extras., min. int. & pfd. div.)	297.2	297.8	269.3	268.4	256.7	235.2
Net income (before extras., after pfd. div.)	132.2	131.2	128.1	124.4	112.7	100.7
Net income (as reported)	160.7	131.2	163.0	124.4	112.7	100.7
Return on avg. equity (before extras.)	11.3%	12.1%	13.1%	14.3%	14.4%	14.1%

Segmented Earnings	<u>12 mos. ended</u>					
	<u>Sept. 2004</u>	<u>2003</u>	<u>2002</u>	<u>2001</u>	<u>2000</u>	<u>1999</u>
CUL (net of minority interest)	129.7	134.4	123.3	123.1	118.1	103.8
Wholly owned subsidiaries	11.1	5.4	13.4	12.6	11.9	13.6
Holding company financing	(8.6)	(8.6)	(8.6)	(11.3)	(17.3)	(16.7)
Extraordinary items [^]	28.5	0.0	34.9	0.0	0.0	0.0
Net income (as reported)	160.7	131.2	163.0	124.4	112.7	100.7

[^] For 12 mos ended September 2004, includes the retail energy assets sale to DEML.

Summary:

- For the 12 months ended September 30, 2004, EBIT fell slightly; however, net income remained relatively flat compared to the year ended December 31, 2003.
- The primary reason for the decline in EBIT was the impact of the AEUB Decisions on the regulated operations of CUL, which established overall lower deemed equity ratios and ROEs [not including Alberta Power (2000)] for the Company's utility operations.
 - Offsetting some of the decline in EBIT was increased business activity at ATCO Structures, ATCO I-Tek, and ATCO Midstream.

Outlook:

- Earnings at ATCO are expected to continue to grow at a modest pace, with the bulk of the growth coming from CUL.
 - CUL's regulated utility operations will continue to experience economic expansion in the franchise area, as well as growth in the rate base from higher capital expenditures.
 - Contributions on a full-year basis from the Brighton Beach generating facility will also provide a boost in the short term.
- Continuing business activity in the Company's non-regulated operations will also contribute to earnings growth.

- Over the medium term, earnings could be stressed somewhat by the following factors:
 - Continuing regulatory risk and lag in Alberta, which should be reduced somewhat by the July 2004 Generic Cost of Capital decisions. To date, however, there has been little improvement in the timeliness of regulatory hearings and decisions;
 - The oversupply of generation in Alberta, where the bulk of the Company's merchant portfolio is located; and
 - The Company's non-regulated operations, while generally complementary and related in nature, tend to be more volatile than ATCO's stable regulated operations, given the cyclical nature of the business environment.
- Overall, ATCO should continue to experience generally stable earnings and some modest earnings growth. The Company is structured around a stable core of regulated utility operations that enjoy earnings growth through economic expansion in their franchise areas and through rate base capital expenditures to meet demand. Complementing this stability are the Company's non-regulated, diversified operations, which will be a key source of earnings growth over the medium term.

FINANCIAL PROFILE AND SENSITIVITY ANALYSIS

(\$ millions)	12 mos. ended			Sensitivity Analysis		
	For the year ended Dec. 31			Year 1	Year 2	Year 3
Cash Flow Statement (consolidated)	Sept. 2004	2003	2002			
EBITDA (before minority interest)	916.9	905.1	842.9	825.2	825.2	825.2
Net income (after min. int., prefs., before extras.)	132.2	131.2	128.1	77.3	69.9	63.0
Depreciation	301.5	284.7	257.1	292.0	306.2	319.6
Other non-cash adjustments (largely min. interests)	54.9	62.0	76.9	70.0	70.0	70.0
Operating Cash Flow	488.6	477.9	462.1	439.4	446.1	452.6
Common dividends	(40.8)	(38.1)	(34.6)	(23.2)	(21.0)	(18.9)
Capital expenditures (net of contrib.)	(568.4)	(491.5)	(608.1)	(550.0)	(550.0)	(550.0)
Gross Free Cash Flow	(120.6)	(51.7)	(180.6)	(133.8)	(124.9)	(116.3)
Working capital changes	36.3	(58.2)	(170.0)	-	-	-
Free Cash Flow	(84.3)	(109.9)	(350.6)	(133.8)	(124.9)	(116.3)
Other investments/acq./sales	50.7	16.4	116.1	0.0	0.0	0.0
Net debt financing	84.7	(89.1)	215.6	133.8	124.9	116.3
Net pfd. equity financing	-	150.0	150.0	-	-	-
Net common equity financing	(6.2)	(4.8)	4.9	-	-	-
Net other financing	1.3	(52.9)	57.2	-	-	-
Net change in cash	46.2	(90.3)	193.2	(0.0)	0.0	(0.0)
Total adjusted net debt (1)	2,698.1	2,763.5	2,742.8	2,831.9	2,956.7	3,073.1
% adj. net debt in capital structure (1)	49.5%	51.3%	53.6%	49.8%	50.0%	50.3%
Fixed-charges coverage (times)	2.24	2.47	2.36	2.21	2.19	2.06
Cash flow/total adjusted net debt (1)	18.1%	17.3%	16.8%	15.5%	13.9%	14.0%

(1) Net of uncommitted cash holdings.

Retractable preferred shares treated as debt, cumulative preferreds, and preferreds as part of minority interest given 70% equity treatment.

Summary:Consolidated Basis

- For the 12 months ended September 30, 2004, operating cash flows continued to increase as a result of higher depreciation expense associated with higher capital expenditures in recent years.
- Higher capital expenditures, related to regulated electric transmission projects, as well as workforce housing assets at ATCO Structures, contributed to a significant gross free cash flow deficit for the year ended December 2003.
 - This deficit was offset by positive working capital changes resulting from the sale of the retail energy supply businesses to Direct Energy Marketing Limited (“DEML”).
- ATCO’s key financial ratios and balance sheet continue to remain strong, reflecting the core stability of the regulated operations, diversification benefits of the non-regulated businesses, and prudent management of the organization as a whole.

On a non-consolidated basis

- ATCO continued to generate operating cash flows well in excess of its capital expenditures and common dividend payments during 2003.
 - ATCO continues to have no debt outstanding and only \$150 million in preferred shares.
 - Dividends received from its subsidiary companies continue to be more than sufficient to cover its preferred shared dividends.

Outlook:Consolidated Basis

- Over the medium term, operating cash flows should continue to increase, reflecting modest growth in the Company’s regulated operations’ rate base and franchise area.
- Annual capital expenditures are projected to be between \$500 million and \$600 million over the next four years, primarily due to a number of capital projects at CU Inc.
 - Operating cash flows are not expected to be sufficient to internally fund capital expenditures and dividend payments.
 - The Company will continue to fund these deficits as they have in the past, with debt and common and/or preferred equity.
- Working capital requirements have declined significantly since the sale the Company’s retail energy supply businesses to DEML, thus reducing its liquidity needs substantially.
- Key cash flow and coverage ratios are expected to remain relatively stable given the high proportion of regulated activities, which provide stability to ATCO’s operating cash flows. As the proportion of non-regulated activities continues to grow, gradual improvement in key ratios will be expected in order to maintain the ratings.

On a non-consolidated basis

- ATCO’s per cent adjusted debt in the capital structure is expected to remain low and the Company is expected to continue to generate free cash flow surpluses.
- ATCO is not expected to access the public debt markets in the near term.

Sensitivity Analysis:

DBRS stress tests the financial strength of companies analyzed to measure their sensitivity under various extreme scenarios. The assumptions used are based neither upon any specific information provided by the Company, nor any expectations that DBRS has concerning the future performance of the Company.

Assumptions:

- EBITDA declines by 10% in Year 1 and remains flat thereafter.
- Annual capital expenditures are \$550 million.
- Annual dividend payments are 30% of net income.
- Free cash flow deficits are 100% debt-financed.

Outcomes:

- ATCO's percentage net debt in the capital structure would continue to remain in line with the acceptable range for the rating (below 55%).
- ATCO would record a cumulative free cash flow deficit of approximately \$375 million and see its debt level rise by approximately the same amount, resulting in a modest deterioration in its key coverage ratios.
 - Key coverage and cash flow ratios would still remain relatively strong for the current ratings.

LONG-TERM DEBT MATURITIES AND BANK LINES
Debt Maturity Schedule (as at September 30, 2004)

(\$ millions)	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>
Recourse	136.9	136.1	187.7	79.0	100.0
Non-recourse	53.0	55.7	76.8	61.3	91.6

Summary:

- At September 30, 2004, the Company had credit lines of \$1,317.7 million (of which \$679.7 million is specifically for CUL and \$329.1 million is specifically for CU Inc.) made up of:
 - \$588.1 million is available on a long-term committed basis, of which \$326.0 million is specifically for CUL;
 - \$613.7 million is available on a short-term committed basis, made up of \$331.7 million for CUL and \$300 million specifically for CU Inc.; and
 - \$115.9 million on an uncommitted basis, of which \$40 million is for CUL and \$29.1 million is for CU Inc.
 - During Q3 2004, the Company reduced its credit lines by a total of \$143 million, primarily due to reduced credit needs at CU Inc. following the sale of the retail energy supply businesses to DEML.
- As at September 30, 2004, the total amount outstanding under the above-mentioned credit facilities was \$136.7 million.
- ATCO does not currently have a commercial paper program in place.
 - CUL has a Cdn\$200 million commercial paper program, which is fully backed by committed bank lines.
 - CU Inc. has a Cdn\$300 million commercial paper program, which is fully backed by committed bank lines.
- In addition, ATCO's consolidated maturity schedule is relatively well spread out, minimizing refinancing risk.

DESCRIPTION OF OPERATIONS

Canadian Utilities Limited (51.9% interest) – accounts for the majority of earnings at ATCO.

Segmented Earnings (\$ millions)	12 months ended	For the year ended December 31				
	Sept. 2004	2003	2002	2001	2000	1999
Regulated (1)	167.0	174.4	157.2	150.3	153.1	156.0
Non-regulated	83.3	84.9	80.5	86.8	74.3	44.1
Extraordinary/non-recurring items	55.1	0	67.3	0.0	0.0	0.0
Consolidated net income (as reported)	305.4	259.3	305.0	237.1	227.4	200.1
Net income accruing to ATCO (after min. interest)	158.2	134.4	158.2	123.1	118.1	103.8
Electricity distribution throughputs (GWh)	9,882	9,768	10,224	10,108	10,392	10,068
Gas distribution throughputs (bcf)	203.1	207.7	209.4	188.6	205.0	185.4
Electricity generated from PPA plants (GWh)	8,072	8,814	8,597	9,442	8,724	8,542
IPP electricity generated (GWh)	6,894	5,664	4,402	4,401	3,661	3,697

(1) Includes generation assets under PPAs.

REGULATED

Utilities Segment – includes ATCO Electric, ATCO Gas, and ATCO Pipelines

Strengths:

- Regulated businesses provide a degree of financial stability.
- Track record of generating strong operating cash flows.
- Diversified energy portfolio.
- Strong franchise area.

Challenges:

- Regulatory risk/lag.
- Low regulated rates of return/equity base.
- Earnings sensitive to weather and to interest rates as related to ROE.

Summary:

- The AEUB regulates ATCO Electric, ATCO Gas, and ATCO Pipelines.
- In December 2002, DEML agreed to purchase the retail energy supply businesses of ATCO Electric and ATCO Gas and, on May 4, 2004, the transaction was completed and closed.
 - Proceeds of the transfer were \$90 million, of which \$45 million was paid at closing, with the remainder to be paid 12 months following closing.
 - As a result of this transaction, ATCO Electric and ATCO Gas are no longer responsible for supplying customers with the commodity; they will, however, continue to provide the regulated transportation and distribution services.
- In addition, effective May 4, 2004, is a ten-year contract that DEML signed with another subsidiary of CUL, ATCO I-Tek Business Services, for billing and call centre services to ensure continued quality customer service.

Electric's Transmission and Distribution business were set at 33% and 37%, respectively.

- On November 30, 2004, and as a result of the application of the adjustment formula (please see Generic Cost of Capital section below), the 2005 ROE was adjusted downwards to 9.50% if ATCO Electric should file a rate application during 2005; otherwise, it will remain at 9.60%.

Gas Transmission & Distribution

- Effective January 1, 2001, CU Inc. merged and restructured its two gas subsidiaries (formerly Canadian Western Natural Gas Company Limited and Northwestern Utilities Limited) into ATCO Gas and ATCO Pipelines Ltd.
- However, for regulatory purposes, separate accounts must be maintained for four divisions (ATCO Gas North, ATCO Pipelines North, ATCO Gas South, and ATCO Pipelines South).
- ATCO Gas (gas distribution) and ATCO Pipelines (gas transmission) are both regulated by the AEUB under a cost-of-service methodology.
- In August 2002, ATCO Gas filed a general rate application for the 2003 and 2004 test years.
 - In the application, ATCO Gas filed combined revenue requirements for ATCO Gas North and ATCO Gas South.
 - In its decision issued October 1, 2003, the AEUB directed CU Inc. to maintain separate revenue requirements for the two divisions and also approved an ROE of 9.50% on equity of 37% for 2003 and 2004, with the GCC decision applying in 2005.

Electricity

- ATCO Electric (distribution and transmission) is regulated using a cost-of-service methodology.
- From 1997-2002, ATCO Electric's approved annual revenue requirement for Alberta-based operations (including that for 2002) had been achieved through a negotiated settlement.
- For 2003 rates, the AEUB established an ROE of 9.4% for both of ATCO Electric's Transmission and Distribution operations in October 2003, on allowed equity ratios of 32% and 35%, respectively.
- For 2004 rates, as a result of the Generic Cost of Capital Decision (GCC), the ROE was revised upwards to 9.60% and common equity ratios for ATCO

- For 2005 rates, the GCC established a common equity ratio of 38%, with the ROE set at 9.50% if ATCO Gas should file a rate application during 2005; otherwise the ROE will stay at 9.60%.
- ATCO Pipelines filed a rate application in February 2003 for the test years 2003 and 2004.
 - In December 2003, the AEUB established an ROE of 9.5% for 2003, on a common equity ratio of 43.5%.
 - For 2004 rates, the GCC established an ROE of 9.60% and a common equity ratio of 43%.
- The 2005 ROE was set at 9.50% if ATCO Pipelines should file a rate application during 2005; otherwise the ROE will stay at 9.60%.

Generic Cost of Capital

- In late 2002, the AEUB decided to call a GCC hearing to consider matters for utilities under its jurisdiction, including the regulated operations of the Company, ATCO Electric, ATCO Gas, and ATCO Pipelines.
 - The AEUB rendered its decision on July 2, 2004, establishing a common ROE for all utilities in Alberta of 9.60% for 2004 (and reflected in the 12 months to September 30, 2004, financial

results), adjusted annually, beginning in 2005, based on 75% of the change in the long-Canada bond yield. The AEUB also established common equity ratios for the Company's regulated operations.

- The outcome of the GCC decision, as it affects the Company, is moderately favourable compared with the previous regulatory decision.
 - Furthermore, the standardization of cost of capital matters should reduce regulatory lag in the future, although to-date, there has been little improvement in the timeliness of regulatory hearings and decisions.
 - The 2004 GCC ruling generally provided some uplift to the ROEs and common equity ratios previously established via the 2003/2004 rate decisions. However, the recent formulaic adjustment resulted in a decline in the 2005 ROE to 9.50% from 9.60%, only for those utilities that file a rate application in 2005.

POWER GENERATION SEGMENT - REGULATED

Alberta Power (2000)

Strengths:

- Legislatively mandated PPAs allow for recovery of forecast costs (variable and fixed), incorporate 450 basis points risk premium above forecast ten-year Government of Canada bonds, and have a deemed equity component at 45%.

Challenges:

PPAs increase business risk relative to the previous framework due to the obligation to meet specified output commitments.

Generation Assets under PPAs – Alberta Power (2000)

	<u>Fuel</u> <u>source</u>	<u>Net capacity</u> <u>MW</u>
Battle River (3 units)	Coal	679
Sheerness (2 units)	Coal	375
Rainbow (2 units)	Gas	90
Sturgeon	Gas	18
Total		<u>1,162</u>

Summary:

- The PPAs incorporate annually adjusted, formula-based ROEs, consisting of a fixed 450 basis point risk premium above forecast ten-year Government of Canada bond yields, with minimum ROEs set for certain plants near the end of their useful lives to ensure that operating risks are adequately compensated for.

- Deemed equity for the generation assets under the PPAs has been set at 45%.
- The ROE for both 2003 and 2004 was set at 9.99% and 9.79%, respectively, down from 10.18% in 2002.
- The PPAs also incorporate incentives that encourage operating efficiencies.
- All benefits and risks associated with meeting efficiency targets are borne by the generator.
- The increased business risks facing ATCO under the PPAs are as follows.
 - ATCO is obligated to meet specified output commitments. Generators will be penalized (required to make a payment to the PPA holder) if actual output is below the specified capability of the respective unit. However, if generators exceed these thresholds, they are entitled to an incentive payment.

- Forecast capital expenditures over the term of the PPAs may be below actual requirements. The variance is not recoverable from the PPA holder.
- Establishing who is at fault and defining "force majeure" in the event of an unplanned shutdown may be difficult, leading to disputes and litigation. ATCO's subsidiary, CU Inc., was faced with such a situation in 2003 when output was curtailed at the Battle River

Generating Plant due to low water levels in the cooling pond. CU Inc. made a force majeure claim, which was successfully resolved in September 2004, when they were awarded \$10.4 million by an arbitration tribunal. This payment essentially refunded the incentive payments that CU Inc. had previously made to the PPA holder for the curtailed production.

NON-REGULATED

Power Generation and Global Enterprises – Includes ATCO Power, ATCO Midstream, ATCO Frontec, and ATCO I-Tek

Strengths:

- Non-regulated assets offer greater earnings growth potential and higher rates of return than the typically lower regulated rates of return of CUL's regulated business segments.
- Long-term sales contracts with fuel cost flow-through minimize merchant power risks.
- Diversified asset base, both geographically and by asset type.

Challenges:

- Non-regulated generation assets are more highly leveraged than regulated assets and subject to increased competitive pressures.
- Additional business risks (currency, counterparty) increase overall risk profile.
- Merchant power risk.
- Potential construction cost overruns.

POWER GENERATION SEGMENT

<u>Independent Operating Power Projects</u>	<u>Total capacity (MW)</u>	<u>ATCO's share (MW)</u>
McMahon, B.C.	120	60
Primrose, Alberta	85	43*
Poplar Hill, Alberta	43	43*
Rainbow Lake, Alberta	89	45*
Joffre, Alberta	480	192*
Valleyview, Alberta	46	46*
Oldman River, Alberta	32	32*
Muskeg River, Alberta	170	119*
Cory, Saskatchewan	260	130*
Barking, U.K.	1,000	255
Heathrow Airport, U.K.	14	7
Osborne, Australia	180	90
Bulwer Island, Australia	33	17
Scotford, Alberta	170	170*
Brighton Beach, Ontario	580	290*
Total	3,302	1,539

* 20% of CUL's share belongs to ATCO Resources Inc., a direct subsidiary of ATCO Ltd.

Summary:

- Contributions from this segment accounted for approximately 13.8% of ATCO's total earnings (excluding the \$28.5 million gain from the sale of the Company's retail energy supply businesses to DEML and after preferred dividends) for the 12 months ended September 30, 2004, which was roughly in line with 14.4% of total earnings at year-end 2003.
 - For the 12 months ended September 30, 2004, the Company brought on-line an additional 782 MW of generating capacity (492 MW net to ATCO).
 - The Company has an effective ownership of 1,539 MW of non-regulated power projects and the newest power facility, the Brighton Beach power plant, was brought on-stream in July 2004. The plant is operated under a tolling arrangement with Coral Energy Canada providing the natural gas for the plant and off-taking the electricity produced.

- Independent power projects are currently more highly leveraged than generation assets under the PPAs and the regulated utility businesses.
- However, most of the projects to date have been financed on a non-recourse basis, with ATCO's exposure limited to the Company's equity investment.
- This business unit's risks are currency, counterparty, and merchant power.
 - However, some of the risk is mitigated by ATCO's strategy of having the majority of its power generation subject to long-term sales contracts, including fuel supply contracts.
 - Furthermore, this portfolio is relatively small compared to ATCO's total asset base and is well diversified, minimizing the impact of these risk factors on the Company as a whole.
 - The Company has no new construction projects under way and is focusing on maximizing the operating efficiency of its current portfolio of assets.
 - In September 2004, the Company and SaskPower announced their joint venture to develop a 150 MW wind farm in Saskatchewan would not proceed.
- Risks with the IPPs are related primarily to the Company's merchant power exposure in Alberta given the high gas price environment and the fact that most of its merchant power is gas-fired.
 - While there is a relatively high correlation between electricity prices and gas prices in Alberta, there remain risks due to the oversupply situation in Alberta.

- In addition, the Company has been negatively impacted by the bankruptcy of TXU Europe, one of the counterparties for the power supplied by the Barking plant in the U.K.
 - TXU Europe had a long-term off-take agreement for 27.5% of the power generated by Barking (or 275 MW); ATCO has a 13.2% equity interest in this plant.
- To date, CUL has received no payments from TXU Europe and there is not yet a replacement off-taker in place.
- The 275 MW of power is being sold into the U.K. market on a merchant basis under a one-year marketing agreement.

GLOBAL ENTERPRISES SEGMENT

Summary:

- Overall, ATCO Frontec, ATCO Midstream, ATCO Structures, and, to a lesser-but-growing extent, ATCO I-Tek, continue to drive this segment, focusing on core capabilities such as camp support services, facilities operation, and gas gathering and processing, information technology solutions and workforce shelter/space rentals products.
 - While the ATCO Frontec Balkan's contract expired in September 2003, they secured a new three-year project, with two additional option years, to provide advanced information systems technological support to the NATO Stabilization Force Organization.
 - ATCO Frontec will continue to expand on its expertise in camp support services primarily in the mining industry (such as Voisey's Bay), expand its presence in the Balkans with NATO, and pursue further opportunities with the Canadian Department of National Defence, the U.S. Department of Defence, and the U.S. Air Force.
- ATCO Midstream has ownership in fifteen natural gas processing and compression facilities, with a gross licensed capacity of 2,060 million cubic feet per day.
- They also own and operate approximately 1,000 kilometres of raw natural gas pipeline and provide services in gas gathering and processing, natural gas liquids extraction, and energy services.
 - ATCO Midstream continues to provide strong contributions to the Global Enterprises segment.
 - Future earnings growth over the medium term will likely be realized in new geographic areas such as the far north, east, and west coasts, as well as through contributions from emerging industries such as heavy oil and natural gas from coal.
 - ATCO I-Tek continues to provide customer care and billing services, as well as information and technology solutions, in Canada.
 - They were awarded the ten-year contract to provide the DEML billing and call centre services to ensure continued quality customer service
 - They also worked to set up ATCO Gas and ATCO Electric's distribution-only services as a result of the sale of the retail energy supply businesses to DEML.

WHOLLY OWNED NON-REGULATED ATCO SUBSIDIARIES

ATCO Structures, ATCO Noise Management, ATCO Resources, and ATCO Investments

- ATCO Structures' primary businesses include:
 - Providing workforce housing at remote industrial and natural resource development projects. The associated products offered by ATCO Structures include support services, transportation, site preparation, maintenance, and installation of the housing;
 - Providing space rentals (through sale or lease) of relocatable modular offices, classrooms, and other community structures; and
 - The manufacturing of a broad range of relocatable modular products for sale and for its lease fleet.
- For the 12 months ended September 30, 2004, ATCO Structures experienced increased business activity at all of its global operations.
 - In September 2004, ATCO Structures announced that it had been awarded a contract to supply a 2,100 person camp, as well as maintenance personnel, for Nexen Inc., for the Long Lake project in the Athabasca oil sands region of northern Alberta. The scheduled completion date of the project is June 2005, and the project life-span is two years.
- ATCO Noise Management's clients are predominantly from the energy and gas manufacturing sector.
 - The Company is currently concentrating on growing its worldwide operations.
- These wholly owned subsidiaries generally account for about 10%-15% of ATCO's net earnings, significantly higher than during the past couple of years.
 - DBRS expects ATCO to continue managing these operations selectively, such that they will not comprise a significant portion of ATCO's consolidated earnings but rather provide incremental benefits.

ATCO Ltd.

Balance Sheet (Consolidated)

(\$ millions)

	As at December 31				As at December 31		
	Sept. 2004	2003	2002		Sept. 2004	2003	2002
Assets				Liabilities & Equity			
Cash & equivalents	628.0	391.9	488.8	Short-term debt	108.5	5.6	12.2
Accounts receivable	389.5	596.6	519.4	A/P & accr'ds	380.5	540.9	564.9
Inventories	180.8	184.2	129.3	Other	0.0	0.0	0.0
Deferred gas & electricity costs	0.0	27.2	51.9	L.t.d. due one year	189.9	167.2	135.9
Prepays	35.8	27.7	27.3	Current Liabilities	678.9	713.7	713.0
Current Assets	1,234.1	1,227.6	1,216.7	Deferred taxes & credits	365.3	367.2	312.7
Net fixed assets	5,316.5	5,155.0	4,949.2	Long-term debt	2,732.9	2,675.9	2,811.0
Deferred charges & other	219.6	235.2	237.4	Red. preferred shares	150.0	150.0	150.0
				Minority interest	1,631.8	1,579.3	1,371.8
Total	6,770.2	6,617.8	6,403.3	Shareholders' equity	1,211.3	1,131.7	1,044.8
				Total	6,770.2	6,617.8	6,403.3

Consolidated Basis

	For the year ended December 31						
	12 mos. ended Sept. 2004	2003	2002	2001	2000	1999	1998
Ratio Analysis							
Current ratio	1.82	1.72	1.71	1.21	1.18	1.53	1.19
Acc. depreciation/gross fixed assets	39.6%	39.9%	39.2%	39.3%	40.2%	39.5%	38.1%
Cash flow/net debt (incl. debt equiv.)	19.8%	18.9%	18.1%	18.8%	17.1%	17.6%	15.3%
Cash flow/adjusted net debt (1)	18.1%	17.3%	16.8%	17.7%	16.5%	16.9%	14.8%
Adjusted net debt/EBITDA	2.86	2.95	3.17	2.97	3.03	3.00	3.17
Cash flow/capital expenditures	0.86	0.97	0.76	0.72	0.99	1.21	0.87
(Cash flow-dividends)/capital expenditures	0.79	0.89	0.70	0.67	0.93	1.14	0.82
% net debt in capital structure (incl. debt equiv.) (1)	45.1%	46.9%	49.9%	53.5%	58.0%	58.0%	60.6%
% adj. net debt in capital structure (1)	49.5%	51.3%	53.6%	56.6%	60.3%	60.3%	62.6%
Hybrids/common equity	35.6%	37.9%	33.0%	28.5%	21.6%	22.4%	20.1%
Common dividend payout	25.4%	29.0%	21.2%	24.8%	24.2%	23.7%	22.9%
Coverage Ratios (2)							
EBIT interest coverage (times)	2.93	2.99	2.84	3.02	3.12	3.19	3.23
EBITDA interest coverage (times)	4.31	4.30	4.04	4.23	4.35	4.47	4.43
Fixed-charges coverage (times)	2.24	2.47	2.36	2.43	2.43	2.41	2.00
Earnings Quality/Operating Efficiency							
Operating margin	17.0%	15.8%	18.3%	15.9%	19.9%	24.0%	26.7%
Net margin	4.4%	3.3%	5.1%	3.3%	3.7%	4.2%	4.3%
Return on average equity (bef. extras.)	11.3%	12.1%	13.1%	14.3%	14.4%	14.1%	13.7%

	For the year ended December 31						
	12 months ended Sept. 2004	2003	2002	2001	2000	1999	1998
Segmented Earnings							
Utilities (gas + electric distribution)	30%	48.0	50.7	41.7	38.3	40.1	47.9
Power generation (incl. PPA generation)	29%	45.9	48.9	37.6	52.6	58.3	35.3
Global Enterprises	19%	31.2	31.5	33.4	26.7	24.3	21.1
Industrials and other	12%	20.0	13.0	17.3	17.4	8.2	11.8
Corporate/inter-segment elimin.	-8%	(12.9)	(12.9)	(1.9)	(10.6)	(18.2)	(15.4)
Extraordinary items	18%	28.5	0.0	34.9	0.0	0.0	0.0
Net income	100%	160.7	131.2	163.0	124.4	112.7	100.7

(1) Net of uncommitted cash holdings. Retractable preferred shares treated as debt, cumulative preferreds, and preferred as part of minority interest given 70% equity treatment. (2) EBIT includes interest income; interest expense excludes allowance for funds used during construction (AFUDC), capitalized interest, and debt amortizations; preferred dividends includes min. interest preferred.

Income Statement (Consolidated)

(\$ millions)

	12 mos. ended	For the year ended December 31				
	<u>Sept. 2004</u>	<u>2003</u>	<u>2002</u>	<u>2001R</u>	<u>2000</u>	<u>1999</u>
Revenues	3,616.1	3,929.7	3,196.3	3,767.8	3,077.4	2,376.5
Expenses						
Fuel + purchased power	357.9	455.20	408.7	633.5	359.4	259.3
Cost of gas	1,227.2	1,516.90	988.5	1,314.5	1,002.7	550.6
Operating + maintenance	987.7	929.90	857.7	844.0	748.3	678.0
Property/franchise taxes	126.4	122.60	98.5	117.6	100.1	78.2
Depreciation	301.5	284.70	257.1	257.7	253.7	241.1
Operating costs	<u>3,000.7</u>	<u>3,309.3</u>	<u>2,610.5</u>	<u>3,167.3</u>	<u>2,464.2</u>	<u>1,807.2</u>
Operating profit	615.4	620.4	585.8	600.5	613.2	569.3
Interest expense	218.6	217.80	214.2	212.4	206.6	187.3
Non-cash financial charges	(16.4)	(23.30)	(28.6)	(14.9)	(11.1)	(6.3)
Other (income)/expense	(26.0)	(31.70)	(23.0)	(40.2)	(32.1)	(27.7)
Equity earnings	<u>0.0</u>	<u>0.00</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
Net interest expense	<u>176.2</u>	<u>162.8</u>	<u>162.6</u>	<u>157.3</u>	<u>163.4</u>	<u>153.3</u>
Pre-tax income	<u>439.2</u>	<u>457.6</u>	<u>423.2</u>	<u>443.2</u>	<u>449.8</u>	<u>416.0</u>
Income taxes (normalized)	<u>142.0</u>	<u>159.80</u>	<u>153.9</u>	<u>174.8</u>	<u>193.1</u>	<u>180.8</u>
Income bef. extras. + min. int.	<u>297.2</u>	<u>297.8</u>	<u>269.3</u>	<u>268.4</u>	<u>256.7</u>	<u>235.2</u>
Minority interest pfd. div.	35.8	33.10	18.2	17.0	16.8	14.9
Minority interest equity income (normalized)	<u>120.6</u>	<u>124.90</u>	<u>114.4</u>	<u>114.0</u>	<u>109.3</u>	<u>96.3</u>
Net income bef. pfd. div. & extras.	<u>140.8</u>	<u>139.8</u>	<u>136.7</u>	<u>137.4</u>	<u>130.6</u>	<u>124.0</u>
Extraordinary items	28.5	0.00	34.9	0.0	0.0	0.0
Preferred dividends	<u>8.6</u>	<u>8.60</u>	<u>8.6</u>	<u>13.0</u>	<u>17.9</u>	<u>23.3</u>
Net income (as reported)	<u>160.7</u>	<u>131.2</u>	<u>163.0</u>	<u>124.4</u>	<u>112.7</u>	<u>100.7</u>

DBRS
AltaLink

AltaLink, L.P.

Report Date: November 24, 2004
 Press Released: November 22, 2004
 Previous Report: October 1, 2003

RATING

<u>Rating</u>	<u>Trend</u>	<u>Rating Action</u>	<u>Debt Rated</u>
A	Stable	Downgraded	Senior Secured Bonds

Geneviève Lavallée, CFA/Nick Dinkha, CFA
 416-593-5577 x2277/x2314
 glavallee@dors.com

<u>RATING HISTORY</u>	<u>Current</u>	<u>2003</u>	<u>2002</u>	<u>2001</u>	<u>2000</u>	<u>1999</u>	<u>1998</u>
Senior Secured Bonds	A	A (high)	A (high)	NR	NR	NR	NR

RATING UPDATE

The rating on the Senior Secured Bonds of AltaLink, L.P. (“ALP” or the “Company”) has been downgraded to “A” and the trend changed to Stable from Negative. The trend on ALP’s rating was changed to Negative from Stable in September 2003 as a result of the financial implications of certain parts of the 2002/2003 and 2003/2004 transmission tariff decision. Since the trend change, however, ALP’s financial results have been better than anticipated and the Alberta Energy and Utilities Board (“AEUB”) has released its generic cost of capital decision, which was moderately favourable for ALP relative to the previous tariff decision. Instead, the downgrade reflects the ongoing uncertainty and significant regulatory lag associated with the AEUB’s decisions with respect to both ALP and AltaLink Investments, L.P. (“AILP”), ALP’s sole limited partner, which has contributed to lengthy time delays in reaching financial decisions by AILP’s sponsors. This type of regulatory environment, combined with the fact that AILP has four non-controlling sponsors (each of which has its own mandate), impacts the sponsors’ ability to make financial decisions in a timely manner. This has been demonstrated over the past two years by the significant time delays experienced by the sponsors in reaching decisions with respect to the financing of AILP.

In addition, the regulatory environment has increased the uncertainty with respect to the type of support and financing that AILP will receive from its sponsors. One of AILP’s sponsors, the Ontario Teachers’ Pension Plan Board (“OTPPB”), has indicated that as a result of the AEUB’s decision to disallow the full recovery of deemed income taxes in respect of its ownership interest in AILP, it will not provide further equity injections

(to ultimately fund ALP’s capital expenditure program) unless and until the income tax issue is resolved. The uncertainty with respect to AILP’s future financial profile has become an important rating consideration given ALP’s reliance on AILP for equity contributions to maintain a stable financial profile, especially in light of ALP’s large capital expenditure program over the medium term.

ALP continues to await the outcome of two key regulatory decisions, one of which was outstanding at the time the rating was placed on a Negative trend, namely the review and variance of the rate decision pertaining to 2002/2003 and 2003/2004 rates, while the other pertains to the tariffs for 2004-2007. The potential outcome of these important regulatory decisions has been factored into the current rating.

Over the medium and longer term, ALP’s financial profile should remain relatively stable given its low business risk profile and the fact that all of its operations are regulated. ALP’s earnings will grow in line with rate base growth, which is expected to grow at a strong pace due to the significant capital expenditure program. As a result of the significant capital projects, ALP will continue to record free cash flow deficits over the medium term. It is the Company’s intention to fund the deficits through a combination of public debt and equity injections by AILP such that ALP’s financial profile remains stable.

While regulatory risk remains one of ALP’s key risks, the challenges associated with the timeliness of decisions and the uncertainty with respect to the type of financing that AILP will receive in the future were the key reasons for the downgrade.

RATING CONSIDERATIONS

Strengths:

- Involved solely in regulated activities
- No volume risk and limited counterparty risk
- Attractive Alberta-based business franchise
- Well-maintained transmission system with a long remaining average operating life

Challenges:

- Regulatory risk/regulatory lag
- Financially weaker parent/lack of a majority sponsor
- Low regulated rates of return/deemed common equity
- Approved ROE sensitive to interest rates
- Free cash flow deficits in the medium term

FINANCIAL INFORMATION

	<u>12 mos. ended</u>	<u>For the year ended April 30</u>		
	<u>July 31, 2004</u>	<u>2004</u>	<u>2003</u>	<u>2002</u>
Fixed-charges coverage (times)	1.98	1.86	2.04	n/a
% debt in capital structure (1)	61.0%	60.8%	60.7%	60.1%
Cash flow/total debt (1)	14.0%	14.7%	14.8%	n/a
Cash flow/capital expenditures (times)	1.00	0.95	1.09	n/a
Net income (before extras.) (\$ millions)	30.3	26.4	30.4	n/a
Operating cash flow (\$ millions)	78.3	79.9	77.3	n/a
Return on average common equity	8.8%	7.7%	9.0%	n/a
Approved ROE	9.60%	9.40%	9.40%	n/a
Deemed common equity in capital structure	35%	34%	34%	n/a

(1) Includes subordinated debt.

THE COMPANY AltaLink, L.P. (“ALP”) owns and operates regulated transmission assets in Alberta. AltaLink Investments, L.P. (“AILP”) is the holding company of AltaLink, L.P. The sponsors of AILP include: Macquarie North America Ltd. (15%), Ontario Teachers’ Pension Plan Board (25%), SNC-Lavalin Inc. (50%), and Trans-Elect Inc. (10%). AltaLink Management Ltd. is the general partner of ALP, and SNC-Lavalin, and Trans-Elect are the general partners (50/50) of AltaLink Management Ltd.

Energy

DOMINION BOND RATING SERVICE

REGULATION

- ALP is regulated by the AEUB.
- ALP is regulated under a cost-of-service/rate-of-return methodology.
 - Operations will continue to be subject to regulatory hearings in the absence of negotiated settlements.
- Key financial components of the AEUB's decision with respect to ALP's transmission tariffs for the years 2002/2003 and 2003/2004 (ALP's past fiscal years ended on April 30) included:
 - Deemed common equity of 32% (34% when adjusted for partial tax disallowance);
 - Approved return on equity (ROE) of 9.40% for both years;
 - Cost of debt approved as follows: actual cost of debt for market debt; 8% for subordinated debt issued to the parent;
 - Deemed income tax recovery not approved for OTPPB's ownership interest; and
 - Approved liability method of taxation for federal taxes approved, but flow-through method for provincial taxes.
- ALP subsequently submitted a review and variance application with respect to certain matters included in the above-mentioned decision.
 - The AEUB has not yet released its decision on this application.
- In July 2004, the AEUB rendered its decision on generic cost of capital matters for utilities under its jurisdiction, including establishing deemed common equity ratios for each utility, as well as a common ROE for 2004.
 - The common ROE for 2004 was set at 9.60%, and will be adjusted annually, beginning in 2005, by 75% of the change in the forecast long Government of Canada bond yield.
 - The deemed common equity ratio for ALP was set at 33% (35% when adjusted for partial tax disallowance).
- The outcome of the generic cost of capital decision, as it impacts ALP, is moderately favourable compared to the previous regulatory decision.
 - Furthermore, the standardization of cost of capital matters should reduce regulatory lag in the future, although to date, there has been little improvement in the timeliness of regulatory hearings and decisions.
- In spring 2004, ALP submitted a general transmission tariff application covering 2004 to 2007.
 - DBRS does not expect the outcome of this decision to have a significant impact on ALP's medium-term financial profile given that the key financial factors (i.e. cost of capital matters) have already been established.
- Both ALP and AILP, ALP's sole limited partner, have experienced uncertainty and significant regulatory lag in respect of AEUB decisions.
 - This is an important challenge facing ALP as it has affected its sponsors' ability to make financial decisions in a timely manner, as well as impacting the type of support and financing that AILP will receive in the future from its sponsors.

RATING CONSIDERATIONS

Strengths: (1) ALP is involved solely in regulated transmission operations in Alberta. This provides a high degree of stability to ALP's earnings and financial profile.

(2) Given the framework within which transmission is governed in Alberta, ALP faces no volume risk (total revenue requirements are negotiated for the year and are not dependent on volumes) and only limited counterparty risk as its only counterparty is the Alberta Electric System Operator, a government-created entity. This provides additional stability to ALP's earnings and financial profile.

(3) ALP has one of the strongest transmission franchise areas in Canada. ALP's franchise area covers virtually the entire Alberta customer base and Alberta continues to have some of the strongest economic fundamentals in Canada, as well as the strongest electricity demand growth. Strong economic growth is expected to continue in Alberta over the medium term. Continued strong electricity demand, as well as growing transmission system constraints, bodes well for the growth potential of ALP's transmission network.

(4) Transmission assets have a relatively long average operating life, and ALP's assets are, on average, less than 20 years old. Independent reports indicate ALP's assets have been well maintained. ALP intends to continue to manage and invest in the existing transmission system to maintain reliability.

Challenges: (1) Regulatory risk is the key challenge facing ALP as its financial profile is heavily dependent on the outcome of regulatory decisions. Furthermore, Alberta-based utilities are often burdened by material time lags associated with the regulatory process, adding to the cost, complexity, and uncertainty inherent in the current system. Regulatory decisions have often been delivered well after the fiscal period in question, resulting in charges against the current year's earnings to reflect prior-period adjustments. The outcome of the generic cost of capital decision whereby the AEUB established the approved ROE formula and the deemed common equity component for regulated utilities in Alberta suggests that regulatory lag should be much lower in the future. However, no improvement has yet been seen in the timeliness of regulatory hearings and decisions.

(2) ALP's sole limited partner, AILP, has a significantly weaker financial profile than ALP. While ALP is a stand-alone company regulated by the AEUB with a low business risk profile, the weaker financial profile of AILP poses some risk in terms of providing ALP with the necessary equity injections to maintain its regulated capital structure. Previously, this had not been a limiting factor on ALP's rating. However, the regulatory environment, combined with the fact that AILP has four non-controlling sponsors (each of which has its own mandate), has impacted the

sponsors' ability to make financial decisions in a timely manner. Furthermore, the regulatory environment has increased the uncertainty with respect to the type of support and financing that AILP will receive from its sponsors in the future. The increased uncertainty with respect to AILP's future financial profile impacts ALP given ALP's reliance on AILP for equity contributions to maintain a stable financial profile, especially given ALP's large capital requirements over the medium term.

(3) In Alberta, as well as in many other jurisdictions in Canada, the rates of return and deemed common equity components approved by the regulators are significantly below those approved for similar operations in the U.S. This acts as a disincentive for investors to allocate capital to Canadian utilities as they can earn higher rates of return in the U.S. from businesses with similar risk profiles. Furthermore, higher deemed common equity in the capital

structure generally provides greater protection for bondholders.

(4) Approved ROEs are linked to interest rates, which have been falling in Canada in recent years. This has had a negative impact on earnings and key financial ratios. Given the outcome of the generic cost of capital decision, ALP's earnings and cash flows will remain sensitive to interest rates through approved ROEs. A continued low interest rate environment will keep key cash flow and coverage ratios weaker than they would be otherwise.

(5) Based on conservative assumptions for net income and the projected large capital expenditure program, ALP will post large free cash flow deficits over the medium term. It is the Company's intention to fund these deficits through a combination of debt issuance and equity injections by its parent, AILP, such that the capital structure is maintained near its current structure.

EARNINGS AND OUTLOOK

(\$ millions)	12 mos. ended	For the year ended April 30		
	July 31, 2004	2004	2003	2002
Net revenues	161.0	154.0	152.2	n/a
EBITDA	109.0	99.5	109.0	n/a
EBIT	61.5	58.2	59.2	n/a
Gross interest expense	31.0	31.3	29.1	n/a
Net interest expense	31.2	31.8	28.8	n/a
Pre-tax income	30.3	26.4	30.4	n/a
Net income (avail. to common)	30.6	26.5	30.4	n/a
Return on average common equity	8.8%	7.7%	9.0%	n/a

Summary:

- ALP's EBIT and net income have generally been stable since ALP began operations, with the unfavourable regulatory decision pertaining to 2002/2003 and 2003/2004 tariffs largely offsetting the impact of rate base growth.
- The higher earnings for the 12 months ended July 2004 relative to the year ended April 2004 was largely due to the outcome of ALP's first transmission tariff application covering both 2002/2003 and 2003/2004, whereby approved revenue requirements were lower than those received under the interim tariff, with the entire amount being booked in Q1 2003/2004
- The lower approved revenue requirements were due to:
 - Lower approved ROE compared to requested ROE; and
 - The disapproval of deemed income tax recovery for OTPPB ownership interest.

Outlook:

- On a full-year basis, ALP's EBIT and net income are expected to be slightly higher as a result of the generic cost of capital decision, which provided for a 9.60% ROE for 2004 compared to the 9.40% ROE previously approved by the AEUB.
- The significant projected capital expenditure program, with the majority being growth-related, will result in a growing rate base, which provides for a favourable earnings growth profile.

– Annual earnings growth of about 6% is expected over the medium term.

- Despite the favourable earnings growth profile, key financial ratios are expected to remain relatively unchanged due to the regulatory framework and ALP's intention to manage distributions and equity injections to maintain stable financial ratios, thus providing no increased protection for bondholders.
- It should be noted that ALP is awaiting the outcome of two key regulatory decisions: (1) the review and variance of the rate decision pertaining to 2002/2003 and 2003/2004 rates, and (2) the general rate application covering 2004-2007 rates.
 - While these are important regulatory decisions, DBRS does not expect the outcome of these decisions to materially impact ALP's financial profile. However, OTPPB, one of ALP's sponsors, has indicated that the outcome of the review and variance decision will impact whether or not it will provide equity injections in the future to AILP to fund ALP's capital program.
 - DBRS considers the generic cost of capital decision to be the key determinant of the medium-term financial profile of Alberta-based regulated utilities.

FINANCIAL PROFILE AND SENSITIVITY ANALYSIS

(\$ millions)	12 mos. ended	For year ended Apr. 30		Sensitivity Analysis		
	July 31, 2004	2004	2003	Year 1	Year 2	Year 3
EBITDA	109.0	99.5	109.0	103.6	103.6	103.6
Net income before extraordinary items	30.3	26.4	30.4	24.1	14.5	4.4
Depreciation	49.2	42.3	51.8	54.4	62.2	72.1
Other non-cash adjustments	(0.9)	11.4	(4.9)	(4.3)	(8.4)	(17.0)
Operating Cash Flow	78.7	80.1	77.3	74.2	68.2	59.6
Capital expenditures	(77.9)	(84.4)	(71.1)	(173.0)	(218.0)	(268.0)
Cash flow before working capital	0.7	(4.3)	6.1	(98.8)	(149.8)	(208.4)
Working capital changes	1.6	4.2	(0.9)	0.0	0.0	0.0
Free cash flow before distributions	2.4	(0.1)	5.3	(98.8)	(149.8)	(208.4)
Distributions to AILP	(15.4)	(12.9)	(29.3)	(7.2)	(4.3)	(1.3)
Free Cash Flow	(13.0)	(13.0)	(24.1)	(106.1)	(154.1)	(209.8)
Other investments	0.7	0.1	(0.8)	0.0	0.0	0.0
Net external debt financing	15.6	22.5	15.1	106.1	154.1	209.8
Net debt financing from AILP	0.0	0.0	0.0	0.0	0.0	0.0
Net equity financing from AILP	0.0	0.0	0.0	0.0	0.0	0.0
Other financing	(2.2)	(7.1)	(2.5)	0.0	0.0	0.0
Net change in cash	1.1	2.5	(12.2)	(0.0)	(0.0)	0.0
Cash flow/capital expenditures (times)	1.00	0.95	1.09	0.43	0.31	0.22
Cash flow/total debt	14.0%	14.7%	14.8%	11.2%	8.3%	5.8%
% debt in the capital structure	61.0%	60.8%	60.7%	64.0%	68.0%	72.6%
Fixed-charges coverage (times)	1.98	1.86	2.04	1.63	1.16	0.73

Summary:

- For the 12 months ended July 31, 2004, ALP's operating cash flow was generally stable despite the negative regulatory decision in 2003 and was sufficient to fully fund its capital expenditures, due to lower capital expenditures.
 - Including distributions to AILP, however, ALP continued to record a free cash flow deficit, which was debt financed.
- Despite entirely debt-financing the free cash flow deficit, ALP's per cent debt in the capital structure remained relatively stable, as did its key cash flow and coverage ratios.

Outlook:

- While operating cash flow is expected to grow strongly over the medium term alongside the projected growth in the rate base, it will remain insufficient to fully fund the significant capital expenditure program over the next five years.
 - The large capital expenditure program is related to the significant transmission system requirements in Alberta to maintain reliability, improve efficiency (reduce line losses), and facilitate a well-functioning and stable electricity market.
- The free cash flow deficits are expected to be funded through a combination of public debt issuance and equity injections from AILP such that ALP's cash flow and interest coverage ratios remain relatively stable.
 - Since inception, it has been ALP's intention to maintain about 40% equity in the capital structure

compared to the lower deemed common equity, currently at 35%

- As a result, DBRS expects ALP's financial profile to remain generally unchanged from its current profile.
- One of the key challenges to ALP's key financial ratios over the medium term relates to the regulatory lag associated with recovering the costs of long lead-time capital projects.
 - While this will negatively impact financial ratios over a two- to three-year period, DBRS does not view this as a long-term challenge and risk to the rating.
- A key risk, however, which is reflected in the current rating, is the uncertainty with respect to AILP's future financial profile and its ability to provide equity injections to ALP.
 - While it is the sponsors' intention to provide the necessary equity injections to maintain a stable financial profile, the regulatory environment, combined with the fact that AILP has four non-controlling sponsors (each of which has its own mandate), has impacted the sponsors' ability to make financial decisions in a timely manner.
 - Furthermore, OTPPB has stated it will not provide further equity injections unless and until the income tax issue is resolved.

Sensitivity Analysis:

DBRS stress tests the financial strength of companies analyzed to measure their sensitivity under various extreme scenarios. The assumptions used are based neither upon any specific information provided by the Company, nor any expectations that DBRS has concerning the future performance of the Company.

Assumptions:

- EBITDA declines by 5% in Year 1 and remains flat thereafter.
- Capital expenditures are \$173 million in Year 1, increasing to \$218 million and \$268 million in Years 2 and 3. These capital expenditures are based on those submitted to the AEUB plus an estimate of the costs associated with the expected new 500 kV line between Edmonton and Calgary.
- Distributions paid to AILP are equal to 30% of net income.
- Free cash flow deficits are 100% debt financed.

Outcomes:

- Under this scenario, ALP would record significantly larger than projected free cash flow deficits, which, when combined with 100% debt financing, would result in a material deterioration in ALP's financial profile.
- Given the nature of the projected capital expenditures (i.e. those required to maintain the reliability and efficiency of the Alberta electricity market), ALP would not be in a position to significantly reduce capital expenditures.
- ALP's sponsors, through AILP, would have to provide equity injections in order to maintain the current rating.

LONG-TERM DEBT MATURITIES AND BANK LINES

Term debt maturities by fiscal year as at July 31, 2004

	<u>2004-2005</u>	<u>2005-2006</u>	<u>2006-2007</u>	<u>2007-2008</u>	<u>2008-2009</u>	<u>2009-2010</u>	<u>2010 & beyond</u>
(\$ millions)	0	0	0	0	100.0	0	410.0

Summary:

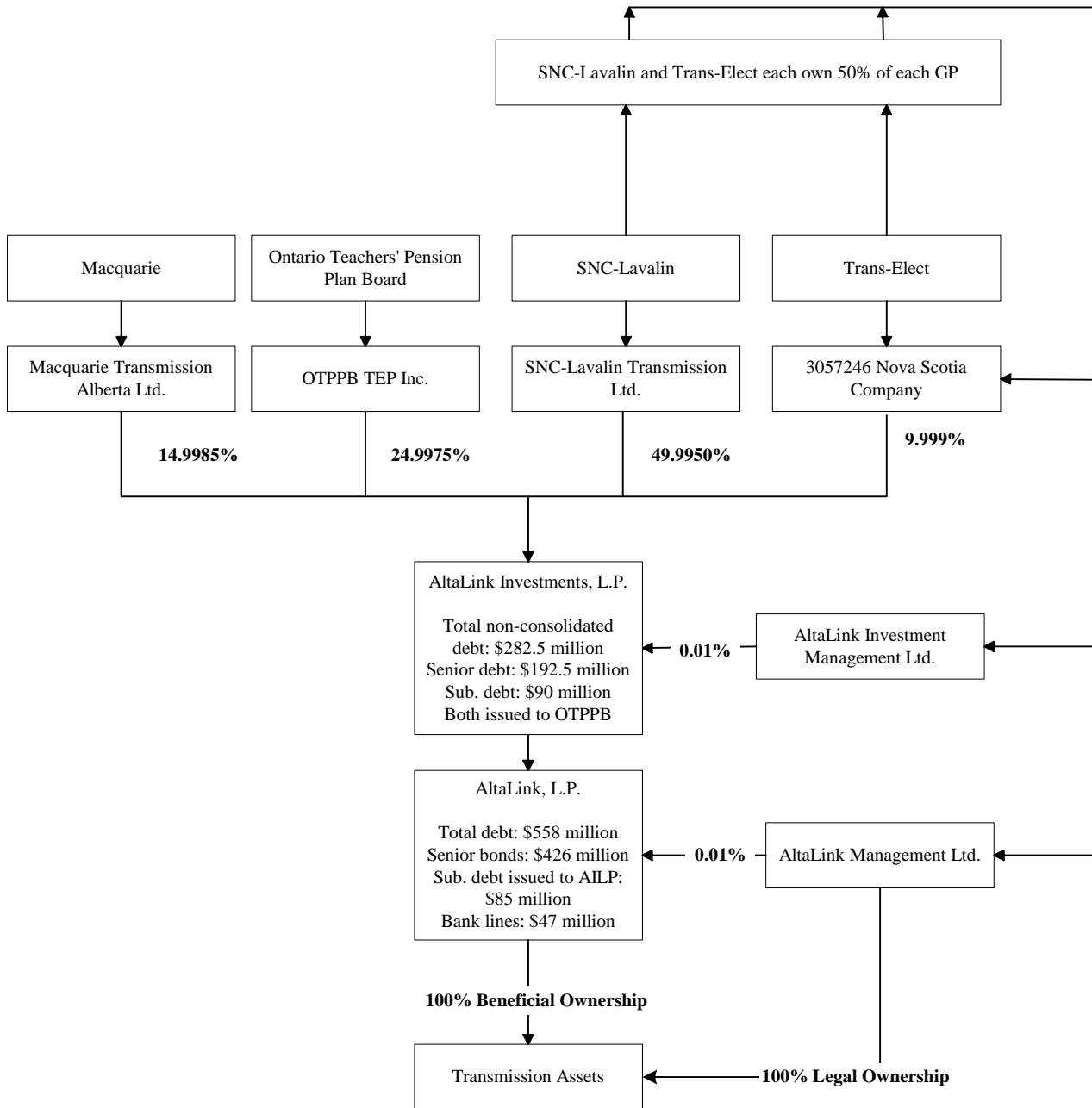
- In late 2003, ALP refinanced its remaining \$125 million senior bridge facility through a re-opening of its Series 03-2 5.43% Senior Secured Bonds due June 5, 2013.
 - ALP currently has \$425 million outstanding in senior secured bonds.
- ALP also has \$85 million in subordinated debt, maturing in 2012, issued to AILP.
 - Non-payment of either interest or principal on the subordinated debt does not trigger an event of default.
- ALP has a \$185 million, 364-day revolving bank facility (maturing in May 2007) for working capital purposes and to temporarily finance capital expenditures until it is cost effective to refinance with long-term debt.

- Under the terms and conditions, the credit facility cannot be used to refinance existing debt.
- The credit facility ranks pari passu with the Senior Secured Bonds.
- At July 31, 2004, ALP had \$46.9 million outstanding on the credit facility.
 - ALP had essentially no amount outstanding in letters of credit as at July 31, 2004.

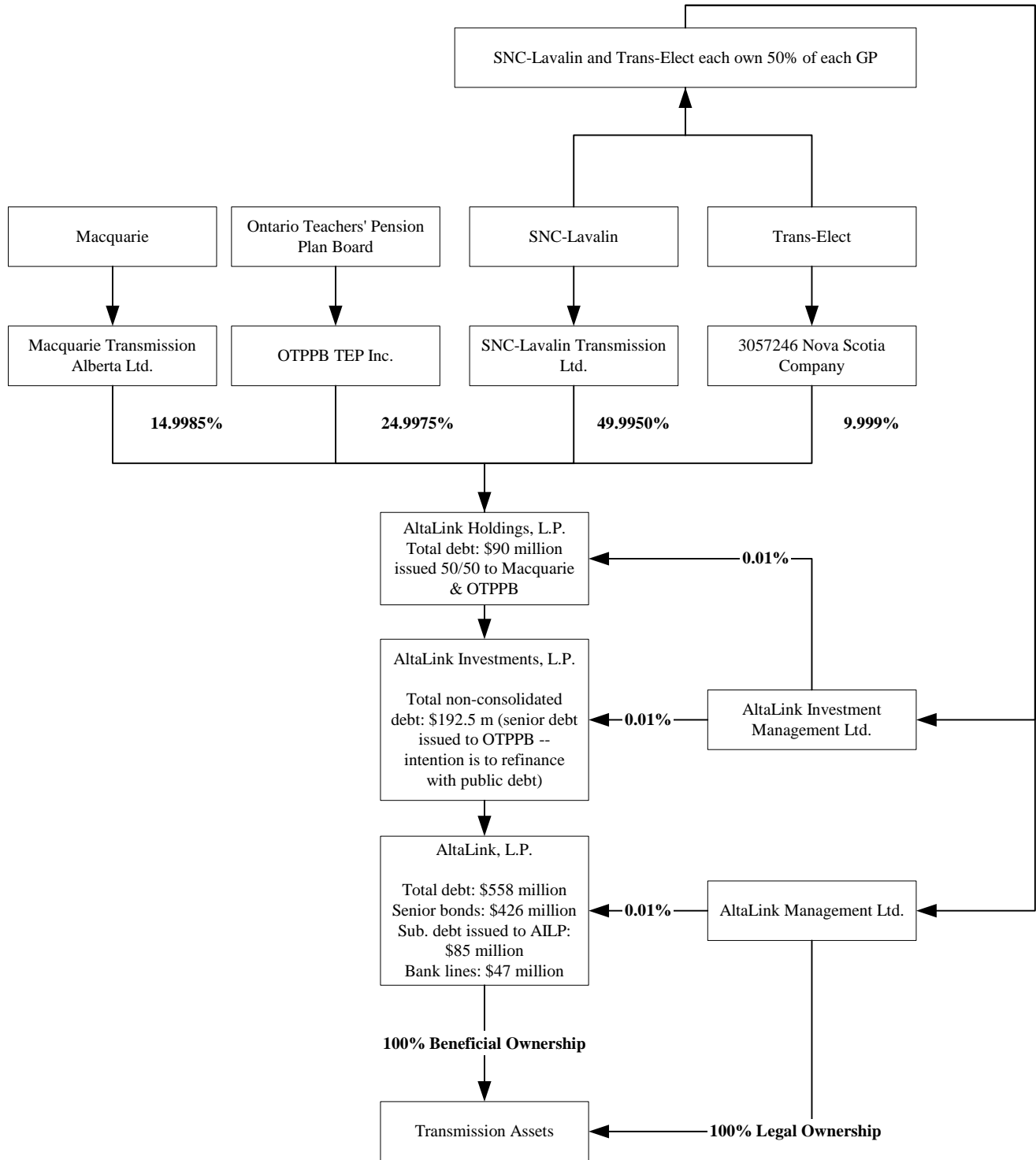
Outlook:

- ALP has no refinancing requirements over the medium term.
- However, it will have to access the debt capital markets to fund a portion of its large capital expenditure program.

CURRENT CORPORATE STRUCTURE



PROPOSED NEW CORPORATE STRUCTURE



- A corporate reorganization is being proposed to strengthen the financial profile of AILP by converting the subordinated debt issued by the sponsors to equity and moving the subordinated debt to the newly created L.P., AltaLink Holdings, L.P.
- A default on the subordinated debt at AltaLink Holdings, L.P. will not create a default on any of AILP's or ALP's debt.

AltaLink, L.P.
Balance Sheet

(\$ millions)

	As at				As at		
	July 31, 2004	2004	2003		July 31, 2004	2004	2003
Assets				Liabilities and Equity			
Cash and short-term investments	0.81	2.30	0.00	Short-term debt	0.17	0.21	421.75
Accounts receivable	21.91	17.06	16.78	A/P + accr'ds	22.36	38.19	31.42
Inventories	0.86	0.96	0.80	Regulatory & other liabs.	1.72	0.39	6.98
Prepays	2.38	1.35	1.09	L.t. debt due in one yr.	0.00	0.00	0.00
Regulatory assets	0.00	0.93	0.00	Current Liabilities	24.24	38.79	460.15
Current Assets	25.96	22.61	18.67	Reg. & environ. liab.	181.08	182.34	140.74
Net fixed assets	874.26	871.29	804.55	Other liabilities	2.57	2.12	1.84
Accrued pension benefit asset	2.92	2.94	3.25	Long-term debt	473.09	459.15	15.20
Other assets and deferred charges	18.28	19.62	12.14	Subordinated debt	85.00	85.00	85.04
Goodwill	202.07	202.07	201.83	Shareholders' equity	357.51	351.13	337.47
Total	1,123.49	1,118.53	1,040.44	Total	1,123.49	1,118.53	1,040.44

Ratio Analysis
Liquidity Ratios

	12 mos. ended	For the year ended April 30		
	July 31, 2004	2004	2003	2002
Current ratio	1.07	0.58	0.04	0.05
Acc. depreciation/gross fixed assets	10.8%	9.8%	5.2%	0.0%
Cash flow/total debt (1)	14.0%	14.7%	14.8%	n/a
Cash flow/total adj. debt (2)	16.0%	16.8%	17.0%	n/a
Total debt/EBITDA	5.12	5.47	4.79	n/a
Cash flow/capital expenditures	1.00	0.95	1.09	n/a
% debt in capital structure (1)	61.0%	60.8%	60.7%	60.1%
% adj. debt in capital structure (2)	53.5%	53.2%	52.8%	60.1%
Average coupon on long-term debt	5.10%	5.10%	n/a	n/a
Deemed common equity	35.0%	34.0%	34.0%	n/a
Distributions payout	40.4%	48.8%	96.6%	n/a

Coverage Ratios

EBIT interest coverage	1.98	1.86	2.04	n/a
EBITDA interest coverage	3.52	3.18	3.75	n/a
Fixed-charges coverage	1.98	1.86	2.04	n/a

Profitability/Operating Efficiency

Operating margin	38.2%	37.8%	38.9%	n/a
Net margin (before extras.)	18.8%	17.1%	20.0%	n/a
Return on average common equity	8.8%	7.7%	9.0%	n/a
Rate base - mid-year (\$ millions)	671.8	671.8	654.1	n/a
Approved ROE	9.60%	9.40%	9.40%	n/a

(1) Includes subordinated debt as 100% debt.

(2) Subordinated debt given 80% equity treatment.

DBRS
FortisAlberta

FortisAlberta Inc.

Report Date: September 22, 2004

Press Released: September 22, 2004

Previous Report: August 6, 2003

RATING

Rating	Trend	Rating Action	Debt Rated
A (low)	Stable	Confirmed	Senior Unsecured Debt

Nick Dinkha, CFA/Geneviève Lavallée, CFA
416-593-5577 x2314/x2277
ndinkha@dors.com

RATING HISTORY	Current	2003	2002	2001	2000	1999	1998
Senior Unsecured Debt	A (low)	A (low)	"A"	"A"	NR	NR	NR

RATING UPDATE

The rating on FortisAlberta Inc. ("FortisAlberta" or the "Company") is confirmed at A (low), as performance remains in line with DBRS's expectations. The Company was downgraded in July 2003 from "A" as a result of the Alberta Energy Utility Board's ("AEUB") 2002-2003 rate decision (the "2003 Decision"). The 2003 Decision did not significantly impact net income as customer rates were reduced in line with the reduction in depreciation expenses; however, it had significant negative effects on operating cash flow and certain coverage ratios. Over the medium term it is expected that free cash flow deficits will continue, and FortisAlberta will have to rely on its ultimate parent, Fortis Inc. ("Fortis"), for equity injections in order to maintain the deemed capital structure.

The outlook on FortisAlberta remains stable over the medium term. The lower fixed-charges coverage ratio for the 12 months ended June 30, 2004, is a result of higher interest expense on inter-company debt, repaid in May 2004, that was not fully recovered in the AEUB-approved rates. On a positive note, FortisAlberta intends to file its first comprehensive depreciation study with the AEUB in 2005, which could offset some of the impact of the 2003 Decision on its operating cash flows by recovering some of the lost depreciation expense via higher depreciation rates. Also positive was the July 2004 generic cost of capital decision by the AEUB, which should bring more consistency and stability to the regulatory process, minimizing the perceived subjectivity of regulatory decisions.

The AEUB-approved regulatory capital structure for FortisAlberta is 63% debt/37% equity, somewhat lower than the previously approved 60% debt/40% equity, with a return on equity (ROE) of 9.60% for 2004; however, FortisAlberta intends to maintain its overall capital structure at a more conservative 60% debt/40% equity.

Key challenges facing FortisAlberta over the medium term include: (1) significant ongoing capital expenditures which, when combined with the currently lower depreciation rates, will result in continued free cash flow deficits; (2) integrating the culture of the recently acquired FortisAlberta with the Fortis group of companies; (3) strengthening relationships with the AEUB and customer groups, which have historically been perceived as adversarial, with more transparency and openness on the part of FortisAlberta.

Although the \$83 million EPCOR claim is still outstanding, FortisAlberta has filed a Statement of Defence (on February 17, 2004) and feels that the claim is without merit and would not have a material impact on the Company's operations.

The Company remains supported by its operating characteristics, specifically that it is a regulated electricity distribution business and faces limited forecast risk, which provides for relatively stable income. While the 2003 Decision did have a material impact on FortisAlberta's cash flows, the new owner, Fortis, is financially capable of providing the required equity injections to maintain a stable financial profile.

RATING CONSIDERATIONS

Strengths:

- Involved exclusively in regulated electricity distribution
- Minimal forecast risk due to limited sensitivity to weather
- Favourable franchise area in Alberta

Challenges:

- Reduced operating cash flows; free cash flow deficits
- Cumbersome regulatory environment with material lags
- Low regulated rates of return compared to U.S. utilities
- Negative impact on earnings and ROE due to an inability to recover all income taxes in customer rates

FINANCIAL INFORMATION

	12 mos. ended	For the year ended December 31			
	June 30, 2004	2003	2002	2001	2000*
Fixed-charges coverage (times)	1.85	2.22	3.03	1.97	1.87
% total debt in capital structure	55.9%	57.6%	57.2%	56.3%	69.3%
Cash flow/total debt	13.1%	8.5%	14.9%	28.4%	5.9%
Cash flow/capital expenditures (times)	0.46	0.33	0.62	1.19	0.78
Net income (before extras.) (\$ millions)	21.8	26.6	21.3	12.1	(1.7)
Operating cash flow (\$ millions)	51.4	34.6	60.6	114.3	35.0
Return on avg. common equity (bef. extras.)	7.2%	8.8%	6.9%	4.2%	(0.7%)
Electricity throughputs (GWh)	14,025	13,522	13,212	12,642	7,874

* For four months ending December 31.

THE COMPANY

FortisAlberta (formerly Aquila Networks Canada (Alberta) Ltd. or "ANCA") began operating in September 2000, following the acquisition of the Alberta-based electricity distribution and retail assets of TransAlta Utilities Corporation. The retail electricity operations were subsequently sold to EPCOR Utilities Inc. The franchise region is located in central and southern Alberta. FortisAlberta is ultimately a wholly owned subsidiary of Fortis, a Canadian public holding company focused primarily on electric utility operations in Canada, the Caribbean, and the U.S.

Energy

DOMINION BOND RATING SERVICE

REGULATION

- FortisAlberta is regulated by the AEUB based on a cost of service methodology.
- During 2002 and up to July 31, 2003, the Company had been collecting revenue based on 2001 approved rates and interim riders.
- The 2003 Decision was issued on July 4, 2003, and:
 - Lowered the Company's depreciation rate from over 5% to about 3.5%, retroactive to January 1, 2002;
 - Extended the useful life of the assets and increased their salvage value, resulting in a reduction in depreciation for 2002 and 2003 of \$26.6 million and \$38 million, respectively.
- FortisAlberta expects to file a comprehensive depreciation study with the AEUB in 2005.
- FortisAlberta intends to file a general tariff application in Q4 2004 to establish 2005 rates, with a decision from the AEUB expected in mid-2005.
 - FortisAlberta's existing rates were established August 1, 2003, and have continued in 2004.

Generic Cost of Capital:

- In late 2002, the AEUB decided to call a generic hearing to consider cost of capital matters for utilities under its jurisdiction, including FortisAlberta.
 - The AEUB rendered its decision on July 2, 2004, establishing equity ratios for the transmission and distribution utilities, as well as a common ROE, for 2004, of 9.60%;
 - The ROE will be adjusted annually, beginning in 2005, by 75% of the change in the forecast long-Canada bond yield.
- For a fully taxable electric distribution company such as FortisAlberta, the deemed equity ratio is 37%.
- DBRS views this hearing favourably as it should reduce some of the regulatory lag in the future, as a portion of FortisAlberta's cost components are pre-established.

RATING CONSIDERATIONS

Strengths: (1) FortisAlberta operates exclusively as an electricity distributor, which is regulated, generally stable, and relatively low risk. The regulatory framework for the distribution business is currently based on a cost of service methodology, which typically provides for a high degree of long-term earnings, cash flow, and financial stability. Financial leverage is expected to remain within the recently approved regulatory guidelines of 63% debt/37% equity, although the Company has indicated it intends to maintain a more conservative 60% debt/40% equity ratio for the overall entity. Regular monitoring by the AEUB of regulated utilities in Alberta ensures they are operating within the regulatory framework and this minimizes the risk of a parent company stripping the capital out of its regulated operating companies.

(2) The demand for electricity in Alberta, and more specifically for the Company, is only moderately sensitive to changes in the weather because the majority of the province uses natural gas for heating purposes and air conditioning is not required in the summer months to the same extent as in other jurisdictions. As a result, the Company faces minimal risk in terms of its demand forecast being significantly different from actual demand. This increases the stability of the Company's earnings and cash flow.

(3) The Alberta economy remains among the strongest in Canada, both fiscally and economically. However, given the energy-based nature of the economy, growth tends to be more volatile. The strong economic fundamentals of the Province should continue to have a positive impact on the Company's electricity throughputs and, consequently, its earnings and cash flow.

Challenges: (1) A major result of the 2003 Decision was the reduction in FortisAlberta's depreciation rates retroactive to January 1, 2002, and, consequently, the amount of depreciation expense that can be recovered

through customer rates. As a result, depreciation expense was reduced significantly for 2002 and 2003. This will continue to impact operating cash flows on an ongoing basis. While FortisAlberta intends to file a comprehensive depreciation study in 2005, the weaker operating cash flows, when combined with continued capital expenditures of about \$110 million per year over the medium term, will result in recurring free cash flow deficits and a further incurrence of debt financing.

(2) Alberta-based utilities have historically been burdened by material time lags associated with the regulatory process, adding to the cost, complexity, and uncertainty inherent in the system. Regulatory decisions were often delivered well after the fiscal period in question, resulting in charges against the current year's earnings to reflect prior-period adjustments (e.g. the 2002-2003 rate decision was rendered in February 2003). The process in Alberta is among the most adversarial in Canada, with intervener groups frequently dragging out the hearings for extended periods, while the applicant (and ultimately customers, through rates) is required to pay the costs of these groups. With the establishment of the generic cost of capital in July 2004, regulatory approval should be more streamlined and efficient, resulting in somewhat reduced regulatory lag.

(3) In Alberta, as well as in many other jurisdictions in Canada, the rates of return allowed by regulators have been low in recent years, largely as a result of the low interest rate environment. This has had a negative impact on earnings and cash flow. In addition, the allowed ROEs are significantly below those allowed for similar operations in the U.S. This acts as a disincentive for investors to allocate capital to Canadian utilities because they can earn higher rates of return in the U.S. from businesses having similar risk profiles.

(4) The Company's net capital asset amount used for income tax purposes is lower than that allowed for regulatory purposes. The impact of this is that the Company must pay higher income taxes than it is allowed to recover through customer rates to offset the higher income taxes.

As a result, the Company's cash flows, reported net earnings, and ROE are lower than they would otherwise be.

EARNINGS AND OUTLOOK

(\$ millions)	<u>12 mos. ended</u>	<u>For the year ended December 31</u>			
	<u>June 30, 2004</u>	<u>2003 (3)</u>	<u>2002 (3)</u>	<u>2001</u>	<u>2000R (1)</u>
Total revenues	220.7	213.8	258.2	253.1	78.8
EBITDA	112.8	113.7	158.1	156.6	43.5
EBIT	67.2	69.1	75.5	75.3	16.6
Gross interest expense	36.4	31.1	24.9	38.2	8.9
Net interest expense	36.4	31.1	24.9	37.9	8.7
Pre-tax income	30.8	38.0	50.6	37.4	8.0
Net income (bef. extras.)	21.8	26.6	21.3	12.1	(1.7)
Net income (avail. to common) (2)	21.8	(53.4)	27.5	12.1	(1.7)
Return on avg. common equity (bef. extras.)	7.2%	8.8%	6.9%	4.2%	(0.7%)

(1) For four months ending December 31.

(2) For 2002, figure excludes a \$10.3 million (pre-tax) favourable prior period regulatory decision.

For 2003, figure excludes \$80 million goodwill impairment charge.

(3) For 2003, revenues, depreciation/amortization, and income tax expense are adjusted to remove the 2002 impact of the 2003 Decision (which was included in 2003 reported results). Figures for 2002 were not adjusted and reflect previously approved depreciation rates.

R = Restated.

Volume Throughputs & Customers	<u>12 mos. ended</u>	<u>For the year ended December 31</u>			
	<u>June 2004</u>	<u>2003</u>	<u>2002</u>	<u>2001</u>	<u>2000*</u>
Electricity sales (GWh)	14,025	13,522	13,212	12,642	7,874
Number of customers	400,680	391,039	387,186	376,334	367,746

* For four months ending December 31.

Summary:

- Higher net income (before extraordinary items) for 2003 is a result of:
 - An increase in the rate base and growth in customer demand, as well as an additional \$5.8 million in revenues related to a rate tariff that was previously collected, but not recognized in revenues until 2003.
- The most significant impact of the 2003 Decision was the reduction in FortisAlberta's depreciation rate and thus the amount of depreciation that FortisAlberta is allowed to recover in customer rates.
 - While this did not have a direct effect on FortisAlberta's net income, as customer rates were adjusted accordingly, it did affect operating cash flows.
- DBRS has adjusted various items in the 2003 income statement to remove the retroactive impact of this decision; 2002 results remain unadjusted, as reflected by the higher revenues.
- For the 12 months ended June 30, 2004, net income was lower due to higher interest expense incurred during the first six months of 2004.
 - Given that rates in 2004 have been maintained at their 2003 levels, the higher interest costs were not recovered in rates.
- Also, the inter-company loans, repaid in May 2004, carried significantly higher rates of interest than market, resulting in higher interest expenses for these periods.

Outlook:

- It is expected that FortisAlberta's EBIT and net income will remain relatively stable over the medium term.
 - Some growth is expected to come from increases in both the customer base and rate base.
- The recent generic cost of capital decision should ensure that regulatory decisions are more streamlined and less burdened by regulatory process, as a debt/equity structure and ROE for rate-setting purposes are already pre-determined.

FINANCIAL PROFILE AND SENSITIVITY ANALYSIS

(\$ millions)	12 mos. ended			Sensitivity Analysis		
	June 30, 2004	2003	2002	Year 1	Year 2	Year 3
EBITDA	112.8	113.7	158.1	102.3	102.3	102.3
Net income (bef. extras./one-time items)	21.8	26.6	21.3	16.1	11.5	7.3
Depreciation and amortization	45.6	44.6	82.6	56.2	61.9	67.0
Other non-cash adjustments	(16.1)	(36.6)	(43.3)	0.0	0.0	0.0
Operating Cash Flow	51.4	34.6	60.6	72.3	73.4	74.3
Capital expenditures	(111.9)	(103.8)	(97.4)	(110.0)	(110.0)	(110.0)
Common dividends	0.0	0.0	(0.3)	0.0	0.0	0.0
Gross Free Cash Flow	(60.6)	(69.2)	(37.1)	(37.7)	(36.6)	(35.7)
Working capital changes	(50.8)	(91.4)	94.4	0.0	0.0	0.0
Collection of regulatory cost deferral*	95.0	158.5	153.1	0.0	0.0	0.0
Free Cash Flow	(16.4)	(2.0)	210.4	(37.7)	(36.6)	(35.7)
Other investments	0.0	0.0	4.1	0.0	0.0	0.0
Net debt financing	(42.5)	1.8	(176.2)	37.7	36.6	35.7
Net equity/preferred share/other	46.9	46.9	(38.3)	0.0	0.0	0.0
Net change in cash	(12.0)	46.6	0.0	0.0	0.0	0.0
Total Debt	393	409	407	430.7	467	503.1
% debt in the capital structure	55.9%	57.6%	57.2%	57.6%	58.7%	60.0%
EBITDA/interest coverage (times)	3.10	3.65	6.34	5.2	4.75	4.38
EBIT/interest coverage (times)	1.85	2.22	3.03	2.35	1.88	1.51
Fixed-charges coverage (times)	1.85	2.22	3.03	2.35	1.88	1.51
Cash flow/total debt	13.1%	8.5%	14.9%	16.8%	15.7%	14.8%

For the sensitivity analysis, debt is based on June 30, 2004, figures as that represents the current capitalization structure, given the acquisition by Fortis.

Capex projections are based on Company forecasts. All free cash flow deficits are assumed to be debt financed.

* 2000 Pool Price Deferral Account.

Summary:

- The 2003 Decision substantially lowered depreciation rates, with depreciation expense falling by over \$30 million between 2002 and 2003.
 - The lower depreciation expense and large non-cash adjustments, comprised primarily of provisions for future income tax and deferred charges, contributed to lower operating cash flows for 2003 and for the 12 months ended June 30, 2004.
- As such, operating cash flow has been insufficient to fund capital expenditures resulting in gross free cash flow deficits.
 - While collection of the 2000 Pool Price Deferral Account mitigated the free cash flow deficit in 2003 and for the 12 months ended June 30, 2004, it was largely collected by 2003 and is not expected to play a significant role in reducing the free cash flow deficits going forward.
 - The regulatory cost deferral stems from the period when FortisAlberta also retailed electricity and was subject to commodity costs. During 2000, the pool price charged to FortisAlberta exceeded the AEUB-approved rates that the Company could charge customers, resulting in the Company incurring expenditures that far exceeded the revenues received. The Company was directed to recover these deferred charges from 2001 to 2003.

Outlook:

- As a result of the AEUB's decision, which reduced FortisAlberta's depreciation rate, its operating cash flows will remain significantly lower over the medium term.
- Given FortisAlberta's large capital expenditure program of about \$110 million per year over the medium term, the Company is expected to record significant free cash flow deficits, at least until 2008.
- It is expected that the free cash flow deficits will be funded through a combination of debt and equity contributions from the parent, Fortis, such that the capital structure of the overall entity is maintained at 60% debt/40% equity – more conservative than the deemed 63% debt/37% equity.
- Key coverage ratios will remain lower as a result of the 2003 Decision, however, they should remain within the range acceptable for the current rating.
- The comprehensive depreciation study, which FortisAlberta expects to file with the AEUB in 2005, could provide some recovery of depreciation expense if approved, which would reduce free cash flow deficits over the medium term.

Sensitivity Analysis:

DBRS stress tests the financial strength of companies analyzed to measure their sensitivity under various extreme scenarios. The assumptions used are based neither upon any specific information provided by the Company, nor any expectations that DBRS has concerning the future performance of the Company.

Assumptions:

- Year-end 2003 EBITDA is reduced by 10% and remains flat thereafter.
- Annual capital expenditures are \$110 million and the dividend payout remains at zero.
- Free cash flow deficits are 100% debt financed.
- Depreciation expense levels remain as per the 2003 Decision.
- No further regulatory deferral collections/refunds.

Outcomes:

- The recovery in FortisAlberta's interest coverage and cash flow-to-debt ratios during Year 1 are the result of higher operating cash flows and lower interest expense.
 - While they deteriorate slightly over the medium term, these ratios still remain acceptable for the current rating.
- FortisAlberta is expected to continue generating significant free cash flow deficits.

LONG-TERM DEBT MATURITIES AND BANK LINES

Summary:

- On May 31, 2004, as a result of the sale of ANCA to Fortis, the Company retired the \$230 million long-term inter-company debt, and the \$20.5 million short-term inter-company debt, as well as the \$142.1 million bank loan arranged by CSFB. This debt was replaced with:
 - A \$393 million unsecured bank bridge loan, fully drawn; and
 - A \$100 million syndicated extendible revolving credit facility, maturing May 13, 2005 (there are no amounts currently outstanding under this facility).

Outlook:

- The Company's \$100 million credit facility should provide sufficient liquidity to meet any short-term funding requirements.
- The Company is looking to refinance the \$393 million bridge facility in the capital markets.
 - FortisAlberta plans on issuing the debt in two tranches: a ten-year tranche and a 30-year tranche.
 - Exact tranche sizes have not been confirmed as of the date of the publishing of this report.

DESCRIPTION OF OPERATIONS

- FortisAlberta is a regulated, electricity distribution company that has been operating since September 2000.
- The Company's franchise region is located in central and southern Alberta, in the suburbs surrounding Edmonton and Calgary as well as Red Deer, Lethbridge, and Medicine Hat.
 - FortisAlberta's distribution network comprises approximately 400,000 customers and approximately 60% of the Alberta distribution grid (as measured by circuit kilometres of line), with the bulk of their revenues derived primarily from industrial and residential customers, with some rural customers.

FortisAlberta Inc.
Balance Sheet

(\$ millions)

	As at			As at December 31		
	June 30, 2004	2003	2002	June 30, 2004	2003	2002
Assets						
Cash and short-term investments	0.0	46.6	0.0			
Funds on deposit	38.7	46.9	0.0			
Acct. receivable	36.0	48.4	43.5			
Regulatory cost deferrals	0.0	0.0	116.7			
Inventories and prepaids	20.0	16.5	12.7			
Current Assets	94.6	158.3	172.9			
Net fixed assets	500.4	475.0	389.2			
Regulatory deferral/deferred charges	2.1	0.0	12.9			
Future income tax	13.5	14.2	3.0			
Goodwill	189.3	189.3	269.3			
Total	800.0	836.8	847.2			
				Liabilities & Equity		
				Short-term debt	393.0	150.2
				A/P + accr'ds/other	55.6	88.0
				Regulatory liabilities	12.9	10.4
				Regulatory cost deferral	28.6	29.0
				Other debt due in one yr	0.0	28.4
				L.t. debt due in one yr.	0.0	0.0
				Current Liabilities	490.1	305.9
				Deferred taxes/credits	0.0	0.0
				Other debt	0.0	0.0
				Long-term debt	0.0	230.0
				Total liabilities	490.1	535.9
				Shareholders' equity	309.9	300.9
				Total	800.0	836.8

Ratio Analysis
Liquidity Ratios

	12 mos. ended	For the year ended December 31			
	June 30, 2004	2003	2002	2001	2000 (1)
Current ratio	0.19	0.52	0.60	0.60	0.67
Acc. depreciation/gross fixed assets	60.3%	60.7%	64.1%	62.5%	61.7%
Cash flow/total debt	13.1%	8.5%	14.9%	28.4%	5.9%
Total debt/EBITDA	3.49	3.59	2.57	2.57	13.54
Cash flow/capital expenditures	0.46	0.33	0.62	1.19	0.78
Cash flow-dividends/capital exp.	0.46	0.33	0.62	1.19	(1.02)
% debt in capital structure	55.9%	57.6%	57.2%	56.3%	69.3%
Average coupon on long-term debt	n/a	8.66%	8.66%	8.66%	n/a
Deemed equity	37%	40%	40%	40%	40%
Common dividend payout (before extras.)	0.0%	0.0%	1.3%	0.0%	n.m.

Coverage Ratios (2)

EBIT interest coverage (times)	1.85	2.22	3.03	1.97	1.87
EBITDA interest coverage (times)	3.10	3.65	6.34	4.10	4.89
Fixed-charges coverage (times)	1.85	2.22	3.03	1.97	1.87

Profitability/Operating Efficiency

EBIT margin	30.4%	32.3%	29.3%	29.7%	21.1%
Net margin (before extras.)	9.9%	12.5%	8.3%	4.8%	(2.2%)
Return on avg. common equity (bef. extras.)	7.2%	8.8%	6.9%	4.2%	(0.7%)
Allowed ROE	9.60%	9.50%	9.50%	#	n/a
GWh sold/employee	16.35	16.25	16.23	17.22	n.m.
Customers/employee	467	470	476	513	n.m.
Controllable costs/avg. customer (\$) (3)	251.4	237.5	240.8	238.7	n.m.
Rate base (\$ millions)	546	547	500	455	-

n.m.: not meaningful

(1) For four months ending December 31.

(2) Before capitalized interest, AFUDC, and debt amortizations. (3) Controllable costs include operating, maintenance, and administration.

#: negotiated settlement.

FortisAlberta Inc.
Income Statement

(\$ millions)

	12 mos. ended	For the year ended Dec. 31			
	June 30, 2004	2003 (3)	2002 (3)	2001	2000R (1)
Distribution revenues	207.298	202.078	248.092	398.346	431.381
Purchased power/transmission services	0	0.000	0.000	155.200	359.351
Net electricity revenues	207.298	202.078	248.092	243.146	72.030
Other income	13.412	11.691	10.144	9.966	6.811
Total revenues	220.710	213.769	258.236	253.112	78.841
Expenses:					
Operating, maintenance, & administration	100.735	92.873	93.228	89.835	32.880
Property taxes	7.218	7.177	6.889	6.687	2.483
Depreciation & amortization	45.577	44.583	82.578	81.304	26.831
Operating expenses	153.530	144.633	182.695	177.826	62.194
EBIT	67.180	69.136	75.541	75.286	16.647
Interest expense	36.398	31.142	24.924	38.196	8.893
Other financing charges	0.000	0.000	0.000	(0.300)	(0.223)
Interest/dividend income	0.000	0.000	0.000	0.000	0.000
Net interest expense	36.398	31.142	24.924	37.896	8.670
Pre-tax income	30.782	37.994	50.617	37.390	7.977
Income taxes (normalized)	8.935	11.372	29.295	25.242	9.675
Net income before extras./preferred dividends	21.847	26.622	21.322	12.148	(1.698)
Preferred dividends	0.000	0.000	0.000	0.000	0.000
Extraordinary/one-time items (2)	0.000	(80.000)	6.219	0.000	0.000
Net income	21.847	(53.378)	27.541	12.148	(1.698)

(1) For four months ending December 31.

(2) For 2002, figure excludes a \$10.3 million (pre-tax) favourable prior period regulatory decision. For 2003, figure excludes \$80 million goodwill impairment charge.

(3) For 2003, revenues, depreciation/amortization and income tax expense are adjusted to remove the 2002 impact of the 2003 Decision (which was included in 2003 reported results). Figures for 2002 were not adjusted and reflect previously approved depreciation rates.

R = Restated.

**S&P, Research Update:
ATCO Group of Companies “A” Ratings Affirmed
Outlook Stable
November 9, 2004**

STANDARD &POOR'S	RATINGS DIRECT

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Research:

Research Update: ATCO Group of Companies 'A' Ratings Affirmed; Outlook Stable

Publication date: 09-Nov-2004
Primary Credit Analyst: Nicole Martin, Toronto (1) 416-507-2560;
nicole_martin@standardandpoors.com
Secondary Credit Analyst: Laurie Conheady, Toronto (1) 416-507-2518;
laurie_conheady@standardandpoors.com

Credit Rating: A/Stable/--

■ Rationale

On Nov. 9, 2004, Standard & Poor's Ratings Services affirmed its 'A' long-term corporate credit ratings on ATCO Ltd. (ATCO) and its subsidiaries, Canadian Utilities Ltd. and CU Inc. Standard & Poor's also affirmed its 'P-2(High)' Canadian national scale preferred shares ratings on ATCO and Canadian Utilities, its 'A-' senior unsecured debt rating on Canadian Utilities, its 'A' senior unsecured debt rating on CU Inc., and its 'A-1(Mid)' Canadian national scale CP ratings on Canadian Utilities and CU Inc. The outlook is stable.

The ratings on ATCO reflect its low-risk, monopoly-like gas and electricity delivery operations, economically healthy service territory, and generally favorable regulation. The conservative approach of management and the majority shareholders in the operation of the company and in the pursuit of growth opportunities further supports the ratings. Partially offsetting these strengths are ATCO's quasi-regulated, contracted, and merchant generation plants; higher risk of unregulated industrial activities; and a below-average financial profile compared with its global peers.

The monopoly-like nature of ATCO's gas and electricity transmission and distribution operations provides strong support to the company's business profile. Furthermore, it is expected that in the next few years, the company's Alta.-based regulated wires and pipes activities will continue to account for about half of ATCO's consolidated cash flow and more than 50% of its asset base.

ATCO's gas and electric utilities operate primarily in Alberta, which is viewed as an above-average market characterized by a strong provincial economy and economic fundamentals that compare favorably with national averages. Alberta's real GDP grew by 2.2% in 2003, just slightly ahead of the national average growth rate of 2.0% despite a number of challenges including the effect of the Bovine Spongiform Encephalopathy (BSE) outbreak on the agricultural sector and the sharp 22% appreciation in the Canadian dollar. Heavy exposure to the oil and gas sector could result in volatility; however, the province is expected to continue to grow in the next few years.

The Alberta Energy and Utilities Board (AEUB) regulates ATCO's gas and electric utility operations based on a cost-of-service/rate-of-return methodology. Standard & Poor's views the principal components of AEUB regulation as supportive. Specifically the regulator allows Alberta-based utilities to recover prudently incurred costs including operating and financing costs, allows the flow through of commodity and volume risk, and pre-approves the need for major capital expansion programs. The regulatory regime, although comparable with other provinces in Canada, typically approves less generous returns on thinner equity layers than those approved for ATCO's global peers. Approved returns for ATCO's regulated businesses are 9.6% on equity layers varying from 33%-43% of total

capital. Government interference in the regulatory process is minimal relative to other Canadian provinces. The province enjoys political stability, is strongly pro-business, and offers a very attractive investment environment with the lowest corporate and income taxes in Canada and no provincial sales tax.

ATCO's conservative approach to risk mitigation permeates its operations and is highlighted by its long-term growth strategy of balancing growth in its low-risk regulated operations and higher risk nonregulated operations. In the next few years, absent any significant acquisitions, growth in ATCO's nonregulated generation asset base is not expected to continue to outpace growth in the regulated business segment as it did in the past several years. Furthermore, ATCO's investments in generation are conservatively structured with limited commodity-risk exposure related to price paid for fuel or price received for electricity output.

Despite ATCO's conservative management approach, the operating risk surrounding its generation assets presents the potential for less cash flow stability relative to the regulated operations. Although the level of market and credit risk associated with the generation portfolio is managed, cash flows from this segment (expected to represent about 30% of consolidated cash flows) are exposed to higher operating risks than those derived from the regulated utility operations. The generation portfolio includes 1,312 megawatts (MW) governed by legislatively mandated power purchase agreements (PPAs); multiple independent power projects in Canada, the U.K., and Australia with long-term contracts and tolling agreements (1,065 MW); and a small proportion of merchant capacity (474 MW) located primarily in Alberta.

Also offsetting the strength and stability of its regulated utility operations are ATCO's service and industrial-based businesses, which are expected to account for about 20% of ATCO's cash flow. Contributing to the growth in this segment are the cash flows from a long-term service contract to provide billing services to retail customers in Alberta as well as an upswing in the company's cyclical industrial business activities.

The company's below-average financial profile stems from the thin equity layers and low returns of the regulated businesses as compared with global peers, and ATCO's aggressive financial policy for its nonregulated power generation businesses. The more aggressive financing of its regulated operations and generation assets is somewhat mitigated by the less asset-intensive and lower-leveraged nonregulated industrial businesses. Profitability is relatively low but stable over the long term, which is typical of utilities. In the next few years funds from operations (FFO) interest coverage is expected to continue to improve slowly but still remain weak for the rating at less than 4x on average. FFO interest coverage improved marginally in the last four years to 3.6x in 2003, up from 3.4x in 2001. FFO as a percent of average total debt could increase slightly to an average of 22%, up from 20% in 2003, but is also expected to remain aggressive for the rating. Growth opportunities, primarily in the electricity and gas rate base, are significant in the forecast period (5%-8% per year) and expected to dominate capital spending in the next two years absent any major capital acquisition. Capital spending in the regulated businesses is expected to average about C\$400 million per year in the next several years. ATCO's total debt to capital, however, is expected to remain about 50% on a consolidated basis. Consolidated cash flows are expected to be sufficient to internally fund capital expenditures during the period 2005-2007. Access to common equity is constrained by management's preference to maintain the existing ownership structure; however, the company's financial flexibility is mildly supported by the ability to control growth-related capital spending in the generation portfolio and the potential for some small asset sales.

Liquidity.

ATCO's liquidity is adequate to support day-to-day operating needs, modest debt maturities, and expected capital expenditures of all companies in the group, given ATCO's relatively stable cash flow generation, available bank facilities, and its ability to access capital markets. Well-spread debt maturities in the range of C\$160

million-C\$250 million per year in the next three years are manageable and although consolidated cash flows in 2004 are not expected to be sufficient to fully fund capital spending in 2004 available bank lines are more than adequate to meet the shortfall. ATCO's consolidated liquidity is supported by a total of C\$1.3 billion in operating lines of credit of which C\$500 million serves to back stop CP programs at the subsidiary level. As of Sept 30, 2004, C\$404 million remained available under the CP programs. With about C\$140 million required to meet other funding obligations, of the C\$800 million bank line capacity remaining, about C\$660 million is available for meeting debt maturities and general corporate purposes. Furthermore, the company generally maintains a healthy level of cash and short-term investments that as of Sept. 30, 2004, totaled C\$628 million, which would allow ATCO to take advantage of opportunistic asset acquisitions or withstand temporary financial setbacks.

■ Outlook

The stable outlook reflects a relatively stable, but moderately aggressive, financial profile that is adequately supported by ATCO's diversified utility operations, stable regulatory environment, and managed growth in higher risk nonregulated operations. The ratings, however, could be compromised by a large debt-financed acquisition or deterioration in ATCO's financial profile.

■ Ratings List

ATCO Ltd.	
Corporate credit rating	A/Stable/--
Preferred shares	
Global scale	BBB+
Canadian national scale	P-2(High)
Canadian Utilities Ltd.	
Corporate credit rating	A/Stable/A-1
Senior unsecured debt	A-
Preferred shares	
Global scale	BBB+
Canadian national scale	P-2(High)
Commercial paper	
Global scale	A-1
Canadian national scale	A-1(Mid)
CU Inc.	
Corporate credit rating	A/Stable/A-1
Senior unsecured debt	A
Commercial paper	
Global scale	A-1
Canadian national scale	A-1(Mid)

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The McGraw-Hill Companies

S&P, Research Summary: AltaLink
June 5, 2006

RESEARCH

Summary: AltaLink, L.P.

Publication date: 05-Jun-2006
Primary Credit Analyst: Nicole Martin, Toronto (1) 416-507-2560;
nicole_martin@standardandpoors.com
Secondary Credit Analyst: Bhavini Patel, CFA, Toronto (1) 416-507-2558;
bhavini_patel@standardandpoors.com

Credit Rating: A-/Stable/--

Rationale

The ratings on AltaLink, L.P. (AltaLink) reflect the company's strong business profile and average financial position. AltaLink's credit profile benefits from low-risk, electricity transmission assets, an attractive service area with favorable economic fundamentals, and the relatively supportive regulatory environment and market framework for transmission companies in the Province of Alberta. These strengths are offset by a financial profile constrained by regulatory directives, and pressured by capital funding requirements to meet significant network growth from 2006 to 2009.

Calgary, Alta.-based AltaLink is a regulated transmission company wholly owned by AltaLink Investments, L.P. (AILP; BBB-/Stable/--). Legal and structural ring-fencing measures permit the ratings on AltaLink to be insulated somewhat from its parent. A material change in the risk profile of either AltaLink or AILP could, however, have a direct effect on the ratings on both AltaLink and AILP. As of Dec. 31, 2005, including CP maturing in June 2006, AltaLink had total debt outstanding of about C\$622 million.

AltaLink's monopoly transmission assets have inherently low operating risk. The transmission assets have demonstrated good reliability performance, in line with those of its Canadian peers. Furthermore, 60% of the existing asset base is less than 20 years old. As the company significantly expands its transmission infrastructure during the next several years, the age profile will improve further, as should AltaLink's operating efficiency.

AltaLink's transmission assets represented about 50% of the total circuit kilometers of Alberta's transmission grid and about 40% of Alberta's total transmission rate base as of 2005. AltaLink serves most of the more populated southern half of the province. Forecast growth in electricity consumption within the province, ranging from 2%-3% per year, is among the highest in Canada. The provincial economy's continuing strong prospects for growth in the near term contribute to AltaLink's growing rate base.

The predictability and security of AltaLink's regulated cash flows are enhanced by the cost-of-service/rate of return regulatory framework under which it operates. Furthermore, stable monthly revenue shields the company from cash flow volatility stemming from weather- or economy-induced variability of energy demand. The Alberta Electric System Operator, an agent of the Province of Alberta (AAA/Stable/A-1+), pays AltaLink for transmission services, thus mitigating the company's exposure to the credit profiles of AltaLink's end-users. The Alberta Energy and Utilities Board (AEUB), an independent regulatory body, provides oversight of all transmission assets in the province, and approves the company's transmission tariffs. Infrastructure upgrades and expansion projects are pre-approved by the AEUB and, once completed, are added to AltaLink's rate base, thus mitigating the risk of AltaLink under-recovering its investment.

Like many regulated utilities in Canada, AltaLink's average financial profile is constrained by a comparatively low approved ROE (8.93% in 2006) on a thin deemed equity base of 35%. AltaLink's adjusted funds from operations (FFO) interest coverage ratio improved in 2005 to 3.8x, from 3.3x as of Dec. 31, 2004 (based on an eight-month reporting period). Deferred revenues of C\$7.5 million relating to

2004 were recorded in 2005 net income. After eliminating the impact of the collection of these revenues, adjusted FFO interest coverage in 2005 would be 3.5x, in line with expectations. FFO-to-average total debt increased to 16% in 2005, from about 10% in 2004. Total debt-to-total capital, adjusted for operating leases, increased marginally to about 63%, from 61% in 2004. (The company changed its fiscal year-end to Dec. 31 from April 30 during 2004 to align its fiscal period with its regulatory period.) In 2006, AltaLink's key credit metrics are expected to remain comparable with 2005 results. In 2007-2009, however, during what should be a significant buildout period, the company's FFO interest coverage ratio is likely to weaken modestly and average closer to 3.5x, and FFO-to-average total debt is expected to average about 13%. This temporary weakening in cash flow metrics is due to a lag between taking on additional debt to partially fund new assets and collecting related revenues. AltaLink's total debt-to-total capital is expected to remain stable at 62% throughout this period, which is high but typical for Canadian regulated utilities and the company's international peer group.

The potential of almost doubling by 2009 the utility's 2004 rate base via capital expansion presents a significant challenge to AltaLink's operational performance and financial profile. During this period, capital spending is expected to average more than C\$200 million per year, more than double historical annual capital expenditures of less than C\$100 million. Although the incremental capital expenditure will be pre-approved by the AEUB, it carries execution risk and presents an issue of delayed receipt of regulated cash flow until the new transmission assets are in service. The costs plus a return, however, will be recoverable through regulated revenues during the life of the assets once they are in service. The company will not be able to internally fund total capital costs related to this significant expansion; net cash flow to capital expenditures is expected to average 40% in the next three years. In addition to new debt financing, there is also an expectation of timely equity injections from the ultimate shareholders of AILP to fund growth, ensure adequate liquidity, and prevent the deterioration of the financial profile of both AltaLink and AILP.

The ratings on AltaLink largely reflect the company's stand-alone credit quality, but remain linked with the rating on its owner. Legal and structural ring-fencing features and demonstrated regulatory oversight restrict AILP's ability to significantly increase cash distributions from AltaLink and provide a measure of protection to the operating company in the event of bankruptcy of AILP. The ring-fencing measures allow AltaLink to be rated more on a stand-alone basis rather than using Standard & Poor's Ratings Services' consolidated methodology; the ratings, however, remain somewhat constrained by the creditworthiness of AILP.

Liquidity

AltaLink's liquidity, which benefits from an expectation of modest unit-holder support, is expected to remain satisfactory during 2006. Together, FFO, which is expected to be about C\$100 million in 2006, and the available capacity under the company's bank line and CP program, should be sufficient to fund forecast capital spending of about C\$230 million (net of customer contributions) and distributions of about C\$20 million in 2006.

The company established a C\$200 million CP program in late 2005 that is backstopped by a C\$200 million committed bank facility that expires in December 2008. As of March 31, 2006, C\$73 million remained available under this program. Given the partnership's ongoing capital expansion program, there is an expectation that the debt under the CP program will be refinanced with a long-term debt issue sometime in 2006 to maintain AltaLink's liquidity at an acceptable level. There are no significant short- or long-term debt maturities at AltaLink until 2008. Also in late 2005, AltaLink reduced its C\$185 million credit facility to C\$85 million, which remained essentially undrawn at the end of first-quarter 2006.

Although AltaLink's accessible cash and cash equivalents remained nil as of March 31, 2006, the company had a meaningful restricted cash balance of C\$55.7 million. The funds represent capital contributions from customers for construction of related customer-specific interconnections that will become available to AltaLink when the related projects are energized.

Outlook

The stable outlook reflects the expectation of full and timely equity injections from AltaLink's ultimate sponsors, in the 2006-2009 timeframe, to maintain a satisfactory capital structure at AltaLink by partially funding its capital expenditures. Failure of the sponsors to fulfill their commitment to inject cash on a timely basis would put immediate pressure on the ratings on both AltaLink and AILP. An outlook revision to

negative or a downgrade could result from a significant and sustained inability to achieve both AltaLink's and AILP's forecast stand-alone financial profiles. An outlook revision to positive or an upgrade is unlikely in the medium term, given that AltaLink will continue to face significant financing and construction risk for the next several years. Furthermore, the ratings on AltaLink remain tied to the creditworthiness of AILP that is not expected to improve in the next several years.

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S&P, Research:
Union Gas
August 24, 2006

RESEARCH

Union Gas Ltd.

Publication date: 24-Aug-2006
Primary Credit Analyst: Bhavini Patel, CFA, Toronto (1) 416-507-2558;
 bhavini_patel@standardandpoors.com
Secondary Credit Analyst: Dimitri Nikas, New York (1) 212-438-7807;
 dimitri_nikas@standardandpoors.com

Corporate Credit Rating

BBB/Developing/--

Financial risk profile (of parent Duke Energy Corp.)

Moderate

Debt maturities

2006 C\$83 mil
 2007 C\$208 mil
 2008 C\$110 mil
 2009 C\$28 mil
 2010 C\$222 mil

Company contact

Julie Dill (1) 704-373-4332

Outstanding Rating(s)**Union Gas Ltd.**

Sr unsecd debt

Local currency

BBB

CP

Local currency

A-2

Pfd stk

Local currency

BB+

Duke Energy Corp.

Corporate Credit Rating

BBB/Positive/NR

Sr unsecd debt

Local currency

NR

Sr secd debt

Local currency

NR

Pfd stk

Local currency

NR

Cinergy Corp.

Corporate Credit Rating

BBB/Positive/A-2

Sr unsecd debt

Local currency

BBB-

CP

Local currency

A-2

Duke Capital LLC

Corporate Credit Rating

BBB/Developing/A-2

Sr unsecd debt

Local currency

BBB

CP

Local currency

A-2

Pfd stk

Local currency

BB+

Duke Power Company LLC

Corporate Credit Rating BBB/Positive/A-2

Sr unsecd debt

Local currency

BBB

Sr secd debt

Local currency

BBB+

CP

Local currency

A-2

PanEnergy Corp.

Corporate Credit Rating

BBB/Developing/NR

Sr unsecd debt

BBB-

Westcoast Energy Inc.

Corporate Credit Rating

BBB/Developing/--

Sr unsecd debt

Local currency

BBB

Pfd stk

Local currency

BB+

Cincinnati Gas & Electric Co.

Corporate Credit Rating

BBB/Positive/A-2

Sr unsecd debt

Local currency

BBB

Sr secd debt

Local currency

BBB+

Sub debt

Local currency

BB+

Pfd stk

Local currency

BB+

Duke Energy Trading and Marketing, L.L.C.

Corporate Credit Rating

BBB-/Stable/--

PSI Energy Inc.

Corporate Credit Rating

BBB/Positive/A-2

Sr unsecd debt

Local currency

BBB

Sr secd debt

Local currency

BBB+

Pfd stk

Local currency

BB+

Texas Eastern Transmission LP

Corporate Credit Rating

BBB/Developing/--

Sr unsecd debt

Local currency

BBB

Union Light Heat & Power Co.

Corporate Credit Rating

BBB/Positive/--

Sr unsecd debt

Local currency

BBB

Sr secd debt

Local currency

NR

Corporate Credit Rating History

Mar. 25, 2002

A+

Aug. 14, 2002

A

Jan. 31, 2003

A-

June 17, 2003

BBB+

Feb. 10, 2004

BBB

Major Rating Factors

Strengths:

- Large customer base that has attractive demographics and is resistant to economic cycles
- Strategic ownership of natural gas storage and transmission assets enhances competitive position
- Regulated cash flows

Weaknesses:

- High leverage associated with company's regulated capital structure
- Allowed ROE is relatively low compared with global peers

Rationale

The ratings and outlook on Union Gas Ltd., an Ontario-based natural gas distribution company, reflect the consolidated credit profile of its ultimate parent, Duke Energy Corp. (BBB/Positive/NR). The ratings on Union Gas have been equalized with those on Duke Energy, reflecting Standard & Poor's Ratings Services' consolidated ratings methodology. The assessment is further supported by the strategic nature of Union Gas within the wider Duke Energy group of companies. (For more information on Duke Energy, please refer to the full report published Aug. 18, 2006 on RatingsDirect, the real-time Web-based source for Standard & Poor's credit ratings, research, and risk analysis.)

Union Gas is the second-largest natural gas distribution utility in Canada, serving approximately 1.3 million customers in northern, southwestern, and eastern Ontario. The company also owns and operates a transmission system (from Dawn, Ont. to Mississauga, Ont.) and the largest gas storage facility in Canada, with a working storage capacity of 150 billion cubic feet. As at June 30, 2006, Union Gas had total debt outstanding of about C\$2.0 billion.

Duke Energy's business risk profile is '6' (satisfactory) and its financial risk profile is adequate. The company's business risk profile is supported by a stable, regulated electric utility, low-operating risk gas transmission and distribution, and gas-gathering operations that provide the bulk of cash flow. These strengths are offset by higher risk international operations, exposure to real estate operations, and uncertainty as to how the regulatory environment will evolve in Ohio after 2008.

Duke Energy is planning to separate the electric business and natural gas operations effective Jan. 1, 2007, by spinning off the gas operations to shareholders. The new gas company will own all the U.S. and Canadian gas assets, while international and real estate operations will remain with the electric business, and Duke Capital LLC's (BBB/Developing/A-2) projected year-end 2006 debt balance of about US\$3 billion is expected to move to the new gas company. Although the separation is expected to be largely credit neutral for the electric business, there is concern as to how the new gas company will be capitalized, especially in light of expected planned capital projects.

On a stand-alone basis, the key factors supporting Union Gas' strong business profile include its efficient regulated gas distribution network, attractive franchise region in Ontario, strategic ownership of natural gas storage and transmission assets in southern Ontario, and a regulatory mechanism in place that allows for a complete flow-through of commodity cost expense to customers and permits the utility to adjust rates quarterly. The Ontario Energy Board (OEB) regulates the utility, and all of Union Gas' revenues are derived from regulated activities providing a measure of stability to cash flows. Union Gas has a strong competitive position, with a monopoly on gas distribution in the markets it serves, mitigating any competitive threats. The competitive advantage of Union Gas' storage and transmission assets involves a combination of market liquidity and operating flexibility that enhances credit quality and helps the company manage natural gas inventories, providing the benefit of security of supply. The transmission system and storage facility connect to six major U.S. and Canadian pipelines servicing three large North American markets (Ontario, Michigan, and New York City). These strengths are partially offset by the volatility of natural gas prices, which can affect gas purchase costs for the company's operating requirements; volumetric risk resulting from changes in economic conditions and the price of alternate fuel sources, leading to possible fuel-switching by customers; and weather-induced variability of demand, as differences from the assumption of normal weather that is used in rate setting could result in volatility in gas

consumption.

Duke Energy's consolidated financial risk profile is expected to remain adequate for the ratings and in line with recent financial performance, with adjusted funds from operations (AFFO) interest coverage of at least 4.2x in the medium term, AFFO-to-average total debt of at least 20%, and adjusted total debt that does not exceed 45% of total capital. Duke Energy has agreed to share about US\$240 million in merger-related savings with ratepayers in North Carolina, South Carolina, Indiana, Ohio, and Kentucky during the next two years. Duke Energy's financial risk profile remains robust for the rating through Standard & Poor's sensitivity, which accounts for the company's providing all the agreed-upon savings to ratepayers while incurring all costs to achieve the merger, thereby receiving no cost savings benefit.

Union Gas' financial policy is determined by Duke Energy, but is also dictated by local regulatory directives. The provincial regulator, the Ontario Energy Board (OEB), allows only a 35% deemed equity component in the company's capital structure for rate-setting purposes, although an agreement was reached with the OEB in May 2006 to increase the equity component to 36% effective Jan. 1, 2007; therefore, leverage is on the high end for regulated utilities in North America. Union Gas' financial measures for 12 months ended Dec. 31, 2005, included AFFO interest coverage of about 3.2x, adjusted total debt to total capital at about 68%, and AFFO to total debt at about 16%. Revenue stability is achieved through a cost-of-service basis, where the rates are set to recover revenues equal to the forecast costs, including operating, maintenance, and administrative costs. To reduce the price volatility of its gas supply, Union Gas has a risk-management policy in place that has been accepted by the regulator.

Liquidity

Standard & Poor's Ratings Services' overall assessment of Union Gas' liquidity is tied to a consolidated view of Duke Energy's liquidity, which is adequate. Based on available credit lines and expected cash flow, Union Gas' liquidity, on a stand-alone basis, should meet cash outlay commitments and debt maturities for the next 12 months. Union Gas has a committed line of credit of C\$400 million, which is primarily used as a backstop to its C\$400 million CP program. As of June 30, 2006, the CP program was undrawn. Union Gas also has a C\$25 million operating line of credit, of which C\$22 million was available at June 30, 2006. Internally generated cash flows are sufficient to fund capital expenditures in the next several years.

Union Gas' liquidity is viewed on a consolidated basis with that of its ultimate parent, Duke Energy. Duke Energy's liquidity is adequate in light of the ongoing trading and marketing operations, as well as expected debt maturities of about US\$1.6 billion annually until 2010. Total availability at March 31, 2006, through combined credit facilities was about US\$5.3 billion, with US\$3.1 billion at the Duke Energy subsidiaries (about US\$2.2 billion unused capacity) and US\$2.2 billion at the Cinergy Corp. (BBB/Positive/A-2) subsidiaries (US\$1.35 billion unused capacity). Standard & Poor's expects that Duke Energy will resize the credit facilities as they mature to reflect the absence of its own derivative portfolio, while continuing to have sufficient liquidity to support Cinergy's trading and marketing operations until they are sold.

Based on Standard & Poor's liquidity adequacy ratio, which captures the effects of an adverse credit and market event on a company's primary sources of liquidity, Cinergy's coverage was just adequate during first-quarter 2006. The computation assumes a downside scenario in which Cinergy would have to post enough collateral to cover its entire negative mark-to-market exposure while accounting for an adverse movement in power and gas prices.

Cinergy also has an accounts-receivable sale program (US\$406 million outstanding as of Dec. 31, 2005) that has a speculative-grade rating trigger.

Outlook

The developing outlook on Union Gas reflects the outlook on its parent, Duke Capital, which reflects concern as to how the proposed new gas company will be capitalized and funded upon completion of the planned spin-off. Although Standard & Poor's expects that the business risk profile of the new gas company will not be materially different from Duke Capital's current one, providing support to credit quality, additional information will be factored into the evaluation of the new gas company's credit profile as it becomes available.

Table 1**Duke Energy Corp.--Peer Comparison**

	--Average of past three fiscal years--					
	Duke Energy Corp.	FPL Group Inc.	Progress Energy Inc.	Exelon Corp.	Southern Co.	Dominion Resources Inc.
Rating history	BBB/Positive/NR	A/Watch Neg/--	BBB/Positive/A-2	BBB+/Watch Neg/A-2	A/Stable/A-1	BBB/Stable/A-2
(Mil. US\$)						
Sales	12,103.3	10,373.2	9,540.3	15,228.0	11,379.0	12,089.3
Income from continuing operations	527.4	871.6	763.7	1,195.0	1,534.3	1,191.7
Funds from operations (FFO)	3,389.4	1,806.5	1,593.3	4,094.3	3,140.1	3,267.8
Capital expenditures	2,151.3	1,400.9	1,456.3	1,990.3	2,067.5	2,139.0
Total debt	17,445.6	8,173.3	10,831.3	11,529.7	12,887.4	16,696.1
Preferred stock	0.0	1.7	93.0	87.0	526.7	1,080.0
Common equity	15,074.0	8,557.0	7,705.0	9,017.0	10,205.0	10,725.7
Total capital	33,146.2	16,731.9	18,665.7	20,648.0	23,619.1	28,501.8
Ratios						
Adjusted EBIT interest coverage (x)	2.5	2.6	2.0	3.6	3.6	2.5
Adjusted FFO interest coverage (x)	3.9	3.8	3.2	5.1	5.1	3.6
Adjusted FFO/avg. total debt (%)	18.8	19.1	13.2	29.4	23.7	17.0
Net cash flow/capital expenditure (%)	107.6	94.8	69.1	160.5	104.4	104.7
Adjusted total debt/capital (%)	52.6	52.8	61.4	59.3	56.4	61.0
Return on common equity (%)	3.1	9.8	10.0	13.3	14.5	10.8
Common dividend payout (%)	203.6	54.9	73.4	70.3	68.4	67.4

Table 2**Duke Energy Corp.--Financial Summary**

	--Fiscal year ended Dec. 31--					
	TTM ended March 31, 2006	2005	2004	2003	2002	2001
Rating history	BBB/Stable/A-2	BBB/Stable/A-2	BBB/Positive/A-2	BBB+/Negative/A-2	A/Negative/A-1	A+/Stable/A-1
(Mil. US\$)						
Sales	11,177.6	11,030.6	22,503.0	22,080.0	15,663.0	18,197.0
Funds from operations (FFO)	3,782.7	3,519.6	5,108.3	4,092.4	4,530.0	3,590.7
Income from continuing operations	2,014.9	1,508.3	1,232.0	(1,003.0)	1,034.0	1,994.0
Capital expenditures	2,485.3	2,351.4	2,423.0	2,591.0	5,508.0	5,930.0
Total debt	16,530.5	16,015.4	19,366.5	22,466.6	24,261.1	16,132.3
Preferred stock	0.0	0.0	134.0	134.0	157.0	234.0
Common equity	16,552.0	16,439.0	17,927.0	15,449.0	16,848.0	14,935.0
Total capital	33,809.5	33,105.2	36,893.0	37,535.0	40,880.0	30,774.0
Ratios						
EBIT interest coverage (x)	3.6	3.3	2.4	1.9	2.2	4.4

FFO interest coverage adjusted (x)	4.8	4.5	4.6	3.8	4.8	5.3
FFO/avg. total adjusted debt (%)	23.4	21.6	26.4	17.5	22.4	22.3
Net cash flow/capital expenditures (%)	100.5	102.7	163.6	114.7	64.0	44.8
Total debt/capital (%)	48.9	48.4	51.9	59.3	59.0	51.9
Return on equity (%)	11.9	9.1	6.6	(7.0)	5.9	13.0
Common dividend payout (%)	63.8	73.3	87.1	(101.8)	90.6	43.3
TTM--Trailing 12 months.						

Table 3**Union Gas Ltd.--Financial Summary***

Rating history	--Average of past three fiscal years--			--Fiscal year ended Dec. 31--		
	Issuer	2005	2004	2003	2002	2001
(Mil. C\$)						
Total revenues	1,920.0	2,084.0	1,841.0	1,835.0	1,589.0	1,926.0
Net income from continuing ops.	133.7	121.0	152.0	128.0	114.0	121.0
Funds from operations (FFO)	294.4	353.2	299.8	230.3	261.4	358.8
Capital expenditures	169.7	229.0	146.0	134.0	191.0	216.0
Cash and investments	20.3	0.0	0.0	61.0	0.0	0.0
Total debt	2,172.1	2,259.2	2,134.7	2,122.3	2,292.2	2,587.9
Preferred stock	105.0	105.0	105.0	105.0	105.0	119.0
Common equity	960.4	949.9	978.8	952.5	913.4	1,016.8
Total capital	3,237.4	3,314.0	3,218.5	3,179.8	3,310.5	3,723.7
Adjusted ratios						
EBIT interest coverage (x)	2.2	2.2	2.2	2.2	2.0	1.9
FFO int. cov. (x)	2.8	3.2	2.8	2.4	2.6	3.0
FFO/total debt (%)	13.6	15.6	14.0	10.9	11.4	13.9
Discretionary cash flow/total debt (%)	2.3	(2.0)	(3.2)	12.5	10.5	(11.9)
Net cash flow/capex (%)	110.7	101.8	116.3	119.6	47.8	133.7
Total debt/total capital (%)	67.1	68.2	66.3	66.7	69.2	69.5
Return on average equity (%)	12.6	10.4	13.4	11.7	10.2	10.9
Common dividend payout ratio (unadjusted) (%)	91.3	99.1	85.0	52.8	151.4	56.0
N/A--Not applicable.						

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**Standard & Poor's Industry Report Card:
Regulatory Rulings, M&A, and Fuel Cost
Recovery Dominate Global Utilities Credit Environment
November 21, 2006**

RESEARCH

Industry Report Card:

Regulatory Rulings, M&A, And Fuel Cost Recovery Dominate Global Utilities Credit Environment

Publication date: 21-Nov-2006
Primary Credit Analysts: Barbara A Eiseman, New York (1) 212-438-7666;
barbara_eiseman@standardandpoors.com
 John W Whitlock, New York (1) 212-438-7678;
john_whitlock@standardandpoors.com
 Paul Lund, London (44) 20-7176-3715;
paul_lund@standardandpoors.com
Secondary Credit Analysts: Nicole Martin, Toronto (1) 416-507-2560;
nicole_martin@standardandpoors.com
 Sergio Fuentes, Buenos Aires (54) 114-891-2131;
sergio_fuentes@standardandpoors.com
 Mark Legge, Melbourne 61-3-9631-2041;
mark_legge@standardandpoors.com

Commentary/Key Trends

Ratings activity for the global utility universe remained moderate over the past six months and was relatively balanced between upside and downside actions. Familiar themes continue to dominate the credit picture, including regulatory rulings, merger and acquisitions (M&A) activity, fuel cost recovery, accelerating capital expenditures for new generation projects, infrastructure improvements, and environmental requirements. Although these challenges and uncertainties may pressure future financial performance, overall, Standard & Poor's Ratings Services believes that the credit trend is likely to remain stable, based on the outlook distribution throughout the sector. While M&A activity and regulatory pressures are threatening ratings in Europe, the outlook for Latin American utilities is positive as companies continue to benefit from favorable market conditions.

In the U.S., rating actions were moving in a decidedly positive direction until early October, when political developments in Illinois resulted in downgrades of all of the state's electric utilities. The principal drivers of upside rating activity were organic developments such as stronger financial profiles and reduced business risk. Downward rating momentum can be traced to a difficult regulatory and political climate in Illinois and Maryland, weak financial metrics, and an increased emphasis on riskier unregulated ventures. Despite these challenges, the credit quality of U.S. utilities remains defined by the emphasis on core competencies, where risks are more familiar, but can still be considerable, including major pending regulatory decisions, the approaching end of lengthy rate freezes and industry transition periods in a few states, and the need for substantial infrastructure expenditures.

The Credit Drivers

Notwithstanding favorable market conditions in Europe, ratings remain under pressure due to a flurry of M&A deals and increasingly unsupportive regulation. The Canadian utility sector continued its trend of stable credit quality, reflecting a focus on the expansion of lower-risk, regulated core business, modest M&A activity, and the absence of any indication of further material market restructuring in any of the provinces. Although the outlook for the Australian utility sector remains predominately stable, liberal leverage at the regulated network businesses leaves companies susceptible to downward rating pressure in the event of underperformance. With the majority of Australian utilities in a growth mode and limited opportunities domestically, companies may become more acquisitive offshore. The lack of familiarity with the offshore region would heighten credit risk. In Latin America, utilities continue to benefit from favorable macroeconomic conditions.

Despite some recent terminations in the U.S., specifically FPL Group Inc. (A/Stable/--) and Constellation Energy Group Inc. (BBB+/Negative/A-2), and Exelon Corp. (BBB+/Watch Neg/A-2) and Public Service Enterprise Group Inc. (PSEG; BBB/Negative/A-3), M&A activity remains a major credit driver around the globe, especially in Australia and Europe, with private equity funds driving some European transactions. With most of the deals heavily debt-financed, credit quality will likely suffer. Utilities in Europe and the U.S. are also under pressure to increase shareholder value. This is especially significant for utilities whose financial profiles are already somewhat weak for their ratings, leaving them susceptible to negative rating actions if their credit metrics deteriorate further.

Going forward, a very important dynamic for shaping the overall financial condition of the industry will be the quality of regulation. In general, uncertainty regarding rate-setting actions in the U.S., New Zealand, and Europe will weigh heavily on credit quality. In the U.S., regulatory uncertainty has emerged with the approaching end of lengthy rate moratoriums and industry transition periods in some states. There will also be requests for large amounts of rate relief to recover plant investment. Regulators are likely to be reluctant to authorize material rate hikes, although the cost pressures on many utilities could be significant as they struggle with attrition caused by years without a rate filing following restructuring legislation and regulatory rule making. High fuel costs, pension obligations, and health-care expenses further exacerbate these pressures.

Although no fundamental changes are expected from the transition to a national regulator in Australia from a state-based regulatory regime, the conversion creates an element of uncertainty. Regulatory frameworks across Canada allow for below-average ROEs that may reduce financial flexibility, as utilities face a challenging period of asset renewal and growth. As the financial profiles of many utilities in Western Europe continue to strengthen, the regulatory environment has become more restrictive, especially in Germany and Sweden. Meanwhile, the regulatory climate in Latin America and Eastern Europe appears to remain supportive of credit quality.

In the U.S., Europe, New Zealand, and Latin America, financial performance has modestly strengthened. This improvement can be traced to the ability of most companies to pass on to customers higher fuel prices, an extended period of favorable market conditions, deleveraging, costs containment, and the sale of unregulated noncore assets. However, this trend may stabilize or reverse, due to the effects of high energy costs and problems that could arise with fuel availability, the continuation of debt-financed M&A, and accelerating capital outlays for new generating capacity additions, diversity of natural gas supply, new pipeline, and liquefied natural gas projects. Accordingly, responsive and timely rate adjustments by regulators and credit supportive actions by management will be necessary to prevent a decline in measures of bondholder protection.

Healthy Market Sustains U.S. Credits

The main drivers of recent upside rating actions for U.S. utilities include enhanced liquidity and overall stronger financial profiles, better operating performance, reduced business risk, and sustained improvement in regulatory relationships, and refocused business strategies. The negative rating actions were attributable to an extremely challenging regulatory environment, subpar financial parameters, and increasing business risk related to investments outside the traditional regulated business. The handful of new CreditWatch listings can be traced to event risk; specifically, M&A announcements. Perhaps the most recent notable events in the U.S. were the dissolution of the merger agreements between Exelon Corp. and PSEG, and FPL Group Inc. (A/Stable/A-1) and Constellation Energy. The collapse of these mergers is directly related to political unrest during the approval process, highlighting the very real vulnerability of utilities to aggressive political initiatives. These failed attempts may negatively affect the potential for utility consolidation in the U.S.

The ratings distribution for the utilities sector in the U.S. remains entrenched in the 'BBB' rating category and about 53% of the sector carries a stable credit outlook. This level of rating stability reflects a fundamentally sound business model, and a reasonably steady financial performance. Much of the industry continues to emphasize their core competencies, where risks are more familiar, but can still be considerable, including major pending regulatory decisions, the approaching end of lengthy rate freezes and industry transition periods in a few states, the need for substantial infrastructure expenditures, fuel cost recovery in a relatively high-fuel-price environment, and gradually rising interest rates.

The merchant power sector witnessed very limited rating activity in third-quarter 2006. Standard & Poor's

raised the ratings on Mission Energy Holding Co. and its subsidiaries one notch to 'BB-' to reflect the tighter relationship of the companies' credit quality to that of parent Edison International (BBB-/Stable/--) in light of Edison's expected but unspecified capital contributions over time. Otherwise, the only rating action was the placement of the 'B+' rating of Mirant Corp. and its rated subsidiaries on CreditWatch with negative implications, after the company announced that it would sell its Asian and Caribbean assets and use the proceeds to buy back stock. Generally, Standard & Poor's expects that a general consolidation of the merchant sector will result, despite the earlier failure of NRG Energy Inc. (B+/Stable/B-2) and Mirant to merge.

Because the bulk of a utility's operating expenses relate to fuel and purchased power, of primary importance to rating stability is the level of support that state regulators provide to utilities for fuel cost recovery, particularly as gas and coal prices have risen. Utilities operating under rate moratoriums, companies without access to fuel and purchased-power adjustment clauses or with fixed-fuel mechanisms, or which face significant regulatory lag, are also subject to reduced operating margins, increased exposure to cash flow volatility, and greater demand for working capital. Companies that are routinely granted fuel true-ups may be required to spread recovery over many years to ease the pain for the consumer. However, not all companies suffer from high fuel costs. Companies with significant nuclear and coal base-load capacity and midstream oil and gas operations are posting solid financial metrics, due to their generally low cost of production relative to gas-fired plants, which typically set the price of power in deregulated markets.

With few exceptions, regulatory outcomes have supported relatively strong credit characteristics for the utility industry. However, prospectively, regulators will be addressing large base-rate relief requests related to new generating capacity additions, environmental modifications on coal plants, and transmission and distribution (T&D) improvements. Current cash recovery and/or return by means of construction work in progress support what would otherwise be a sometimes-significant cash flow drain, and reduces a utility's need to issue debt during construction. Moreover, allowing rate recovery of projected costs with subsequent periodic updates for actual results reduces lags in cost recovery.

A favorable development for credit quality is that many regulatory rulings related to the construction of new base load follow comprehensive settlement negotiations among utilities, commission staff, consumer advocates, and other major intervenors. Such an approach, which has occurred in Wisconsin, Iowa, Missouri, Kansas, and Colorado, limits the possibility of any subsequent review of utilities' expenditure decisions. Also supportive has been the adoption in certain states, such as Kansas and Indiana, and most recently in Missouri, of environmental-tracking mechanisms and other riders that allow companies to reflect in rates capital costs associated with environmental-compliance equipment, without having to file a formal rate case. Finally, the greater the percentage of a utility's rates that are recovered through fixed charges, rather than volume-based charges, the greater the support for credit quality.

Notwithstanding gradual improvement in financial measures over the past few years and the industry's current focus on traditional regulated utility operations, Standard & Poor's does not discount prospects for a return to business pursuits outside the core competencies of utility management. Inevitably, competition for capital and investor interest could again embolden companies to embrace growth strategies that would likely erode credit quality, absent protective structural and ring-fencing mechanisms. Efforts to reward shareholders through share repurchases or common dividend increases will also weigh on credit quality. These actions are especially significant for companies whose financial profiles are already somewhat weak for their ratings, leaving them susceptible to negative rating actions.

Favorable Conditions In Europe Tempered By M&A Pressure

Most major European utilities continue to benefit from favorable market conditions. Generators and vertically integrated power utilities, particularly in deregulated markets, have continued to benefit from robust power prices driven by high oil, gas, and carbon dioxide prices. Nevertheless, ratings remain under pressure primarily due to M&A activity, with nearly half of the top-20 utilities (ranked by debt issuance) on CreditWatch with negative implications or with a negative outlook. This M&A activity is likely to be boosted in the near term by any fallout from the ongoing battle to takeover Spain's Endesa S.A. (A/Watch Neg/A-1) and from the merger of Suez S.A. (A-/Watch Pos/A-2) and Gaz de France S.A. (GDF; AA-/Watch Neg/A-1+) in France and Belgium.

M&A activity has also affected smaller utilities, where not only utilities, but also private equity funds are

acquisitive, with valuations increasing on regulated water and electricity assets alike.

M&A has remained a key ratings driver among the largest European utilities, but has not resulted in additional rating actions in recent months. Nevertheless, six major European utilities remain on CreditWatch due to M&A activity:

- E.ON AG (AA-/Watch Neg/A-1+) due to its planned acquisition of Endesa;
- Endesa due to its position as an acquisition target;
- Iberdrola S.A. (A+/Watch Neg/A-1) due to its agreement to acquire Endesa assets from the other bidder, Gas Natural SDG S.A. (A+/Watch Neg/A-1), if successful;
- GDF and Suez remain on CreditWatch with respect to their pending merger; and
- National Grid PLC (A+/Watch Neg/A-1) remains on CreditWatch, pending the acquisition of U.S. operator KeySpan Corp. (A+/Watch Neg/A-1).

Other major European utilities also affected by M&A activity include RWE AG (A+/Negative/A-1), which announced the sale of the largest U.K. water company, Thames Water Utilities Ltd. (BBB+/Watch Neg/A-2) to Kemble Water Ltd., a consortium led by Macquarie's European Infrastructure for £8.4 million including existing debt.

In Spain, the original timetable for the potential acquisition of Endesa by E.ON has been delayed, and timing for completion is uncertain. Numerous proceedings were launched by the various parties, in addition to the requirement for competing bids to run in parallel. The European Commission concluded that most of the Comision Nacional de Energia's conditions to approve the acquisition are illegal and requested explanations from the Spanish government. At the same time, Acciona S.A., the Spanish construction and investment company, is building a stake in Endesa, raising the acquisition price, which has so far been matched by E.ON.

Regulatory developments are likely to be a more negative factor, as European utilities' improved financial performance, due to high energy prices, attracts increasing scrutiny. The regulatory environment has become less supportive, particularly in Germany and Sweden.

In Germany, the new network regulator, Bundesnetzagentur, imposed significant tariff reductions. Initial cuts in tariffs of 18% for Vattenfall Europe Transmission (the third-largest German high-voltage grid operator), are achieved by reducing allowable asset values, the absolute ROE, and other costs. In Sweden, taxation on power generation has increased, while electricity network-distribution regulations have also become stricter. These adverse regulatory developments in Vattenfall's main markets were the key driver for our recent revision of its outlook to stable from positive. Further low- to mid-double-digit tariff cuts for various electricity and gas distribution operators have followed.

These conditions have also affected energy trading contracts, as a German Federal Court ruling forced E.ON to shorten the term of its wholesale gas sales contracts.

In France, which is traditionally supportive of its major utilities, the government granted GDF only a 5.6% increase in regulated supply tariffs, effective May 1, 2006, which does not cover the group's sourcing costs which negatively affected its cash flow by €331 million in the first half of 2006. Gas supply prices will now be reviewed on an annual, rather than quarterly, basis, increasing interyear liquidity needs. GDF's regulated electricity retail supply tariffs increased by only 1.7% from August 2006, which was the first since 2004. A further twist is that industrial electricity users who chose market-priced contracts can opt into a renewable, two-year period to tariffs capped at 30% above the regulated supply tariffs. Suppliers would be compensated by generators, in particular GDF. Such amendments will negatively affect GDF, as they will reduce the share of its highly profitable French sales at market prices. The group estimates that the mechanism will negatively affect its operating income. While the pressure from the EU is undoubtedly growing, it remains uncertain how the EU will implement the acceleration of competition and facilitate the drive to fully open the internal energy markets. Ratings could be affected by this move in the longer term, if significant restructuring of ownership or capital structures results.

The EU launched an investigation in June 2005 to assess the competitive conditions in the European gas

and electricity markets, with a view to addressing the barriers hampering the development of a fully functioning and open EU-wide energy market from July 1, 2007. In February 2006, the EU published a preliminary report, with the final report expected to be published early in 2007. The preliminary report details the five main barriers to a fully functioning gas and electricity markets identified by the EU:

- A high degree of concentration in most European markets, with some incumbents continuing to enjoy dominant positions;
- Vertical integration of the largest players, meaning not only the ownership of T&D assets by most incumbents, but also in gas, the network of long-term contracts between gas producers and incumbent importers;
- Limited market integration, given the difficulty in securing available capacity on cross-border pipelines in gas, and insufficient interconnection capacity and long-term capacity reservations precluding the market opening in electricity;
- Lack of transparency in the electricity wholesale market, but also of reliable and timely information on the gas markets; and
- Price formation mechanisms, which at present are not adequately robust and reliable.

The EU has launched a number of proceedings against 17 of the EU's 25 members (including France, Germany, Belgium, Spain, and Italy) for not fully incorporating directives on the full opening of energy markets to competition into national law.

Canada Credits Remain Solidly Investment Grade

The credit quality for the Canadian utility sector remains stable, despite an upcoming period of heavy capital spending. The sector remains solidly investment grade, with all issuers falling within the 'A' and 'BBB' ratings categories. The number of 'A' and 'A-' rated credits has remained unchanged in the past year. There has been some shuffling, both positive and negative, of ratings in the 'BBB' category related to company-specific developments. The Oct. 31, 2006 announcement by the federal Finance Minister of the government's intention to impose taxes in 2011 on Canadian "specified investment flow-through" entities, which include all of what are generally referred to as income trusts, has had a limited effect on creditworthiness in the sector in the near term. Two power trusts, anticipating equity issuance in the near term as part of financing of recent asset acquisitions, were put or remain on CreditWatch with negative implications, as management reviews financing plans under less-attractive equity market conditions. High capital requirements are expected to dominate the utility scene in Canada for the remainder of the decade. New electric and gas infrastructure (production and delivery) is required across the country to renew aging assets and meet increasing demand driven by domestic organic growth and increasing oil and gas exports. On the electricity side, multibillion-dollar transmission renewal and expansion has begun in Alberta and Ontario. Several key electric utilities have major new generation facilities under construction and are committed to more in the near future. Supplementing these large capital-intensive projects are large and small new independent power producer projects. For instance, a total of 3,600 MW of new generation (predominantly gas-fired) in Ontario alone is expected to be brought in-service in 2007 and 2008. More than C\$10 billion in various capital-expenditure opportunities for new oil and gas pipelines over the next several years have been identified. However, it is unclear at this time what projects will actually be developed. Many of these projects relate to the burgeoning developing in the Alberta oil sands.

Related pressure on financial strength is not expected to affect credit quality in the sector. Canadian utility financial policies tend to be aggressive with leverage, and regulators parsimonious with returns. As a result, most companies will not generate sufficient internal cash flow to fully fund projected outlays during this expansion period. The bulk of capital to be spent, however, will become part of regulated rate base and, once complete, companies are expected to recoup their cost of capital and earn a modest ROE. Furthermore, debt raised to build new (nonutility) generation will generally enjoy the support of relatively stable cash flow from long-term contracts with solid government counterparties. Limited new merchant generation is anticipated, and only in Ontario and Alberta.

M&A Abounds In Australia

M&A activity continues to be the major credit driver for Australian utilities. On Oct. 6, 2006, shareholders of Alinta Ltd. (BBB/Negative/--) and The Australian Gas Light Co. (AGL; unrated) voted in favor of the proposed A\$6.8 billion merger of AGL's infrastructure assets with Alinta and the subsequent separation of AGL Energy. As a result of the transaction, Standard & Poor's assigned a 'BBB' rating and stable outlook

to AGL Energy, and affirmed the 'BBB' rating on the Alinta companies, including the AGL infrastructure business, which was renamed Alinta LGA Ltd. on Oct. 25, 2006. However, the outlook was revised to negative reflecting the company's restructuring and integration challenges, combined with its aggressive risk appetite.

Also pending is completion of the Diversified Utility Energy Trust's (DUET; BBB/Negative/--) A\$429 million (29% equity) transaction in the consortium to purchase Duquesne Light Holdings Inc. (Duquesne; BBB/Watch Neg/--), which serves the greater Pittsburgh, Pa.-area. The transaction was announced on July 6, 2006. If approved by shareholders and regulators, the transaction should close in first-quarter 2007. DUET's credit quality will be unaffected by the completion of the transaction. With regard to privatization of government-owned electricity assets, in April 2006, the Queensland government announced the sale of the state's retail contestable electricity and gas assets. On Oct. 3, 2006, it was announced that the Australian Pipeline Trust was the successful bidder for the Queensland government's gas distribution business, Allgas for A\$521 million, which represents a very high 1.7x multiple to Allgas' A\$303 million regulated asset base value as of June 30, 2006. Other Queensland energy assets expected to be sold in 2006 include electricity and gas retailer Sun Retail and Powerdirect Australia, a second energy retailer. The outlook for the Australian utilities sector is stable, with nearly three-quarters of the rated entities possessing stable outlooks. Nevertheless, regulated network businesses remain aggressively financed, leaving little room in their rating for underperformance. With the majority of Australian utilities in growth mode and only limited opportunities domestically, a trend of companies becoming more acquisitive offshore is a distinct possibility. The lack of familiarity with the offshore regulation, markets, operations, and competitive environment can only heighten the credit risk of such transactions.

New Zealand Regulatory Environment Increasingly Uncertain

The regulatory environment in New Zealand has grown somewhat less uncertain, with the New Zealand Commerce Commission (NZCC) recently reaching several administrative settlements. In October 2006, Vector Ltd. (BBB+/Negative/--) reached an in-principle agreement on an administrative settlement with the NZCC. This follows the NZCC's August 2006 decision to publish an "intention to declare control" of Vector's electricity distribution services, reflecting its belief that Vector was earning excess returns. In September 2006, the NZCC and electricity distribution business, Unison Networks Ltd. (not rated), agreed to an administrative settlement that will result in a price cut effective December 2006.

Below-average hydrology and a lack of reserve power contributed to high wholesale electricity pool prices in early 2006. However, recent rains and snowmelt have alleviated the situation, with total storage up to 1,979 gigawatt-hours in mid-October 2006, an increase of 24% compared with the previous month. This has led to significant price relief, with average wholesale prices retreating back toward NZ\$40 per megawatt-hour (MWh) in mid-October, compared with prices of NZ\$160 per MWh in early April. By the same token, energy companies that are 'long' generation, such as Genesis Power Ltd. (Genesis; BBB+/Stable/--), Contact Energy Ltd. (BBB/Stable/A-2), and Mighty River Power Ltd. (BBB+/Stable/A-2), have experienced strong cash flow in 2006 because of the high electricity prices.

There have been some encouraging signs regarding additional gas sources in the short term. Most recently, the Pohokura field, with about 700 petajoules (PJ) of reserves, commenced commercial production in early September 2006. This field will complement the declining Maui field as it winds down over the next two to three years. In addition, an agreement has been reached to develop Kupe, the second-largest undeveloped field in New Zealand after Pohokura, with an estimated 281PJ of gas resource. The first gas is expected to be produced by mid-2009. Yet, New Zealand still faces a gas supply challenge over the medium term, as additional gas supplies are relatively modest, especially compared with the increasing demand for electricity (which is increasing at 2% to 3% annually). Furthermore, all the new gas supplies will be more expensive than the Maui gas on which New Zealand has long relied. Ratings stability is envisioned for New Zealand utilities. Very high average electricity prices during fiscal 2006 have generated strong cash flows to energy companies with surplus generation. However, uncertainty in the regulatory environment, particularly in the network sector, and uncertainty regarding additional gas supplies will continue to weigh on the sector's creditworthiness.

Latin American Momentum From Macroeconomic Conditions

The ratings trend for Latin American electric utilities remains positive, which has been the case since 2003. This upside momentum can be traced to good macroeconomic conditions, which has resulted in a relatively strong demand for power, stronger local currencies against the U.S. dollar, and better company

access to very favorable financial markets. This healthy economic environment has not been affected by presidential elections in many countries throughout 2006 like Perú, Colombia, México, Brazil, and Ecuador. The combination of higher cash flow generation and favorable financial market conditions permitted many companies to deleverage, extend debt tenors, and reduce foreign exchange risk and interest rates on their outstanding financial debt. As a result, various utilities in the region have been upgraded. These mainly included Argentine electric utilities that completed debt restructuring following massive defaults in early 2002; Brazilian companies that benefited from the country's positive economic and financial environment; and Chilean power generators that benefited from higher regulated electricity prices triggered by the passage of a new regulation in May 2005.

Rating Activity

Table 1

Asia Pacific

Company/Rating/Comments

Analyst

AGL Energy (BBB/Stable/--)

On Oct. 20, 2006, AGL Energy was assigned a 'BBB' rating and stable outlook. This followed a shareholder vote on Oct. 6, 2006, and the subsequent Federal court approval on Oct. 9, 2006, in favor of the proposed scheme of arrangement, meaning the merger and demerger between Alinta Ltd. and The Australian Gas Light Co. (AGL) became effective on Oct. 25, 2006. The remaining AGL infrastructure business forms part of the new Alinta corporate structure, and was renamed Alinta LGA Ltd. (BBB/Negative/--), also effective Oct. 25, 2006.

Mark Legge

Alinta Ltd. (BBB/Negative/--)

The merger between Alinta Ltd. and AGL Energy was completed on Oct. 25, 2006, following shareholder approval on Oct. 6, 2006. The combination of the existing Alinta group companies with the AGL infrastructure businesses improves Alinta's overall business profile through the consolidation of stable and predictable cash flow from regulated and monopoly-like assets. Moreover, creditworthiness is enhanced by the increased geographic and market diversity that the new businesses bring to the Alinta group.

Peter
Stephens

Contact Energy Ltd. (BBB/Stable/A-2)

Contact Energy Ltd.'s 2006 financial performance was sound with funds from operations at NZ\$408 million, moderately exceeding expectations. Highlighting the benefit of Contact's generation diversification, output increased by 10% over fiscal 2006, despite New Zealand's South Island experiencing the driest year in almost three decades. The company's thermal plant output rose more than 40%, which offset a 23% fall in hydro output. While high wholesale prices substantially benefited generation revenue, the negative impact on the company's retail operations due to a rise in electricity purchase costs was mitigated by a rise in electricity tariffs of 4%. Contact faces the dual and interrelated challenges of sourcing additional gas post-2010 to support its generation activities, and the associated pressure on margins as such gas will be more expensive and less flexible than the Maui 367 gas which ceases in 2009.

Mark Legge

Diversified Utility and Energy Trusts (DUET) (BBB-/Negative/--)

DUET is part of a consortium seeking to acquire Pittsburgh-based electricity company Duquesne Light Holdings (DQE; BBB/Watch Neg/--). Completion of the equity-funded deal is expected in first-quarter 2007. DQE will end up being DUET's largest investment, placing pressure on DUET to deliver equity returns sufficient to compensate its unit holders that have funded this investment. If the transaction proceeds as expected, the investment in DQE will improve DUET's financial profile and add up to 1x cover to POWERS, increasing coverage to about 4x. DUET also faces the challenge of managing the expansion of the Dampier-to-Bunbury Pipeline, which is currently undergoing stage 4 expansion with the stage 5a expansion about to commence. However, the risks around this investment are diminishing, as a track record is established as the stage 4 expansion nears completion.

Richard Creed

Origin Energy Ltd. (BBB+/Stable/A-2)

Origin Energy Ltd.'s cash flow metrics remained solid in fiscal 2006, with FFO to debt around 27%. Nevertheless, cash flow was below Standard & Poor's Ratings Services' expectations, primarily reflecting an 11% decline in exploration and production EBITDA, due to a 27% decline in Perth Basin oil production and delays in the BassGas Project. The Kupe Gas Project, in which Origin has a 50% share, received final investment approval in June 2006, with projected capital expenditures on the project having grown substantially to NZ\$980 million. Completion is expected by mid-2009. While the company is estimating EBITDA growth for its Australian operations of 15% in fiscal 2007, it has indicated contributions from its 51% investment in Contact Energy may shrink as its subsidiary deals with the challenges of possibly lower wholesale electricity prices and increasing gas (input) prices.

Mark Legge

Canada

Canadian Utilities Ltd. (A/Stable/A-1)

In second-quarter 2006 (ended June 30), Canadian Utilities Limited reported year-over-year growth in earnings due primarily to higher contributions from its natural gas storage operations and higher contributions from the sale of natural gas liquids at Atco Midstream. The increased earnings were somewhat offset by an unfavorable tax reassessment. Credit measures were stable, anchored by the consistent earnings contributions from its utilities and power generation

Kenton
Freitag

segments.

Hydro-Quebec (A+¶, A-1+¶ (¶Debt guaranteed by Province of Quebec (A+/Stable/A-1+)))

The long-term forecast on the company's financial profile is asset growth and financial stability, despite high capital expenditures in the next several years that could increase total debt by up to C\$1 billion by 2010. Hydro-Québec has 1,055 MW of new hydroelectric generation assets under construction, which should come into service from 2006 to 2008. The company's strategic sale of its noncore foreign investments is essentially complete with the \$1.5 billion sale of Transelec S.A. (BBB-/Stable/--) to Brookfield Asset Management Inc. (A-/Stable/A-2) that closed in third-quarter 2006. Funds from operations interest coverage improved marginally to 2.6x at year-end 2005, compared with 2.5x in 2004. Second-quarter 2006 (ended June 30) results were consistent with 2005 results, and Standard & Poor's Ratings Services' expectations.

Nicole Martin

Hydro One Inc. (A/Stable/A-1)

The ratings on Hydro One Inc. were affirmed on Sept. 15, 2006, and take into account the company's revised estimate of its level of annual capital expenditures. Subject to regulatory approval and project timing, capital spending by Hydro One will likely increase to between C\$800 million and C\$1.3 billion a year for several years, from close to C\$700 million in 2005. Standard & Poor's Ratings Services expects the company to debt finance about 20% of its capital spending. The capital projects will, however, add to Hydro One's revenue-generating regulated rate base in the long term. In addition to financial pressure on the transmission and distribution utility's balance sheet, the potential for decreased profitability and weaker cash flow credit metrics as a result of the Ontario Energy Board's ongoing generic cost-of-capital review was also considered. A recent reopening of a transfer tax holiday for municipally held utilities could prompt some partnerships or asset swaps in the Ontario local distribution company sector.

Nicole Martin

TransAlta Corp. (BBB/Stable/--)

In the second- and third-quarter 2006, TransAlta Corp. management continued to focus on optimizing operational performance, managing merchant exposure in the North American electricity wholesale market, and shoring up the balance sheet for the company's expected next growth phase. Standard & Poor's continues to expect adjusted funds from operations (FFO) interest coverage of better than 4x and adjusted FFO to total debt coverage of more than 20% in 2006, and similar results in 2007. A decision regarding a potential joint venture with EPCOR Utilities Inc. (BBB+/Stable/--) to develop a greenfield coal-fired electricity generation asset in Alberta toward the end of this decade is expected later this year. Any change in the ratings will largely depend on TransAlta's ability to continue to strengthen its balance sheet in the remainder of 2006 and 2007, its ability to recontract merchant capacity at its Centralia plant at favorable market prices in 2008 and beyond, and the extent of any other material growth commitments during the same period.

Nicole Martin

Enbridge Inc. (A-/Stable/--)

Enbridge Inc.'s second-quarter 2006 (ended June 30) results were consistent with Standard & Poor's Ratings Services' expectations and continue to highlight the stability of its credit metrics, with funds from operations interest and debt coverages and leverage similar to those at year-end 2005. The company has material growth plans; it has identified at least C\$8 billion in organic growth opportunities in the next five years. Accordingly, the ratings are increasingly focused on the company's ability to manage the project risk involved with its expansion, as well as maintaining a financial profile that is supportive of the current rating.

Kenton Freitag

TransCanada PipeLines Ltd. (A-/Negative/--)

TransCanada Pipelines Ltd.'s second-quarter 2006 results were modestly higher on a year-over-year basis. However, the operating segments demonstrated opposing trends. The pipeline segment showed declining earnings due to lower allowed ROE and a diminishing rate base on its Canadian Mainline and Alberta System pipelines. Improvements in the energy segment traced to higher volumes and improved margins in the power portfolio, as well as higher capacity and increased storage spreads in its natural gas storage facilities.

Kenton Freitag

Latin America

AES Gener S.A. (BBB-/Stable/--)

On April 20, 2006, Standard & Poor's Ratings Services upgraded AES Gener S.A. by one notch to 'BBB-' based on its better financial risk profile, demonstrated by its lower leverage, improving debt service coverage ratios, and favorable debt structure. AES Gener's profitability and cash flow benefited from the higher node prices in the Central Interconnected System (SIC) after the passage of the Short Law II in May 2005. In addition, AES Gener does not face significant refinancing risk in the next five years, as annual consolidated debt maturities are below \$60 million until 2014, when bonds for about \$570 million will become due. However, AES Gener remains exposed to natural gas supply shortages in Chile and to a drought in the SIC, because those factors affect the company's operating costs. A potential combination of both factors in the next two years would affect its financial performance.

Sergio Fuentes

Comision Federal De Electricidad (CFE) ((FC: BBB/Stable/--; LC: BBB+/Stable/--))

Lower oil and natural gas prices and new hydroelectric capacity are elements that were cited in Mexico's recent election as elements that could allow lower electricity rates become a reality. It is premature to assess the impact that this could have on Comision Federal De Electricidad's (CFE) credit profile. Nevertheless, it is relevant, given that a lack of a rate-setting policy that fully compensates CFE for all cost increases is viewed as a credit weakness. Other items that were highlighted by Mexico's president elect during the campaign included plans to develop schemes to allow large consumers to purchase electricity at more competitive costs, and allowing Mexico's energy companies to establish strategic alliances to have access to state-of-the-art technology.

José Coballasi

Companhia Energetica de Sao Paulo (CCC+/Positive/--)

Companhia Energética de São Paulo's (CESP) financial profile improved during 2006 after the BrR 1.2 billion capital injection by Sao Paulo and the BrR 2 billion primary share offering. However, the company's credit quality remains challenged by an aggressive debt amortization schedule and weak debt service coverage ratios. Standard & Poor's Ratings Services would revise the ratings upward, if CESP successfully extended its debt maturity profile and smoothed debt maturities in the next two years.

Juliana Gallo

Eletropaulo Metropolitana Eletricidade de Sao Paulo S.A. (BB-/Stable/--)

Eletropaulo Metropolitana Eletricidade de Sao Paulo S.A.'s rating was recently upgraded to 'BB-' due to the significant improvement of its financial risk profile, which benefits from the recent renegotiation of about 45% of its debt and from a debt reduction at the level of its holding company, Brasileira Energia S.A (Brasiliiana). Eletropaulo has recently extended the tenor of a BrR 2.7 billion debt with pension funds up to 2022. In addition, in September 2006, AES Transgas Empreendimentos S.A., which is majority owned by Brasileira, sold a nonvoting stake in Eletropaulo for BrR1.17 billion through a public offering. Proceeds were used to repay debt at the level of Brasileira. Those two factors resulted in a manageable debt amortization schedule through 2008 and lower pressure on Eletropaulo to upstream relatively high dividends to Brasileira.

Marcelo Costa

Enersis S.A. (BBB-/Positive/--)

On a consolidated basis, Enersis S.A.'s lower debt levels, coupled with the favorable economic environment in Latin America and the passage of the Short Law II in Chile in May 2005, resulted in an improvement in consolidated funds from operations (FFO) interest coverage and FFO to average total debt to 3.8x and 27.7%, respectively, in the 12 months ended June 30, 2006. Individually, dividends and interest payments from its 98%-owned subsidiary Chilectra S.A., allow Enersis to cover its interest expenses. In addition, Standard & Poor's Ratings Services expects dividends from its 60%-owned Empresa Nacional de Electricidad S.A. to continue increasing, based on its improving profitability and cash flow generation.

Sergio Fuentes

Interconexion Electrica S.A. E.S.P. (ISA) (Foreign currency: BB/Positive; Local currency: BBB-/Stable)

The ratings on Interconexion Electrica S.A. E.S.P. (ISA) reflect the company's dominant position in Colombia's power transmission system, its natural monopoly, the government's ownership, and its strategic importance for the Republic of Colombia. On Nov. 14, 2006, Standard & Poor's Ratings Services lowered the local currency corporate credit rating on ISA to 'BBB-' from 'BBB' and removed it from CreditWatch with negative implications, where it was placed on June 20, 2006, following the company's acquisition of a 50.1% controlling stake in Companhia de Transmissão de Energia Paulista. The downgrade reflected an aggressive financial policy evidenced by continued debt-funded acquisitions. The rating action took into consideration ISA's expected deleveraging of its capital structure through a stock issue in 2007, as well as the expected associated improvement in the company's financial measures.

Fabiola Ortiz

U.S.**American Electric Power Co. Inc. (BBB/Stable/A-2)**

American Electric Power Co. Inc. (AEP) faces an almost constant cycle of regulatory proceedings in one or more of the 11 states in which it operates, as well as at the federal level. The Texas Public Utilities Commission's decision to cut stranded-cost recovery was a credit disappointment. The mostly coal-burning company will be spending a lot of money on environmental compliance, a massive undertaking that heightens operating risk and regulatory risk, and threatens AEP's generation cost advantage.

Todd Shipman

Consolidated Edison Inc. (A/Negative/A-2)

Consolidated Edison Inc. announced a reduction in earnings guidance for 2006 after its 10-day power outage in Queens and smaller, sporadic interruptions in other parts of its New York City service territory. The new earnings target and reduced cash flow, associated with emergency response, permanent repairs, customer claims, and potential penalties, will further depress the company's already-weak financial measures. As of June 30, 2006, funds from operations (FFO) to total debt was about 13%, FFO interest coverage was 3.1x, and debt to capital was 55%. The current ratings factor in the expectation that regulatory rate increases, such as subsidiary Consolidated Edison Co. of New York's rate increase of \$220 million in 2007, will continue.

Kenneth L. Farer

Constellation Energy Group Inc. (BBB+/Negative/A-2)

A new state law requires subsidiary Baltimore Gas & Electric Co. to defer recovery of power costs, but also allows immediate relief through securitization. A troubling precedent of legislative intervention could still affect the utility's credit quality, if future supply cost increases are also controlled. Repricing of Constellation Energy Group Inc.'s power generation fleet is expected to increase cash flow on a consolidated basis. Consolidated financial measures are weak in 2006 after adjusting for debt like obligations, but the use of proceeds from the proposed sale of 3,800 MW of gas-fired assets for debt reduction will benefit balance-sheet strength.

Aneesh Prabhu

Dominion Resources Inc. (BBB/Positive/A-2)

Lower gas prices and mild weather have mitigated fuel-related expenses, which are unrecoverable above a frozen fuel factor through mid-2007. A strategic review undertaken by the company has resulted in a decision to sell most of the Dominion Resources Inc.'s exploration and production (E&P) assets, especially since changes in Virginia legislation obviate the need for E&P to act as a natural hedge for utility fuel costs. Proceeds from the sale will be first used to achieve targeted financial measures, which Standard & Poor's Ratings Services views as credit supportive. The sale would also support an overall lower business risk. Liquidity concerns have receded with gas prices at a more sustainable

Aneesh Prabhu

level.

Duke Energy Corp. (BBB/Positive/NR)

Duke Energy Corp.'s plans to separate the electric and natural gas operations are proceeding on schedule, with a start date of Jan. 1, 2007. Standard & Poor's Ratings Services reviewed the company's proposal and revised the outlook on Duke Capital Corp. (in essence the core of the new gas company) to positive, to reflect that entity's potential for a ratings upgrade of up to two notches. At the same time, the ratings on the remaining electric company were affirmed with a positive outlook, to reflect the likelihood for a higher rating as well. Duke Energy has followed through with its plan to reduce and mitigate business risk at the regulated operations, most recently completing the sale of Cinergy Corp.'s trading and marketing operations to Fortis NV of the Netherlands.

Dimitri Nikas

Edison International (BBB-/Stable/NR)

Ratings stability is expected in the near term, following a recent rating downgrade in response to revised strategic policies that allow capital infusions to be made into unregulated subsidiaries, if needed to support growth initiatives, and if they are in the shareholders' best interest. The company exhibited steady to gradual improvement in fully adjusted funds from operations (FFO) interest coverage of about 2.9x and in FFO to total debt of about 15% as of June 30, 2006.

David Bodek

Entergy Corp. (BBB/Negative/--)

Entergy Corp.'s pursuit to recover hurricane-related costs in its service territories, incurred in 2005, is ongoing. The company has made some progress through the implementation of securitization bills in Texas and Louisiana, but the timing of the recovery and amounts remain uncertain. Entergy estimates storm damage of \$700 million in Louisiana and \$390 million in Texas. The bankrupt subsidiary Entergy New Orleans recently filed its reorganization plan that is currently being debated among the various creditor classes, and the company could emerge from bankruptcy by year-end 2007 if the parties agree. At the same time, Entergy New Orleans has received an allocation of about \$200 million in federal grant money that will undoubtedly help. The consolidated business risk profile continues to reflect some pressure from ongoing regulatory challenges, such as in Arkansas, as well as the company's increasing involvement in nonregulated generation, such as the recent purchase of the Palisades nuclear plant from Consumers Energy Co. Nevertheless, the consolidated financial profile remains robust, with adequate credit-protection measures for the 12-months ended Sept. 30, 2006.

Dimitri Nikas

Exelon Corp. (BBB+/Watch Neg/A-2)

On Oct. 5, 2006, Standard & Poor's lowered its corporate credit rating on Commonwealth Edison (ComEd) to 'BBB-' from 'BBB+'. The rating remains on CreditWatch with negative implications. At the same time, Standard & Poor's placed its 'BBB+' corporate credit ratings on Exelon Corp., Exelon Generation Co., and PECO Energy Co. on CreditWatch with negative implications. The ratings actions reflect the increased potential for legislators in Illinois to extend ComEd's current rate freeze for another three years. The Illinois House of Representative could vote on rate freeze legislation by the end of November. ComEd has indicated that it will lose about \$4 million per day (pretax) if the rate freeze is extended. Despite having taken various steps to insulate itself from a bankruptcy filing at ComEd, if rate freeze legislation is signed into law, the overall credit quality of Exelon and ExGen would decline due to heightened counterparty credit risk at ExGen (ComEd and Ameren Corp.'s utilities will be customers of ExGen after 2006) and the potentially permanent loss of dividend income from ComEd to Exelon.

Jeanny Silva

FirstEnergy Corp. (BBB/Stable/--)

The company's rate certainty plan in Ohio will lower cash flow in the near term, but is viewed as credit neutral, as it preserves the recovery of increased fuel costs after 2008. The company's operating performance has been satisfactory, but doubts remain on the sustainability of nuclear operations. Rate cases in Pennsylvania and the post-2008 market structure in Ohio are other risks. Climbing maintenance expenditures will cut into free cash flow in 2006. Financial metrics and liquidity have improved markedly, as substantial debt was paid down in 2005. A share-repurchase program will bruise credit metrics, but they will remain consistent with ratings.

Todd Shipman

FPL Group Inc. (A/Stable/--)

FPL Group Inc.'s consolidated financial performance for the 12 months ended June 30, 2006 was below expectation, driven by the lingering cash flow effect of the 2004-2005 hurricanes and underrecovered fuel costs at the utility. The CreditWatch with negative implications listing reflects the announced merger with Constellation Energy Group Inc. The combined entity would likely have a higher business risk profile and weaker financial risk profile, because it would have a significantly higher percentage of cash flow from higher-risk competitive businesses, with little change in the pro forma balance sheet.

Jodi Hecht

Pacific Gas & Electric Co. (BBB/Stable/A-2)

Long-term electricity and fuel-procurement activities are ongoing and will define the utility's operational and financial profile. The California Public Utilities Commission remains committed to providing relief in response to material changes in utility costs, which contributes to rating stability. The company exhibited gradual improvements in cash flow coverage measures as of June 30, 2006, with fully adjusted funds from operations (FFO) to interest coverage of 3.4x and FFO to total debt of about 18%.

David Bodek

Progress Energy Inc. (BBB/Positive/A-2)

Financial performance for the 12 months ending June 30, 2006 improved slightly, as the fuel surcharge for Progress Energy Florida and Progress Energy Carolinas continue. Adjusted funds from operations to average debt improved to 15% compared to 14% in the previous year. The short-term focus remains on the execution of the debt-reduction plan, as

Jodi Hecht

the company exits higher-risk businesses.

Public Service Enterprise Group Inc. (BBB/Negative/A-3)

Meaningful debt reduction is contemplated, with the cash distributions from PSEG Energy Holdings LLC after the termination of merger proceedings with Exelon Corp. Cash flow over the next six months will benefit from revenue enhancements associated with the New Jersey Board of Public Utilities' most recent wholesale electricity auction, and from operational improvements. Both electric and gas rate cases were delayed due to merger proceedings, but are expected to be filed soon.

Aneesh
Prabhu

Sempra Energy (BBB+/Stable/A-2)

Consistent and predictable financial performance is expected at the utilities and Sempra Generation. Significant upcoming capital expenditures at the utilities, liquid natural gas (LNG) projects, the Rockies Express pipeline, and perhaps additional nonregulated assets could limit the amount of debt that can be paid down. Under conservative assumptions for Sempra Commodities, ratios are expected to be weak for the rating in 2006 and 2007, with funds from operations interest coverage and debt somewhat lower than 4x and 23%, respectively. This is because Sempra invested substantial sums in its LNG and pipelines businesses without any cash flows. For the 12-months ended June 30, 2006, these ratios stood at 4.1x and 22.8%, respectively. Ratios will improve significantly from 2008 onward, even under conservative assumptions for Sempra Commodities.

Swami
Venkataraman

Southern Co. (A/Stable/A-1)

Retail kilowatt sales were up 2.5% for the first half of 2006, compared with first-half 2005, mostly from customer growth and weather-related factors. Customer growth was 1.3% for the year ended June 2006. Mississippi Power Co. continues to evaluate several options to recover the costs to repair Hurricane Katrina damage, and federal grants could form part of the funding package. Adjusted funds from operations interest coverage was 4.8x for the year ended June 30, 2006, and should be around 5x through 2008.

Terry Pratt

TXU Corp. (BBB-/Negative/NR)

The negative outlook continues to reflect the potential for a lower rating, once the financial effects of TXU Corp.'s planned \$10 billion program to build 11 coal-fired power plants is factored into the consolidated rating. Retail customer counts continue to decline. For the 12 months ended June 30, 2006, adjusted funds from operations (FFO) to interest coverage was 5.1x and adjusted FFO to average total debt was 27.4%. However, leverage remains high compared with peers, as measured by an average total debt to total capital ratio of about 96%.

Terry Pratt

Europe

Edison SpA (BBB+/Stable/A-2)

Over the first half of 2006, Edison SpA's EBITDA was robust, at €774 million, due to strong volume growth and effective portfolio management in the electricity division, as well as improving procurement terms of gas purchases and higher selling prices of equity gas in the gas division. Consolidated net debt stood at about €4.8 billion, a slight decline from December 2005.

Monica
Mariani

Electricite de France S.A. (AA-/Negative/A-1+)

Electricite de France S.A.'s (EDF) satisfactory operating performance in the first half of 2006, with organic EBITDA growth of 3.3%, was driven primarily by international operations, which posted organic EBITDA growth of 6.1%, while the French operations only recorded a 1.5% rise. The French operations were affected by increased input costs, unfavorable weather and hydro conditions, and reduced availability of the nuclear plants in the first quarter, but benefited from cost savings. EDF will benefit in the second half of 2006 from the recently approved 1.7% increase in regulated supply tariffs. The international operations benefited in the first half of 2006 from the increased contribution of German affiliate EnBW and of EDF Trading. The group reduced its financial debt in the first half of 2006 -- despite a €1.3 billion payment for nuclear decommissioning and a €1.4 billion outflow for dividends -- due to its strong operating free cash flow of €4.1 billion, which was boosted by lower-than-expected capital expenditures, and €0.9 billion of disposals. EDF is now aiming for its reported financial debt to be lower at the end of 2006 than at the end of 2005.

Hugues de La
Presle

Endesa S.A. (A/Watch Neg/A-1)

The ratings on Endesa S.A. remain on CreditWatch with negative implications, following German energy utility E.ON AG's announcement on Sept. 26, 2006, of an increase in its bid for the Spanish utility. The operating performance of Endesa in the first half of 2006 was stronger than anticipated, with EBITDA growing 33% to €3.7 billion. This is the result of all the geographical business areas (Iberia, Latin America, and Europe) experiencing EBITDA growth between 30% and 38%. Driven by these excellent results, the company's management decided to revise upward the 2005 to 2009 strategic plan growth commitments given to the market in October 2005. EBITDA is now expected to grow by 38% from 2005 to 2009, and the dividend payout commitment is increasing accordingly. Net debt showed a slight increase of 4%, to €19 billion, from €18.2 billion at December 2005, mainly driven by the group's capital expenditures (€1.5 billion) and the financing of the tariff deficit that the Spanish system experienced again in the first half of the year (€572 million). Credit metrics strengthened, however, due to increased profitability and cash flow generation. Based on unaudited numbers, annualized funds from operations (FFO) to debt was 25% and FFO to net interest was 5.7x. The negative CreditWatch implications on Endesa reflect Standard & Poor's Ratings Services' initial assessment of the risk, albeit limited, of a deterioration in Endesa's profile to a level commensurate with an 'A-' rating, if any of the bids are successful. This initial assessment did not, however, anticipate the €1 billion bank guarantee posted in relation to a mercantile court suspension, or the recent, temporary changes to the Spanish wholesale power market regime (resulting from the Royal Law Decree 3/2006) and the resulting potential negative effects on Endesa's profitability.

Ana Nogales

Enel SpA (A+/Negative/A-1)

Over the first half of 2006, Enel SpA reported satisfactory results, with recurring EBITDA at €4 billion, growing by 5.3% primarily as a result of international activities and grid operations. Reported net debt grew to €14.1 billion from €12.3 billion at year-end 2005, reflecting primarily the effect of the consolidation of Slovenske Elektrarne and of €2.7 billion of dividends paid in June 2006. An additional €1.2 billion in dividends will be paid in November, as an interim dividend on 2006 results. Enel's international activity remains dynamic and resulted in the completion or announcement of several acquisitions in Eastern Europe and Latin America, the most notable Slovak generator Slovenske Elektrarne and Romanian distribution company Muntenia Sud. The group will continue to seek acquisition opportunities over the coming months. Barring material acquisitions, Enel should be able to maintain a ratio of funds from operations to adjusted total debt of about 30% in the short term. Over the longer term, Standard & Poor's Ratings Services expects Enel's financial profile to deteriorate from its current strong level, as the company releverages its balance sheet through capital expenditures, dividends, and acquisitions.

Monica
Mariani**Energias de Portugal (A/Stable/A-1)**

The strategic plan announced recently by Energias de Portugal S.A.'s (EDP) new management entails €5.6 billion of capital expenditures between 2006 and 2008, of which €2.1 billion on renewable energy and €1.4 billion to boost the group's generation capacity. Such investments are expected to be partially funded by about €800 million of sales. The group has also committed to increase its dividend by 8% per year on the back of an annual 11% growth in EBITDA over the period. Despite its substantial investment program and the planned increase in its dividend, EDP aims to improve its financial profile by 2008, its objective to reduce debt to EBITDA as calculated by the company to 3.8x in 2008 from 4.6x in 2005. EDP needs to improve its financial profile, which is currently weak for the ratings.

Ana Nogales

EnBW Energie Baden-Wuerttemberg AG (A-/Positive/A-2)

EnBW Energie Baden-Wuerttemberg AG's (EnBW) debt increased slightly in the first half of 2006, despite satisfactory operating performance, due to a strong receivables-related increase in working capital, the payment of dividends and, above all, consolidation of Stadtwerke Duesseldorf. The company is expecting further operating improvements (albeit tempered by the onset of regulation on its German network operations) and a continuation of its consolidation in the short term, although its appetite for generation and strategic investments has also increased. The positive outlook reflects the potential for ratings improvement over the medium term, if EnBW can further improve its financial profile and establish a track record of sustained financial improvement, as it shifts its focus from consolidation to growth. Nevertheless, any deterioration of its business position from increased regulation and competition in the German electricity and gas markets, together with growing investments, could temper the scope for ratings improvement.

Amrit Gescher

E.ON AG (AA-/Watch Neg/A-1+)

E.ON AG posted a robust performance for the first half of 2006, although its net cash position at year-end 2005 turned to a moderate net financial debt position of €2.6 billion, partially owing to the payment of a special dividend related to the disposal of E.ON's 43% Degussa stake and payments for a contractual trust arrangement for pension commitments (which were previously on the balance sheet). The rating was placed on CreditWatch with negative implications on Feb. 21, 2006, following the company's announcement of its intended all-cash offer for up to 100% of Endesa for €25.4 per share (after the payout of a special dividend by Endesa). On Sept. 26, 2006, E.ON said it would increase its offer to €35 per share. Following the bid, the Spanish government passed provisional regulations affecting the Spanish wholesale power market. These regulations could reduce the profitability of the vertically integrated Spanish utilities and, if the situation is prolonged, it could have incremental negative ratings implications. A recent German court ruling shortening the duration of E.ON's wholesale gas contracts, network tariff cuts by Germany's new energy regulator, and a fairly challenging market environment in the U.K. also imply a moderate increase in E.ON's business risk. E.ON has stated that it will defend its objective of maintaining an 'A' rating with a capital increase of up to 10% of total share capital, if necessary. Standard & Poor's Ratings Services also notes the group's wide asset base and the potential for disposals, if necessary. Given the perceived incremental weakening of E.ON's business position, we now expect that a ratio of funds from operations to adjusted net debt of more than 20% would be required to maintain an 'A'-category long-term corporate credit rating (compared with our previous expectation of 20%).

Amrit Gescher

Iberdrola S.A. (A+/Watch Neg/A-1)

The ratings were placed on CreditWatch with negative implications on Sept. 6, 2005, following Gas Natural SDG, S.A.'s (A+/Watch Neg/A-1) €22.55 billion bid for a 100% stake in Endesa and its agreement to a subsequent sale of an estimated €7 billion-€9 billion in assets to Iberdrola. In the first half of 2006, Iberdrola's operating performance remained strong, with EBITDA growing 20% to €1.9 billion, from €1.6 billion in the same period of 2005. This growth was driven by the wind power and international operations. This EBITDA figure includes, however, €353 million of tariff deficit. The group's financial profile remains weak, with net debt increasing by 11% to €13.6 billion, driven by the need to finance the tariff deficit and the continuing expansion strategy in international renewable operations. In addition, Iberdrola's involvement in Gas Natural's bid for Endesa indicates that the company is ready to pursue an aggressive acquisition strategy.

Ana Nogales

National Grid PLC (A/Watch Neg/A-1)

The ratings on National Grid PLC were placed on CreditWatch with negative implications on Feb. 24, 2006, after news of the potential acquisition of KeySpan Corp. (A/Watch Neg/A-1), a diversified energy company based in the northeast U.S. National Grid will pay £4.2 billion for KeySpan's equity, to be raised entirely in additional borrowing. This is in addition to the assumption of about £2.5 billion of existing debt at KeySpan. As of Sept. 1, 2006, National Grid had already raised £3.3 billion of its £6 billion funding target. The acquisition debt is all expected to be raised at the group holding company level. The acquisition is set to be completed during first-quarter 2007. Standard & Poor's Ratings Services expects to resolve the CreditWatch status once the acquisition becomes unconditional, following approval by the New York Public

Paul Lund

Service Commission. Any lowering of the rating is likely to be limited to one notch.

RWE AG (A+/Negative/A-1)

RWE AG's core operating performance continued its robust path in the first half of 2006 and net debt declined from year-end 2005, despite the outflow of the full-year 2005 dividend. The company's ongoing sale of the bulk of its water business, which was announced in November 2005, accounting for about one-quarter of the group's operating earnings, and the likelihood that it will invest some of these proceeds into riskier energy operations, is likely to weaken the company's very strong business profile and could have negative implications, if followed by rapid and extensive use of its financial flexibility. This could occur if investments are made in riskier operations or markets. RWE's clearly defined dividend policy, strong track record of financial consolidation in recent years, and strict acquisition criteria moderate the likelihood of such a development. Nevertheless, RWE could be subject to the M&A-related event risk currently characterizing Europe's consolidating energy markets. For the ratings to be maintained, the group will need to restrict itself to moderate-scale or low-risk acquisitions, as well as maintaining conservative financial policies. On Oct. 16, 2006, RWE announced its intention to sell U.K.-based water subsidiary Thames Water Holdings PLC for £4.8 billion (the transaction will likely be concluded in late 2006). The sale of RWE's U.S. water business should be completed in 2007. Proceeds from the sale of the U.K. and U.S. water assets will likely result in a net cash position by year-end 2006, which would increase further in 2007 before any acquisitions. Based on a lowered net-debt ceiling of €10 billion to €12 billion after the disposals, however, RWE expects to have headroom for acquisitions, if opportunities arise.

Amrit Gescher

Scottish Power U.K. PLC (A-/Stable/A-2)

Scottish Power U.K. PLC's agreement to sell its U.S. subsidiary PacifiCorp and return £2.25 billion of capital to shareholders is consistent with Standard & Poor's Ratings Services' expectations, and is already factored into ratings. Scottish Power concluded the disposal, ahead of our expectations, for a consideration of \$5.1 billion in cash and the assumption of \$4.3 billion in net debt and preferred stock. The financial impact of the PacifiCorp sale is likely to be positive, given a marked reduction in Scottish Power's debt, PacifiCorp's worse-than-expected recent performance, and the sharp reduction in capital-expenditure requirements. Nevertheless, we expect Scottish Power to pursue investments in higher-risk, competitive activities, which may gradually increase business risk. Scottish Power produced a strong financial performance for the year ended March 31, 2006, as operating profit was up 39%, with all businesses contributing to the growth. From July 10, 2006, the company's electricity prices will rise by an average 10%, while gas prices will increase by an average 17% as a result of rising wholesale prices.

William Ferrara

Suez S.A. (A-/Watch Pos/A-2)

Suez S.A. continued to perform strongly in the first half of 2006, with organic sales growth of 9.5% and EBIT up 13.9%, thanks to strong contributions from all of the group's four businesses. As a result, management has reviewed upward its guidance for the year, now expecting sales to grow by more than 7% and EBIT to rise by more than 15%. The group is also aiming for reported net debt to be below €12 billion at the end of 2006. Reported net debt stood at €13 billion at the end of June 2006, but has declined since then, due to the €1.2 billion proceeds Suez has received for the disposal of some of its stakes in the Belgian intermunicipal distribution companies. Suez and Gaz de France S.A. appear to have made some progress toward their merger.

Hugues De La Presle

Vattenfall AB (A-/Stable/A-2)

The recent revision of Vattenfall AB's outlook to stable from positive reflects the increasing regulatory and political pressure in the group's main markets of Sweden and Germany. Over the past year, several adverse regulatory and fiscal actions have affected Vattenfall. In Sweden, taxation on power generation has increased and electricity network distribution regulations have also become stricter. In 2006, the German network regulator imposed a decrease in transmission tariffs by almost 18%. Additional adverse measures cannot be ruled out. As a fully state-owned utility, Vattenfall could also become subject to political actions, such as potential restructuring of the company, major changes in strategy, or potential privatization. Financial performance during the first half of 2006 remained strong, mainly as a result of very high wholesale power prices in the Nordic region and in Germany.

Andreas Zsiga

Veolia Environnement S.A. (BBB+/Stable/A-2)

Veolia Environnement S.A.'s operating performance has remained strong in 2006, with organic sales growth of 9.9% in the first half. As a result, the group is now targeting a growth in sales of more than 10%, with a faster growth in its EBIT. The group's financial profile remains moderate, however. In addition, Veolia's strategy, which Standard & Poor's Ratings Services assumed rested primarily on organic growth, complemented only by add-on acquisitions, is somewhat blurred following its interest in French concession and construction group VINCI S.A., and the international environment assets of Suez S.A.

Hugues De La Presle

Contact Information

Table 2

Contact Information

Credit analyst	Location	Phone	E-mail
U.S.			
David Bodek	New York	(1) 212-438-7969	david_bodek@standardandpoors.com
Barbara Eiseman	New York	(1) 212-438-7666	barbara_eiseman@standardandpoors.com

Kenneth L. Farer	New York	(1) 212-438-1679	kenneth_farer@standardandpoors.com
Jodi Hecht	New York	(1) 212-438-2019	jodi_hecht@standardandpoors.com
Dimitri Nikas	New York	(1) 212-438-7807	dimitri_nikas@standardandpoors.com
Aneesh Prabhu	New York	(1) 212-438-1285	aneesh_prabhu@standardandpoors.com
Terry Pratt	New York	(1) 212-438-2080	terry_pratt@standardandpoors.com
Todd Shipman	New York	(1) 212-438-7676	todd_shipman@standardandpoors.com
Jeanny Silva	New York	(1) 212-438-1776	jeanny_silva@standardandpoors.com
Swami Venkataraman	San Francisco	(1) 415-371-5071	swami_venkataraman@standardandpoors.com
John Whitlock	New York	(1) 212-438-7678	john_whitlock@standardandpoors.com

Asia-Pacific

Richard Creed	Melbourne	(61) 3-9631-2045	richard_creed@standardandpoors.com
Chris Cudsi	Melbourne	(61) 3-9631-2156	chris_cudsi@standardandpoors.com
Mark Legge	Melbourne	(61) 3-9631-2041	mark_legge@standardandpoors.com
Peter Stephens	Melbourne	(61) 3-9631-2078	peter_stephens@standardandpoors.com

Latin America

José Coballasi	Mexico City	(52) 55-5081-4436	jose_coballasi@standardandpoors.com
Marcelo Costa	Sao Paulo	(55) 11-5501-8955	marcelo_costa@standardandpoors.com
Sergio Fuentes	Buenos Aires	(54) 114-891-2131	sergio_fuentes@standardandpoors.com
Juliana Gallo	Sao Paulo	(55) 11-5501-8948	juliana_gallo@standardandpoors.com
Fabiola Ortiz	Mexico City	(52) 55-5081-4449	fabiola_ortiz@standardandpoors.com

Canada

Kenton Freitag	Toronto	(1) 416-507-2545	kenton_freitag@standardandpoors.com
Nicole Martin	Toronto	(1) 416-507-2560	nicole_martin@standardandpoors.com

Europe

Hugues De La Presle	London	(44) 20-7826-3731	hugues_delapresle@standardandpoors.com
William Ferara	London	(44) 20-7176-3519	william_ferara@standardandpoors.com
Amrit Gescher	London	(44) 20-7176-3733	amrit_gescher@standardandpoors.com
Paul Lund	London	(44) 20-7176-3715	paul_lund@standardandpoors.com
Monica Mariani	Milan	(39) 02-72-111-207	monica_mariani@standardandpoors.com
Ana Nogales	Madrid	(34) 91-788-7206	ana_nogales@standardandpoors.com
Andreas Zsiga	Stockholm	(46) 8-440-5936	andreas_zsiga@standardandpoors.com

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Consensus Economics
Consensus Forecasts
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**Survey Date
October 9, 2006**

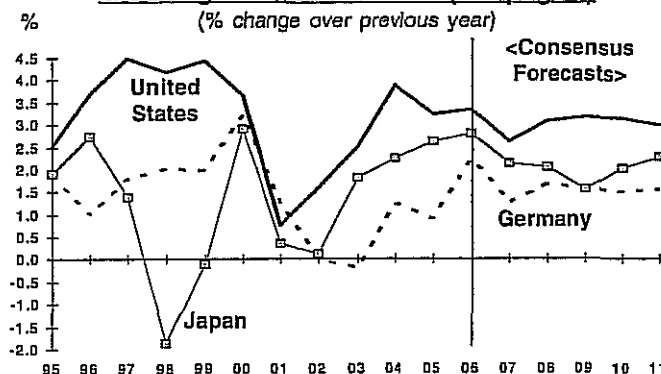
Every month, Consensus Economics surveys over 240 prominent financial and economic forecasters for their estimates of a range of variables including future growth, inflation, interest rates and exchange rates. More than 20 countries are covered and the reference data, together with analysis and polls on topical issues, is rushed to subscribers by express mail and e-mail.

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Survey Highlights

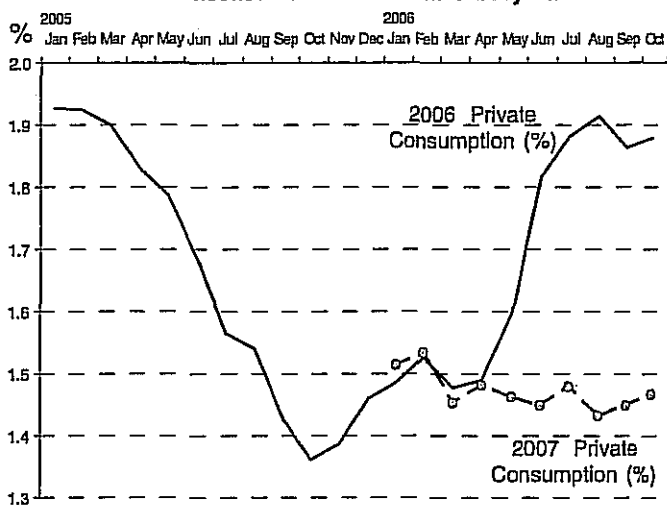
- ❖ **GDP forecasts** for the world's major economies have remained largely unchanged in this month's survey, reflecting mixed data releases.
- ❖ Moderating economic activity in the **US**, combined with lower energy prices, has resulted in consensus forecasts for consumer price inflation being lowered this month. These factors have also seen the Fed pause its cycle of monetary tightening for the second consecutive meeting, with our panel predicting that the next move in interest rates could well be downwards, sometime in the second quarter of 2007.
- ❖ In contrast, our **UK** panellists are confident that the Bank of England will increase interest rates in November, attaching a 65% likelihood to this outcome. Strong GDP growth and above-target inflation already saw the central bank hike rates in August.
- ❖ **Oil price** forecasts have been lowered following the sharp decrease in prices in recent months (see page 27).
- ❖ This month's special survey is a repeat of our regular compilation of **Long-Term Forecasts** (pages 3, 28, and 29), with consensus expectations for the next 5-10 years.

G-3 Long-Term GDP Growth (see page 3)



In the Euro zone (page 18), latest data releases suggest that economic activity remains robust, and this has led to an upgrade in our panel's forecasts for both 2006 and 2007 GDP growth. Upbeat news from forward-looking PMI surveys has helped. The German industrial sector, in particular, has played an important role in lifting regional production. A 3.7% jump (m-o-m) in German manufacturing orders in August, coupled with firm IFO business sentiment, also bodes well for Euro-wide capital spending intentions. However, despite this year's rise in investment estimates, 2007 forecasts have moderated on the back of the US slowdown and signs that Euro zone industrial output may be stabilizing. Consumer spending, however, continues to show gains, with August's 0.7% m-o-m rise in retail sales – from 0.4% in July – underscoring the improved outlook. Positive job market news has also supported private consumption expectations.

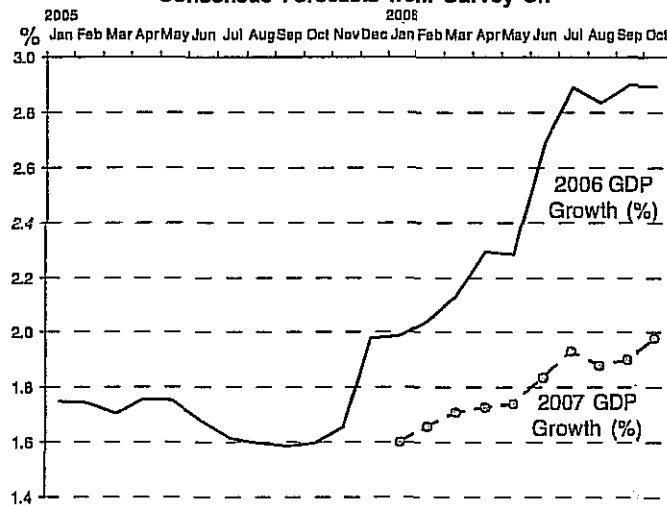
Consensus Forecasts from Survey of:



* % change on previous year	Historical Data			2006 Consensus Forecast	Consensus Forecasts for 2007 from Survey of					
	2003	2004	2005		May '06	June	July	Aug	Sep	Oct
Gross Domestic Product*	0.8	1.7	1.5	2.6	1.8	1.8	1.8	1.8	1.8	1.9
Private Consumption*	1.2	1.3	1.4	1.9	1.5	1.4	1.5	1.4	1.4	1.5
Gross Fixed Investment*	1.0	1.7	2.8	4.3	3.0	3.1	3.0	3.0	3.4	3.3

In Switzerland (page 24), 2007 forecasts have been upgraded again this month as the economy's recent strong performance continues. GDP growth has been at 0.7% (q-o-q) or above for the past five quarters, with the country benefiting from buoyant global economic activity (particularly in Germany, its closest trading partner) and a revival in domestic demand. Private consumption still remains fairly subdued by international standards but is forecast to increase by close to 2% in both 2006 and 2007. Strong exports, however, have been the bedrock of the expansion, with a current account surplus of 16% of GDP recorded in the first half of 2006. The upbeat data have prompted our panel to raise its 2007 forecast for this variable. Meanwhile, inflationary pressures remain absent, with prices anticipated to rise by just over 1% both this year and next. This has allowed the central bank to increase interest rates at a gradual pace.

Consensus Forecasts from Survey of:



* % change on previous year	Historical Data			2006 Consensus Forecast	Consensus Forecasts for 2007 from Survey of					
	2003	2004	2005		May '06	June	July	Aug	Sep	Oct
Gross Domestic Product*	-0.2	2.3	1.9	2.9	1.7	1.8	1.9	1.9	1.9	2.0
Private Consumption*	0.8	1.5	1.3	1.9	1.5	1.6	1.8	1.6	1.7	1.8
Current Account Balance (SwFr bn)	58.1	60.5	67.7	67.4	61.3	61.0	63.2	62.4	64.0	66.7

- GDP - Gross Domestic Product
 - na - not available
 - OECD - Organisation for Economic Co-operation and Development
 - y-o-y - year-on-year
 - q-o-q - quarter-on-quarter
 - IMF - International Monetary Fund
 - Emu - European economic and monetary union
 - ECB - European Central Bank
 - m-o-m - month-on-month
- Measures of GDP, Consumption, Business Investment and Industrial Production are expressed in real (i.e. inflation-adjusted) terms. These variables, and certain others as indicated, are expressed as percentage changes over the previous year.

In addition to their regular forecasts, country panellists were asked to provide longer-term forecasts covering the period until 2016 for growth in real GDP, consumer spending, investment and industrial production, along with consumer price inflation, current account balances and long-term bond yields. All definitions correspond to those used in the individual country pages.

United States											
* % change over previous year	Historical				Consensus Forecasts						
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2016 ¹
Gross Domestic Product*	1.6	2.5	3.9	3.2	3.4	2.6	3.1	3.2	3.1	3.0	3.0
Personal Consumption*	2.7	2.8	3.9	3.5	3.2	2.8	3.0	3.0	3.0	2.9	2.9
Business Investment*	-9.2	1.0	5.9	6.8	8.0	6.8	5.6	5.5	5.1	4.9	4.8
Industrial Production*	0.1	0.6	4.1	3.2	4.5	3.2	3.2	3.1	3.3	3.5	3.5
Consumer Prices*	1.6	2.3	2.7	3.4	3.5	2.5	2.3	2.3	2.3	2.3	2.3
Current Account Balance (US\$bn)	-472	-528	-665	-792	-855	-847	-821	-810	-788	-777	-732
10 Year Treasury Bond Yield, % ²	3.8	4.4	4.2	4.4	4.8 ³	5.0 ⁴	5.2	5.4	5.3	5.3	5.3

¹Signifies average for period ²End period ³End January, 2007 ⁴End October, 2007

Slowing growth fundamentals, coupled with higher interest rates, have raised concerns over the near-term US outlook. Our survey of long-term forecasts, though, suggests that GDP is expected to return to rates of 3% growth and above after 2007. The perceived resilience of US activity stems in large part from the economy's ability to implement technological change – which boosts the productivity of labour and capital inputs, thereby shifting North American trend-GDP growth rates higher – at a faster pace than its European counterparts. Indeed, Canadian GDP expectations over the forecast horizon project similar average growth of just under 3%. The US economy also benefits from less government intervention, lower taxation and fewer structural rigidities (although the US has yet to properly tackle its huge fiscal and current account deficits, with forecasts for the latter showing that the shortfall is not expected to narrow significantly over the next 5-10 years). In the Euro zone, this year's projection of firm economic growth of 2.6% is not expected to be sustained at the same rate of expansion going forward. Part

of this is due to structural challenges like more regulated labour markets and government intervention. Demographics are also significant: as Europe's "baby boom" generation moves towards retirement, a shrinking working population will shoulder a heavier burden to support them or risk a grave public pensions shortfall. Elsewhere, lower rates of job creation have yet to be properly tackled. This was illustrated earlier this year when efforts by the French government to add flexibility to youth employment were met with protests, partly by those seeking to preserve existing practices. In Italy, an already large fiscal shortfall – expected to reach 4.8% of GDP this year – has been met with plans to increase taxes; measures directly tackling structural rigidities have been less forthcoming. Consequently, French and, especially, Italian growth rates are forecast to remain modest over the medium-term. Japan's aging workforce and sizeable public deficit are also factors governing long-term forecasts. The good news, though, is that a return to deflation is not anticipated.

(tables continued on pages 28-29)

Japan											
* % change over previous year	Historical				Consensus Forecasts						
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2016 ¹
Gross Domestic Product*	0.1	1.8	2.3	2.6	2.8	2.2	2.0	1.6	2.0	2.3	1.7
Private Consumption*	1.1	0.6	1.9	2.1	1.9	1.9	2.0	1.5	2.2	2.2	1.8
Business Investment*	-5.2	6.2	4.7	7.8	9.1	5.7	4.6	3.1	3.5	4.2	2.6
Industrial Production*	-1.3	3.3	5.2	1.5	3.8	2.3	2.7	1.4	2.5	3.2	2.0
Consumer Prices*	-0.9	-0.2	0.0	-0.3	0.3	0.5	0.7	1.9	1.3	1.5	1.6
Current Account Balance (¥tn)	14.1	15.8	18.6	18.3	18.4	18.2	18.3	19.6	20.0	20.4	21.2
10 Year Treasury Bond Yield, % ²	0.8	1.4	1.4	1.5	1.9 ³	2.1 ⁴	2.4	2.7	3.1	3.4	3.5

Germany											
* % change over previous year	Historical				Consensus Forecasts						
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2016 ¹
Gross Domestic Product*	0.0	-0.2	1.2	0.9	2.2	1.2	1.7	1.6	1.5	1.6	1.5
Private Consumption*	-0.8	-0.1	0.1	0.1	1.0	0.1	1.1	1.3	1.3	1.3	1.2
Machinery & Eqpt Investment*	-7.5	-0.1	4.2	6.1	6.5	4.5	2.3	2.8	2.5	2.5	2.5
Industrial Production*	-1.3	0.1	2.5	2.8	4.7	2.6	2.0	2.4	2.1	1.8	1.9
Consumer Prices*	1.4	1.1	1.7	2.0	1.8	2.3	1.6	1.6	1.6	1.6	1.6
Current Account Balance (Euro bn)	43.4	40.3	81.9	92.6	85.9	89.1	92.0	82.1	73.4	69.0	68.6
10 Year Treasury Bond Yield, % ²	4.2	4.3	3.7	3.3	3.9 ³	4.0 ⁴	4.2	4.3	4.3	4.2	4.3

Year Average	Annual Total	Fiscal Years (Oct-Sep)		Rates on Survey Date					
				4.8%		4.7%			
Unemployment Rate (%)	Current Account (US\$ bn)	Federal Budget Balance (US\$ bn)		3 month Treasury Bill Rate (%)		10 Year Treasury Bond Yield (%)			
2006 2007	2006 2007	FY 05-06	FY 06-07	End Jan'07	End Oct'07	End Jan'07	End Oct'07		
4.6	4.5	na	na	-300	-275	5.5	5.8	5.4	5.8
4.7	4.8	na	na	na	na	4.9	4.9	4.9	5.1
4.7	4.8	-850	-860	-265	-285	5.0	4.3	4.9	4.5
4.7	5.0	-862	-883	-245	-290	5.5	5.0	4.5	4.3
4.8	5.4	na	na	-176	-225	5.0	4.8	4.5	5.3
4.7	5.0	-875	-849	-250	-250	5.1	5.0	5.1	5.1
4.7	5.1	-858	-879	-296	-335	na	na	na	na
4.7	5.0	na	na	-245	-280	5.0	4.4	5.0	4.8
4.7	4.7	-880	-900	-300	-325	5.2	5.3	4.9	5.1
4.7	4.9	-858	-830	-280	-306	4.9	4.6	5.0	5.0
4.7	5.1	-857	-800	-235	-320	4.7	4.0	4.5	4.4
4.8	5.0	-800	-820	-240	-225	4.9	4.9	4.7	4.9
4.7	4.5	-902	-1006	-260	-280	na	na	na	na
4.7	5.0	-848	-816	-170	-181	5.0	4.7	5.0	5.2
4.8	5.1	-854	-880	-235	-250	5.1	4.9	4.9	5.1
4.8	4.9	na	na	na	na	4.8	4.8	4.8	5.1
4.7	5.0	-885	-915	-260	-300	4.8	4.0	4.6	4.5
4.7	5.1	-839	-833	-233	-232	5.2	5.2	4.9	5.1
4.8	5.3	na	na	na	na	4.4	4.3	4.5	4.8
4.7	4.9	-849	-820	-364	-348	5.0	4.7	4.7	5.0
4.7	5.0	na	na	-260	-300	5.1	4.6	5.0	5.0
4.7	5.3	-775	-690	-234	-249	5.0	5.0	5.1	5.4
4.7	5.0	-875	-842	-270	-287	4.8	4.4	4.7	4.6
4.8	5.6	-849	-792	-275	-335	4.8	4.0	4.7	4.4
4.7	4.7	-845	-828	-173	-175	4.9	4.9	5.0	5.4
4.7	4.7	-853	-834	-259	-280	5.0	4.3	4.9	5.0
4.7	5.0	-880	-860	-280	-260	5.1	5.2	5.0	5.5
4.7	5.1	na	na	-190	-241	5.0	4.4	4.7	4.7
4.7	5.0	-855	-847	-252	-273	5.0	4.7	4.8	5.0
4.7	5.0	-855	-856	-246	-269				
4.7	4.9	-884	-887	-308	-320				
4.8	5.6	-775	-690	-170	-175	5.5	5.8	5.4	5.8
4.6	4.5	-902	-1006	-364	-348	4.4	4.0	4.5	4.3
0.0	0.2	28	61	44	45	0.2	0.4	0.2	0.4
5.0	5.0			-337	-270				
4.7	4.8			-423	-354				
4.8	4.9	-869	-959						
4.7	4.7								

Fed Weighs Up Inflation Alongside Slower Growth Outlook

The Fed left interest rates unchanged on September 20 for the second consecutive time, prompted by signs of receding price pressures. Oil prices have been on a downward bent over the past two months, while producer costs moderated recently on the back of lower automobile prices. Headline consumer price increases also fell back in August, to 3.8% y-o-y; however, this follows three consecutive months of inflation above 4%. Despite our panel downgrading its forecasts for both consumer and producer prices in 2006 and 2007, the inflation threat has not diminished completely. For example, core personal consumption expenditure prices (the Fed's primary indicator of underlying inflation) rose to a new cyclical high of 2.5% y-o-y in August, up from 2.3% in July. This coincided with news of rising income growth which, coupled with higher unit labour costs evidenced in the second quarter's productivity report, underscores the Fed's conclusion that "inflation risks remain." Our panellists are already predicting an end to monetary tightening (see box, below), but Fed chairman Ben Bernanke has hinted that any further movement in rates is more likely to be upward than down.

Industrial production contracted by 0.1% m-o-m in August following July's 0.4% gain, while the factory report for the same month showed zero growth in new orders (in m-o-m terms). Shipments did rise following two months of declines, while the trend in core capital goods orders and shipments over the third quarter bodes well for the business investment outlook. However, manufacturing sentiment has become increasingly muted, as evidenced in September's ISM survey which showed production, orders and, particularly, employment falling back. This year's forecast for industrial production, however, has crept up this month although 2007 estimates have moderated. Elsewhere, consumer spending remains resilient in the face of lukewarm job creation and waning housing market activity. Real consumption contracted by 0.1% m-o-m in August, but consumer confidence in September jumped as a result of lower gasoline prices and an improved perception of job fundamentals (September's labour report showed larger-than-expected upward adjustments to past data). Next year's expectations for consumer spending have consequently seen a slight upgrade.

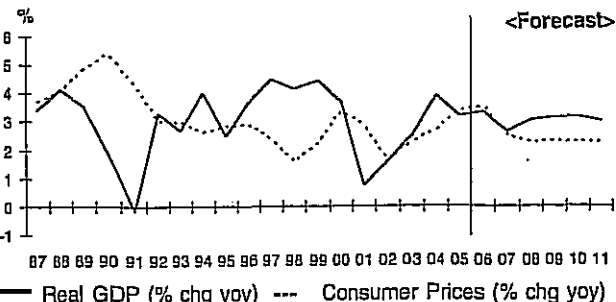
Direction of Trade – 2005

Major Export Markets (% of Total)		Major Import Suppliers (% of Total)	
Canada	23.4	Canada	16.9
Mexico	13.3	China	15.0
Japan	6.1	Mexico	10.0
Latin America	21.2	Asia (ex. Japan)	28.0
Asia (ex. Japan)	18.6	Latin America	17.5
Middle East	3.9	Middle East	4.0

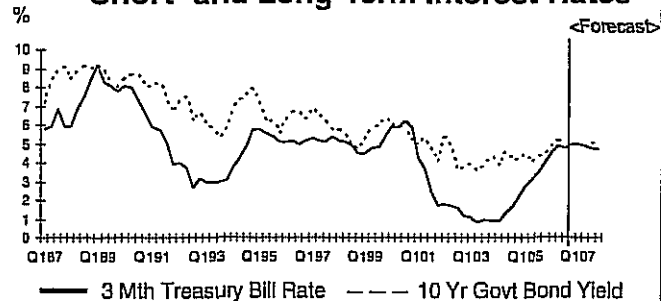
US Fed Funds Rate – October 9, 2006 = 5.25%

FORECASTS	End Dec. 2006	End Mar. 2007	End June 2007	End Sep. 2007
Consensus Mean Average:	5.22%	5.20%	5.06%	4.90%
Mode (most frequent forecast):	5.25%	5.25%	4.75%	4.50%

Real Growth and Inflation



Short- and Long-Term Interest Rates



	Average % Change on Previous Calendar Year												Annual Total					
	Gross Domestic Product		Private Consumption		Business Investment		Industrial Production		Consumer Prices		Domestic Corporate Goods Prices		Total Cash Earnings (nominal)		New Car Registrations (mn)		Housing Starts (mn)	
	国内総生産		民間消費		民間設備投資		鉱工業生産		消費者物価		卸売物価		現金給与総額(名目)		新車登録台数(百万台)		親設住宅着工(百万戸)	
Economic Forecasters	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007
Merrill Lynch - Japan	3.2	3.0	2.2	3.2	10.4	7.3	4.7	3.3	0.3	0.7	na	na	na	na	na	na	na	na
Mitsubishi UFJ Research	3.2	2.0	1.8	1.1	9.8	7.4	4.5	2.0	0.2	0.8	3.1	2.7	1.0	1.8	na	na	1.30	1.28
Mitsubishi Research Institute	3.0	2.2	1.9	2.0	8.8	5.7	3.5	2.0	na	na	3.0	1.3	na	na	na	na	1.29	1.32
Daiwa Institute of Research	2.9	2.4	2.0	2.0	9.3	3.8	3.6	0.5	na	na	2.9	0.2	na	na	na	na	na	na
Deutsche Securities	2.9	1.6	1.7	1.7	9.6	2.1	3.8	-0.2	0.2	0.6	3.2	0.9	0.5	0.8	na	na	na	na
ITOCHU Institute	2.9	2.1	2.1	1.9	9.2	5.9	3.7	2.1	0.2	0.4	2.8	1.4	0.6	1.5	3.3	3.3	1.27	1.28
Nomura Securities	2.9	2.4	1.7	2.1	9.2	6.7	4.5	5.0	0.4	0.5	3.2	2.2	0.9	1.0	na	na	na	na
JP Morgan - Japan	2.8	2.8	1.9	2.3	9.9	9.1	3.9	4.2	0.2	0.7	3.0	2.5	na	na	na	na	na	na
HSBC	2.8	1.9	1.9	1.7	8.4	5.7	4.0	1.9	0.5	0.5	1.9	0.7	na	na	na	na	na	na
Econ Intelligence Unit	2.8	2.1	1.8	1.8	na	na	2.9	1.4	0.4	1.3	4.4	1.8	na	na	na	na	na	na
Global Insight	2.7	2.3	2.0	2.7	7.9	2.7	3.6	0.8	0.4	0.7	2.9	0.9	na	na	na	na	1.27	1.27
Credit Suisse	2.7	2.0	1.8	1.6	9.3	6.0	4.8	3.9	0.2	0.0	na	na	na	na	na	na	na	na
Goldman Sachs	2.7	2.4	1.8	1.6	9.2	10.3	3.4	3.5	0.2	0.5	2.7	1.5	na	na	na	na	na	na
Japan Ctr for Econ Research	2.7	2.0	1.9	1.5	8.1	4.3	3.8	3.3	na	na	2.7	0.9	0.9	1.7	na	na	1.31	1.33
Mizuho Research Institute	2.7	1.8	1.9	1.9	8.2	2.5	3.8	1.6	0.3	0.2	2.8	0.4	0.6	2.1	na	na	1.26	1.20
Nikko Citigroup	2.7	2.3	1.6	2.0	9.2	7.0	3.6	2.7	0.2	0.3	2.7	-1.6	na	na	na	na	na	na
NLI Research Institute	2.7	1.8	1.8	1.8	9.2	5.6	3.7	2.5	0.2	0.0	3.0	0.5	na	na	na	na	1.28	1.24
Toyota Motor Corporation	2.7	2.2	2.0	1.6	8.0	4.0	4.0	2.0	0.3	0.2	3.0	1.5	na	na	3.3	3.2	1.27	1.20
Bank of Tokyo-Mitsubishi UFJ	2.6	1.7	1.8	1.7	9.1	5.6	3.4	1.9	0.2	0.3	2.9	1.1	0.5	0.5	na	na	1.25	1.25
BS	2.6	2.0	1.8	1.9	9.3	6.7	3.1	1.5	0.1	0.2	2.3	1.1	0.5	1.0	3.5	3.4	1.25	1.27
Consensus (Mean)	2.8	2.2	1.9	1.9	9.1	5.7	3.8	2.3	0.3	0.5	2.9	1.1	0.7	1.3	3.4	3.3	1.27	1.26
Last Month's Mean	2.8	2.2	1.9	1.9	9.1	5.3	3.9	2.2	0.4	0.6	2.9	1.0	0.7	1.3	3.4	3.3	1.27	1.25
3 Months Ago	3.0	2.2	2.2	1.9	6.9	5.1	3.9	2.5	0.6	0.6	2.4	0.7	0.8	1.3	3.3	3.3	1.26	1.26
High	3.2	3.0	2.2	3.2	10.4	10.3	4.8	5.0	0.5	1.3	4.4	2.7	1.0	2.1	3.5	3.4	1.31	1.33
Low	2.6	1.6	1.6	1.1	7.9	2.1	2.9	-0.2	0.1	0.0	1.9	-1.6	0.5	0.5	3.3	3.2	1.25	1.20
Standard Deviation	0.2	0.3	0.1	0.5	0.7	2.1	0.5	1.3	0.1	0.3	0.5	1.0	0.2	0.6	0.1	0.1	0.02	0.04
Comparison Forecasts																		
IMF (Sep. '06)	2.7	2.1	1.9	2.0					0.3	0.7								
OECD (May '06)	2.8	2.2	1.7	1.6					0.7	0.8								

Government and Background Data

Prime Minister - Mr. Shinzo Abe (LDP). Parliament - The LDP-led coalition, with the New Komeito party, has a majority in the lower House of Representatives, or *Shuglin* (323 out of 480 seats). Next Elections - by 2010 (lower house). Nominal GDP - ¥502.6tn (2005). Population - 128.1mn (mid-year, 2005). Yen/\$ Exchange Rate - 110.2 (average, 2005).

Quarterly Consensus Forecasts

Historical Data and Forecasts (bold italics) From Survey of September 11, 2006

	2006		2007				2008			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Gross Domestic Product	3.4	2.5	2.9	2.4	2.4	2.4	2.1	1.9	1.9	1.9
Private Consumption	2.0	1.8	1.9	1.8	2.0	1.9	1.9	1.9	1.9	2.1
Consumer Prices	-0.1	0.2	0.7	0.7	0.5	0.6	0.6	0.6	0.6	0.8

Historical Data

* % change on previous year	2002	2003	2004	2005
Gross Domestic Product*	0.1	1.8	2.3	2.6
Private Consumption*	1.1	0.6	1.9	2.1
Business Investment*	-5.2	6.2	4.7	7.8
Industrial Production*	-1.3	3.3	5.2	1.5
Consumer Prices*	-0.9	-0.2	0.0	-0.3
Domestic Corporate Goods Prices*	-2.1	-0.8	1.2	1.7
Total Cash Earnings (nominal)*	-2.3	-0.4	-2.7	0.6
New Car Registrations, mn	3.2	3.2	3.4	3.4
Housing Starts, mn	1.15	1.16	1.19	1.24
Unemployment Rate, %	5.4	5.3	4.7	4.4
Current Account, ¥tn	14.1	15.8	18.6	18.3
General Govt Budget Balance, SNA basis, fisc. years, ¥tn	-29.2	-35.3	-32.9	-25.4 e
3 mth CD's, % (end yr)	0.1	0.1	0.1	0.1
10 Yr Govt Bond, % (end yr)	0.8	1.4	1.4	1.5

Year Average	Annual Total		Fiscal Years (Apr-Mar)		Rates on Survey Date				
					0.4%		1.7%		
Unemployment Rate (%)	Current Account (¥tn)	General Government Budget Balance (¥tn)		3 month Yen Cert of Deposit (%)		10 Year Govt Bond Yield (%)			
失業率	経常収支	一般政府財政収支 (SNA ベース、兆円)		3ヵ月物円建 譲渡性預金		10年物国債利回り			
2006	2007	2006	2007	FY 06-07	FY 07-08	End Jan'07	End Oct'07	End Jan'07	End Oct'07
4.0	3.5	18.9	17.7	na	na	0.6	0.9	2.0	1.8
4.1	3.9	18.6	17.1	na	na	0.5	0.5	1.9	1.9
4.0	3.7	17.5	16.1	na	na	0.7	1.2	1.9	2.3
4.1	3.9	18.5	17.3	na	na	na	na	na	na
4.1	3.9	18.3	22.6	-26.6	-24.0	0.7	0.5	2.0	1.9
4.0	3.7	18.2	18.2	na	na	0.4	0.8	2.0	2.5
4.0	3.6	19.0	19.1	-14.9	-10.3	0.5	0.9	1.9	2.3
4.0	3.6	19.1	20.8	na	na	na	na	2.0	2.5
4.2	4.3	18.3	16.6	na	na	0.3	0.6	1.6	1.4
4.1	4.0	na	na	na	na	na	na	na	na
4.2	4.0	17.7	15.5	na	na	0.6	1.1	2.1	2.6
na	na	19.0	19.4	na	na	na	na	na	na
4.2	3.9	18.2	17.5	-18.3	-14.6	0.5	0.8	1.8	2.1
4.1	3.9	18.1	20.3	na	na	na	na	1.8	1.9
4.1	3.8	19.3	19.9	na	na	0.5	0.8	1.9	2.2
4.1	3.9	17.6	17.7	na	na	na	na	1.8	na
4.0	3.8	18.7	18.0	na	na	0.7	0.8	1.9	2.2
4.0	3.8	17.0	16.0	na	na	0.5	0.5	1.8	2.0
4.1	4.0	19.1	19.6	na	na	na	na	1.8	2.1
1.0	3.7	17.9	17.1	na	na	0.7	0.8	2.0	2.3
4.1	3.8	18.4	18.2	-19.9	-16.3	0.6	0.8	1.9	2.1
4.1	3.8	18.3	18.2	-19.5	na				
4.1	3.8	19.2	19.3	-20.0	na				
4.2	4.3	19.3	22.6	-14.9	-10.3	0.7	1.2	2.1	2.6
4.0	3.5	17.0	15.5	-26.6	-24.0	0.3	0.5	1.6	1.4
0.1	0.2	0.6	1.8	6.0	7.0	0.1	0.2	0.1	0.3
4.1	4.0								
4.0	3.5								

Latest Tankan Survey Suggests Firm Fundamentals

The Bank of Japan's September Tankan survey assuaged fears of a protracted slowdown following a rather muted second quarter. Sentiment among large manufacturing firms over the three months to September climbed to a two-year high, while both manufacturing and non-manufacturing respondents predicted that capital spending would jump by a 8.3% y-o-y during the current fiscal year (which began in April). Sales and profit projections showed a moderation compared with the previous year but, overall, the report presented a very upbeat picture of business investment intentions for 2007, forecasts for which has seen an upgrade. The Tankan report did suggest that non-manufacturing activity may have peaked during the three months to June, though. Elsewhere, data confirms that consumer spending underwent a soft patch during the summer months. There was a 0.6% (m-o-m) contraction in real spending by salaried workers in August, its second consecutive fall. This, combined with still-muted department store sales, was attributed to hot weather at the end of the month which enticed shoppers away. Retail sales, however, did bounce back from July's contraction, by 1.3% (y-o-y) in August. Fuel sales were a factor behind the increase although non-fuel retailing also saw a jump on the back of auto and household appliance spending. Our panel's outlook for private consumption remains firm – though unchanged – this month, supported by retailer confidence and signs of tightening job market conditions (also indicated in the Tankan report).

According to the Tankan, industrial activity looks likely to pick up in pace going into the third quarter. Indeed, data elsewhere show that production rebounded by 1.9% (m-o-m) in August following an unexpected decline in July, while shipments surged by an even stronger 2.5%. In addition, September's purchasing managers' survey predicts upbeat industrial output over the next two months. Industry has been buoyed by strong business spending, while yen weakness over the past few months has contributed to a surge in exports, as evidenced in summer trade data. The 2006 forecast for production growth stands at 3.8% this month, while next year's consensus has edged up slightly.

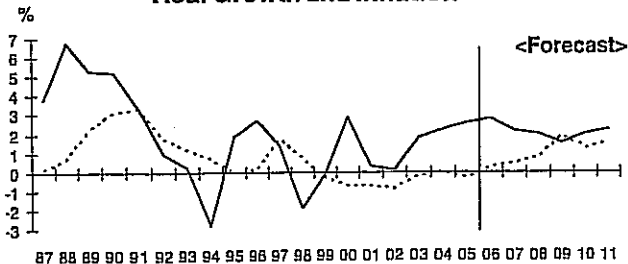
Direction of Trade – 2005

Major Export Markets (% of Total)		Major Import Suppliers (% of Total)	
United States	22.9	China	21.0
China	13.4	United States	12.7
South Korea	7.8	South Korea	4.7
<i>Asia (inc. the above) 48.6</i>		<i>Asia (inc. the above) 44.6</i>	
Latin America	3.8	Middle East	16.9
Middle East	2.9	Latin America	2.8

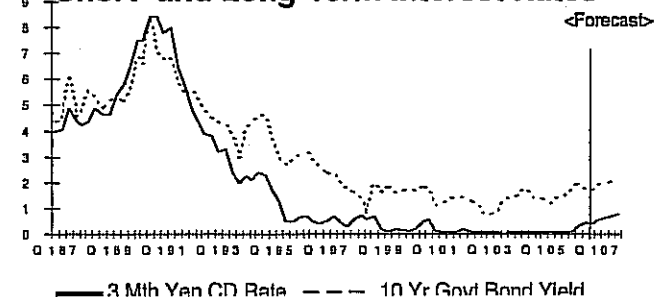
Japan Uncollateralized Overnight Call rate – October 9, 2006 = 0.25%

FORECASTS	End Dec. 2006	End Mar. 2007	End June 2007	End Sep. 2007
Consensus Mean Average:	0.38%	0.52%	0.61%	0.66%
Mode (most frequent forecast):	0.50%	0.50%	0.50%	0.50%

Real Growth and Inflation



Short- and Long-Term Interest Rates



	Average % Change on Previous Calendar Year													
	Gross Domestic Product		Private Consumption		Machinery & Equipment Investment		Industrial Production		Consumer Prices		Producer Prices		Negotiated Wages and Salaries	
	<i>Bruttoinlandsprodukt</i>		<i>Privater Verbrauch</i>		<i>Ausrüstungs-investitionen</i>		<i>Produktion im Produzierenden Gewerbe</i>		<i>Preisindex für die Lebenshaltung</i>		<i>Index für Erzeugerpreise</i>		<i>Tarifoohn- und -gehaltsniveau</i>	
Economic Forecasters	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007
JP Morgan	2.5	2.0	1.3	1.3	6.6	5.0	4.4	2.8	2.0	2.5	na	na	na	na
Landesbank Berlin	2.5	1.1	0.9	0.8	6.7	2.4	4.5	2.0	1.7	1.9	5.7	2.5	1.9	2.4
Bank of America	2.4	1.5	1.0	0.3	na	na	4.8	4.6	1.7	2.2	na	na	na	na
IW - Cologne Institute	2.4	1.5	0.9	0.3	6.8	6.0	4.5	2.5	1.8	2.2	5.0	2.0	1.5	1.5
Lehman Brothers	2.4	1.3	0.9	0.6	na	na	5.0	1.5	1.7	2.1	5.8	3.4	na	na
UBS	2.4	1.5	0.9	0.6	7.3	4.2	4.8	2.7	1.8	2.5	5.7	2.6	na	na
Dresdner Bank	2.3	1.2	0.9	0.0	7.0	6.0	4.7	2.5	1.7	2.3	5.6	1.6	1.5	1.8
Goldman Sachs	2.3	1.7	1.0	0.5	6.9	3.9	4.3	2.0	1.8	2.2	5.7	2.7	na	na
HSBC Trinkaus	2.3	1.1	0.8	-0.4	6.8	3.5	4.6	2.4	1.8	2.0	5.5	2.4	1.6	1.6
Saf Oppenheim	2.3	1.4	1.0	-0.3	5.1	4.7	na	na	1.8	2.4	na	na	na	na
SEB	2.3	1.0	1.0	-0.1	6.8	4.2	4.7	2.8	1.7	2.3	5.2	2.5	2.2	2.4
WestLB	2.3	1.3	1.0	-0.3	7.0	5.5	3.5	2.8	1.7	2.5	5.3	3.0	2.0	2.0
WGZ Bank	2.3	1.5	1.4	-0.5	7.1	5.0	5.5	3.0	2.0	2.4	5.5	1.4	2.0	2.3
DZ Bank	2.2	1.0	0.8	0.1	7.1	5.9	4.8	3.6	1.9	2.1	5.5	1.9	na	na
BHF-Bank	2.2	1.7	1.0	0.8	6.0	3.8	5.5	3.0	1.7	1.9	5.5	3.0	2.0	2.4
DekaBank	2.2	0.8	1.3	-0.6	6.3	3.5	4.3	0.3	1.7	2.6	5.5	1.6	2.0	2.0
DIW - Berlin	2.2	1.3	0.7	0.0	5.2	4.4	na	na	1.8	2.4	na	na	1.6	1.5
Helaba Frankfurt	2.2	1.5	1.0	0.0	7.0	5.0	4.7	2.5	1.8	2.5	5.0	2.0	1.9	2.2
Hypo Vereinsbank	2.2	0.7	1.2	0.8	4.6	2.9	na	na	1.8	2.5	na	na	2.0	2.0
MM Warburg	2.2	1.3	0.8	0.2	6.1	3.5	4.7	2.0	1.7	2.4	5.7	2.7	2.2	2.0
RWI Essen	2.2	1.7	0.8	0.2	7.2	7.1	4.7	3.5	1.7	2.1	5.5	3.5	1.7	1.9
Econ Intelligence Unit	2.2	1.4	1.0	-0.2	na	na	4.4	2.5	1.9	2.4	5.9	2.8	na	na
Morgan Stanley	2.1	0.7	1.2	-0.3	7.1	4.1	na	na	1.7	1.8	na	na	na	na
Bank Julius Baer	2.1	1.3	0.7	0.1	5.2	1.8	4.8	3.2	1.8	2.4	5.9	3.9	2.0	1.8
BayernLB	2.1	1.0	1.0	0.1	6.2	5.1	5.5	3.5	1.7	2.5	6.0	6.0	1.8	2.0
Citigroup	2.1	1.1	0.8	-0.4	7.3	5.5	5.0	3.0	1.7	2.5	5.2	3.0	1.7	1.9
Global Insight	2.1	1.1	0.8	0.3	6.8	4.0	5.6	3.0	1.7	2.3	5.4	2.1	2.2	2.6
WWA	2.1	1.1	0.8	-0.3	7.2	6.1	4.2	2.0	1.7	2.4	5.5	2.0	1.5	1.8
Commerzbank	2.0	1.0	0.8	0.3	7.0	6.0	4.0	1.8	1.8	2.0	5.3	2.5	2.0	2.2
Deutsche Bank	2.0	0.5	1.1	-0.6	5.9	1.4	4.2	2.0	1.9	2.3	5.5	2.0	1.8	1.5
Consensus (Mean)	2.2	1.2	1.0	0.1	6.5	4.5	4.7	2.6	1.8	2.3	5.5	2.6	1.9	2.0
Last Month's Mean	2.2	1.2	1.0	0.1	6.4	4.5	4.4	2.4	1.8	2.4	5.5	2.6	1.8	1.9
3 Months Ago	1.8	1.1	0.9	0.1	5.6	4.2	4.0	2.4	1.8	2.4	5.1	2.4	1.8	1.8
High	2.5	2.0	1.4	1.3	7.3	7.1	5.6	4.6	2.0	2.6	6.0	6.0	2.2	2.6
Low	2.0	0.5	0.7	-0.6	4.6	1.4	3.5	0.3	1.7	1.8	5.0	1.4	1.5	1.5
Standard Deviation	0.1	0.3	0.2	0.5	0.8	1.4	0.5	0.8	0.1	0.2	0.3	1.0	0.2	0.3
Comparison Forecasts														
Government (Apr. '06)	1.6	1.0	0.3	-0.2	5.0	5.5								
Eur Commission (May '06)	1.7	1.0	1.2	-0.3	6.7	4.7								
IMF (Sep. '06)	2.0	1.3	0.7	0.3										
OECD (May '06)	1.6	1.5	0.6	0.6	4.7	5.4								

Government and Background Data

Chancellor - Mrs. Angela Merkel (Christian Democratic Party or CDU).
Parliament - A coalition of the CDU/CSU and SPD has a large majority in the 614-seat Bundestag (lower house); the CDU/CSU has a majority in the Bundesrat (upper house). **Next Elections** - 2009 (Bundestag).
Nominal GDP - Euro2,247bn (2005). **Population** - 82.7mn mid-year (2005). **\$/Euro Exchange Rate** - 1.244 (average, 2005).

Quarterly Consensus Forecasts

Historical Data and Forecasts (bold italics) From Survey of September 11, 2006

	2006				2007				2008			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Gross Domestic Product	1.7	2.4	2.4	2.8	1.9	1.3	1.1	0.9	1.3	1.4		
Private Consumption	1.0	0.6	0.5	2.2	0.1	0.5	0.3	-0.4	0.7	0.8		
Consumer Prices	2.0	1.9	1.7	1.6	2.8	2.4	2.2	2.2	1.6	1.5		

Historical Data

* % change on previous year	2002	2003	2004	2005
Gross Domestic Product*	0.0	-0.2	1.2	0.9
Private Consumption*	-0.8	-0.1	0.1	0.1
Machinery & Eqpt Investment*	-7.5	-0.1	4.2	6.1
Industrial Production*	-1.3	0.1	2.5	2.8
Consumer Prices*	1.4	1.1	1.7	2.0
Producer Prices*	-0.6	1.7	1.6	4.6
Negotiated Wages & Salaries*	3.2	2.5	1.9	1.5
Unemployment Rate, %	9.8	10.5	10.5	11.7
Current Account, Euro bn	43.4	40.3	81.9	92.6
Public Sector Budget				
Balance, Euro bn	-64.5	-73.9	-64.0	-56.1
3 mth Euro, % (end yr)	2.9	2.1	2.2	2.5
10 Yr German Govt Bond, % (end yr)	4.2	4.3	3.7	3.3

Year Average	Annual Total		Rates on Survey Date						
			3.5%		3.8%				
Unemployment Rate (%)	Current Account (Euro bn)	Public Sector Budget Bal. (Euro bn)	3 month Euro Rate (%)		10 Year German Govt Bond Yield (%)				
Arbeitslosenquote, % der Erwerbspers. insgesamt	Leistungsbilanz (Euro bn)	Bilanz der Gebietskörperschaften (Euro bn)	3 Monate Euro (%)		Rendite von Bundesanleihen, 10 Jahre (%)				
2006 2007	2006 2007	2006 2007	End Jan'07	End Oct'07	End Jan'07	End Oct'07			
11.1	10.8	71.2	81.3	-65.0	-53.0	na	na	na	na
10.9	10.7	103.0	116.0	-60.0	-66.0	3.5	3.1	3.6	3.8
11.0	10.5	88.1	88.4	-60.9	-42.1	3.5	3.7	3.8	4.6
na	na	na	na	na	na	3.6	na	4.0	na
10.9	11.1	85.0	76.1	-59.6	-39.9	3.7	3.6	3.8	3.5
10.8	10.6	82.9	77.9	na	na	3.7	4.0	4.3	3.9
10.9	10.3	92.5	100.0	-53.8	-38.2	3.7	3.7	3.9	4.1
10.9	10.2	83.0	62.0	na	na	3.8	3.8	4.2	4.1
10.9	10.5	87.5	84.0	-66.0	-49.0	3.6	3.5	3.7	3.6
10.8	10.2	na	na	na	na	3.5	4.3	3.8	4.3
10.9	10.3	85.0	80.0	-58.0	-45.0	3.6	3.9	4.0	4.3
10.9	10.7	na	na	-50.0	-48.0	3.6	3.5	3.7	3.6
10.9	10.0	87.0	85.0	na	na	3.7	3.7	3.8	3.7
10.9	10.5	85.0	70.0	-65.0	-59.0	3.5	4.2	3.9	4.5
10.9	10.4	60.0	70.0	-50.0	-45.0	3.5	3.5	3.5	3.8
10.9	10.8	71.4	90.4	-62.4	-56.5	3.6	3.9	3.8	4.2
11.0	10.6	95.0	99.0	-62.5	-43.2	3.5	3.6	4.2	4.1
10.9	10.4	90.0	95.0	-65.0	-59.0	3.7	4.1	4.1	4.4
10.9	10.7	88.0	84.0	-68.0	-60.0	3.8	3.7	3.8	4.0
10.9	10.7	108.0	112.0	-61.0	-56.0	3.7	3.7	3.5	3.3
10.9	10.2	105.0	110.0	na	na	3.7	4.0	4.2	4.5
10.7	10.4	na	na	na	na	na	na	na	na
10.9	10.5	74.8	76.4	-63.2	-54.5	3.6	3.2	4.0	3.8
11.0	10.5	81.2	106.6	-60.0	-66.0	3.8	3.4	4.3	4.2
10.9	10.4	90.0	95.0	-63.0	-50.0	3.8	3.4	3.9	3.6
10.6	10.5	81.4	93.4	-64.0	-50.6	3.6	3.6	3.6	3.8
10.9	9.9	79.3	91.1	-57.6	-46.4	3.6	3.5	4.1	4.1
10.9	10.5	80.0	102.0	-55.5	-40.2	na	na	na	na
10.8	10.2	90.0	90.0	-40.0	-31.0	3.7	3.6	3.7	3.9
10.9	10.7	90.0	80.0	-60.0	-47.3	3.8	3.5	3.9	3.8
10.9	10.5	85.9	89.1	-59.6	-49.8	3.6	3.7	3.9	4.0
10.9	10.5	85.4	88.0	-60.3	-50.2				
11.0	10.7	85.5	89.1	-65.8	-54.6				
11.1	11.1	108.0	116.0	-40.0	-31.0	3.8	4.3	4.3	4.6
10.6	9.9	60.0	62.0	-68.0	-66.0	3.5	3.1	3.5	3.3
0.1	0.3	10.4	13.7	6.4	9.0	0.1	0.3	0.2	0.3

Inflation Eases Ahead of 2007 Tax Hike

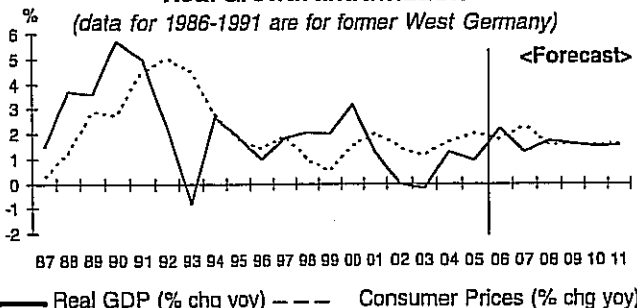
Data releases over the past month have been largely upbeat, indicating that this year's upturn in activity will probably continue until year-end. After posting GDP growth of 0.9% q-o-q during the second quarter, the economy appears to have remained relatively buoyant in the third. Industry has benefited from strong global demand and, more recently, improving domestic conditions, with production soaring by 1.9% m-o-m in August, its greatest rate of increase in nearly three years. The data underline our panel's upgraded forecast of 4.7% growth in production for this year. Manufacturing orders also surprised on the upside after surging by 3.7% m-o-m in August, with both domestic and foreign orders sharply up. In addition, business confidence indicators show that current conditions continue to improve. And, with consumers likely to bring forward purchases in order to avoid the 3%-point increase in value-added tax (VAT) scheduled for January 1, this trend will likely continue. Indeed, the current conditions component of the IFO business survey reached a 15-year high in September. However, the effects of the planned VAT rise on business and the economy as a whole have added a note of caution to the outlook. The future expectations component of the IFO survey is gathering downward momentum, while the ZEW survey saw an even more acute decline in expectations over the summer months. GDP forecasts for 2007 do reflect the expectation that activity will slow, with growth of 2.2% predicted for this year before moderating to only 1.2% in 2007, as the VAT hike, possible slowing global demand and higher interest rates curtail the recovery.

Consumer price inflation in September fell sharply, to 1.0% (y-o-y) from 1.7% in August, the lowest rate for two-and-a-half years, as the price of oil declined sharply (see page 27). Also playing an important part was the September 2005 tobacco tax hike dropping out of the calculation. Next year's VAT increase, however, will see inflation rise above 2%, our panel believes, although there is a degree of uncertainty as to how much of the increase will be passed on to consumers through higher prices and how much businesses will shoulder, to the detriment of their profit margins.

Direction of Trade – 2005

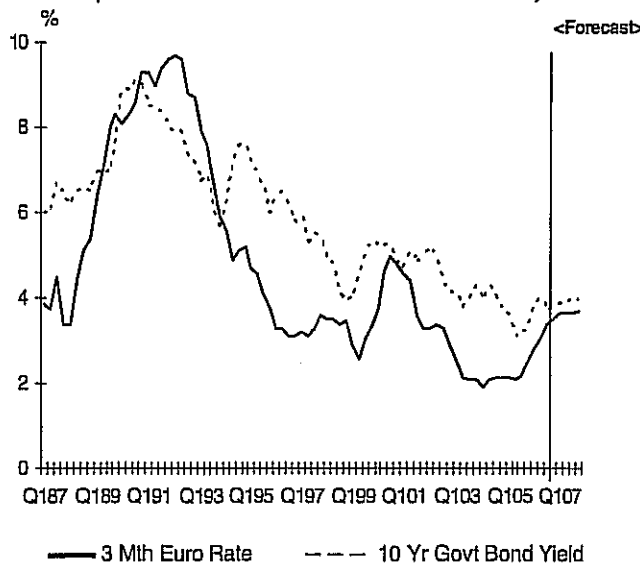
Major Export Markets (% of Total)		Major Import Suppliers (% of Total)	
France	10.1	France	8.8
United States	8.8	Netherlands	8.5
United Kingdom	7.9	United States	6.5
Eastern Europe	14.8	Eastern Europe	16.2
Asia (inc. Japan)	7.1	Asia (inc. Japan)	12.4
Middle East	2.9	Latin America	2.1

Real Growth and Inflation



Short- and Long-Term Interest Rates

(short rate = 3 mth Euro-Dm for Q187 to Q498)



	Average % Change on Previous Calendar Year											
	Gross Domestic Product		Household Consumption		Business Investment		Industrial Production (excl. construction, energy and food)		Consumer Prices		Hourly Wage Rates	
	<i>Produit Intérieur Brut</i>		<i>Consommation des Ménages</i>		<i>Investissements des Entreprises</i>		<i>Production Industrielle (hors énergie et IAA)</i>		<i>Prix à la Consommation</i>		<i>Taux de Salaire Horaire</i>	
Economic Forecasters	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007
BIPE	2.4	1.8	2.8	2.2	4.0	3.9	2.3	2.0	1.9	1.6	2.9	2.6
JP Morgan	2.4	2.6	2.9	2.6	4.3	4.7	na	na	1.8	1.8	na	na
Bank of America	2.4	2.3	2.7	2.1	3.6	3.0	2.1	3.0	1.8	1.7	2.8	2.9
Morgan Stanley	2.3	1.9	2.9	2.3	4.0	2.9	2.0	1.6	1.9	1.3	2.9	na
Econ Intelligence Unit	2.3	1.8	2.4	2.0	na	na	na	na	2.0	1.7	na	na
BNP-Paribas	2.3	2.0	2.6	2.4	4.0	3.8	1.3	1.0	1.8	1.3	2.8	2.7
Credit Agricole	2.3	2.2	2.8	2.6	4.0	4.1	1.5	1.4	1.8	1.8	na	na
Exane	2.3	1.8	2.6	1.7	3.9	2.8	1.5	1.7	1.9	1.8	2.5	2.5
GAMA	2.3	2.3	2.7	2.1	4.0	3.6	1.8	0.8	1.8	1.7	3.1	3.2
Goldman Sachs	2.3	2.3	2.6	2.4	4.3	4.9	2.1	2.5	1.9	1.5	na	na
IXIS CIB	2.3	1.9	2.7	2.0	3.6	2.9	na	na	1.9	1.9	na	na
Natexis Banque Populaire	2.3	1.8	2.7	2.2	4.0	2.7	2.3	1.6	1.8	1.6	2.8	2.7
OFCE	2.3	2.2	2.8	2.5	4.0	3.5	na	na	1.9	1.8	3.4	3.3
Societe Generale	2.3	1.9	2.8	2.3	4.1	3.6	na	na	1.8	1.5	3.1	3.1
Total	2.3	2.3	2.4	2.3	4.1	4.0	1.8	2.0	1.7	1.7	na	na
UBS	2.3	1.9	2.7	2.0	3.9	3.4	1.9	1.4	1.8	1.8	na	na
Centre Prev l'Expansion	2.2	1.8	2.6	2.3	4.5	5.5	1.8	1.2	2.0	1.5	na	na
COE - CCIP	2.2	1.9	2.7	2.5	3.7	3.6	na	na	1.8	1.4	3.0	2.7
HSBC France	2.2	1.6	2.6	2.3	3.9	3.2	1.6	0.8	1.9	1.7	2.9	2.7
Rexecode	2.2	1.8	2.6	2.2	3.7	3.5	na	na	2.0	1.7	2.9	2.6
Consensus (Mean)	2.3	2.0	2.7	2.3	4.0	3.7	1.8	1.6	1.9	1.6	2.9	2.8
Last Month's Mean	2.3	2.0	2.6	2.2	3.7	3.6	1.8	1.7	1.9	1.7	2.9	2.8
3 Months Ago	2.0	1.9	2.4	2.1	3.6	3.4	1.8	1.8	1.8	1.6	2.9	2.7
High	2.4	2.6	2.9	2.6	4.5	5.5	2.3	3.0	2.0	1.9	3.4	3.3
Low	2.2	1.6	2.4	1.7	3.6	2.7	1.3	0.8	1.7	1.3	2.5	2.5
Standard Deviation	0.1	0.3	0.1	0.2	0.2	0.7	0.3	0.6	0.1	0.2	0.2	0.3
Comparison Forecasts												
Government (Sep. '05)	2.3		2.3		4.3				1.8			
Eur Commission (May '06)	1.9	2.0	2.1	2.2								
IMF (Sep. '06)	2.4	2.3	2.7	2.5								
OECD (May '06)	2.1	2.2	2.3	2.3								

Government and Background Data

President - Mr. Jacques Chirac (UMP). Prime Minister - Mr. Dominique de Villepin (UMP). Parliament - The centre-right Union for a Popular Movement (UMP) has 353 out of the 577 seats in the National Assembly. Next Elections - April/May 2007 (presidential). Nominal GDP - Euro1,707bn (2005). Population - 60.5mn (mid-year, 2005). \$/Euro Exchange Rate - 1.244 (average, 2005).

Quarterly Consensus Forecasts

Historical Data and Forecasts (bold italic) From Survey of September 11, 2006

	2006				2007				2008			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Gross Domestic Product	1.4	2.6	2.5	2.7	2.6	1.9	1.8	1.8	1.8	1.9		
Household Consumption	2.3	3.1	2.6	2.6	2.4	2.2	2.2	2.1	2.1	2.2		
Consumer Prices	1.8	2.0	1.8	1.9	1.9	1.5	1.7	1.7	1.7	1.7		

Percentage Change (year-on-year).

Historical Data

* % change on previous year	2002	2003	2004	2005
Gross Domestic Product*	1.1	1.1	2.0	1.2
Household Consumption*	2.3	2.3	2.5	2.2
Business Investment*	-2.9	0.3	4.2	3.7
Industrial Production*	-1.7	-1.0	2.4	0.0
Consumer Prices*	1.9	2.1	2.2	1.7
Hourly Wage Rates*	3.6	2.8	2.9	3.0
Unemployment Rate, %	9.1	9.9	10.0	10.0
Current Account, Euro bn	15.4	7.0	-5.6	-27.0
Public Sector Budget				
Balance, Euro bn	-49.1	-66.8	-61.0	-50.0
3 mth Euro, % (end yr)	2.9	2.1	2.2	2.5
10 Yr French Govt Bond, % (end yr)	4.2	4.4	3.7	3.3

Year Average	Annual Total		Rates on Survey Date					
			3.5%		3.8%			
Unemployment Rate (%)	Current Account (Euro bn)	Public Sector Budget Balance (Euro bn)	3 month Euro Rate (%)	10 Year French Govt Bond Yield (%)				
Taux de Chômage (%)	Solde Courant (Euro md)	Balance Budgétaire (Euro md)	Taux d'intérêt 3 mois Euro (%)		Rendement des obligations d'Etat, 10 ans (%)			
2006 2007	2006 2007	2006 2007	End Jan'07	End Oct'07	End Jan'07	End Oct'07	End Jan'07	End Oct'07
9.1 8.4	-27.0 -28.0	-51.2 -51.4	3.6 3.3	4.3 3.9				
9.0 8.0	-21.0 -18.0	-50.0 -52.0	3.8 4.1	3.7 3.7				
9.1 8.4	-27.3 -20.1	-49.8 -48.1	3.5 3.7	3.8 4.6				
9.1 8.5	na na	-45.5 -43.9	3.7 3.2	4.1 4.8				
9.3 9.1	na na	na na	na na	na na				
9.0 8.2	-29.0 -25.0	-48.0 -48.0	3.7 3.2	3.7 3.3				
9.1 8.8	-30.0 -18.5	-48.0 -46.2	3.9 3.9	4.1 4.0				
9.1 8.8	-32.0 -29.0	-48.0 -50.0	3.8 3.8	3.6 3.9				
9.0 8.6	-27.0 -18.0	-47.0 -43.0	3.6 3.8	4.1 4.3				
9.2 8.7	-9.1 -12.7	-50.1 -55.9	3.8 3.8	4.2 4.1				
9.1 8.6	na na	-46.1 -47.0	3.6 3.6	3.9 3.8				
9.1 8.5	-28.0 -25.0	-56.0 -58.0	3.8 3.6	3.8 3.8				
9.1 8.4	-33.8 -44.2	-48.1 -53.4	3.6 3.8	4.0 4.2				
9.1 8.4	-30.0 -28.0	-51.0 -53.0	3.7 3.9	3.7 4.0				
9.1 8.8	-25.0 -20.0	-52.0 -48.0	3.6 3.6	4.1 4.2				
9.1 8.6	-26.0 -29.6	-46.3 -42.6	3.7 4.0	3.7 4.0				
9.9 9.5	-30.0 -30.0	-50.7 -48.0	3.5 3.5	4.0 3.8				
9.1 8.6	-27.4 -40.5	-52.1 -54.3	3.6 3.5	4.0 4.0				
9.1 8.8	-23.0 -19.0	-50.7 -54.3	3.6 3.4	3.7 3.6				
9.0 8.5	-30.0 -30.2	-51.9 -48.3	3.5 3.5	3.9 4.0				
9.1 8.6	-26.8 -25.6	-49.6 -49.8	3.7 3.6	3.9 4.0				
9.1 8.6	-25.0 -22.9	-52.0 -54.0						
9.3 8.9	-26.6 -26.2	-54.9 -54.7						
9.9 9.5	-9.1 -12.7	-45.5 -42.6	3.9 4.1	4.3 4.8				
9.0 8.0	-33.8 -44.2	-56.0 -58.0	3.5 3.2	3.6 3.3				
0.2 0.3	5.5 8.2	2.6 4.4	0.1 0.3	0.2 0.3				
9.5 9.2								

Industry and Consumption Provide Contrasting Outlooks

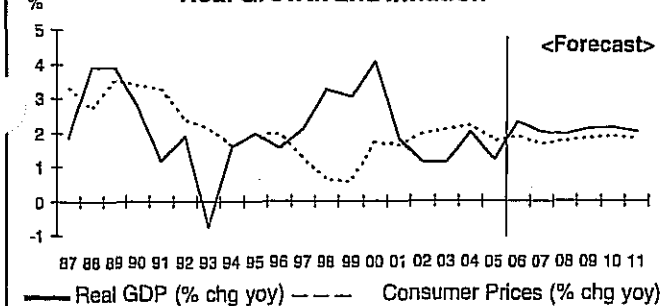
The final release of the second quarter national accounts confirmed that the expansion soared during the three months to June by 1.2% q-o-q, the fastest pace of growth since the end of 2000. Growth was lifted by business investment (on the back of companies' increased profit margins) which grew by 2.3% q-o-q compared with the 1.8% figure initially released. As a result, our panel's forecast for 2006 business spending has jumped this month from 3.7% to 4.0%. However, going into the third quarter, business sentiment appeared to falter slightly. INSEE's survey of manufacturer sentiment edged down in September on the back of a more muted perception of current conditions, while the purchasing managers' indicator for manufacturing also cooled. The moderation in sentiment may have been due in part to the sharp decline in July production, by 1.5% in m-o-m terms. Indeed, despite production recovering in August by 0.9%, our panel's industrial output forecasts for 2007 have slipped this month following evidence of declining export competitiveness. July saw a sharp 3.0% (m-o-m) drop in exports, the second contraction in a row, as a result of the strong euro. Indeed, exports to outside the Euro zone fell by 5.3% m-o-m, although goods and services sold to Germany actually rose. Industry has not been helped by marked weakness in the automobile sector. Peugeot Citroen and Renault (France's largest carmakers) depleted their stocks of older models in an effort to boost auto trade this summer but, unfortunately, a 0.7% m-o-m fall in sales in July, coupled with a 13.3% contraction (y-o-y) in new car registrations, suggests some measure of caution on the part of the French consumer.

On the whole, though, consumer spending, remains upbeat. After contracting by 0.9% m-o-m in July, manufactured goods' consumption soared by 3.3% in August, providing strong support to the expansion in the third quarter. Elsewhere, despite a decline in car sales in July, overall retail activity surged from a 0.1% gain (m-o-m) in June to a 0.8% increase on the back of homewares and equipment purchases. Looking ahead, another improvement in consumer confidence last month, coupled with robust job creation, has helped to lift our panel's household consumption expectations.

Direction of Trade – 2005

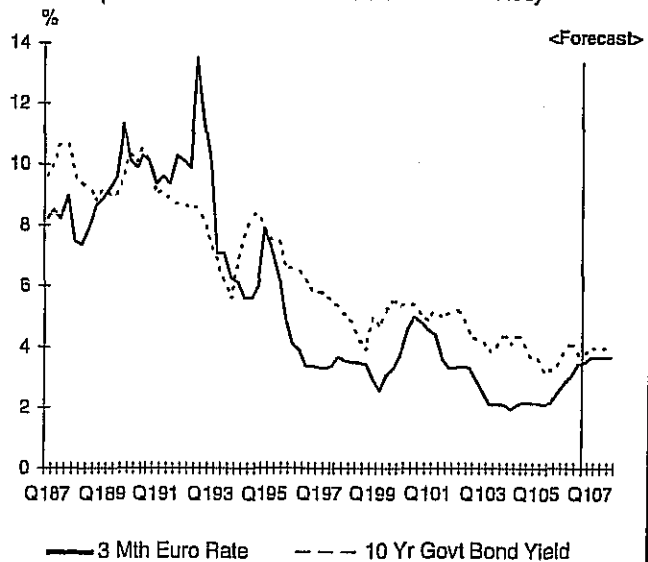
Major Export Markets (% of Total)		Major Import Suppliers (% of Total)	
Germany	14.7	Germany	18.9
Spain	9.6	Belgium	10.7
Italy	8.7	Italy	8.2
Eastern Europe	7.3	Asia (inc. Japan)	7.3
Asia (inc. Japan)	6.7	Eastern Europe	7.0
Africa	5.9	Africa	4.5

Real Growth and Inflation



Short- and Long-Term Interest Rates

(short rate = 3 mth Euro-Fir for Q187 to Q498)



	Average % Change on Previous Calendar Year																	
	Gross Domestic Product		Household Consumption		Gross Fixed Investment		Company Trading Profits		Manufacturing Production		Retail Prices (underlying rate)		Consumer Prices Index (HICP)		Output Prices		Average Earnings	
Economic Forecasters	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007
Credit Suisse	2.8	2.8	2.3	2.8	5.0	4.8	na	na	na	na	2.9	2.7	2.3	2.0	na	na	4.5	4.5
Lloyds TSB Financial Markets	2.8	2.8	2.3	2.5	5.0	4.0	5.0	6.0	1.0	1.5	2.8	2.8	2.3	2.4	2.7	2.0	4.2	4.5
Barclays Capital	2.7	2.8	2.3	2.6	5.1	3.5	na	na	1.6	3.7	2.9	2.8	2.4	2.3	na	na	4.2	4.1
ABN Amro	2.7	2.9	2.3	2.8	5.1	3.2	na	na	na	na	2.9	3.0	2.3	2.4	na	na	na	na
Confed of British Industry	2.7	2.5	2.3	2.3	5.3	3.5	6.1	7.7	1.0	0.7	2.9	3.0	2.4	2.3	2.8	2.6	4.3	4.4
DTZ Research	2.7	2.5	2.2	2.4	5.0	3.4	na	na	0.6	1.0	2.8	2.6	2.3	2.3	na	na	4.0	4.2
ING Financial Markets	2.7	2.2	2.1	1.9	4.9	3.1	na	na	1.0	1.6	2.7	2.3	2.4	1.9	2.8	2.0	4.2	4.2
Beacon Econ Forecasting	2.6	2.5	2.8	3.5	5.1	3.8	na	na	0.8	-0.5	2.9	3.3	2.4	2.5	na	na	4.4	4.7
Global Insight	2.6	2.5	2.2	2.3	4.8	3.5	na	na	0.8	1.6	2.8	2.6	2.4	2.1	2.7	2.1	4.2	4.3
Goldman Sachs	2.6	2.5	2.2	2.4	5.0	2.0	-1.1	3.3	1.2	1.6	2.9	2.8	2.3	2.2	2.7	2.2	4.6	4.5
JP Morgan	2.6	2.7	2.2	2.9	5.1	3.8	na	na	na	na	3.2	2.4	2.3	2.2	2.8	2.7	na	na
Liverpool Macro Research	2.6	2.4	1.6	1.5	na	na	na	na	na	na	2.4	2.3	na	na	na	na	4.2	4.1
Lombard Street Research	2.6	2.3	2.5	2.6	4.5	1.6	na	na	na	na	2.7	2.4	2.2	2.3	na	na	4.3	4.1
Merrill Lynch	2.6	2.7	2.3	2.6	5.2	3.8	na	na	1.3	2.0	2.9	3.3	2.3	2.4	na	na	4.4	4.3
Oxford - LBS	2.6	2.3	2.2	2.2	5.7	3.0	-0.6	6.5	1.3	0.6	2.8	2.6	2.3	2.1	2.2	1.4	4.2	4.6
UBS	2.6	2.5	2.2	2.6	4.8	3.8	na	na	1.0	1.3	3.1	3.1	2.3	2.1	na	na	4.3	4.1
HSBC	2.5	1.8	2.2	1.6	4.8	3.0	na	na	1.3	0.8	2.8	2.7	2.2	2.1	3.3	2.2	4.4	4.3
Capital Economics	2.5	2.0	2.1	2.5	4.8	3.5	-1.5	2.0	1.3	1.0	3.0	2.8	2.3	2.2	2.5	1.5	4.2	4.4
HBOS	2.5	2.8	2.0	2.7	5.0	3.6	na	na	1.0	1.2	2.6	2.4	2.2	1.9	2.4	1.5	4.2	4.2
ITEM Club	2.5	2.5	2.0	2.4	5.1	3.5	5.0	6.0	1.0	1.9	2.7	2.6	2.3	2.1	3.0	2.0	4.1	3.6
Lehman Brothers	2.5	2.2	2.1	1.4	4.7	3.4	na	na	1.1	-0.4	3.0	2.8	2.4	2.2	2.6	2.4	4.1	3.4
RBS Financial Markets	2.5	2.4	2.1	2.1	4.9	3.5	3.8	5.9	1.0	1.3	2.9	3.0	2.3	2.3	3.2	2.8	4.1	4.3
Morgan Stanley	2.5	2.5	1.7	1.8	4.1	2.3	na	na	1.2	1.1	2.9	2.8	2.4	2.4	na	na	4.2	4.3
Experian Business Strategies	2.5	2.3	2.1	2.2	4.4	2.4	4.4	11.4	1.1	1.5	2.7	2.6	2.2	2.1	2.6	1.5	4.5	4.6
Citigroup	2.4	1.7	2.2	2.2	5.4	4.2	-1.5	1.9	1.1	1.1	2.9	2.6	2.3	2.1	2.5	2.5	4.1	3.8
Schroders	2.4	2.5	2.1	2.3	3.9	3.1	na	na	0.9	1.9	2.9	2.7	2.3	2.1	na	na	4.0	4.1
Cambridge Econometrics	2.2	2.7	2.0	2.5	3.6	3.8	4.8	5.3	0.5	1.4	2.1	2.0	2.0	2.1	na	na	4.2	4.4
Economic Perspectives	2.2	-0.1	2.0	0.5	3.8	-2.9	1.5	-3.5	0.5	0.8	2.6	2.7	2.4	2.6	2.6	2.0	3.9	3.5
Consensus (Mean)	2.6	2.4	2.2	2.3	4.8	3.1	2.4	4.8	1.0	1.2	2.8	2.7	2.3	2.2	2.7	2.1	4.2	4.2
Last Month's Mean	2.6	2.4	2.1	2.2	4.8	3.3	4.9	4.9	0.9	1.4	2.8	2.6	2.3	2.2	2.7	2.1	4.2	4.2
3 Months Ago	2.4	2.5	2.0	2.3	4.2	3.3	5.1	4.7	0.8	1.4	2.5	2.4	2.1	2.0	2.5	2.1	4.2	4.1
High	2.8	2.9	2.8	3.5	5.7	4.8	6.1	11.4	1.6	3.7	3.2	3.3	2.4	2.6	3.3	2.8	4.6	4.7
Low	2.2	-0.1	1.6	0.5	3.6	-2.9	-1.5	-3.5	0.5	-0.5	2.1	2.0	2.0	1.9	2.2	1.4	3.9	3.4
Standard Deviation	0.1	0.6	0.2	0.6	0.5	1.4	3.0	3.8	0.3	0.8	0.2	0.3	0.1	0.2	0.3	0.5	0.2	0.3
Comparison Forecasts																		
Treasury (Mar. '06)	2.3	3.0	2.3	2.5	1.9	4.3			0.8	2.0								
Eur Commission (May '06)	2.4	2.8	1.9	2.3	3.4	4.3							2.0	2.0				
JMF (Sep. '06)	2.7	2.7	2.4	2.8	5.3	4.1							2.3	2.4				
OECD (May '06)	2.4	2.9	2.1	2.4	3.1	5.2							2.2	1.7				

Government and Background Data

Prime Minister - Mr. Tony Blair (Labour). Parliament - The Labour party has a majority of 64 in the 646-seat House of Commons (lower house). Next Election - By June 2010 (general election). Nominal GDP - £1,225bn (2005). Population - 59.7mn (mid-year, 2005). \$/£ Exchange Rate - 1.820 (average, 2005).

Quarterly Consensus Forecasts

Historical Data and Forecasts (bold italics) From Survey of September 11, 2006

	2006				2007				2008					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Gross Domestic Product	2.3	2.6	2.7	2.7	2.6	2.5	2.4	2.4	2.5	2.5				
Household Consumption	1.5	2.4	2.3	2.0	2.2	2.1	2.1	2.2	2.3	2.4				
Consumer Prices Index	1.9	2.2	2.4	2.5	2.5	2.2	2.1	2.1	2.2	2.1				

Historical Data

* % change on previous year	2002	2003	2004	2005
Gross Domestic Product*	2.1	2.7	3.3	1.9
Household Consumption*	3.6	3.0	3.5	1.4
Gross Fixed Investment*	3.7	0.4	6.0	2.7
Company Trading Profits*	4.8	8.3	10.3	2.3
Manufacturing Production*	-2.6	0.2	2.0	-1.1
Retail Prices (underlying rate)*	2.2	2.8	2.2	2.3
Consumer Prices Index (HICP)*	1.3	1.4	1.3	2.1
Output Prices*	0.0	1.5	2.5	2.8
Average Earnings*	3.6	3.5	4.3	4.0
Unemployment Rate, %	3.1	3.0	2.7	2.7
Current Account, £ bn	-16.5	-14.9	-19.3	-27.4
Public Sector Net Cash Requirement, fiscal yrs, £ bn	25.2	39.7	38.6	40.0
3 mth Interbank, % (end yr)	3.9	4.0	4.8	4.6
10 Yr Gilt Yields, % (end yr)	4.4	4.8	4.5	4.1

Year Average	Annual Total		Fiscal Years (Apr-Mar)		Rates on Survey Date				
	Current Account (£ bn)		Public Sector Net Cash Requirement (£ bn)		5.0%		4.6%		
Unemployment Rate (%)					3 month Interbank Rate (%)		10 Year Gilt Yield (%)		
2006 2007	2006 2007	FY 06-07	FY 07-08	End Jan'07	End Oct'07	End Jan'07	End Oct'07		
2.7	2.7	-32.0	-33.0	na	na	5.3	5.3	na	na
3.0	3.0	-31.6	-32.5	39.0	35.0	5.2	4.9	4.8	4.9
3.0	3.1	-34.6	-34.7	38.0	35.2	5.1	5.1	4.8	4.9
na	na	na	na	na	na	na	na	na	na
3.0	3.0	-30.6	-30.5	na	na	na	na	na	na
3.0	3.0	-25.9	-27.4	na	na	5.0	5.0	5.1	5.0
3.1	3.5	-32.0	-29.0	39.0	37.0	5.1	4.6	4.4	4.5
2.9	3.0	-35.4	-55.9	40.4	54.5	5.2	5.6	4.5	4.8
3.0	3.1	-30.6	-29.8	39.4	37.4	5.0	5.1	4.7	4.8
2.8	3.3	-33.5	-34.0	43.1	40.3	4.9	4.9	4.8	4.7
na	na	-37.5	-42.4	na	na	na	na	na	na
2.9	3.3	-35.3	-42.1	38.3	34.1	4.6	4.5	4.9	4.5
3.2	3.3	-26.2	-28.0	42.0	40.0	5.3	4.8	4.8	4.7
3.0	2.9	na	na	na	na	na	na	na	na
3.0	3.1	-30.4	-25.6	48.5	36.8	5.0	4.8	4.4	4.5
3.1	3.2	-34.7	-39.1	39.9	37.5	5.0	5.0	4.8	4.7
2.8	3.2	-35.0	-38.0	36.0	39.0	5.1	4.3	4.4	4.2
3.0	3.0	-32.0	-48.0	39.0	31.0	5.2	4.5	4.4	4.5
3.0	3.0	-32.0	-28.0	38.5	35.0	5.1	4.9	4.7	4.6
3.0	2.9	-34.1	-33.0	40.0	41.0	na	na	na	na
3.0	3.1	-30.7	-34.5	37.0	na	5.2	4.9	4.5	4.5
3.0	3.1	-31.0	-27.8	37.0	35.6	5.1	4.8	4.8	4.7
na	na	na	na	na	na	5.2	5.1	5.1	5.3
3.0	3.1	-29.2	-35.9	43.5	36.4	5.0	4.7	4.9	5.0
3.0	3.5	-35.2	-54.8	41.5	39.6	5.0	5.0	4.6	4.6
3.0	3.3	-29.0	-31.0	37.0	39.0	5.2	4.8	4.6	4.7
3.0	3.0	-27.2	-25.9	na	na	na	na	na	na
3.0	3.7	-25.0	-20.0	42.0	48.0	4.9	4.5	4.5	4.3
3.0	3.1	-31.6	-34.4	40.0	38.5	5.1	4.9	4.7	4.7
3.0	3.2	-32.0	-32.6	39.3	37.4				
3.0	3.2	-32.5	-33.5	38.5	37.5				
3.2	3.7	-25.0	-20.0	48.5	54.5	5.3	5.6	5.1	5.3
2.7	2.7	-37.5	-55.9	36.0	31.0	4.6	4.3	4.4	4.2
0.1	0.2	3.3	8.8	2.9	5.2	0.2	0.3	0.2	0.3
		-32.8	-36.5						

Bank of England Holds Fire on Rate Hike

The outlook for the economy remains bright, with the period of healthy GDP growth experienced over the past year expected to extend into 2007. Consensus forecasts for GDP growth in 2006 and 2007 remain unchanged this month, with the economy projected to expand by 2.6% and 2.4%, respectively. Revised national accounts data did reveal, however, that activity grew at a slower pace in the second quarter than previously thought, by 0.7% q-o-q compared with 0.8%. Domestic demand was also slightly less robust. Despite this, gains in employment and a strengthening housing market have helped to calm fears that consumer spending might slump in light of elevated energy prices, high debt levels and concerns over pensions. To be sure, consumption is not expected to represent as important a factor in driving economic activity as in past years, but steady spending growth is still forecast (consensus forecasts anticipate increases of over 2% this year and in 2007). Retail sales in the third quarter to August remained resilient, with y-o-y increases of over 4%, even as momentum generated during a buoyant second quarter eased somewhat.

Consumer price inflation in August moved up to 2.5% y-o-y from 2.4% in July, due in part to a jump in toy and computer games' prices. Further increases are expected by many analysts who point to the inclusion of the rapid rise in university tuition fees in the index from October onwards. Downward pressure from September's sharp decline in oil prices, though, could well mitigate the full impact of any upward move. Consensus forecasts for inflation have remained unchanged this month, following a gradual rise in expectations over the summer. Meanwhile, inflationary pressure from wage growth abated in July, particularly in the private sector. The Bank of England is concerned that rising costs for households may lead to higher wage demands, but, so far, there is little evidence of this. Nonetheless, inflation remains above the bank's 2% target, with the majority of economists expecting a 25 basis-point rate increase in November. Since the previous rate rise in August (which took interest rates to 4.75%), members of the Monetary Policy Committee have indicated that further tightening is on the cards.

Direction of Trade – 2005

Major Export Markets (% of Total)		Major Import Suppliers (% of Total)	
United States	14.9	Germany	12.9
Germany	10.7	United States	8.7
France	8.7	France	7.2
Asia (inc. Japan)	8.2	Asia (inc. Japan)	14.9
Middle East	5.3	Eastern Europe	6.7
Eastern Europe	5.3	Africa	3.0

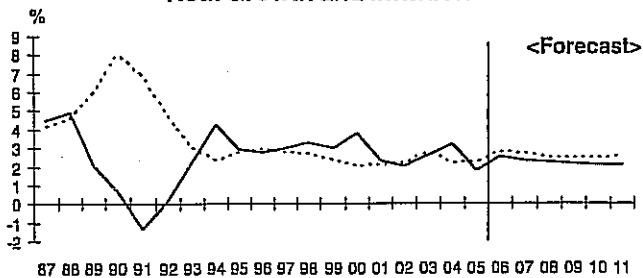
Likelihood of a Bank of England Interest Rate Change

Our panel's estimated average probability of a change in the repo rate (4.75% on survey date) at or before the next Monetary Policy Committee Meeting is:

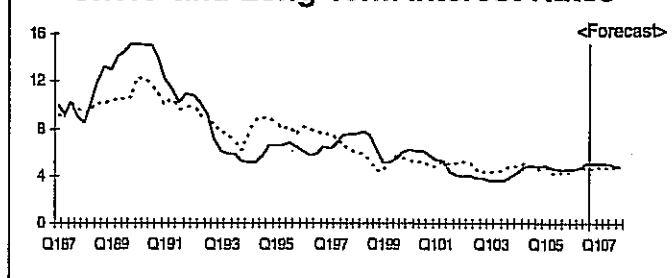
INCREASE	NO CHANGE	DECREASE	
64.7	+ 31.9	+ 3.3	= 100 %

Most likely rate change mentioned: +0.25%

Real Growth and Inflation



Short- and Long-Term Interest Rates



	Average % Change on Previous Calendar Year													
	Gross Domestic Product		Household Consumption		Gross Fixed Investment		Industrial Production		Consumer Prices		Producer Prices		Contractual Hourly Earnings	
	<i>Prodotto Interno Lordo</i>		<i>Consumi delle Famiglie</i>		<i>Investimenti Fissi Lordi</i>		<i>Produzione Industriale</i>		<i>Prezzi al Consumo</i>		<i>Prezzi alla Produzione</i>		<i>Ripartizione Orarie Contrattuali</i>	
Economic Forecasters	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007
Banca IMI	1.8	1.5	1.7	1.2	3.2	1.7	2.1	1.8	2.1	1.9	5.4	3.4	2.5	2.8
JP Morgan	1.8	1.8	1.8	1.7	3.4	2.3	na	na	2.3	1.9	5.5	2.5	na	na
ENI	1.7	1.6	1.7	1.3	3.2	2.0	2.1	0.9	2.2	2.0	6.0	2.3	2.8	2.9
Banca Nzie del Lavoro	1.7	0.9	1.7	1.1	3.6	1.2	2.0	0.7	2.3	2.0	5.9	4.2	2.8	3.2
HSBC	1.7	0.9	1.7	1.1	3.5	1.1	1.9	0.2	2.2	2.1	na	na	2.7	2.4
Prometeia	1.7	1.0	1.6	1.0	2.5	1.8	2.3	0.8	2.3	1.7	4.5	-0.3	2.7	2.2
Ref.	1.7	1.3	1.6	1.1	3.7	1.9	1.5	0.3	2.1	1.8	5.2	1.5	3.1	2.9
Bank of America	1.7	1.6	1.7	1.7	3.3	1.7	2.0	1.3	2.2	1.8	5.3	2.5	2.4	2.1
Banca Intesa	1.7	1.1	1.7	1.7	2.9	1.6	1.9	1.5	2.1	1.9	5.8	2.7	2.8	2.9
Capitalia	1.6	1.2	1.6	1.2	2.7	1.5	1.2	0.9	2.2	2.0	5.8	3.2	2.7	2.4
Centro Europa Ricerche	1.6	1.3	1.6	1.3	2.9	1.3	na	na	2.2	2.0	na	na	na	na
Goldman Sachs	1.6	1.0	1.8	1.3	2.3	1.4	2.2	0.5	2.2	1.8	5.2	3.8	na	na
ING Financial Markets	1.6	1.2	1.6	1.2	3.1	2.3	2.3	1.2	2.2	1.9	5.5	2.1	2.9	2.8
UniCredit Banca Mobiliare	1.6	1.0	1.7	1.0	3.2	1.9	1.8	1.2	2.2	2.0	5.7	3.7	na	na
IXIS CIB	1.5	0.9	1.7	1.2	2.9	1.4	2.5	1.8	2.2	2.2	4.6	3.0	2.9	3.0
Confindustria	1.5	1.4	1.5	1.3	2.6	2.1	na	na	2.2	2.0	na	na	na	na
ISAE	1.5	1.3	1.3	1.2	2.3	2.2	na	na	2.3	2.0	4.8	1.8	na	na
Econ Intelligence Unit	1.5	1.2	1.4	1.0	3.3	2.7	1.0	0.8	2.3	2.0	5.8	3.0	na	na
Consensus (Mean)	1.6	1.2	1.6	1.3	3.0	1.8	1.9	1.0	2.2	1.9	5.4	2.6	2.8	2.7
Last Month's Mean	1.6	1.2	1.6	1.2	2.8	1.7	2.0	1.0	2.2	1.9	5.4	2.6	2.7	2.6
3 Months Ago	1.4	1.2	1.4	1.3	2.2	1.8	1.8	1.1	2.2	1.9	4.7	2.4	2.7	2.5
High	1.8	1.8	1.8	1.7	3.7	2.7	2.5	1.8	2.3	2.2	6.0	4.2	3.1	3.2
Low	1.5	0.9	1.3	1.0	2.3	1.1	1.0	0.2	2.1	1.7	4.5	-0.3	2.4	2.1
Standard Deviation	0.1	0.3	0.1	0.2	0.4	0.4	0.4	0.5	0.1	0.1	0.5	1.1	0.2	0.4
Comparison Forecasts														
Government (Jul. '06)	1.5	1.5	1.3	1.3	2.2	1.9								
Eur Commission (May '06)	1.3	1.2	1.0	1.1	2.3	2.2								
IMF (Sep. '06)	1.5	1.3	1.3	1.5	2.3	2.0								
OECD (May '06)	1.4	1.3	1.1	1.1	2.9	3.1								

Government and Background Data

Prime Minister - Mr. Romano Prodi (*L'Ulivo*).
Parliament - A centre-left coalition, known as the *Unione*, has majorities in both the Chamber of Deputies (lower house) and the Senate (upper house). Next Elections - By 2011 (parliamentary). Nominal GDP - Euro1,418bn (2005). Population - 58.1mn (mid-year, 2005). \$/Euro Exchange Rate - 1.244 (average, 2005).

Quarterly Consensus Forecasts

Historical Data and Forecasts (bold italics) From Survey of September 11, 2006

	2006				2007				2008	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Gross Domestic Product	1.6	1.5	1.5	1.7	1.3	1.2	1.3	1.4	1.6	1.6
Household Consumption	2.0	1.5	1.4	1.8	1.2	1.3	1.3	1.4	1.5	1.5
Consumer Prices	2.1	2.2	2.2	2.2	2.2	1.9	1.8	1.8	2.0	1.9

Historical Data

* % change on previous year	2002	2003	2004	2005
Gross Domestic Product*	0.3	0.1	0.9	0.1
Household Consumption*	0.2	1.0	0.5	0.1
Gross Fixed Investment*	4.0	-1.5	1.9	-0.4
Industrial Production*	-1.6	-0.5	-0.6	-0.8
Consumer Prices*	2.5	2.7	2.2	2.0
Producer Prices*	0.2	1.6	2.7	4.0
Contractual Hourly Earnings*	2.1	2.2	2.8	3.1
Unemployment Rate,%	8.6	8.4	8.0	7.7
Current Account, Euro bn	-10.0	-17.4	-12.5	-22.1
State Sector Cash Balance, Euro bn	-30.8	-46.4	-50.1	-59.6
3 mth Euro, % (end yr)	2.9	2.1	2.2	2.5
10 yr Italian Govt Bond, % (end yr)	4.3	4.5	3.8	3.5

Year Average	Annual Total				Rates on Survey Date				
	3.5%		4.0%		3.5%		4.0%		
Unemployment Rate (%)	Current Account (Euro bn)	State Sector Cash Balance (Euro - bn)	3 month Euro Rate (%)	10 Year Italian Govt Bond Yield (%)					
Tasso di Disoccupazione (%)	Parlite Correnti (Euro mld)	Fabbisogno del Settore Statale (Euro mld)	Interessi Euro Trimestrali (%)	Buoni del Tesoro Decennali (%)					
2006 2007	2006 2007	2006 2007	End Jan'07	End Oct'07	End Jan'07	End Oct'07	End Jan'07	End Oct'07	
7.1	7.0	-25.0	-21.0	-60.0	-55.0	3.5	3.5	4.3	4.0
7.2	6.5	-35.6	-39.0	na	na	na	na	na	na
7.6	7.7	-31.1	-24.9	-66.0	-58.0	3.6	3.7	4.2	4.5
7.3	7.3	-30.0	-27.0	-62.0	-60.0	3.8	3.4	4.0	3.7
7.2	7.4	na	na	na	na	3.6	3.4	3.9	3.8
7.4	7.2	-32.9	-23.1	-50.0	-45.0	na	na	na	na
7.2	7.0	-32.0	-30.0	-60.1	-63.6	3.5	4.0	4.1	4.3
7.3	7.3	-27.2	-23.2	-72.2	-53.4	3.5	3.7	3.8	4.6
7.1	7.1	-17.3	-15.3	-47.7	-58.4	3.5	3.8	4.1	3.9
7.4	7.3	-28.0	-25.0	-57.0	-55.0	3.7	3.6	4.1	4.0
7.2	7.0	na	na	na	na	3.7	3.8	4.2	4.4
7.4	7.7	-16.0	-17.0	na	na	3.8	3.8	4.2	4.1
7.4	7.3	-39.7	-41.0	-52.7	-51.0	na	na	na	na
7.0	6.8	na	na	na	na	na	na	na	na
7.2	7.5	na	na	-53.0	-55.5	3.7	3.6	3.9	3.8
7.5	7.3	-24.1	-29.4	na	na	na	na	na	na
7.4	7.1	na	na	na	na	na	na	na	na
7.6	7.5	na	na	na	na	na	na	na	na
7.3	7.2	-28.2	-26.3	-58.1	-55.5	3.6	3.7	4.1	4.1
7.4	7.3	-28.5	-27.0	-58.2	-54.0				
7.5	7.4	-27.3	-23.4	-62.1	-59.7				
7.6	7.7	-16.0	-15.3	-47.7	-45.0	3.8	4.0	4.3	4.6
7.0	6.5	-39.7	-41.0	-72.2	-63.6	3.5	3.4	3.8	3.7
0.2	0.3	7.0	7.8	7.6	5.1	0.1	0.2	0.2	0.3
7.6	7.5			-59.0	-52.4				
7.7	7.7								
7.7	7.6								

Tax Increases Loom Over Outlook

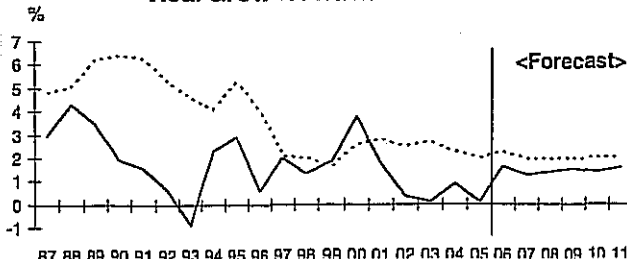
Strengthening business and consumer sentiment has given a boost to the short-term outlook this month, although higher taxes in 2007 are expected to rein in household consumption and GDP growth going forward. Having fallen in August, consumer confidence (as measured by ISAE) rose unexpectedly strongly in September. Many analysts put the rise in optimism down to the recent steep decline in oil prices (see page 27 for more details). In addition, ISAE's index of business sentiment rebounded in September after declining in the previous two months. An improved view of expected future output was the main driver behind the increase in confidence. The survey also suggested that firms were finding it easier to pass on higher input costs to consumers by raising the prices of their goods. Despite this, consumer price inflation remains remarkably stable, with the latest reading of 2.2% in September in line with outturns over much of the year to date. Consensus forecasts anticipate that a period of disinflation will leave prices up by 1.9% in 2007, from 2.2% this year.

The government in late September announced that it had agreed upon a proposed 2007 budget. Plans to increase taxes – by raising the top rate of income tax from 41% to 43%, while simultaneously lowering the threshold from €100,000 to €75,000 – are expected to boost tax revenues. Making government more efficient and clamping down on tax evasion also form part of the proposals, which are forecast to lower the budget deficit from an expected 4.8% of GDP in 2006 to 2.8% in 2007. The measures, though, are not all aimed at narrowing the fiscal gap. There will be increased spending on infrastructure in poorer southern regions of the country, while labour taxes will be reduced in an effort to boost business competitiveness. Some economists, however, are disappointed by the budget's reliance on higher tax revenues instead of lower public spending, and have also argued that it does not go far enough in tackling structural rigidities. But, with a government majority of just one in the Senate, the budget in its current form could well be subject to further political compromise. The centre-right opposition has promised to organise street protests against the budget, citing the tax increases as unfair to the middle classes.

Direction of Trade – 2005

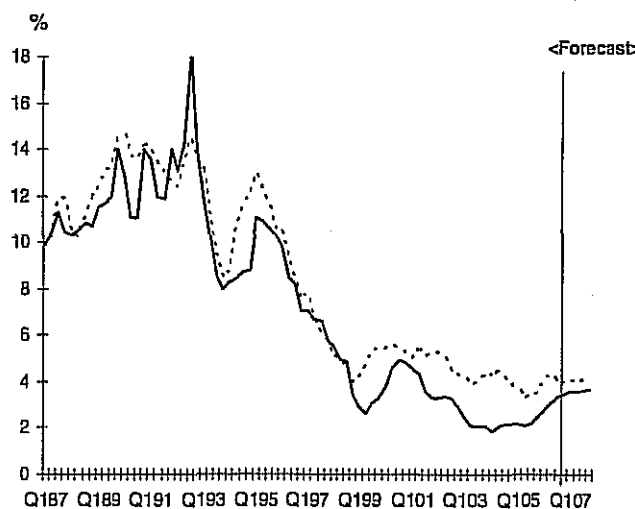
Major Export Markets (% of Total)		Major Import Suppliers (% of Total)	
Germany	13.2	Germany	17.1
France	12.1	France	9.9
United States	8.0	Netherlands	5.7
Eastern Europe	14.3	Eastern Europe	13.9
Asia (inc. Japan)	5.8	Asia (inc. Japan)	9.0
Middle East	4.9	Middle East	7.1

Real Growth and Inflation



Short- and Long-Term Interest Rates

(short rate = 3 mth Treasury Bill for Q187 to Q498)



	Average % Change on Previous Calendar Year														Annual Total			
	Gross Domestic Product		Personal Expenditure		Machinery & Equipment Investment		Pre - Tax Corporate Profits		Industrial Production		Consumer Prices		Industrial Product Prices		Average Hourly Earnings		Housing Starts (thousand units)	
	<i>Produit Intérieur Brut</i>		<i>Dépenses de Consommation des Ménages</i>		<i>Investissement Productif</i>		<i>Bénéfices des Sociétés avant Impôts</i>		<i>Production Industrielle</i>		<i>Prix à la Consommation</i>		<i>Prix des Produits Industriels</i>		<i>Rémunération Horaire Moyenne</i>		<i>Construction de Logements mises en chantier, milliers</i>	
Economic Forecasters	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007
Caisse de Depot	2.9	2.8	3.8	3.1	9.1	8.3	na	na	na	na	2.3	2.0	na	na	na	na	220	190
CIBC World Markets	2.9	2.5	3.8	2.8	8.8	6.9	4.6	8.0	na	na	2.1	2.2	na	na	na	na	226	202
Global Insight	2.9	2.6	3.9	3.2	9.7	7.4	3.0	6.8	1.0	2.6	2.0	1.5	2.8	0.5	3.4	3.6	226	211
Informetrica	2.9	2.7	3.8	3.1	9.0	8.0	3.0	1.5	0.7	2.0	2.1	1.7	3.0	1.4	3.6	3.2	222	180
Merrill Lynch Canada	2.9	2.3	4.3	3.5	9.2	7.2	na	na	na	na	2.0	1.7	na	na	na	na	230	208
Scotia Economics	2.9	2.6	3.9	3.0	9.0	7.0	6.0	4.0	1.0	2.0	2.3	2.0	na	na	na	na	220	190
Bank of Montreal	2.8	2.7	4.1	3.3	9.8	9.3	4.1	5.4	na	na	2.1	1.8	na	na	na	na	228	204
BMO Capital Markets	2.8	2.7	4.0	3.0	9.4	6.8	6.0	4.8	0.6	1.2	2.1	2.0	2.2	1.8	2.7	3.2	225	190
Desjardins	2.8	2.4	4.1	3.6	9.3	7.4	7.5	5.5	na	na	2.2	1.8	2.9	3.1	3.1	2.3	230	210
Economap	2.8	2.6	4.0	2.6	9.6	7.0	6.0	4.0	0.5	0.8	2.1	2.0	1.5	1.0	3.5	3.2	220	190
EDC Economics	2.8	2.4	3.8	2.9	9.1	7.3	6.0	3.5	na	na	2.3	2.0	na	na	3.2	3.2	224	192
National Bank Financial	2.8	2.3	4.1	3.2	9.4	9.9	2.6	-10.2	na	na	na	na	na	na	na	na	220	195
Royal Bank of Canada	2.8	2.7	3.9	2.8	9.6	10.0	6.4	4.0	na	na	2.3	1.8	na	na	na	na	222	200
Toronto Dominion Bank	2.8	2.3	4.0	3.4	9.3	8.7	3.5	1.7	na	na	2.4	1.9	na	na	na	na	227	189
University of Toronto	2.8	2.6	3.6	2.3	9.4	7.9	3.4	3.7	na	na	2.0	1.3	na	na	na	na	226	190
Conf Board of Canada	2.7	2.9	3.9	3.4	9.2	8.5	3.5	3.1	na	na	1.9	1.4	2.5	1.2	na	na	226	203
Consensus (Mean)	2.8	2.6	3.9	3.1	9.3	8.0	4.7	3.3	0.8	1.7	2.1	1.8	2.5	1.5	3.3	3.1	224	197
Last Month's Mean	2.9	2.7	3.9	3.0	9.2	7.9	5.2	4.6	0.4	1.8	2.2	1.9	2.3	2.2	3.4	3.3	225	197
3 Months Ago	3.1	2.8	3.6	2.9	8.9	8.4	5.5	4.0	1.0	2.1	2.1	1.8	1.7	1.5	3.6	3.6	218	192
High	2.9	2.9	4.3	3.6	9.8	10.0	7.5	8.0	1.0	2.6	2.4	2.2	3.0	3.1	3.6	3.6	230	211
Low	2.7	2.3	3.6	2.3	8.8	6.8	2.6	-10.2	0.5	0.8	1.9	1.3	1.5	0.5	2.7	2.3	220	180
Standard Deviation	0.1	0.2	0.2	0.3	0.3	1.1	1.6	4.3	0.2	0.7	0.1	0.3	0.6	0.9	0.3	0.4	4	9
Comparison Forecasts																		
IMF (Sep. '06)	3.1	3.0	3.9	3.1							2.2	1.9						
OECD (May '06)	3.1	3.3	3.3	3.6							2.0	2.3						

Government and Background Data

Prime Minister - Mr. Stephen Harper (Conservative). Government - The Conservatives lead a minority government, with 124 out of 308 seats in parliament (155 seats are needed for a clear majority). Next Election - By 2011 (general election). Nominal GDP - C\$1,371bn (2005). Population - 32.3mn (mid-year, 2005). C\$/US\$ Exchange Rate - 1.212 (average, 2005).

Quarterly Consensus Forecasts

Historical Data and Forecasts (bold italics) From Survey of September 11, 2006

	2006		2007				2008			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Gross Domestic Product	3.2	2.9	2.8	2.8	2.6	2.7	2.7	2.7	2.9	3.0
Personal Expenditure	3.7	3.9	4.1	3.9	3.3	3.0	2.9	2.7	2.7	2.8
Consumer Prices	2.5	2.6	1.8	1.9	2.0	1.6	1.9	2.0	2.0	2.0

Historical Data

* % change on previous year	2002	2003	2004	2005
Gross Domestic Product*	2.9	1.8	3.3	2.9
Personal Expenditure*	3.6	3.0	3.3	3.9
Machinery & Eqpt Investment*	-2.8	7.9	10.3	10.5
Pre - Tax Corporate Profits*	6.4	7.1	18.3	10.6
Industrial Production*	2.1	0.2	1.8	1.0
Consumer Prices*	2.3	2.7	1.8	2.2
Industrial Product Prices*	0.0	-1.4	3.2	1.5
Average Hourly Earnings*	2.2	1.6	3.2	3.4
Housing Starts, '000 units	205	218	233	225
Unemployment Rate, %	7.7	7.6	7.2	6.8
Current Account, C\$ bn	19.8	14.1	27.6	31.8
Federal Govt Budget Balance, fiscal years, C\$ bn	6.6	9.1	1.5	13.2
3 mth Trsy Bill, % (end yr)	2.7	2.6	2.5	3.4
10 Yr Govt Bond, % (end yr)	4.7	4.8	4.9	4.0

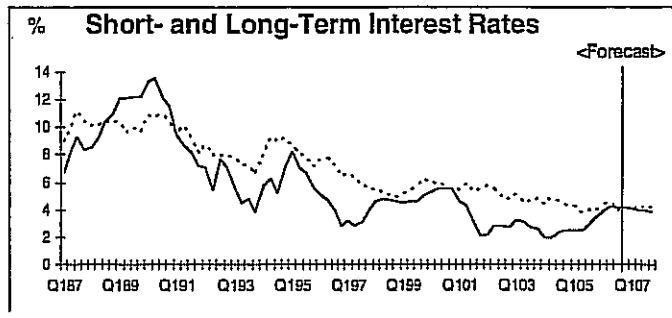
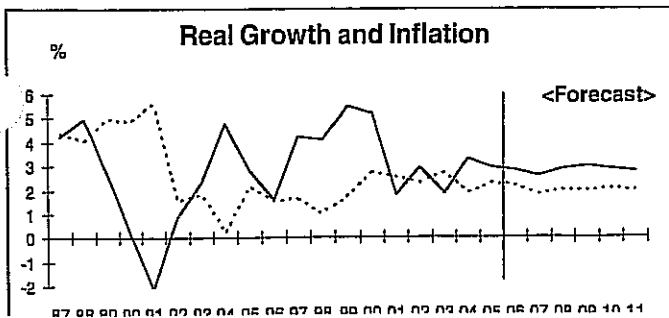
		Annual Total		Fiscal Years (Apr-Mar)		Rates on Survey Date			
						4.2%		4.1%	
Unemployment Rate (%)		Current Account (C\$ bn)		Federal Govt Budget Balance (C\$ bn)		3 month Treasury Bill Rate (%)		10 Year Government Bond Yield (%)	
Taux de Chômage (%)		Balance Courante (C\$ md)		Balance Budgétaire (C\$ md)		Rendement sur les Bons du Trésor de 3 mois %		Rendement des Obligations d'État de 10 ans %	
2006	2007	2006	2007	FY 06-07	FY 07-08	End Jan'07	End Oct'07	End Jan'07	End Oct'07
6.4	6.5	30.0	24.5	6.0	5.0	4.2	4.0	4.3	4.9
6.4	6.6	18.9	20.3	3.0	3.0	3.8	3.2	3.9	3.4
6.4	6.5	22.0	20.0	3.0	3.0	4.0	3.8	4.0	4.1
6.4	6.2	23.0	18.0	5.0	3.0	4.0	4.1	4.3	4.5
6.4	6.8	20.7	5.7	na	na	4.3	3.8	4.3	4.1
6.4	6.5	18.5	5.5	4.0	4.4	3.9	3.4	4.0	3.8
6.4	6.5	27.3	28.2	na	na	4.2	4.2	4.0	4.5
6.4	6.3	19.0	7.0	5.0	3.0	4.2	3.9	4.0	4.1
6.4	6.5	20.3	16.4	7.5	6.0	4.0	3.5	3.9	4.1
6.4	6.3	20.0	10.0	5.0	3.0	4.0	3.9	4.0	4.1
6.4	6.6	28.0	24.0	na	na	4.3	4.3	4.0	3.9
6.4	6.6	19.4	12.0	5.0	0.0	3.7	3.2	3.9	3.6
6.4	6.4	22.8	18.9	na	na	4.2	4.1	4.2	4.0
6.3	6.5	20.2	15.9	3.0	4.0	4.1	3.9	4.2	4.6
6.4	6.5	21.6	16.1	na	na	4.2	4.2	4.3	4.5
6.5	6.6	21.2	21.1	8.1	6.3	4.1	4.3	4.5	4.8
6.4	6.5	22.1	16.5	5.0	3.7	4.1	3.8	4.1	4.2
6.4	6.4	24.5	21.0	4.4	3.6				
6.3	6.3	32.3	26.0	4.8	3.8				
6.5	6.8	30.0	28.2	8.1	6.3	4.3	4.3	4.5	4.9
6.3	6.2	18.5	5.5	3.0	0.0	3.7	3.2	3.9	3.4
0.0	0.1	3.5	6.9	1.7	1.7	0.2	0.4	0.2	0.4
6.3	6.3								
6.4	6.2								

Mining and Oil Extraction Lift Industrial Output in July
 Following a slowdown in activity during the second quarter, output-based GDP growth progressed into July on a relatively positive note. The economy expanded by 0.2% m-o-m following flat growth in June, boosted by the energy, retail and financial sectors. Energy output, in particular, surprised on the upside, accelerating by 1.3% m-o-m in July, its first monthly gain since March. Despite the closure of some oil sites, extraction among those already in operation soared significantly. This, coupled with a 2.4% surge in mining output, helped to lift industrial production by 0.5% m-o-m, compared with a 0.1% gain in the previous month. However, manufacturing (which excludes mining, oil and gas extraction) showed no gains m-o-m, and it is still too early to tell whether the rise in industrial production suggests a veritable turnaround in the sector after months of lacklustre activity. Indeed, following June's 1.9% resurgence (m-o-m) in manufacturing shipments, July saw only a 0.8% rise. Elsewhere, weakness in net trade, along with a deceleration in labour productivity during the second quarter, has added further uncertainty to the outlook. 2006 production forecasts have recovered this month after September's downgrade, but 2007 expectations have slipped slightly. Consumer spending, in contrast, remains firm. The July GDP report showed retail trade lifted by incentives to promote new vehicle purchases as well as an increase in used car sales. Moreover, personal expenditure has been supported by solid employment growth, as evidenced in the September labour survey which showed payrolls rising by 210,000 since the beginning of the year and the jobless rate slipping from 6.5% to 6.4%. There are suggestions, though, that the housing sector is moderating, with housing starts reaching only 213,700 units in August, compared with 236,500 in July. This year's housing forecasts have slipped this month, but personal expenditure prospects for both 2006 and 2007 remain upbeat.

The Federal government budget surplus for FY05-06 proved to be much larger than the C\$7.9bn predicted by our panel last month. The surplus reached C\$13.2bn, fuelled by the expansion which also helped to reduce the nation's debt burden (now standing at 35.1% of GDP). Our panel's budget forecasts have consequently risen this month.

Major Export Markets (% of Total)		Major Import Suppliers (% of Total)	
United States	84.1	United States	57.5
Japan	2.1	China	7.4
United Kingdom	1.8	Mexico	3.8
Asia (ex. Japan)	4.0	Asia (ex. Japan)	12.9
Latin America	1.8	Latin America	6.7
Middle East	0.6	Africa	1.7

INCREASE	NO CHANGE	DECREASE	
2.5	+ 89.3	+ 8.2	= 100 %



Average % Change on Previous Calendar Year		Annual Total				Average % Change on Prev. Year			
Exports of Goods & Services	Imports of Goods & Services	Current Account (Euro bn)		General Govt Budget Balance (Euro bn)		Money Supply, M3, end period			
2006	2007	2006	2007	2006	2007	2006	2007		
8.8	6.3	8.2	6.3	-38.3	-47.0	-175	-133	na	na
7.9	4.9	7.3	4.4	-18.7	-22.6	-174	-149	7.9	4.8
8.4	3.8	7.8	4.0	na	na	na	na	7.9	6.3
8.5	3.5	7.7	3.0	-15.1	42.6	-183	-164	8.1	7.3
8.5	4.8	8.0	4.7	-18.5	3.3	-182	-162	na	na
8.2	3.2	7.6	3.6	-10.0	-20.0	-160	-200	7.5	6.0
8.7	5.3	8.1	5.3	-25.2	-8.7	-176	-166	8.2	6.5
8.2	4.6	7.8	4.6	-30.0	-10.0	-186	-169	7.0	4.8
8.5	4.3	8.1	4.8	-34.6	-42.2	-199	-178	7.6	6.2
8.3	4.6	7.9	4.6	-54.3	-31.0	-184	-174	na	na
8.8	4.6	8.6	6.1	-64.1	-128.1	-165	-161	8.3	4.0
8.3	4.6	8.0	4.6	-45.0	-40.0	na	na	7.9	5.0
8.5	4.6	8.2	4.6	-35.0	-29.0	na	na	na	na
8.5	4.5	8.0	4.0	0.0	20.0	-200	-170	8.0	6.4
7.6	2.7	8.0	3.1	na	na	na	na	8.1	4.8
8.2	3.8	7.8	3.8	-39.3	-16.0	-168	-131	8.0	6.0
na	na	na	na	na	na	na	na	7.8	6.0
8.6	6.5	8.2	4.7	na	na	na	na	na	na
8.5	4.3	8.2	5.0	-20.0	10.0	-190	-158	8.3	6.0
9.0	6.0	9.0	7.0	na	na	na	na	8.3	6.5
8.3	4.7	8.0	4.5	-46.3	-20.0	na	na	na	na
7.1	4.1	7.4	4.0	na	na	-188	-188	na	na
7.3	3.2	7.2	3.7	-38.0	-34.0	-187	-165	7.3	6.0
8.1	3.0	7.8	3.5	na	na	na	na	8.2	7.0
8.4	3.9	7.8	3.8	-30.0	-10.0	-210	-180	6.5	6.0
8.6	4.1	8.1	4.4	na	na	na	na	na	na
7.8	4.4	8.0	5.1	-41.0	-32.0	-213	-207	na	na
8.3	5.9	8.2	7.1	na	na	na	na	na	na
3.4	3.6	8.1	3.4	na	na	-199	-175	7.4	4.9
7.9	4.3	7.4	4.6	-22.2	-0.7	-180	-176	7.2	5.2
7.6	5.3	7.1	5.1	na	na	-173	-152	na	na
8.3	4.4	7.9	4.6	-31.3	-20.8	-185	-168	7.8	5.8
8.1	4.4	7.8	4.6	-33.4	-24.7	-187	-175	7.6	5.8
7.2	4.5	7.2	4.6	-29.3	-19.1	-197	-184	7.7	5.8
9.0	6.5	9.0	7.1	0.0	42.6	-160	-131	8.3	7.3
7.1	2.7	7.1	3.0	-64.1	-128.1	-213	-207	6.5	4.0
0.4	0.9	0.4	1.0	15.5	33.7	14	19	0.5	0.9

ECB Increases Target Interest Rate

The ECB raised its main refi rate to 3.25% on October 5, the fifth 25 basis-point increase this year. The move was widely expected, given the acceleration in August retail sales and improving job market conditions which are helping to support consumption. The ECB has signalled that another rate hike might be forthcoming; however, with September inflation slowing to 1.8% y-o-y, coupled with the moderation in US activity, some observers predict that monetary tightening could be reaching the top end of its cycle. Elsewhere, a 3.7% m-o-m jump in German machinery orders in August has helped to buoy Euro zone investment expectations for 2006. However, a 0.4% (m-o-m) decline in August production suggests that the expansion in industry may have peaked.

Euro Zone Interest Rates

Forecasts are provided by a total of more than 80 panelists for **Germany** (page 9), **France** (page 11), **Italy** (page 15), the **Netherlands** (page 20) and **Spain** (page 22). This allows the analysis of forecasts for different yields on individual country 10-year benchmark bonds. Forecasts for 3-month interest rates are all for the EURIBOR rate.

	Actual	Consensus	
	Oct 9 '06	End Jan '07	End Oct '07
Euribor: 3-mth, %	3.5	3.7	3.7
German 10-yr			
Govt Bond, %	3.8	3.9	4.0

Likelihood of an ECB Interest Rate Change

Our panel's estimated average probability of a change in the refinancing rate (3.25% on survey date) within the 30 days following the survey date is:

INCREASE	NO CHANGE	DECREASE	
13.9	+ 86.1	+ 0.0	= 100 %
Most likely rate change mentioned: None			

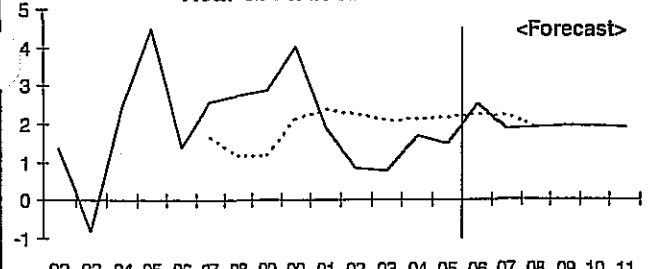
Euro Exchange Rates

Forecasts are provided by more than 100 panellists and are shown on page 27.

Euro Zone Economic Statistics

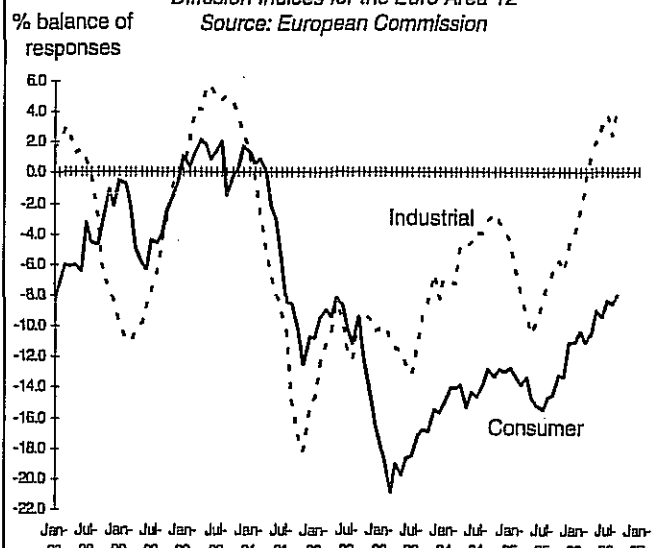
The source of all Historical Data (facing page) is Eurostat, with the exception of the Current Account and the Money Supply, M3, which are from the European Central Bank. The base years and statistics methodologies used by Eurostat may differ from those used by individual Euro zone-member countries included in *Consensus Forecasts*. Eurostat data is often drawn from the national statistical agencies within the Euro zone but is adjusted to achieve standard classifications.

Real Growth and Inflation



Consumer and Industrial Confidence

Diffusion Indices for the Euro Area 12
Source: European Commission

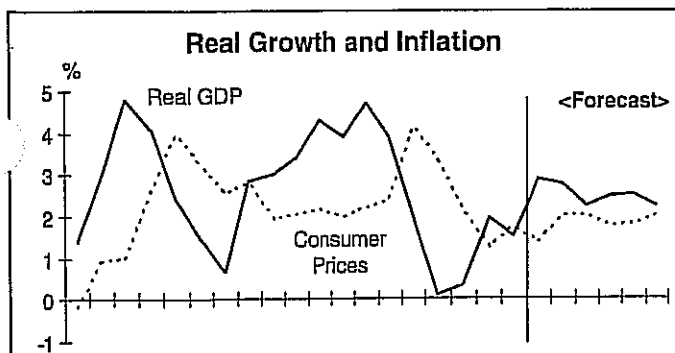


	Average % Change on Previous Calendar Year												Annual Total		Rates on Survey Date			
	Gross Domestic Product		Private Consumption *		Gross Fixed Investment		Manufacturing Production		Consumer Prices		Hourly Wages (Manufacturing)		Current Account (Euro bn)		3.5%		3.8%	
	2006	2007	2006*	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	End Jan'07	End Oct'07	End Jan'07	End Oct'07
Economic Forecasters	2006	2007	2006*	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	End Jan'07	End Oct'07	End Jan'07	End Oct'07
Kempen & Co.	3.1	3.5	0.0	2.8	5.0	5.0	3.0	3.5	1.7	2.5	1.5	2.5	na	na	na	na	na	na
NIBC	3.1	3.3	-0.5	3.0	3.8	4.0	2.0	2.2	1.3	2.5	1.8	2.7	na	na	3.8	4.4	4.0	4.4
Rabobank Nederland	3.0	3.2	-0.4	2.5	4.2	6.7	na	na	1.2	1.9	2.0	2.3	38.3	38.0	3.6	3.6	3.6	3.8
Moody's Economy.com	2.9	2.2	-0.4	1.5	4.6	2.7	1.4	2.0	1.7	1.9	na	na	34.5	32.7	3.4	3.9	na	na
Econ Intelligence Unit	2.9	2.6	na	na	3.0	3.5	2.3	2.4	1.4	1.6	na	na	na	na	na	na	na	na
Fortis Bank	2.8	2.9	-1.0	2.6	4.3	4.6	2.0	2.1	1.3	2.1	1.6	2.4	33.1	32.5	3.7	4.1	4.3	4.8
HSBC	2.8	2.3	-0.1	1.5	3.1	2.5	2.0	1.6	1.4	1.9	na	na	na	na	3.6	3.4	3.7	3.6
ING	2.8	2.6	-0.6	1.8	4.5	4.2	1.8	3.4	1.2	1.9	2.0	2.0	na	na	3.8	3.8	3.6	3.8
Theodoor Gillissen	2.8	2.6	-0.4	2.3	4.5	4.6	2.1	3.2	1.2	2.0	1.6	2.0	38.0	38.0	3.6	3.6	3.9	4.1
Deutsche Bank	2.7	2.4	-0.3	2.0	3.8	4.4	1.9	1.7	1.2	1.6	1.7	2.0	34.0	34.5	3.8	3.5	3.9	3.8
Consensus (Mean)	2.9	2.8	-0.4*	2.2	4.1	4.2	2.1	2.5	1.4	2.0	1.7	2.3	35.6	35.1	3.7	3.8	3.9	4.0
Last Month's Mean	2.8	2.8	-0.4	2.2	3.7	4.3	2.2	2.6	1.3	2.0	1.8	2.2	34.0	32.7				
3 Months Ago	2.6	2.7	-0.8	2.0	3.8	4.4	2.2	2.4	1.4	2.0	1.7	2.1	30.0	31.1				
High	3.1	3.5	0.0	3.0	5.0	6.7	3.0	3.5	1.7	2.5	2.0	2.7	38.3	38.0	3.8	4.4	4.3	4.8
Low	2.7	2.2	-1.0	1.5	3.0	2.5	1.4	1.6	1.2	1.6	1.5	2.0	33.1	32.5	3.4	3.4	3.6	3.6
Standard Deviation	0.1	0.4	0.3	0.6	0.7	1.2	0.4	0.7	0.2	0.3	0.2	0.3	2.4	2.7	0.1	0.3	0.3	0.4
Comparison Forecasts																		
CPB (Sep. '06)	3.1	3.0	-1.3	1.9	4.8	4.0			1.3	1.5			38.3	38.9				
Eur Commission (May '06)	2.6	2.6	-2.1	1.5	4.4	3.4												
IMF (Sep. '06)	2.9	2.9																
OECD (May '06)	2.4	2.8	-2.6	1.2	3.0	3.1												

* Reforms to the healthcare system are expected to reduce private consumption growth by around 3.4 percentage points in 2006.

❖ Revised national accounts data for the second quarter show the economy expanding at an even quicker pace than first thought, with GDP growth of 1.2% (up from the first estimate of 1.0%). A combination of strong domestic and foreign demand will see GDP growth of 2.9% this year, our panel predicts.

❖ In its 2007 budget, the government estimates that a budget surplus will be achieved after six years of deficits, as a result of the economy's recovery from years of stagnation. A general election is scheduled to take place on November 22, 2006.



Historical Data

* % change on previous year	2002	2003	2004	2005
Gross Domestic Product*	0.1	0.3	2.0	1.5
Private Consumption*	0.9	-0.2	0.6	0.7
Gross Fixed Investment*	-4.5	-1.5	-0.8	3.6
Manufacturing Production*	0.1	-1.1	1.6	0.2
Consumer Prices*	3.3	2.1	1.2	1.7
Hourly Wages (manufacturing)*	3.6	2.7	1.5	1.0
Current Account, transactions basis, Euro bn	11.6	26.0	43.6	33.4
3 mth Euro, % (end yr)	2.9	2.1	2.2	2.5
10 Yr Dutch Govt Bond Yield, % (end yr)	4.2	4.3	3.7	3.3

Nominal GDP - Euro505.6bn (2005). Popn - 16.3mn (mid-year, 2005). \$/Euro Exch. Rate - 1.244 (average, 2005).

Quarterly Consensus Forecasts

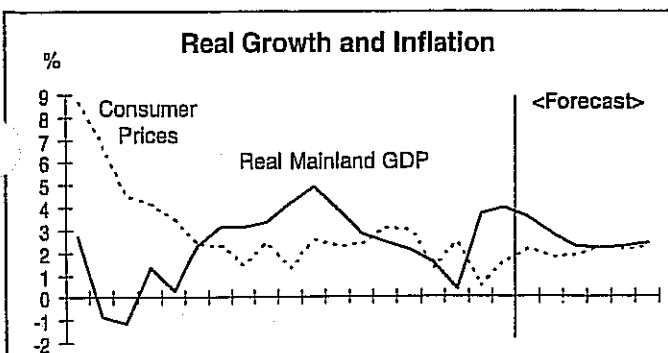
Historical Data and Forecasts (bold italics) From Survey of September 11, 2006

	2006				2007				2008			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Gross Domestic Product	2.3	2.6	2.9	3.2	3.3	2.9	2.5	2.1	1.9	1.9		
Consumer												

	Average % Change on Previous Calendar Year												Annual Total		Rates on Survey Date			
	Gross Domestic Product (Mainland)		Private Consumption		Gross Fixed Investment		Manufacturing Production		Consumer Prices		Wages & Salaries		Current Account (Nkr bn)		3.5%		4.1%	
	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	End Jan'07	End Oct'07	End Jan'07	End Oct'07
Economic Forecasters	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	End Jan'07	End Oct'07	End Jan'07	End Oct'07
Danske Bank	3.8	3.2	3.9	3.7	8.0	5.9	na	na	2.1	1.2	4.3	4.8	486	516	3.9	4.8	4.1	4.6
Deutsche Bank	3.7	3.0	3.7	2.4	5.9	4.0	3.5	2.5	2.0	2.0	4.3	4.5	392	358	3.4	4.2	4.5	4.5
First Securities	3.6	2.6	3.9	2.8	7.5	1.4	3.5	2.0	2.3	1.6	4.5	5.2	388	356	3.8	4.8	4.4	4.8
DnB NOR	3.6	3.0	3.7	2.9	7.5	1.7	na	na	2.4	2.1	4.2	4.5	333	291	3.8	4.5	4.5	4.3
Handelsbanken - Oslo	3.6	3.3	3.9	3.4	5.0	4.5	na	na	2.1	1.6	4.0	4.5	na	na	na	na	4.0	4.0
JP Morgan	3.6	2.6	3.9	2.8	6.6	4.2	na	na	2.0	1.6	na	na	426	503	na	na	na	na
Moody's Economy.com	3.5	2.8	3.8	3.5	6.5	3.0	2.5	0.5	2.0	2.2	4.9	4.8	350	290	3.5	3.6	4.2	4.3
ING Financial Markets	3.3	2.7	3.3	2.8	7.0	4.5	3.5	1.5	2.1	1.8	4.3	4.5	360	340	3.7	4.3	4.3	4.6
Statistics Norway	3.2	2.1	3.5	3.7	7.7	-0.1	3.2	0.7	2.4	1.5	4.0	5.0	390	369	3.8	3.8	na	na
Consensus (Mean)	3.5	2.8	3.7	3.1	6.9	3.2	3.2	1.4	2.2	1.7	4.3	4.7	391	378	3.7	4.3	4.3	4.4
Last Month's Mean	3.4	2.6	3.7	3.0	6.8	3.1	3.1	1.2	2.3	1.7	4.2	4.6	391	394				
3 Months Ago	3.2	2.5	3.3	2.9	5.9	2.4	3.2	1.3	2.2	1.8	4.2	4.5	364	342				
High	3.8	3.3	3.9	3.7	8.0	5.9	3.5	2.5	2.4	2.2	4.9	5.2	486	516	3.9	4.8	4.5	4.8
Low	3.2	2.1	3.3	2.4	5.0	-0.1	2.5	0.5	2.0	1.2	4.0	4.5	333	290	3.4	3.6	4.0	4.0
Standard Deviation	0.2	0.4	0.2	0.5	1.0	1.9	0.4	0.8	0.2	0.3	0.3	0.3	48	86	0.2	0.5	0.2	0.3
Comparison Forecasts																		
Bank of Norway (Jun. '06)	3.8	2.8	3.5	3.3					2.3	1.8	4.0	4.8						
OECD (May '06)	3.3	2.6	3.6	2.9	13.5	2.6			2.2	2.6								

❖ The outlook remains strong, with forecasts for 2007 GDP growth up to 2.8%, from 2.6% last month. Declining unemployment will likely support private consumption in 2007, even as it moderates somewhat from this year. Manufacturing production, however, is expected to slow more precipitously after a robust performance in 2006.

❖ Headline consumer price inflation jumped to 2.6% y-o-y in September from 1.9% in August, mainly due to a sharp increase in electricity tariffs (up by 48.1% y-o-y). Increasing inflationary pressures may lead to more aggressive tightening of monetary policy.



Historical Data

* % change on previous year	2002	2003	2004	2005
GDP (Mainland)*	1.6	0.4	3.7	4.0
Private Consumption*	2.9	2.7	4.6	3.6
Gross Fixed Investment*	-1.0	0.2	8.1	10.9
Manufacturing Production*	-0.9	-4.2	1.4	3.1
Consumer Prices*	1.3	2.5	0.5	1.5
Wages & Salaries per Full-Time Employee (Total)*	5.3	3.9	4.3	3.6
Current Account, Nkr bn	194	204	233	317
3 mth Interbank Rate, % (end yr)	7.1	2.5	2.0	2.6
10 Yr Govt Bond Yield, % (end yr)	5.8	4.5	4.1	3.6

Nominal GDP (total) - Nkr 1,904bn (2005). Population - 4.6mn (mid-yr, 2005). Nkr/\$ Exchange Rate - 6.443 (average, 2005).

Quarterly Consensus Forecasts

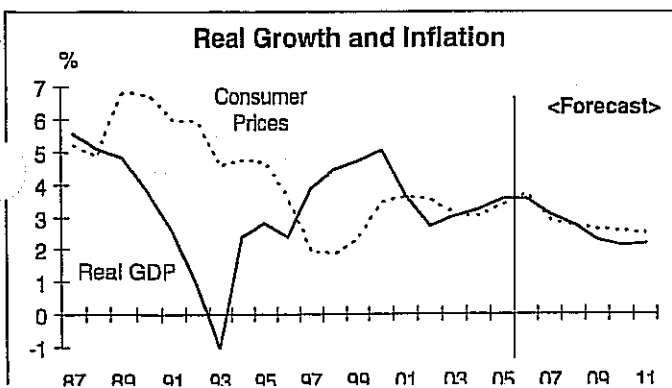
Historical Data and Forecasts (bold italics) From Survey of September 11, 2006

	2006				2007				2008	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Gross Domestic Product (mainland)	3.6	3.8	3.5	3.1	3.0	2.7	2.6	2.4	2.4	2.4
Consumer										

	Average % Change on Previous Calendar Year												Annual Total		Rates on Survey Date			
	Gross Domestic Product		Household Consumption		Gross Fixed Investment		Industrial Production		Consumer Prices		Salary Cost per Hour		Current Account (Euro bn)		3.5%		3.8%	
	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	End Jan'07	End Oct'07	End Jan'07	End Oct'07
Economic Forecasters	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	End Jan'07	End Oct'07	End Jan'07	End Oct'07
FUNCAS	3.7	3.2	3.6	3.2	6.1	5.2	3.9	3.1	3.6	2.8	3.3	3.0	-81.2	-93.6	3.8	4.2	4.0	4.3
Goldman Sachs	3.7	2.9	3.4	3.0	5.8	3.7	na	na	3.7	3.0	na	na	-79.9	-87.2	3.8	3.8	4.2	4.1
Grupo Santander	3.7	3.2	3.6	3.0	6.1	4.9	na	na	3.7	2.8	3.7	3.5	-79.0	-85.0	3.8	4.1	3.9	4.2
AFI	3.6	3.2	3.5	2.9	6.1	5.3	na	na	3.6	3.1	na	na	-79.3	-82.2	3.7	3.7	3.8	3.9
Banesto	3.6	3.1	3.4	3.2	6.4	4.7	2.8	2.0	3.8	2.9	na	na	na	na	3.7	3.7	3.9	3.5
BBVA	3.6	3.3	3.5	3.2	6.0	4.9	3.6	3.2	3.7	2.7	3.5	3.5	-76.9	-82.9	3.8	4.1	4.3	4.4
Caja Madrid	3.6	3.3	3.6	3.1	6.0	4.6	2.4	1.9	3.6	2.7	3.2	3.0	-78.1	-84.6	3.7	3.4	3.8	3.3
CEPREDE	3.6	3.2	3.6	3.2	6.2	5.4	3.0	2.8	3.7	3.1	3.4	3.4	-88.8	-99.2	3.5	3.9	4.1	4.5
IFL-Univers Carlos III	3.6	3.4	3.6	3.6	5.9	5.5	4.0	4.7	3.6	2.7	3.0	3.2	-78.7	-88.2	3.7	4.1	4.2	4.4
Instituto de Credito Oficial	3.6	3.2	3.6	3.2	6.0	4.9	4.0	3.5	3.7	2.9	3.3	3.2	-77.8	-83.7	3.7	4.2	4.2	4.5
La Caixa	3.6	3.2	3.5	3.0	6.1	5.2	3.4	2.5	3.7	2.8	3.0	2.9	-84.9	-85.7	3.7	3.9	3.7	4.2
HSBC	3.5	2.5	3.4	2.8	5.7	3.6	3.5	2.1	3.9	2.8	3.2	3.3	-87.6	-88.0	3.6	3.4	3.7	3.6
UBS	3.5	2.9	3.4	2.8	5.6	2.4	2.6	2.1	3.8	3.2	na	na	-84.0	-72.4	3.5	3.8	3.9	3.7
ING Financial Markets	3.4	2.7	3.2	2.2	5.7	3.5	3.8	2.0	3.7	2.9	na	na	na	na	3.8	3.8	3.6	3.8
Inst L R Klein (Gauss)	3.4	3.0	3.7	3.6	5.8	4.3	3.2	2.8	3.9	2.9	3.5	3.2	-72.0	-68.2	3.8	4.2	4.3	4.4
Econ Intelligence Unit	3.4	2.7	3.6	2.6	5.0	2.8	na	na	3.5	2.7	na	na	na	na	na	na	na	na
Consensus (Mean)	3.6	3.1	3.5	3.0	5.9	4.4	3.4	2.7	3.7	2.9	3.3	3.2	-80.6	-84.7	3.7	3.9	4.0	4.0
Last Month's Mean	3.5	3.0	3.5	3.0	5.9	4.4	3.1	2.5	3.8	3.0	3.3	3.3	-81.7	-86.9				
3 Months Ago	3.3	2.9	3.7	3.1	5.8	4.4	2.3	2.0	3.7	3.0	3.2	3.2	-80.8	-87.0				
High	3.7	3.4	3.7	3.6	6.4	5.5	4.0	4.7	3.9	3.2	3.7	3.5	-72.0	-68.2	3.8	4.2	4.3	4.5
Low	3.4	2.5	3.2	2.2	5.0	2.4	2.4	1.9	3.5	2.7	3.0	2.9	-88.8	-99.2	3.5	3.4	3.6	3.3
Standard Deviation	0.1	0.3	0.1	0.4	0.3	1.0	0.6	0.8	0.1	0.2	0.2	0.2	4.6	7.9	0.1	0.3	0.2	0.4
Comparison Forecasts																		
Eur Commission (May '06)	3.1	2.8	3.7	3.1	5.3	4.1												
IMF (Sep. '06)	3.4	3.0	3.6	3.4	5.3	4.1												
OECD (May '06)	3.3	3.0	3.8	3.5	6.3	5.0												

❖ Macroeconomic forecasts remain strong and relatively unchanged this month, with 2006 and 2007 GDP expectations both up by 0.1 percentage points. Industrial production forecasts, meanwhile, have also moved higher following strong growth during the summer.

❖ The second quarter current account deficit of €20.1bn was an improvement on the €24.5bn shortfall in the first three months of the year, although the deficit was still a massive 8.2% of GDP. A booming domestic economy, underpinned by negative real interest rates, has been the key factor behind the large deficit.



Historical Data				
* % change on previous year	2002	2003	2004	2005
Gross Domestic Product*	2.7	3.0	3.2	3.5
Household Consumption*	2.8	2.8	4.2	4.2
Gross Fixed Investment*	3.4	5.9	5.0	7.0
Industrial Production*	0.1	1.6	1.8	0.1
Consumer Prices*	3.5	3.0	3.0	3.4
Salary Cost per Hour*	4.1	4.3	3.5	3.2
Current Account, Euro bn	-23.8	-27.5	-44.2	-66.6
3 mth Euro, % (end yr)	2.9	2.1	2.2	2.5
10 Yr Spanish Govt Bond Yield, % (end yr)	4.2	4.3	3.7	3.3

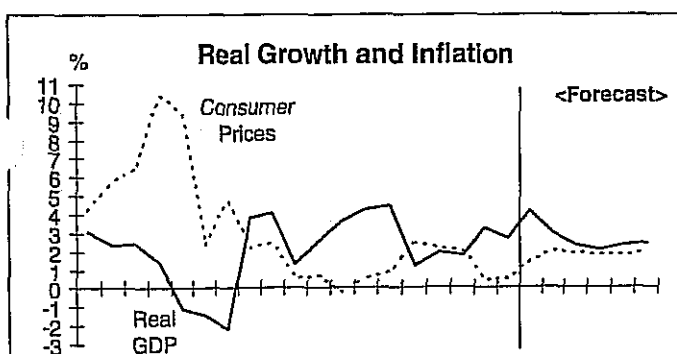
Nominal GDP - Euro904.3bn (2005). Popn - 43.1mn (mid-year, 2005). \$/Euro Exch. Rate - 1.244 (av., 2005).

Quarterly Consensus Forecasts										
Historical Data and Forecasts (bold italics) From Survey of September 11, 2006										
	2006		2007				2008			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Gross Domestic Product	3.6	3.7	3.6	3.4	3.3	3.1	3.0	3.0	2.9	2.8
Consumer Prices	4.0	3.9	3.7	3.6	3.4	3.1	3.0	3.0	3.0	2.9

	Average % Change on Previous Calendar Year												Annual Total		Rates on Survey Date			
	Gross Domestic Product		Household Consumption		Gross Fixed Investment		Mining & Manufacturing Production		Consumer Prices		Hourly Earnings (Mining & Manuf.)		Current Account (Skr bn)		3 month Interbank Rate (%)		10 Year Govt Bond Yield (%)	
	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	End Jan'07	End Oct'07	End Jan'07	End Oct'07
Economic Forecasters																		
ING Financial Markets	4.7	3.2	3.6	3.0	7.0	5.1	na	na	1.3	1.4	3.3	2.4	190	155	na	na	na	na
JP Morgan	4.6	3.1	3.3	3.1	8.4	3.8	4.3	4.0	1.5	1.7	na	na	184	178	na	na	na	na
Morgan Stanley	4.5	2.9	3.3	3.0	9.0	5.2	na	na	1.5	2.3	na	na	189	199	3.6	3.8	4.1	3.9
Confed of Swed Enterprise	4.5	2.7	3.3	2.7	9.0	3.5	5.8	3.7	1.5	1.7	na	na	185	190	3.0	3.5	4.1	4.5
Goldman Sachs	4.5	3.1	3.0	2.9	8.3	4.0	4.7	3.7	1.5	2.0	na	na	190	196	3.4	4.0	4.4	4.3
Svenska Handelsbanken	4.4	3.3	3.4	4.0	9.0	6.5	5.3	4.7	1.5	2.3	3.1	3.6	158	149	3.2	4.0	3.6	3.7
UBS	4.4	2.9	3.2	2.7	7.8	3.1	3.6	2.2	1.5	2.0	na	na	162	124	3.3	4.0	4.4	4.1
Econ Intelligence Unit	4.2	3.3	3.2	3.4	8.5	4.7	4.0	3.1	1.5	2.0	na	na	na	na	na	na	na	na
Merrill Lynch	4.2	3.2	3.6	3.1	8.6	5.8	5.4	3.4	1.5	2.2	3.2	3.7	200	210	3.4	3.8	3.9	4.3
Nordea	4.2	2.9	3.3	3.0	7.9	4.3	na	na	1.4	2.0	na	na	197	210	3.3	3.9	3.7	3.9
SE Banken	4.2	3.2	3.4	3.5	9.0	4.5	na	na	1.4	2.1	3.4	3.8	194	211	3.4	4.2	4.1	4.1
Swedbank	4.2	3.0	3.2	2.7	8.0	4.5	6.7	5.0	1.5	2.5	3.4	3.5	178	169	3.5	4.0	4.0	4.3
National Institute - NIER	4.1	3.3	3.1	3.4	8.3	5.0	5.8	5.1	1.5	1.9	3.2	3.3	179	193	na	na	4.3	4.5
SBAB	4.0	3.0	3.1	2.6	7.3	4.1	4.5	4.0	1.5	2.5	3.2	3.4	185	205	3.3	4.0	4.1	4.3
Öhman	3.9	2.9	3.3	3.0	8.5	5.0	5.5	5.0	1.4	2.3	3.4	3.7	180	185	3.2	3.9	4.1	4.3
HQ Bank	3.6	2.4	3.2	2.5	7.5	4.7	4.5	2.0	1.3	1.7	3.1	3.3	na	na	na	na	na	na
Skandiabanken	3.6	2.8	3.3	2.7	7.8	6.0	na	na	1.4	1.7	3.3	3.7	190	180	3.4	3.9	3.8	3.9
Consensus (Mean)	4.2	3.0	3.3	3.0	8.2	4.7	5.0	3.8	1.5	2.0	3.3	3.4	184	184	3.3	3.9	4.0	4.2
Last Month's Mean	4.1	3.0	3.2	2.9	8.0	4.3	4.8	3.6	1.5	2.0	3.3	3.4	183	181				
3 Months Ago	3.6	2.8	3.2	2.8	7.0	3.9	4.7	3.5	1.4	1.9	3.3	3.5	177	179				
High	4.7	3.3	3.6	4.0	9.0	6.5	6.7	5.1	1.5	2.5	3.4	3.8	200	211	3.6	4.2	4.4	4.5
Low	3.6	2.4	3.0	2.5	7.0	3.1	3.6	2.0	1.3	1.4	3.1	2.4	158	124	3.0	3.5	3.6	3.7
Standard Deviation	0.3	0.2	0.2	0.4	0.6	0.9	0.9	1.0	0.1	0.3	0.1	0.4	12	25	0.2	0.2	0.2	0.3
Comparison Forecasts																		
Riksbank (Jun. '06)	3.7	2.8	2.6	3.3	6.2	3.5			1.5	2.3								
Eur Commission (May '06)	3.4	3.0	3.2	3.2	5.6	4.5												
IMF (Sep. '06)	4.0	2.2																
OECD (May '06)	3.9	3.3	3.2	2.7	5.8	4.2			1.0	2.1								

❖ Revisions to the national accounts lowered GDP growth in the second quarter to 1.3% q-o-q from 1.4%, although the fundamental picture of a strong economy remains unchanged. Survey evidence from the third quarter points to further robust expansion.

❖ The centre-right coalition ousted the Social Democratic-led government in the September 17 general election. The new administration plans to increase the role of the private sector in the economy, including selling off state-owned minority stakes in large Swedish companies and cutting taxes.



Historical Data

* % change on previous year	2002	2003	2004	2005
Gross Domestic Product*	2.0	1.8	3.3	2.7
Household Consumption*	1.5	1.8	1.8	2.4
Gross Fixed Investment*	-2.6	1.1	5.1	8.5
Min. & Manufacturing Prodn*	1.3	2.5	3.2	1.6
Consumer Prices*	2.2	1.9	0.4	0.5
Average Hourly Earnings (Mining & Manufacturing)*	3.4	2.9	2.7	3.0
Current Account, Skr bn	121	181	176	171
3 mth Interbank Rate, % (end yr)	4.4	2.9	2.2	2.0
10 Yr Govt Bond Yield, % (end yr)	4.6	4.8	4.0	3.3

Nominal GDP - Skr 2,673.0bn (2005). Population - 9.0mn (mid-year, 2005). Skr/\$ Exchange Rate - 7.473 (average, 2005).

Quarterly Consensus Forecasts

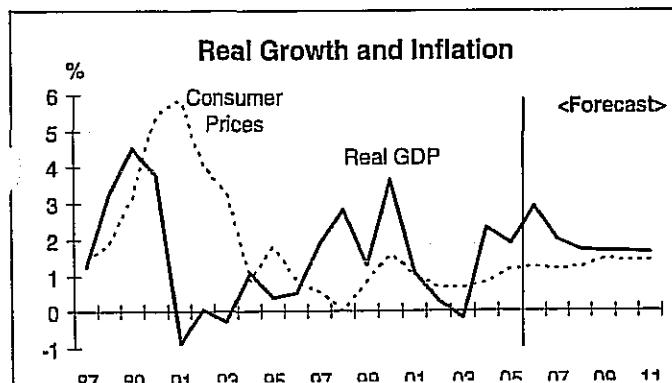
Historical Data and Forecasts (bold italics) From Survey of September 11, 2006

	2005				2007				2008	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Gross Domestic Product	4.4	5.0	4.0	3.7	3.4	2.9	2.7	2.6	2.5	2.6
Consumer										

	Average % Change on Previous Calendar Year												Annual Total		Rates on Survey Date			
	Gross Domestic Product		Private Consumption		Gross Fixed Investment		Industrial Production		Consumer Prices		Merchandise Exports (SwFr bn)		Current Account (SwFr bn)		3 month Euro-Franc Rate (%)		10 Year Govt Bond Yield (%)	
	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	End Jan'07	End Oct'07	End Jan'07	End Oct'07
Economic Forecasters																		
Bank Vontobel	3.1	2.1	1.9	1.5	5.7	4.0	8.3	3.8	1.2	1.1	na	na	na	na	2.0	2.3	2.5	2.7
JP Morgan	3.1	2.4	1.9	2.0	4.4	2.9	4.4	2.7	1.2	1.0	175	185	68.9	68.4	na	na	na	na
Swiss Life	3.1	2.0	2.6	1.8	4.5	4.2	4.5	3.5	1.1	0.9	165	155	na	na	na	na	na	na
Global Insight	3.0	1.8	1.8	1.6	4.9	3.5	6.3	5.5	1.2	1.0	180	188	69.0	75.0	2.1	2.0	2.8	2.8
Goldman Sachs	3.0	1.8	1.8	1.6	4.3	2.0	4.8	4.2	1.3	1.7	na	na	60.3	59.7	2.5	2.5	3.0	3.1
Pictet & Cie	3.0	2.5	2.0	2.2	4.0	3.5	na	na	1.1	0.9	na	na	72.0	70.0	2.0	2.8	2.7	3.4
UBS	3.0	1.4	1.9	1.7	5.3	3.0	na	na	1.1	1.1	168	174	69.0	59.0	2.0	2.0	2.6	2.7
Bank Julius Baer	3.0	1.9	1.9	1.8	5.0	4.0	5.7	1.7	1.2	1.3	172	195	76.5	80.1	2.0	2.3	3.1	3.0
BAK Basel	2.9	2.0	1.7	1.6	5.3	2.1	6.7	5.8	1.2	0.9	174	182	67.1	65.4	2.0	2.2	2.4	2.6
Econ Intelligence Unit	2.9	2.0	1.9	1.5	3.7	4.5	6.4	2.8	1.4	1.6	na	na	na	na	na	na	na	na
Credit Suisse	2.8	2.2	2.1	2.0	3.0	2.0	7.1	na	1.4	1.4	na	na	na	na	2.0	2.3	2.7	3.0
ING Financial Markets	2.8	2.2	1.7	1.5	3.3	2.4	3.2	2.7	1.3	1.4	162	159	61.0	55.0	2.3	2.5	2.4	2.6
HSBC	2.7	1.5	1.7	1.5	4.6	2.6	5.4	2.9	1.2	1.0	na	na	64.0	67.0	2.0	2.0	2.4	2.3
KOF/ETH	2.6	2.1	1.9	2.1	3.6	2.8	na	na	1.2	0.8	174	179	59.1	58.6	2.0	2.1	2.5	2.3
Zürcher Kantonalbank	2.5	1.8	2.0	1.9	4.5	3.4	na	na	1.1	1.2	170	178	74.0	76.0	2.0	2.2	2.3	2.6
Consensus (Mean)	2.9	2.0	1.9	1.8	4.4	3.1	5.7	3.6	1.2	1.2	171	177	67.4	66.7	2.1	2.3	2.6	2.8
Last Month's Mean	2.9	1.9	2.0	1.7	3.9	2.9	5.7	3.1	1.3	1.2	168	171	65.2	64.0				
3 Months Ago	2.9	1.9	2.0	1.8	3.6	2.8	5.9	3.6	1.3	1.2	166	169	63.8	63.2				
High	3.1	2.5	2.6	2.2	5.7	4.5	8.3	5.8	1.4	1.7	180	195	76.5	80.1	2.5	2.8	3.1	3.4
Low	2.5	1.4	1.7	1.5	3.0	2.0	3.2	1.7	1.1	0.8	162	155	59.1	55.0	2.0	2.0	2.3	2.3
Standard Deviation	0.2	0.3	0.2	0.2	0.8	0.8	1.4	1.3	0.1	0.3	6	13	5.7	8.1	0.2	0.2	0.2	0.3
Comparison Forecasts																		
IMF (Sep. '06)	3.0	1.9																
OECD (May '06)	2.4	1.8	1.8	1.6	4.1	3.1			1.1	0.8								

❖ As expected, the Swiss National Bank raised its 3-month Libor target range by 25 basis points to 1.25-2.25% at its quarterly policy review in September. Against a backdrop of above-trend growth but below-target inflation, the bank said that it would continue its gradual normalisation of monetary policy. Most analysts expect a further 25 basis-point increase at the next meeting in December.

❖ 2006 and 2007 current account forecasts have improved this month as data for the second quarter confirmed that buoyant economic conditions resulted in a surplus of SwFr18.5bn.



Historical Data				
* % change on previous year	2002	2003	2004	2005
Gross Domestic Product*	0.3	-0.2	2.3	1.9
Private Consumption*	0.0	0.8	1.5	1.3
Gross Fixed Investment*	0.2	-1.4	4.5	3.1
Industrial Production*	-5.1	0.1	4.4	2.7
Consumer Prices*	0.6	0.6	0.8	1.2
Merch Exports, SwFrbn	136	135	146	157
Current Account, SwFr bn	36.3	58.1	60.5	67.7
3 mth Euro-Franc Rate, % (end yr)	0.6	0.2	0.7	1.0
10 Yr Govt Bond Yield, % (end yr)	2.2	2.6	2.3	1.9

Nominal GDP - SwFr 456.9bn (2005). Population - 7.3mn (mid-year, 2005). SwFr/\$ Exchange Rate - 1.2452 (average, 2005)

Quarterly Consensus Forecasts										
Historical Data and Forecasts (bold italics) From Survey of September 11, 2006										
	2006				2007				2008	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Gross Domestic Product	3.3	3.1	2.8	2.4	2.1	1.7	1.7	1.7	1.8	1.8
Consumer Prices	1.2	1.3	1.4	1.3	1.2	1.2	1.3	1.3	1.3	1.2

Forecasts for the countries in Western Europe, the Middle East and Africa shown on the next two pages were provided by the following leading economic forecasters:

Bank Austria Creditanstalt

Economist Intelligence Unit

Moody's Economy.com

Bank Leumi

Forecaster ECOSA

D&B

Handelsbanken Markets

Oxford - LBS

e = consensus estimate based on latest survey

AUSTRIA	Population - 8.2mn (2005, mid-year)	Historical Data				Consensus Forecasts	
		2002	2003	2004	2005	2006	2007
	Nominal GDP - US\$306.6bn (2005)						
	Gross Domestic Product (% change on previous year)	0.9	1.1	2.4	2.0	2.9	2.2
	Industrial Production (% change on previous year)	0.7	4.1	6.1	4.3	6.1	4.0
	Consumer Prices (% change on previous year)	1.8	1.3	2.1	2.3	1.8	1.8
	Current Account (US Dollar bn)	0.7	-0.5	0.4	3.8	4.1	2.8

BELGIUM	Population - 10.4mn (2005, mid-year)	Historical Data				Consensus Forecasts	
		2002	2003	2004	2005	2006	2007
	Nominal GDP - US\$371.5bn (2005)						
	Gross Domestic Product (% change on previous year)	1.5	0.9	2.4	1.5	2.5	2.1
	Industrial Production (% change on previous year)	1.2	0.7	3.1	-0.2	3.9	2.2
	Consumer Prices (% change on previous year)	1.6	1.6	2.1	2.8	2.2	1.9
	Current Account (US Dollar bn)	11.7	12.7	12.2	10.1	7.8	9.7

DENMARK	Population - 5.4mn (2005, mid-year)	Historical Data				Consensus Forecasts	
		2002	2003	2004	2005	2006	2007
	Nominal GDP - US\$259.2bn (2005)						
	Gross Domestic Product (% change on previous year)	0.5	0.7	1.9	3.2	2.8	2.2
	Manufacturing Production (% change on previous year)	1.0	-0.7	-0.3	1.7	2.4	1.7
	Consumer Prices (% change on previous year)	2.4	2.1	1.2	1.8	2.0	2.0
	Current Account (US Dollar bn)	5.0	6.1	6.0	7.7	5.2	5.5

EGYPT	Population - 74.0mn (2005, mid-year)	Historical Data				Consensus Forecasts	
		2002	2003	2004	2005	2006	2007
	Nominal GDP - US\$93.6bn (2005) ¹						
	Gross Domestic Product (% change on previous year) ¹	3.2	3.1	4.2	4.9	5.7	5.7
	Consumer Prices (% change on previous year)	2.7	4.5	11.3	4.9	7.3	5.3
	Current Account (US Dollar bn)	0.6	3.7	3.9	2.8 e	2.8	2.7

¹ year(s) ending June 30

FINLAND	Population - 5.2mn (2005, mid-year)	Historical Data				Consensus Forecasts	
		2002	2003	2004	2005	2006	2007
	Nominal GDP - US\$196.2bn (2005)						
	Gross Domestic Product (% change on previous year)	1.6	1.9	3.3	3.0	4.0	2.7
	Industrial Production (% change on previous year)	2.0	1.5	4.8	-2.0	5.5	2.8
	Consumer Prices (% change on previous year)	1.6	0.9	0.2	0.6	1.5	1.7
	Current Account (US Dollar bn)	13.8	10.6	14.7	10.0	8.8	9.0

GREECE	Population - 11.1mn (2005, mid-year)	Historical Data				Consensus Forecasts	
		2002	2003	2004	2005	2006	2007
	Nominal GDP - US\$225.6bn (2005)						
	Gross Domestic Product (% change on previous year)	3.8	4.8	4.7	3.7	3.6	3.3
	Industrial Production (% change on previous year)	0.8	0.3	1.2	-0.9	1.8	2.6
	Consumer Prices (% change on previous year)	3.6	3.5	2.9	3.5	3.3	3.0

IRELAND	Population - 4.1mn (2005, mid-year)	Historical Data				Consensus Forecasts	
		2002	2003	2004	2005	2006	2007
	Nominal GDP - US\$200.8bn (2005)						
	Gross Domestic Product (% change on previous year)	6.0	4.3	4.3	5.5	5.2	5.0
	Industrial Production (% change on previous year)	7.3	4.8	0.5	3.0	4.6	4.1
	Consumer Prices (% change on previous year)	4.6	3.5	2.2	2.5	3.6	3.0
	Current Account (US Dollar bn)	-1.2	0.0	-1.1	-5.2	-6.2	-7.0

ISRAEL	Population - 6.7mn (2005, mid-year)	Historical Data				Consensus Forecasts	
		2002	2003	2004	2005	2006	2007
	Nominal GDP - US\$129.8bn (2005)						
	Gross Domestic Product (% change on previous year)	-0.9	1.5	4.8	5.2	3.9	3.9
	Industrial Production (% change on previous year)	-1.9	-0.3	6.9	3.6	5.2	4.7
	Consumer Prices (% change on previous year)	5.7	0.7	-0.4	1.3	2.5	2.3
	Current Account (US Dollar bn)	-0.7	1.7	3.2	3.8	2.5	2.6

NIGERIA	Popn - 131.5mn (2005, mid-year)	Historical Data				Consensus Forecasts	
		2002	2003	2004	2005	2006	2007
	Nominal GDP - US\$94.8bn (2005)						
	Gross Domestic Product (% change on previous year)	1.5	10.7	6.0	6.9	5.3	6.0
	Consumer Prices (% change on previous year)	13.7	14.0	19.4	13.5	10.2	10.0
	Current Account (US Dollar bn)	1.1	9.5	12.3	12.6 e	21.3	21.4

PORTUGAL	Population - 10.4mn (2005, mid-year)	Historical Data				Consensus Forecasts	
		2002	2003	2004	2005	2006	2007
	Nominal GDP - US\$183.6bn (2005)						
	Gross Domestic Product (% change on previous year)	0.8	-1.1	1.2	0.4	1.2	1.3
	Industrial Production (% change on previous year)	-0.4	0.1	-2.6	0.1	0.8	1.5
	Consumer Prices (% change on previous year)	3.6	3.3	2.4	2.3	2.4	2.2
	Current Account (US Dollar bn)	-10.0	-9.2	-12.9	-17.0	-14.7	-13.7

SAUDI ARABIA	Popn - 24.6mn (2005, mid-year)	Historical Data				Consensus Forecasts	
		2002	2003	2004	2005	2006	2007
	Nominal GDP - US\$309.8bn (2005)						
	Gross Domestic Product (% change on previous year)	0.1	7.7	5.3	6.5	5.9	4.2
	Consumer Prices (% change on previous year)	0.2	0.6	0.3	0.7	1.3	1.4
	Current Account (US Dollar bn)	11.9	28.0	51.9	87.1	110.6	106.9

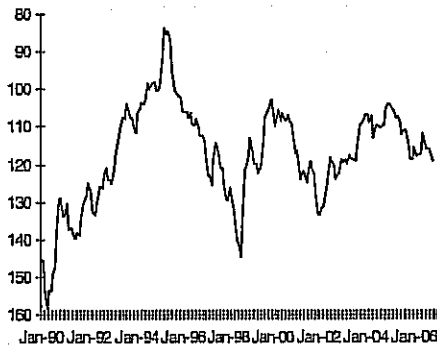
SOUTH AFRICA	Popn - 47.4mn (2005, mid-year)	Historical Data				Consensus Forecasts	
		2002	2003	2004	2005	2006	2007
	Nominal GDP - US\$239.5bn (2005)						
	Gross Domestic Product (% change on previous year)	3.7	3.0	4.5	4.9	4.5	4.6
	Manufacturing Production (% change on previous year)	4.5	-1.8	4.2	3.6	5.4	6.2
	Consumer Prices (% change on previous year)	9.2	5.8	1.4	3.4	4.7	4.8
	Current Account (US Dollar bn)	0.7	-2.3	-7.4	-10.1	-12.6	-10.1

Foreign Exchange Rates

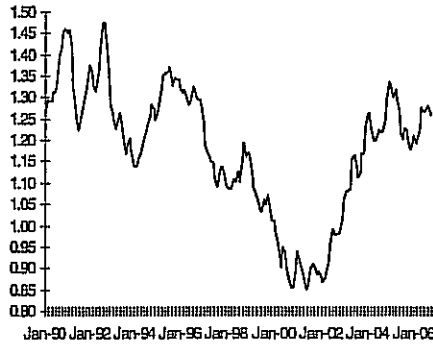
All US\$ rates are amounts of currency per dollar, except the UK pound and the euro which are reciprocals. A positive (+) sign for the % change implies an appreciation of the currency against the US Dollar and vice versa.

	Historical Data				Latest Spot Rate (Oct. 9)	Consensus Forecasts					
	Rates at end of:					Forecast End Jan. 2007	Percent Change	Forecast End Oct. 2007	Percent Change	Forecast End Oct. 2008	Percent Change
	2002	2003	2004	2005							
Rates per US Dollar¹											
Canadian Dollar	1.580	1.292	1.204	1.165	1.122	1.125	-0.2	1.134	-1.0	1.133	-0.9
Egyptian Pound	4.630	6.153	6.131	5.739	5.739	5.785	-0.8	5.851	-1.9	6.035	-4.9
European Euro	1.049	1.263	1.362	1.180	1.260	1.296	+2.8	1.303	+3.3	1.296	+2.9
Israeli Shekel	4.737	4.379	4.308	4.603	4.258	4.405	-3.3	4.463	-4.6	4.538	-6.2
Japanese Yen	119.9	107.1	104.1	118.0	119.1	112.7	+5.7	107.0	+11.4	103.8	+14.7
Nigerian Naira	126.4	136.5	132.4	129.0	128.3	129.8	-1.2	132.1	-2.9	135.6	-5.4
Saudi Arabian Riyal	3.745	3.750	3.750	3.745	3.750	3.749	0.0	3.749	0.0	3.749	0.0
South African Rand	8.640	6.640	5.630	6.325	7.839	7.575	+3.5	7.521	+4.2	7.734	+1.4
United Kingdom Pound	1.612	1.785	1.931	1.722	1.865	1.894	+1.5	1.870	+0.2	1.851	-0.8
Rates per Euro											
Danish Krone	7.427	7.525	7.447	7.461	7.456	7.457	0.0	7.456	0.0	7.450	+0.1
Norwegian Krone	7.305	8.436	8.227	7.987	8.409	8.030	+4.7	7.851	+7.1	7.923	+6.1
Swedish Krona	9.254	9.080	9.010	9.389	9.299	9.149	+1.6	9.023	+3.1	8.980	+3.5
Swiss Franc	1.454	1.562	1.541	1.550	1.589	1.570	+1.2	1.546	+2.8	1.517	+4.8

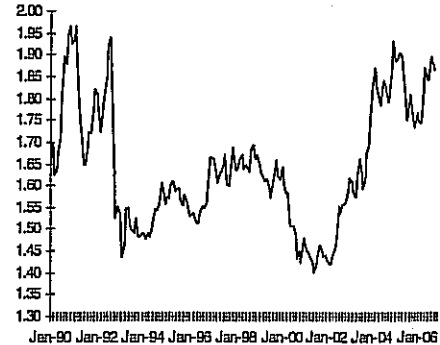
Yen per US\$



US\$ per Euro¹



US\$ per UK Pound



¹ historical rates up to January 1, 1999, are calculated as "synthetic" euro exchange rates based on a weighted average of the eleven original component currencies.

West Texas Intermediate, US\$ per barrel		
Range 1985-2006	77.0 - 10.4	
Spot Rate (Oct. 9)	60.0	
	Forecast for	
October Survey	End Jan. 2007	End Oct. 2007
Mean Forecast	63.9	62.6
High	78.0	78.0
Low	53.8	50.0
Standard Deviation	5.1	6.1
No. of Forecasts	69	69

Prices on a Downward Trend Despite OPEC's Call to Cut Output
 After more than a year of high oil prices, excess supply conditions have dampened the surge in crude oil futures. Observers estimate that US gasoline prices tumbled by more than 20% over the past two months. In an effort to support prices, some OPEC member countries are considering a cut in production. However, no formal agreement has been announced, and the size of the proposed cut is still subject to debate. Consequently, oil prices have remained subdued following the news, with the price of West Texas Intermediate standing at US\$60.0 on our survey date. Debate over Iran's nuclear program, though, coupled with North Korea's first nuclear test and disruption to Nigerian supplies have lifted geopolitical concerns and could well exert upward pressure on prices again.

France

* % change over previous year	Historical				Consensus Forecasts						
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2016 ¹
Gross Domestic Product*	1.1	1.1	2.0	1.2	2.3	2.0	2.0	2.1	2.1	2.0	2.1
Household Consumption*	2.3	2.3	2.5	2.2	2.7	2.3	2.2	2.3	2.2	2.2	2.2
Business Investment*	-2.9	0.3	4.2	3.7	4.0	3.7	3.5	3.8	4.0	3.1	3.2
Industrial Production*	-1.7	-1.0	2.4	0.0	1.8	1.6	1.9	2.2	2.3	2.0	2.2
Consumer Prices*	1.9	2.1	2.2	1.7	1.9	1.6	1.7	1.8	1.8	1.8	1.9
Current Account Balance (Euro bn)	15.4	7.0	-5.6	-27.0	-26.8	-25.6	-27.0	-26.8	-26.7	-22.6	-19.3
10 Year Treasury Bond Yield, % ²	4.2	4.4	3.7	3.3	3.9 ³	4.0 ⁴	4.2	4.4	4.4	4.4	4.5

United Kingdom

* % change over previous year	Historical				Consensus Forecasts						
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2016 ¹
Gross Domestic Product*	2.1	2.7	3.3	1.9	2.6	2.4	2.3	2.2	2.1	2.1	2.3
Household Consumption*	3.6	3.0	3.5	1.4	2.2	2.3	2.3	2.2	2.0	2.0	2.2
Gross Fixed Investment*	3.7	0.4	6.0	2.7	4.8	3.1	2.2	2.3	2.6	2.9	2.9
Manufacturing Production*	-2.6	0.2	2.0	-1.1	1.0	1.2	1.4	1.1	0.8	1.0	1.1
Retail Prices (underlying rate)*	2.2	2.8	2.2	2.3	2.8	2.7	2.5	2.5	2.5	2.6	2.6
Consumer Prices*	1.3	1.4	1.3	2.1	2.3	2.2	2.0	2.0	2.0	2.0	2.0
Current Account Balance (£ bn)	-16.5	-14.9	-19.3	-27.4	-31.6	-34.4	-37.5	-35.2	-32.9	-26.8	-25.5
10 Year Treasury Bond Yield, % ²	4.4	4.8	4.5	4.1	4.7 ³	4.7 ⁴	4.7	4.7	4.6	4.5	4.7

Italy

* % change over previous year	Historical				Consensus Forecasts						
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2016 ¹
Gross Domestic Product*	0.3	0.1	0.9	0.1	1.6	1.2	1.4	1.5	1.4	1.6	1.5
Household Consumption*	0.2	1.0	0.5	0.1	1.6	1.3	1.5	1.5	1.6	1.6	1.5
Gross Fixed Investment*	4.0	-1.5	1.9	-0.4	3.0	1.8	1.6	1.6	1.4	1.9	1.8
Industrial Production*	-1.6	-0.5	-0.6	-0.8	1.9	1.0	1.2	1.2	1.3	1.4	1.4
Consumer Prices*	2.5	2.7	2.2	2.0	2.2	1.9	2.0	1.9	2.0	2.0	2.1
Current Account Balance (Euro bn)	-10.0	-17.4	-12.5	-22.1	-28.2	-26.3	-19.0	-15.4	-9.6	-9.5	-10.2
10 Year Treasury Bond Yield, % ²	4.3	4.5	3.8	3.5	4.1 ³	4.1 ⁴	4.5	4.6	4.4	4.4	4.5

Canada

* % change over previous year	Historical				Consensus Forecasts						
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2016 ¹
Gross Domestic Product*	2.9	1.8	3.3	2.9	2.8	2.6	2.9	3.0	2.9	2.8	2.5
Personal Expenditure*	3.6	3.0	3.3	3.9	3.9	3.1	2.9	2.9	2.7	2.6	2.3
Machinery & Eqpt Investment*	-2.8	7.9	10.3	10.5	9.3	8.0	6.0	5.0	4.4	3.9	3.5
Industrial Production*	2.1	0.2	1.8	1.0	0.8	1.7	2.3	2.6	2.6	2.8	2.7
Consumer Prices*	2.3	2.7	1.8	2.2	2.1	1.8	2.0	2.0	2.0	2.0	2.0
Current Account Balance (C\$ bn)	19.8	14.1	27.6	31.8	22.1	16.5	17.5	18.6	20.6	21.1	23.8
10 Year Treasury Bond Yield, % ²	4.7	4.8	4.3	4.0	4.1 ³	4.2 ⁴	4.8	5.0	5.0	5.1	5.2

Euro zone

* % change over previous year	Historical				Consensus Forecasts						
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2016 ¹
Gross Domestic Product*	0.9	0.8	1.7	1.5	2.6	1.9	1.9	2.0	2.0	1.9	1.9
Private Consumption*	0.9	1.2	1.3	1.4	1.9	1.5	1.7	1.8	1.8	1.8	1.7
Gross Fixed Capital Formation*	-1.6	1.0	1.7	2.8	4.3	3.3	2.6	2.5	2.4	2.4	2.3
Industrial Production*	-0.5	0.3	2.0	1.2	3.3	2.0	1.8	2.1	2.0	1.8	1.9
Consumer Prices*	2.3	2.1	2.1	2.2	2.3	2.2	1.9	1.9	1.9	1.9	1.9
Current Account Balance (Euro bn)	53.2	31.9	46.8	-23.5	-31.3	-20.8	-16.8	-15.7	-14.0	-16.3	-18.6

The Netherlands

* % change over previous year	Historical				Consensus Forecasts						
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2016 ¹
Gross Domestic Product*	0.1	0.3	2.0	1.5	2.9	2.8	2.2	2.5	2.5	2.2	1.8
Private Consumption*	0.9	-0.2	0.6	0.7	-0.4	2.2	1.6	2.0	2.1	2.2	1.6
Gross Fixed Investment*	-4.5	-1.5	-0.8	3.6	4.1	4.2	2.7	3.0	2.9	2.3	2.1
Manufacturing Production*	0.1	-1.1	1.6	0.2	2.1	2.5	1.9	2.5	2.4	1.9	1.5
Consumer Prices*	3.3	2.1	1.2	1.7	1.4	2.0	2.0	1.8	1.8	2.0	1.9
Current Account Balance (Euro bn)	11.6	26.0	43.6	33.4	35.6	35.1	38.6	42.9	41.3	40.8	39.3
10 Year Treasury Bond Yield, % ²	4.2	4.3	3.7	3.3	3.9 ³	4.0 ⁴	4.3	4.3	4.5	4.5	4.4

Norway

* % change over previous year	Historical				Consensus Forecasts						
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2016 ¹
Gross Dom Prod (Mainland)*	1.6	0.4	3.7	4.0	3.5	2.8	2.3	2.2	2.3	2.4	2.4
Private Consumption*	2.9	2.7	4.6	3.6	3.7	3.1	2.9	3.0	3.0	2.8	2.8
Gross Fixed Investment*	-1.0	0.2	8.1	10.9	6.9	3.2	0.4	0.4	1.4	2.1	2.2
Manufacturing Production*	-0.9	-4.2	1.4	3.1	3.2	1.4	0.9	1.3	1.3	1.2	1.2
Consumer Prices*	1.3	2.5	0.5	1.5	2.2	1.7	1.9	2.2	2.2	2.2	2.2
Current Account Balance (Nkr bn)	194	204	233	317	391	378	281	262	250	244	236
10 Year Treasury Bond Yield, % ²	5.8	4.5	4.1	3.6	4.3 ³	4.4 ⁴	4.9	4.7	4.7	4.9	5.0

Spain

* % change over previous year	Historical				Consensus Forecasts						
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2016 ¹
Gross Domestic Product*	2.7	3.0	3.2	3.5	3.6	3.1	2.7	2.3	2.1	2.2	2.4
Household Consumption*	2.8	2.8	4.2	4.2	3.5	3.0	2.7	2.2	2.1	2.2	2.4
Gross Fixed Investment*	3.4	5.9	5.0	7.0	5.9	4.4	3.9	3.2	2.6	2.2	2.6
Industrial Production*	0.1	1.6	1.8	0.1	3.4	2.7	2.2	1.8	1.8	1.9	2.2
Consumer Prices*	3.5	3.0	3.0	3.4	3.7	2.9	2.7	2.6	2.5	2.5	2.5
Current Account Balance (Euro bn)	-23.8	-27.5	-44.2	-66.6	-80.6	-84.7	-89.5	-90.5	-90.6	-87.9	-91.5
10 Year Treasury Bond Yield, % ²	4.2	4.3	3.7	3.3	4.0 ³	4.0 ⁴	4.2	4.3	4.4	4.3	4.3

Sweden

* % change over previous year	Historical				Consensus Forecasts						
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2016 ¹
Gross Domestic Product*	2.0	1.8	3.3	2.7	4.2	3.0	2.4	2.1	2.3	2.4	2.3
Household Consumption*	1.5	1.8	1.8	2.4	3.3	3.0	2.4	1.8	2.1	2.2	2.1
Gross Fixed Investment*	-2.6	1.1	5.1	8.5	8.2	4.7	2.6	2.6	2.8	3.1	3.0
Mining & Manufacturing Production*	1.3	2.5	3.2	1.6	5.0	3.8	2.7	2.7	3.2	3.7	3.4
Consumer Prices*	2.2	1.9	0.4	0.5	1.5	2.0	1.9	1.8	1.8	1.9	1.9
Current Account (Skr bn)	121	181	176	171	184	184	180	165	168	173	165
10 Year Treasury Bond Yield, % ²	4.6	4.8	4.0	3.3	4.0 ³	4.2 ⁴	4.1	4.1	4.1	4.3	4.3

Switzerland

* % change over previous year	Historical				Consensus Forecasts						
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2016 ¹
Gross Domestic Product*	0.3	-0.2	2.3	1.9	2.9	2.0	1.7	1.7	1.7	1.6	1.6
Private Consumption*	0.0	0.8	1.5	1.3	1.9	1.8	1.6	1.5	1.6	1.5	1.5
Gross Fixed Investment*	0.2	-1.4	4.5	3.1	4.4	3.1	2.7	2.3	3.1	3.0	3.0
Industrial Production*	-5.1	0.1	4.4	2.7	5.7	3.6	3.0	2.7	2.5	2.5	2.4
Consumer Prices*	0.6	0.6	0.8	1.2	1.2	1.2	1.2	1.5	1.4	1.4	1.4
Current Account Balance (SwFr bn)	36.3	58.1	60.5	67.7	67.4	66.7	76.1	85.2	86.5	88.3	90.9
10 Year Treasury Bond Yield, % ²	2.2	2.6	2.3	1.9	2.6 ³	2.8 ⁴	2.8	3.1	3.1	3.1	3.1

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October Survey	Real GDP % increase			Consumer Prices % increase			Current Account Balance, US\$bn		
	2005	2006	2007	2005	2006	2007	2005	2006	2007
Belgium	1.5	2.5	2.1	2.8	2.2	1.9	10.1	7.8	9.7
Canada	2.9	2.8	2.6	2.2	2.1	1.8	26.2	19.5	14.6
France	1.2	2.3	2.0	1.7	1.9	1.6	-33.6	-33.6	-33.3
Germany	0.9	2.2	1.2	2.0	1.8	2.3	115.3	107.6	115.7
Italy	0.1	1.6	1.2	2.0	2.2	1.9	-27.5	-35.4	-34.2
Japan	2.6	2.8	2.2	-0.3	0.3	0.5	166.1	158.3	166.4
Netherlands	1.5	2.9	2.8	1.7	1.4	2.0	41.6	44.6	45.6
Norway	4.0	3.5	2.8	1.5	2.2	1.7	49.2	60.9	61.9
Spain	3.5	3.6	3.1	3.4	3.7	2.9	-83.0	-101.0	-110.0
Sweden	2.7	4.2	3.0	0.5	1.5	2.0	22.9	24.8	26.3
Switzerland	1.9	2.9	2.0	1.2	1.2	1.2	54.3	53.7	55.7
United Kingdom	1.9	2.6	2.4	2.1	2.3	2.2	-49.8	-58.0	-64.8
United States	3.2	3.4	2.6	3.4	3.5	2.5	-792	-855	-847
North America ¹	3.2	3.3	2.6	3.3	3.4	2.5	-766	-835	-832
Western Europe ²	1.6	2.6	2.0	2.0	2.1	2.1	81.0	49.2	51.9
European Union ²	1.7	2.7	2.2	2.1	2.2	2.2	-48.2	-94.1	-95.7
Euro zone ²	1.5	2.6	1.9	2.2	2.3	2.2	-29.3	-39.2	-27.0
Asia Pacific ³	5.1	5.3	4.6	1.6	2.0	2.0	370	379	376
Eastern Europe ⁴	6.0	6.2	5.4	7.5	7.1	6.6	24.4	36.6	22.9
Latin America ⁵	4.2	4.7	4.0	5.7	4.8	5.1	38.8	42.4	23.5
Other Countries ⁶	5.7	5.1	4.6	3.3	4.0	3.8	96.2	124.7	123.5
Total	3.4	3.8	3.2	2.8	2.9	2.6			

Regional totals, as well as the grand total for GDP growth and inflation, are weighted averages calculated using 2005 GDP weights, converted at average 2005 exchange rates. Current account forecasts given in national currencies on pages 7-24 have been converted using consensus exchange rate forecasts for the purposes of comparison. ¹USA and Canada. ²The Euro zone aggregate is taken from our panel's latest forecasts (pages 18-19). The Euro zone current account data and forecasts are based on extra-euro zone data, i.e., they are compiled from an aggregate of the Euro zone member states' transactions only with nonresidents of the Euro zone. The European Union data includes the Euro zone countries listed on page 18 plus Denmark, Sweden and the United Kingdom, as well as May 2004 entrants the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia (data taken from Eastern Europe Consensus Forecasts). Western Europe comprises the Euro zone plus Denmark, Sweden and the United Kingdom, along with Norway and Switzerland. ³Survey results for Japan plus fourteen other countries taken from *Asia Pacific Consensus Forecasts*. ⁴Nineteen countries, including eight European Union countries taken from the latest issue of *Eastern Europe Consensus Forecasts*. ⁵Fourteen countries taken from the latest issue of *Latin American Consensus Forecasts* (Inflation figures are on a December/December basis). ⁶Egypt, Israel, Nigeria, Saudi Arabia and South Africa.

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December 2006

Aspen Publishers

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**Top Analysts' Forecasts Of U.S. And Foreign Interest Rates, Currency Values
And the Factors That Influence Them**

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EXECUTIVE EDITOR:

RANDELL E. MOORE

3663 Madison Ave.

Kansas City, MO 64111

Phone (816) 931-0131

Fax (816) 931-0430

E-mail: randy.moore@wolterskluwer.com

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Consensus Continues To Predict FOMC Will Ease By End Of Q2 2007

Domestic Commentary The Treasury market racked up another month of gains in November on further signs of below-trend economic activity coupled with lower than expected inflation. On the day after Thanksgiving, the on-the-run 10-year note yield dropped to a 10-month low as speculation increased that the Federal Open Market Committee (FOMC) would cut interest rates during the first half of next year. Implied rates in the futures and Eurodollar market now indicate about a 40% chance for a 25 basis point rate cut to 5.0% in the FOMC's target federal funds rate in Q1 of next year. Odds of a rate cut by late Q2 2007 now stand at about 70%. This is roughly in line with current expectations among our panelists. About three quarters of our contributing economists now predict the next change in FOMC policy will be a reduction in interest rates with 12 out of 50 apparently looking for a rate cut by the end of Q1. The number of panelists expecting the Fed to ease by the end of Q2 now stands at 27, or slightly more than half of those we survey each month. Among those who do not expect the FOMC to ease in 2007, about half believe policymakers will simply leave rates unchanged while the other half anticipate further interest rate increases as economic growth rebounds, reigniting inflationary concerns among policymakers. The divergent views leave the consensus predicting that the FOMC will ease very cautiously in 2007, lowering its target funds rate only 50 basis points by year's end.

The consensus continues to predict the U.S. economy will avoid a recession in 2007, putting the odds of a downturn at a relatively low 24.8%. However, 60% of our contributors cut their forecasts of the real GDP growth rate in the current quarter over the past month and the consensus forecast of growth in the initial quarter of next year also suffered a slight decline. The consensus now predicts real GDP will grow at a 2.3% rate in Q4, 0.3 of a percentage point slower than a month ago. Real GDP is forecast by the consensus to grow at a 2.6% clip in Q1 2007, 0.1 of a point less than a month earlier. Consensus forecasts of real GDP's growth rate in Q2, Q3 and Q4 of next year were unchanged at 2.7%, 2.9% and 3.0%, respectively.

Also falling over the past month were consensus forecasts of inflation in the current quarter and next. The consensus predicts the Consumer Price Index (CPI) will contract at an annualized rate of 0.5% in the current quarter. The softness will be largely attributable to much lower energy costs and steeply-discounted prices for light trucks and SUVs as automakers trim bloated inventories. The CPI is expected to register an annualized growth rate of 2.6% in the first half of next year and a growth rate of 2.4% in the second half of 2007. That compares with average annualized quarterly increase of about 3.5% from Q1 2004 through Q3 2006.

The declines in consensus forecasts of near-term economic growth and inflation are a direct reflection of the data flow over the past month. The latest monthly readings on nonfarm payroll growth, retail sales, the housing sector and industrial production all were generally softer than expected as were major inflation reports. Nonfarm payrolls rose by a smaller than expected 92,000 in October. A rise in initial jobless claims, combined with further deterioration in help-wanted indices from the Conference Board and Monster.com, have many analysts' guessing nonfarm payroll growth in November will remain similarly below trend. Retail sales fell 0.2% in October despite an unexpected rise of 0.6% in auto dealer receipts that flew in the face of the reported decline in unit sales of cars and light trucks. Moreover, the report also revealed sharp downward revisions to retail sales excluding autos in August and September. As a result, most analysts now look for real personal consumption expenditures growth in Q3 to be marked down when the government releases its revised GDP report on November 30th. Initial reports of how the holiday shopping season started during the Thanksgiving Day weekend were mixed, but likely adding to concern about the pace of real PCE

growth in the current quarter, Wal-Mart announced that same-store sales would fall slightly in November, the first monthly decline since April 1996.

Housing starts plunged in October by almost 15% to their lowest level in six years, suggesting that real residential investment may well be as big a drag on GDP growth in Q4 as in Q3 when it trimmed the rate of growth by more than a percentage point. Lastly, total industrial production rose only 0.2% in October, barely offsetting the prior month's decline of 0.6%. Manufacturing output fell 0.2% for a second consecutive month. The recession in the auto sector continued to significantly dampen manufacturing activity and regional surveys suggest the sluggishness may have extended into November. Motor vehicle production fell 3.9% in October as the assembly rate dropped to the lowest level since the 1998 GM strike.

On the inflation front, both the CPI and the Producer Price Index (PPI) fell by more than predicted by the consensus in October. The CPI declined by 0.5% for a second consecutive month, dropping the year-over-year rate of change to a four-year low of 1.3%. Meanwhile, the core CPI rose only 0.1%, reducing the y/y rate of change to 2.7% from its decade-high rate of 2.9% in September. The PPI also fell for a second straight month in October, dropping 1.6% versus a 1.3% decline in September. The softness in the core CPI suggests the October core PCE price index will be up only 0.1%, dropping its y/y change to 2.3% compared with 2.4% in September. It is likely that the bulk of the effects of lower energy and new vehicle prices have now played out in the monthly CPI and PPI figures. As a result, though y/y figures for both likely peaked this summer some rebound from the October levels are likely in coming months. It's also plausible that the y/y change in the core CPI and core PCE price index peaked in September. But still high rates of resource utilization suggest a meaningful retreat may be slower in coming than some market participants believe.

That certainly seems to be the message the Fed is trying to convey. Over the past month, Fed Governor Warsh and regional bank presidents Moskow of Chicago and Pianalto of Cleveland each warned that while down from recent highs, inflation remains elevated and may not retreat into a range that policymakers are comfortable with. Based on those sorts of remarks analysts expecting the FOMC to abandon its tightening bias in the December 12th policy statement are likely to be disappointed. Indeed, policymakers seem determined to stick to the sidelines unless there is a more dramatic shift in economic conditions or inflation that alters their outlook for a gradual recovery in the economy over the course of next year.

Consensus Forecast A large majority of our contributors believe the FOMC will opt to begin loosening monetary policy by the end of Q2 2007. At present, however, the consensus expects the Fed to ease judiciously, cutting rate by only 50 basis points next year. Real GDP growth will remain below trend in the short-term, but gradually improve over the course of next year as drag from the housing and auto sectors plays out. Headline inflation has peaked, says the consensus. Core inflation, too, has likely peaked but may remain above the level desired by the FOMC until next spring. Easing by the Fed next year will restore a positive slope to the yield curve. The trade-weighted value of the dollar will continue to fall as interest rate differentials between the U.S. and other nations narrow (*see page 2 for summary of this month's U.S. consensus forecasts*).

Special Questions Only 13.6% of our contributors that responded said the Fed "will" formally adopt an "inflation objective" in 2007 and just 20.5% said the Fed "should" do so (*see page 13*). On page 14 you will find the results of our twice-yearly long-range survey with consensus forecasts for the years 2008 through 2012 and averages for the five-year periods 2008-2012 and 2013-2017.

Consensus Forecasts Of U.S. Interest Rates And Key Assumptions¹

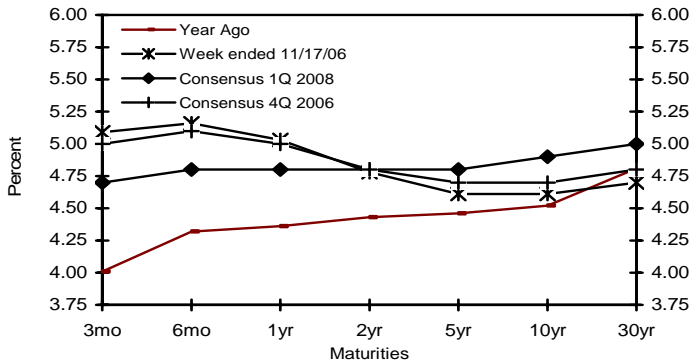
Interest Rates	History								Consensus Forecasts-Quarterly Avg.					
	Average For Week Ending				Average For Month				Latest Q	4Q 2006	1Q 2007	2Q 2007	3Q 2007	4Q 2007	1Q 2008
	Nov.17	Nov.10	Nov.3	Oct.27	Oct.	Sep.	Aug.	3Q 2006						
Federal Funds Rate	5.25	5.24	5.25	5.24	5.25	5.25	5.25	5.25	5.3	5.2	5.1	5.0	4.9	4.8
Prime Rate	8.25	8.25	8.25	8.25	8.25	8.25	8.25	8.25	8.3	8.2	8.1	8.0	7.9	7.8
LIBOR, 3-mo.	5.37	5.38	5.37	5.38	5.37	5.38	5.42	5.43	5.4	5.4	5.3	5.2	5.1	5.0
Commercial Paper, 1-mo.	5.20	5.21	5.20	5.21	5.20	5.21	5.22	5.22	5.3	5.2	5.2	5.1	5.0	4.9
Treasury bill, 3-mo.	5.09	5.09	5.08	5.12	5.05	5.08	5.09	5.08	5.0	5.0	4.9	4.8	4.7	4.7
Treasury bill, 6-mo.	5.16	5.16	5.14	5.18	5.12	5.08	5.17	5.17	5.1	5.1	5.0	4.9	4.9	4.8
Treasury bill, 1 yr.	5.03	5.03	5.00	5.07	5.01	4.97	5.08	5.09	5.0	5.0	4.9	4.9	4.8	4.8
Treasury note, 2 yr.	4.78	4.76	4.73	4.85	4.80	4.77	4.90	4.93	4.8	4.8	4.8	4.8	4.8	4.8
Treasury note, 5 yr.	4.61	4.62	4.60	4.74	4.69	4.67	4.82	4.84	4.7	4.7	4.8	4.8	4.8	4.8
Treasury note, 10 yr.	4.61	4.64	4.64	4.77	4.73	4.72	4.88	4.90	4.7	4.7	4.8	4.8	4.9	4.9
Treasury note, 30 yr.	4.70	4.74	4.74	4.89	4.85	4.85	5.00	4.99	4.8	4.9	4.9	4.9	5.0	5.0
Corporate Aaa bond	5.34	5.39	5.41	5.55	5.51	5.51	5.68	5.68	5.5	5.6	5.7	5.7	5.8	5.9
Corporate Baa bond	6.21	6.25	6.27	6.42	6.42	6.43	6.59	6.59	6.4	6.5	6.6	6.7	6.7	6.8
State & Local bonds	4.17	4.19	4.18	4.30	4.30	4.27	4.39	4.42	4.3	4.4	4.4	4.5	4.5	4.6
Home mortgage rate	6.24	6.33	6.31	6.40	6.36	6.40	6.52	6.56	6.3	6.4	6.4	6.5	6.5	6.5

Key Assumptions	History								Consensus Forecasts-Quarterly Avg.					
	4Q 2004	1Q 2005	2Q 2005	3Q 2005	4Q 2005	1Q 2006	2Q 2006	3Q 2006	4Q 2006	1Q 2007	2Q 2007	3Q 2007	4Q 2007	1Q 2008
Major Currency Index	81.9	81.3	83.5	84.7	85.8	84.9	82.2	81.7	81.8	81.4	80.9	80.6	80.3	80.4
Real GDP	2.6	3.4	3.3	4.2	1.8	5.6	2.6	1.6	2.3	2.6	2.7	2.9	3.0	3.2
GDP Price Index	3.2	3.5	2.4	3.3	3.3	3.3	3.3	1.8	1.7	2.5	2.4	2.2	2.2	2.2
Consumer Price Index	3.6	2.3	3.8	5.5	3.3	2.2	4.9	3.0	-0.5	2.6	2.6	2.4	2.4	2.3

¹Individual panel members' forecasts are on pages 4 through 9. Historical data for interest rates except LIBOR is from Federal Reserve Release (FRSR) H.15. LIBOR quotes available from *The Wall Street Journal*. Definitions reported here are same as those in FRSR H.15. Treasury yields are reported on a constant maturity basis. Historical data for the U.S. Federal Reserve Board's Major Currency Index is from FRSR H.10 and G.5. Historical data for Real GDP and GDP Chained Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index (CPI) history is from the Department of Labor's Bureau of Labor Statistics (BLS).

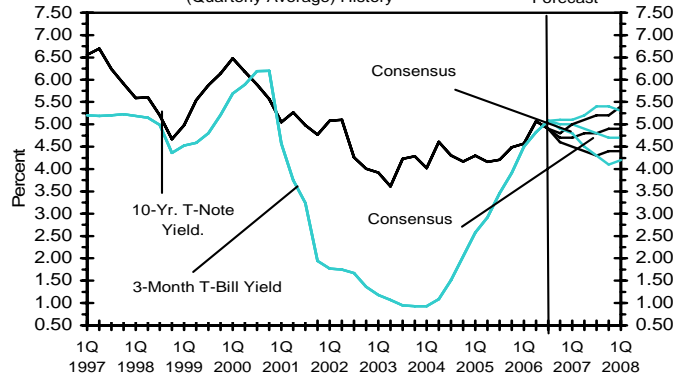
U.S. Treasury Yield Curve

Week ended November 17, 2006 and Year Ago vs. 4Q 2006 and 1Q 2008 Consensus forecasts



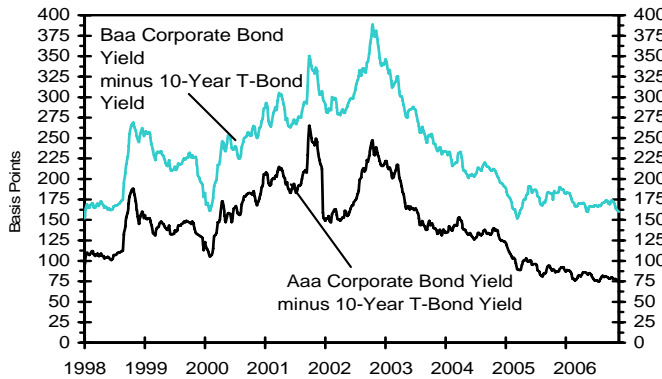
U.S. 3-Mo. T-Bills & 10-Yr. T-Note Yield

(Quarterly Average) History Forecast



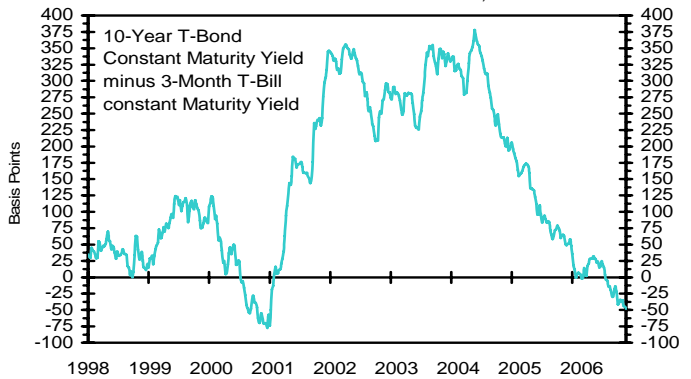
Corporate Bond Spreads

As of week ended November 17, 2006



U.S. Treasury Yield Curve

As of week ended November 17, 2006



-----3-Month Interest Rates¹-----

	History			Consensus Forecasts		
	Month	Year	Months From Now:			
Latest:	Ago:	Ago:	3	6	12	
U.S.	5.38	5.41	4.31	5.18	4.84	4.61
Japan	0.50	0.41	0.06	0.69	0.80	0.99
U.K.	5.22	5.16	4.59	5.18	5.13	5.06
Switzerland	1.94	1.88	1.00	2.10	2.30	2.33
Canada	4.25	4.31	3.34	4.15	3.95	4.00
Australia	6.31	6.18	5.58	6.28	6.20	5.73
Eurozone	3.63	3.53	2.47	3.71	3.76	3.70

-----10-Yr. Government Bond Yields¹-----

	History			Consensus Forecasts		
	Month	Year	Months From Now:			
Latest:	Ago:	Ago:	3	6	12	
U.S.	4.56	4.78	4.46	4.56	4.51	4.55
Germany	3.74	3.87	3.49	3.59	3.63	3.66
Japan	1.67	1.80	1.49	1.89	1.96	2.14
U.K.	4.56	4.71	4.22	4.58	4.55	4.55
France	3.75	3.88	3.51	3.59	3.63	3.67
Italy	3.98	4.15	3.68	3.79	3.80	3.76
Switzerland	2.32	2.57	2.21	2.42	2.35	2.38
Canada	3.98	4.20	4.09	3.92	3.87	3.97
Australia	5.55	5.80	5.38	5.45	5.38	5.50
Spain	3.78	3.92	3.53	3.60	3.61	3.63
Eurozone	3.86	3.94	3.51	3.68	3.70	3.75

-----Foreign Exchange Rates¹-----

	History			Consensus Forecasts		
	Month	Year	Months From Now:			
Latest:	Ago:	Ago:	3	6	12	
U.S.	81.52	82.25	86.53	79.6	79.1	79.9
Japan	116.61	118.62	118.76	112.0	110.3	107.5
U.K.	1.9145	1.8876	1.7214	1.93	1.93	1.92
Switzerland	1.2276	1.2567	1.3144	1.18	1.15	1.14
Canada	1.1414	1.1254	1.1720	1.13	1.14	1.16
Australia	0.7758	0.7621	0.7383	0.77	0.77	0.76
Euro	1.2928	1.2669	1.1799	1.31	1.33	1.32

	Consensus 3-Month Rates vs. U.S. Rate			Consensus 10-Year Gov't Yields vs. U.S. Yield	
	Now	In 12 Mo.		Now	In 12 Mo.
Japan	-4.88	-3.63	Germany	-0.82	-0.89
U.K.	-0.16	0.45	Japan	-2.89	-2.41
Switzerland	-3.44	-2.28	U.K.	0.00	0.00
Canada	-1.13	-0.61	France	-0.81	-0.88
Australia	0.93	1.12	Italy	-0.58	-0.79
Eurozone	-1.75	-0.91	Switzerland	-2.24	-2.17
			Canada	-0.58	-0.58
			Australia	0.99	0.95
			Spain	-0.78	-0.93
			Eurozone	-0.70	-0.80

Forecasts of individual panel members are on pages 10 and 11. Definitions of variables are as follows: ¹Three month currency interest rates. Government bonds are yields to maturity. Foreign exchange rate forecasts are currency per U.S. dollar except for U.K., Australia and the Euro, which are U.S. dollar equivalents. For the U.S. dollar, forecasts are of the U.S. Federal Reserve Board's Major Currency Index.

International Commentary Global bond yields drifted lower over the past month despite early-November interest rate increases by central banks in Australia and the U.K. and speculation that the European Central Bank (ECB), Swiss National Bank (SNB) and Bank of Japan (BoJ) will tighten monetary policy in December. Meanwhile, the U.S. dollar index has dropped to an 18-month low. The greenback is being weighed down by sluggish U.S. economic growth, speculation that the next move by the Fed will be an easing while the ECB and the BoJ continue tightening monetary policy and signs of increased desire on the part of foreign central banks to reduce their holdings of U.S. dollars in their foreign exchange reserves. .

The Bank of England's Monetary Policy Committee (MPC) voted 7-2 to increase the overnight rate target by 25 basis points to a five-year high of 5.0% on November 9th. The BoE remains worried about anchoring inflation expectations and avoiding pass-through from higher energy prices into wages. Consumer price inflation is near a six year high and exceeded the bank's 2.0% target for a seventh consecutive month in October. Although the 2006 wage round went about as expected, pass-through to wages remains an issue for 2007. Economic growth remains healthy and MPC members worry that the degree of spare capacity is "limited." Moreover, credit expansion remains strong and money supply growth is running at its fastest pace since 1991. Nonetheless, most analysts suspect the MPC will leave interest rates unchanged over the foreseeable future.

The ECB left rates unchanged on November 2nd, but is widely expected to raise its target repo rate by 25 basis points to 3.50% at the December 7th meeting. In the press conference following the November meeting, Governor Trichet virtually guaranteed a December hike by noting that in the battle against inflation "strong vigilance remains of the essence." While real GDP growth in the Eurozone slowed to 0.5% (q/q) in Q3 from 0.9% in Q2, y/y growth was a healthy 2.6%. Credit and money supply growth remain very strong and the German Ifo survey of business confidence unexpectedly jumped to a 15-year high in November. While acknowledging the deceleration in headline consumer inflation over the past two months, the ECB continues to believe it will exceed its 2% target both this year and next. Bank officials are particularly worried that solid economic growth and rising inflation will prompt labor unions to demand larger wage increases. Tax increases in Germany and Italy that are scheduled to go into effect in Q1 2007 may dampen economic growth, but the effect is expected to be short-lived. Nonetheless, after raising rates in December, the ECB may wait until Q2 to before tightening again. A continued rise in the value of the euro versus the U.S. dollar may also serve to make the ECB cautious about further tightening in 2007. Switzerland's central bank is likely to follow the ECB's lead and raise its overnight target rate by 25 basis points on December 14th to 2.0%.

The BoJ left rates unchanged at the November 15th-16th meeting and will likely opt to stand pat again in December. However, many analysts predict a further 25 basis point increase in the target overnight call rate to 0.5% in January if the December Tankan report continues to show signs of healthy economic growth and rising consumer inflation. The consensus looks for an increase in the BoJ's overnight rate to 1.0% by the end of next year.

Elsewhere, Australia's central bank raised rates by a quarter of a percentage point to 6.25% on November 17th, matching the previous cycle high. The RBA's policy statement emphasized continued capacity constraints and inflation pressures that may eventually require a further tightening of policy. The consensus, however, thinks the RBA will cut interest rates in the second half of next year. The Bank of Canada left rates unchanged at its last meeting and most analysts believe the next move will be an easing of policy (see 10 and 11 for individual panel members' forecasts).

International Interest Rate And Foreign Exchange Rate Forecasts

Blue Chip Forecasters	3 Mo. Euro Dollar Rate		
	In 3 Mo.	In 6 Mo.	In 12 Mo.
Scotiabank	5.30	4.80	4.40
Deutsche Bank AG	na	na	na
WestLB	5.30	5.00	4.20
ING Financial Markets	4.90	4.40	4.70
Mizuho Research Institute	5.20	5.15	5.15
November Consensus	5.18	4.84	4.61
High	5.30	5.15	5.15
Low	4.90	4.40	4.20
Last Months Avg.	5.20	4.91	4.51

Blue Chip Forecasters	3 Mo. Euro Yen Rate		
	In 3 Mo.	In 6 Mo.	In 12 Mo.
Scotiabank	0.65	0.65	0.90
Deutsche Bank AG	na	na	na
WestLB	0.70	1.00	1.20
ING Financial Markets	0.70	0.70	0.90
Mizuho Research Institute	0.70	0.85	0.95
November Consensus	0.69	0.80	0.99
High	0.70	1.00	1.20
Low	0.65	0.65	0.90
Last Months Avg.	0.66	0.83	0.99

Blue Chip Forecasters	3 Mo. Euro Sterling Rate		
	In 3 Mo.	In 6 Mo.	In 12 Mo.
Scotiabank	5.25	5.25	5.00
Deutsche Bank AG	na	na	na
WestLB	5.10	5.00	5.00
ING Financial Markets	5.20	5.10	5.10
Mizuho Research Institute	5.15	5.15	5.15
November Consensus	5.18	5.13	5.06
High	5.25	5.25	5.15
Low	5.10	5.00	5.00
Last Months Avg.	5.18	5.10	4.93

Blue Chip Forecasters	3 Mo. Euro Franc Rate %		
	In 3 Mo.	In 6 Mo.	In 12 Mo.
Scotiabank	2.00	2.25	2.25
Deutsche Bank AG	na	na	na
WestLB	2.00	2.25	2.25
ING Financial Markets	2.30	2.40	2.50
Mizuho Research Institute	na	na	na
November Consensus	2.10	2.30	2.33
High	2.30	2.40	2.50
Low	2.00	2.25	2.25
Last Months Avg.	2.03	2.27	2.32

Blue Chip Forecasters	3 Mo. Euro Dollar Rate		
	In 3 Mo.	In 6 Mo.	In 12 Mo.
Scotiabank	4.25	3.80	3.60
Deutsche Bank AG	na	na	na
WestLB	4.30	4.30	4.30
ING Financial Markets	3.90	3.75	4.10
Mizuho Research Institute	na	na	na
November Consensus	4.15	3.95	4.00
High	4.30	4.30	4.30
Low	3.90	3.75	3.60
Last Months Avg.	4.25	4.00	3.95

United States			
10 Yr. Gov't Bond Yield %			
In 3 Mo.	In 6 Mo.	In 12 Mo.	
4.65	4.55	4.40	
na	na	na	
4.60	4.40	4.30	
4.30	4.40	4.70	
4.70	4.70	4.80	
4.56	4.51	4.55	
4.70	4.70	4.80	
4.30	4.40	4.30	
4.59	4.49	4.50	

Japan			
10 Yr. Gov't Bond Yield %			
In 3 Mo.	In 6 Mo.	In 12 Mo.	
2.00	2.15	2.25	
na	na	na	
1.90	2.00	2.20	
1.70	1.70	2.00	
1.95	2.00	2.10	
1.89	1.96	2.14	
2.00	2.15	2.25	
1.70	1.70	2.00	
1.91	2.04	2.21	

United Kingdom			
10 Yr. Gilt Yields %			
In 3 Mo.	In 6 Mo.	In 12 Mo.	
4.50	4.50	4.30	
na	na	na	
4.60	4.50	4.50	
4.50	4.50	4.70	
4.70	4.70	4.70	
4.58	4.55	4.55	
4.70	4.70	4.70	
4.50	4.50	4.30	
4.63	4.58	4.51	

Switzerland			
10 Yr. Gov't Bond Yield %			
In 3 Mo.	In 6 Mo.	In 12 Mo.	
2.50	2.40	2.25	
na	na	na	
2.40	2.30	2.30	
2.35	2.35	2.60	
na	na	na	
2.42	2.35	2.38	
2.50	2.40	2.60	
2.35	2.30	2.25	
2.43	2.35	2.35	

Canada			
10 Yr. Gov't Bond Yield %			
In 3 Mo.	In 6 Mo.	In 12 Mo.	
3.95	3.90	3.80	
na	na	na	
4.10	4.10	4.10	
3.70	3.60	4.00	
na	na	na	
3.92	3.87	3.97	
4.10	4.10	4.10	
3.70	3.60	3.80	
3.92	3.87	3.90	

Fed's Major Currency \$ Index			
In 3 Mo.	In 6 Mo.	In 12 Mo.	
79.7	79.2	77.8	
na	na	na	
79.0	78.0	78.0	
79.8	79.2	81.4	
80.0	80.0	82.2	
79.6	79.1	79.9	
80.0	80.0	82.2	
79.0	78.0	77.8	
79.1	79.2	79.7	

US \$/Yen			
In 3 Mo.	In 6 Mo.	In 12 Mo.	
110.0	110.0	105.0	
na	na	na	
113.0	110.0	105.0	
112.0	108.0	105.0	
113.0	113.0	115.0	
112.0	110.3	107.5	
113.0	113.0	115.0	
110.0	108.0	105.0	
112.0	110.3	107.5	

Pound Sterling/US \$			
In 3 Mo.	In 6 Mo.	In 12 Mo.	
1.92	1.92	1.91	
na	na	na	
1.91	1.93	1.93	
1.96	1.95	1.91	
na	na	na	
1.93	1.93	1.92	
1.96	1.95	1.93	
1.91	1.92	1.91	
1.93	1.94	1.92	

SF/US \$			
In 3 Mo.	In 6 Mo.	In 12 Mo.	
1.17	1.14	1.11	
na	na	na	
1.19	1.16	1.16	
1.17	1.16	1.15	
na	na	na	
1.18	1.15	1.14	
1.19	1.16	1.16	
1.17	1.14	1.11	
1.19	1.16	1.14	

US \$/C \$			
In 3 Mo.	In 6 Mo.	In 12 Mo.	
1.11	1.11	1.09	
na	na	na	
1.12	1.14	1.15	
1.15	1.18	1.25	
na	na	na	
1.13	1.14	1.16	
1.15	1.18	1.25	
1.11	1.11	1.09	
1.11	1.13	1.15	

International Interest Rate And Foreign Exchange Rate Forecasts

Blue Chip Forecasters	3 Mo. Euro Dollar Rate		
	In 3 Mo.	In 6 Mo.	In 12 Mo.
Scotiabank	6.30	6.30	6.00
Deutsche Bank AG	na	na	na
WestLB	6.30	6.20	5.70
ING Financial Markets	6.25	6.10	5.50
Mizuho Research Institute	na	na	na
November Consensus	6.28	6.20	5.73
High	6.30	6.30	6.00
Low	6.25	6.10	5.50
Last Months Avg.	6.22	6.18	5.83

Australia		
10 Yr. Gov't Bond Yield %		
In 3 Mo.	In 6 Mo.	In 12 Mo.
5.75	5.75	5.80
na	na	na
5.40	5.20	5.10
5.20	5.20	5.60
na	na	na
5.45	5.38	5.50
5.75	5.75	5.80
5.20	5.20	5.10
5.45	5.38	5.50

A \$/US \$		
In 3 Mo.	In 6 Mo.	In 12 Mo.
0.76	0.75	0.74
na	na	na
0.76	0.76	0.78
0.80	0.79	0.75
na	na	na
0.77	0.77	0.76
0.80	0.79	0.78
0.76	0.75	0.74
0.77	0.77	0.76

Blue Chip Forecasters	3 Mo. Euro Rate		
	In 3 Mo.	In 6 Mo.	In 12 Mo.
Scotiabank	3.85	4.10	3.85
Deutsche Bank AG	na	na	na
WestLB	3.60	3.50	3.50
ING Financial Markets	3.90	3.85	3.85
Mizuho Research Institute	3.50	3.60	3.60
November Consensus	3.71	3.76	3.70
High	3.90	4.10	3.85
Low	3.50	3.50	3.50
Last Months Avg.	3.68	3.78	3.70

Eurozone		
10 Yr. Euro Bond Yield %		
In 3 Mo.	In 6 Mo.	In 12 Mo.
3.75	3.85	3.75
na	na	na
3.70	3.60	3.60
3.60	3.65	3.90
na	na	na
3.68	3.70	3.75
3.75	3.85	3.90
3.60	3.60	3.60
3.68	3.68	3.70

Euro/US \$		
In 3 Mo.	In 6 Mo.	In 12 Mo.
1.30	1.32	1.33
na	na	na
1.32	1.35	1.35
1.33	1.36	1.32
1.30	1.30	1.26
1.31	1.33	1.32
1.33	1.36	1.35
1.30	1.30	1.26
1.31	1.33	1.32

Blue Chip Forecasters	10 Yr. Gov't Bond Yields %											
	Germany			France			Italy			Spain		
	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.
Scotiabank	3.75	3.85	3.75	3.77	3.87	3.77	4.05	4.15	4.00	3.75	3.85	3.75
West LB	3.60	3.50	3.50	3.60	3.50	3.50	3.70	3.60	3.60	3.60	3.50	3.50
ING Financial Markets	3.60	3.65	3.90	3.60	3.65	3.90	3.90	3.85	3.85	3.65	3.60	3.75
Mizuho Research Institute	3.40	3.50	3.50	3.40	3.50	3.50	3.50	3.60	3.60	3.40	3.50	3.50
November Consensus	3.59	3.63	3.66	3.59	3.63	3.67	3.79	3.80	3.76	3.60	3.61	3.63
High	3.75	3.85	3.90	3.77	3.87	3.90	4.05	4.15	4.00	3.75	3.85	3.75
Low	3.40	3.50	3.50	3.40	3.50	3.50	3.50	3.60	3.60	3.40	3.50	3.50
Last Months Avg.	3.69	3.69	3.70	3.69	3.69	3.71	3.95	3.94	3.90	3.70	3.69	3.70

	Consensus Forecasts 10-year Bond Yields vs U.S. Yield			
	Current	In 3 Mo.	In 6 Mo.	In 12 Mo.
Japan	-2.89	-2.68	-2.55	-2.41
United Kingdom	0.00	0.01	0.04	0.00
Switzerland	-2.24	-2.15	-2.16	-2.17
Canada	-0.58	-0.65	-0.65	-0.58
Australia	0.99	0.89	0.87	0.95
Germany	-0.82	-0.98	-0.89	-0.89
France	-0.81	-0.97	-0.88	-0.88
Italy	-0.58	-0.78	-0.71	-0.79
Spain	-0.78	-0.96	-0.90	-0.93
Eurozone	-0.60	-0.88	-0.81	-0.80

	Consensus Forecasts 3 Mo. Interest Rates vs U.S. Rate			
	Current	In 3 Mo.	In 6 Mo.	In 12 Mo.
Japan	-4.88	-4.49	-5.64	-3.63
United Kingdom	-0.16	0.00	0.29	0.45
Switzerland	-3.44	-3.08	-2.54	-2.28
Canada	-1.13	-1.03	-0.89	-0.61
Australia	0.93	1.11	1.36	1.12
Eurozone	-1.75	-1.46	-1.08	-0.91

Viewpoints:

A Sampling of Views on the Economy, Financial Markets and Government Policy Excerpted from Recent Reports Issued by our Blue Chip Panel Members and Others

A Road Map To Fed Easing

We recently trimmed half a point apiece from our estimates for US economic growth for this quarter and the next. The revised pattern, if you can call it that, calls for a steady 2% annualized increase in real GDP through the third quarter of 2007. We also trimmed 0.4 percentage points from the year-to-year increase that we expect in the core price index for personal consumption expenditures (core PCE index) over the four quarters of 2007. As a result, we now see this gauge of core inflation moving back into the 1%-2% "comfort zone" embraced by several members of the Federal Open Market Committee (FOMC) by about mid-year. Together, these changes clarify the case for the easing in monetary policy that we expect to see starting sometime next spring. Although prices of fixed-income securities currently lean in this direction, it is far from a consensus among economists. Accordingly, in this holiday-shortened, data-starved week, we offer a road map of the signposts we would look for to set the stage for Fed easing. We actually see two alternative routes:

The most likely path centers on the continuation of slow, below-trend growth. In time, this should curb growth in labor demand, causing the jobless rate to start rising. It does not take much of an increase in unemployment to prompt the Federal Reserve to start easing in an effort to ward off recession. To be specific, over the past 40 years increases of 1/6 of a percentage point in the three-month moving average of the unemployment rate have always been associated with Fed easing—regardless of the level of joblessness or the rate of inflation. Given the latest data, this implies easing by the time the three-month average of the jobless rate reaches 4¾%. Although the inflation rate appears not to have mattered in the past, this unemployment rate threshold could rise if the recent decline in core inflation proved to be fleeting.

So far, the labor market has been remarkably shielded from the collapse in housing activity. Construction payrolls have flattened at a high level but have yet to drop measurably. However, this is likely to change in the next three to six months. Specifically, construction payrolls are more sensitive to the number of housing units under construction than to the more widely reported data on starts and permits for new construction. As projects authorized earlier are completed, some workers in this sector are bound to be idled as are those in related industries. Our best estimate is that job losses from the housing spillover could run to 50,000 per month within the next half year, with half or more of this in the construction industry. This is more than one-third the average payroll gain of the past half year. We will be tracking two key indicators. The first is initial claims for jobless benefits, which should increase measurably from the 310,000-320,000 range that has prevailed since midyear. Although it is hard to be precise about this, an increase into the 340,000-350,000 range would raise eyebrows at the Fed.

What are those other signals? Besides the obvious one—a rise in the jobless rate—we would look for a step down in the monthly growth of nonfarm payrolls, as confirmation that increased hiring elsewhere in the economy is not offsetting job losses in construction-related industries. Specifically, gains averaging less than 100,000 per month would markedly increase the probability of easing, as some Fed officials have cited this figure as one that may be consistent with a stable unemployment rate. Various gauges of labor demand, such as the Conference Board's index of help wanted advertising in major newspapers or Monster.com's parallel index of on-line job ads, also merit attention for signs of further deterioration.

Unlike the labor market, consumer spending already shows some signs of spillover from the weakness in housing. Despite an estimated \$90-billion boost to real disposable income from the sharp drop in energy prices that has occurred over the past three months, real consumer

spending appears to be rising slightly less rapidly than before. Given this, the main requirement for real consumer spending, as far as Fed easing is concerned, is to stay roughly on or a bit below its current 2½% annualized growth trend. For the goods sector, where most of the high frequency data is generated, this translates into (nominal) gains of about 0.3% per month in the core component of retail sales (excluding vehicles, building materials, and gasoline) and no major rebound in sales of lightweight motor vehicles from the 16½ million unit annualized pace of the past few months.

A third set of signposts relates to the industrial sector, where imbalances in inventories relative to sales point to a correction in output in coming months. Although many seem to think that these imbalances are confined to the auto sector, this is simply not true. The I/S ratio for durable goods excluding vehicles sends a clear message: the composite index of manufacturing activity produced from the Institute for Supply Management's (ISM's) monthly survey should soon drop below the 50 level that divides growth from contraction in this sector of the economy. The same conclusion can be drawn, even more forcefully, from a recent survey on the demand for goods conducted by the National Association of Business Economists. Based on these indicators, we expect a contraction in industrial activity to join the drop in housing activity as a drag on US economic growth over the next half year or so. The signpost is straightforward: a drop in the ISM index into the 45-50 range. However, even if this does not occur, Fed officials are still likely to cut rates if they see a weakening in the job market and a persistence of subdued growth in real consumer spending.

Recent favorable reports on inflation—particularly on core indexes—suggest an alternate path to Fed easing, though one that is somewhat less likely than the route just sketched. So far, the easing in core inflation has been concentrated in volatile components such as vehicles and apparel. However, if this easing were to persist, and especially if it included components in the service sector, Fed officials could become concerned that monetary policy as measured by the real federal funds rate was getting too tight for comfort. For this to happen, a number of things need to fall in place. First, it would be difficult to explain any easing based on this concern to the financial markets if core PCE inflation were not within the 1%-2% "comfort zone," though presumably less so if growth remained sufficiently weak and the labor market simply had not deteriorated as much as described above. Second, if real GDP growth were close to its trend rate (about 3% in our view, though a bit less in the view of the Fed staff) then such a move would not make sense unless labor market weakening suggested that the rebound growth was ephemeral. Third, the logic behind such a move would strengthen materially if financial conditions tightened in the interim.

Ed McKelvey, Goldman Sachs, New York, NY

Has Inflation Peaked?

By several metrics, the Fed's game plan to promote a gradual decline in inflation seems to be working. Inflation itself has plunged, thanks to the sharp drop in energy prices, to just 1.3% in the year ended in October. And measured by the "core" CPI (excluding food and energy), it has cooled in the past four months to a 2.4% annual rate based on annualized 4-month changes, and has slipped even on a year-over-year basis to 2.7%. Moreover, some inflation fundamentals are working in the right direction. For example, inflation expectations have stabilized, growth has slowed below trend, and operating rates have slipped. Has inflation peaked and will it head steadily lower?

We think inflation will peak over the next several months. But the judgment that the peak has already passed is likely premature for three reasons. First, inflation expectations are still slightly elevated despite the slide in energy quotes over the past three (*continued on next page*)

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months. Second, while growth has slipped below trend, measures of slack in both product and labor markets continue to suggest that companies have pricing power and that costs are likely to rise. And we still expect a pickup in growth, which would refresh pricing power and push costs higher. Finally, and perhaps most controversially, the global dimension matters: Global growth relative to capacity is still strong, boosting US import prices despite relative stability in the dollar. As a result, I believe that the current inflation lull won't last and that inflation risks are still tilted higher.

To be sure, some of the news on inflation fundamentals has lately moved in the right direction. Fueled partly by tumbling energy prices, longer-term inflation expectations have stabilized. For example, 5-10 year inflation expectations measured by the University of Michigan's consumer survey fell to 3% in early November from 3.2% in August, and distant forward inflation compensation in the TIPs market has declined to 254 bp, or 12 bp below the August peak. No doubt, the slide in energy prices also helped slightly lower core consumer inflation.

In addition, "pipeline" pricing indicators have moved lower. Courtesy of the housing recession and of sharp declines in energy and feedstock quotes, the intermediate goods "core" producer price index has decelerated on a six-month change basis from 8.1% in June to a 5.6% annual rate in October. Likewise, the ISM manufacturing price diffusion index plunged to 47% in October, and in non-manufacturing the index fell to a three-year low of 51.7%.

Finally, growth has slowed below trend, eventually allowing some slack to open up in product markets and limiting firms' pricing power. Over the past three quarters, the pace of overall GDP has run about a half a point under our estimate of its 3% potential rate of growth. And industrial operating rates have slipped about 0.7 percentage point from their highs, as capacity growth has outstripped the advance in production over the past six months. Both the housing recession and sharp cutbacks in motor vehicle production have contributed, with operating rates in wood products, nonmetallic minerals, and motor vehicles and parts each down about 1000 basis points from their peaks in late 2005. Just as so-called "speed effects" raised pricing power when operating rates were rising, the decline in operating rates reverses some of those effects.

Nonetheless, I think that inflation risks are far from one-sided. Indeed it's impressive that inflation expectations are still slightly elevated despite the plunge in energy quotes and the corresponding reduction in headline inflation to just 1.3% in October; just three months earlier, gasoline prices were still climbing and overall inflation was running 300 bp higher. In my view, the term structure of TIPS spreads should not be comforting to the Fed or market participants, with 10-year break-even inflation down 40 bp from the August peak, compared with 12 bp for 5-year, 5-year forwards.

In addition, while slack has lately increased in product markets, it is still limited. In my view, the economy's potential growth rate has downshifted to about 3% from 3½% over the past few years. And that implies that the recent period of slow growth is just beginning to offset the above-trend pace of the past few years. Indeed, even with the recent retreat in operating rates, they are still well above historical norms. That still suggests that companies have pricing power and in many cases can pass costs through to higher prices.

In contrast, in labor markets, slack has lately dwindled. Job opening rates are back to six-year highs, and the jobless rate at 4.4% stands at a five-year low. Surveys suggest that companies large and small are hiking or planning to hike pay. Moreover, while employment is a lagging indicator, productivity has slowed to 1.3% in the third quarter as job growth caught up with the economy. If anything, productivity dipped

below its 2½% trend more than a year ago as the prospective upward revisions to hours worked hint that nonfarm business productivity rose by just 2.1% in the year ended in the first quarter — 60 bp lower than depicted by official data. The combination is promoting an acceleration in unit labor costs to roughly a 3-4% rate. Some of that acceleration will squeeze profit margins, but some may show up in higher prices.

Finally, globalization is not always and everywhere disinflationary. In fact, it appears that global growth is outstripping the increase in global capacity, raising inflation risks outside our borders. That may account for the rise in US non-fuel import prices despite relative stability in the dollar. More recently, consumer import prices have re-accelerated to 1%, hinting that today's rising import prices could show up in core inflation in 3-4 months. In addition, the bounce in energy prices that we expect this winter may again lift prices in some "core" components.

Markets are pricing about a one-in-three chance that the Fed will begin to ease in a few months — a realistic notion if inflation continues to ebb and growth continues to fall below trend. That's one possible scenario; incoming data suggest that the housing recession is far from over, and cutbacks in motor vehicle output will depress growth in the current quarter. So consumer and business capital spending, government outlays, and net exports must all improve to promote the moderate pickup we expect in Q4. Even if growth is a bit more subdued than we think, however, the Fed legitimately will have a high threshold for easing. After all, this is just the slowdown they wanted to promote a gradual decline in inflation, and it would take a couple more benign inflation reports for the FOMC to drop its tightening bias.

But two other scenarios are also possible. In one, inflation risks remain elevated and growth gradually picks back up; in that case, the Fed will likely stay on hold for a considerable period. But if, as we suspect, those inflation risks again translate into somewhat higher inflation and growth improves, there is still a legitimate case for the Fed to take out more inflation insurance.

Among these three scenarios, at current market pricing, the risks don't favor bond investors. The Fed and we see the risks still tilted to higher rather than lower inflation and expect that growth will improve from the recent below-trend pace. Correspondingly, for markets that are priced for inflation to fall, the risks that yields rise back towards 5% are higher than for their falling below 4½%.

Richard Berner, Morgan Stanley, New York, NY

SPECIAL QUESTIONS:

1. Will the next change in the target federal funds rate by the FOMC be and increase or a decrease?

(Percent of those responding)	
<u>Increase</u>	<u>Decrease</u>
24.4%	75.6%

2. A. WILL the FOMC formally adopt an "inflation objective" in 2007?

(Percent of those responding)	
<u>Yes</u>	<u>No</u>
13.6%	86.4%

B. SHOULD the FOMC formally adopt an "inflation objective" in 2007?

(Percent of those responding)	
<u>Yes</u>	<u>No</u>
20.5%	79.5%

3. What are the odds that a U.S. recession will begin within the next 12 months?

Consensus	24.8%
Top 10 Average	33.7%
Bottom 10 Average	15.0%

Long Range Forecasts:

The table below contains results of our twice-annual long-range CONSENSUS survey. There are also Top 10 and Bottom averages for each variable. Shown are estimates for the years 2008 through 2012 and averages for the five-year periods 2008-2012 and 2012-2017. Apply these projections cautiously. Few economic, demographic and political forces can be evaluated accurately over such long time spans.

Interest Rates		-----Average For The Year-----					Five-Year Averages	
		2008	2009	2010	2011	2012	2008-2012	2013-2017
1. Federal Funds Rate	CONSENSUS	4.9	4.8	4.6	4.7	4.8	4.8	4.7
	Top 10 Average	5.6	5.7	5.4	5.4	5.4	5.5	5.4
	Bottom 10 Average	4.2	4.0	3.8	3.9	4.1	4.0	4.1
2. Prime Rate	CONSENSUS	7.8	7.8	7.5	7.6	7.7	7.7	7.7
	Top 10 Average	8.5	8.7	8.4	8.5	8.4	8.5	8.4
	Bottom 10 Average	6.9	6.8	6.6	6.7	6.8	6.8	6.8
3. LIBOR, 3-Mo.	CONSENSUS	5.1	5.1	4.8	4.9	4.9	5.0	5.0
	Top 10 Average	5.8	5.9	5.6	5.7	5.7	5.7	5.6
	Bottom 10 Average	4.4	4.2	4.0	4.1	4.3	4.2	4.3
4. Commercial Paper, 1-Mo.	CONSENSUS	5.0	4.9	4.7	4.8	4.8	4.8	4.8
	Top 10 Average	5.6	5.8	5.4	5.5	5.5	5.6	5.5
	Bottom 10 Average	4.2	4.1	3.9	4.0	4.2	4.1	4.2
5. Treasury Bill Yield, 3-Mo.	CONSENSUS	4.8	4.8	4.6	4.6	4.7	4.7	4.7
	Top 10 Average	5.5	5.7	5.3	5.4	5.4	5.4	5.3
	Bottom 10 Average	4.0	4.0	3.8	3.9	4.1	4.0	4.1
6. Treasury Bill Yield, 6-Mo.	CONSENSUS	4.9	4.8	4.7	4.7	4.8	4.8	4.8
	Top 10 Average	5.6	5.7	5.4	5.4	5.4	5.5	5.4
	Bottom 10 Average	4.1	4.1	3.9	4.0	4.2	4.1	4.2
7. Treasury Bill Yield, 1-Yr.	CONSENSUS	4.9	4.9	4.7	4.8	4.9	4.9	4.9
	Top 10 Average	5.6	5.8	5.5	5.5	5.6	5.6	5.5
	Bottom 10 Average	4.3	4.2	4.0	4.1	4.3	4.2	4.3
8. Treasury Note Yield, 2-Yr.	CONSENSUS	5.0	5.0	4.9	4.9	5.0	5.0	5.0
	Top 10 Average	5.6	5.8	4.8	5.7	5.7	5.5	5.6
	Bottom 10 Average	4.3	4.3	4.2	4.3	4.4	4.3	4.5
10. Treasury Note Yield, 5-Yr.	CONSENSUS	5.0	5.1	5.0	5.1	5.1	5.1	5.2
	Top 10 Average	5.6	5.9	5.7	5.8	5.8	5.7	5.7
	Bottom 10 Average	4.4	4.4	4.3	4.4	4.6	4.4	4.7
11. Treasury Note Yield, 10-Yr.	CONSENSUS	5.1	5.2	5.2	5.2	5.3	5.2	5.4
	Top 10 Average	5.7	6.0	5.8	5.9	5.9	5.9	6.0
	Bottom 10 Average	4.5	4.5	4.5	4.6	4.7	4.5	4.8
12. Treasury Bond Yield, 30-Yr.	CONSENSUS	5.3	5.4	5.3	5.4	5.4	5.4	5.5
	Top 10 Average	6.0	6.2	6.1	6.1	6.2	6.1	6.3
	Bottom 10 Average	4.7	4.6	4.6	4.7	4.8	4.7	4.9
13. Corporate Aaa Bond Yield	CONSENSUS	6.1	6.1	6.0	6.1	6.1	6.1	6.3
	Top 10 Average	6.8	7.0	6.8	6.8	6.8	6.8	7.0
	Bottom 10 Average	5.4	5.3	5.2	5.3	5.4	5.3	5.5
13. Corporate Baa Bond Yield	CONSENSUS	6.9	6.9	6.9	7.0	7.0	7.0	7.1
	Top 10 Average	7.5	7.8	7.7	7.7	7.7	7.7	7.7
	Bottom 10 Average	6.4	6.2	6.1	6.3	6.4	6.3	6.3
14. State & Local Bonds Yield	CONSENSUS	4.7	4.8	4.8	4.9	4.9	4.8	4.9
	Top 10 Average	5.2	5.3	5.3	5.5	5.5	5.4	5.5
	Bottom 10 Average	4.2	4.2	4.2	4.3	4.3	4.2	4.4
15. Home Mortgage Rate	CONSENSUS	6.7	6.8	6.8	6.9	6.9	6.8	6.9
	Top 10 Average	7.3	7.6	7.5	7.6	7.7	7.5	7.6
	Bottom 10 Average	6.1	6.1	6.0	6.2	6.3	6.1	6.3
A. FRB - Major Currency Index	CONSENSUS	80.8	80.3	79.8	79.6	80.2	80.1	80.1
	Top 10 Average	84.7	85.0	84.0	84.5	85.4	84.7	86.2
	Bottom 10 Average	76.8	75.8	74.9	73.9	74.4	75.2	74.0
		-----Year-Over-Year, % Change-----					Five-Year Averages	
		2007	2008	2009	2010	2011	2007-2011	2012-2016
B. Real GDP	CONSENSUS	3.1	3.1	3.0	3.1	3.1	3.1	3.0
	Top 10 Average	3.4	3.4	3.4	3.3	3.6	3.4	3.3
	Bottom 10 Average	2.7	2.7	2.5	2.7	2.6	2.6	2.6
C. GDP Chained Price Index	CONSENSUS	2.3	2.3	2.2	2.2	2.2	2.2	2.2
	Top 10 Average	2.8	2.7	2.6	2.5	2.6	2.6	2.5
	Bottom 10 Average	1.9	1.9	1.9	1.9	1.9	1.9	1.9
D. Consumer Price Index	CONSENSUS	2.5	2.5	2.4	2.4	2.4	2.4	2.4
	Top 10 Average	2.9	2.8	2.7	2.7	2.7	2.8	2.7
	Bottom 10 Average	2.1	2.2	2.1	2.1	2.1	2.1	2.1

Databank:

2006

Monthly Indicator	Jan	Feb	Mar	Apr	May	Jun	Jly	Aug	Sep	Oct	Nov	Dec
Retail and Food Service Sales (a)	3.0	-0.8	0.7	0.7	0.2	-0.5	1.4	0.0	-0.8	-0.2		
Auto & Light Truck Sales (b)	17.6	16.5	16.5	16.7	16.0	16.2	17.1	16.0	16.6	16.2		
Personal Income (a, current \$)	0.8	0.3	0.5	0.7	0.4	0.6	0.4	0.4	0.5			
Personal Consumption (a, current \$)	0.9	0.5	0.5	0.6	0.7	0.3	0.8	0.2	0.1			
Consumer Credit (e)	4.1	2.1	0.7	5.7	8.2	5.9	6.5	4.6	-0.6			
Consumer Sentiment (U. of Mich.)	91.2	86.7	88.9	87.4	79.1	84.9	84.7	82.0	85.4	93.6	92.1	
Household Employment (c)	295	183	384	47	288	387	-34	250	271	437		
Non-farm Payroll Employment (c)	154	200	175	112	100	134	123	230	148	92		
Unemployment Rate (%)	4.7	4.8	4.7	4.7	4.6	4.6	4.8	4.7	4.6	4.4		
Average Hourly Earnings ('82\$)	8.17	8.20	8.19	8.18	8.15	8.17	8.16	8.16	8.24			
Average Hourly Earnings (current \$)	16.40	16.47	16.51	16.61	16.62	16.69	16.76	16.81	16.85	16.91		
Non-farm Workweek (hrs.)	33.8	33.8	33.8	33.9	33.8	33.9	33.9	33.8	33.8	33.9		
Industrial Production (d)	3.2	3.1	3.6	4.6	4.5	4.7	5.0	5.0	5.8	4.9		
Capacity Utilization (%)	80.9	81.1	81.3	81.8	81.7	82.5	82.6	82.7	82.1	82.2		
ISM Manufacturing Index (g)	54.8	56.7	55.2	57.3	54.4	53.8	54.7	54.5	52.9	51.2		
ISM Non-Manufacturing Index (g)	56.8	60.1	60.5	63.0	60.1	57.0	54.8	57.0	52.9	57.1		
Housing Starts (b)	2.265	2.132	1.972	1.832	1.953	1.833	1.760	1.659	1.740	1.486		
Housing Permits (b)	2.195	2.147	2.085	1.973	1.946	1.869	1.763	1.727	1.638	1.535		
New Home Sales (1-family, c)	1.173	1.038	1.121	1.121	1.101	1.078	984	1.021	1.075			
Construction Expenditures (a)	0.0	0.5	1.0	0.2	-0.4	0.0	-0.7	0.0	-0.3			
Consumer Price Index (nsa., d)	4.0	3.6	3.4	3.5	4.2	4.3	4.1	3.8	2.1	1.3		
CPI ex. Food and Energy (nsa., d)	2.1	2.1	2.1	2.3	2.4	2.6	2.7	2.8	2.9	2.7		
Producer Price Index (n.s.a., d)	5.6	3.9	3.6	4.1	4.5	4.9	4.2	3.7	0.9	-1.6		
Durable Goods Orders (a)	-7.8	3.6	6.0	-4.7	0.3	3.3	-2.8	-0.1	7.8			
Leading Economic Indicators (g)	0.4	-0.5	0.4	-0.1	-0.5	0.1	-0.3	-0.2	0.4	0.2		
Balance of Trade & Services (f)	-66.3	-62.7	-62.1	-63.6	-65.4	-64.8	-68.0	-69.0	-64.3			
Federal Funds Rate (%)	4.29	4.49	4.59	4.79	4.94	4.99	5.24	5.25	5.25	5.25		
3-Mo. Treasury Bill Rate (%)	4.24	4.54	4.51	4.60	4.72	4.79	4.95	4.96	4.81	4.92		
10-Year Treasury Note Yield (%)	4.42	4.57	4.72	4.99	5.11	5.11	5.09	4.88	4.72	4.73		

2005

Monthly Indicator	Jan	Feb	Mar	Apr	May	Jun	Jly	Aug	Sep	Oct	Nov	Dec
Retail and Food Service Sales (a)	0.0	0.7	0.3	1.8	-0.3	1.9	1.7	-1.8	0.3	0.2	0.9	0.3
Auto & Light Truck Sales (b)	16.3	16.4	16.8	17.2	16.6	17.8	20.7	16.8	16.3	14.7	15.7	17.1
Personal Income (a, current \$)	-2.3	0.3	0.2	0.5	0.3	0.5	0.8	-1.8	2.9	0.5	0.2	0.5
Personal Consumption (a, current \$)	0.1	0.6	0.6	1.0	-0.1	0.9	1.3	-0.1	0.6	0.3	0.1	0.4
Consumer Credit (e)	6.5	3.4	3.8	1.7	-0.1	8.4	5.6	6.5	2.8	-4.0	0.0	1.1
Consumer Sentiment (U. of Mich.)	95.5	94.1	92.6	87.7	86.9	96.0	96.5	89.1	76.9	74.2	81.6	91.5
Household Employment (c)	101	51	316	595	375	179	361	314	10	190	-14	168
Non-farm Payroll Employment (c)	76	265	140	228	106	166	241	175	48	37	354	145
Unemployment Rate (%)	5.2	5.4	5.1	5.1	5.1	5.0	5.0	4.9	5.1	4.9	5.0	4.9
Average Hourly Earnings ('82\$)	8.24	8.22	8.19	8.16	8.19	8.21	8.20	8.16	8.06	8.09	8.15	8.20
Average Hourly Earnings (current \$)	15.88	15.91	15.95	16.00	16.03	16.07	16.14	16.16	16.19	16.28	16.28	16.35
Non-farm Workweek (hrs.)	33.7	33.7	33.7	33.8	33.7	33.7	33.7	33.7	33.8	33.8	33.8	33.8
Industrial Production (d)	4.1	3.8	4.0	3.1	2.3	3.7	3.1	3.1	2.0	2.6	3.2	3.5
Capacity Utilization (%)	79.8	80.0	79.9	79.7	79.8	80.3	80.2	80.3	79.1	79.9	80.5	81.2
ISM Manufacturing Index (g)	56.3	55.6	55.3	53.8	51.8	54.0	56.4	53.5	58.0	58.1	57.3	55.6
ISM Non-Manufacturing Index (g)	60.3	60.4	61.8	60.4	59.2	61.1	60.4	64.8	53.7	59.2	59.3	61.0
Housing Starts (b)	2.137	2.213	1.856	2.079	2.034	2.078	2.070	2.075	2.158	2.046	2.131	2.002
Housing Permits (b)	2.141	2.121	2.083	2.156	2.092	2.169	2.186	2.185	2.21	2.111	2.170	2.094
New Home Sales (1-family, b)	1.193	1.252	1.324	1.270	1.311	1.272	1.367	1.271	1.253	1.346	1.236	1.259
Construction Expenditures (a)	1.0	1.8	1.3	-0.3	1.8	2.1	1.2	0.8	1.0	0.9	0.9	1.0
Consumer Price Index (s.a., d)	3.0	3.0	3.1	3.5	2.8	2.5	3.2	3.6	4.7	4.3	3.5	3.4
CPI ex. Food and Energy (s.a., d)	2.3	2.4	2.3	2.2	2.2	2.0	2.1	2.1	2.0	2.1	2.1	2.2
Producer Price Index (n.s.a., d)	4.1	4.7	5.0	4.8	3.6	3.7	4.7	5.3	6.9	5.9	4.4	5.4
Durable Goods Orders (a)	-0.9	1.2	-1.7	1.1	7.0	1.2	-5.5	4.5	-1.6	3.2	4.4	0.9
Leading Economic Indicators (g)	-0.1	0.3	-0.7	0.2	0.0	1.1	-0.1	0.0	-0.7	1.0	0.9	0.3
Balance of Trade & Services (f)	-56.6	-57.5	-54.0	-57.0	-56.6	-58.4	-58.1	-58.7	-65.0	-66.6	-64.0	-64.2
Federal Funds Rate (%)	2.28	2.50	2.63	2.79	3.00	3.04	3.26	3.50	3.62	3.78	4.00	4.16
3-Mo. Treasury Bill Rate (%)	2.33	2.54	2.74	2.78	2.84	2.97	3.22	3.44	3.42	3.71	3.88	3.89
10-Year Treasury Note Yield (%)	4.22	4.17	4.50	4.34	4.14	4.00	4.18	4.26	4.20	4.46	4.54	4.47

(a) month-over-month % change; (b) millions, saar; (c) thousands, saar; (d) year-over-year % change; (e) annualized % change; (f) \$ billions; (g) level. Most series are subject to frequent government revisions. Use with care.

Calendar Of Upcoming Economic Data Releases
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Monday November 27	Tuesday 28	Wednesday 29	Thursday 30	Friday December 1
	Durable Goods Orders (Oct) Existing Home Sales (Oct) Consumer Confidence, Conference Board, (Nov) ABC Consumer Comfort Index Weekly Store Sales	GDP, Preliminary, Q3 Corporate Profits (Preliminary, Q3) New Home Sales (Oct) Beige Book for Dec. 12 FOMC Meeting EIA Crude Oil Stocks Mortgage Applications Weekly Store Sales	Personal Income and Consumption (Oct) Chicago PMI (Nov) Agricultural Prices (Nov) Weekly Jobless Claims Factors Affecting Monetary Reserves	ISM (Manufacturing, Nov) Unit auto Sales (Nov) Construction Spending (Oct)
4 Pending Home Sales Index (Oct)	5 ISM (Non-Manufacturing, Nov) Productivity (Revised, Q3) Factory Orders (Oct) Challenger Survey (Nov) ABC Consumer Comfort Index Weekly Store Sales	6 EIA Crude Oil Stocks Mortgage Applications	7 Monster Employment Index (Nov) Consumer Credit (Oct) Weekly Jobless Claims Factors Affecting Monetary Reserves	8 Employment Report (Nov) Consumer Sentiment (Preliminary Dec., University of Michigan)
11 Wholesale Trade (Oct)	12 FOMC Meeting U.S. Trade (Oct) Treasury Budget (Nov) ABC Consumer Comfort Index Weekly Store Sales	13 Retail Sales (Nov) Business Inventories (Oct) Weekly Store Sales Mortgage Applications	14 Trade Price Indices (Nov) Weekly Jobless Claims Factors Affecting Monetary Reserves	15 Consumer Price Index (Nov) Industrial Production (Nov) Empire State Index (Dec) Bank Credit (Nov) Net Foreign Security Purchases (Oct)
18 NAHB Housing Market Index (Dec) Current Account (Q3)	19 Producer Price Index (Nov) Housing Starts (Nov) Weekly Store Sales ABC Consumer Comfort Index	20 EIA Crude Oil Stocks Mortgage Applications	21 GDP (Q3, Final) Corporate Profits (Q3, Final) Philadelphia Fed Index (Dec) Leading Economic Indicators (Nov) Weekly Jobless Claims Factors Affecting Monetary Reserves	22 Personal Income and consumption (Nov) Durable Orders (Nov) Consumer Sentiment (University of Michigan, Final, Dec)
25 Christmas Day All Markets Closed	26 ABC Consumer Comfort Index	27 New Home Sales (Nov) Mortgage Applications Weekly Store Sales	28 Existing Home Sales (Nov) Consumer Confidence (Dec, Conference Board) Agricultural Prices (Dec) Weekly Jobless Claims Factors Affecting Monetary Reserves	29 Chicago PMI (Dec) ISM (Manufacturing, Nov) Unit auto Sales (Nov) Construction Spending (Oct)
January 1 New Year's Day All Markets Closed	2 ISM (Manufacturing, Dec) FOMC Minutes (12/12 meeting) ABC Consumer Comfort Index Weekly Store Sales	3 Unit Auto Sales (Dec) ADP Employment (Dec) Construction Expenditures (Nov) EIA Crude Oil Stocks Mortgage Applications	4 ISM (Non-Manufacturing, Dec) Pending Home Sales (Nov) Weekly Jobless Claims Factors Affecting Monetary Reserves	5 Employment Report (Dec)

BLUE CHIP FORECASTERS

CONTRIBUTORS TO DOMESTIC SURVEY

Action Economics, LLC, Boulder, CO
Dr. Michael Englund

Argus Research Corp., New York, NY
Dr. Richard A. Yamarone

Banc of America Securities, LLC, New York, NY
Dr. Mickey Levy and Dr. Peter E. Kretzmer

Bank of Tokyo-Mitsubishi UFJ, Ltd., New York, NY
Christopher S. Rupkey

Barclays Capital, New York, NY
Dean Maki

Bear Stearns & Co., New York, NY
Dr. John Ryding and Conrad DeQuadros

BMO Capital Markets, Toronto, Canada
Dr. Sherry Cooper and Douglas Porter

Briefing.com, Boston, MA
Timothy E. Rogers

Chmura Economics & Analytics, Richmond, VA
Dr. Christine Chmura and Dr. Xiaobing Shuai

ClearView Economics, LLC, Cleveland, OH
Dr. Kenneth T. Mayland

Comerica Bank, Detroit, MI
Dana B. Johnson

Cycledata Corp., San Diego, CA
Robert S. Powers

Economist Intelligence Unit, New York, NY
Leo Abruzzese and Jan Friederich

DePrince & Associates, Murfreesboro, TN
Dr. Albert E. DePrince Jr.

Fannie Mae, Washington, DC
Dr. David W. Berson

Georgia State University, Atlanta, GA
Dr. Rajeev Dhawan and Emin Hajiyev

Goldman Sachs & Co., New York, NY
Dr. William Dudley

ING Investment Management, Inc., Hartford, CT
James A. Griffin Jr.

J.P. Morgan Chase, New York, NY
Bruce Kasman and Robert Mellman

JPMorgan Private Client Services, New York, NY
Dr. Anthony Chan

J.W. Coons Advisors, LLC, Columbus, OH
James W. Coons

Kellner Economic Advisers, Port Washington, NY
Dr. Irwin L. Kellner

LaSalle/ABN AMRO Treasury Research, Chicago, IL
Carl R. Tannenbaum

Lehman Brothers, New York, NY
Dr. Ethan Harris

Loomis, Sayles & Company, L.P., Bloomfield, MI
Brian Horrigan and David Sowerby

Merrill Lynch Economics, New York, NY
David Rosenberg, Gerald E. Cohen and Thomas Porcelli Jr.

Mesirow Financial, Chicago, IL
Diane Swonk

Moody's Economy.com, West Chester, PA
Dr. Mark M. Zandi

Moody's Investors Service, New York, NY
John Lonski and John Puchalla

Naroff Economic Advisors, Philadelphia, PA
Dr. Joel L. Naroff

National Association of Realtors, Washington, DC
Dr. David A. Lereah and Dr. S. Lawrence Yun

National City Corporation, Cleveland, OH
Richard DeKaser

Nomura Securities International, Inc., New York, NY
Dr. David H. Resler and Gerald Zukowski

PNC Financial Services Group, Pittsburgh, PA
Dr. Stuart G. Hoffman

Prudential Equity Group LLC, New York, NY
Robert Hughes

RBS Greenwich Capital Economics, Greenwich, CT
Stephen Stanley and Michelle Girard

Scotiabank, Toronto, Canada
Aron Gampel and Dr. Warren Jestin

Standard & Poor's Corp., New York, NY
Dr. David M. Blitzler and David Wyss

State House Policy Office, Providence, RI
Gary L. Ciminero

Stone Harbor Investment Partners, LP, New York, NY
Brian Keyser

SunTrust Banks, Inc., Atlanta, GA
Gregory L. Miller and Christopher P. George

Swiss Re, New York, NY
Kurt Karl

The Northern Trust Company, Chicago, IL
Paul L. Kasriel and Asha G. Bangalore

Thredgold Economic Associates, Salt Lake City, UT
Jeff K. Thredgold

Trusco Capital Management, Richmond, VA
Alan Gayle

UBS Warburg, Stamford, CT
James O'Sullivan and Samuel Coffin

U.S. Trust Co., New York, NY
Dr. Robert T. McGee and Nora C. Mirshafii

Wachovia, Charlotte, NC
Dr. John Silvia and Mark Vitner

Wayne Hummer Investment, LLC., Chicago, IL
William B. Hummer

Wells Capital Management, San Francisco, CA
Gary Schlossberg

Woodworth Holdings, Ltd., Summit, NJ
Jay N. Woodworth

CONTRIBUTORS TO INTERNATIONAL SURVEY

Deutsche Bank AG, Frankfurt, Germany

ING Financial Markets, London, England

Mizuho Research Institute, Tokyo, Japan

Scotiabank, Toronto, Canada

WestLB AG, Dusseldorf, Germany

Taylor, Karen BMO
Pipelines/Gas & Electric Utilities:
2007 ROEs Decline to Unprecedented Levels
Ontario Gets Reprieve
December 7, 2006

Pipelines/ Gas & Electric Utilities

Industry Rating Pipelines: **Market Perform**

Industry Rating
Gas & Electric Utilities: **Market Perform**

December 7, 2006

Toronto, Ontario

Karen J. Taylor, CFA

(416) 359-4304

karen.taylor@bmo.com

Associate: Benjamin Pham

Michael McGowan, CA, CFA

(416) 359-5807

michael.mcgowan@bmo.com

2007 ROEs Decline to Unprecedented Levels; Ontario Gets Reprieve

Highlights

- The ugly got uglier – actual 2007 allowed ROEs declined by an average of 0.37% versus the average allowed return on equity for 2006. The average actual allowed return on equity in 2007 is 8.65% versus 9.01% in 2006.
- The announced allowed returns are fully reflected in our diluted EPS estimates over the 2007 and 2008 forecast period.
- Although we believe that the allowed returns established by the automatic adjustment mechanisms set out herein likely violate the Fair Return Standard and are confiscatory, they are in line with expectations and therefore neutral to our outlook.
- Companies with material exposure to these automatic adjustment mechanisms include Canadian Utilities Limited, Pacific Northern Gas, Gaz Metro L.P., Fortis Inc. and TransCanada Corporation. Companies with limited exposure to ROE adjustment mechanisms include: Enbridge Inc., Duke Energy, and TransAlta Corporation.
- There are a number of companies in our coverage universe with no exposure to these automatic adjustment mechanisms: Caribbean Utilities, and Emera Inc. The pipeline and power trusts/limited partnerships in our coverage universe generally do not have a material exposure to these mechanisms.
- On November 23, the Ontario Energy Board abandoned its generic licence amendment proceeding, the purpose of which, among other things, was to codify its approach to determining the allowed return on equity. The Board has also rejected the implementation of an alternative approach to determine the allowed return on equity for Ontario's local electricity distribution utilities. We believe that this alternative approach was seriously flawed and had no basis in reality.
- We rate the units of Fort Chicago Energy Partners, LP, Inter Pipeline Fund, and Northland Power Income Fund Outperform. We also rate the shares of Pacific Northern Gas Ltd., and Caribbean Utilities Co. Ltd. Outperform.
- We remain restricted on the units of Calpine Power Income Fund.

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The allowed rates of return on equity (ROE) for many of the pipeline and energy utility companies in our coverage universe are established by an automatic adjustment mechanism in the fall of each year and are highly dependent on forecast interest rates for the prospective fiscal period. As discussed below, the 2007 allowed ROEs for various jurisdictions have now been established and allowed ROEs, on a cumulative basis, have reached unprecedented lows.

A. The Calculations

Table 1 sets out the key variables that drive each of the automatic adjustment mechanisms, by regulator.

Table 1: Key Input Assumptions

Regulator	Year Formula Effective	Month of Consensus Economics	Base GOC Yield	Equity Risk Premium	Adjustment Factor	2004A ROE	2005A ROE	2006A ROE	2007E ROE	Change 2007 vs. 2006
National Energy Board	1995	November	9.25%	3.00%	75%	9.56%	9.46%	8.88%	8.46%	-0.42%
British Columbia Utilities Commission - Terasen Gas (BCGU)	2006	November	5.25%	3.90%	75%	9.15%	9.03%	8.80%	8.37%	-0.43%
British Columbia Utilities Commission - Terasen Gas (Centra)	2006	November	5.25%	4.60%	75%	9.65%	9.53%	9.50%	9.07%	-0.43%
British Columbia Utilities Commission - PNG West Division/Tumbler Ridge	2006	November	5.25%	4.55%	75%	9.80%	9.68%	9.45%	9.02%	-0.43%
British Columbia Utilities Commission - PNG Ft. St. John/Dawson Creek/FortisBC	2006	November	5.25%	4.30%	75%	9.55%	9.43%	9.20%	8.77%	-0.43%
Alberta Energy and Utilities Board	2005	November	5.68%	3.92%	75%	9.60%	9.50%	8.93%	8.51%	-0.42%
Ontario Energy Board - Enbridge Gas Distribution	1998	October	7.25%	3.40%	75%	9.69%	9.57%	8.74%	8.39%	-0.35%
Ontario Energy Board - Union Gas ¹	1998	October	7.25%	3.55%	75%	9.62%	9.63%	8.92%	8.53%	-0.39%
Regie de l'energie ²	1999	August	5.76%	3.84%	75%	9.45%	9.69%	8.95%	8.73%	-0.22%
Nova Scotia Utilities and Review Board Island Regulatory and Appeals Commission Newfoundland and Labrador Board of Commissioners of Public Utilities ³	2000	Oct/Nov	5.60%	4.15%	80%	9.75%	9.24%	8.77%	8.60%	-0.17%

Notes:

(1) Issue of Consensus Economics used to calculate allowed ROE has varied. October stipulated in June 29, 2006 Reasons for Decision re: 2007 Rates.

(2) Excludes 0.57% of Allowed Incentive Return in 2003, 1.51% in 2004, 1.95% in 2005, 0.38% in 2006, and approximately 0.75% in 2007

(3) Return on Equity for Newfoundland Power Inc. Fixed for two-years at 9.75% in decision dated June 20, 2003. Total Return Calculation methodology.

Source: BMO Capital Markets

As set out in Table 1, the allowed ROEs established for the 2007 period are an average of 0.37% lower than in 2006. The primary reason for the decline in allowed return is the precipitous drop in the implied forecast 30-year bond yield arising from: (i) reduction in the underlying Consensus Estimate for 2007 versus 2006 to 4.15% from 4.55%; and (ii) decline in the observed spreads between the 10-year and 30-year government of Canada bond yields, as published in the National Post throughout October of 2006 versus a similar period in 2005, to approximately 7 basis points from approximately 23 basis points.

Tables 2, 3, and 4 highlight the calculation of the allowed 2007 actual ROE for the National Energy Board (NEB), Alberta Energy and Utility Board (AEUB), and the British Columbia Utilities Commission (BCUC). Table 5 highlights our estimate of the allowed return on equity for Enbridge Gas Distribution, as per the automatic adjustment mechanism notionally used by the Ontario Energy Board (OEB). We note that that the OEB, unlike its utility peer group, does not publish or release the calculation for the allowed return for the utilities subject to its purview. We note that the formulas appear to vary between Union Gas and Enbridge Gas Distribution and also between the electricity and natural gas sectors.

Table 2: Calculation of the 2007 Actual ROE – Multi-Pipeline Cost of Capital

Description		
2006 Calculated Return on Equity		8.88%
2006 Forecast Yield		4.78%
November 2006 Consensus Forecast - 3 Months Out		4.10%
November 2006 Consensus Forecast - 3 Months Out		4.20%
	Average	4.15%
Average Spread between 10-year and 30-year GOCs ¹		0.07%
Forecast Long-Term (30-year) GOC Bond Yield - 2007		4.22%
	2007 Forecast Yield	4.22%
	Less: 2006 Forecast Yield	4.78%
	Difference	-0.56%
	Times 75% Adjustment Factor	-0.42%
	Plus: 2006 Approved Return on Equity	8.88%
	Equals 2007E Approved Return on Equity	8.46%

Note:

(1) Calculated by using the 10-year and 30-year Government of Canada bond yields published daily in the National Post throughout October of the current year

Source: BMO Capital Markets

Table 3: Calculation of the 2007 Actual ROE – AEUB

Description		
Calculated Return on Equity Per Decision		9.60%
Forecast Yield Per Decision		5.68%
November 2006 Consensus Forecast - 3 Months Out		4.10%
November 2006 Consensus Forecast - 3 Months Out		4.20%
	Average	4.15%
Average Spread between 10-year and 30-year GOCs ²		0.07%
Forecast Long-Term (30-year) GOC Bond Yield - 2007		4.22%
	2007 Forecast Yield	4.22%
	Less: 2006 Forecast Yield	5.68%
	Difference	-1.46%
	Times 75% Adjustment Factor	-1.10%
	Plus: Approved Return on Equity	9.60%
	Equals 2007E Approved Return on Equity	8.51%

Note:

(2) Calculated by using the 10-year and 30-year Government of Canada bond yields published daily in the National Post throughout October of the current year

Source: BMO Capital Markets

Table 4: Calculation of the 2007 Actual ROE – BCUC

Description		
2006 Calculated Return on Equity		8.80%
November 2006 Consensus Forecast - 3 Months Out		4.10%
November 2006 Consensus Forecast - 3 Months Out		4.20%
	Average	4.15%
Average Spread between 10-year and 30-year GOCs		0.07%
Forecast Long-Term (30-year) GOC Bond Yield - 2007		4.22%
	Benchmark Return per G-14-06	9.145%
	Long-Term (30-year)GOC Bond Yield Decision	5.25%
	2007 Forecast Yield	4.22%
	Less: Bond Yield from Decision	5.25%
	Difference	-1.03%
	Times 75% Adjustment Factor	-0.77%
	Plus: Approved Return on Equity Decision	9.145%
	Equals 2007E Approved Return on Equity	8.37%

Source: BMO Capital Markets

Table 5: Calculation of the 2007E ROE for Enbridge Gas Distribution – OEB

Description	
2006 Calculated Return on Equity	8.74%
2006 Forecast Yield	4.70%
November 2006 Consensus Forecast - 3 Months Out	4.10%
November 2006 Consensus Forecast - 12 Months Out	4.20%
Average	4.15%
Average Spread between 10-year and 30-year GOCs	0.08%
Forecast Long-Term (30-year) GOC Bond Yield - 2006	4.23%
2007 Forecast Yield	4.23%
Less: 2006 Forecast Yield	4.70%
Difference	-0.47%
Times 75% Adjustment Factor	-0.35%
Plus: 2006 Approved Return on Equity	8.74%
Equals 2007E Approved Return on Equity	8.39%

Source: BMO Capital Markets

B. Allowed Returns are Confiscatory

We believe on a collective basis, that the allowed returns as established by the formulas highlighted above are confiscatory and likely violate the Fair Return Standard. This standard, as established by Canada's Supreme Court and accepted by the National Energy Board in 1971, states that a fair or reasonable rate of return should:

1. be comparable to the return available from the application of the invested capital to other enterprises of like risk (the comparable earnings standard);
2. enable the financial integrity of the regulated enterprise to be maintained and permit incremental capital to be attracted to the enterprise on reasonable terms and conditions (the financial integrity and capital attraction standards); and
3. achieve fairness from the viewpoint of the customers and from the viewpoint of present and prospective investors (appropriate balance of customer and investor interests).

We believe that regulators have consistently refused to give weight to a number of arguments that would result in higher allowed returns, solely on the basis that to do so would result in higher customer rates.

- The North American capital markets are increasingly integrated and investors have the ability to invest in utility assets north and south of the border.
- There is merit incorporating U.S. market metrics into the analysis and that the Canadian benchmark equity portfolio (the S&P/TSX) may not meet the theoretical requirement for a diversified market portfolio.
- The returns on comparable investments with similar risk, whether they be Canadian or U.S. examples, should be considered.
- The allowed return on equity and deemed equity must satisfy all aspects of the Fair Return Standard and that no part of the Standard has priority.

- The continued reliance on a derived 30-year government of Canada bond yield may not be a relevant proxy for the cost of debt (and/or a proxy for the risk free rate) for two key reasons: (i) the observed and anticipated reduction in the supply of government of Canada securities and the continued conversation in the financial market that the government may cease to issue debt securities at the long end of the curve may result in distortions in the market cost of these securities and thus the observed yields; and (ii) that corporate debt issuers do not have access to the debt capital market at government yield levels.
- No pipeline or energy utility in our regulated coverage universe has issued equity in the last five years to fund, on an unlevered basis, a dollar-for-dollar equity investment in utility rate base. Continued assertions by regulators that utilities have adequate access to capital are not credible with respect to the equity component, as access to equity has not been tested over the ensuing period. For example, On September 16, 2003, Fortis Inc. announced that it planned to acquire the assets of Aquila British Columbia and Aquila Alberta for \$1.36 billion, including assumed debt. The company financed the transaction by assuming approximately \$689 million of utility debt and issued approximately \$170 million of holdco debt, \$200 million of holdco preferred shares and new equity of approximately \$350 million. Despite the levered nature of the transaction and the prospect for above average rate base growth at the two target utilities, the common shares of Fortis Inc. declined by 5% at the time the transaction was announced and the transaction was initially widely expected to be dilutive until 2006.
- None of the pipeline projects highlighted in our May 24, 2006, report entitled “Exchanging Fire”, save and except the Canadian portion of the Southern Access Pipeline (with an approximate cost of \$160 million versus an estimated cost to Enbridge of projects currently permitted and/or under way of \$8 billion), are expected to earn the National Energy Board multi-pipeline decision return on equity. We note that in many instances, the market-based tolling arrangements with shippers result in a risk profile similar to that of the benchmark pipeline, the TransCanada Mainline pipeline.
- Continued investment in utility rate base by the owners of utilities is not an acquiescence that the allowed return on equity is appropriate and that investment may relate to other obligations including the utility’s obligation to be the supplier or supply or last resort and fulfil the obligation to serve, maintain the safe and reliable operation of the utility, and may be fulfilling specific conditions of its operating licence.
- A failure by utility companies to annually litigate the allowed return on equity “formula” does not constitute acceptance of the adequacy of the allowed return. Rather, we believe that the lack of annual litigation reflects the cost of the process, the time required to pursue litigation that detracts from management’s ability to focus on the efficient operation of the business and the potential damage to important utility regulatory and customer relationships.
- The evidenciary standard is too high and almost impossible to meet. Moreover, we believe that notwithstanding decisions from the Supreme Court that stipulate otherwise, utility regulators continue to rely heavily on their quasi-judicial and expert status to impose a bare-bones return on equity and drive down the deemed capital structure of

the utility in order to protect customers from prices, without the fear of reconsideration upon appeal. Regulators must establish the cost of equity and deemed equity not because they are experts in this regard, but in order to establish just and reasonable rates. The regulator is not permitted to consider the effects on customers in the determination of the allowed ROE and capital structure, and we do not believe that the regulator is permitted to factor in other policy objectives into its determination of the allowed return on equity; i.e., we do not believe that the regulator is permitted to reduce the allowed return on equity and/or deemed equity for small utility companies in order to encourage consolidation or any other specific policy objective. We believe in these situations, that the inclusion of these other factors in the assessment of cost of equity and designation of deemed equity, unlawfully transfers value to utility ratepayers from its legitimate owner, the utility shareholders.

C. Ontario Gets a Reprieve

On November 23, the Ontario Energy Board (OEB) issued a notice to participants regarding its Multi-year Electricity Distribution Rate Setting Plan, including the Cost of Capital, 2nd Generation Incentive Regulation Mechanism and Generic Licence Amendment Proceeding. The Board indicated that, pursuant to Staff and Panel recommendations, the Board discontinue its code-based approach (November 17 and November 20, 2006 respectively); that in the interests of achieving a more timely setting of electricity distribution rates for the 2007 rate year, the Board will instead implement its cost of capital and 2nd generation incentive regulation policies by means of guidelines. As a result, the Board discontinued the generic licence amendment proceeding, which was commenced on the Board's own motion.

On November 30, the Board issued a Draft Report on the Board on Cost of Capital and 2nd Generation Incentive Regulation for Ontario's Electricity Distributors and Associated Guidelines. The draft report details the Board's policies on cost of capital and 2nd generation incentive regulation, and draws on the work of Board staff and the input of interest parties since this consultation was initiated in April 2006. Also included are guidelines to assist parties in understanding how the policies will be implemented and information for distributors in preparing their rate applications for the 2007 rate year.

The Draft Report contains the following highlights with respect to the cost of equity capital and deemed capital structure:

- The Board has determined that the current approach to setting ROE will be maintained. The ROE will be determined based on the Long Canada Bond Forecast rate plus an equity risk premium. The Board's current approach has been in place for six years. The consultation process undertaken by the Board included a review of one method that would have required more time and greater costs for its implementation. We also note that the range of ROE produced by this alternative method was unacceptably low; well below the various rates of return discussed previously. The Board concluded that none of the approaches reviewed is better than the Board's current method.
- The Board's method will continue to include an implicit premium of 50 basis points (0.5%) for floatation and transaction costs.

- The current method was established in 1999 as part of a review of cost of capital. The ROE calculated at that time is the starting point for the calculation and is 9.35% (as per Hydro One Network Inc.'s RP-1998-0001 Decision). This formula is $ROE_t = 9.35\% + 0.75(LCBF_t - 5.50\%)$. The Long Canada Bond Forecast will use the average of the January consensus forecast of the 10-year Government of Canada bond yield 3 months ahead and 12 months ahead plus the difference between the observed yields on the 30-year Government of Canada bond yield and the 10-year Government of Canada bond yield as published by the Bank of Canada during the month of January (2007).
- No incentive returns for capital investments are appropriate at this time.
- No earnings sharing mechanisms are appropriate for second generation incentive rate making.
- The Board will include an adjustment to rates in 2008, 2009 and 2010 to transition distributors from their existing capital structures to a single deemed capital structure of 40% equity and 60% debt:
 - o For distributors starting at equity of 35%, the equity component will move in equal increments over two years until it reaches 40%.
 - o For distributors starting at equity of 45%, the equity component will move in equal increments over two years until it reaches 40%; and
 - o For distributors starting at equity of 50%, the equity component will move in equal increments over three years until it reaches 40%.

We believe that the following points are relevant about the draft guidelines:

- The current formula is not expected to result in a return on equity that is materially higher than the formulas previously discussed. We reiterate that the existing formulas result in an allowed return on equity that likely violates the Fair Return Standard and we believe them to be confiscatory.
- We are not convinced that a “one-size fits all” capital structure is appropriate and we are concerned that the Board’s policy objectives of regulatory efficiency and LDC consolidation are driving force behind the single deemed capital structure approach. This may not be appropriate.
- We are not disappointed by the Board’s decision to abandon the Licence Amendment proceeding and the rejection of the alternative approach to determining the return on equity. This latter item was seriously flawed and had no basis in reality. We set out our views on this approach in comments/reports dated June 27, August 8 and September 7, 2006.

D. Comparable Equity Securities

Canadian Gas Utilities																	
Company	TSX Ticker	Price (C\$) 5-Dec-06	Shares O/S (mm)	Market Cap. (mm)	Earnings per Share			P/E Ratios			Dividend Rate	Yield	12-Month Target	Total Return			
					2004A	2005A	2006E	2007E	2004A	2005A					2006E	2007E	
Duke Energy Corp. ²	DUK ⁵	\$32.69	1089.6	\$35,618	\$1.32	\$1.73	\$1.78	\$1.95	16.8	16.1	18.3	16.8	\$1.28	3.9%	\$32.00	1.8%	Market Perform
Enbridge Inc.	ENB	40.55	339.7	13,775	1.56	1.56	1.76	1.81	16.7	21.8	23.0	22.4	1.20	3.0%	40.00	1.6%	Market Perform
Enbridge Income Fund	ENF.UN	12.00	34.6	416	0.30	0.44	0.54	0.55	40.4	30.8	22.2	21.8	0.96	8.0%	11.50	3.8%	Market Perform
Fort Chicago Energy Partners L.P.	FCE.UN	10.75	133.7	1,437	0.74	0.59	0.64	0.47	14.1	20.9	16.8	22.9	0.93	8.7%	11.00	11.0%	Outperform
Gaz Metro ⁴	GZM.UN	15.80	117.5	1,857	1.40	1.30	1.25	1.25	15.4	16.7	12.6	12.7	1.24	7.8%	16.50	12.3%	Market Perform
Inter Pipeline Fund	IPL.UN	8.39	199.5	1,674	0.46	0.48	0.67	0.48	17.6	20.1	12.5	17.5	0.84	10.0%	8.50	11.3%	Outperform
Pacific Northern Gas Ltd.	PNG	18.50	3.6	67	1.38	1.72	1.04	1.52	14.3	11.4	17.8	12.2	0.80	4.3%	20.00	12.4%	Outperform
Pembina Pipeline Income Fund	PIF.UN	15.60	121.9	1,902	0.53	0.65	0.81	0.84	23.5	22.0	19.3	18.6	1.32	8.4%	15.00	4.6%	Market Perform
TransCanada Corp.	TRP	39.38	487.7	19,206	1.55	1.70	1.86	1.89	17.9	19.1	21.2	20.8	1.33	3.4%	38.50	1.1%	Market Perform
Group Average (Excl. ENF, FCE, GZM, IPL and PIF)									16.4	17.1	20.1	18.1		3.6%		4.2%	
Canadian Electric Utilities																	
Company	TSX Ticker	Price (C\$) 5-Dec-06	Shares O/S (mm)	Market Cap. (mm)	Earnings per Share			P/E Ratios			Dividend Rate	Yield	12-Month Target	Total Return			
					2004A	2005A	2006E	2007E	2004A	2005A					2006E	2007E	
Caribbean Utilities Co. Ltd. ^{2,3}	CUP.U	\$12.44	25.2	\$314	\$0.77	\$0.13	\$0.87	\$0.87	16.1	NMF	14.3	14.4	\$0.66	5.3%	\$13.00	9.8%	Outperform
Emera Inc.	EMA	22.91	110.4	2,528	1.16	1.04	1.15	1.14	15.7	18.2	19.9	20.1	0.89	3.9%	22.00	-0.1%	Market Perform
Fortis Inc.	FIS	28.80	103.4	2,979	0.99	1.10	1.28	1.39	15.6	18.6	22.5	20.7	0.78	2.7%	28.25	4.3%	Market Perform
Group Average									15.8	18.4	18.9	18.4		4.0%		4.7%	
Canadian Multi-Utilities																	
Company	TSX Ticker	Price (C\$) 5-Dec-06	Shares O/S (mm)	Market Cap. (mm)	Earnings per Share			P/E Ratios			Dividend Rate	Yield	12-Month Target	Total Return			
					2004A	2005A	2006E	2007E	2004A	2005A					2006E	2007E	
ATCO Ltd. ¹	ACOX	\$48.73	51.8	\$2,525	\$2.17	\$2.46	\$3.13	\$2.77	11.7	14.4	15.6	17.6	\$0.82	1.7%	NA	NA	NR
Atlantic Power Corporation ⁶	ATP.UN	10.00	46.4	464	(0.57)	(0.01)	0.02	0.23	NMF	NMF	16.6	14.0	1.06	10.6%	\$10.00	10.6%	Market Perform
Boralex Power Income Fund	BPT.UN	8.55	59.1	505	0.50	0.50	0.55	0.50	21.1	21.5	15.6	17.1	0.90	10.5%	9.00	15.8%	Market Perform
Calpine Power Income Fund	CF.UN	10.89	61.7	672	0.81	0.76	R	R	13.5	13.3	R	R	R	R	R	R	Restricted
Cdn Hydro Developers, Inc.	KHD	5.80	120.5	699	0.06	0.00	0.06	0.07	44.4	NMF	99.1	86.6	0.00	0.0%	5.60	-3.4%	Market Perform
Canadian Utilities Ltd.	CU	46.19	126.6	5,849	1.98	2.03	2.59	2.57	14.4	17.4	17.8	18.0	1.20	2.6%	42.00	-6.5%	Market Perform
Creststreet Power & Income Fund LP	CRS.UN	4.40	11.5	51	(0.54)	(0.00)	(0.00)	0.02		NMF	NMF	NMF	0.65	14.8%	4.25	11.4%	Underperform
EPCOR Power, L.P.	EP.UN	24.84	48.4	1,203	2.25	1.83	1.81	1.27	15.1	19.2	13.7	19.5	2.52	10.1%	25.50	12.8%	Market Perform
Great Lakes Hydro Income Fund	GLH.UN	18.75	48.3	905	1.03	0.75	1.08	1.03	16.5	25.0	17.3	18.2	1.25	6.7%	16.25	-6.7%	Underperform
Innervex Power Income Fund	IEF.UN	12.03	24.7	297	0.46	0.46	0.54	0.47	25.5	28.5	22.4	25.6	0.98	8.1%	11.50	3.7%	Market Perform
Northland Power Income Fund	NPI.UN	12.20	62.1	757	0.57	0.91	0.61	0.73	21.5	13.4	20.0	16.7	1.08	8.9%	13.00	15.4%	Outperform
Maxim Power Corp. ¹	MXG	6.80	43.9	299	0.50	0.30	0.21	0.24	7.6	24.3	32.4	28.3	0.00	0.0%	NA	NA	NR
TransAlta Corp.	TA	25.61	200.6	5,137	0.62	0.88	1.01	1.20	27.6	24.1	25.3	21.3	1.00	3.9%	22.00	-10.2%	Underperform
TransAlta Power L.P.	TPW.UN	7.10	75.1	533	0.48	(0.04)	0.49	0.37	19.8	NMF	14.4	19.0	0.80	11.2%	6.50	2.7%	Underperform
Group Average (Excl. KHD, MXG, IFS, LPS and Income Trusts)									17.9	18.6	19.6	19.0		2.7%		-8.3%	

Notes:

NA = Not Applicable, NMF = Not Meaningful, NR = Not Rated

¹ Estimates from First Call

² All figures in U.S. Dollars

³ Caribbean Utilities' year-end is April 30

⁴ Gaz Metro's year-end is Sept. 30

⁵ Ticker on the New York Stock Exchange

⁶ Represents Income Participating Securities (IPS). Share price, Market Cap and Dividend in C\$; all else in US\$.

Source: BMO Capital Markets

Analyst's Certification

I, Karen Taylor, CFA, hereby certify that the views expressed in this report accurately reflect my personal views about the subject securities or issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed in this report.

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The Conference Board of Canada
Electricity Restructuring:
Opening Power Markets
May 2004



Briefing March 2004

Electricity Restructuring Opening Power Markets

About the Electricity Restructuring Series

This briefing is the fifth in a series that highlights key learnings from the experience of North American and U.K. electricity restructuring initiatives over the past decade. The briefings focus on the impacts of public policies in the areas of economic regulation, air quality and climate change on investment in electricity generation and transmission, and on trade across regions.

Investment is needed in transmission capacity. Electricity in Canada and the United States has become a North American phenomenon, with growing volumes of exports and imports between the two countries. The result is a highly interconnected, complex continental network—one that is flexible in responding to fluctuations in demand and supply, but is more vulnerable in the event of a major failure.

Yet challenges exist to getting investment. North America's evolving electricity sector must find ways to raise the level of investment in order to strengthen the transmission infrastructure. This briefing suggests possibilities, while outlining why investment is needed and identifying some of the obstacles.

INVESTMENT IS NEEDED

Under-investment in critical infrastructure cannot be sustained. Witness the Aug. 14 blackout. Its cascading nature underscored the need not only for a more resilient electricity infrastructure, but also for a less brittle system overall.

New demands due to trade, combined with an aging system, have created congestion on transmission lines. This congestion has given rise to an untenable situation with respect to reliability, and constitutes a barrier to electricity trade. In fact, the lack of adequate transmission has become a bottleneck to the development of generation in several areas. An inadequate infrastructure not only threatens electricity reliability; it also contributes to volatility in electricity prices and higher prices for consumers in constrained zones.

Transmission lines are strained and overtaxed, largely because investment in continental transmission capacity has stagnated while network congestion has increased. The North American Electric Reliability Council (NERC)

reported in 2002 that the number of power deals that could not be fulfilled due to transmission constraints quintupled, from 300 in 1998 to 1,500 in 2002.¹ This has created local market power problems and has complicated the operation of wholesale power markets. The grid, in its grim condition, requires upgrading that is estimated to be in the order of \$50 billion US.

And money isn't the only issue. Arguably, there are imperfections in transmission governance arrangements that further erode the effectiveness of the transmission infrastructure. The transmission system remains fragmented, with too many system operators relying on incompatible scheduling, transmission pricing and emergency management mechanisms.²

Making transmission improvements comprises only one element among many in moving towards the objective of meeting future power needs. Nevertheless, facilitating transmission investment is an important objective, since transmission is currently the factor that most limits the supply of electricity in North America.

Given the deficiencies of the current infrastructure, investment is clearly required to accommodate cross-border exchanges and to ensure the reliability and security of electricity.

Improving transmission is vital—but we must do more to meet North America's power needs, including removing obstacles to investment.

However, investors who are considering the transmission sector in North America face increased risks. Why? In a nutshell, the sector lacks sufficient commercial incentives and potential rewards to balance new risks. We need to remove barriers and address disincentives to transmission investment either through regulatory mechanisms or market signals, particularly as markets continue to integrate.

CHALLENGES FOR INVESTMENT

A number of regulatory issues and uncertainties are limiting investment in new transmission capacity.

PLANNING

A lack of integrated and co-ordinated planning for transmission between jurisdictions exists. The focus on regional supply has limited the expansion of the transmission system; in general, the main problem lies in insufficient regional integrated planning. Moreover, the cumbersome procedures for finding sites and obtaining permission for new facilities deter investors. Multiple authorities are responsible for planning and building new facilities, and investors must endure long lead times before obtaining regulatory approval.³ For example, three years' lead time is the current estimate to attain the necessary approval for transmission line work in the Pacific Northwest Economic Region. The "not in my back yard" factor is a particular challenge for investors in planning for, and obtaining, suitable new corridors.

The electricity sector suffers from a lack of integrated and co-ordinated planning for transmission.

REGULATED RATES

Investors are discouraged by limitations on the regulated cost recovery for transmission upgrading. Transmission companies are simply not seeing favourable risk/return ratios on their investments, and know that they can realize better returns in the United States, where regulated rates of return are much higher. Rates of return to Canadian firms for transmission projects are around 9 to 10 per cent, well below the 13 to 14 per cent available to U.S. companies.⁴ These lower rates discourage investment in Canadian utilities. Moreover, investors are additionally deterred by the fact that existing cost-of-service rates do not reflect the economic value of the transmission grid.⁵

FINANCING

Obtaining desired levels of financing is also problematic. Following the Enron bankruptcy and the ensuing loss of market credibility, it has become more difficult for energy companies to get credit for working capital and to finance their investments. And the upshot is that companies have been curtailing or exiting energy trading and marketing, and energy trading activity is down more than 70 per cent in the United States.⁶ In turn, there is a lack of financing to pursue projects,⁷ which has reduced the incentive to pursue new infrastructure projects or new transmission connection technologies.

REGULATORY UNCERTAINTY

Several regulatory factors combine to create an unfavourable investment climate in the electricity sector:

- Changes in market restructuring policies in both Canada and the United States are ongoing.
- In light of the continuing attempts to create an even playing field in the wholesale power supply market through non-discriminatory access, there is indecision as to how transmission systems should be operated.⁸
- With increased regionalization, it is unclear who will own and operate the grid in the future. Despite regionalization, the authority to improve the grid remains with individual states and provinces. And, as the blackout demonstrated, key industry decision-makers are unsure of their regulatory options during emergencies or market events.⁹

ENCOURAGING INVESTMENT

Encouraging investment increasingly preoccupies the industry as a whole. The Canadian Electricity Association (CEA) has estimated that about \$150 billion in investment will be required in the electricity sector over the next 20 years, either to replace aging capacity and infrastructure or to add to what already exists. And the industry will be relying on private capital for much of this future investment.¹⁰

To secure the substantial sums that will be required by the electricity sector over the next 20 years, several investment challenges must be overcome.

Key players have been pushing politicians for regulatory reform to encourage investment in transmission. For example, the Edison Electric Institute has urged the U.S. Congress to update federal laws that restrict critically needed investment in the power transmission system. The CEA, along with the Canadian Gas Association, is urging multi-jurisdictional efforts to improve the investment climate in Canada.

Ideally, a multifaceted approach should be designed to overcome investment challenges. This section presents five key elements that such an approach should encompass.

RATES OF RETURN AND DEPRECIATION

As the CEA has pointed out, investors must see reasonable rates of return on their capital.¹¹ Specifically, the CEA contends that rates of return should recognize the value that the transmission grid plays in the economy. Rates should include clear signals on congestion and losses to transmission users, and should encourage technological innovation.

Increases in regulated rates of return on infrastructure projects would provide better incentives for building transmission. Rate improvements could assist in enhancing the security and reliability of the overall electricity system by attracting new investment to reduce congestion, increase import/export capability, add capacity and support competitive markets. A more secure and reliable system would engender greater competition for infrastructure contracts and could lead to lower costs for such work and lower consumer prices.

The CEA has issued a call for substantially higher capital cost allowance (CCA) rates to reflect the economic life of depreciating assets and to permit expansion. “Given steadily growing demand and long lead times to plan and bring new supply and infrastructure on-line, a decision on CCA rates is urgently needed to allow utilities to build out infrastructure equivalent to approximately 35 per cent of existing capacity over the next two decades.”¹²

It is important that Canada’s rates be competitive with those of the United States so that both countries can maintain a solid pace of transmission infrastructure improvement.

Furthermore, the risk profile of new transmission facilities is generally greater than that for existing facilities. These greater risks—and the lack of regulatory recognition of these risks—may make utilities reluctant to pursue investment. Regulators should therefore recognize these additional risks when setting rates.¹³

Maintaining competitive rates is a necessary, but not a sufficient, condition for investment, however. It is important to improve rates in Canada, but, given that U.S. transmission companies are not investing adequately either, there are clearly other issues that must be addressed in order to get the investment that is so evidently needed.

PLANNING

The blackout prompted serious thought about planning, and the merits of regionalization. The U.S. Federal Energy Regulatory Commission (FERC) has argued that the blackout demonstrated the need for regional co-ordination and planning, and for national standards. FERC's regional transmission organization (RTO) system aims to formalize the regional planning process and efficiently manage the growth of the transmission system.¹⁴ Standard Market Design (SMD), an attempt at standardization and regionalization, may boost infrastructure investment. SMD is a federal plan to standardize all U.S. wholesale power markets. The FERC proposal calls for a single set of market rules that would eliminate the differences between regional electricity markets. FERC views these differences as barriers that limit the ability of energy users to get access to lower-cost power resources.¹⁵ The current energy bill delays SMD until 2007.

The Aug. 14 blackout underscored the need for planning, although differences of opinion exist as to how best to proceed.

Some states and provinces have chosen a different interpretation of the blackout, regarding it as an indication that they should isolate themselves on the grid to avoid problems. However some experts, such as Connie Hughes, Chair of the Ad Hoc Committee on Critical Infrastructure for the U.S. National Association of Regulatory Utility Commissioners, argues that there is no reason for breaking down power and energy trade between countries.¹⁶ Although critics of regionalization view it as an infringement on state and provincial rights, integrated planning will likely work more effectively under a regionalized RTO system.

LOCATIONAL MARGINAL PRICING

Locational marginal pricing (LMP) is a market-pricing approach used to manage the efficient use of the transmission system. LMP sets prices specific to location. It aims to manage congestion by pricing electricity higher in locations where congestion exists, thus providing a precise market-based method for pricing electricity that includes the cost of congestion. By doing so, LMP also indicates where investment in new transmission facilities is most needed. LMP has been recognized as a significant improvement on flawed congestion management and uniform pricing systems.¹⁷

Some electricity markets have adopted or are adopting LMP: Pennsylvania New Jersey Maryland (PJM ISO) implemented LMP in 1998; New York (NY ISO) in 1999; New England (ISO-NE) in 2003.¹⁸ And it appears to be advantageous; transmission investments are now being proposed in congested zones in these three jurisdictions.¹⁹ Furthermore, FERC is promoting LMP as a means of managing electric transmission congestion. It is the proposed pricing model for many of the RTOs.²⁰

LMP could help dissolve “load pockets”²¹ and allocate scarce transmission resources more efficiently. Specifically, LMP provides better information for investment decisions by:

- identifying congested areas;
- producing transparent prices that assist investment analysis;
- helping to account for the value of upgrades to the system; and
- assisting in comparing the value of “competing” investment options.

LMP also supports efficient regional planning.

Despite the potential advantages of LMP, it is a complex approach that is not without its own challenges. Using pricing to provide incentives for expansion creates an inherent conflict—it lessens the motivation for transmission companies to deal with congestion, as they may be able to collect more revenues when it exists. To address this concern, New York State auctions the rights to recover congestion revenues to entities that do not control the grid.²²

Realistically, LMP must be regarded as a necessary feature of a successful system, but not as a solution in itself. Ideally, LMP should be a complementary part of a larger suite of mutually reinforcing tools, both market and regulatory, that, acting together, improve the reliability and efficiency of a power system.²³

MERCHANT TRANSMISSION

Another option to improve transmission capacity is to permit “merchant” transmission lines. These are projects, usually involving direct current lines, financed by private sector interests to export power over long distances and across borders on a fee-for-service basis. AltaLink is advocating merchant transmission lines, as is its American parent, Trans-Elect, Inc. Merchant

transmission lines have the potential to alleviate transmission congestion issues. Moreover, several merchant transmission projects and long-distance transmission line projects have been proposed as means of connecting more “environmentally friendly” forms of power, such as hydro and wind, to their markets.

However, as a new industry, merchant transmission is unproven.²⁴ Investment in it is therefore more likely to play a significant role in addressing transmission constraints over the longer, rather than the shorter, term.

RELIABILITY STANDARDS

Electricity reliability, which had long rested on the back burner of political priorities, was quickly marched to the forefront this summer. The blackout, was, of course, the catalyst. It exposed the fact that the current system for maintaining reliability—which is based on standards with which utilities voluntarily comply—is no longer effective. The introduction of competition in wholesale electric markets has eroded the incentive for voluntary action. Now, more than ever, the electricity market needs mandatory standards, along with financial consequences for non-compliance.

NERC is developing a single set of reliability standards to replace its existing operating policies and planning standards. The new standards will address planning and operations, and will include compliance measures for each standard.²⁵ Legislation on this issue is being considered as part of the national energy bill before the U.S. Congress. Among the bill’s measures is a plan to make reliability standards mandatory.²⁶ The bill has been on hold, but the Senate will conduct a second vote in January 2004. FERC Chairman Pat Wood recently announced that while federal legislation setting electric reliability requirements is the best fix for grid problems, FERC can act to boost reliability if Congress fails to pass a bill.²⁷

Canada is in favour of the creation of a self-regulating organization tasked with ensuring reliability. With members from both Canada and the United States, this entity would develop, implement and enforce consistent reliability standards for the interconnected North American electricity grid, while respecting the jurisdiction of sovereign regulatory bodies.²⁸ The former Natural Resources

Minister, Herb Dhaliwal, stated that Ottawa would consider bringing in mandatory reliability standards for power grid operators that could discipline those that do not toe the line.²⁹

CANADIAN CHOICES IN A NORTH AMERICAN MARKET

The transmission system across Canada is not as strained as in the United States. Therefore, the urgency to improve transmission capacity in Canada is not as strong. However, considerable concern exists over the lack of interprovincial trade. North–south transmission capacity exceeds east–west capacity since infrastructure has developed on the basis of historical market demand.

Exhibit 1 North American Electricity Trade Is Bright

The single most significant energy trading relationship in the world is between Canada and the United States. Cross-border trade in electricity has been growing dramatically largely due to legislation in the United States, which, over the past 25 years, has encouraged the trading of electricity between and within jurisdictions. Over the last few years, it has also been bolstered by the North American Free Trade Agreement. A more integrated North American electricity market has meant increased integration of regional markets through regional transmission organizations (RTOs) and contractual arrangements.

In 1996, the U.S. Federal Energy Regulatory Commission (FERC) mandated open access for non-discriminatory electricity transmission that led to state and provincial reforms, such as the creation of wholesale trading. FERC imposed some reciprocity conditions upon foreign applicants that required them to open their transmission power grid along the lines adopted for the U.S. wholesale market. Then, in 1999, FERC ordered the creation of Regional Transmission Organizations (RTOs) by December 2001 to better co-ordinate planning; this invited Canadian utilities that buy from or sell electricity to the United States to participate.

Canada dominates U.S. electricity imports—in fact, we actually dominate U.S. *energy* imports. And the United States is increasingly relying upon Canadian energy supplies; almost 100 per cent of American electricity imports come from Canada.¹ Notably, for example, imports of power from BC Hydro arguably prevented California from experiencing widespread blackouts during the 2001 power crisis.² However, transmission investment has not kept pace with electricity demand or with generation investment over the past 15 years.

North–south transmission capacity continues to exceed east–west, and there are no strong signs of growth in inter-regional trade in North America. Baseline projections from the Energy Modeling Forum in the United States validate this trend.

American-owned companies continue to be active in Canada, especially in the deregulated provinces of Alberta and Ontario. Canadian companies, such as TransEnergie, Fortis, TransAlta and NS Power, are increasingly active in the U.S. market.

Given its integrated nature, a continental electricity sector appears to be here to stay.

1 This is according to Canada’s most recent trade statistics (2001). Lawrence Martin, “Elbowing aside Brian’s legacy,” *The Globe and Mail*, June 4, 2003, p. A17.

2 Michael Den Tandt, “Energy-hogging U.S. can’t stay sore at us forever,” *The Globe and Mail*, April 3, 2003, p. B2.

3 Prices and Emissions in a Restructured Electricity Market, Energy Modeling Forum, Stanford University, May 2001.

The north–south trading of electricity supplies (particularly exports to the United States from Quebec, Manitoba and British Columbia) has been more prevalent, economical and effective than east–west transmission. While cross-border electricity trade is growing, inter-regional trade is not necessarily increasing. Trade is hindered by the fact that Canadian provinces tend to function as silos, with little interprovincial co-operation and extensive interprovincial barriers.

Strengthening east–west electricity trade could bring many advantages to Canada.

In light of the desire in Canada for better flow of electricity among provinces, it is incumbent upon us to explore the viability of strengthened east–west electricity trade in Canada.³⁰ Additional transmission infrastructure is needed to allow sources of generation, some of which are distant from major demand centres, to be brought to market. While most provinces are interconnected with their immediate neighbours, possible further development of east–west lines, notably those between Ontario and Manitoba, and Ontario and Quebec, must be further examined. A major study about transmission expansion in Canada is underway.³¹ There may be significant costs to expanding east–west transmission in Canada, but there might also be environmental benefits. For example, if an Ontario–Manitoba line could supply some capacity to replace coal-fired generation in Ontario (consistent with Canada’s climate change and Ontario’s energy policies), then it may make good sense as a policy objective.³²

Strengthening interprovincial links may assist in securing the long-term provincial supply needs, such as in the case of the Ontario–Manitoba link. Additionally, developing an east–west grid could be considered to be an investment in the future and an exercise in nation building.

Canada’s priorities must be addressed within the context of the North American electricity market. The U.S. regulatory framework exerts strong influence over Canadian decisions regarding cross-border commercial activity in electricity. Within each country, measures can be taken to bolster integration, but regulatory policy must be co-ordinated across North America.

In moving forward with competitive electricity markets, there are sound reasons to enhance Canada–U.S. and interprovincial transmission transfer capability. But, in making decisions on how to proceed, Canada needs to carefully evaluate the merits and drawbacks of the U.S.-driven initiatives. If, as FERC proposes, membership in RTOs becomes essential for power trading in North America, then there will be significantly stronger reasons for Canadian membership in them. Canada is already facing decisions about joining RTOs, and it should pay particular attention to analyzing the advantages and disadvantages of joining with states in regional relationships.

Canada should also be aware that any decision to adopt SMD would affect not only the functioning of RTO markets, but also the roles of the independent market operators and system operators. The standardization of markets and the introduction of independent transmission providers would change the nature of the market, along with the players themselves. SMD could provide market safeguards and facilitate continental trade. But Canadian companies must carefully balance the potential competitiveness benefits that they could derive from SMD against the loss of independence that it would bring.

Canadians should also bear in mind that policy and regulation designed for the American situation may have unintended impacts on us and on our bilateral relationship. For instance, both the augmented continental movement of electricity and decisions regarding transmission capacity could have implications for competitiveness.³³ Thus, there is a need for ongoing Canada–U.S. dialogue and for building stronger relations, with the objective of minimizing cross-border discrepancies. Ergo, now might be an opportune time for Canada to examine the extent of its involvement with NERC. Moreover, in setting harmonized market rules, regulators should aim to accommodate jurisdictional realities.

MOVING AHEAD WITH OPEN ELECTRICITY MARKETS

Adequate transmission capacity is vital to an efficient electricity market. To strengthen the North American transmission grid, players in the Canadian electricity

sector—regulators, investors, politicians and policy-makers—must make a number of decisions on key issues. In particular:

- In supporting transmission investment, the Canadian electricity sector must consider how best to prepare for an increasingly regionalized electricity system in North America.
- Utilities, transmission companies and system operators should consider the extent of their involvement and their roles in integrated planning.
- Canadian regulators should decide whether improved rates of return on invested capital and CCA rates would result in desired investment activity.
- Regulators should resolve whether LMP could provide additional incentives for new transmission investment and, at the same time, also support regional planning.
- In light of the pending U.S. energy legislation regarding mandatory reliability standards, governments must decide on the possible benefits of forming a new self-regulating reliability organization for North America.

In moving ahead on these issues, we cannot forget to encourage new technologies. They will increase the capacity and efficiency of existing networks and reduce line losses,³⁴ and will be vital in making grid capacity improvements sustainable.

Exhibit 2 Current Initiatives

- A report for the Federal-Provincial-Territorial Electricity Transmission Working Group was recently completed. The “Regional Electricity Transmission Grid Study” discusses current transmission constraints and barriers to transmission and generation development.
- The Canadian Electricity Association (CEA) has recently published recommendations for an integrated North American electricity market, specifically aimed at enhancing cross-border electricity trade. Interestingly, these proposals are similar to those put forth by the U.S. Federal Energy Regulatory Commission (FERC). The CEA measures include:
 - increased participation in RTOs (regional integration);
 - increased focus on harmonizing market rules;
 - enhancement of cross-border and interprovincial transmission transfer capability; and
 - co-ordination of critical infrastructure protection.¹
- Ontario has recently formed the Electricity Conservation and Supply Tax Force.
- The May 2002 U.S. National Transmission Grid Study (NTGS), published by the U.S. Department of Energy, highlights many of the legacy transmission issues in the country and proposes 50 specific recommendations.¹
- The North American Energy Working Group (NAEWG) report—*North America—Regulation of International Electricity Trade* is an overview of federal regulations in Canada, the United States and Mexico with respect to the authorization of the construction and operation of international power lines, and the authorization of electricity exports and imports.

¹ Canadian Electricity Association, *Canadian electricity and the economy—The Integrated North American Electricity Market: Enhancing Opportunities for Cross Border Trading and Environmental Performance* (Toronto: Canadian Electricity Association, 2003).

Finally, to effectively address the current challenges preventing required investment in transmission infrastructure, a strategic and forward-looking Canadian plan must form part of a focused North American approach.

1 ICF Consulting, *The Cascading Blackout: Why Wasn't the Power Outage Contained?* Issue Paper, Fairfax, VA.

2 Paul L. Joskow, “The Difficult Transition to Competitive Electricity Markets in the U.S.” (AEI-Brookings Joint Center for Regulatory Studies, July 2003).

3 Nickle’s Energy Analysts, July 21, 2003. According to Scott Thon, President and Chief Executive Officer of AltaLink.

4 Ibid.

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13 These risks include cost disallowances, cost overages, equipment problems and revenue risk. See Navigant Consulting, *Regional Electricity Transmission Grid Study* (Toronto: Navigant Consulting, 2003), p. 63.

14 Department of Energy National Transmission Grid Study [on line]. [cited January 2004] Available from <www.eh.doe.gov/index.html>.

15 Energy User News, Jan. 31, 2003. [cited December 2003] Available from <www.energyusernews.com/>.

16 “Grid reliability essential: Hughes,” *Financial Post*, Sept. 3, 2003.

17 “Initial Observations on LMP in Other Jurisdictions.” Presentation by Andrew Pietrewicz, Ontario Independent Electricity Market Operator, Nov. 11, 2003.

18 LMP has also operated in the New Zealand market since 1996, and in some South American countries. LMP is being considered in Australia and Ontario, and is planned in California (CAISO), Texas (ERCOT), Midwest (MISO) and Southeast (SeTRANS).

- 19 "Initial Observations on LMP in Other Jurisdictions." Presentation by Andrew Pietrewicz, Ontario Independent Electricity Market Operator, Nov. 11, 2003.
- 20 "LMP and Financial Transmission Rights." Presentation by John D. Chandley, LECG Economics Finance, Nov. 11, 2003.
- 21 Load pockets are geographical areas in which the demand for electricity can exceed the capacity of local generating facilities and/or in which there is an electricity import limitation as a result of transmission line constraints.
- 22 Auction revenues are allocated to transmission owners and applied to embedded costs of transmission system (to reduce the transmission service charge paid by loads). From Pietrewicz.
- 23 "Initial Observations on LMP in Other Jurisdictions." Presentation by Andrew Pietrewicz, Ontario Independent Electricity Market Operator, Nov. 11, 2003.
- 24 Constraints to the development of merchant transmission include market imperfections, immaturity of the merchant transmission industry, significant market risks, and the free rider problem. See Navigant Consulting, *Regional Electricity Transmission Grid Study* (Toronto: Navigant Consulting, 2003), p. 91.
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- 26 Barrie McKenna, "Senators block proposed energy bill," *The Globe and Mail*, Nov. 22, 2003, p. B3.
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- 28 Notes for an Address by the Honourable Herb Dhaliwal, PC, MP, (Former) Minister of Natural Resources Canada to the Canadian Electricity Association Washington Forum, Washington, D.C., March 19, 2002. [cited December 2003] Available from <www.nrca.gc.ca/media/speeches/2002/200232_e.htm>.
- 29 Simon Tuck, "U.S. firm faces blackout blame," *The Globe and Mail*, Nov. 19, 2003.
- 30 Alternative options for improving transmission capacity include improving north-south links or boosting generation capacity in centres that require it.
- 31 The Regional Electrical Transmission Grid Study in Canada.
- 32 Given the cost of natural gas, expanding gas-based generation stations may be more expensive than getting hydro (e.g., from Manitoba), even with high transmission charges.
- 33 In the cases of some U.S. regions undergoing restructuring, a key motivation has been a desire to obtain lower-cost power for consumers. One source has been hydro power from Canada.
- 34 Transmission line losses—power lost due to wire resistance—are a function of distance transported from generator to demand.

The Electricity Restructuring Series

Canadian governments and industries, particularly the energy sector and its major customers, are concerned with understanding the impacts of policy choices and market trends. The Electricity Restructuring Series aims to provide insights for public policy makers and business leaders. Members of the Conference Board's Energy Policy Centre have provided guidance and direction for research. This briefing is the fifth of six in the series.

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2. Electricity Restructuring: Acting on Principles
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Electricity Restructuring: Opening Power Markets

by *Erin Down, Al Howatson, Gilles Rhéaume and Greg Hoover*

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**Table B-3 Figures
Raw Underlying Annual Data Series**

Report

Report on Canadian Economic Statistics 1924-2005

March 2006

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REPORT ON CANADIAN ECONOMIC STATISTICS

1924 – 2005

HIGHLIGHTS OF THE REPORT

There was a flattening of the yield curve in 2005 resulting from an increase in short-term interest rates and the continued decline in rates at all other term to maturities. Equity markets performed well overall with the largest gains coming from Canada. For the third consecutive year, the Canadian S&P/TSX Total Return Index outperformed most of the major indices when measured in Canadian dollars posting a 24.13% gain for the year. The MSCI World, European and Pacific Basin indices were up 4.78%, 4.69%, and 17.14% respectively (see Table 6). Equity markets in the US posted gains for the third consecutive year. In US dollars, the S&P 500 Index was up 3.00% in 2005 after gaining 8.99% in 2004 and 26.38% in 2003 (see Appendix A), while the S&P 500 Total Return Index was up 4.91% in 2005 after gaining 10.88% in 2004 and 28.69% in 2003 (see Table 5). In Canadian dollars, however, gains posted by the S&P 500 Total Return Index were erased due to depreciation of the US currency.

The Canadian dollar continued to appreciate against the US dollar for the fourth consecutive year, gaining 5.0% against the greenback in 2005 based on the average noon exchange rate for the month of December (see Table 5).

Inflation remained low, increasing slightly from 2.12% in 2004 to 2.15% in 2005.

The Canadian bond markets continued to post strong gains, in spite of a strong equity market. For 2005, the total returns on government of Canada long bonds, provincial bonds and corporate bonds were 15.05%, 15.10% and 13.94% respectively (see Table 3B). After adjusting for inflation, the 91day T-bill posted a real return of 0.51% for 2005, compared with 0.13% in 2004. The real rate of return for government of Canada long bonds, provincial bonds and corporate bonds was 12.63%, 12.67% and 11.54% respectively for 2005 (see Table 3C).

The total return on direct investment in properties reversed its downward trend and recorded its highest gain since 1981, according to the ICREIM/IPD Index. The return was 18.7% in 2005 compared to 13.0% in 2004, 8.4% in 2003, 8.8% in 2002, 9.2% in 2001 and 12.0% in 2000.

The productivity gain as measured by GDP per employed person and the wage rate of increase were 5.38% and 3.28% respectively. In real terms, the corresponding rates were 3.16% and 1.11%.

REPORT ON CANADIAN ECONOMIC STATISTICS

JANUARY 1, 1924 – DECEMBER 31, 2005

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REPORT ON CANADIAN ECONOMIC STATISTICS

JANUARY 1, 1924 – DECEMBER 31, 2005

INTRODUCTION

This is the thirtieth report on Canadian Economic Statistics issued by the Canadian Institute of Actuaries Committee on Investment Practice. Reports have been published annually since 1977. The reader is reminded that monthly values of CANSIM series used in the calculation of minimum transfer values of pensions are given in Appendix A of this report.

This report was prepared by Charles L. Gilbert, Nexus Generations and approved by the Canadian Institute of Actuaries Committee on Investment Practice:

Christian-Marc Panneton, Chairperson
Martin Roy, Vice-Chairperson

Hélène Baril	Jonathan Hede	Julie Perks
Michael Bean	Gilbert Lacoste	Ivy Lee
Robert Berendsen	Martin le Roux	Sylvain St-Georges
Jean-Jacques Chouinard	Jean-Philippe Lemay	

The committee welcomes comments and suggestions about this report and the tables within.

DESCRIPTION OF DATA

The primary source of data is the CANSIM database maintained by Statistics Canada. Some statistics, such as the GDP and the wage and salary index, are subject to re-estimation by Statistics Canada over a period of months or years. This report includes revisions to the numbers presented last year, and it is likely that the next issue of these economic tables will contain revisions of some of the figures given here. Appendix B is a list of the CANSIM series used, together with the concordance of CANSIM I series to CANSIM II series. Most CANSIM series did not start until well after January 1, 1924, the commencement date of the attached tables. For years not covered by CANSIM, a variety of data sources was used. The data sources are indicated in the notes to the tables, in Appendix C, and in the bibliography (Appendix E). In some cases, lack of data required that approximations be used.

Statistics Canada information is used with the permission of Statistics Canada. Users are forbidden to copy the data and disseminate them, in an original or modified form, for commercial purposes, without the expressed permission of Statistics Canada. Information on the availability of the wide range of data from Statistics Canada can be obtained from Statistics Canada's Regional Offices, its World Wide Web site at <http://www.statcan.ca>, and its toll-free access number 1-800-263-1136.

Other data have been provided by Standard and Poor's Corporation, RBC Dexia Investor Services, Frank Russell Canada Limited, Investment Property Databank, Scotia Capital, Thomson Financial (Datastream International), Morgan Stanley Capital International, TSX Inc., Bank of Canada, and the U.S. Federal Reserve. The committee is grateful for these data but cannot assume any responsibility for them.

TABLES 1A, 1B, 1C, 1D

BASIC VARIABLES - SINGLE YEAR CHANGES: YEAR-END TO YEAR-END

TABLE 1A: NOMINAL ANNUAL PERCENTAGE RATES OF CHANGE/RETURN								
YEAR	CONSUMER PRICE INDEX	COMMON STOCK INDEX	CANADA LONG BONDS	CONVENTIONAL MORTGAGE INDEX	91 DAY T-BILLS	U.S. COMMON STOCKS IN CANADIAN \$	GDP PER EMPLOYED	WAGE AND SALARY INDEX
1923	0.92	.	.	.	.	.	.	.
1924	-1.82	11.25	7.84	.	.	.	1.86	0.11
1925	2.78	28.74	5.17	.	.	.	4.36	-0.22
1926	-1.80	24.42	5.39	.	.	.	3.81	1.41
1927	-0.92	44.92	10.18	.	.	.	4.86	1.72
1928	0.93	32.92	0.56	.	.	.	2.89	1.48
1929	2.75	-11.60	2.34	.	.	.	-1.37	1.15
1930	-6.25	-30.90	9.26	.	.	.	-10.47	-1.35
1931	-10.48	-32.96	-4.97	.	.	.	-15.81	-5.26
1932	-7.45	-12.92	12.37	.	.	.	-11.02	-6.12
1933	-2.30	51.63	7.37	.	.	.	-1.30	-2.08
1934	1.18	20.26	19.66	.	0.64	.	6.05	1.90
1935	2.33	30.63	0.83	.	1.17	.	5.41	2.35
1936	1.14	25.35	11.12	.	0.89	.	5.76	4.64
1937	4.49	-15.83	-0.58	.	0.71	.	4.40	5.21
1938	-2.15	9.13	5.63	.	0.62	34.42	3.50	1.68
1939	2.20	0.19	-2.98	.	0.70	8.46	11.24	2.13
1940	5.38	-19.13	8.69	.	0.73	-9.98	19.22	6.63
1941	6.12	1.93	3.80	.	0.59	-11.70	20.12	7.12
1942	2.88	13.99	3.08	.	0.54	21.08	12.66	7.49
1943	1.87	19.67	3.88	.	0.49	25.59	6.82	5.49
1944	-1.83	13.47	3.16	.	0.39	19.60	4.11	2.01
1945	1.87	36.05	5.18	.	0.37	36.09	-2.55	0.98
1946	5.50	-1.50	6.02	.	0.39	-16.45	1.92	6.28
1947	14.78	0.34	3.17	.	0.41	5.27	11.72	11.06
1948	9.09	12.13	-2.38	.	0.41	5.08	13.47	8.95
1949	0.69	22.61	4.85	.	0.48	29.78	4.25	6.08
1950	6.21	48.43	-0.12	.	0.54	24.63	13.32	7.93
1951	10.39	24.04	-3.13	.	0.77	21.35	8.78	9.86
1952	-1.18	-0.42	1.99	5.18	1.05	11.96	12.84	7.22
1953	0.00	2.15	3.64	2.08	1.66	-0.75	5.18	4.17
1954	0.00	39.05	9.99	7.48	1.53	51.37	0.34	3.01
1955	0.60	27.80	-0.34	6.73	1.46	35.64	7.60	4.47
1956	2.96	13.22	-3.63	-2.42	2.91	2.43	8.65	5.48
1957	1.72	-20.58	5.89	3.23	3.86	-9.20	0.49	4.51
1958	2.82	31.25	-5.69	8.86	2.16	41.33	5.53	3.97
1959	1.10	4.59	-4.43	1.75	4.78	10.36	2.74	3.77
1960	1.63	1.78	7.10	10.32	3.52	3.76	1.50	3.24
1961	0.00	32.75	9.78	7.12	2.89	34.58	3.19	3.11
1962	1.60	-7.09	3.05	7.12	4.05	-5.81	6.92	1.53
1963	2.11	15.60	4.26	7.12	3.66	23.05	4.16	4.08
1964	2.06	25.43	6.97	7.12	3.80	15.82	4.51	4.77
1965	3.03	6.68	0.96	2.59	4.03	12.50	7.42	6.48
1966	3.43	-7.07	1.55	1.58	5.14	-9.43	6.78	5.47
1967	3.79	18.09	-2.20	2.21	4.62	23.56	5.04	6.78
1968	4.11	22.45	-0.80	2.97	6.47	10.26	7.55	7.29
1969	4.82	-0.81	-2.01	-3.15	7.43	-8.33	7.63	6.32
1970	1.26	-3.57	21.98	11.87	6.57	-1.55	5.01	8.90
1971	4.96	8.01	11.55	13.90	3.79	12.22	7.83	10.67
1972	5.12	27.38	1.11	8.92	3.59	18.62	9.20	7.74
1973	9.36	0.27	1.71	6.87	5.46	-14.53	13.80	6.88
1974	12.33	-25.93	-1.69	4.50	8.23	-27.20	13.25	13.36
1975	9.45	18.48	2.82	12.20	7.56	40.76	11.04	14.42
1976	5.85	11.02	19.02	14.21	9.44	24.18	10.29	11.20
1977	9.47	10.71	5.97	14.62	7.86	-0.25	9.37	8.04
1978	8.41	29.72	1.29	6.84	8.93	14.41	7.06	6.41
1979	9.76	44.77	-2.62	5.66	12.54	17.25	10.07	8.60
1980	11.11	30.13	2.06	8.10	13.71	35.39	9.77	11.45
1981	12.18	-10.25	-3.02	9.98	20.38	-5.91	10.68	11.41
1982	9.24	5.54	42.98	29.15	15.25	26.93	8.88	9.54
1983	4.60	35.49	9.60	20.46	9.86	23.26	6.75	7.69
1984	3.69	-2.39	15.09	12.36	11.95	12.37	5.94	3.10
1985	4.38	25.07	25.26	16.72	9.77	38.65	4.82	3.93
1986	4.19	8.95	17.54	13.34	9.47	17.63	1.85	2.73
1987	4.15	5.88	0.45	10.26	8.46	-0.40	6.95	4.60
1988	3.99	11.08	10.45	10.12	9.77	6.67	6.48	4.19
1989	5.23	21.37	16.29	13.06	12.91	27.86	3.99	5.00
1990	4.97	-14.80	3.34	10.63	13.98	-3.20	2.91	4.68
1991	3.79	12.02	24.43	21.56	9.57	28.86	2.50	4.34
1992	2.13	-1.43	13.07	11.25	6.49	19.55	3.27	3.32
1993	1.69	32.55	22.88	15.66	5.27	15.10	3.40	0.84
1994	0.20	-0.18	-10.46	-0.15	5.33	5.71	3.72	1.82
1995	1.75	14.53	26.28	16.47	7.43	35.71	2.77	1.40
1996	2.20	28.35	14.29	13.80	4.48	22.27	3.53	2.66
1997	0.75	14.98	17.45	7.19	3.30	39.72	1.95	0.88
1998	1.02	-1.58	14.13	7.73	4.81	38.99	1.00	1.70
1999	2.58	31.71	-7.15	2.10	4.83	15.63	6.15	1.63
2000	3.23	7.41	13.64	9.36	5.63	-6.07	6.54	2.18
2001	0.70	-12.57	3.92	11.94	4.13	-8.70	-0.73	1.76
2002	3.88	-12.44	10.09	7.60	2.55	-23.00	3.81	2.23
2003	1.99	26.72	8.06	7.82	2.93	8.34	2.18	1.99
2004	2.12	14.48	8.46	7.15	2.25	2.97	5.58	1.43
2005	2.15	24.13	15.05	6.08	2.67	-0.09	5.38	3.28

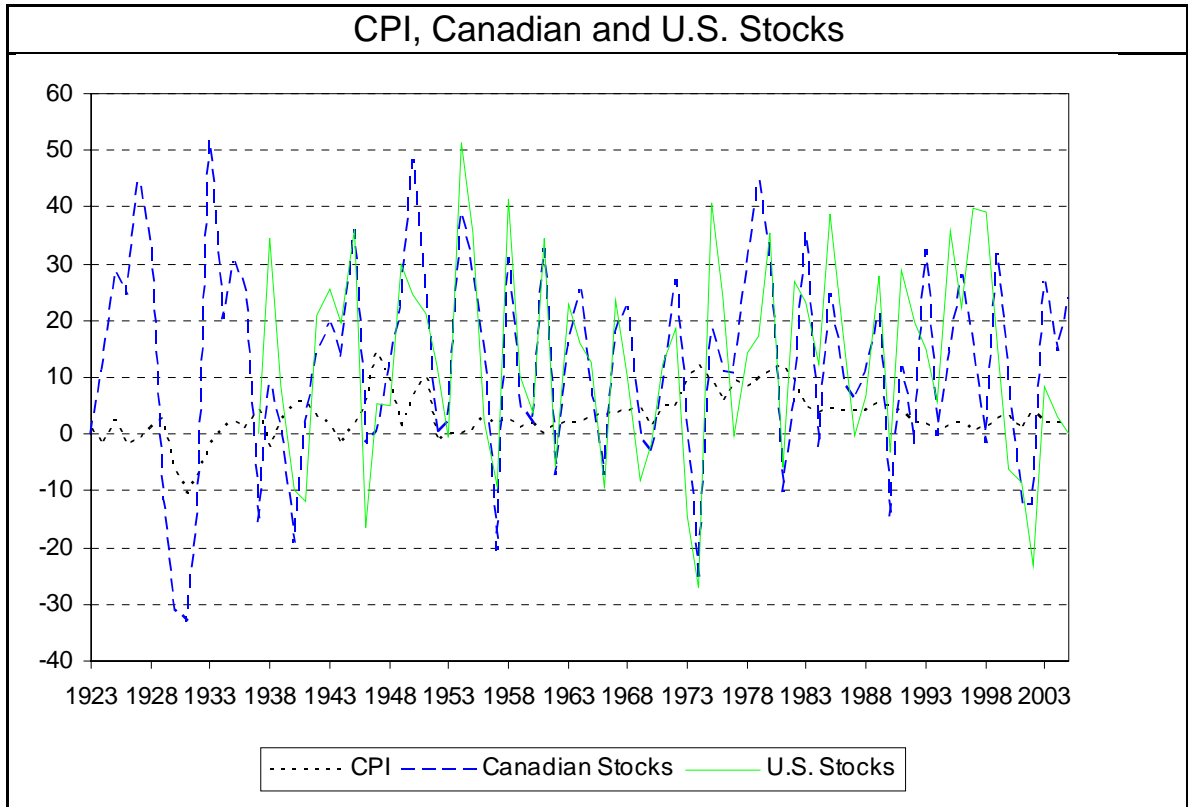
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This table gives rates of change/return on Canadian stocks, bonds, mortgages and Treasury bills and on U.S. stocks on a market basis assuming purchase on Dec. 31 of the previous year and sale on Dec. 31 of the current year, including reinvested dividends, coupons or payments. Also given are the CPI, a productivity index (GDP/employed) and rates of wage and salary increases. Details are given in Appendix C. U.S. stock returns are derived in Table 5. Values in bold are revised estimates.

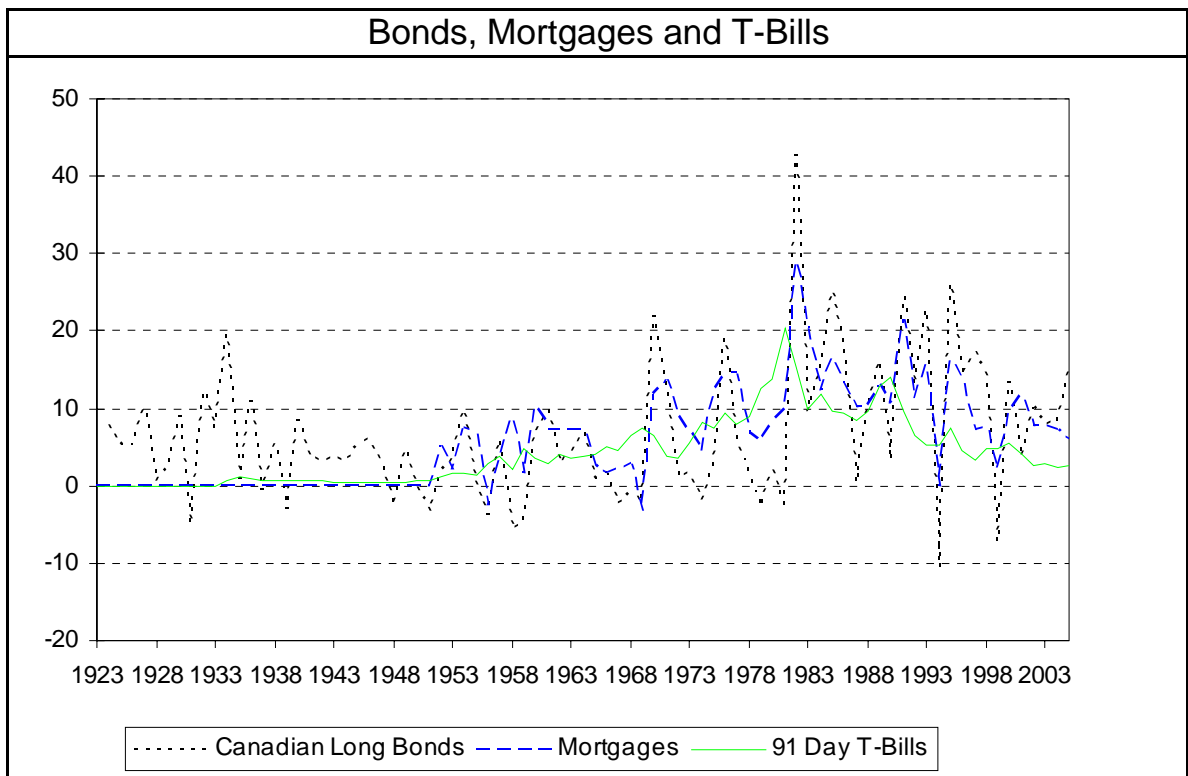
FIGURE 1A : NOMINAL RATES



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TABLE 1B: REAL ANNUAL PERCENTAGE RATES OF CHANGE/RETURN								
YEAR	CONSUMER PRICE INDEX	REAL VALUES NET OF CPI INCREASES						WAGE AND SALARY INDEX
		COMMON STOCK INDEX	CANADA LONG BONDS	CONVENTIONAL MORTGAGE INDEX	91 DAY T-BILLS	U.S. COMMON STOCKS IN CANADIAN \$	GDP PER EMPLOYED	
1923	0.92	.	.	.	.	.	.	.
1924	-1.82	13.31	9.84	.	.	.	3.74	1.96
1925	2.78	25.26	2.33	.	.	.	1.54	-2.91
1926	-1.80	26.70	7.32	.	.	.	5.71	3.27
1927	-0.92	46.27	11.20	.	.	.	5.83	2.66
1928	0.93	31.70	-0.37	.	.	.	1.94	0.54
1929	2.75	-13.96	-0.40	.	.	.	-4.01	-1.56
1930	-6.25	-26.30	16.54	.	.	.	-4.50	5.23
1931	-10.48	-25.11	6.15	.	.	.	-5.95	5.83
1932	-7.45	-5.92	21.41	.	.	.	-3.86	1.43
1933	-2.30	55.20	9.90	.	.	.	1.02	0.23
1934	1.18	18.86	18.26	.	-0.53	.	4.82	0.72
1935	2.33	27.66	-1.46	.	-1.13	.	3.02	0.03
1936	1.14	23.95	9.87	.	-0.24	.	4.57	3.46
1937	4.49	-19.45	-4.86	.	-3.62	.	-0.10	0.68
1938	-2.15	11.53	7.95	.	2.83	37.37	5.77	3.91
1939	2.20	-1.97	-5.06	.	-1.46	6.13	8.85	-0.06
1940	5.38	-23.26	3.15	.	-4.41	-14.57	13.14	1.19
1941	6.12	-3.95	-2.19	.	-5.22	-16.80	13.19	0.94
1942	2.88	10.79	0.19	.	-2.27	17.68	9.50	4.47
1943	1.87	17.47	1.98	.	-1.36	23.29	4.86	3.56
1944	-1.83	15.59	5.08	.	2.26	21.83	6.06	3.92
1945	1.87	33.55	3.25	.	-1.48	33.59	-4.34	-0.87
1946	5.50	-6.64	0.48	.	-4.85	-20.81	-3.40	0.73
1947	14.78	-12.58	-10.12	.	-12.52	-8.29	-2.67	-3.25
1948	9.09	2.79	-10.52	.	-7.96	-3.67	4.02	-0.13
1949	0.69	21.77	4.13	.	-0.21	28.88	3.53	5.35
1950	6.21	39.76	-5.96	.	-5.34	17.34	6.70	1.62
1951	10.39	12.37	-12.25	.	-8.71	9.93	-1.45	-0.48
1952	-1.18	0.76	3.21	6.43	2.25	13.30	14.18	8.50
1953	0.00	2.15	3.64	2.08	1.66	-0.75	5.18	4.17
1954	0.00	39.05	9.99	7.48	1.53	51.37	0.34	3.01
1955	0.60	27.04	-0.93	6.10	0.86	34.84	6.96	3.85
1956	2.96	9.97	-6.40	-5.22	-0.05	-0.51	5.53	2.45
1957	1.72	-21.93	4.10	1.48	2.10	-10.74	-1.21	2.74
1958	2.82	27.64	-8.28	5.87	-0.65	37.45	2.63	1.11
1959	1.10	3.45	-5.47	0.64	3.64	9.16	1.62	2.65
1960	1.63	0.15	5.38	8.55	1.86	2.09	-0.13	1.59
1961	0.00	32.75	9.78	7.12	2.89	34.58	3.19	3.11
1962	1.60	-8.56	1.42	5.43	2.41	-7.29	5.23	-0.07
1963	2.11	13.22	2.11	4.91	1.53	20.51	2.01	1.94
1964	2.06	22.90	4.81	4.96	1.70	13.48	2.40	2.65
1965	3.03	3.54	-2.01	-0.43	0.97	9.19	4.26	3.35
1966	3.43	-10.15	-1.82	-1.79	1.65	-12.43	3.23	1.97
1967	3.79	13.77	-5.77	-1.52	0.80	19.05	1.20	2.88
1968	4.11	17.61	-4.72	-1.10	2.26	5.91	3.31	3.05
1969	4.82	-5.37	-6.52	-7.60	2.49	-12.55	2.68	1.43
1970	1.26	-4.76	20.47	10.48	5.25	-2.77	3.71	7.55
1971	4.96	2.90	6.28	8.52	-1.11	6.92	2.73	5.45
1972	5.12	21.18	-3.81	3.61	-1.46	12.84	3.88	2.49
1973	9.36	-8.31	-7.00	-2.28	-3.57	-21.85	4.05	-2.27
1974	12.33	-34.06	-12.48	-6.97	-3.65	-35.19	0.82	0.92
1975	9.45	8.25	-6.06	2.51	-1.73	28.61	1.45	4.54
1976	5.85	4.89	12.45	7.90	3.39	17.32	4.20	5.05
1977	9.47	1.13	-3.20	4.70	-1.47	-8.88	-0.10	-1.31
1978	8.41	19.65	-6.57	-1.45	0.48	5.53	-1.25	-1.85
1979	9.76	31.90	-11.28	-3.73	2.53	6.82	0.29	-1.05
1980	11.11	17.12	-8.15	-2.71	2.34	21.85	-1.21	0.30
1981	12.18	-19.99	-13.55	-1.97	7.31	-16.13	-1.34	-0.69
1982	9.24	-3.38	30.89	18.23	5.50	16.20	-0.32	0.27
1983	4.60	29.53	4.78	15.16	5.03	17.84	2.06	2.96
1984	3.69	-5.86	11.00	8.36	7.97	8.38	2.17	-0.57
1985	4.38	19.82	20.01	11.83	5.16	32.83	0.43	-0.43
1986	4.19	4.57	12.80	8.78	5.07	12.89	-2.25	-1.41
1987	4.15	1.66	-3.55	5.86	4.14	-4.37	2.69	0.43
1988	3.99	6.82	6.21	5.90	5.56	2.59	2.40	0.19
1989	5.23	15.34	10.52	7.45	7.30	21.51	-1.18	-0.22
1990	4.97	-18.83	-1.55	5.40	8.58	-7.78	-1.96	-0.27
1991	3.79	7.93	19.89	17.13	5.57	24.16	-1.24	0.53
1992	2.13	-3.49	10.72	8.93	4.27	17.06	1.11	1.17
1993	1.69	30.35	20.84	13.74	3.53	13.19	1.69	-0.83
1994	0.20	-0.37	-10.64	-0.35	5.13	5.51	3.52	1.62
1995	1.75	12.56	24.11	14.46	5.58	33.37	1.00	-0.35
1996	2.20	25.58	11.83	11.35	2.23	19.64	1.30	0.45
1997	0.75	14.12	16.58	6.40	2.53	38.68	1.19	0.13
1998	1.02	-2.58	12.98	6.64	3.75	37.58	-0.02	0.68
1999	2.58	28.41	-9.48	-0.46	2.19	12.73	3.48	-0.93
2000	3.23	4.05	10.08	5.94	2.33	-9.01	3.21	-1.01
2001	0.70	-13.18	3.21	11.17	3.41	-9.33	-1.42	1.05
2002	3.88	-15.71	5.98	3.57	-1.28	-25.88	-0.07	-1.59
2003	1.99	24.25	5.95	5.71	0.92	6.22	0.19	0.00
2004	2.12	12.11	6.21	4.93	0.13	0.83	3.39	-0.67
2005	2.15	21.51	12.63	3.84	0.51	-2.20	3.16	1.11

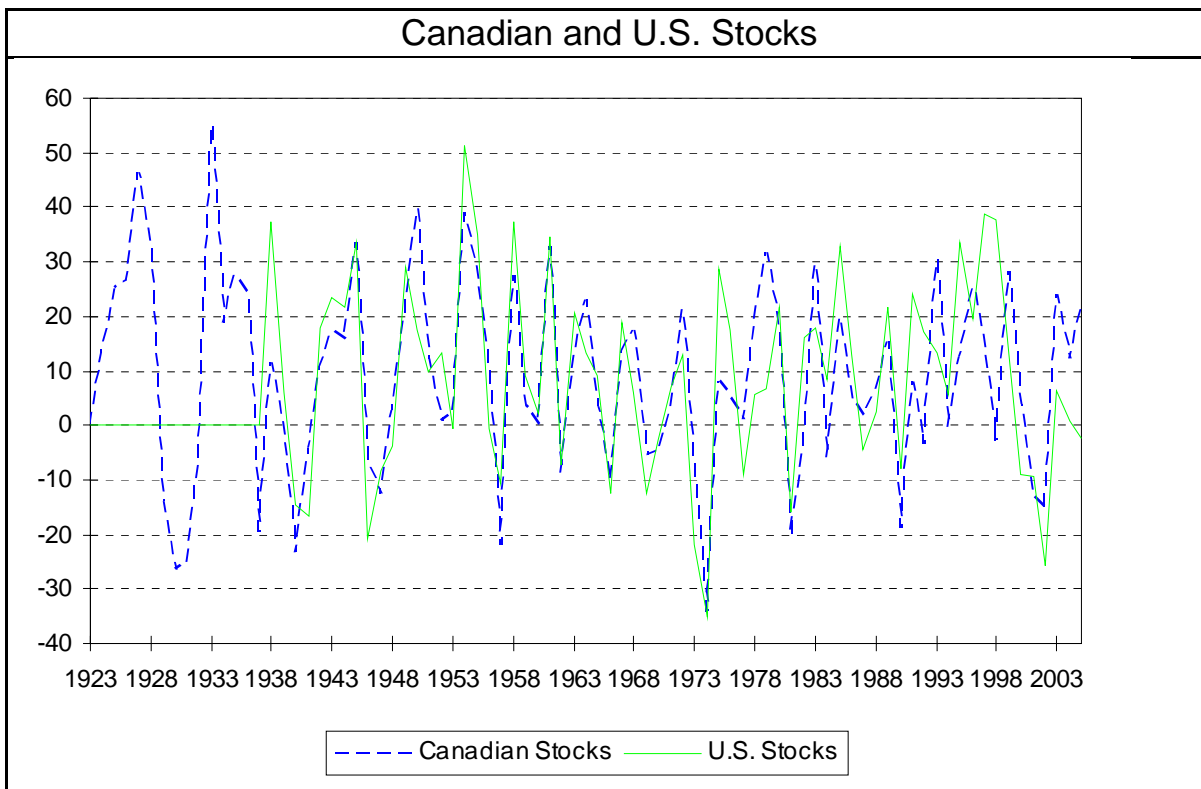
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This table contains the values of Table 1A after the CPI is removed geometrically. Values in bold are revised estimates.

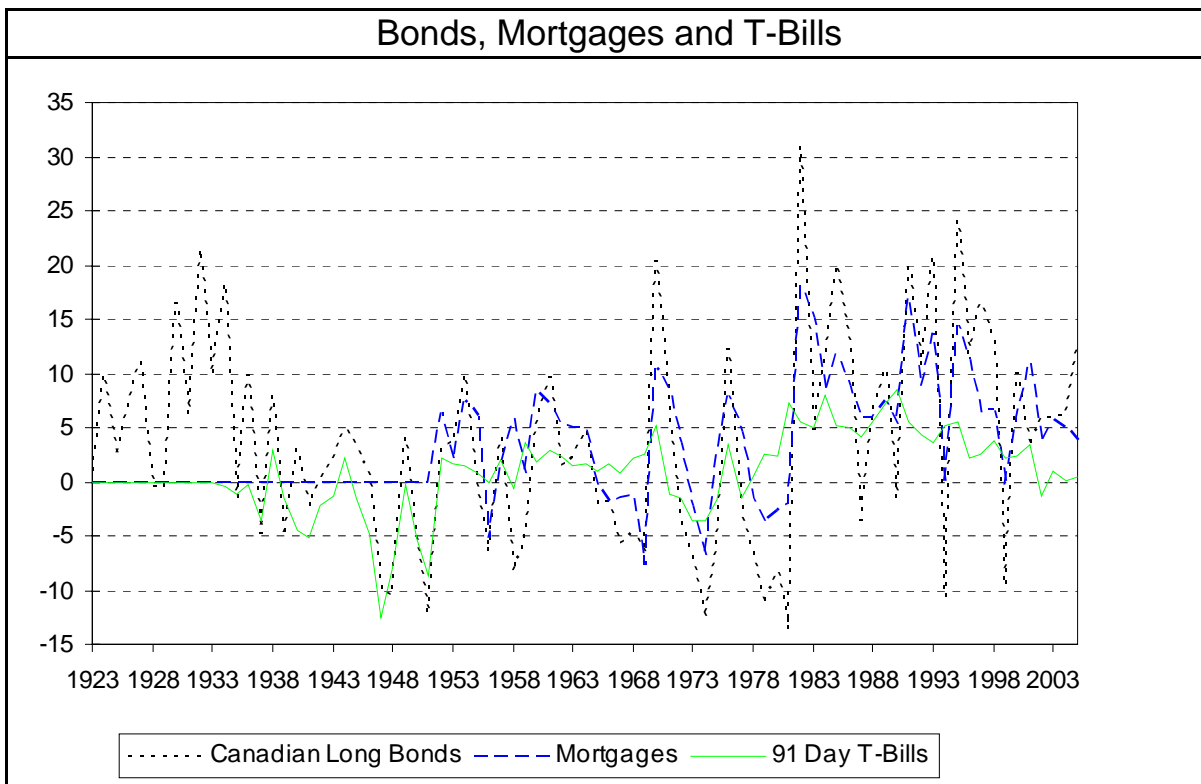
FIGURE 1B: REAL RATES



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TABLE 1C: ACCUMULATION FACTORS

DEC. 31	CONSUMER PRICE INDEX	COMMON STOCK INDEX	CANADA LONG BONDS	CONVENTIONAL MORTGAGE INDEX	91 DAY T-BILLS	U.S. COMMON STOCKS IN CANADIAN \$	GDP PER EMPLOYED	WAGE AND SALARY INDEX
1923	85.87	0.34	7.20	.	.	.	14.99	28.17
1924	84.31	0.38	7.76	.	.	.	15.27	28.20
1925	86.65	0.49	8.16	.	.	.	15.93	28.14
1926	85.09	0.61	8.60	.	.	.	16.54	28.54
1927	84.31	0.89	9.48	.	.	.	17.34	29.03
1928	85.09	1.18	9.53	.	.	.	17.84	29.46
1929	87.43	1.04	9.75	.	.	.	17.60	29.80
1930	81.97	0.72	10.66	.	.	.	15.75	29.39
1931	73.38	0.48	10.13	.	.	.	13.26	27.85
1932	67.92	0.42	11.38	.	.	.	11.80	26.14
1933	66.35	0.64	12.22	.	32.52	.	11.65	25.60
1934	67.14	0.77	14.62	.	32.73	.	12.35	26.09
1935	68.70	1.00	14.74	.	33.12	.	13.02	26.70
1936	69.48	1.26	16.38	.	33.41	.	13.77	27.94
1937	72.60	1.06	16.29	.	33.65	0.52	14.38	29.39
1938	71.04	1.15	17.20	.	33.86	0.70	14.88	29.89
1939	72.60	1.16	16.69	.	34.10	0.75	16.55	30.52
1940	76.50	0.93	18.14	.	34.35	0.68	19.74	32.55
1941	81.19	0.95	18.83	.	34.55	0.60	23.71	34.87
1942	83.53	1.09	19.41	.	34.74	0.73	26.71	37.48
1943	85.09	1.30	20.17	.	34.90	0.91	28.53	39.54
1944	83.53	1.47	20.80	.	35.04	1.09	29.70	40.33
1945	85.09	2.01	21.88	.	35.17	1.48	28.94	40.73
1946	89.77	1.98	23.20	.	35.30	1.24	29.50	43.28
1947	103.04	1.98	23.93	.	35.45	1.30	32.95	48.07
1948	112.41	2.22	23.36	.	35.59	1.37	37.40	52.37
1949	113.19	2.73	24.49	.	35.77	1.78	38.98	55.56
1950	120.22	4.05	24.46	.	35.96	2.22	44.18	59.96
1951	132.71	5.02	23.70	11.16	36.24	2.69	48.06	65.88
1952	131.15	5.00	24.17	11.74	36.62	3.01	54.22	70.63
1953	131.15	5.11	25.05	11.98	37.22	2.99	57.03	73.58
1954	131.15	7.10	27.55	12.88	37.79	4.52	57.23	75.79
1955	131.93	9.07	27.46	13.74	38.34	6.14	61.58	79.19
1956	135.83	10.27	26.46	13.41	39.46	6.29	66.91	83.53
1957	138.17	8.16	28.02	13.84	40.98	5.71	67.24	87.29
1958	142.08	10.71	26.43	15.07	41.86	8.07	70.96	90.76
1959	143.64	11.20	25.26	15.33	43.86	8.90	72.90	94.19
1960	145.98	11.40	27.05	16.91	45.41	9.24	73.99	97.24
1961	145.98	15.13	29.69	18.12	46.72	12.43	76.35	100.26
1962	148.32	14.06	30.60	19.41	48.61	11.71	81.64	101.79
1963	151.44	16.25	31.90	20.79	50.39	14.41	85.03	105.95
1964	154.57	20.38	34.13	22.27	52.31	16.69	88.87	111.00
1965	159.25	21.74	34.45	22.85	54.41	18.78	95.46	118.20
1966	164.72	20.21	34.99	23.21	57.21	17.01	101.93	124.67
1967	170.96	23.86	34.22	23.72	59.85	21.01	107.06	133.12
1968	177.99	29.22	33.95	24.43	63.72	23.17	115.15	142.83
1969	186.57	28.98	33.26	23.66	68.46	21.24	123.94	151.85
1970	188.91	27.95	40.57	26.47	72.95	20.91	130.15	165.36
1971	198.28	30.18	45.26	30.15	75.72	23.47	140.33	183.01
1972	208.43	38.45	45.76	32.83	78.43	27.83	153.24	197.17
1973	227.95	38.56	46.55	35.09	82.71	23.79	174.38	210.73
1974	256.05	28.56	45.76	36.67	89.52	17.32	197.49	238.88
1975	280.25	33.84	47.05	41.14	96.28	24.38	219.29	273.33
1976	296.64	37.57	56.00	46.99	105.37	30.27	241.87	303.93
1977	324.75	41.59	59.34	53.86	113.65	30.20	264.53	328.37
1978	352.07	53.95	60.11	57.54	123.81	34.55	283.20	349.43
1979	386.42	78.10	58.53	60.80	139.33	40.51	311.73	379.49
1980	429.35	101.64	59.74	65.73	158.44	54.84	342.18	422.93
1981	481.65	91.22	57.93	72.28	190.73	51.60	378.73	471.19
1982	526.15	96.28	82.83	93.35	219.81	65.50	412.38	516.13
1983	550.35	130.45	90.78	112.45	241.49	80.73	440.21	555.83
1984	570.65	127.33	104.49	126.35	270.34	90.72	466.35	573.06
1985	595.63	159.24	130.88	147.48	296.75	125.79	488.84	595.60
1986	620.61	173.50	153.83	167.16	324.86	147.96	497.90	611.86
1987	646.37	183.70	154.53	184.30	352.34	147.36	532.49	640.01
1988	672.13	204.05	170.67	202.95	386.75	157.20	567.02	666.81
1989	707.26	247.67	198.48	229.46	436.69	200.99	589.63	700.15
1990	742.39	211.02	205.11	253.86	497.72	194.56	606.80	732.93
1991	770.49	236.37	255.21	308.59	545.35	250.71	621.94	764.74
1992	786.89	232.98	288.57	343.32	580.75	299.72	642.25	790.12
1993	800.16	308.81	354.60	397.07	611.37	344.97	664.10	796.76
1994	801.72	308.27	317.50	396.47	643.97	364.68	688.83	811.29
1995	815.77	353.06	400.95	461.76	691.84	494.90	707.91	822.61
1996	833.72	453.14	458.25	525.47	722.85	605.10	732.92	844.51
1997	839.97	521.01	538.23	563.27	746.71	845.42	747.21	851.92
1998	848.56	512.75	614.29	606.79	782.64	1175.05	754.72	866.44
1999	870.41	675.37	570.37	619.53	820.42	1358.73	801.13	880.53
2000	898.52	725.40	648.16	677.52	866.65	1276.25	853.54	899.74
2001	904.76	634.20	673.59	758.40	902.42	1165.20	847.28	915.53
2002	939.89	555.32	741.58	816.00	925.44	897.22	879.59	935.92
2003	958.63	703.73	801.37	879.81	952.55	972.07	898.80	954.55
2004	978.92	805.63	869.17	942.70	973.98	1000.90	948.92	968.20
2005	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00

This table contains the values of Table 1A accumulated to \$1000.00 at the end of 2005.

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TABLE 1D: ACCUMULATION FACTORS NET OF CPI

DEC. 31	CONSUMER PRICE INDEX	COMMON STOCK INDEX	CANADA LONG BONDS	CONVENTIONAL MORTGAGE INDEX	91 DAY T-BILLS	U.S. COMMON STOCKS IN CANADIAN \$	GDP PER EMPLOYED	WAGE AND SALARY INDEX
1923	85.87	4.00	83.81	.	.	.	174.54	328.07
1924	84.31	4.53	92.06	.	.	.	181.07	334.51
1925	86.65	5.68	94.20	.	.	.	183.85	324.77
1926	85.09	7.20	101.10	.	.	.	194.35	335.39
1927	84.31	10.53	112.42	.	.	.	205.68	344.32
1928	85.09	13.86	112.00	.	.	.	209.68	346.19
1929	87.43	11.93	111.55	.	.	.	201.27	340.78
1930	81.97	8.79	130.01	.	.	.	192.21	358.60
1931	73.38	6.58	138.00	.	.	.	180.77	379.48
1932	67.92	6.19	167.56	.	.	.	173.79	384.93
1933	66.35	9.61	184.14	.	490.15	.	175.56	385.80
1934	67.14	11.42	217.77	.	487.58	.	184.02	388.58
1935	68.70	14.58	214.59	.	482.08	.	189.58	388.69
1936	69.48	18.08	235.77	.	480.92	.	198.24	402.14
1937	72.60	14.56	224.32	.	463.51	7.12	198.05	404.88
1938	71.04	16.24	242.16	.	476.65	9.78	209.48	420.72
1939	72.60	15.92	229.91	.	469.67	10.38	228.02	420.45
1940	76.50	12.22	237.14	.	448.95	8.87	257.97	425.44
1941	81.19	11.73	231.95	.	425.53	7.38	292.00	429.46
1942	83.53	13.00	232.40	.	415.85	8.69	319.74	448.67
1943	85.09	15.27	236.99	.	410.21	10.71	335.29	464.63
1944	83.53	17.65	249.04	.	419.50	13.05	355.59	482.82
1945	85.09	23.58	257.13	.	413.30	17.43	340.15	478.63
1946	89.77	22.01	258.37	.	393.25	13.80	328.59	482.14
1947	103.04	19.24	232.23	.	344.01	12.66	319.81	466.50
1948	112.41	19.78	207.81	.	316.64	12.19	332.66	465.91
1949	113.19	24.08	216.39	.	315.97	15.71	344.40	490.83
1950	120.22	33.66	203.49	.	299.11	18.44	367.46	498.77
1951	132.71	37.82	178.57	84.08	273.05	20.27	362.12	496.39
1952	131.15	38.11	184.30	89.49	279.19	22.97	413.47	538.58
1953	131.15	38.93	191.01	91.34	283.82	22.79	434.89	561.03
1954	131.15	54.13	210.10	98.17	288.15	34.50	436.38	577.94
1955	131.93	68.77	208.15	104.16	290.62	46.52	466.77	600.21
1956	135.83	75.62	194.83	98.72	290.47	46.28	492.59	614.94
1957	138.17	59.04	202.81	100.18	296.56	41.31	486.63	631.77
1958	142.08	75.36	186.02	106.06	294.64	56.79	499.44	638.81
1959	143.64	77.96	175.84	106.75	305.36	61.99	507.53	655.71
1960	145.98	78.07	185.30	115.87	311.04	63.29	506.86	666.13
1961	145.98	103.64	203.42	124.12	320.04	85.17	523.05	686.82
1962	148.32	94.76	206.31	130.87	327.74	78.96	550.40	686.31
1963	151.44	107.29	210.66	137.30	332.75	95.15	561.47	699.60
1964	154.57	131.86	220.79	144.10	338.40	107.98	574.94	718.16
1965	159.25	136.53	216.36	143.48	341.68	117.90	599.42	742.22
1966	164.72	122.67	212.43	140.92	347.33	103.24	618.80	756.87
1967	170.96	139.57	200.16	138.77	350.09	122.91	626.24	778.68
1968	177.99	164.15	190.72	137.25	358.02	130.17	646.96	802.46
1969	186.57	155.33	178.29	126.81	366.92	113.84	664.27	813.91
1970	188.91	147.93	214.78	140.11	386.17	110.69	688.91	875.33
1971	198.28	152.23	228.27	152.04	381.87	118.35	707.73	923.00
1972	208.43	184.47	219.57	157.53	376.31	133.54	735.19	945.98
1973	227.95	169.14	204.20	153.94	362.87	104.37	764.99	924.48
1974	256.05	111.54	178.71	143.21	349.61	67.64	771.28	932.94
1975	280.25	120.74	167.88	146.81	343.56	86.99	782.50	975.30
1976	296.64	126.64	188.78	158.41	355.20	102.05	815.34	1024.56
1977	324.75	128.07	182.74	165.85	349.97	92.99	814.56	1011.17
1978	352.07	153.24	170.73	163.45	351.66	98.13	804.40	992.50
1979	386.42	202.12	151.47	157.34	360.57	104.83	806.72	982.06
1980	429.35	236.73	139.13	153.08	369.02	127.73	796.96	985.05
1981	481.65	189.40	120.28	150.07	395.99	107.13	786.31	978.27
1982	526.15	182.99	157.43	177.43	417.78	124.48	783.76	980.95
1983	550.35	237.02	164.96	204.33	438.79	146.70	799.87	1009.95
1984	570.65	223.12	183.10	221.41	473.74	158.98	817.23	1004.23
1985	595.63	267.35	219.74	247.60	498.21	211.18	820.72	999.96
1986	620.61	279.56	247.88	269.34	523.46	238.41	802.28	985.90
1987	646.37	284.20	239.07	285.13	545.10	227.98	823.82	990.16
1988	672.13	303.59	253.92	301.95	575.41	233.88	843.61	992.09
1989	707.26	350.18	280.63	324.43	617.43	284.18	833.68	989.95
1990	742.39	284.24	276.28	341.95	670.44	262.07	817.36	987.26
1991	770.49	306.78	331.23	400.52	707.79	325.39	807.20	992.54
1992	786.89	296.08	366.73	436.30	738.04	380.90	816.20	1004.11
1993	800.16	385.94	443.16	496.24	764.06	431.13	829.96	995.76
1994	801.72	384.51	396.03	494.52	803.24	454.87	859.19	1011.93
1995	815.77	432.79	491.50	566.04	848.08	606.66	867.79	1008.39
1996	833.72	543.51	549.65	630.26	867.01	725.78	879.10	1012.94
1997	839.97	620.27	640.77	670.59	888.98	1006.49	889.57	1014.23
1998	848.56	604.26	723.92	715.09	922.32	1384.76	889.42	1021.08
1999	870.41	775.91	655.29	711.77	942.56	1561.02	920.40	1011.63
2000	898.52	807.33	721.37	754.04	964.53	1420.40	949.95	1001.36
2001	904.76	700.96	744.50	838.23	997.41	1287.86	936.47	1011.90
2002	939.89	590.84	789.01	868.19	984.62	954.60	935.85	995.78
2003	958.63	734.10	835.96	917.78	993.67	1014.02	937.60	995.74
2004	978.92	822.98	887.89	963.00	994.95	1022.45	969.35	989.05
2005	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00

This table contains the values of Table 1A accumulated (net of CPI) to \$1000.00 at the end of 2005.

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TABLES 2A, 2B
BASIC VARIABLES - CHANGES FOR VARIOUS SUBPERIODS
YEAR-END TO YEAR-END

TABLE 2A AVERAGE NOMINAL ANNUAL PERCENTAGE RATES OF CHANGE/RETURN									
	PERIOD	CONSUMER PRICE INDEX	COMMON STOCK INDEX	CANADA LONG BONDS	CONVENTIONAL MORTGAGE INDEX	91 DAY T-BILLS	U.S. COMMON STOCKS IN CANADIAN \$	GDP PER EMPLOYED	WAGE AND SALARY INDEX
5 YEARS	1926-1930	-1.11	7.92	5.48	.	.	.	-0.22	0.87
	1931-1935	-3.47	6.82	6.71	.	.	.	-3.74	-1.90
	1936-1940	2.18	-1.38	4.24	.	0.73	.	8.67	4.04
	1941-1945	2.15	16.50	3.82	.	0.47	16.92	7.96	4.59
	1946-1950	7.16	15.06	2.26	.	0.45	8.37	8.82	8.04
	1951-1955	1.88	17.53	2.34	.	1.29	22.59	6.87	5.72
	1956-1960	2.04	4.67	-0.30	4.24	3.44	8.52	3.74	4.19
	1961-1965	1.76	13.79	4.96	6.20	3.69	15.24	5.23	3.98
	1966-1970	3.48	5.15	3.32	2.98	6.04	2.18	6.40	6.95
	1971-1975	8.21	3.90	3.01	9.22	5.71	3.12	11.00	10.57
	1976-1980	8.91	24.60	4.89	9.82	10.47	17.60	9.31	9.12
	1981-1985	6.77	9.40	16.98	17.54	13.37	18.06	7.39	7.09
	1986-1990	4.50	5.79	9.40	11.47	10.90	9.11	4.42	4.24
	1991-1995	1.90	10.84	14.35	12.71	6.81	20.53	3.13	2.34
	1996-2000	1.95	15.49	10.08	7.97	4.61	20.86	3.81	1.81
	2001-2005	2.16	6.63	9.06	8.10	2.90	-4.76	3.22	2.14
	MEAN	1956-2005	4.13	9.86	7.45	8.95	6.74	10.72	5.73	5.20
STD DEV	1956-2005	2.80	6.47	5.39	4.24	3.59	8.80	2.72	3.04
10 YEARS	1926-1935	-2.30	7.37	6.09	.	.	.	-2.00	-0.52
	1936-1945	2.16	7.19	4.03	.	0.60	.	8.31	4.31
	1946-1955	4.48	16.29	2.30	.	0.87	15.26	7.84	6.88
	1956-1965	1.90	9.13	2.29	5.22	3.56	11.83	4.48	4.09
	1966-1975	5.81	4.52	3.16	6.06	5.87	2.65	8.67	8.74
	1976-1985	7.83	16.75	10.77	13.62	11.91	17.83	8.35	8.10
	1986-1995	3.20	8.29	11.85	12.09	8.83	14.68	3.77	3.28
	1996-2005	2.06	10.97	9.57	8.03	3.75	7.29	3.51	1.97
	MEAN	1956-2005	4.13	9.86	7.45	8.95	6.74	10.72	5.73	5.20
STD DEV	1956-2005	2.58	4.48	4.47	3.70	3.57	6.01	2.54	3.01
15 YEARS	1931-1945	0.25	7.06	4.91	.	.	.	4.14	2.20
	1946-1960	3.66	12.28	1.42	.	1.72	12.97	6.46	5.97
	1961-1975	4.44	7.52	3.76	6.11	5.14	6.68	7.51	7.13
	1976-1990	6.71	12.98	10.31	12.90	11.57	14.85	7.02	6.80
	1991-2005	2.01	10.93	11.14	9.57	4.76	11.53	3.39	2.09
25 YEARS	1931-1955	1.92	10.66	3.86	.	.	.	5.60	4.04
	1956-1980	4.83	10.15	3.16	6.46	5.84	9.16	7.10	6.93
	1981-2005	3.44	9.58	11.93	11.50	7.65	12.31	4.38	3.50
50 YEARS	1956-2005	4.13	9.86	7.45	8.95	6.74	10.72	5.73	5.20
80 YEARS	1926-2005	3.10	9.99	6.19	.	.	.	5.31	4.56

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Table 2A contains geometric averages of annual values from Table 1A over various periods. The mean and standard deviation for the 5 year and 10 year averages are calculated over the period for which all series exist. This is done to allow comparability over all series. On the following page are corresponding standard deviations of the same values as well as correlation coefficients. The correlations are calculated only over the last ten year period and over all years for which data of both correlated series exist.

TABLE 2A (Cont'd)

STANDARD DEVIATIONS OF NOMINAL ANNUAL PERCENTAGE RATES OF CHANGE/RETURN									
	PERIOD	CONSUMER PRICE INDEX	COMMON STOCK INDEX	CANADA LONG BONDS	CONVENTIONAL MORTGAGE INDEX	91 DAY T-BILLS	U.S. COMMON STOCKS IN CANADIAN \$	GDP PER EMPLOYED	WAGE AND SALARY INDEX
5 YEARS	1926-1930	3.39	27.75	3.75	.	.	.	4.30	0.81
	1931-1935	5.51	37.36	9.26	.	.	.	9.30	3.31
	1936-1940	2.98	22.70	5.84	.	0.24	.	4.20	1.86
	1941-1945	2.84	19.42	2.49	.	0.15	20.26	8.84	2.57
	1946-1950	5.18	15.79	3.60	.	0.06	21.58	7.55	4.08
	1951-1955	4.76	22.47	4.91	.	0.52	19.31	5.62	2.92
	1956-1960	0.81	22.09	4.89	4.45	1.40	23.27	3.67	0.72
	1961-1965	1.11	16.42	3.00	2.26	0.45	15.89	2.38	1.41
	1966-1970	1.35	12.78	4.60	3.17	1.50	14.78	1.21	0.85
	1971-1975	3.16	19.54	10.73	3.77	1.96	19.85	3.94	2.84
	1976-1980	1.97	14.56	8.29	4.31	2.40	15.07	1.55	3.21
	1981-1985	3.72	20.31	18.42	8.90	4.10	15.91	2.30	3.87
	1986-1990	0.55	12.77	10.57	3.04	1.91	18.66	2.10	0.88
1991-1995	1.28	18.72	15.10	8.05	3.99	14.85	0.47	1.80	
1996-2000	1.05	13.43	12.73	5.94	1.56	15.28	2.12	0.67	
2000-2005	1.13	17.31	3.53	2.10	1.54	12.05	2.90	0.41	
10 YEARS	1926-1935	4.48	31.27	6.83	.	.	.	7.85	2.95
	1936-1945	2.74	16.41	4.18	.	0.24	.	6.32	2.27
	1946-1955	5.46	18.59	4.05	.	0.50	19.86	5.98	3.16
	1956-1965	0.93	18.08	5.47	3.81	1.01	18.27	2.66	1.11
	1966-1975	3.40	15.70	7.69	5.25	1.64	16.36	3.02	2.52
	1976-1985	3.02	17.56	13.93	7.04	3.96	14.60	1.91	3.37
	1986-1995	1.65	14.02	11.62	5.64	2.91	13.64	1.67	1.39
	1996-2005	1.04	15.97	8.92	4.20	1.65	22.43	2.35	0.54
15 YEARS	1931-1945	4.56	23.95	6.36	.	.	.	10.32	4.26
	1946-1960	4.57	19.22	4.63	.	1.39	20.00	5.16	2.75
	1961-1975	3.43	15.98	6.52	4.39	1.63	16.79	3.42	3.12
	1976-1990	2.94	15.23	12.38	5.84	3.42	14.91	2.78	3.65
	1991-2005	1.08	16.26	10.50	5.53	3.12	18.69	1.90	1.14
25 YEARS	1931-1955	5.28	22.45	5.59	.	.	.	8.80	4.38
	1956-1980	3.58	17.16	6.79	4.79	2.67	17.83	3.33	3.19
	1981-2005	2.63	15.42	11.59	6.13	4.64	17.35	2.77	3.08
50 YEARS	1956-2005	3.19	16.15	10.38	6.05	3.97	17.54	3.28	3.41
80 YEARS	1926-2005	4.19	18.70	8.91	.	.	.	5.57	3.78

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CORRELATIONS OF NOMINAL ANNUAL PERCENTAGE RATES OF CHANGE/RETURN									
	CONSUMER PRICE INDEX	COMMON STOCK INDEX	CANADA LONG BONDS	CONVENTIONAL MORTGAGE INDEX	91 DAY T-BILLS	U.S. COMMON STOCKS IN CANADIAN \$	GDP PER EMPLOYED	WAGE AND SALARY INDEX	
									LAST 10 YEARS
CPI		-0.28	-0.53	-0.19	-0.01	-0.16	-0.39	-0.15	
STOCKS	0.08		-0.06	-0.17	0.08	0.39	0.47	0.18	
LONG BONDS	-0.06	0.05		0.67	0.37	0.43	-0.16	-0.02	
MORTGAGES	0.23	0.13	0.78		0.58	0.22	-0.40	-0.04	
91 DAY T-BILLS	0.45	-0.09	0.27	0.45		0.48	0.03	-0.33	
U.S. STOCKS	-0.23	0.69	0.25	0.34	0.00		-0.27	-0.51	
GDP PER EMP	0.72	0.16	-0.14	-0.07	0.00	-0.28		0.42	
WAGE & SALARY	0.83	0.03	-0.10	0.11	0.30	-0.10	0.75		
									ALL YEARS

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TABLE 2B
AVERAGE REAL ANNUAL PERCENTAGE RATES OF CHANGE/RETURN

	PERIOD	CONSUMER PRICE INDEX	REAL VALUES NET OF CPI INCREASES						WAGE AND SALARY INDEX
			COMMON STOCK INDEX	CANADA LONG BONDS	CONVENTIONAL MORTGAGE INDEX	91 DAY T-BILLS	U.S. COMMON STOCKS IN CANADIAN \$	GDP PER EMPLOYED	
5 YEARS	1926-1930	-1.11	9.13	6.65	.	.	.	0.89	2.00
	1931-1935	-3.47	10.66	10.54	.	.	.	-0.28	1.62
	1936-1940	2.18	-3.48	2.02	.	.	-1.41	.	6.35
	1941-1945	2.15	14.05	1.63	.	.	-1.64	14.46	5.69
	1946-1950	7.16	7.38	-4.57	.	.	-6.26	1.13	1.56
	1951-1955	1.88	15.36	0.45	.	.	-0.57	20.33	4.90
	1956-1960	2.04	2.57	-2.30	2.15	1.37	.	6.35	1.66
	1961-1965	1.76	11.83	3.15	4.37	1.90	.	13.25	3.41
	1966-1970	3.48	1.62	-0.15	-0.48	2.48	.	-1.25	2.82
	1971-1975	8.21	-3.98	-4.81	0.94	-2.31	.	-4.70	2.58
	1976-1980	8.91	14.41	-3.69	0.84	1.44	.	7.99	0.37
	1981-1985	6.77	2.46	9.57	10.09	6.19	.	10.58	0.59
	1986-1990	4.50	1.23	4.69	6.67	6.12	.	4.41	-0.08
	1991-1995	1.90	8.77	12.21	10.61	4.81	.	18.28	1.20
1996-2000	1.95	13.28	7.98	5.90	2.61	.	18.55	1.83	
2001-2005	2.16	4.37	6.75	5.81	0.72	.	-6.78	1.03	
MEAN	1956-2005	4.13	5.50	3.19	4.63	2.50	6.33	1.54	1.03
STD DEV	1956-2005	2.80	6.08	5.89	3.84	2.61	8.91	1.14	1.29
10 YEARS	1926-1935	-2.30	9.89	8.58	.	.	.	0.31	1.81
	1936-1945	2.16	4.92	1.83	.	.	-1.53	.	6.02
	1946-1955	4.48	11.30	-2.09	.	.	-3.46	10.32	3.22
	1956-1965	1.90	7.10	0.39	3.25	1.63	.	9.74	2.53
	1966-1975	5.81	-1.22	-2.50	0.23	0.05	.	-2.99	2.70
	1976-1985	7.83	8.27	2.73	5.37	3.79	.	9.27	0.48
	1986-1995	3.20	4.93	8.38	8.62	5.46	.	11.13	0.56
	1996-2005	2.06	8.74	7.36	5.86	1.66	.	5.12	1.43
	MEAN	1956-2005	4.13	5.50	3.19	4.63	2.50	6.33	1.54	1.03
STD DEV	1956-2005	2.58	4.07	4.61	3.13	2.11	5.74	1.05	1.32
15 YEARS	1931-1945	0.25	6.80	4.65	.	.	.	3.88	1.94
	1946-1960	3.66	8.31	-2.16	.	.	-1.88	8.98	2.69
	1961-1975	4.44	2.95	-0.66	1.59	0.67	.	2.14	2.94
	1976-1990	6.71	5.87	3.38	5.80	4.56	.	7.63	0.29
	1991-2005	2.01	8.75	8.95	7.42	2.70	.	9.34	1.35
25 YEARS	1931-1955	1.92	8.58	1.90	.	.	.	3.61	2.08
	1956-1980	4.83	5.07	-1.60	1.55	0.96	.	4.12	2.16
	1981-2005	3.44	5.93	8.21	7.80	4.07	.	8.58	0.91
50 YEARS	1956-2005	4.13	5.50	3.19	4.63	2.50	6.33	1.54	1.03
80 YEARS	1926-2005	3.10	6.68	3.00	.	.	.	2.14	1.42

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Table 2B contains values similar to those of Table 2A except that they are based on the real rates of return of Table 1B.

TABLE 2B (Cont'd)

STANDARD DEVIATIONS OF REAL ANNUAL PERCENTAGE RATES OF CHANGE/RETURN									
	PERIOD	CONSUMER PRICE INDEX	COMMON STOCK INDEX	CANADA LONG BONDS	CONVENTIONAL MORTGAGE INDEX	91 DAY T-BILLS	U.S. COMMON STOCKS IN CANADIAN \$	GDP PER EMPLOYED	WAGE AND SALARY INDEX
5 YEARS	1926-1930	3.39	27.35	5.89	.	.	.	4.27	3.20
	1931-1935	5.51	35.25	7.64	.	.	.	4.76	2.89
	1936-1940	2.98	23.48	7.18	.	2.47	.	3.95	1.95
	1941-1945	2.84	20.86	2.78	.	3.01	22.15	5.64	1.70
	1946-1950	5.18	19.42	7.56	.	5.09	24.58	4.67	3.20
	1951-1955	4.76	19.70	8.82	.	5.15	19.84	6.13	3.38
	1956-1960	0.81	21.70	5.13	4.65	1.73	23.06	3.62	1.10
	1961-1965	1.11	16.69	3.73	2.59	0.60	16.23	2.17	1.28
	1966-1970	1.35	12.19	4.98	3.67	1.21	14.36	1.13	1.22
	1971-1975	3.16	20.03	14.37	7.56	3.96	20.43	1.44	3.90
	1976-1980	1.97	12.63	9.11	4.84	2.47	14.18	2.16	3.55
	1981-1985	3.72	19.72	18.22	10.05	2.29	15.24	1.76	1.48
	1986-1990	0.55	12.12	10.06	2.87	1.38	17.69	2.23	0.71
1991-1995	1.28	19.12	14.55	7.11	2.05	15.03	2.32	1.01	
1996-2000	1.05	12.58	13.03	6.00	1.62	15.99	1.37	0.66	
2000-2005	1.13	17.08	2.51	2.94	1.88	12.28	2.13	1.12	
10 YEARS	1926-1935	4.48	29.45	7.73	.	.	.	4.51	2.78
	1936-1945	2.74	17.46	5.12	.	2.63	.	4.37	1.81
	1946-1955	5.46	19.28	7.70	.	5.09	21.76	5.80	3.48
	1956-1965	0.93	18.02	5.85	4.08	1.30	18.31	2.55	1.11
	1966-1975	3.40	16.19	9.18	5.91	2.83	17.11	1.21	2.62
	1976-1985	3.02	16.38	13.90	7.70	3.45	13.80	1.83	2.56
	1986-1995	1.65	13.59	10.85	4.90	1.51	12.88	2.08	0.91
	1996-2005	1.04	15.61	9.01	4.46	2.00	22.69	1.68	0.85
15 YEARS	1931-1945	4.56	23.16	8.34	.	.	.	5.92	2.08
	1946-1960	4.57	19.31	6.77	.	4.78	21.19	4.91	2.84
	1961-1975	3.43	16.89	8.24	5.69	2.44	17.96	1.42	2.24
	1976-1990	2.94	14.09	12.64	6.49	3.08	14.09	1.89	2.13
	1991-2005	1.08	16.16	10.25	5.14	2.51	18.83	1.85	0.92
25 YEARS	1931-1955	5.28	21.58	8.71	.	.	.	5.79	2.64
	1956-1980	3.58	16.73	7.77	5.11	2.20	18.08	2.10	2.32
	1981-2005	2.63	15.15	11.27	5.64	2.41	16.96	1.83	1.00
50 YEARS	1956-2005	3.19	15.79	10.58	6.03	2.81	17.52	2.13	2.07
	1926-2005	4.19	18.40	9.68	.	.	.	3.79	2.33

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CORRELATIONS OF REAL ANNUAL PERCENTAGE RATES OF CHANGE/RETURN									
	CONSUMER PRICE INDEX	COMMON STOCK INDEX	CANADA LONG BONDS	CONVENTIONAL MORTGAGE INDEX	91 DAY T-BILLS	U.S. COMMON STOCKS IN CANADIAN \$	GDP PER EMPLOYED	WAGE AND SALARY INDEX	
									LAST 10 YEARS
CPI		-0.26	-0.47	-0.09	0.16	-0.14	-0.35	0.24	
STOCKS	-0.14		-0.04	-0.14	0.07	0.42	0.60	0.13	
LONG BONDS	-0.48	0.12		0.69	0.45	0.49	-0.17	0.26	
MORTGAGES	-0.33	0.21	0.84		0.68	0.35	-0.50	0.37	
91 DAY T-BILLS	-0.38	0.05	0.47	0.45		0.70	-0.15	0.30	
U.S. STOCKS	-0.41	0.72	0.37	0.45	0.25		-0.01	0.32	
GDP PER EMP	-0.05	0.18	-0.11	-0.13	-0.18	-0.04		-0.26	
WAGE & SALARY	-0.46	0.00	0.15	0.03	0.10	0.27	0.36		
									ALL YEARS

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TABLES 3A, 3B, 3C

FIXED INTEREST SECURITIES

TABLE 3A ANALYSIS OF INTEREST RATES BY CLASS OF SECURITY MEDIUM AND LONG-TERM SECURITIES NOMINAL YIELDS TO MATURITY COMPOUNDED SEMI-ANNUALLY						
YEAR	FEDERAL BONDS V122487	PROVINCIAL BONDS V122517	ALL CORPORATE BONDS V122518	CONVENTIONAL MORTGAGES V122497	5 YEAR GICS V122526	SAVINGS ACCOUNTS V122493
1948	2.93	3.16	3.49	.	.	.
1949	2.87	3.15	3.47	.	.	.
1950	2.86	3.14	3.43	.	.	.
1951	3.23	3.73	3.93	5.46	.	.
1952	3.56	4.12	4.27	5.77	.	.
1953	3.71	4.14	4.43	5.97	.	.
1954	3.18	3.49	4.00	6.01	.	.
1955	3.14	3.42	3.87	5.88	.	.
1956	3.63	4.26	4.49	6.23	.	.
1957	4.11	4.98	5.29	6.85	.	.
1958	4.15	4.75	4.95	6.80	.	.
1959	5.08	5.64	5.60	6.98	.	.
1960	5.19	5.65	5.69	7.18	.	.
1961	5.05	5.49	5.45	7.00	.	.
1962	5.11	5.50	5.43	6.97	.	.
1963	5.09	5.43	5.42	6.97	.	.
1964	5.18	5.53	5.51	6.97	5.26	.
1965	5.21	5.59	5.67	7.02	5.52	.
1966	5.69	6.29	6.44	7.66	6.06	.
1967	5.94	6.70	7.02	8.07	6.34	3.38
1968	6.75	7.60	7.85	9.06	7.01	4.92
1969	7.58	8.40	8.68	9.84	8.03	5.96
1970	7.91	9.04	9.22	10.45	8.52	6.17
1971	6.95	8.03	8.41	9.43	7.75	4.54
1972	7.23	8.13	8.33	9.21	7.61	4.00
1973	7.56	8.36	8.50	9.59	8.19	5.48
1974	8.90	9.91	10.19	11.24	9.68	8.50
1975	9.04	10.17	10.75	11.43	9.57	7.00
1976	9.18	10.09	10.48	11.78	10.11	7.83
1977	8.70	9.49	9.83	10.36	8.96	6.00
1978	9.27	9.86	10.10	10.59	9.25	7.04
1979	10.21	10.72	10.91	11.98	10.40	10.13
1980	12.48	13.05	13.28	14.32	12.32	11.15
1981	15.22	16.09	16.32	18.15	15.40	15.42
1982	14.26	15.47	15.86	17.89	13.65	11.50
1983	11.79	12.64	12.74	13.29	11.25	6.85
1984	12.75	13.36	13.50	13.61	11.90	7.69
1985	11.04	11.64	11.74	12.18	10.50	6.08
1986	9.52	10.30	10.36	11.22	9.56	6.02
1987	9.95	10.61	10.71	11.14	9.42	4.81
1988	10.22	10.85	10.93	11.60	10.00	5.69
1989	9.92	10.49	10.81	12.05	10.17	8.08
1990	10.85	11.59	11.91	13.24	10.98	8.77
1991	9.76	10.54	10.80	11.16	8.94	4.48
1992	8.77	9.48	9.90	9.52	7.33	2.27
1993	7.85	8.55	8.85	8.70	6.20	0.77
1994	8.63	9.27	9.44	9.34	7.34	0.50
1995	8.28	8.85	9.02	9.22	7.06	0.50
1996	7.50	7.96	8.11	7.94	5.64	0.50
1997	6.42	6.77	6.95	7.07	4.71	0.50
1998	5.47	5.93	6.22	6.90	4.38	0.24
1999	5.69	6.19	6.64	7.39	4.81	0.10
2000	5.89	6.48	7.13	8.20	5.34	0.10
2001	5.78	6.35	7.09	7.18	4.05	0.10
2002	5.66	6.13	6.98	6.70	3.91	0.05
2003	5.28	5.71	6.50	6.04	3.13	0.05
2004	5.08	5.51	6.06	5.80	2.92	0.05
2005	4.39	4.83	5.36	5.48	2.71	0.05

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The above values are arithmetic averages of the twelve monthly yields to maturity of medium and long-term securities. The basic data is in Appendix A.

TABLE 3A (Cont'd)

ARITHMETIC AVERAGES OVER SELECTED INTERVALS							
	PERIOD	FEDERAL BONDS	PROVINCIAL BONDS	ALL CORPORATE BONDS	CONVENTIONAL MORTGAGES	5 YEAR GICS	SAVINGS ACCOUNTS
5 YEARS	1951-1955	3.36	3.78	4.10	.	.	.
	1956-1960	4.43	5.06	5.21	6.81	.	.
	1961-1965	5.13	5.51	5.50	6.99	.	.
	1966-1970	6.77	7.61	7.84	9.01	7.19	.
	1971-1975	7.94	8.92	9.23	10.18	8.56	5.90
	1976-1980	9.97	10.64	10.92	11.80	10.21	8.43
	1981-1985	13.01	13.84	14.03	15.02	12.54	9.51
	1986-1990	10.09	10.77	10.94	11.85	10.03	6.68
	1991-1995	8.66	9.34	9.60	9.59	7.37	1.70
	1996-2000	6.19	6.67	7.01	7.50	4.98	0.29
	2001-2005	5.24	5.71	6.40	6.24	3.34	0.06
MEAN	1971-2005	8.73	9.41	9.73	10.31	8.15	4.65
STD DEV	1971-2005	2.61	2.72	2.59	2.94	3.19	3.92
10 YEARS	1956-1965	4.78	5.28	5.35	6.90	.	.
	1966-1975	7.36	8.26	8.54	9.60	7.88	.
	1976-1985	11.49	12.24	12.48	13.41	11.37	8.97
	1986-1995	9.38	10.05	10.27	10.72	8.70	4.19
	1996-2005	5.72	6.19	6.71	6.87	4.16	0.17
MEAN	1976-2005	8.86	9.49	9.82	10.33	8.08	4.44
STD DEV	1976-2005	2.92	3.07	2.91	3.29	3.65	4.40
15 YEARS	1961-1975	6.61	7.34	7.52	8.73	.	.
	1976-1990	11.02	11.75	11.96	12.89	10.92	8.20
	1991-2005	6.70	7.24	7.67	7.77	5.23	0.68
	25 YEARS	1956-1980	6.85	7.55	7.74	8.96	.
	1981-2005	8.64	9.26	9.60	10.04	7.65	3.65
50 YEARS	1956-2005	7.74	8.40	8.67	9.50	.	.

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STANDARD DEVIATIONS OVER SELECTED INTERVALS							
	PERIOD	FEDERAL BONDS	PROVINCIAL BONDS	ALL CORPORATE BONDS	CONVENTIONAL MORTGAGES	5 YEAR GICS	SAVINGS ACCOUNTS
5 YEARS	1951-1955	0.26	0.34	0.24	.	.	.
	1956-1959	0.67	0.60	0.49	0.36	.	.
	1961-1965	0.07	0.06	0.10	0.02	.	.
	1966-1969	0.98	1.15	1.15	1.17	1.06	.
	1971-1975	0.97	1.03	1.15	1.06	1.00	1.84
	1976-1979	1.51	1.42	1.38	1.57	1.32	2.15
	1981-1985	1.72	1.89	1.99	2.79	1.98	3.90
	1986-1989	0.49	0.50	0.58	0.86	0.62	1.68
	1991-1995	0.71	0.76	0.78	0.93	0.99	1.72
	1996-1999	0.81	0.79	0.70	0.55	0.51	0.20
		2001-2005	0.55	0.59	0.71	0.69	0.60	0.02
10 YEARS	1956-1965	0.58	0.47	0.37	0.26	.	.
	1966-1975	1.10	1.24	1.31	1.22	1.21	.
	1976-1985	2.21	2.31	2.30	2.73	2.01	3.02
	1986-1995	0.95	0.97	0.96	1.46	1.60	3.07
	1996-2005	0.83	0.83	0.74	0.89	1.01	0.18
15 YEARS	1961-1975	1.40	1.67	1.82	1.61	.	.
	1976-1989	1.92	2.00	2.01	2.36	1.77	2.82
	1991-2005	1.63	1.72	1.59	1.59	1.84	1.19
25 YEARS	1956-1979	2.21	2.31	2.40	2.15	.	.
	1981-2005	2.98	3.13	3.00	3.46	3.54	4.29
50 YEARS	1956-2005	2.75	2.86	2.85	2.90	.	.

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CORRELATIONS OF NOMINAL YIELDS TO MATURITY						
	FEDERAL BONDS	PROVINCIAL BONDS	ALL CORPORATE BONDS	CONVENTIONAL MORTGAGES	5 YEAR GICS	SAVINGS ACCOUNTS
	LAST 10 YEARS					
FEDERAL BONDS		1.00	0.94	0.78	0.84	0.81
PROVINCIAL BONDS	1.00		0.96	0.82	0.87	0.77
ALL CORPORATE BONDS	1.00	1.00		0.82	0.81	0.57
MORTGAGES	0.97	0.98	0.97		0.97	0.47
5 YEAR GICS	0.95	0.96	0.95	0.98		0.63
SAVINGS ACCOUNTS	0.85	0.87	0.87	0.92	0.93	
	ALL YEARS					

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TABLE 3B
ANALYSIS OF INTEREST RATES BY CLASS OF SECURITY
MEDIUM AND LONG-TERM SECURITIES
EFFECTIVE ANNUAL NOMINAL RATES OF TOTAL RETURN

YEAR	CONSUMER PRICE INDEX	FEDERAL BONDS	PROVINCIAL BONDS	ALL CORPORATE BONDS	CONVENTIONAL MORTGAGES	5 YEAR GICS	SAVINGS ACCOUNTS
1948	9.09	-2.38	.	.	.	.	.
1949	0.69	4.85	5.37	5.43	.	.	.
1950	6.21	-0.12	-0.36	1.95	.	.	.
1951	10.39	-3.13	-9.15	-6.48	.	.	.
1952	-1.18	1.99	5.05	4.43	5.18	.	.
1953	0.00	3.64	5.26	4.20	2.08	.	.
1954	0.00	9.99	14.42	10.67	7.48	.	.
1955	0.60	-0.34	-3.13	1.68	6.73	.	.
1956	2.96	-3.63	-10.98	-7.17	-2.42	.	.
1957	1.72	5.89	10.57	5.83	3.23	.	.
1958	2.82	-5.69	-1.92	3.57	8.86	.	.
1959	1.10	-4.43	-5.85	-4.09	1.75	.	.
1960	1.63	7.10	11.36	12.17	10.32	.	.
1961	0.00	9.78	9.60	7.99	7.12	.	.
1962	1.60	3.05	4.48	4.95	7.12	.	.
1963	2.11	4.26	4.45	4.46	7.12	.	.
1964	2.06	6.97	7.04	5.19	7.12	.	.
1965	3.03	0.96	-0.14	-0.23	2.59	3.12	.
1966	3.43	1.55	-1.95	-1.15	1.58	5.17	.
1967	3.79	-2.20	-0.10	-0.14	2.21	4.84	.
1968	4.11	-0.80	1.18	2.33	2.97	4.84	4.99
1969	4.82	-2.01	-3.45	-1.88	-3.15	2.62	6.06
1970	1.26	21.98	18.54	13.43	11.87	10.03	6.28
1971	4.96	11.55	13.45	14.26	13.90	11.80	4.60
1972	5.12	1.11	6.31	9.54	8.92	6.15	4.05
1973	9.36	1.71	0.65	2.46	6.87	4.27	5.57
1974	12.33	-1.69	-3.24	-5.69	4.50	4.04	8.71
1975	9.45	2.82	7.12	9.06	12.20	10.23	7.14
1976	5.85	19.02	20.58	20.81	14.21	11.51	8.01
1977	9.47	5.97	9.11	10.43	14.62	12.95	6.11
1978	8.41	1.29	3.82	5.33	6.84	5.24	7.19
1979	9.76	-2.62	-2.60	-1.04	5.66	5.72	10.43
1980	11.11	2.06	2.71	1.94	8.10	5.72	11.51
1981	12.18	-3.02	-5.74	-2.62	9.98	9.88	16.12
1982	9.24	42.98	46.75	42.32	29.15	28.26	11.89
1983	4.60	9.60	10.36	13.21	20.46	10.78	6.99
1984	3.69	15.09	17.71	17.27	12.36	9.96	7.86
1985	4.38	25.26	25.12	24.69	16.72	14.37	6.19
1986	4.19	17.54	17.17	16.19	13.34	11.67	6.13
1987	4.15	0.45	2.09	3.67	10.26	6.18	4.88
1988	3.99	10.45	12.60	11.44	10.12	9.69	5.78
1989	5.23	16.29	16.30	14.39	13.06	12.43	8.28
1990	4.97	3.34	1.55	3.79	10.63	10.25	9.00
1991	3.79	24.43	27.54	24.71	21.56	17.14	4.54
1992	2.13	13.07	13.08	14.30	11.25	12.56	2.29
1993	1.69	22.88	26.04	25.28	15.66	13.24	0.77
1994	0.20	-10.46	-10.18	-7.41	-0.15	-6.36	0.50
1995	1.75	26.28	27.88	26.81	16.47	15.66	0.50
1996	2.20	14.29	16.08	15.60	13.80	13.86	0.50
1997	0.75	17.45	18.96	16.86	7.19	3.51	0.50
1998	1.02	14.13	12.38	10.23	7.73	7.09	0.24
1999	2.58	-7.15	-5.87	-4.91	2.10	-1.35	0.10
2000	3.23	13.64	13.29	9.09	9.36	8.30	0.10
2001	0.70	3.92	5.05	7.07	11.94	9.28	0.10
2002	3.88	10.09	11.95	10.33	7.60	2.08	0.05
2003	1.99	8.06	9.33	13.65	7.82	7.75	0.05
2004	2.12	8.46	8.25	8.78	7.15	3.52	0.05
2005	2.15	15.05	15.10	13.94	6.08	2.80	0.05

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This table provides values of total return rates on 18-year federal bonds, 20-year provincial bonds, 17-year corporate bonds, 5-year mortgages, 5-year GIC and non-chequable savings accounts. These values, derived from the basic data in Appendix A, assume purchase on Dec. 31 of the previous year and sale on Dec. 31 of the current year, with all income reinvested. See also Appendices C and D.

TABLE 3B (Cont'd)

GEOMETRIC AVERAGES OVER SELECTED INTERVALS								
	PERIOD	CONSUMER PRICE INDEX	FEDERAL BONDS	PROVINCIAL BONDS	ALL CORPORATE BONDS	CONVENTIONAL MORTGAGES	5 YEAR GICS	SAVINGS ACCOUNTS
5 YEARS	1951-1955	1.88	2.34	2.17	2.75	.	.	.
	1956-1960	2.04	-0.30	0.24	1.82	4.24	.	.
	1961-1965	1.76	4.96	5.03	4.44	6.20	.	.
	1966-1970	3.48	3.32	2.55	2.37	2.98	.	.
	1971-1975	8.21	3.01	4.70	5.70	9.22	7.25	6.00
	1976-1980	8.91	4.89	6.45	7.23	9.82	8.18	8.63
	1981-1985	6.77	16.98	17.59	18.07	17.54	14.45	9.75
	1986-1990	4.50	9.40	9.73	9.77	11.47	10.02	6.80
	1991-1995	1.90	14.35	15.86	15.96	12.71	10.09	1.71
	1996-2000	1.95	10.08	10.60	9.09	7.97	6.16	0.29
2001-2005	2.16	9.06	9.88	10.72	8.10	5.05	0.06	
MEAN	1971-2005	4.88	9.59	10.60	10.86	10.93	8.70	4.68
STD DEV	1971-2005	3.05	4.89	4.65	4.51	3.37	3.13	4.02
10 YEARS	1956-1965	1.90	2.29	2.61	3.12	5.22	.	.
	1966-1975	5.81	3.16	3.62	4.02	6.06	.	.
	1976-1985	7.83	10.77	11.88	12.52	13.62	11.27	9.19
	1986-1995	3.20	11.85	12.75	12.82	12.09	10.06	4.22
	1996-2005	2.06	9.57	10.24	9.90	8.03	5.60	0.17
MEAN	1976-2005	4.33	10.73	11.62	11.74	11.22	8.95	4.46
STD DEV	1976-2005	3.06	1.14	1.28	1.61	2.89	2.98	4.51
15 YEARS	1961-1975	4.44	3.76	4.09	4.16	6.11	.	.
	1976-1990	6.71	10.31	11.16	11.59	12.90	10.85	8.39
	1991-2005	2.01	11.14	12.08	11.89	9.57	7.08	0.68
	MEAN	1976-2005	4.44	10.31	11.16	11.59	12.90	10.85	8.39
25 YEARS	1956-1980	4.83	3.16	3.77	4.29	6.46	.	.
	1981-2005	3.44	11.93	12.68	12.66	11.50	9.10	3.65
50 YEARS	1956-2005	4.13	7.45	8.14	8.40	8.95	.	.

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STANDARD DEVIATIONS OVER SELECTED INTERVALS								
	PERIOD	CONSUMER PRICE INDEX	FEDERAL BONDS	PROVINCIAL BONDS	ALL CORPORATE BONDS	CONVENTIONAL MORTGAGES	5 YEAR GICS	SAVINGS ACCOUNTS
5 YEARS	1951-1955	4.76	4.91	8.70	6.19	.	.	.
	1956-1960	0.81	4.89	8.45	5.81	4.45	.	.
	1961-1965	1.11	3.00	4.05	4.28	2.26	.	.
	1966-1970	1.35	4.60	4.26	3.30	3.17	.	.
	1971-1975	3.16	10.73	9.35	8.49	3.77	3.49	1.83
	1976-1980	1.97	8.29	8.60	8.21	4.31	3.63	1.89
	1981-1985	3.72	18.42	20.42	18.03	8.90	8.96	3.85
	1986-1990	0.55	10.57	10.02	9.02	3.04	3.25	1.39
	1991-1995	1.28	15.10	16.81	14.67	8.05	9.17	3.99
	1996-2000	1.05	12.73	12.97	12.39	5.94	7.31	0.21
2001-2005	1.13	3.53	3.25	2.67	2.10	3.42	0.03	
10 YEARS	1956-1965	0.93	5.47	7.64	5.60	3.81	.	.
	1966-1975	3.40	7.69	7.43	6.83	5.25	.	.
	1976-1985	3.02	13.93	15.01	13.22	7.04	6.62	3.13
	1986-1995	1.65	11.62	12.23	10.70	5.64	6.48	2.97
	1996-2005	1.04	8.92	9.00	8.24	4.20	5.44	0.21
15 YEARS	1961-1975	3.43	6.52	6.53	5.99	4.39	.	.
	1976-1990	2.94	12.38	12.99	11.43	5.84	5.56	2.99
	1991-2005	1.08	10.50	11.18	9.93	5.53	6.59	2.52
25 YEARS	1956-1980	3.58	6.79	7.64	6.70	4.79	.	.
	1981-2005	2.63	11.59	12.40	10.97	6.13	6.66	4.66
50 YEARS	1956-2005	3.19	10.38	11.17	9.90	6.05	.	.

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CORRELATIONS OF RATES OF CHANGE/RETURN							
	CONSUMER PRICE INDEX	FEDERAL BONDS	PROVINCIAL BONDS	ALL CORPORATE BONDS	CONVENTIONAL MORTGAGES	5 YEAR GICS	SAVINGS ACCOUNTS
	LAST 10 YEARS						
CPI		-0.13	-0.11	-0.22	-0.19	-0.25	-0.42
FEDERAL BONDS	-0.12		0.99	0.91	0.45	0.41	0.46
PROVINCIAL BONDS	-0.12	0.97		0.94	0.48	0.42	0.51
ALL CORPORATE BONDS	-0.09	0.95	0.98		0.54	0.50	0.46
MORTGAGES	0.25	0.78	0.81	0.86		0.93	0.40
5 YEAR GICS	0.17	0.79	0.80	0.81	0.92		0.41
SAVINGS ACCOUNTS	0.81	-0.04	-0.06	-0.06	0.27	0.34	
	ALL YEARS						

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TABLE 3C
ANALYSIS OF INTEREST RATES BY CLASS OF SECURITY
MEDIUM AND LONG-TERM SECURITIES
EFFECTIVE ANNUAL REAL RATES OF TOTAL RETURN

YEAR	CONSUMER PRICE INDEX	REAL VALUES NET OF CPI INCREASES					5 YEAR GICS	SAVINGS ACCOUNTS
		FEDERAL BONDS	PROVINCIAL BONDS	ALL CORPORATE BONDS	CONVENTIONAL MORTGAGES			
1948	9.09	-10.52	.	.	.	.	.	.
1949	0.69	4.13	4.64	4.70	.	.	.	.
1950	6.21	-5.96	-6.18	-4.01	.	.	.	.
1951	10.39	-12.25	-17.70	-15.28	.	.	.	.
1952	-1.18	3.21	6.30	5.67	6.43	.	.	.
1953	0.00	3.64	5.26	4.20	2.08	.	.	.
1954	0.00	9.99	14.42	10.67	7.48	.	.	.
1955	0.60	-0.93	-3.70	1.08	6.10	.	.	.
1956	2.96	-6.40	-13.53	-9.84	-5.22	.	.	.
1957	1.72	4.10	8.69	4.03	1.48	.	.	.
1958	2.82	-8.28	-4.61	0.73	5.87	.	.	.
1959	1.10	-5.47	-6.87	-5.13	0.64	.	.	.
1960	1.63	5.38	9.58	10.37	8.55	.	.	.
1961	0.00	9.78	9.60	7.99	7.12	.	.	.
1962	1.60	1.42	2.83	3.29	5.43	.	.	.
1963	2.11	2.11	2.30	2.30	4.91	.	.	.
1964	2.06	4.81	4.88	3.07	4.96	.	.	.
1965	3.03	-2.01	-3.08	-3.16	-0.43	0.09	.	.
1966	3.43	-1.82	-5.20	-4.43	-1.79	1.68	.	.
1967	3.79	-5.77	-3.75	-3.79	-1.52	1.01	.	.
1968	4.11	-4.72	-2.81	-1.71	-1.10	0.70	0.84	.
1969	4.82	-6.52	-7.89	-6.39	-7.60	-2.11	1.18	.
1970	1.26	20.47	17.07	12.02	10.48	8.67	4.96	.
1971	4.96	6.28	8.09	8.87	8.52	6.51	-0.34	.
1972	5.12	-3.81	1.14	4.21	3.61	0.98	-1.02	.
1973	9.36	-7.00	-7.97	-6.31	-2.28	-4.66	-3.47	.
1974	12.33	-12.48	-13.86	-16.04	-6.97	-7.38	-3.22	.
1975	9.45	-6.06	-2.13	-0.35	2.51	0.71	-2.11	.
1976	5.85	12.45	13.92	14.13	7.90	5.35	2.04	.
1977	9.47	-3.20	-0.34	0.87	4.70	3.18	-3.08	.
1978	8.41	-6.57	-4.24	-2.85	-1.45	-2.93	-1.13	.
1979	9.76	-11.28	-11.25	-9.83	-3.73	-3.67	0.61	.
1980	11.11	-8.15	-7.56	-8.25	-2.71	-4.85	0.36	.
1981	12.18	-13.55	-15.97	-13.20	-1.97	-2.05	3.51	.
1982	9.24	30.89	34.34	30.28	18.23	17.41	2.43	.
1983	4.60	4.78	5.51	8.23	15.16	5.90	2.29	.
1984	3.69	11.00	13.52	13.10	8.36	6.05	4.02	.
1985	4.38	20.01	19.87	19.46	11.83	9.57	1.74	.
1986	4.19	12.80	12.45	11.51	8.78	7.17	1.86	.
1987	4.15	-3.55	-1.98	-0.46	5.86	1.95	0.70	.
1988	3.99	6.21	8.28	7.17	5.90	5.49	1.73	.
1989	5.23	10.52	10.52	8.71	7.45	6.85	2.90	.
1990	4.97	-1.55	-3.26	-1.12	5.40	5.03	3.84	.
1991	3.79	19.89	22.89	20.16	17.13	12.87	0.72	.
1992	2.13	10.72	10.73	11.92	8.93	10.22	0.15	.
1993	1.69	20.84	23.95	23.20	13.74	11.36	-0.90	.
1994	0.20	-10.64	-10.36	-7.59	-0.35	-6.54	0.31	.
1995	1.75	24.11	25.68	24.63	14.46	13.67	-1.23	.
1996	2.20	11.83	13.58	13.11	11.35	11.41	-1.66	.
1997	0.75	16.58	18.08	16.00	6.40	2.75	-0.25	.
1998	1.02	12.98	11.24	9.12	6.64	6.01	-0.77	.
1999	2.58	-9.48	-8.24	-7.30	-0.46	-3.83	-2.41	.
2000	3.23	10.08	9.75	5.68	5.94	4.91	-3.03	.
2001	0.70	3.21	4.32	6.33	11.17	8.52	-0.59	.
2002	3.88	5.98	7.77	6.21	3.57	-1.73	-3.69	.
2003	1.99	5.95	7.19	11.43	5.71	5.65	-1.91	.
2004	2.12	6.21	6.00	6.52	4.93	1.37	-2.02	.
2005	2.15	12.63	12.67	11.54	3.84	0.63	-2.06	.

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This table is based on Table 3B but adjusted for the CPI.

TABLE 3C (Cont'd)

GEOMETRIC AVERAGES OVER SELECTED INTERVALS								
	PERIOD	CONSUMER PRICE INDEX	FEDERAL BONDS	PROVINCIAL BONDS	ALL CORPORATE BONDS	CONVENTIONAL MORTGAGES	5 YEAR GICS	SAVINGS ACCOUNTS
5 YEARS	1951-1955	2.99	-0.59	-0.23	-0.18	.	.	.
	1956-1960	1.84	-3.50	-4.27	-1.96	1.69	.	.
	1961-1965	1.48	4.66	5.79	5.36	6.19	.	.
	1966-1970	4.10	-0.55	-1.51	-1.70	-0.56	.	.
	1971-1975	8.21	-4.81	-3.24	-2.32	0.94	-0.88	-2.04
	1976-1980	8.91	-3.69	-2.26	-1.54	0.84	-0.67	-0.25
	1981-1985	6.77	9.57	10.14	10.58	10.09	7.19	2.79
	1986-1990	4.50	4.69	5.00	5.04	6.67	5.28	2.20
	1991-1995	1.90	12.21	13.70	13.80	10.61	8.03	-0.19
	1996-2000	1.95	7.98	8.48	7.00	5.90	4.13	-1.63
	2001-2005	2.16	6.75	7.56	8.38	5.81	2.82	-2.06
MEAN	1971-2005	4.88	4.49	5.46	5.70	5.78	3.65	-0.19
STD DEV	1971-2005	3.05	6.53	6.31	5.99	3.88	3.52	1.98
10 YEARS	1956-1965	1.66	0.50	0.63	1.63	3.91	.	.
	1966-1975	6.13	-2.70	-2.38	-2.01	0.19	.	.
	1976-1985	7.83	2.73	3.75	4.35	5.37	3.19	1.26
	1986-1995	3.20	8.38	9.26	9.33	8.62	6.65	1.00
	1996-2005	2.06	7.36	8.02	7.69	5.86	3.47	-1.84
MEAN	1976-2005	4.33	6.13	6.99	7.10	6.60	4.43	0.13
STD DEV	1976-2005	3.06	3.01	2.89	2.54	1.75	1.92	1.72
15 YEARS	1961-1975	4.56	-0.31	0.27	0.39	2.15	.	.
	1976-1990	6.71	3.38	4.17	4.58	5.80	3.88	1.57
	1991-2005	2.01	8.95	9.88	9.69	7.42	4.97	-1.30
25 YEARS	1956-1980	4.86	-1.64	-1.16	-0.47	1.79	.	.
	1981-2005	3.44	8.21	8.94	8.92	7.80	5.47	0.20
50 YEARS	1956-2005	4.15	3.17	3.77	4.12	4.75	.	.

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STANDARD DEVIATIONS OVER SELECTED INTERVALS								
	PERIOD	CONSUMER PRICE INDEX	FEDERAL BONDS	PROVINCIAL BONDS	ALL CORPORATE BONDS	CONVENTIONAL MORTGAGES	5 YEAR GICS	SAVINGS ACCOUNTS
5 YEARS	1951-1955	5.24	8.28	12.27	9.98	.	.	.
	1956-1960	0.81	6.37	10.13	7.87	5.29	.	.
	1961-1965	1.11	4.40	4.59	3.97	2.85	.	.
	1966-1970	4.36	6.39	6.92	5.77	5.86	.	.
	1971-1975	3.16	14.37	13.18	12.02	7.56	7.17	3.75
	1976-1980	1.97	9.11	9.36	8.99	4.84	4.09	2.13
	1981-1985	3.72	18.22	20.08	18.17	10.05	9.19	1.44
	1986-1990	0.55	10.06	9.57	8.63	2.87	2.98	0.91
	1991-1995	1.28	14.55	16.31	14.25	7.11	8.07	2.12
	1996-2000	1.05	13.03	13.24	12.63	6.00	7.29	0.93
	2001-2005	1.13	2.51	2.11	2.69	2.94	4.11	1.20
10 YEARS	1956-1965	0.93	5.88	7.81	6.04	4.16	.	.
	1966-1975	4.13	9.74	9.54	8.73	6.53	.	.
	1976-1985	3.02	13.90	14.89	13.39	7.70	6.71	2.42
	1986-1995	1.65	10.85	11.53	10.11	4.90	5.60	1.43
	1996-2005	1.04	9.01	9.07	8.40	4.46	5.69	1.10
15 YEARS	1961-1975	3.83	8.23	8.14	7.37	6.00	.	.
	1976-1990	2.94	12.64	13.14	11.77	6.49	5.84	2.05
	1991-2005	1.08	10.25	10.92	9.74	5.14	6.18	1.85
25 YEARS	1956-1980	3.58	7.83	8.37	7.39	5.37	.	.
	1981-2005	2.63	11.27	12.06	10.79	5.64	6.03	2.18
50 YEARS	1956-2005	3.35	10.44	11.07	9.90	6.09	.	.

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CORRELATIONS OF RATES OF CHANGE/RETURN							
	CONSUMER PRICE INDEX	FEDERAL BONDS	PROVINCIAL BONDS	ALL CORPORATE BONDS	CONVENTIONAL MORTGAGES	5 YEAR GICS	SAVINGS ACCOUNTS
	LAST 10 YEARS						
CPI		-0.28	-0.26	-0.38	-0.48	-0.45	-0.99
FEDERAL BONDS	-0.42		0.99	0.91	0.49	0.46	0.34
PROVINCIAL BONDS	-0.39	0.98		0.94	0.52	0.47	0.33
ALL CORPORATE BONDS	-0.41	0.96	0.98		0.60	0.55	0.43
MORTGAGES	-0.33	0.84	0.86	0.90		0.94	0.52
5 YEAR GICS	-0.38	0.87	0.88	0.89	0.92		0.49
SAVINGS ACCOUNTS	-0.02	0.23	0.18	0.18	0.27	0.32	
	ALL YEARS						

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TABLES 4A, 4B, 4C
GOVERNMENT OF CANADA BONDS BY TERM

TABLE 4A ANALYSIS OF INTEREST RATES BY TERM OF SECURITY GOVERNMENT OF CANADA SECURITIES NOMINAL YIELDS TO MATURITY COMPOUNDED SEMI-ANNUALLY					
YEAR	91 DAY V122541	1-3 YEAR V122558	3-5 YEAR V122485	5-10 YEAR V122486	10+ YEAR V122487
1936	0.85	.	.	.	2.97
1937	0.72	.	.	.	3.17
1938	0.60	.	.	.	3.09
1939	0.71	.	.	.	3.16
1940	0.71	.	.	.	3.28
1941	0.58	.	.	.	3.10
1942	0.54	.	.	.	3.06
1943	0.48	.	.	.	3.01
1944	0.39	.	.	.	3.00
1945	0.36	.	.	.	2.93
1946	0.39	.	.	.	2.61
1947	0.41	.	.	.	2.57
1948	0.41	.	.	.	2.93
1949	0.49	1.65	.	.	2.87
1950	0.55	1.80	.	.	2.86
1951	0.79	2.42	2.61	3.08	3.23
1952	1.07	2.81	3.24	3.56	3.56
1953	1.72	3.21	3.45	3.63	3.71
1954	1.43	2.18	2.67	2.90	3.18
1955	1.63	2.19	2.79	2.87	3.14
1956	2.96	3.60	3.76	3.75	3.63
1957	3.81	4.46	4.57	4.39	4.11
1958	2.28	3.28	3.47	3.69	4.15
1959	4.90	5.03	4.94	5.10	5.08
1960	3.24	3.96	4.52	4.85	5.19
1961	2.84	3.59	4.38	4.61	5.05
1962	4.12	4.28	4.60	4.76	5.11
1963	3.61	4.21	4.48	4.77	5.09
1964	3.80	4.41	4.72	4.92	5.18
1965	4.04	4.52	4.90	5.09	5.21
1966	5.09	5.38	5.55	5.74	5.69
1967	4.72	5.29	5.64	5.94	5.94
1968	6.42	6.37	6.68	6.85	6.75
1969	7.39	7.49	7.66	7.76	7.58
1970	6.13	6.57	7.11	7.58	7.91
1971	3.61	4.93	5.56	6.15	6.95
1972	3.61	5.54	6.26	6.74	7.23
1973	5.59	6.54	6.98	7.17	7.56
1974	8.06	8.03	8.12	8.27	8.90
1975	7.61	7.56	7.72	8.06	9.04
1976	9.17	8.27	8.35	8.73	9.18
1977	7.54	7.46	7.90	8.14	8.70
1978	8.97	8.77	9.00	9.08	9.27
1979	12.23	10.77	10.42	10.16	10.21
1980	13.45	12.44	12.37	12.30	12.48
1981	18.99	15.97	15.68	15.29	15.22
1982	14.41	13.95	14.00	14.03	14.26
1983	9.65	10.18	10.61	11.11	11.79
1984	11.54	11.67	11.91	12.42	12.75
1985	9.78	10.12	10.39	10.78	11.04
1986	9.29	9.09	9.21	9.37	9.52
1987	8.40	9.19	9.42	9.55	9.95
1988	9.83	9.67	9.77	9.76	10.22
1989	12.62	10.71	10.20	9.83	9.92
1990	13.45	11.65	11.19	10.82	10.85
1991	9.02	8.99	9.16	9.36	9.76
1992	6.76	7.03	7.43	8.16	8.77
1993	4.94	5.89	6.46	7.24	7.85
1994	5.66	7.14	7.79	8.26	8.63
1995	7.08	7.26	7.64	7.93	8.28
1996	4.28	5.35	6.21	6.86	7.50
1997	3.30	4.68	5.33	5.87	6.42
1998	4.82	5.09	5.16	5.26	5.47
1999	4.80	5.36	5.50	5.56	5.69
2000	5.61	5.91	5.99	5.96	5.89
2001	3.83	4.25	4.88	5.32	5.78
2002	2.61	3.55	4.44	5.08	5.66
2003	2.90	3.24	3.88	4.54	5.28
2004	2.24	2.92	3.67	4.34	5.08
2005	2.75	3.18	3.50	3.89	4.39

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This table gives the 12 month arithmetic average of the yields to maturity on government bonds of various durations. The given annual rate is that compounded semi-annually. Averages, standard deviations and correlations are given on the next page.

TABLE 4A (Cont'd)

ARITHMETIC AVERAGES OVER SELECTED INTERVALS						
	PERIOD	91 DAY	1-3 YEAR	3-5 YEAR	5-10 YEAR	10+ YEAR
5 YEARS	1941-1945	0.47	.	.	.	3.02
	1946-1950	0.45	.	.	.	2.77
	1951-1955	1.33	2.56	.	.	3.36
	1956-1960	3.44	4.07	4.25	4.36	4.43
	1961-1965	3.68	4.20	4.62	4.83	5.13
	1966-1970	5.95	6.22	6.53	6.77	6.77
	1971-1975	5.70	6.52	6.93	7.28	7.94
	1976-1980	10.27	9.54	9.61	9.68	9.97
	1981-1985	12.87	12.38	12.52	12.73	13.01
	1986-1990	10.72	10.06	9.96	9.87	10.09
	1991-1995	6.69	7.26	7.70	8.19	8.66
1996-2000	4.56	5.28	5.64	5.90	6.19	
2001-2005	2.87	3.43	4.07	4.63	5.24	
MEAN	1956-2005	6.68	6.90	7.18	7.42	7.74
STD DEV	1956-2005	3.46	2.94	2.79	2.72	2.72
10 YEARS	1946-1955	0.89	.	.	.	3.07
	1956-1965	3.56	4.13	4.43	4.59	4.78
	1966-1975	5.82	6.37	6.73	7.03	7.36
	1976-1985	11.57	10.96	11.06	11.20	11.49
	1986-1995	8.71	8.66	8.83	9.03	9.38
	1996-2005	3.71	4.35	4.86	5.27	5.72
	MEAN	1956-2005	6.68	6.90	7.18	7.42	7.74
STD DEV	1956-2005	3.44	2.92	2.78	2.72	2.73
15 YEARS	1946-1960	1.74	.	.	.	3.52
	1961-1975	5.11	5.65	6.02	6.29	6.61
	1976-1990	11.29	10.66	10.69	10.76	11.02
	1991-2005	4.71	5.32	5.80	6.24	6.70
25 YEARS	1956-1980	5.81	6.11	6.39	6.58	6.85
	1981-2005	7.54	7.68	7.98	8.26	8.64
50 YEARS	1956-2005	6.68	6.90	7.18	7.42	7.74
60 YEARS	1946-2005	5.71	.	.	.	6.96

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STANDARD DEVIATIONS OVER SELECTED INTERVALS						
	PERIOD	91 DAY	1-3 YEAR	3-5 YEAR	5-10 YEAR	10+ YEAR
5 YEARS	1941-1945	0.09	.	.	.	0.06
	1946-1950	0.07	.	.	.	0.16
	1951-1955	0.39	0.44	.	.	0.26
	1956-1960	0.99	0.69	0.61	0.63	0.67
	1961-1965	0.51	0.36	0.20	0.19	0.07
	1966-1970	1.07	0.91	0.92	0.92	0.98
	1971-1975	2.12	1.31	1.05	0.89	0.97
	1976-1980	2.47	2.03	1.81	1.64	1.51
	1981-1985	3.92	2.54	2.28	1.92	1.72
	1986-1990	2.20	1.10	0.79	0.56	0.49
	1991-1995	1.56	1.11	0.97	0.76	0.71
1996-2000	0.85	0.45	0.45	0.60	0.81	
2001-2005	0.59	0.51	0.57	0.57	0.55	
10 YEARS	1946-1955	0.53	.	.	.	0.37
	1956-1965	0.75	0.53	0.47	0.51	0.58
	1966-1975	1.59	1.07	0.95	0.89	1.10
	1976-1985	3.38	2.63	2.47	2.33	2.21
	1986-1995	2.78	1.81	1.45	1.09	0.95
	1996-2005	1.13	1.07	0.96	0.87	0.83
15 YEARS	1946-1960	1.42	.	.	.	0.81
	1961-1975	1.67	1.38	1.29	1.29	1.40
	1976-1990	2.98	2.23	2.10	2.00	1.92
	1991-2005	1.90	1.76	1.67	1.64	1.63
25 YEARS	1956-1980	2.90	2.31	2.19	2.14	2.21
	1981-2005	4.30	3.51	3.26	3.08	2.98
50 YEARS	1956-2005	3.74	3.05	2.86	2.76	2.75
60 YEARS	1946-2005	4.05	.	.	.	3.06

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CORRELATIONS OF YIELDS BY TIME TO MATURITY					
	91 DAY	1-3 YEAR	3-5 YEAR	5-10 YEAR	10+ YEAR
	LAST 10 YEARS				
91 DAY		0.94	0.83	0.65	0.40
1-3 YEAR	0.99		0.96	0.84	0.63
3-5 YEAR	0.98	1.00		0.96	0.82
5-10 YEAR	0.96	0.99	1.00		0.95
10+ YEAR	0.96	0.97	0.99	1.00	
	ALL YEARS				

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TABLE 4B
ANALYSIS OF INTEREST RATES BY TERM OF SECURITY
GOVERNMENT OF CANADA SECURITIES
EFFECTIVE ANNUAL NOMINAL RATES OF TOTAL RETURN

YEAR	CPI	91 DAY	1-3 YEAR	3-5 YEAR	5-10 YEAR	10+ YEAR
1936	1.14	0.89	.	.	.	.
1937	4.49	0.71	.	.	.	-0.58
1938	-2.15	0.62	.	.	.	5.63
1939	2.20	0.70	.	.	.	-2.98
1940	5.38	0.73	.	.	.	8.69
1941	6.12	0.59	.	.	.	3.80
1942	2.88	0.54	.	.	.	3.08
1943	1.87	0.49	.	.	.	3.88
1944	-1.83	0.39	.	.	.	3.16
1945	1.87	0.37	.	.	.	5.18
1946	5.50	0.39	.	.	.	6.02
1947	14.78	0.41	.	.	.	3.17
1948	9.09	0.41	.	.	.	-2.38
1949	0.69	0.48	.	.	.	4.85
1950	6.21	0.54	1.28	.	.	-0.12
1951	10.39	0.77	1.94	.	.	-3.13
1952	-1.18	1.05	1.50	1.68	1.16	1.99
1953	0.00	1.66	3.15	3.06	4.21	3.64
1954	0.00	1.53	4.75	6.91	8.67	9.99
1955	0.60	1.46	0.37	-0.40	-0.80	-0.34
1956	2.96	2.91	2.02	0.30	-2.31	-3.63
1957	1.72	3.86	5.28	6.43	7.94	5.89
1958	2.82	2.16	3.21	2.55	0.31	-5.69
1959	1.10	4.78	4.14	2.36	-1.80	-4.43
1960	1.63	3.53	5.97	6.14	10.47	7.10
1961	0.00	2.89	4.62	7.30	7.38	9.78
1962	1.60	4.05	2.70	3.02	2.24	3.05
1963	2.11	3.66	4.01	3.91	3.97	4.26
1964	2.06	3.80	4.39	4.49	4.95	6.97
1965	3.03	4.03	3.38	3.02	1.71	0.96
1966	3.43	5.14	4.86	4.33	3.53	1.55
1967	3.79	4.62	4.80	3.21	1.31	-2.20
1968	4.11	6.47	5.72	5.02	3.16	-0.80
1969	4.82	7.43	5.52	3.92	1.41	-2.01
1970	1.26	6.57	11.36	16.47	20.87	21.98
1971	4.96	3.79	5.41	6.41	9.14	11.55
1972	5.12	3.59	3.76	2.66	1.66	1.11
1973	9.36	5.46	3.51	2.73	2.47	1.71
1974	12.33	8.23	7.29	8.17	7.03	-1.69
1975	9.45	7.56	5.15	3.24	0.42	2.82
1976	5.85	9.44	9.36	10.47	14.27	19.02
1977	9.47	7.86	7.55	6.82	5.88	5.97
1978	8.41	8.93	5.32	3.55	1.32	1.29
1979	9.76	12.54	8.43	5.72	3.21	-2.62
1980	11.11	13.72	11.95	9.77	5.63	2.06
1981	12.18	20.38	11.28	6.74	2.00	-3.02
1982	9.24	15.25	20.58	27.53	35.98	42.98
1983	4.60	9.86	10.36	10.41	9.58	9.60
1984	3.69	11.94	10.61	11.34	12.53	15.09
1985	4.38	9.77	12.00	14.81	19.20	25.26
1986	4.19	9.47	9.76	10.92	13.78	17.54
1987	4.15	8.46	7.81	6.05	3.58	0.45
1988	3.99	9.76	9.08	9.04	9.67	10.45
1989	5.23	12.91	10.61	11.21	12.81	16.29
1990	4.97	13.98	11.20	9.65	7.06	3.34
1991	3.79	9.57	14.08	17.63	20.20	24.43
1992	2.13	6.49	8.23	9.73	10.28	13.07
1993	1.69	5.27	9.92	12.71	17.31	22.88
1994	0.20	5.33	0.56	-3.68	-7.10	-10.46
1995	1.75	7.43	11.87	16.04	20.75	26.28
1996	2.20	4.48	7.78	10.27	11.90	14.29
1997	0.75	3.30	3.33	4.80	8.74	17.45
1998	1.02	4.81	5.66	7.01	9.30	14.13
1999	2.58	4.83	3.91	1.23	-2.07	-7.15
2000	3.23	5.63	6.50	8.51	10.92	13.64
2001	0.70	4.13	7.35	7.58	5.97	3.92
2002	3.88	2.55	3.36	6.32	8.98	10.09
2003	1.99	2.93	3.46	4.48	5.67	8.06
2004	2.12	2.25	3.00	4.27	5.95	8.46
2005	2.15	2.67	2.36	2.85	5.76	15.05

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This table gives annual rates of return of federal government bonds assuming purchase on Dec. 31 of the previous year and sale on Dec. 31 of the current year, with all income reinvested.

TABLE 4B (Cont'd)

GEOMETRIC AVERAGES OVER SELECTED INTERVALS							
	PERIOD	CPI	91 DAY	1-3 YEAR	3-5 YEAR	5-10 YEAR	10+ YEAR
5 YEARS	1941-1945	2.15	0.47	.	.	.	3.82
	1946-1950	7.16	0.45	.	.	.	2.26
	1951-1955	2.00	1.25	.	.	.	1.54
	1956-1960	2.04	3.44	4.12	3.53	2.79	-0.30
	1961-1965	1.76	3.69	3.82	4.34	4.03	4.96
	1966-1970	3.48	6.04	6.42	6.48	5.81	3.32
	1971-1975	8.21	5.71	5.02	4.62	4.09	3.01
	1976-1980	8.91	10.47	8.50	7.23	5.97	4.89
	1981-1985	6.77	13.37	12.90	13.95	15.31	16.98
	1986-1990	4.50	10.90	9.69	9.36	9.31	9.40
	1991-1995	1.90	6.81	8.83	10.21	11.77	14.35
1996-2000	1.95	4.61	5.42	6.32	7.64	10.08	
2001-2005	2.16	2.90	3.89	5.09	6.46	9.06	
MEAN	1956-2005	4.13	6.74	6.82	7.07	7.26	7.45
STD DEV	1956-2005	2.80	3.59	3.02	3.22	3.86	5.39
10 YEARS	1946-1955	4.55	0.85	.	.	.	1.90
	1956-1965	1.90	3.56	3.97	3.93	3.41	2.29
	1966-1975	5.81	5.87	5.72	5.54	4.95	3.16
	1976-1985	7.83	11.91	10.68	10.54	10.54	10.77
	1986-1995	3.20	8.83	9.26	9.78	10.54	11.85
	1996-2005	2.06	3.75	4.65	5.70	7.05	9.57
	MEAN	1956-2005	4.13	6.74	6.82	7.07	7.26	7.45
STD DEV	1956-2005	2.58	3.57	2.95	2.89	3.23	4.47
15 YEARS	1946-1960	3.70	1.70	.	.	.	1.16
	1961-1975	4.44	5.14	5.08	5.14	4.64	3.76
	1976-1990	6.71	11.57	10.35	10.15	10.13	10.31
	1991-2005	2.01	4.76	6.03	7.18	8.60	11.14
25 YEARS	1956-1980	4.83	5.84	5.56	5.23	4.53	3.16
	1981-2005	3.44	7.65	8.10	8.94	10.05	11.93
50 YEARS	1956-2005	4.13	6.74	6.82	7.07	7.26	7.45
60 YEARS	1946-2005	4.20	5.73	.	.	.	6.51

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STANDARD DEVIATIONS OVER SELECTED INTERVALS							
	PERIOD	CPI	91 DAY	1-3 YEAR	3-5 YEAR	5-10 YEAR	10+ YEAR
5 YEARS	1941-1945	3.27	0.18	.	.	.	4.20
	1946-1950	5.80	0.06	.	.	.	3.38
	1951-1955	5.10	0.60	.	.	.	5.17
	1956-1960	0.81	1.40	2.27	3.02	4.81	4.89
	1961-1965	1.11	0.45	1.31	1.87	3.77	3.00
	1966-1970	1.35	1.50	1.98	3.00	4.14	4.60
	1971-1975	3.16	1.96	3.51	6.40	9.00	10.73
	1976-1980	1.97	2.40	2.40	3.26	5.68	8.29
	1981-1985	3.72	4.10	4.31	8.27	13.59	18.42
	1986-1990	0.55	1.91	1.59	3.42	6.38	10.57
	1991-1995	1.28	3.99	5.08	7.98	10.98	15.10
1996-2000	1.05	1.56	3.67	5.89	8.49	12.73	
2001-2005	1.13	1.54	2.24	2.27	2.61	3.53	
10 YEARS	1946-1955	5.32	0.44	.	.	.	4.12
	1956-1965	0.93	1.01	1.68	2.58	4.44	5.47
	1966-1975	3.40	1.64	2.36	4.21	6.09	7.69
	1976-1985	3.02	3.96	4.42	7.02	10.68	13.93
	1986-1995	1.65	2.91	3.59	5.72	8.18	11.62
	1996-2005	1.04	1.65	3.01	4.29	6.01	8.92
	MEAN	1956-2005	3.19	3.97	3.86	5.29	7.54	10.38
STD DEV	1956-2005	3.19	3.97	3.86	5.29	7.54	10.38
15 YEARS	1946-1960	4.49	4.49	.	.	.	4.49
	1961-1975	3.43	1.63	2.08	3.52	5.24	6.52
	1976-1990	2.94	3.42	3.63	5.85	9.11	12.38
	1991-2005	1.08	3.12	3.92	5.46	7.38	10.50
25 YEARS	1956-1980	0.00	0.00	0.00	0.00	0.00	0.00
	1981-2005	2.63	4.64	4.36	5.93	8.39	11.59
50 YEARS	1956-2005	3.19	3.97	3.86	5.29	7.54	10.38
60 YEARS	1946-2005	3.58	4.30	.	.	.	9.75

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CORRELATIONS OF RETURNS BY TIME TO MATURITY						
	CPI	91 DAY	1-3 YEAR	3-5 YEAR	5-10 YEAR	10+ YEAR
LAST 10 YEARS						
CPI		-0.04	-0.18	-0.01	0.02	-0.13
91 DAY	0.44		0.73	0.41	0.10	-0.15
1-3 YEAR	0.35	0.80		0.83	0.43	0.03
3-5 YEAR	0.22	0.54	0.93		0.84	0.48
5-10 YEAR	0.06	0.35	0.80	0.96		0.85
10+ YEAR	-0.10	0.30	0.68	0.86	0.95	
ALL YEARS						

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TABLE 4C
ANALYSIS OF INTEREST RATES BY TERM OF SECURITY
GOVERNMENT OF CANADA SECURITIES
EFFECTIVE REAL RATES OF TOTAL RETURN

YEAR	CPI	REAL VALUES NET OF CPI INCREASES				
		91 DAY	1-3 YEAR	3-5 YEAR	5-10 YEAR	10+ YEAR
1936	1.14	-0.24	.	.	.	.
1937	4.49	-3.62	.	.	.	-4.86
1938	-2.15	2.83	.	.	.	7.95
1939	2.20	-1.46	.	.	.	-5.06
1940	5.38	-4.41	.	.	.	3.15
1941	6.12	-5.22	.	.	.	-2.19
1942	2.88	-2.27	.	.	.	0.19
1943	1.87	-1.36	.	.	.	1.98
1944	-1.83	2.26	.	.	.	5.08
1945	1.87	-1.48	.	.	.	3.25
1946	5.50	-4.85	.	.	.	0.48
1947	14.78	-12.52	.	.	.	-10.12
1948	9.09	-7.96	.	.	.	-10.52
1949	0.69	-0.21	.	.	.	4.13
1950	6.21	-5.34	-4.64	.	.	-5.96
1951	10.39	-8.71	-7.65	.	.	-12.25
1952	-1.18	2.25	2.71	2.89	2.37	3.21
1953	0.00	1.66	3.15	3.06	4.21	3.64
1954	0.00	1.53	4.75	6.91	8.67	9.99
1955	0.60	0.86	-0.23	-0.99	-1.39	-0.93
1956	2.96	-0.05	-0.91	-2.58	-5.12	-6.40
1957	1.72	2.10	3.49	4.62	6.11	4.10
1958	2.82	-0.65	0.38	-0.26	-2.44	-8.28
1959	1.10	3.64	3.01	1.25	-2.87	-5.47
1960	1.63	1.87	4.27	4.44	8.69	5.38
1961	0.00	2.89	4.62	7.30	7.38	9.78
1962	1.60	2.41	1.08	1.39	0.62	1.42
1963	2.11	1.53	1.86	1.76	1.83	2.11
1964	2.06	1.70	2.29	2.38	2.83	4.81
1965	3.03	0.97	0.34	-0.01	-1.28	-2.01
1966	3.43	1.65	1.39	0.87	0.09	-1.82
1967	3.79	0.80	0.97	-0.56	-2.39	-5.77
1968	4.11	2.26	1.55	0.87	-0.91	-4.72
1969	4.82	2.49	0.66	-0.86	-3.26	-6.52
1970	1.26	5.25	9.98	15.02	19.37	20.47
1971	4.96	-1.11	0.43	1.39	3.99	6.28
1972	5.12	-1.46	-1.29	-2.34	-3.29	-3.81
1973	9.36	-3.57	-5.35	-6.07	-6.31	-7.00
1974	12.33	-3.65	-4.48	-3.70	-4.72	-12.48
1975	9.45	-1.73	-3.93	-5.67	-8.25	-6.06
1976	5.85	3.39	3.32	4.36	7.95	12.45
1977	9.47	-1.47	-1.75	-2.42	-3.28	-3.20
1978	8.41	0.48	-2.85	-4.49	-6.55	-6.57
1979	9.76	2.53	-1.21	-3.68	-5.97	-11.28
1980	11.11	2.35	0.76	-1.21	-4.93	-8.15
1981	12.18	7.31	-0.81	-4.85	-9.08	-13.55
1982	9.24	5.50	10.39	16.75	24.48	30.89
1983	4.60	5.03	5.51	5.55	4.76	4.78
1984	3.69	7.96	6.68	7.38	8.52	11.00
1985	4.38	5.16	7.30	10.00	14.20	20.01
1986	4.19	5.07	5.34	6.46	9.20	12.80
1987	4.15	4.14	3.51	1.82	-0.55	-3.55
1988	3.99	5.56	4.90	4.86	5.47	6.21
1989	5.23	7.30	5.12	5.69	7.21	10.52
1990	4.97	8.58	5.94	4.46	1.99	-1.55
1991	3.79	5.57	9.92	13.34	15.82	19.89
1992	2.13	4.28	5.98	7.44	7.98	10.72
1993	1.69	3.53	8.09	10.84	15.36	20.84
1994	0.20	5.13	0.36	-3.86	-7.28	-10.64
1995	1.75	5.58	9.94	14.04	18.67	24.11
1996	2.20	2.23	5.46	7.89	9.49	11.83
1997	0.75	2.53	2.56	4.02	7.93	16.58
1998	1.02	3.75	4.59	5.93	8.20	12.98
1999	2.58	2.19	1.30	-1.31	-4.53	-9.48
2000	3.23	2.33	3.17	5.12	7.45	10.08
2001	0.70	3.41	6.61	6.84	5.24	3.21
2002	3.88	-1.28	-0.51	2.35	4.91	5.98
2003	1.99	0.92	1.44	2.44	3.61	5.95
2004	2.12	0.13	0.87	2.11	3.76	6.21
2005	2.15	0.51	0.20	0.68	3.53	12.63

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TABLE 4C (Cont'd)

GEOMETRIC AVERAGES OVER SELECTED INTERVALS								
	PERIOD	CPI	91 DAY	1-3 YEAR	3-5 YEAR	5-10 YEAR	10+ YEAR	
5 YEARS	1941-1945	2.03	-1.57	.	.	.	2.18	
	1946-1950	8.13	-7.04	.	.	.	-7.12	
	1951-1955	-0.12	1.56	.	.	.	5.09	
	1956-1960	2.04	1.37	2.03	1.45	0.73	-2.30	
	1961-1965	1.76	1.90	2.03	2.54	2.24	3.15	
	1966-1970	3.48	2.48	2.85	2.90	2.26	-0.15	
	1971-1975	8.21	-2.31	-2.95	-3.32	-3.80	-4.81	
	1976-1980	8.91	1.44	-0.37	-1.54	-2.70	-3.69	
	1981-1985	6.77	6.19	5.75	6.73	8.00	9.57	
	1986-1990	4.50	6.12	4.96	4.65	4.60	4.69	
	1991-1995	1.90	4.81	6.80	8.15	9.68	12.21	
	1996-2000	1.95	2.61	3.41	4.28	5.58	7.98	
	2001-2005	2.16	0.72	1.69	2.86	4.21	6.75	
MEAN	1956-2005	4.13	2.50	2.58	2.82	3.00	3.19	
STD DEV	1956-2005	2.80	2.61	2.89	3.46	4.29	5.89	
10 YEARS	1946-1955	3.92	-2.83	.	.	.	-1.20	
	1956-1965	1.90	1.63	2.03	1.99	1.48	0.39	
	1966-1975	5.81	0.05	-0.09	-0.26	-0.82	-2.50	
	1976-1985	7.83	3.79	2.64	2.51	2.51	2.73	
	1986-1995	3.20	5.46	5.88	6.39	7.11	8.38	
	1996-2005	2.06	1.66	2.55	3.57	4.89	7.36	
	MEAN	1956-2005	4.13	2.50	2.58	2.82	3.00	3.19
	STD DEV	1956-2005	2.58	2.11	2.14	2.42	3.07	4.61
15 YEARS	1946-1960	3.29	-1.45	.	.	.	-1.57	
	1961-1975	4.44	0.67	0.61	0.67	0.19	-0.66	
	1976-1990	6.71	4.56	3.41	3.22	3.20	3.38	
	1991-2005	2.01	2.70	3.94	5.08	6.46	8.95	
25 YEARS	1956-1980	4.83	0.96	0.69	0.38	-0.29	-1.60	
	1981-2005	3.44	4.07	4.51	5.32	6.39	8.21	
50 YEARS	1956-2005	4.13	2.50	2.58	2.82	3.00	3.19	
60 YEARS	1946-2005	4.10	1.59	.	.	.	2.44	

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STANDARD DEVIATIONS OVER SELECTED INTERVALS							
	PERIOD	CPI	91 DAY	1-3 YEAR	3-5 YEAR	5-10 YEAR	10+ YEAR
5 YEARS	1941-1945	2.85	3.03	.	.	.	2.85
	1946-1950	5.27	5.32	.	.	.	8.84
	1951-1955	5.29	6.20	.	.	.	10.64
	1956-1960	0.81	1.73	2.21	2.97	4.76	5.13
	1961-1965	1.11	0.60	1.79	2.66	4.22	3.73
	1966-1970	1.35	1.21	2.15	3.27	4.45	4.98
	1971-1975	3.16	3.96	6.88	9.58	12.30	14.37
	1976-1980	1.97	2.47	2.96	4.06	6.52	9.11
	1981-1985	3.72	2.29	4.75	8.65	13.61	18.22
	1986-1990	0.55	1.38	1.39	3.20	6.07	10.06
	1991-1995	1.28	2.05	3.68	6.94	10.24	14.55
	1996-2000	1.05	1.62	3.66	5.96	8.68	13.03
	2001-2005	1.13	1.88	2.82	2.34	1.78	2.51
10 YEARS	1946-1955	5.50	5.15	.	.	.	7.67
	1956-1965	0.93	1.30	1.90	2.93	4.68	5.85
	1966-1975	3.40	2.83	4.17	5.67	7.39	9.18
	1976-1985	3.02	3.45	4.81	7.35	10.78	13.90
	1986-1995	1.65	1.51	2.61	4.89	7.41	10.85
	1996-2005	1.04	2.00	3.32	4.42	6.05	9.01
15 YEARS	1946-1960	4.59	4.59	.	.	.	6.79
	1961-1975	3.43	2.44	3.67	4.98	6.64	8.24
	1976-1990	2.94	3.08	4.26	6.42	9.51	12.64
	1991-2005	1.08	2.51	3.43	4.96	6.98	10.25
25 YEARS	1956-1980	3.58	2.20	3.26	4.50	6.22	7.77
	1981-2005	2.63	2.41	3.26	5.24	7.91	11.27
50 YEARS	1956-2005	3.19	2.81	3.77	5.43	7.72	10.58
60 YEARS	1946-2005	3.61	3.98	.	.	.	10.26

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CORRELATIONS OF RETURNS BY TIME TO MATURITY							
	CPI	91 DAY	1-3 YEAR	3-5 YEAR	5-10 YEAR	10+ YEAR	
	LAST 10 YEARS						
CPI		-0.69	-0.59	-0.38	-0.25	-0.28	
91 DAY	-0.39		0.84	0.54	0.25	0.08	
1-3 YEAR	-0.48	0.80		0.85	0.49	0.17	
3-5 YEAR	-0.39	0.58	0.96		0.85	0.53	
5-10 YEAR	-0.36	0.46	0.88	0.97		0.87	
10+ YEAR	-0.43	0.49	0.81	0.91	0.96		
	ALL YEARS						

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TABLE 5
RETURNS ON U.S. COMMON STOCKS IN CANADIAN DOLLARS

ANNUAL PERCENTAGE RATES OF TOTAL RETURN			
YEAR	RETURN ON S&P 500 (NOMINAL VALUES)	DECEMBER EXCHANGE RATE U.S. IN CANADIAN DOLLARS	RETURN IN CANADIAN DOLLARS (NOMINAL VALUES)
1938	33.23	1.0097	34.42
1939	-0.89	1.1050	8.46
1940	-9.98	1.1050	-9.98
1941	-11.70	1.1050	-11.70
1942	21.08	1.1050	21.08
1943	25.59	1.1050	25.59
1944	19.60	1.1050	19.60
1945	36.39	1.1025	36.09
1946	-8.12	1.0025	-16.45
1947	5.27	1.0025	5.27
1948	5.08	1.0025	5.08
1949	18.00	1.1025	29.78
1950	30.47	1.0531	24.63
1951	24.61	1.0256	21.35
1952	18.31	0.9706	11.96
1953	-1.01	0.9731	-0.75
1954	52.16	0.9680	51.37
1955	31.37	0.9995	35.64
1956	6.59	0.9605	2.43
1957	-10.77	0.9774	-9.20
1958	43.21	0.9646	41.33
1959	11.92	0.9512	10.36
1960	0.46	0.9824	3.76
1961	26.79	1.0427	34.58
1962	-8.72	1.0760	-5.81
1963	22.67	1.0793	23.05
1964	16.33	1.0746	15.82
1965	12.37	1.0758	12.50
1966	-10.04	1.0831	-9.43
1967	23.89	1.0802	23.56
1968	10.99	1.0731	10.26
1969	-8.42	1.0742	-8.33
1970	3.95	1.0174	-1.55
1971	14.26	0.9992	12.22
1972	18.91	0.9967	18.62
1973	-14.76	0.9994	-14.53
1974	-26.37	0.9881	-27.20
1975	37.19	1.0138	40.76
1976	23.59	1.0187	24.18
1977	-7.39	1.0972	-0.25
1978	6.43	1.1795	14.41
1979	18.24	1.1696	17.25
1980	32.31	1.1968	35.39
1981	-4.98	1.1851	-5.91
1982	21.49	1.2382	26.93
1983	22.41	1.2468	23.26
1984	6.13	1.3202	12.37
1985	31.22	1.3949	38.65
1986	18.91	1.3798	17.63
1987	5.11	1.3074	-0.40
1988	16.61	1.1960	6.67
1989	31.69	1.1612	27.86
1990	-3.10	1.1600	-3.20
1991	30.47	1.1457	28.86
1992	7.62	1.2727	19.55
1993	10.08	1.3307	15.10
1994	1.32	1.3884	5.71
1995	37.58	1.3695	35.71
1996	22.96	1.3618	22.27
1997	33.36	1.4267	39.72
1998	28.58	1.5422	38.99
1999	21.04	1.4733	15.63
2000	-9.10	1.5224	-6.07
2001	-11.89	1.5775	-8.70
2002	-22.10	1.5593	-23.00
2003	28.69	1.3128	8.34
2004	10.88	1.2191	2.97
2005	4.91	1.1610	-0.09

Source: Standard & Poor's, a division of The McGraw-Hill Companies, Inc. © Copyright 2006. All Rights Reserved.
Source: Statistics Canada CANSIM Series © Copyright 2006. All Rights Reserved.

This table converts S&P 500 Common Stock Index values and reinvested dividends to Canadian dollars and gives total return rates in Canadian dollars. The values in the last column are used in Tables 1A-1D and 2A-2B.

TABLE 6
RETURNS ON INTERNATIONAL STOCK INDICES
ANNUAL PERCENTAGE RATES OF TOTAL RETURN

MEASURED IN U.S. DOLLARS					MEASURED IN CANADIAN DOLLARS				
YEAR	WORLD INDEX	WORLD EXC. U.S.	EUROPEAN INDEX	PACIFIC BASIN INDEX	YEAR	WORLD INDEX	WORLD EXC. U.S.	EUROPEAN INDEX	PACIFIC BASIN INDEX
1970	-1.98	-13.41	-9.36	-11.99	1970	-7.17	-17.99	-14.15	-16.65
1971	19.56	33.30	28.04	38.76	1971	17.43	30.91	25.75	36.27
1972	23.55	40.36	15.62	107.55	1972	23.24	40.01	15.33	107.03
1973	-14.51	-10.67	-7.73	-20.95	1973	-14.27	-10.43	-7.48	-20.74
1974	-24.48	-18.53	-22.78	-20.94	1974	-25.33	-19.45	-23.65	-21.83
1975	34.50	32.76	43.90	26.72	1975	37.99	36.22	47.64	30.02
1976	14.71	3.55	-6.37	21.64	1976	15.27	4.05	-5.92	22.23
1977	2.00	17.52	23.92	13.69	1977	9.86	26.57	33.47	22.45
1978	18.22	33.10	24.30	48.77	1978	27.08	43.08	33.62	59.93
1979	12.67	10.94	14.67	-3.48	1979	11.72	10.01	13.71	-4.29
1980	27.72	25.44	14.53	36.38	1980	30.69	28.36	17.19	39.55
1981	-3.30	-2.45	-10.45	8.31	1981	-4.25	-3.41	-11.32	7.25
1982	11.27	-0.26	5.69	-6.26	1982	16.26	4.21	10.43	-2.06
1983	23.28	24.79	22.38	26.42	1983	24.14	25.65	23.23	27.29
1984	5.77	3.47	1.26	13.48	1984	12.00	9.56	7.22	20.16
1985	41.77	51.40	79.79	39.39	1985	49.79	59.97	89.96	47.28
1986	42.80	65.84	44.46	93.82	1986	41.25	64.05	42.90	91.72
1987	16.76	24.56	4.10	39.85	1987	10.64	18.02	-1.37	32.51
1988	23.95	27.80	16.35	35.19	1988	13.39	16.91	6.44	23.67
1989	17.19	11.42	29.06	2.68	1989	13.78	8.18	25.30	-0.31
1990	-16.52	-22.81	-3.37	-34.29	1990	-16.60	-22.89	-3.47	-34.36
1991	18.97	12.44	13.66	11.54	1991	17.50	11.05	12.26	10.16
1992	-4.66	-11.93	-4.25	-18.20	1992	5.91	-2.17	6.37	-9.13
1993	23.13	32.61	29.79	35.97	1993	28.74	38.66	35.71	42.17
1994	5.58	7.64	2.66	13.03	1994	10.16	12.31	7.11	17.93
1995	21.32	11.76	22.13	2.99	1995	19.67	10.24	20.47	1.59
1996	14.00	7.20	21.57	-8.40	1996	13.36	6.59	20.89	-8.92
1997	16.23	2.56	24.20	-25.34	1997	21.77	7.45	30.12	-21.78
1998	24.80	19.11	28.91	2.69	1998	34.90	28.75	39.34	11.01
1999	25.34	28.27	16.23	57.96	1999	19.74	22.54	11.04	50.90
2000	-12.92	-13.16	-8.14	-25.64	2000	-10.02	-10.26	-5.08	-23.17
2001	-16.52	-21.16	-19.64	-25.22	2001	-13.50	-18.30	-16.73	-22.51
2002	-19.54	-15.51	-18.09	-9.01	2002	-20.47	-16.49	-19.04	-10.06
2003	33.76	40.01	39.14	38.98	2003	12.62	17.88	17.15	17.01
2004	15.25	20.84	21.39	19.30	2004	7.02	12.22	12.72	10.79
2005	10.02	14.96	9.93	23.01	2005	4.78	9.48	4.69	17.14

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**CORRELATIONS OF NOMINAL ANNUAL
 PERCENTAGE RATES OF CHANGE/RETURN**

MEASURED IN CANADIAN DOLLARS									
	CONSUMER PRICE INDEX	COMMON STOCK INDEX	CANADIAN LONG BONDS	CANADIAN 91-DAY T-BILLS	U.S. STOCK INDEX	WORLD INDEX	WORLD EXC. U.S.A. INDEX	EUROPEAN INDEX	PACIFIC BASIN INDEX
	LAST 10 YEARS								
CPI		0.04	-0.14	-0.04	-0.63	-0.52	-0.29	-0.51	0.13
STOCKS	0.08		-0.13	0.00	0.39	0.52	0.62	0.48	0.58
LONG BONDS	-0.06	0.05		-0.15	0.23	0.06	-0.10	0.29	-0.61
91-DAY T-BILLS	0.45	-0.10	0.27		0.27	0.18	0.04	0.12	-0.08
U.S. STOCKS	-0.20	0.70	0.25	0.02		0.93	0.73	0.95	0.16
WORLD	-0.09	0.65	0.27	0.06	0.86		0.91	0.96	0.46
WORLD EXC. U.S.A.	0.01	0.61	0.08	-0.03	0.59	0.91		0.85	0.73
EUROPE	-0.07	0.56	0.27	-0.01	0.73	0.88	0.85		0.28
PACIFIC BASIN	0.05	0.50	-0.09	-0.03	0.34	0.70	0.87	0.52	
	ALL YEARS								

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All rates of return are gross of tax and include both market value changes and dividends.

TABLE 7
REAL ESTATE RETURNS

NOMINAL ANNUAL PERCENTAGE RATE OF RETURN	
YEAR	RETURN
1973	35.5
1974	19.4
1975	14.1
1976	10.2
1977	14.9
1978	12.0
1979	13.0
1980	23.1
1981	26.4
1982	1.2
1983	6.7
1984	12.4
1985	11.5
1986	12.9
1987	14.6
1988	16.4
1989	16.8
1990	4.3
1991	0.2
1992	-5.5
1993	-6.4
1994	1.9
1995	5.0
1996	7.0
1997	18.5
1998	16.0
1999	10.6
2000	12.0
2001	9.2
2002	8.8
2003	8.4
2004	13.0
2005	18.7

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GEOMETRIC AVERAGES OVER SELECTED PERIODS		
	PERIOD	RETURN
5 YEARS	1976-1980	14.6
	1981-1985	11.3
	1986-1990	12.9
	1991-1995	-1.1
	1996-2000	12.8
	2001-2005	11.6
10 YEARS	1976-1985	12.9
	1986-1995	5.7
	1996-2005	12.2
15 YEARS	1976-1990	12.9
	1991-2005	7.6
20 YEARS	1986-2005	8.9

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STANDARD DEVIATIONS OVER SELECTED PERIODS		
	PERIOD	RETURN
5 YEARS	1976-1980	5.0
	1981-1985	9.4
	1986-1990	5.1
	1991-1995	4.9
	1996-2000	4.5
	2001-2005	4.4
10 YEARS	1976-1985	7.3
	1986-1995	8.7
	1996-2005	4.2
15 YEARS	1976-1990	6.4
	1991-2005	7.7
20 YEARS	1986-2005	7.4

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Tracks the unlevered turns of income-producing, investment grade properties held or managed by pension funds, life insurance companies, and real estate managers

1973 - 1985: the total return was provided by Morguard Investments Limited
 1985 - 1999: based on the Russell Canadian Property Index™ (RCPI)
 2000 onwards: based on ICRED/IPD Property Index, which can be downloaded
 from www.ipdindex.co.uk/results/indices/canada/index_canada.asp

TABLE 8
PENSION PLAN ASSET MEDIAN RETURNS

MEDIAN INVESTMENT RESULTS ANNUAL RATES OF RETURN							
YEAR	TOTAL FUND	CANADIAN COMMON STOCKS	FOREIGN COMMON STOCKS	BONDS	MORTGAGES	REAL ESTATE	TOTAL FIXED INCOME
1960	9.5	4.1	7.6	.	.	.	11.4
1961	13.3	30.1	16.9	.	.	.	8.8
1962	2.0	-5.1	-7.4	4.9	.	.	5.1
1963	8.1	13.8	25.9	5.5	.	.	5.6
1964	11.1	23.6	13.7	6.3	.	.	6.5
1965	3.5	5.5	7.1	1.3	.	.	1.2
1966	-2.3	-7.7	-2.8	0.0	.	.	0.0
1967	7.6	15.8	29.9	0.3	.	.	0.6
1968	9.4	22.1	4.0	1.9	.	.	2.4
1969	-3.2	-1.8	-14.4	-2.0	.	.	-5.4
1970	1.3	-4.4	-13.3	16.3	.	.	9.9
1971	12.5	11.6	17.3	15.6	.	.	12.0
1972	18.4	28.9	15.7	7.6	.	.	8.3
1973	-2.1	-4.3	-22.0	3.2	.	.	3.5
1974	-12.7	-25.7	-30.1	-0.1	.	.	2.7
1975	13.2	18.0	31.6	9.2	.	.	9.8
1976	12.4	8.0	17.2	18.5	.	.	15.5
1977	8.7	7.9	1.0	9.2	.	.	10.0
1978	13.5	29.4	15.8	4.9	.	.	6.9
1979	15.0	38.3	19.7	0.5	.	6.6	5.0
1980	18.0	33.4	38.0	6.0	.	6.6	8.8
1981	1.6	-9.1	-7.6	3.3	.	12.8	8.9
1982	22.6	9.2	25.7	33.7	.	13.1	26.1
1983	20.0	34.8	22.8	11.2	.	10.2	11.9
1984	9.2	0.8	7.0	15.8	.	12.6	14.7
1985	23.6	26.6	38.5	21.9	14.2	11.7	19.1
1986	13.4	11.6	16.4	13.6	11.9	11.9	13.2
1987	3.8	3.8	-1.7	3.9	8.9	13.1	5.1
1988	10.4	13.3	8.2	9.2	9.7	14.2	9.5
1989	15.9	20.1	23.9	12.8	12.7	15.6	12.5
1990	-0.8	-13.7	-5.9	7.9	11.0	5.5	9.3
1991	17.3	12.7	29.1	21.9	16.7	-0.4	20.4
1992	5.9	-2.5	16.7	10.3	10.0	-6.9	10.0
1993	21.4	29.4	15.1	18.4	10.6	-6.5	16.9
1994	-0.7	1.3	5.3	-4.3	1.3	-1.6	-3.0
1995	17.4	15.0	20.8	21.0	12.3	-0.1	19.6
1996	18.8	28.9	17.1	11.8	9.9	2.4	11.2
1997	14.8	19.3	21.3	9.7	5.3	11.8	8.9
1998	8.0	-1.8	26.1	9.4	7.0	11.6	8.9
1999	11.3	24.1	17.0	-1.3	4.2	9.7	-0.7
2000	9.8	18.6	-6.0	10.5	9.0	9.4	9.8
2001	0.6	-0.8	-8.9	8.1	8.3	9.1	7.7
2002	-3.9	-7.3	-18.6	9.3	7.6	8.8	8.8
2003	13.5	26.7	8.1	7.0	7.0	9.1	6.5
2004	10.1	15.7	6.5	7.2	7.4	11.2	6.7
2005	11.8	24.1	6.0	6.5	5.9	16.2	6.1

Source: RBC Dexia Investor Services © Copyright 2006. All Rights Reserved.

1960 - 1999: the data was provided by SEI Financial Services

2000: the data was provided by Royal Trust Investment Services

2001 - 2004: based on RBC Global Services - Benchmark

2005 onwards: based on RBC Dexia Investor Services – Benchmark

TABLE 8 (Cont'd)

GEOMETRIC AVERAGES OVER SELECTED INTERVALS								
	PERIOD	TOTAL FUND	CANADIAN COMMON STOCKS	FOREIGN COMMON STOCKS	BONDS	MORTGAGES	REAL ESTATE	TOTAL FIXED INCOME
5 YEARS	1966-1970	2.43	4.15	-0.51	3.10			1.38
	1971-1975	5.20	3.83	-0.53	6.97			7.20
	1976-1980	13.48	22.71	17.76	7.66			9.18
	1981-1985	15.07	11.29	16.15	16.74		12.08	15.99
	1986-1990	8.36	6.35	7.62	9.42		12.00	9.88
	1991-1995	11.95	10.62	17.14	13.01	10.06	-3.15	12.43
	1996-2000	12.47	17.32	14.52	7.91	7.06	8.92	7.53
	2001-2005	6.20	10.84	-1.97	7.61	7.23	10.84	7.16
MEAN	1986-2005	9.72	11.21	9.07	9.47		6.98	9.23
STD DEV	1986-2005	2.99	4.53	8.54	2.48		6.98	2.44
10 YEARS	1966-1975	3.81	3.99	-0.52	5.02			4.25
	1976-1985	14.27	16.86	16.95	12.10			12.53
	1986-1995	10.14	8.46	12.28	11.20		4.15	11.15
	1996-2005	9.29	14.03	5.96	7.76	7.15	9.88	7.34
	MEAN	1986-2005	9.72	11.21	9.07	9.47		6.98	9.23
STD DEV	1986-2005	0.60	3.94	4.47	2.44		4.05	2.69
15 YEARS	1976-1990	12.27	13.25	13.75	11.20			11.64
	1991-2005	10.17	12.88	9.56	9.48	8.11	5.35	9.01
25 YEARS	1981-2005	10.77	11.23	10.45	10.88		7.98	10.55

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STANDARD DEVIATIONS OVER SELECTED INTERVALS								
	PERIOD	TOTAL FUND	CANADIAN COMMON STOCKS	FOREIGN COMMON STOCKS	BONDS	MORTGAGES	REAL ESTATE	TOTAL FIXED INCOME
5 YEARS	1966-1970	5.72	12.61	17.33	3.47			3.52
	1971-1975	12.90	20.58	22.80	7.52			4.05
	1976-1980	3.42	13.65	10.96	6.73			3.99
	1981-1985	9.61	19.82	17.75	12.40		2.97	7.46
	1986-1990	6.91	13.05	18.60	7.33		2.18	5.61
	1991-1995	9.28	17.37	14.31	10.50	5.52	5.24	9.18
	1996-2000	4.30	11.78	7.62	8.32	3.42	5.92	7.59
	2001-2005	7.63	14.14	11.32	1.72	1.06	1.77	1.63
10 YEARS	1966-1975	9.56	16.12	19.10	6.63			5.26
	1976-1985	6.87	16.20	13.88	9.66			6.03
	1986-1995	7.96	13.49	13.91	8.15		8.95	6.93
	1996-2005	6.67	12.74	15.19	5.69	2.39	4.30	5.21
15 YEARS	1976-1990	7.24	14.21	14.24	8.50			5.53
	1991-2005	7.42	14.19	14.03	7.05	3.65	6.55	6.34
25 YEARS	1981-2005	7.81	14.02	15.01	7.96		6.36	6.33

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CORRELATIONS OF RATES OF RETURN							
	TOTAL FUND	CANADIAN COMMON STOCKS	FOREIGN COMMON STOCKS	BONDS	MORTGAGES	REAL ESTATE	TOTAL FIXED INCOME
	LAST 10 YEARS						
TOTAL FUND		0.89	0.74	0.00	-0.08	-0.14	-0.01
CANADIAN STOCKS	0.84		0.44	-0.22	-0.14	-0.10	-0.23
FOREIGN STOCKS	0.83	0.69		-0.15	-0.38	0.05	-0.15
BONDS	0.60	0.15	0.39		0.75	-0.30	1.00
MORTGAGES	0.49	0.10	0.40	0.87		-0.63	0.77
REAL ESTATE	-0.03	0.00	-0.11	-0.05	-0.14		-0.33
TOTAL FIXED INCOME	0.64	0.19	0.43	0.96	0.90	-0.07	
	ALL YEARS						

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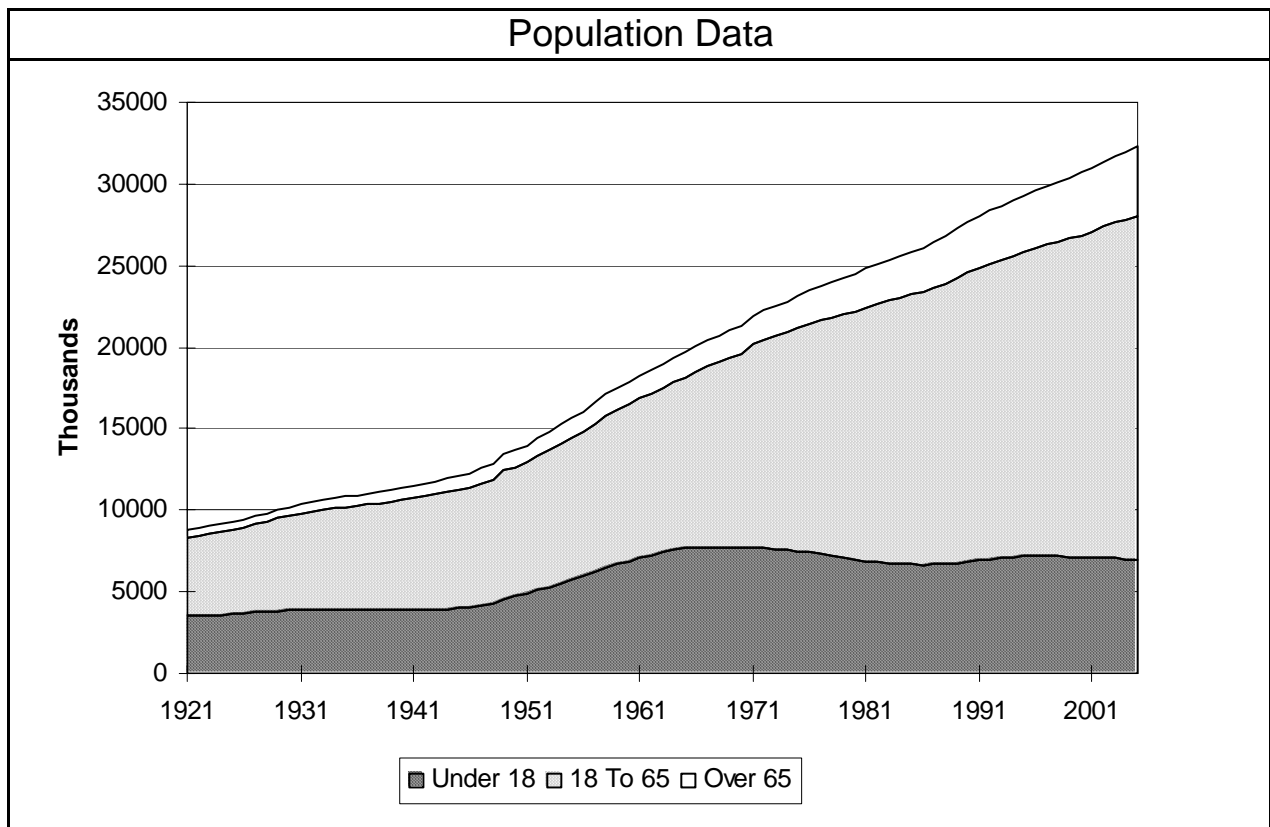
TABLE 9
HISTORICAL CANADIAN POPULATION AND
DEPENDENCY RATIOS

YEAR	TOTAL POPULATION V466668	POP<18/ POP 18-65	POP>65/ POP 18-65	YEAR	TOTAL POPULATION V466668	POP<18/ POP 18-65	POP>65/ POP 18-65
1921	8,788,000	72.6	8.7	1964	19,291,000	73.8	14.4
1922	8,919,000	72.0	8.8	1965	19,644,000	73.2	14.4
1923	9,010,000	71.6	8.8	1966	20,014,900	72.0	14.3
1924	9,143,000	71.1	9.0	1967	20,378,000	70.3	14.3
1925	9,294,000	70.6	9.1	1968	20,701,100	68.5	14.2
1926	9,451,000	70.3	9.2	1969	21,001,000	66.7	14.2
1927	9,637,000	69.3	9.3	1970	21,297,000	64.9	14.3
1928	9,835,000	68.4	9.4	1971	21,961,999	62.5	14.2
1929	10,029,000	67.7	9.5	1972	22,218,475	60.6	14.2
1930	10,208,000	67.1	9.7	1973	22,491,757	58.5	14.2
1931	10,376,700	66.6	9.8	1974	22,807,918	56.4	14.3
1932	10,510,000	65.5	9.9	1975	23,143,192	54.6	14.3
1933	10,633,000	64.3	10.0	1976	23,449,791	52.8	14.4
1934	10,741,000	63.2	10.1	1977	23,725,921	51.1	14.6
1935	10,845,000	62.0	10.3	1978	23,963,370	49.4	14.8
1936	10,950,000	61.0	10.5	1979	24,201,801	47.6	15.0
1937	11,045,000	59.9	10.6	1980	24,516,071	46.1	15.2
1938	11,152,000	58.9	10.7	1981	24,820,393	44.5	15.3
1939	11,267,000	58.0	10.8	1982	25,117,442	43.1	15.4
1940	11,381,000	57.1	11.0	1983	25,366,969	41.8	15.5
1941	11,506,700	56.5	11.2	1984	25,607,651	41.0	15.7
1942	11,654,000	55.7	11.3	1985	25,842,736	40.4	16.0
1943	11,795,000	55.3	11.5	1986	26,101,155	39.9	16.4
1944	11,946,000	55.1	11.7	1987	26,448,855	39.6	16.8
1945	12,072,000	55.1	11.8	1988	26,795,383	39.2	17.1
1946	12,292,000	55.3	12.0	1989	27,281,795	38.8	17.3
1947	12,551,000	56.0	12.3	1990	27,697,530	38.8	17.6
1948	12,823,000	57.1	12.7	1991	28,031,394	38.8	18.0
1949	13,447,000	58.5	13.0	1992	28,366,737	38.9	18.3
1950	13,712,000	59.3	13.2	1993	28,681,676	38.8	18.5
1951	14,009,400	60.6	13.5	1994	28,999,006	38.6	18.6
1952	14,459,000	61.9	13.6	1995	29,302,091	38.4	18.8
1953	14,845,000	62.9	13.7	1996	29,610,757	38.2	19.0
1954	15,287,000	64.2	13.8	1997	29,907,172	37.8	19.2
1955	15,698,000	65.5	13.9	1998	30,157,082	37.4	19.4
1956	16,080,800	66.7	14.0	1999	30,403,878	36.8	19.5
1957	16,610,000	68.0	13.9	2000	30,689,035	36.2	19.6
1958	17,080,000	69.5	13.9	2001	31,021,251	35.7	19.6
1959	17,483,000	70.5	14.0	2002	31,372,587	34.9	19.7
1960	17,870,000	71.7	14.1	2003	31,669,150	34.2	19.8
1961	18,238,200	72.8	14.3	2004	31,974,363	33.6	19.9
1962	18,583,000	73.4	14.3	2005	32,270,507	33.0	20.0
1963	18,931,000	73.9	14.4				

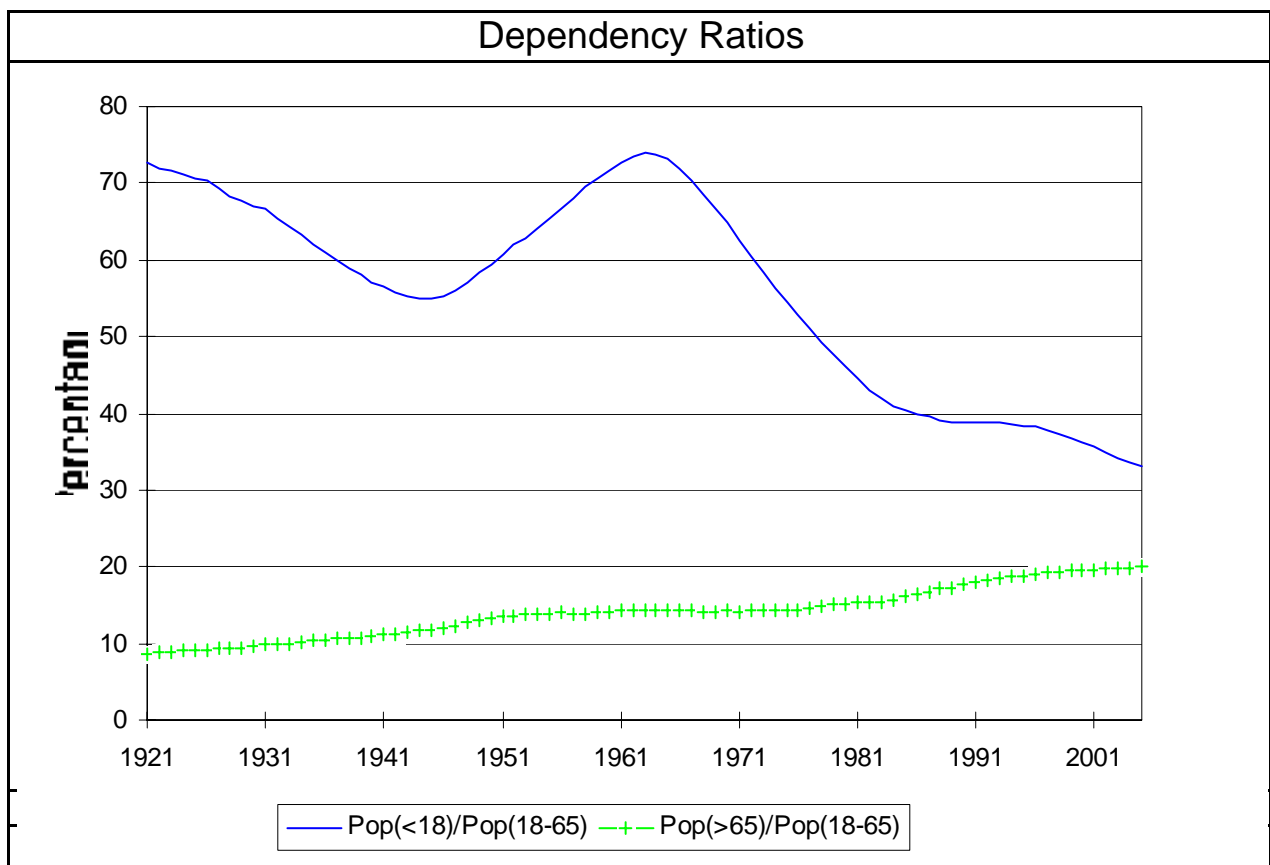
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POP (<18)/POP (18-65): This is the ratio, as a percentage, of the number of people under age 18 to the number of people aged 18 to 65.

POP (>65)/POP (18-65): This is the ratio, as a percentage, of the number of people over age 65 to the number of people aged 18 to 65.



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TABLE 10
GOVERNMENT OF CANADA SECURITIES BY TERM

TABLE 10 ANALYSIS OF INTEREST RATES BY TERM OF SECURITY GOVERNMENT OF CANADA SECURITIES NOMINAL YIELDS TO MATURITY COMPOUNDED SEMI-ANNUALLY								
YEAR	3 MONTH B14007	6 MONTH B14008	2 YEAR B14067	3 YEAR B14068	5 YEAR B14069	7 YEAR B14070	10 YEAR B14071	LONG TERM B14072
1936	0.75	.	.	.	.	.	.	.
1937	0.76	.	.	.	.	.	.	.
1938	0.68	.	.	.	.	.	.	.
1939	0.81	.	.	.	.	.	.	.
1940	0.64	.	.	.	.	.	.	.
1941	0.55	.	.	.	.	.	.	.
1942	0.52	.	.	.	.	.	.	.
1943	0.41	.	.	.	.	.	.	.
1944	0.37	.	.	.	.	.	.	.
1945	0.36	.	.	.	.	.	.	.
1946	0.40	.	.	.	.	.	.	.
1947	0.41	.	.	.	.	.	.	.
1948	0.41	.	.	.	.	.	.	.
1949	0.51	.	.	.	.	.	.	.
1950	0.63	.	.	.	.	.	.	.
1951	0.90	.	.	.	.	.	.	.
1952	1.30	.	.	.	.	.	.	.
1953	1.89	.	.	.	.	.	.	.
1954	1.06	.	.	.	.	.	.	.
1955	2.56	.	.	.	.	.	.	.
1956	3.67	.	.	.	.	.	.	.
1957	3.62	.	.	.	.	.	.	.
1958	3.49	.	.	.	.	.	.	.
1959	5.12	5.47	.	.	.	.	.	.
1960	3.25	3.54	.	.	.	.	.	.
1961	2.99	3.14	.	.	.	.	.	.
1962	3.91	4.01	.	.	.	.	.	.
1963	3.78	3.99	.	.	.	.	.	.
1964	3.82	3.96	.	.	.	.	.	.
1965	4.54	4.77	.	.	.	.	.	.
1966	4.96	5.03	.	.	.	.	.	.
1967	5.95	6.13	.	.	.	.	.	.
1968	6.24	6.47	.	.	.	.	.	.
1969	7.81	7.88	.	.	.	.	.	.
1970	4.44	4.52	.	.	.	.	.	.
1971	3.21	3.31	.	.	.	.	.	.
1972	3.65	3.87	.	.	.	.	.	.
1973	6.35	6.51	.	.	.	.	.	.
1974	7.12	6.97	.	.	.	.	.	.
1975	8.64	8.83	.	.	.	.	.	.
1976	8.14	7.93	.	.	.	.	.	8.85
1977	7.17	7.36	.	.	.	.	.	9.22
1978	10.46	10.71	.	.	.	.	.	9.95
1979	13.66	13.60	.	.	.	.	.	11.60
1980	17.01	15.30	.	.	12.53	.	.	13.04
1981	14.41	14.51	.	.	15.24	.	.	15.52
1982	9.80	9.39	10.03	10.14	10.42	.	11.31	11.92
1983	9.71	9.86	10.33	10.48	10.98	.	11.72	12.29
1984	9.84	10.16	10.18	10.53	10.90	.	11.52	11.99
1985	9.24	9.26	8.98	9.06	9.20	9.43	9.63	9.99
1986	8.24	8.48	8.55	8.49	8.63	8.65	8.74	8.90
1987	8.41	9.01	9.62	9.71	9.78	9.93	10.02	10.29
1988	10.94	11.40	10.56	10.27	10.27	10.26	10.17	10.00
1989	12.22	12.04	10.92	10.38	9.77	9.72	9.56	9.37
1990	11.47	11.40	10.46	10.41	10.27	10.38	10.34	10.40
1991	7.42	7.37	7.31	7.69	7.87	8.18	8.32	9.00
1992	7.11	7.17	6.93	7.08	7.34	7.84	7.86	8.36
1993	3.86	4.02	4.61	4.91	5.73	6.34	6.57	7.28
1994	7.18	8.11	8.84	9.00	8.99	9.08	9.07	9.13
1995	5.54	5.65	5.89	6.16	6.64	6.99	7.11	7.63
1996	2.80	3.18	4.03	4.85	5.44	6.02	6.37	7.09
1997	4.46	4.88	5.04	5.32	5.34	5.48	5.61	5.95
1998	4.70	4.76	4.72	4.83	4.76	4.82	4.89	5.23
1999	4.93	5.29	5.85	6.01	6.11	6.18	6.18	6.23
2000	5.56	5.58	5.27	5.30	5.30	5.34	5.35	5.56
2001	2.00	2.06	3.21	3.79	4.69	5.13	5.44	5.69
2002	2.67	2.79	3.18	3.55	4.06	4.47	4.88	5.42
2003	2.59	2.59	2.96	3.26	3.91	4.30	4.66	5.20
2004	2.48	2.58	3.05	3.26	3.74	4.08	4.39	4.92
2005	3.40	3.65	3.80	3.83	3.87	3.87	3.93	4.02

Source: Bank of Canada, Department of Monetary and Financial Analysis.

This table gives the actual mid-market closing yields of selected Canada bond issues that mature approximately in the indicated term areas. The given annual rate is that compounded semi-annually. At times, some of the change in the yield occurring over a reporting period may reflect a switch to a more topical issue.

TABLE 11
U.S. GOVERNMENT SECURITIES BY TERM

TABLE 11
ANALYSIS OF INTEREST RATES BY TERM OF SECURITY
U.S. GOVERNMENT SECURITIES
NOMINAL YIELDS TO MATURITY COMPOUNDED SEMI-ANNUALLY*

YEAR	3 MONTH T-BILL	6 MONTH T-BILL	1 YEAR T-BOND	2 YEAR T-BOND	3 YEAR T-BOND	5 YEAR T-BOND	7 YEAR T-BOND	10 YEAR T-BOND	20 YEAR T-BOND	30 YEAR T-BOND
1934	0.23	.	.	.	.	.	.	.	.	.
1935	0.15	.	.	.	.	.	.	.	.	.
1936	0.12	.	.	.	.	.	.	.	.	.
1937	0.11	.	.	.	.	.	.	.	.	.
1938	0.03	.	.	.	.	.	.	.	.	.
1939	0.04	.	.	.	.	.	.	.	.	.
1940	0.02	.	.	.	.	.	.	.	.	.
1941	0.33	.	.	.	.	.	.	.	.	.
1942	0.38	.	.	.	.	.	.	.	.	.
1943	0.38	.	.	.	.	.	.	.	.	.
1944	0.38	.	.	.	.	.	.	.	.	.
1945	0.38	.	.	.	.	.	.	.	.	.
1946	0.38	.	.	.	.	.	.	.	.	.
1947	0.95	.	.	.	.	.	.	.	.	.
1948	1.16	.	.	.	.	.	.	.	.	.
1949	1.10	.	.	.	.	.	.	.	.	.
1950	1.34	.	.	.	.	.	.	.	.	.
1951	1.73	.	.	.	.	.	.	.	.	.
1952	2.09	.	.	.	.	.	.	.	.	.
1953	1.60	.	1.66	.	2.07	2.32	.	2.59	2.89	.
1954	1.15	.	1.21	.	1.81	2.16	.	2.51	2.67	.
1955	2.54	.	2.73	.	2.88	2.93	.	2.96	2.98	.
1956	3.21	.	3.68	.	3.76	3.70	.	3.59	3.45	.
1957	3.04	.	3.18	.	3.11	3.08	.	3.21	3.38	.
1958	2.77	3.01	3.29	.	3.72	3.82	.	3.86	3.86	.
1959	4.49	4.85	5.14	.	5.12	5.01	.	4.69	4.33	.
1960	2.25	2.50	2.86	.	3.42	3.67	.	3.84	3.91	.
1961	2.60	2.88	3.18	.	3.72	3.91	.	4.06	4.07	.
1962	2.87	2.91	3.01	.	3.37	3.56	.	3.86	3.92	.
1963	3.52	3.66	3.81	.	4.01	4.04	.	4.13	4.19	.
1964	3.84	3.95	4.02	.	4.08	4.09	.	4.18	4.18	.
1965	4.38	4.55	4.72	.	4.79	4.72	.	4.62	4.50	.
1966	4.96	5.07	5.20	.	5.19	5.00	.	4.84	4.76	.
1967	4.97	5.49	5.71	.	5.71	5.75	.	5.70	5.59	.
1968	5.96	6.06	6.19	.	6.16	6.12	.	6.03	5.88	.
1969	7.82	7.90	8.17	.	8.10	7.96	7.51	7.65	6.91	.
1970	4.87	4.89	5.00	.	5.75	5.95	6.23	6.39	6.28	.
1971	4.01	4.23	4.60	.	5.27	5.69	5.97	5.93	6.00	.
1972	5.07	5.30	5.52	.	6.01	6.16	6.20	6.36	5.96	.
1973	7.45	7.56	7.27	.	6.81	6.80	6.77	6.74	7.29	.
1974	7.15	7.11	7.31	.	7.24	7.31	7.38	7.43	7.91	.
1975	5.44	5.85	6.60	.	7.43	7.76	7.93	8.00	8.23	.
1976	4.35	4.51	4.89	5.38	5.68	6.10	6.37	6.87	7.30	.
1977	6.07	6.40	6.96	7.18	7.30	7.48	7.59	7.69	7.87	7.94
1978	9.08	9.36	10.30	9.72	9.33	9.08	9.03	9.01	8.90	8.88
1979	12.04	11.84	11.98	11.39	10.71	10.42	10.42	10.39	10.18	10.12
1980	15.49	14.64	14.88	14.08	13.65	13.25	13.00	12.84	12.49	12.40
1981	10.85	11.52	12.85	13.29	13.66	13.60	13.62	13.72	13.73	13.45
1982	7.94	8.16	8.91	9.66	9.88	10.22	10.49	10.54	10.62	10.54
1983	9.00	9.17	10.11	10.84	11.13	11.54	11.78	11.83	12.02	11.88
1984	8.06	8.28	9.33	10.18	10.56	11.07	11.45	11.50	11.64	11.52
1985	7.10	7.14	7.67	8.15	8.40	8.73	9.11	9.26	9.75	9.54
1986	5.53	5.55	5.87	6.27	6.43	6.67	6.97	7.11	7.28	7.37
1987	5.77	6.36	7.17	7.86	8.13	8.45	8.82	8.99	.	9.12
1988	8.07	8.22	8.99	9.09	9.11	9.09	9.13	9.11	.	9.01
1989	7.63	7.42	7.72	7.78	7.77	7.75	7.85	7.84	.	7.90
1990	6.74	6.70	7.05	7.31	7.47	7.73	8.00	8.08	.	8.24
1991	4.07	4.10	4.38	5.03	5.39	6.19	6.69	7.09	.	7.70
1992	3.22	3.36	3.71	4.67	5.21	6.08	6.46	6.77	.	7.44
1993	3.06	3.23	3.61	4.21	4.54	5.15	5.48	5.77	6.40	6.25
1994	5.60	6.21	7.14	7.59	7.71	7.78	7.80	7.81	7.99	7.87
1995	5.14	5.13	5.31	5.32	5.39	5.51	5.63	5.71	6.12	6.06
1996	4.91	5.04	5.47	5.78	5.91	6.07	6.20	6.30	6.65	6.55
1997	5.16	5.24	5.53	5.72	5.74	5.77	5.83	5.81	6.07	5.99
1998	4.39	4.40	4.52	4.51	4.48	4.45	4.65	4.65	5.36	5.06
1999	5.20	5.44	5.84	6.10	6.14	6.19	6.38	6.28	6.69	6.35
2000	5.77	5.68	5.60	5.35	5.26	5.17	5.28	5.24	5.64	5.49
2001	1.69	1.78	2.22	3.11	3.62	4.39	4.86	5.09	5.76	5.48
2002	1.19	1.24	1.45	1.84	2.23	3.03	3.63	4.03	5.01	.
2003	0.90	0.99	1.31	1.91	2.44	3.27	3.79	4.27	5.11	.
2004	2.19	2.43	2.67	3.01	3.21	3.60	3.93	4.23	4.88	.
2005	3.89	4.18	4.35	4.40	4.39	4.39	4.41	4.47	4.73	.

Source: U.S. Federal Reserve, Statistical Release H.15.

*3 Month and 6 Month T-Bills rates shown are on a discount basis annualized using a 360-day year.

T-bonds listed are Treasury nominal securities at "constant maturity". Yields are interpolated by the U.S. Treasury from the daily yield curve for non-inflation-indexed Treasury securities.

DATA SERIES FOR PAST THREE YEARS												
YEAR	1	2	3	4	5	6	7	8	9	10	11	12
S&P/TSX - TOTAL RETURN INDEX												
2003	-0.54	-0.02	-2.97	3.91	4.32	2.05	4.01	3.63	-1.00	4.84	1.25	4.83
2004	3.75	3.24	-2.11	-3.89	2.25	1.73	-0.92	-0.81	3.67	2.44	1.94	2.64
2005	-0.40	5.17	-0.38	-2.38	2.69	3.33	5.31	2.50	3.41	-5.65	4.42	4.41
V122628 - S&P/TSX - STOCK DIVIDENDS YIELDS												
2003	1.93	1.96	2.05	2.00	1.91	1.87	1.83	1.77	1.80	1.72	1.72	1.64
2004	1.62	1.62	1.67	1.74	1.74	1.72	1.75	1.82	1.74	1.71	1.70	1.67
2005	1.68	1.67	1.68	1.75	1.78	1.72	1.65	1.62	1.57	1.68	1.65	1.99
V122541 - GOVERNMENT OF CANADA 91-DAY TREASURY BILL YIELD RATE												
2003	2.81	2.86	3.14	3.24	3.20	3.13	2.81	2.70	2.60	2.65	2.71	2.59
2004	2.26	2.13	1.99	1.94	2.02	2.04	2.08	2.14	2.41	2.58	2.56	2.48
2005	2.44	2.46	2.55	2.46	2.45	2.47	2.58	2.76	2.81	3.03	3.30	3.40
v122558 - GOVERNMENT OF CANADA MARKETABLE BONDS: AVERAGE YIELD - 1-3 YEARS												
2003	3.55	3.48	3.85	3.60	3.20	3.05	2.87	3.17	2.95	3.06	3.10	3.02
2004	2.71	2.46	2.34	2.69	2.91	3.18	3.20	3.01	3.22	3.18	3.13	3.06
2005	2.83	2.97	3.25	2.97	2.91	2.83	3.02	2.97	3.28	3.58	3.77	3.80
V122485 - GOVERNMENT OF CANADA MARKETABLE BONDS: AVERAGE YIELD - 3-5 YEARS												
2003	4.15	4.06	4.37	4.09	3.60	3.50	3.67	3.89	3.67	3.88	3.88	3.75
2004	3.52	3.26	3.14	3.59	3.77	4.01	4.01	3.77	3.84	3.79	3.70	3.58
2005	3.37	3.48	3.70	3.42	3.32	3.17	3.35	3.22	3.51	3.80	3.86	3.85
V122486 - GOVERNMENT OF CANADA MARKETABLE BONDS: AVERAGE YIELD - 5-10 YEARS												
2003	4.76	4.66	4.90	4.64	4.21	4.16	4.52	4.67	4.40	4.61	4.57	4.42
2004	4.31	4.08	3.98	4.40	4.49	4.65	4.64	4.43	4.38	4.32	4.22	4.16
2005	3.96	4.04	4.19	3.92	3.81	3.65	3.77	3.59	3.79	4.04	3.98	3.89
V122487 - GOVERNMENT OF CANADA MARKETABLE BONDS: AVERAGE YIELD - 10+ YEARS												
2003	5.45	5.39	5.52	5.34	5.01	4.98	5.35	5.40	5.19	5.33	5.24	5.14
2004	5.15	4.98	4.94	5.23	5.23	5.30	5.29	5.14	5.02	4.96	4.87	4.86
2005	4.69	4.71	4.75	4.55	4.41	4.27	4.31	4.11	4.21	4.38	4.20	4.04
V122493 - CHARTERED BANK - DEPOSIT RATES FOR NON-CHEQUABLE SAVINGS DEPOSIT												
2003	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
2004	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
2005	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
V122497 - RESIDENTIAL MORTGAGE LENDING RATE												
2003	6.26	6.29	6.33	6.44	6.10	5.62	5.71	5.87	5.97	5.83	6.02	6.00
2004	5.78	5.51	5.31	5.56	5.82	6.06	6.10	5.97	5.94	5.95	5.87	5.69
2005	5.60	5.59	5.60	5.67	5.55	5.31	5.26	5.32	5.30	5.39	5.56	5.60
V122515 - CHARTERED BANK - 5 YEAR PERSONAL FIXED TERM DEPOSIT RATE												
2003	3.35	3.35	3.35	3.35	3.10	2.55	2.80	2.80	2.80	2.80	2.80	2.80
2004	2.50	2.50	2.25	2.75	3.00	3.13	3.03	2.78	2.63	2.78	2.78	2.53
2005	2.63	2.63	2.73	2.53	2.53	2.23	2.23	2.23	2.23	2.43	2.53	2.53
V122526 - CHARTERED BANK 5 YEAR GUARANTEED INVESTMENT CERTIFICATE												
2003	3.48	3.48	3.48	3.48	3.23	2.80	2.93	2.93	2.93	2.93	2.93	2.93
2004	2.63	2.63	2.38	2.88	3.13	3.38	3.28	3.03	2.88	3.03	3.03	2.78
2005	2.88	2.88	2.98	2.78	2.78	2.48	2.48	2.48	2.48	2.68	2.78	2.78
V37694 - EXCHANGE RATE - CANADIAN CENTS PER U.S. DOLLAR - AVERAGE NOON SPOT RATE												
2003	154.10	151.24	147.59	145.85	138.45	135.23	138.15	139.56	136.32	132.18	131.26	131.28
2004	129.60	132.90	132.84	134.25	137.83	135.77	132.19	131.18	128.78	124.69	119.61	121.91
2005	122.53	123.97	121.61	123.60	125.55	124.02	122.27	120.40	117.76	117.76	118.11	116.10
V1597104 - AVERAGE WEEKLY EARNINGS												
2003	686.47	686.11	686.55	686.12	688.12	690.43	691.59	688.99	692.38	692.96	692.94	701.21
2004	694.34	702.03	703.06	707.09	704.66	708.58	702.96	706.05	709.44	707.48	708.82	711.24
2005	709.11	711.11	716.60	720.53	724.51	728.46	731.29	736.26	736.97	737.85	739.04	734.60
V735319 - CONSUMER PRICE INDEX FOR CANADA												
2003	121.40	122.30	122.80	121.90	122.00	122.10	122.20	122.50	122.70	122.40	122.70	122.80
2004	122.90	123.20	123.60	123.90	125.00	125.10	125.00	124.80	124.90	125.20	125.70	125.40
2005	125.30	125.80	126.50	126.90	127.00	127.20	127.50	128.00	129.10	128.50	128.20	128.10
V2062811 - LABOUR FORCE SURVEY ESTIMATES - BOTH SEXES 15+ YEARS (IN THOUSANDS)												
2003	15581	15614	15642	15618	15589	15653	15660	15652	15690	15747	15785	15827
2004	15846	15840	15851	15920	15951	15976	15972	15950	15996	16019	16026	16040
2005	16052	16071	16066	16108	16136	16151	16180	16201	16197	16268	16303	16295
V122517 - SCOTIA CAPITAL LONG TERM PROVINCIAL BONDS												
2003	5.92	5.88	6.02	5.82	5.52	5.41	5.70	5.79	5.57	5.73	5.63	5.52
2004	5.50	5.37	5.38	5.66	5.71	5.78	5.76	5.58	5.44	5.39	5.29	5.30
2005	5.14	5.11	5.21	5.04	4.89	4.69	4.72	4.52	4.64	4.82	4.67	4.54
V122518 - SCOTIA CAPITAL LONG TERM ALL CORPORATE BONDS												
2003	6.85	6.81	7.06	6.70	6.35	6.22	6.48	6.54	6.29	6.39	6.27	6.07
2004	6.03	5.87	5.85	6.15	6.25	6.36	6.34	6.17	6.05	5.99	5.88	5.82
2005	5.66	5.62	5.73	5.58	5.46	5.20	5.25	5.04	5.15	5.34	5.24	5.09

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V498086 - GDP AT MARKET PRICES (IN MILLIONS OF DOLLARS)				
YEAR	3	6	9	12
2003	1,212,808	1,202,620	1,216,956	1,232,380
2004	1,252,380	1,284,268	1,305,484	1,318,608
2005	1,329,716	1,349,772	1,383,764	1,411,652

Source: Statistics Canada CANSIM Series © Copyright 2006. All Rights Reserved.

ESTIMATES OF POPULATION				
YEAR	ALL AGES V466668	AGES 0-17 V466965	AGES 18-65 V466674	AGES >65 V466686
2003	31,669,150	7,038,734	20,564,124	4,066,292
2004	31,974,363	6,997,515	20,834,400	4,142,448
2005	32,270,507	6,967,853	21,084,876	4,217,778

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S&P 500 - COMMON STOCK INDEX	
YEAR	DEC. 31
2003	1,111.92
2004	1,211.92
2005	1,248.29

Source: Standard & Poor's, a division of The McGraw-Hill Companies, Inc. © Copyright 2006. All Rights Reserved.

MORGAN STANLEY CAPITAL INTERNATIONAL 'GROSS' INDICES IN \$U.S.	
YEAR	DEC. 31
WORLD	
2003	2,919.44
2004	3,364.56
2005	3,701.80
WORLD EXCLUDING U.S.A.	
2003	3,274.79
2004	3,957.32
2005	4,549.17
EUROPE	
2003	4,042.33
2004	4,906.92
2005	5,394.29
PACIFIC BASIN	
2003	3,073.96
2004	3,667.32
2005	4,511.07

Source: Morgan Stanley Capital International Inc. © Copyright 2006. All Rights Reserved.

APPENDIX B

TITLES AND PERIODICITIES OF CANSIM SERIES USED

<u>CANSIM I</u>	<u>CANSIM II</u>	<u>TITLE</u>
B4245	V122628	Toronto Stock Exchange – stock dividend yields
B14007	V122541	Treasury Bill auction average yields (3 months)
B14009	V122558	Government of Canada marketable bonds, average yield (1-3 years)
B14010	V122485	Government of Canada marketable bonds, average yield (3-5 years)
B14011	V122486	Government of Canada marketable bonds, average yield (5-10 years)
B14013	V122487	Government of Canada marketable bonds, average yield (10+ years)
B14024	V122497	Average 5year residential mortgage lending rate
B14019	V122493	Chartered Bank deposit rates for non-chequable savings deposits
B14045	V122515	Chartered Bank – 5-Year Personal fixed term deposit rate
B14056	V122526	Chartered Bank – 5-Year Guaranteed Investment Certificate
B14047	V122517	Scotia Capital Inc. – average weighted yield: long-term provincial bonds
B14048	V122518	Scotia Capital Inc. – average weighted yield: long-term all corporate bonds
B40001	V37694	Exchange rate – Canadian cents per U.S. dollar – average noon spot rate
C892268*	V466668*	Estimates of Population, both sexes, all ages
C892547*	V466965*	Estimates of Population, both sexes, 0-17 years
C892565*	V466674*	Estimates of Population, both sexes, 18-64 years
C892577*	V466686*	Estimates of Population, both sexes, 65 years and over
D14840‡	V498086‡	GDP at market prices in millions of dollars, seasonally adjusted
P100000	V735319	Consumer Price Index
L186863	V1597104	Average weekly earnings: Industrial aggregate, seasonally adjusted
–	V2062811	Labour force survey estimates: both sexes, 15 years and over, seasonally adjusted

‡ reported quarterly

* reported annually

All other series are reported monthly.

APPENDIX C

SOURCES AND METHODS FOR EACH TABLE

TABLES 1A-1D AND TABLES 2A-2B:

CONSUMER PRICE INDEX:

CANSIM P100000 / V735319 December 1923 – December 2005

Method: Change in December – December period.

COMMON STOCK INDEX:

Prices:

Urquhart & Buckley H641 (Corporate Composite)	December 1923 – December 1946
CANSIM B4202 (TSE Corporates)	December 1946 – December 1956
S&P/TSX Total Return Index	December 1956 – December 2005

Dividend Yield, Annual Averages:

Ibbotson & Sinquefield (1977)	January 1923 – December 1933
Urquhart & Buckley H617	January 1934 – December 1955
CANSIM B4245 / V122628	January 1956 – December 2005

Method:

1956 and earlier:

December purchase – December sale, plus dividends. The dividend yield used is a twelve month average. For the period January 1926 – December 1933, Standard and Poor's US dividend yields were used (Ibbotson and Sinquefield, 1977). The values were adjusted by subtracting the average difference, .17%, between the Standard and Poor's dividend yield index and the S&P/TSX dividend yield index over the period January 1956 – December 1965. For the period January 1924 – December 1925, the average Standard and Poor's yield over the period January 1926 – December 1928 was used, 5.05%, reduced by the .17% correction.

1957 and later:

December to December ratio of the S&P/TSX Total Return Index.

GOVT. OF CANADA LONG BOND INDEX (OVER 10-YEAR TERM):

Bank of Canada (1979)	December 1923 – December 1936
CANSIM B14013 / V122487	December 1936 – December 2005

Method:

Assume purchase of a bond with 18 years to maturity in December, sell after one year.

CONVENTIONAL MORTGAGE INDEX:

CANSIM B14024 / V122497 December 1951 – December 2005

Method:

Assume a 25year mortgage with interest rate fixed for 5 years (25 years for calendar year 1969 and earlier) is bought on December 31 and sold on the subsequent December 31 at then current yields. No allowance is made for administration expenses.

91-DAY TREASURY BILLS:

CANSIM B14007 / V122541

January 1934 – December 2005

Method:

Assume purchase on January 1, rolled over quarterly until December 31.

PER CAPITA PRODUCTIVITY INDEX:**GNP; GDP:**

Firestone	1923 – 1927	(GNP)
CANSIM D31295	1926 – 1947	(GNP)
CANSIM D20031	Q4 1947 – Q4 1960	(GDP)
CANSIM D14840 / V498086	Q4 1960 – Q4 2005	(GDP)

EMPLOYED:

Urquhart & Buckley C51	1923 – 1953
CANSIM D755002	December 1953 – December 1965
CANSIM D767286	December 1966 – December 1975
CANSIM V2062811	December 1976 – December 2005

Method:

Change in ratio of fourth quarter GNP or GDP to December employed. For 1923–1953, the year-end number of employed was estimated as the geometric mean of the current and following year values; for 1966–1975, it was ratioed up by 3.31% to give continuity from 1975 to 1976. For 1923–1947, the year-end GNP was calculated as the geometric mean of the current and following year values.

WAGE AND SALARY INDEX:

Urquhart and Buckley D1	1923 – 1940
Canadian Statistical Review	1939 – 1962
CANSIM D1439	December 1961 – January 1983
CANSIM L57711	January 1983 – January 1991
CANSIM L186863 / V1597104	January 1991 – December 2005

Method:

Change in December–December period. For 1923–1961, the year-end index was estimated as the geometric mean of the current and following year values. CANSIM D1439 and CANSIM L57711 were linked as at January 1983. Effective 2002, CANSIM I L186863 continued as CANSIM II V1597104, hence CANSIM I L57711 and CANSIM II V1597104 were linked as at January 1991.

NOTES:

1. The S&P/TSX Total Return Index and the S&P 500 Index are applicable to the last business day in December, while other series in this report are based on monthly, quarterly or annual averages. All values are given as an effective rate, i.e., compounded annually.
2. Table 2A headed “Average Nominal Annual Percentage Rates of Change/Return” contains means and standard deviations. These refer to the annualized returns over five- and ten-year periods. The mean is a geometric mean of the applicable five- and ten-year annualized returns for the period. The standard deviation is the sample standard deviation of the non-overlapping annualized observations and is based on the arithmetic mean.
3. The table headed “Standard Deviations of Nominal Annual Percentages Rates of Change/Return” consists of standard deviations of one-year returns during the period indicated, again using the arithmetic mean.

TABLES 3A-3C:**FEDERAL BONDS (OVER 10-YEAR TERM):**

CANSIM B14013 / V122487	January 1936 – December 2005
Method:	TABLE 3A Twelve-month average of yields to maturity.
	TABLE 3B Assume purchase a bond with 18 years to maturity in December, sell after one year. Rate is effective.
	TABLE 3C As for TABLE 3B, but adjusted for CPI.

PROVINCIAL BOND INDEX (LONG TERM):

ScotiaMcLeod	January 1948 – October 1977
CANSIM B14047 / V122517	November 1977 – December 2005
Method:	TABLE 3A Twelve-month average of yields to maturity.
	TABLE 3B Assume purchase a bond with 20 years to maturity in December, sell after one year. Rate is effective.
	TABLE 3C As for TABLE 3B, but adjusted for CPI.

ALL CORPORATE BOND INDEX (LONG TERM):

ScotiaMcLeod	January 1948 – October 1977
CANSIM B14048 / V122518	November 1977 – December 2005
Method:	TABLE 3A Twelve-month average of yields to maturity.
	TABLE 3B Assume purchase a bond with 17 years to maturity in December, sell after one year. Rate is effective.
	TABLE 3C As for TABLE 3B, but adjusted for CPI.

CONVENTIONAL MORTGAGES:

CANSIM B14024 / V122497	January 1951 – December 2005
Method:	TABLE 3A Twelve-month average of current mortgage rates.
	TABLE 3B Assume purchase a 25 year mortgage, sell after one year. The interest rate is assumed fixed for 5 years (25 years if 1969 or earlier). Rate is effective.
	TABLE 3C As for TABLE 3B, but adjusted for CPI.

5-YEAR GUARANTEED INVESTMENT CERTIFICATES:

CANSIM B14023	January 1964 – October 1980
CANSIM B14056 / V122526	November 1980 – December 2005
Method:	TABLE 3A Twelve-month average of GIC current rates.
	TABLE 3B Assume purchase a 5year GIC in December, sell after one year. Rate is effective.
	TABLE 3C As for TABLE 3B, but adjusted for CPI.

NON-CHEQUABLE SAVINGS DEPOSITS:

CANSIM B14019 / V122493	January 1968 – December 2005
Method:	TABLE 3A Twelve-month average of non-chequable savings deposit rates.
	TABLE 3B Use $\exp(\text{twelve monthly average of rates convertible monthly}) - 1$.
	TABLE 3C As for TABLE 3B, but adjusted for CPI.

TABLES 4A-4C:**91-DAY TREASURY BILLS:**

CANSIM B14007 / V122541

January 1936 – December 2005

Method: TABLE 4A

Average of twelve monthly values on semi-annual basis

TABLE 4B

Assume January 1 purchase, quarterly rollover until December 31.

TABLE 4C

As for TABLE 4B, but adjusted for CPI.

1-3 YEAR CANADA BONDS:

CANSIM B14009 / V122558

January 1949 – December 2005

Method: TABLE 4A

Average of twelve monthly values.

TABLE 4B

Assume a bond is bought in December with two years to maturity, sell after one year. Rate is effective.

TABLE 4C

As for TABLE 4B, but adjusted for CPI.

3-5 YEAR CANADA BONDS:

CANSIM B14010 / V122485

January 1951 – December 2005

Method: TABLE 4A

Average of twelve monthly values.

TABLE 4B

Assume a bond is bought in December with four years to maturity, sell after one year. Rate is effective.

TABLE 4C

As for TABLE 4B, but adjusted for CPI.

5-10 YEAR CANADA BONDS:

CANSIM B14011 / V122486

January 1951 – December 2005

Method: TABLE 4A

Average of twelve monthly values

TABLE 4B

Assume a bond is bought in December with 7 1/2 years to maturity, sell after one year. Rate is effective.

TABLE 4C

As for TABLE 4B, but adjusted for CPI.

10+ YEAR CANADA BONDS:

CANSIM B14013 / V122487

January 1936 – December 2005

Method: TABLE 4A

Average of twelve monthly values.

TABLE 4B

Assume a bond is bought in December with 18 years to maturity, sell after one year. Rate is effective.

TABLE 4C

As for TABLE 4B, but adjusted for CPI.

APPENDIX D

DESCRIPTION OF METHODOLOGIES

In the case of the CPI, the tabulated annual change is the ratio of indices in successive Decembers, expressed as a percentage. The indices for January to November inclusive are ignored. For some series, such as the GNP, the CANSIM series is quarterly, and the ratio of fourth quarter indices is used.

For federal long-term bonds, it is assumed that a purchase is made in December of a newly issued 18-year bond with a redemption yield corresponding to then current yield rates. The coupon is collected semi-annually; and the bond is sold in the following December, just after the second coupon payment, at a price corresponding to then current yield rates. The total yield (capital gain plus coupon) is tabulated in these economic tables. The formula used is an extension of the one derived in Appendix II of Boyle, Brooks-Hill and Paterson (1974). The formula for the bond value index, B_n , assuming the coupon is reinvested at the average rate for the year, is:

$$B_n = B_{n-1} \left[v^{34} + .5r_{n-1} \left\{ \ddot{a}_{\overline{35}|} + v^{35} + .25(r_{n-1} + r_n) \ddot{a}_{\overline{36}|} \right\} \right]$$

where r_{n-1} is the coupon rate on new 18-year bonds in December of year $n - 1$, r_n is the coupon rate on new 18-year bonds in December of year n and v^{34} , v^{35} , $\ddot{a}_{\overline{35}|}$, $\ddot{a}_{\overline{36}|}$ and are calculated at the six-monthly coupon rate $.5r_n$. The midyear coupon is assumed to be reinvested in an 18-year bond at the rate $.5(r_{n-1} + r_n)$. For instance, for the year 2004 one can obtain from Appendix A the values for B14013 / V122487, $r_{n-1} = 5.14\%$ and $r_n = 4.86\%$. Hence the formula produces $B_n / B_{n-1} = 1.0846$ in agreement with the return presented in Table 1A, 8.46%.

Consistent with previous reports, the terms used in deriving the bond value index for long-term provincial bonds and all corporate bonds are 20 years and 17 years, respectively.

Mortgage yields up to and including calendar year 1969 are calculated assuming a 25-year period for both amortization and the period for which interest is fixed.

For calendar years 1970 and later, mortgages are assumed to be amortized over 25 years, and to have an interest rate fixed for five years. This leads to a formula for the mortgage value index:

$$M_n = M_{n-1} \left\{ \left(\ddot{a}_{\overline{9}|} + v^8 a'_{\overline{40}|} \right) + \left(\ddot{a}_{\overline{10}|} + v^9 a''_{\overline{40}|} \right) / a''_{\overline{50}|} \right\} / a'_{\overline{50}|}$$

where v^8 , v^9 , $\ddot{a}_{\overline{9}|}$ and $\ddot{a}_{\overline{10}|}$ are calculated at $.5r_n$; $a'_{\overline{40}|}$, $a''_{\overline{50}|}$, are calculated at $0.5r_{n-1}$; and $a''_{\overline{40}|}$ and $a''_{\overline{50}|}$ are calculated at $0.25(r_{n-1} + r_n)$. For 2004, Appendix A gives for B14024 / V122497 the values $r_{n-1} = 6.00\%$ and $r_n = 5.69\%$. Hence, the formula gives the result $M_n / M_{n-1} = 1.0715$ in agreement with Table 1A. In this formula, it is assumed that semi-annual payments are reinvested at midyear at the rate $0.25(r_{n-1} + r_n)$. This convenient approximation introduces minimal errors. This formula is consistent with the formula for bonds taking into account the balance outstanding at the end of the term period.

Tables 1B and 2B present rates of return, rates of change and interest rates net of increases in the Consumer Price Index. The net rates for each year were calculated as $\{(1 + i_n)/(1 + P_n)\} - 1$, where i_n is the nominal rate for year n (on a year-end to year-end basis) and P_n is the change in the Price Index for the twelve months to the end of year n .

As indicated in the title pages to the Tables, it was frequently necessary to combine several series so that statistics could be presented for the full period. Generally the new series were used from the first year n at which figures were available. The annual percentage change for the last year of the older series is based on the quotient of the older series year-end n and year-end $n - 1$ values. The annual percentage change for the new series is based on the quotient of the new series year-end $n + 1$ and year-end n values.

Tables 3A and 4A present the yields to maturity for the various bonds and other fixed income investments. For GICs, savings deposits and mortgages the current rates for new investments are used. Tables 3A and 4A present for each calendar year the average of the rates for each of the 12 months during that year. Tables 3B and 4B present the rates of return, including capital changes, calculated as in Table 1A. Tables 3C and 4C give the rates of return adjusted for inflation.

APPENDIX E

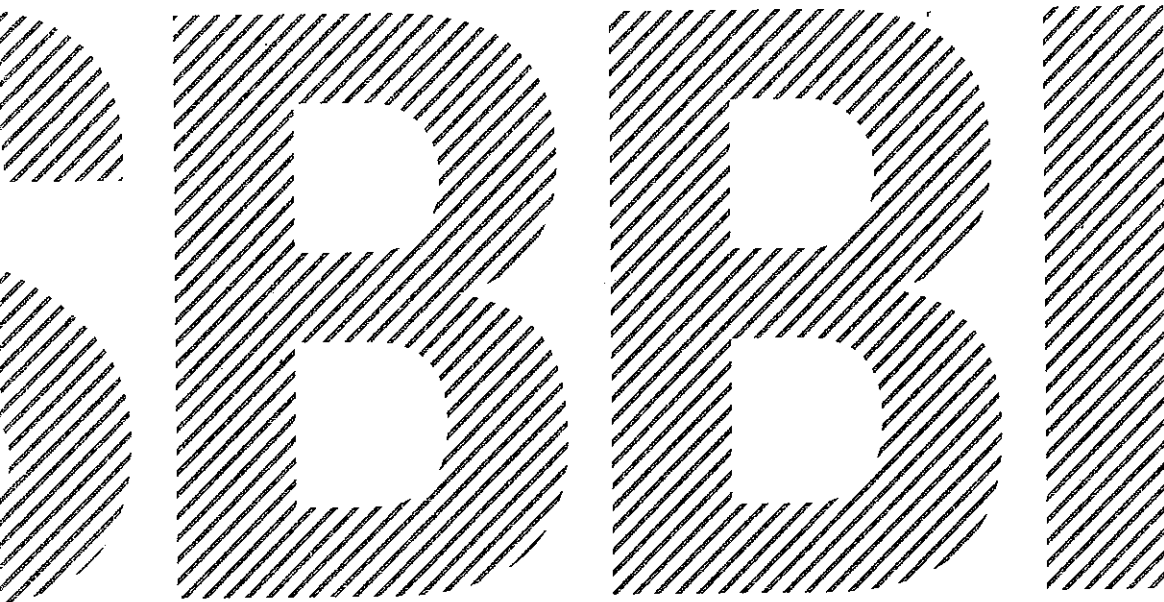
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Stocks, Bonds, Bills,
and Inflation

Market Results for
1926–2006

2007 Yearbook
Classic Edition

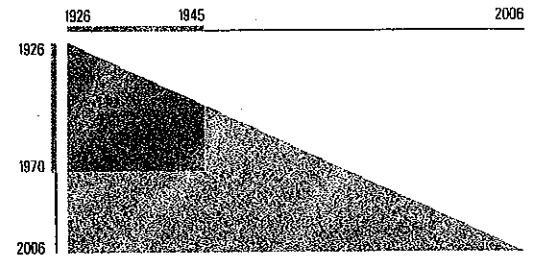


MORNINGSTAR

Table C-1 (page 1 of 6)

Large Company Stocks Total Returns
 Rates of Return for all holding periods
 Percent per annum compounded annually

from 1926 to 2006



To the end of	From the beginning of										1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935										
1926	11.6																			
1927	23.9	37.5																		
1928	30.1	40.5	43.6																	
1929	19.2	21.8	14.7	-8.4																
1930	8.7	8.0	-0.4	-17.1	-24.9															
1931	-2.5	-5.1	-13.5	-27.0	-34.8	-43.3														
1932	-3.3	-5.6	-12.5	-22.7	-26.9	-27.9	-8.2													
1933	2.5	1.2	-3.8	-11.2	-11.9	-7.1	18.9	54.0												
1934	2.0	0.9	-3.5	-9.7	-9.9	-5.7	11.7	23.2	-1.4											
1935	5.9	5.2	1.8	-3.1	-2.2	3.1	19.8	30.9	20.6	47.7										
1936	8.1	7.8	4.9	0.9	2.3	7.7	22.5	31.6	24.9	40.6	33.9									
1937	3.7	3.0	0.0	-3.9	-3.3	0.2	10.2	14.3	6.1	8.7	-6.7	-35.0								
1938	5.5	5.1	2.5	-0.9	0.0	3.6	13.0	16.9	10.7	13.9	4.5	-7.7	31.1							
1939	5.1	4.6	2.3	-0.8	-0.1	3.2	11.2	14.3	8.7	10.9	3.2	-5.3	14.3	-0.4						
1940	4.0	3.5	1.3	-1.6	-1.0	1.8	8.6	11.0	5.9	7.2	0.5	-6.5	5.6	-5.2	-9.8					
1941	3.0	2.4	0.3	-2.4	-1.9	0.5	6.4	8.2	3.5	4.3	-1.6	-7.5	1.0	-7.4	-10.7	-11.6				
1942	3.9	3.5	1.5	-1.0	-0.4	2.0	7.6	9.3	5.3	6.1	1.2	-3.4	4.6	-1.1	-1.4	3.1	20.3			
1943	5.0	4.7	2.9	0.6	1.3	3.7	9.0	10.8	7.2	8.2	4.0	0.4	7.9	3.8	4.8	10.2	23.1	25.9		
1944	5.8	5.5	3.8	1.7	2.5	4.8	9.8	11.5	8.3	9.3	5.7	2.6	9.5	6.3	7.7	12.5	22.0	22.8	19.8	
1945	7.1	6.9	5.4	3.5	4.3	6.6	11.5	13.2	10.4	11.5	8.4	5.9	12.6	10.1	12.0	17.0	25.4	27.2	27.8	36.4
1946	6.4	6.1	4.7	2.8	3.5	5.6	10.1	11.6	8.8	9.7	6.8	4.4	10.1	7.7	8.9	12.4	17.9	17.3	14.5	12.0
1947	6.3	6.1	4.7	3.0	3.7	5.6	9.8	11.2	8.6	9.4	6.7	4.5	9.6	7.5	8.5	11.4	15.8	14.9	12.3	9.9
1948	6.3	6.1	4.7	3.1	3.8	5.6	9.6	10.8	8.4	9.1	6.6	4.6	9.2	7.3	8.2	10.6	14.2	13.2	10.9	8.8
1949	6.8	6.6	5.3	3.8	4.5	6.3	10.1	11.2	9.0	9.7	7.4	5.6	10.0	8.3	9.2	11.5	14.8	14.0	12.2	10.7
1950	7.7	7.5	6.4	4.9	5.6	7.4	11.1	12.3	10.2	11.0	8.9	7.3	11.5	10.0	11.0	13.4	16.6	16.1	14.8	13.9
1951	8.3	8.1	7.1	5.7	6.4	8.2	11.7	12.9	11.0	11.7	9.8	8.4	12.4	11.1	12.1	14.3	17.3	16.9	15.9	15.3
1952	8.6	8.5	7.5	6.2	6.9	8.6	12.0	13.2	11.3	12.1	10.3	9.0	12.8	11.6	12.5	14.6	17.4	17.1	16.1	15.7
1953	8.3	8.1	7.2	5.9	6.5	8.2	11.4	12.4	10.7	11.4	9.6	8.3	11.9	10.7	11.5	13.4	15.7	15.3	14.3	13.7
1954	9.6	9.5	8.6	7.4	8.1	9.7	12.9	14.0	12.4	13.1	11.6	10.4	13.9	12.9	13.9	15.8	18.2	18.0	17.4	17.1
1955	10.2	10.2	9.3	8.2	8.9	10.5	13.7	14.7	13.2	13.9	12.5	11.4	14.8	13.9	14.9	16.8	19.1	19.0	18.5	18.4
1956	10.1	10.1	9.2	8.2	8.8	10.4	13.4	14.4	12.9	13.6	12.2	11.2	14.4	13.5	14.4	16.1	18.2	18.1	17.5	17.3
1957	9.4	9.3	8.5	7.4	8.1	9.5	12.3	13.2	11.8	12.4	11.0	10.0	13.0	12.1	12.8	14.3	16.2	15.9	15.2	14.9
1958	10.3	10.2	9.5	8.5	9.1	10.6	13.3	14.3	12.9	13.6	12.3	11.4	14.3	13.5	14.3	15.8	17.6	17.5	16.9	16.7
1959	10.3	10.3	9.5	8.6	9.2	10.6	13.3	14.2	12.9	13.5	12.3	11.4	14.2	13.4	14.1	15.6	17.3	17.1	16.6	16.4
1960	10.0	10.0	9.3	8.3	8.9	10.3	12.8	13.7	12.4	13.0	11.8	10.9	13.5	12.8	13.5	14.8	16.4	16.1	15.6	15.3
1961	10.5	10.4	9.7	8.8	9.4	10.8	13.3	14.1	12.9	13.4	12.3	11.5	14.1	13.4	14.0	15.3	16.9	16.7	16.2	16.0
1962	9.9	9.9	9.2	8.3	8.8	10.1	12.5	13.2	12.1	12.6	11.4	10.7	13.0	12.3	12.9	14.1	15.5	15.3	14.7	14.4
1963	10.2	10.2	9.5	8.7	9.2	10.5	12.8	13.5	12.4	12.9	11.8	11.1	13.4	12.7	13.3	14.5	15.8	15.6	15.1	14.9
1964	10.4	10.4	9.7	8.9	9.4	10.6	12.9	13.6	12.5	13.0	12.0	11.3	13.5	12.9	13.5	14.5	15.8	15.6	15.2	14.9
1965	10.4	10.4	9.8	9.0	9.5	10.7	12.9	13.6	12.5	13.0	12.0	11.3	13.5	12.9	13.4	14.5	15.7	15.5	15.0	14.8
1966	9.9	9.8	9.2	8.4	8.9	10.1	12.2	12.8	11.8	12.2	11.2	10.5	12.6	12.0	12.4	13.4	14.5	14.3	13.8	13.6
1967	10.2	10.2	9.6	8.8	9.3	10.4	12.5	13.1	12.1	12.5	11.6	10.9	12.9	12.4	12.8	13.8	14.9	14.7	14.2	14.0
1968	10.2	10.2	9.6	8.9	9.3	10.4	12.4	13.1	12.1	12.5	11.6	10.9	12.9	12.3	12.8	13.7	14.7	14.5	14.1	13.9
1969	9.8	9.7	9.1	8.4	8.9	9.9	11.8	12.4	11.4	11.8	10.9	10.3	12.1	11.6	12.0	12.8	13.8	13.6	13.1	12.9
1970	9.6	9.6	9.0	8.3	8.7	9.7	11.6	12.2	11.2	11.6	10.7	10.1	11.9	11.3	11.7	12.5	13.5	13.2	12.8	12.5

1926

1945

2006

Table C-1 (page 2 of 6)

Large Company Stocks Total Returns

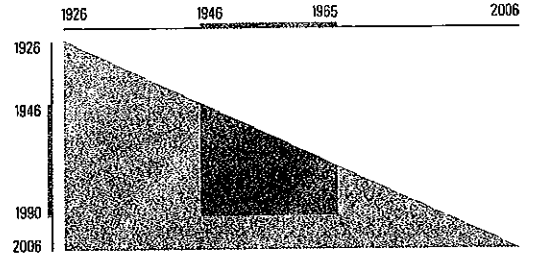
Rates of Return for all holding periods
Percent per annum compounded annually

from 1926 to 2006

To the end of	From the beginning of			1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
	1926	1927	1928																	
1971	9.7	9.7	9.1	8.4	8.9	9.9	11.7	12.2	11.3	11.7	10.8	10.2	11.9	11.4	11.8	12.6	13.5	13.3	12.8	12.6
1972	9.9	9.9	9.3	8.7	9.1	10.1	11.9	12.4	11.5	11.9	11.0	10.5	12.1	11.6	12.0	12.8	13.7	13.5	13.0	12.8
1973	9.3	9.3	8.7	8.1	8.5	9.4	11.1	11.7	10.8	11.1	10.3	9.7	11.3	10.8	11.1	11.8	12.7	12.4	12.0	11.7
1974	8.5	8.4	7.8	7.2	7.5	8.4	10.1	10.6	9.7	10.0	9.1	8.5	10.1	9.5	9.8	10.5	11.2	10.9	10.5	10.2
1975	9.0	8.9	8.4	7.7	8.1	9.0	10.6	11.1	10.2	10.6	9.8	9.2	10.7	10.2	10.5	11.1	11.9	11.6	11.2	11.0
1976	9.2	9.2	8.7	8.0	8.4	9.3	10.9	11.4	10.5	10.9	10.1	9.5	11.0	10.5	10.8	11.5	12.2	12.0	11.6	11.3
1977	8.9	8.8	8.3	7.7	8.1	8.9	10.5	10.9	10.1	10.4	9.6	9.1	10.5	10.0	10.3	10.9	11.6	11.4	11.0	10.7
1978	8.9	8.8	8.3	7.7	8.0	8.9	10.4	10.8	10.0	10.3	9.6	9.0	10.4	9.9	10.2	10.8	11.5	11.3	10.9	10.6
1979	9.0	9.0	8.5	7.9	8.2	9.1	10.6	11.0	10.2	10.5	9.8	9.2	10.6	10.1	10.4	11.0	11.7	11.4	11.1	10.8
1980	9.4	9.4	8.9	8.3	8.7	9.5	11.0	11.4	10.6	10.9	10.2	9.7	11.1	10.6	10.9	11.5	12.2	11.9	11.6	11.4
1981	9.1	9.1	8.6	8.1	8.4	9.2	10.6	11.0	10.3	10.6	9.9	9.4	10.7	10.2	10.5	11.1	11.7	11.5	11.1	10.9
1982	9.3	9.3	8.8	8.3	8.6	9.4	10.8	11.2	10.5	10.8	10.1	9.6	10.9	10.5	10.8	11.3	11.9	11.7	11.4	11.2
1983	9.6	9.5	9.1	8.5	8.9	9.6	11.0	11.5	10.7	11.0	10.3	9.9	11.1	10.7	11.0	11.5	12.2	12.0	11.6	11.4
1984	9.5	9.5	9.0	8.5	8.8	9.6	10.9	11.3	10.6	10.9	10.3	9.8	11.0	10.6	10.9	11.4	12.0	11.8	11.5	11.3
1985	9.8	9.8	9.4	8.9	9.2	9.9	11.3	11.7	11.0	11.3	10.7	10.2	11.4	11.1	11.3	11.8	12.4	12.3	12.0	11.8
1986	10.0	9.9	9.5	9.0	9.4	10.1	11.4	11.8	11.2	11.4	10.8	10.4	11.6	11.2	11.5	12.0	12.6	12.4	12.1	11.9
1987	9.9	9.9	9.5	9.0	9.3	10.0	11.3	11.7	11.0	11.3	10.7	10.3	11.5	11.1	11.3	11.8	12.4	12.2	11.9	11.8
1988	10.0	10.0	9.6	9.1	9.4	10.1	11.4	11.8	11.1	11.4	10.8	10.4	11.6	11.2	11.4	11.9	12.5	12.3	12.1	11.9
1989	10.3	10.3	9.9	9.4	9.7	10.5	11.7	12.1	11.5	11.7	11.2	10.8	11.9	11.6	11.8	12.3	12.9	12.7	12.4	12.3
1990	10.1	10.1	9.7	9.2	9.5	10.2	11.5	11.8	11.2	11.4	10.9	10.5	11.6	11.3	11.5	12.0	12.5	12.4	12.1	11.9
1991	10.4	10.4	10.0	9.5	9.8	10.5	11.8	12.1	11.5	11.8	11.2	10.8	11.9	11.6	11.8	12.3	12.9	12.7	12.4	12.3
1992	10.3	10.3	9.9	9.5	9.8	10.5	11.7	12.1	11.4	11.7	11.1	10.8	11.8	11.5	11.8	12.2	12.7	12.6	12.3	12.2
1993	10.3	10.3	9.9	9.5	9.8	10.5	11.7	12.0	11.4	11.7	11.1	10.8	11.8	11.5	11.7	12.2	12.7	12.5	12.3	12.1
1994	10.2	10.2	9.8	9.4	9.7	10.3	11.5	11.8	11.3	11.5	10.9	10.6	11.6	11.3	11.5	12.0	12.5	12.3	12.1	11.9
1995	10.5	10.5	10.2	9.7	10.0	10.7	11.9	12.2	11.6	11.9	11.3	11.0	12.0	11.7	11.9	12.4	12.9	12.7	12.5	12.4
1996	10.7	10.7	10.3	9.9	10.2	10.9	12.0	12.4	11.8	12.0	11.5	11.2	12.2	11.9	12.1	12.6	13.1	12.9	12.7	12.6
1997	11.0	11.0	10.6	10.2	10.5	11.2	12.3	12.7	12.1	12.3	11.8	11.5	12.5	12.2	12.5	12.9	13.4	13.3	13.1	12.9
1998	11.2	11.2	10.9	10.5	10.8	11.4	12.5	12.9	12.3	12.6	12.1	11.8	12.8	12.5	12.7	13.2	13.6	13.5	13.3	13.2
1999	11.3	11.3	11.0	10.6	10.9	11.5	12.7	13.0	12.5	12.7	12.2	11.9	12.9	12.6	12.9	13.3	13.8	13.7	13.5	13.3
2000	11.0	11.0	10.7	10.3	10.6	11.2	12.3	12.6	12.1	12.3	11.9	11.6	12.5	12.2	12.5	12.9	13.3	13.2	13.0	12.9
2001	10.7	10.7	10.4	10.0	10.3	10.9	11.9	12.2	11.7	11.9	11.5	11.1	12.1	11.8	12.0	12.4	12.9	12.7	12.5	12.4
2002	10.2	10.2	9.9	9.5	9.7	10.3	11.4	11.7	11.1	11.3	10.9	10.6	11.5	11.2	11.4	11.7	12.2	12.0	11.8	11.7
2003	10.4	10.4	10.1	9.7	10.0	10.5	11.6	11.9	11.4	11.6	11.1	10.8	11.7	11.4	11.6	12.0	12.4	12.3	12.1	12.0
2004	10.4	10.4	10.1	9.7	10.0	10.5	11.6	11.9	11.4	11.6	11.1	10.8	11.7	11.4	11.6	12.0	12.4	12.3	12.1	11.9
2005	10.4	10.3	10.0	9.7	9.9	10.5	11.5	11.8	11.3	11.5	11.0	10.7	11.6	11.3	11.5	11.9	12.3	12.2	11.9	11.8
2006	10.4	10.4	10.1	9.7	10.0	10.5	11.5	11.8	11.3	11.5	11.1	10.8	11.6	11.4	11.6	11.9	12.3	12.2	12.0	11.9

Table C-1 (page 3 of 6)

Large Company Stocks Total Returns
 Rates of Return for all holding periods
 Percent per annum compounded annually

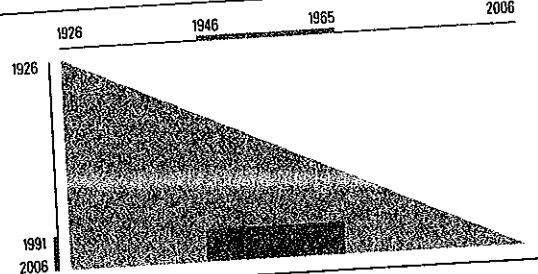


from 1926 to 2006

To the end of	From the beginning of	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	
1946	-8.1																					
1947	-1.4	5.7																				
1948	0.8	5.6	5.5																			
1949	5.1	9.8	11.9	18.8																		
1950	9.9	14.9	18.2	25.1	31.7																	
1951	12.1	16.7	19.6	24.7	27.8	24.0																
1952	13.0	17.0	19.4	23.1	24.6	21.2	18.4															
1953	11.2	14.2	15.7	17.9	17.6	13.3	8.3	-1.0														
1954	15.1	18.4	20.4	23.0	23.9	22.0	21.4	22.9	52.6													
1955	16.7	19.8	21.7	24.2	25.2	23.9	23.9	25.7	41.7	31.6												
1956	15.7	18.4	19.9	21.9	22.3	20.8	20.2	20.6	28.9	18.4	6.6											
1957	13.2	15.4	16.4	17.7	17.6	15.7	14.4	13.6	17.5	7.7	-2.5	-10.8										
1958	15.3	17.5	18.7	20.1	20.2	18.8	18.1	18.1	22.3	15.7	10.9	13.1	43.4									
1959	15.1	17.1	18.1	19.3	19.4	18.1	17.3	17.2	20.5	15.0	11.1	12.7	26.7	12.0								
1960	14.0	15.8	16.6	17.6	17.5	16.2	15.3	14.9	17.4	12.4	8.9	9.5	17.3	6.1	0.5							
1961	14.8	16.5	17.3	18.3	18.3	17.1	16.4	16.2	18.6	14.4	11.7	12.8	19.6	12.6	12.9	26.9						
1962	13.3	14.8	15.4	16.1	15.9	14.7	13.9	13.4	15.2	11.2	8.5	8.9	13.3	6.8	5.2	7.6	-8.7					
1963	13.8	15.2	15.8	16.6	16.4	15.3	14.6	14.3	15.9	12.4	10.2	10.8	14.8	9.9	9.3	12.5	5.9	22.8				
1964	13.9	15.3	15.9	16.6	16.4	15.4	14.7	14.4	16.0	12.8	10.9	11.5	15.1	10.9	10.7	13.5	9.3	19.6	16.5			
1965	13.8	15.1	15.7	16.3	16.2	15.2	14.6	14.3	15.7	12.8	11.1	11.6	14.7	11.1	11.0	13.2	10.1	17.2	14.4	12.5		
1966	12.6	13.7	14.2	14.7	14.4	13.4	12.7	12.4	13.4	10.7	9.0	9.2	11.7	8.2	7.7	9.0	5.7	9.7	5.6	0.6		
1967	13.1	14.2	14.6	15.1	14.9	14.0	13.4	13.1	14.2	11.6	10.1	10.5	12.8	9.9	9.6	11.0	8.6	12.4	9.9	7.8		
1968	13.0	14.0	14.5	14.9	14.7	13.8	13.3	13.0	14.0	11.6	10.2	10.5	12.7	10.0	9.8	11.0	8.9	12.2	10.2	8.6		
1969	12.0	13.0	13.3	13.7	13.4	12.5	11.9	11.6	12.4	10.1	8.7	8.9	10.7	8.2	7.8	8.7	6.6	9.0	6.8	5.0		
1970	11.7	12.6	12.9	13.2	13.0	12.1	11.5	11.1	11.9	9.7	8.4	8.6	10.2	7.8	7.5	8.2	6.3	8.3	6.4	4.8		
1971	11.8	12.6	12.9	13.3	13.0	12.2	11.6	11.3	12.0	10.0	8.8	8.9	10.5	8.3	8.0	8.7	7.1	9.0	7.4	6.1		
1972	12.0	12.9	13.2	13.5	13.3	12.5	12.0	11.7	12.4	10.5	9.4	9.5	11.0	9.0	8.8	9.5	8.1	9.9	8.6	7.6		
1973	10.9	11.7	11.9	12.2	11.9	11.2	10.6	10.3	10.8	9.0	7.9	7.9	9.2	7.3	6.9	7.5	6.0	7.4	6.0	4.9		
1974	9.4	10.1	10.2	10.4	10.1	9.3	8.7	8.2	8.7	6.9	5.7	5.7	6.7	4.8	4.3	4.6	3.0	4.1	2.5	1.2		
1975	10.2	10.9	11.1	11.3	11.0	10.3	9.7	9.4	9.9	8.2	7.1	7.1	8.2	6.4	6.1	6.5	5.2	6.3	5.1	4.1		
1976	10.6	11.3	11.5	11.7	11.5	10.8	10.3	9.9	10.4	8.8	7.8	7.9	9.0	7.3	7.1	7.5	6.3	7.5	6.4	5.6		
1977	10.0	10.7	10.8	11.0	10.7	10.0	9.5	9.2	9.6	8.1	7.1	7.1	8.1	6.5	6.2	6.6	5.4	6.4	5.4	4.6		
1978	9.9	10.5	10.7	10.9	10.6	9.9	9.4	9.1	9.5	8.0	7.1	7.1	8.0	6.5	6.2	6.6	5.5	6.5	5.4	4.7		
1979	10.2	10.8	10.9	11.1	10.8	10.2	9.7	9.4	9.8	8.4	7.5	7.6	8.5	7.1	6.8	7.2	6.2	7.1	6.2	5.6		
1980	10.7	11.3	11.5	11.7	11.5	10.9	10.4	10.2	10.6	9.2	8.4	8.5	9.4	8.1	7.9	8.3	7.4	8.4	7.6	7.1		
1981	10.3	10.8	11.0	11.2	10.9	10.3	9.9	9.6	10.0	8.7	7.9	7.9	8.8	7.5	7.3	7.6	6.8	7.6	6.9	6.3		
1982	10.6	11.1	11.3	11.5	11.2	10.7	10.2	10.0	10.4	9.1	8.4	8.4	9.3	8.1	7.9	8.2	7.4	8.3	7.6	7.1		
1983	10.9	11.4	11.6	11.8	11.6	11.0	10.6	10.4	10.8	9.6	8.8	8.9	9.8	8.6	8.5	8.8	8.1	8.9	8.3	7.9		
1984	10.7	11.3	11.4	11.6	11.4	10.9	10.5	10.2	10.6	9.4	8.7	8.8	9.6	8.5	8.4	8.7	8.0	8.8	8.2	7.8		
1985	11.2	11.8	11.9	12.1	11.9	11.4	11.1	10.8	11.2	10.1	9.5	9.6	10.4	9.3	9.2	9.6	8.9	9.7	9.2	8.8		
1986	11.4	11.9	12.1	12.3	12.1	11.6	11.3	11.1	11.4	10.4	9.7	9.8	10.6	9.6	9.5	9.9	9.3	10.1	9.6	9.3		
1987	11.2	11.8	11.9	12.1	11.9	11.4	11.1	10.9	11.3	10.2	9.6	9.7	10.4	9.5	9.4	9.7	9.1	9.9	9.4	9.1		
1988	11.4	11.9	12.0	12.2	12.0	11.6	11.2	11.1	11.4	10.4	9.8	9.9	10.6	9.7	9.6	10.0	9.4	10.1	9.7	9.4		
1989	11.8	12.3	12.5	12.6	12.5	12.0	11.7	11.6	11.9	10.9	10.4	10.5	11.2	10.3	10.3	10.6	10.1	10.9	10.4	10.2		
1990	11.4	11.9	12.1	12.2	12.1	11.6	11.3	11.1	11.5	10.5	10.0	10.1	10.8	9.9	9.8	10.2	9.6	10.3	9.9	9.7		

Table C-1 (page 4 of 6)

Large Company Stocks Total Returns
 Rates of Return for all holding periods
 Percent per annum compounded annually



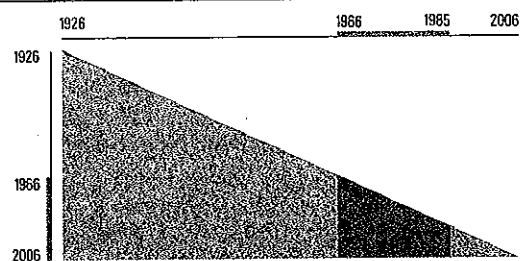
from 1926 to 2006

To the end of	From the beginning of			1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
	1946	1947	1948																	
1991	11.8	12.3	12.5	12.6	12.5	12.1	11.8	11.6	12.0	11.0	10.5	10.6	11.3	10.5	10.4	10.8	10.3	11.0	10.6	10.4
1992	11.7	12.2	12.4	12.5	12.4	11.9	11.7	11.5	11.8	10.9	10.4	10.5	11.2	10.4	10.3	10.7	10.2	10.9	10.5	10.3
1993	11.7	12.2	12.3	12.5	12.3	11.9	11.6	11.5	11.8	10.9	10.4	10.5	11.2	10.4	10.3	10.6	10.2	10.8	10.5	10.3
1994	11.5	11.9	12.1	12.2	12.1	11.6	11.4	11.2	11.5	10.7	10.2	10.3	10.9	10.1	10.1	10.4	9.9	10.5	10.2	9.9
1995	11.9	12.4	12.5	12.7	12.6	12.2	11.9	11.8	12.1	11.2	10.8	10.9	11.5	10.8	10.7	11.0	10.6	11.3	10.9	10.7
1996	12.1	12.6	12.7	12.9	12.8	12.4	12.1	12.0	12.3	11.5	11.1	11.2	11.8	11.1	11.1	11.4	10.9	11.6	11.3	11.1
1997	12.5	13.0	13.1	13.3	13.2	12.8	12.6	12.4	12.8	12.0	11.5	11.7	12.3	11.6	11.6	11.9	11.5	12.2	11.9	11.7
1998	12.8	13.2	13.4	13.6	13.5	13.1	12.9	12.8	13.1	12.3	11.9	12.0	12.7	12.0	12.0	12.3	11.9	12.6	12.3	12.2
1999	13.0	13.4	13.5	13.7	13.6	13.3	13.1	12.9	13.3	12.5	12.1	12.2	12.9	12.2	12.2	12.5	12.2	12.8	12.5	12.4
2000	12.5	12.9	13.1	13.2	13.1	12.8	12.5	12.4	12.7	12.0	11.6	11.7	12.3	11.6	11.6	11.9	11.6	12.2	11.9	11.8
2001	12.0	12.4	12.5	12.7	12.6	12.2	12.0	11.9	12.2	11.4	11.0	11.1	11.7	11.0	11.0	11.3	10.9	11.5	11.2	11.1
2002	11.3	11.7	11.8	11.9	11.8	11.4	11.2	11.1	11.3	10.6	10.2	10.3	10.8	10.1	10.1	10.3	10.0	10.5	10.2	10.0
2003	11.6	12.0	12.1	12.2	12.1	11.7	11.5	11.4	11.7	10.9	10.5	10.6	11.2	10.5	10.5	10.7	10.4	10.9	10.6	10.5
2004	11.6	11.9	12.1	12.2	12.1	11.7	11.5	11.4	11.6	10.9	10.6	10.6	11.1	10.5	10.5	10.7	10.4	10.9	10.6	10.5
2005	11.5	11.8	11.9	12.0	11.9	11.6	11.4	11.3	11.5	10.8	10.4	10.5	11.0	10.4	10.4	10.6	10.3	10.7	10.5	10.3
2006	11.5	11.9	12.0	12.1	12.0	11.7	11.5	11.3	11.6	10.9	10.5	10.6	11.1	10.5	10.5	10.7	10.4	10.9	10.6	10.5

Table C-1 (page 5 of 6)

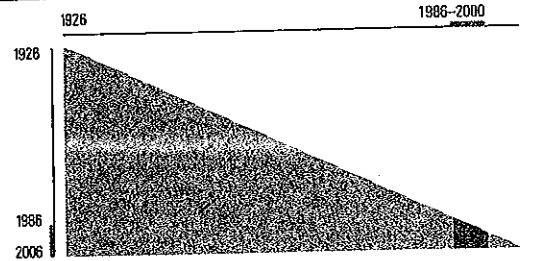
Large Company Stocks Total Returns
Rates of Return for all holding periods
Percent per annum compounded annually

from 1926 to 2006



To the end of	From the beginning of	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
1966	-10.1																				
1967	5.6	24.0																			
1968	7.4	17.3	11.1																		
1969	3.2	8.0	0.8	-8.5																	
1970	3.3	7.0	1.9	-2.4	4.0																
1971	5.1	8.4	4.8	2.8	9.0	14.3															
1972	7.0	10.1	7.5	6.7	12.3	16.6	19.0														
1973	4.0	6.2	3.5	2.0	4.8	5.1	0.8	-14.7													
1974	0.1	1.4	-1.5	-3.4	-2.4	-3.9	-9.3	-20.8	-26.5												
1975	3.3	4.9	2.7	1.6	3.3	3.2	0.6	-4.9	0.4	37.2											
1976	5.0	6.6	4.9	4.1	6.0	6.4	4.9	1.6	7.7	30.4	23.8										
1977	3.9	5.3	3.6	2.8	4.3	4.3	2.8	-0.2	3.8	16.4	7.2	-7.2									
1978	4.1	5.4	3.9	3.2	4.5	4.6	3.3	0.9	4.3	13.9	7.0	-0.5	6.6								
1979	5.1	6.3	5.0	4.5	5.9	6.1	5.1	3.2	6.6	14.8	9.7	5.4	12.3	18.4							
1980	6.7	8.0	6.9	6.5	8.0	8.4	7.8	6.5	9.9	17.5	13.9	11.6	18.7	25.2	32.4						
1981	5.9	7.1	6.0	5.6	6.9	7.2	6.5	5.2	7.9	14.0	10.6	8.1	12.3	14.3	12.2	-4.9					
1982	6.8	8.0	7.0	6.7	7.9	8.3	7.7	6.7	9.4	14.9	12.1	10.2	14.0	16.0	15.2	7.4	21.4				
1983	7.6	8.8	7.9	7.7	8.9	9.3	8.9	8.0	10.6	15.7	13.3	11.9	15.4	17.3	17.0	12.3	22.0	22.5			
1984	7.5	8.6	7.8	7.6	8.7	9.1	8.7	7.9	10.2	14.8	12.5	11.2	14.1	15.4	14.8	10.7	16.5	14.1	6.3		
1985	8.7	9.7	9.0	8.9	10.1	10.5	10.2	9.6	11.9	16.2	14.3	13.3	16.2	17.6	17.5	14.7	20.2	19.8	18.5	32.2	
1986	9.1	10.2	9.5	9.4	10.6	11.0	10.8	10.2	12.4	16.4	14.7	13.8	16.4	17.7	17.6	15.3	19.9	19.5	18.5	25.1	
1987	8.9	9.9	9.3	9.2	10.3	10.6	10.4	9.9	11.9	15.5	13.9	13.0	15.3	16.3	16.0	13.8	17.3	16.5	15.0	18.1	
1988	9.3	10.2	9.6	9.5	10.6	11.0	10.8	10.3	12.2	15.6	14.1	13.3	15.4	16.3	16.1	14.2	17.2	16.5	15.4	17.8	
1989	10.1	11.1	10.5	10.5	11.5	12.0	11.8	11.4	13.3	16.6	15.3	14.6	16.7	17.6	17.5	16.0	18.9	18.6	17.9	20.4	
1990	9.5	10.4	9.9	9.8	10.8	11.2	11.0	10.6	12.3	15.3	13.9	13.3	15.0	15.7	15.5	13.9	16.2	15.6	14.6	16.1	
1991	10.3	11.2	10.7	10.7	11.6	12.0	11.9	11.5	13.2	16.1	14.9	14.3	16.0	16.8	16.7	15.3	17.6	17.2	16.5	18.1	
1992	10.2	11.1	10.6	10.5	11.5	11.8	11.7	11.3	12.9	15.6	14.5	13.9	15.5	16.1	16.0	14.7	16.7	16.2	15.5	16.7	
1993	10.2	11.0	10.5	10.5	11.4	11.7	11.6	11.3	12.8	15.3	14.2	13.7	15.1	15.7	15.5	14.3	16.1	15.6	14.9	16.0	
1994	9.9	10.6	10.2	10.1	11.0	11.3	11.1	10.8	12.2	14.6	13.5	12.9	14.3	14.8	14.5	13.3	14.9	14.3	13.6	14.4	
1995	10.7	11.5	11.1	11.1	11.9	12.2	12.1	11.8	13.2	15.6	14.6	14.1	15.4	16.0	15.8	14.8	16.4	16.0	15.4	16.3	
1996	11.1	11.8	11.5	11.5	12.3	12.6	12.5	12.3	13.6	15.9	15.0	14.6	15.8	16.4	16.2	15.3	16.8	16.5	16.0	16.9	
1997	11.7	12.5	12.1	12.2	13.0	13.3	13.3	13.1	14.4	16.6	15.8	15.4	16.6	17.2	17.1	16.3	17.8	17.5	17.2	18.1	
1998	12.2	13.0	12.6	12.7	13.5	13.8	13.8	13.6	14.9	17.1	16.3	16.0	17.2	17.7	17.7	16.9	18.4	18.2	17.9	18.8	
1999	12.4	13.2	12.9	12.9	13.7	14.1	14.1	13.9	15.2	17.2	16.5	16.2	17.4	17.9	17.9	17.2	18.5	18.4	18.1	18.9	
2000	11.7	12.5	12.1	12.2	12.9	13.2	13.2	13.0	14.2	16.1	15.3	15.0	16.1	16.5	16.4	15.7	16.9	16.6	16.3	17.0	
2001	11.0	11.7	11.3	11.3	12.0	12.3	12.2	12.0	13.1	14.9	14.1	13.8	14.7	15.1	15.0	14.2	15.2	14.9	14.5	15.0	
2002	10.0	10.6	10.2	10.2	10.8	11.0	10.9	10.7	11.7	13.3	12.5	12.1	13.0	13.3	13.0	12.2	13.1	12.7	12.2	12.6	
2003	10.4	11.0	10.7	10.7	11.3	11.5	11.4	11.2	12.2	13.8	13.1	12.7	13.5	13.8	13.6	12.9	13.8	13.4	13.0	13.4	
2004	10.4	11.0	10.7	10.7	11.3	11.5	11.4	11.2	12.1	13.7	13.0	12.6	13.4	13.7	13.5	12.8	13.6	13.3	12.9	13.2	
2005	10.3	10.9	10.5	10.5	11.1	11.3	11.2	11.0	11.9	13.4	12.7	12.4	13.1	13.4	13.2	12.5	13.3	12.9	12.5	12.8	
2006	10.4	11.0	10.7	10.7	11.2	11.4	11.4	11.1	12.0	13.5	12.8	12.5	13.2	13.5	13.3	12.6	13.4	13.0	12.7	12.9	

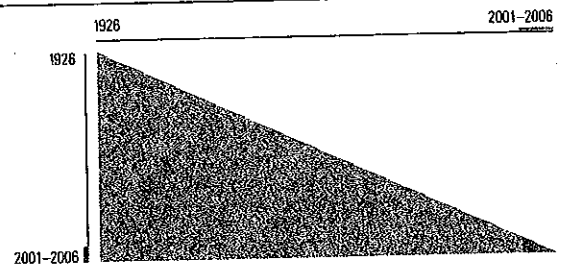
Table C-1 (page 6 of 6)-a

Large Company Stocks Total ReturnsRates of Return for all holding periods
Percent per annum compounded annually

from 1926 to 2006

To the end of	From the beginning of						1993	1994	1995	1996	1997	1998	1999	2000	
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1986	18.5														
1987	11.7	5.2													
1988	13.3	10.9	16.8												
1989	17.6	17.4	23.9	31.5											
1990	13.1	11.8	14.1	12.8	-3.2										
1991	15.9	15.4	18.0	18.5	12.4	30.5									
1992	14.7	14.0	15.9	15.7	10.8	18.6	7.7								
1993	14.1	13.5	14.9	14.5	10.6	15.6	8.8	10.0							
1994	12.6	11.9	12.8	12.2	8.7	11.9	6.3	5.6	1.3						
1995	14.8	14.4	15.7	15.5	13.0	16.6	13.3	15.3	18.0	37.4					
1996	15.6	15.3	16.5	16.4	14.4	17.6	15.2	17.2	19.7	30.1	23.1				
1997	17.0	16.8	18.0	18.2	16.6	19.8	18.0	20.2	23.0	31.1	28.1	33.4			
1998	17.8	17.8	19.0	19.2	17.9	20.8	19.5	21.6	24.1	30.5	28.3	31.0	28.6		
1999	18.0	18.0	19.1	19.4	18.2	20.9	19.7	21.5	23.5	28.6	26.4	27.6	24.8	21.0	
2000	16.0	15.8	16.7	16.7	15.4	17.5	16.1	17.2	18.2	21.3	18.4	17.2	12.3	4.9	-9.1
2001	14.0	13.7	14.4	14.2	12.8	14.4	12.9	13.5	14.0	15.9	12.7	10.7	5.7	-1.0	-10.5
2002	11.5	11.1	11.5	11.1	9.7	10.8	9.2	9.3	9.3	10.3	6.9	4.4	-0.6	-6.8	-14.6
2003	12.4	12.0	12.5	12.2	10.9	12.1	10.7	11.0	11.1	12.2	9.4	7.6	3.8	-0.6	-5.3
2004	12.3	12.0	12.4	12.1	10.9	12.0	10.7	11.0	11.0	12.1	9.6	8.0	4.8	1.3	-2.3
2005	11.9	11.6	12.0	11.7	10.5	11.5	10.3	10.5	10.5	11.4	9.1	7.6	4.8	1.8	-1.1
2006	12.1	11.8	12.2	11.9	10.8	11.8	10.6	10.9	10.9	11.8	9.7	8.4	6.0	3.4	1.1

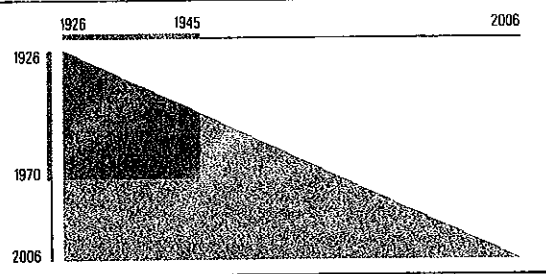
Table C-1 (page 6 of 6)-b

Large Company Stocks Total ReturnsRates of Return for all holding periods
Percent per annum compounded annually

from 1926 to 2006

To the end of	From the beginning of					
	2001	2002	2003	2004	2005	2006
2001	-11.9					
2002	-17.2	-22.1				
2003	-4.1	0.1	28.7			
2004	-0.5	3.6	19.5	10.9		
2005	0.5	3.9	14.4	7.8	4.9	
2006	2.9	6.2	14.7	10.4	10.2	15.8

Table C-4 (page 1 of 6)
Long-Term Government Bonds Total Returns
 Rates of Return for all holding periods
 Percent per annum compounded annually

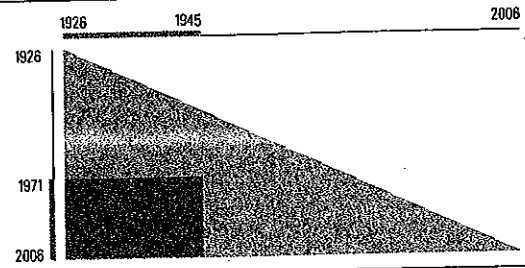


from 1926 to 2006

To the end of	From the beginning of			1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	
	1926	1927	1928																		
1926	7.8																				
1927	8.3	8.9																			
1928	5.5	4.4	0.1																		
1929	5.0	4.1	1.7	3.4																	
1930	4.9	4.2	2.7	4.0	4.7																
1931	3.1	2.2	0.6	0.8	-0.5	-5.3															
1932	5.0	4.5	3.7	4.6	5.0	5.2	16.8														
1933	4.4	3.9	3.1	3.7	3.7	3.4	8.1	-0.1													
1934	5.0	4.6	4.0	4.7	4.9	5.0	8.7	4.9	10.0												
1935	5.0	4.7	4.1	4.7	5.0	5.0	7.8	4.9	7.5	5.0											
1936	5.2	4.9	4.5	5.1	5.3	5.4	7.7	5.5	7.5	6.2	7.5										
1937	4.8	4.5	4.1	4.5	4.7	4.7	6.4	4.5	5.6	4.2	3.8	0.2									
1938	4.8	4.6	4.2	4.6	4.8	4.8	6.3	4.6	5.6	4.5	4.4	2.8	5.5								
1939	4.9	4.7	4.4	4.7	4.9	4.9	6.3	4.8	5.7	4.8	4.8	3.9	5.7	5.9							
1940	5.0	4.8	4.5	4.9	5.0	5.0	6.2	5.0	5.7	5.0	5.0	4.4	5.9	6.0	6.1						
1941	4.7	4.5	4.2	4.5	4.6	4.6	5.7	4.5	5.1	4.4	4.3	3.7	4.6	4.3	3.5	0.9					
1942	4.6	4.5	4.2	4.5	4.5	4.5	5.5	4.4	4.9	4.3	4.2	3.6	4.3	4.0	3.4	2.1	3.2				
1943	4.5	4.3	4.0	4.3	4.4	4.3	5.2	4.2	4.6	4.0	3.9	3.4	3.9	3.6	3.1	2.1	2.6	2.1			
1944	4.4	4.2	4.0	4.2	4.3	4.2	5.0	4.1	4.5	3.9	3.8	3.3	3.8	3.5	3.0	2.3	2.7	2.4	2.8		
1945	4.7	4.6	4.3	4.6	4.6	4.6	5.4	4.6	5.0	4.5	4.5	4.1	4.6	4.5	4.3	3.9	4.7	5.1	6.7	10.7	
1946	4.5	4.3	4.1	4.3	4.4	4.3	5.0	4.2	4.6	4.1	4.0	3.7	4.1	3.9	3.6	3.2	3.7	3.8	4.4	5.2	
1947	4.1	4.0	3.7	3.9	4.0	3.9	4.5	3.8	4.0	3.6	3.5	3.1	3.4	3.2	2.8	2.4	2.6	2.5	2.6	2.5	
1948	4.1	4.0	3.7	3.9	3.9	3.9	4.5	3.7	4.0	3.6	3.5	3.1	3.4	3.2	2.9	2.5	2.7	2.6	2.7	2.7	
1949	4.2	4.1	3.8	4.0	4.1	4.0	4.6	3.9	4.1	3.8	3.7	3.4	3.7	3.5	3.2	2.9	3.2	3.2	3.4	3.5	
1950	4.0	3.9	3.7	3.8	3.9	3.8	4.3	3.7	3.9	3.5	3.4	3.1	3.4	3.2	2.9	2.6	2.8	2.8	2.9	2.9	
1951	3.7	3.6	3.3	3.5	3.5	3.4	3.9	3.3	3.4	3.1	3.0	2.7	2.8	2.6	2.4	2.0	2.1	2.0	2.0	1.9	
1952	3.6	3.5	3.3	3.4	3.4	3.3	3.8	3.2	3.3	3.0	2.8	2.6	2.7	2.5	2.3	1.9	2.0	1.9	1.9	1.8	
1953	3.6	3.5	3.3	3.4	3.4	3.3	3.8	3.2	3.3	3.0	2.9	2.6	2.8	2.6	2.4	2.1	2.2	2.1	2.1	2.0	
1954	3.7	3.6	3.4	3.5	3.6	3.5	3.9	3.4	3.5	3.2	3.1	2.9	3.0	2.9	2.7	2.4	2.6	2.5	2.5	2.5	
1955	3.6	3.4	3.2	3.4	3.4	3.3	3.7	3.1	3.3	3.0	2.9	2.6	2.8	2.6	2.4	2.2	2.3	2.2	2.2	2.2	
1956	3.3	3.1	2.9	3.0	3.0	3.0	3.3	2.8	2.9	2.6	2.5	2.2	2.3	2.2	1.9	1.7	1.7	1.6	1.6	1.5	
1957	3.4	3.3	3.1	3.2	3.2	3.1	3.5	3.0	3.1	2.8	2.7	2.5	2.6	2.4	2.2	2.0	2.1	2.0	2.0	1.9	
1958	3.1	3.0	2.8	2.9	2.8	2.8	3.1	2.6	2.7	2.4	2.3	2.1	2.1	2.0	1.8	1.5	1.6	1.5	1.4	1.3	
1959	2.9	2.8	2.6	2.7	2.7	2.6	2.9	2.4	2.5	2.2	2.1	1.9	1.9	1.8	1.6	1.3	1.4	1.3	1.2	1.1	
1960	3.2	3.1	2.9	3.0	3.0	2.9	3.2	2.8	2.9	2.6	2.5	2.3	2.4	2.3	2.1	1.9	2.0	1.9	1.9	1.8	
1961	3.2	3.0	2.9	3.0	2.9	2.9	3.2	2.7	2.8	2.6	2.5	2.3	2.4	2.2	2.1	1.9	1.9	1.9	1.8	1.8	
1962	3.3	3.1	3.0	3.1	3.1	3.0	3.3	2.9	3.0	2.7	2.6	2.5	2.5	2.4	2.3	2.1	2.2	2.1	2.1	2.1	
1963	3.2	3.1	2.9	3.0	3.0	3.0	3.2	2.8	2.9	2.7	2.6	2.4	2.5	2.4	2.2	2.1	2.1	2.1	2.1	2.0	
1964	3.2	3.1	2.9	3.0	3.0	3.0	3.2	2.8	2.9	2.7	2.6	2.4	2.5	2.4	2.3	2.1	2.2	2.1	2.1	2.1	
1965	3.2	3.0	2.9	3.0	3.0	2.9	3.2	2.8	2.9	2.6	2.6	2.4	2.5	2.4	2.2	2.1	2.1	2.1	2.1	2.0	
1966	3.2	3.1	2.9	3.0	3.0	2.9	3.2	2.8	2.9	2.7	2.6	2.4	2.5	2.4	2.3	2.1	2.2	2.1	2.1	2.1	
1967	2.9	2.7	2.6	2.7	2.6	2.6	2.8	2.4	2.5	2.3	2.2	2.0	2.1	2.0	1.8	1.7	1.7	1.7	1.6	1.6	
1968	2.8	2.7	2.5	2.6	2.6	2.5	2.7	2.4	2.4	2.2	2.1	2.0	2.0	1.9	1.8	1.6	1.6	1.6	1.6	1.5	
1969	2.6	2.5	2.3	2.4	2.4	2.3	2.5	2.1	2.2	2.0	1.9	1.7	1.8	1.7	1.5	1.4	1.4	1.3	1.3	1.2	
1970	2.8	2.7	2.5	2.6	2.6	2.5	2.7	2.4	2.5	2.3	2.2	2.0	2.1	2.0	1.9	1.7	1.7	1.7	1.7	1.6	

Table C-4 (page 2 of 6)

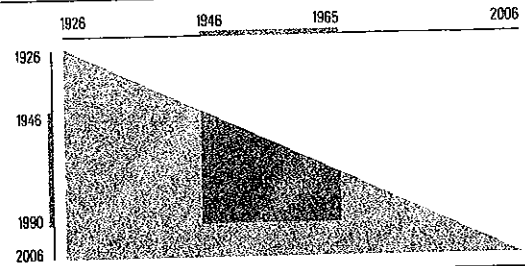
Long-Term Government Bonds Total Returns
 Rates of Return for all holding periods
 Percent per annum compounded annually



from 1926 to 2006

To the end of	From the beginning of																			
	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
1971	3.0	2.9	2.8	2.8	2.8	2.8	3.0	2.7	2.7	2.5	2.5	2.3	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.0
1972	3.1	3.0	2.8	2.9	2.9	2.8	3.1	2.7	2.8	2.6	2.6	2.4	2.5	2.4	2.3	2.2	2.2	2.2	2.2	2.2
1973	3.0	2.9	2.8	2.8	2.8	2.8	3.0	2.6	2.7	2.5	2.5	2.3	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.1
1974	3.0	2.9	2.8	2.8	2.8	2.8	3.0	2.7	2.7	2.6	2.5	2.4	2.4	2.4	2.3	2.1	2.2	2.2	2.2	2.1
1975	3.1	3.0	2.9	3.0	3.0	2.9	3.1	2.8	2.9	2.7	2.7	2.6	2.6	2.5	2.4	2.3	2.4	2.4	2.4	2.4
1976	3.4	3.3	3.2	3.2	3.2	3.2	3.4	3.1	3.2	3.0	3.0	2.9	3.0	2.9	2.8	2.7	2.8	2.8	2.8	2.8
1977	3.3	3.2	3.1	3.2	3.2	3.1	3.3	3.0	3.1	3.0	2.9	2.8	2.9	2.8	2.7	2.6	2.7	2.7	2.7	2.7
1978	3.2	3.1	3.0	3.1	3.1	3.0	3.2	2.9	3.0	2.9	2.8	2.7	2.8	2.7	2.6	2.5	2.6	2.5	2.6	2.6
1979	3.1	3.0	2.9	3.0	3.0	2.9	3.1	2.9	2.9	2.8	2.7	2.6	2.7	2.6	2.5	2.4	2.5	2.4	2.5	2.4
1980	3.0	2.9	2.8	2.9	2.8	2.8	3.0	2.7	2.8	2.6	2.6	2.5	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.3
1981	3.0	2.9	2.8	2.8	2.8	2.8	3.0	2.7	2.7	2.6	2.5	2.4	2.5	2.4	2.3	2.2	2.3	2.3	2.3	2.2
1982	3.5	3.5	3.4	3.4	3.4	3.4	3.6	3.3	3.4	3.3	3.2	3.1	3.2	3.1	3.0	3.0	3.0	3.0	3.0	3.0
1983	3.5	3.4	3.3	3.4	3.4	3.4	3.5	3.3	3.3	3.2	3.2	3.1	3.2	3.1	3.0	3.0	3.0	3.0	3.0	3.0
1984	3.7	3.6	3.5	3.6	3.6	3.6	3.7	3.5	3.6	3.4	3.4	3.3	3.4	3.4	3.3	3.2	3.3	3.3	3.3	3.3
1985	4.1	4.0	3.9	4.0	4.0	4.0	4.2	4.0	4.0	3.9	3.9	3.8	3.9	3.9	3.8	3.8	3.8	3.9	3.9	3.9
1986	4.4	4.3	4.3	4.3	4.3	4.3	4.5	4.3	4.4	4.3	4.3	4.2	4.3	4.3	4.2	4.2	4.3	4.3	4.3	4.4
1987	4.3	4.2	4.1	4.2	4.2	4.2	4.4	4.2	4.3	4.2	4.1	4.1	4.2	4.1	4.1	4.0	4.1	4.1	4.2	4.2
1988	4.4	4.3	4.2	4.3	4.3	4.3	4.5	4.3	4.4	4.3	4.2	4.2	4.3	4.2	4.2	4.2	4.2	4.2	4.3	4.3
1989	4.6	4.5	4.4	4.5	4.5	4.5	4.7	4.5	4.6	4.5	4.5	4.4	4.5	4.5	4.5	4.4	4.5	4.5	4.6	4.6
1990	4.6	4.5	4.5	4.5	4.6	4.6	4.7	4.5	4.6	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.6	4.6	4.7
1991	4.8	4.7	4.7	4.8	4.8	4.8	5.0	4.8	4.9	4.8	4.8	4.7	4.8	4.8	4.8	4.7	4.8	4.8	4.9	4.9
1992	4.8	4.8	4.7	4.8	4.8	4.8	5.0	4.8	4.9	4.8	4.8	4.8	4.9	4.8	4.8	4.8	4.9	4.9	5.0	5.0
1993	5.0	5.0	4.9	5.0	5.0	5.0	5.2	5.0	5.1	5.0	5.0	5.0	5.1	5.1	5.1	5.0	5.1	5.2	5.2	5.3
1994	4.8	4.8	4.7	4.8	4.8	4.8	5.0	4.8	4.9	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.9	4.9	4.9	5.0
1995	5.2	5.1	5.1	5.2	5.2	5.2	5.4	5.2	5.3	5.2	5.2	5.2	5.3	5.2	5.2	5.2	5.3	5.3	5.4	5.5
1996	5.1	5.0	5.0	5.1	5.1	5.1	5.3	5.1	5.2	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.2	5.2	5.3	5.3
1997	5.2	5.2	5.1	5.2	5.2	5.2	5.4	5.2	5.3	5.3	5.3	5.2	5.3	5.3	5.3	5.3	5.4	5.4	5.5	5.5
1998	5.3	5.3	5.2	5.3	5.3	5.4	5.5	5.4	5.4	5.4	5.4	5.3	5.4	5.4	5.4	5.4	5.5	5.5	5.6	5.7
1999	5.1	5.1	5.0	5.1	5.1	5.1	5.3	5.1	5.2	5.1	5.1	5.1	5.1	5.2	5.2	5.2	5.2	5.3	5.3	5.4
2000	5.3	5.3	5.2	5.3	5.3	5.4	5.5	5.4	5.4	5.4	5.4	5.3	5.4	5.4	5.4	5.4	5.5	5.5	5.6	5.6
2001	5.3	5.3	5.2	5.3	5.3	5.3	5.5	5.3	5.4	5.3	5.4	5.3	5.4	5.4	5.4	5.4	5.5	5.5	5.6	5.6
2002	5.5	5.4	5.4	5.5	5.5	5.5	5.7	5.5	5.6	5.5	5.5	5.5	5.6	5.6	5.6	5.6	5.6	5.7	5.7	5.8
2003	5.4	5.4	5.3	5.4	5.4	5.4	5.6	5.4	5.5	5.5	5.5	5.4	5.5	5.5	5.5	5.5	5.6	5.6	5.7	5.7
2004	5.4	5.4	5.4	5.4	5.5	5.5	5.6	5.5	5.6	5.5	5.5	5.5	5.6	5.6	5.6	5.6	5.6	5.7	5.7	5.8
2005	5.5	5.4	5.4	5.5	5.5	5.5	5.7	5.5	5.6	5.5	5.5	5.5	5.6	5.6	5.6	5.6	5.7	5.7	5.8	5.8
2006	5.4	5.4	5.3	5.4	5.4	5.4	5.6	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.6	5.6	5.7	5.7

Table C-4 (page 3 of 6)

Long-Term Government Bonds Total ReturnsRates of Return for all holding periods
Percent per annum compounded annually

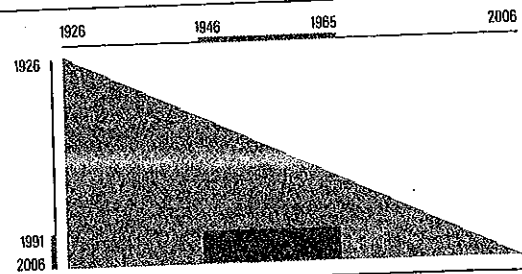
from 1926 to 2006

To the end of	From the beginning of			1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	
	1946	1947	1948																		
1946	-0.1																				
1947	-1.4	-2.6																			
1948	0.2	0.3	3.4																		
1949	1.7	2.3	4.9	6.4																	
1950	1.4	1.8	3.3	3.2	0.1																
1951	0.5	0.6	1.4	0.8	-2.0	-3.9															
1952	0.6	0.7	1.4	0.9	-0.9	-1.4	1.2														
1953	1.0	1.1	1.7	1.4	0.2	0.2	2.4	3.6													
1954	1.6	1.8	2.5	2.4	1.6	1.9	4.0	5.4	7.2												
1955	1.3	1.5	2.0	1.8	1.1	1.3	2.6	3.1	2.9	-1.3											
1956	0.7	0.8	1.1	0.9	0.1	0.1	0.9	0.9	0.0	-3.5	-5.6										
1957	1.2	1.4	1.8	1.6	1.0	1.1	2.0	2.2	1.8	0.0	0.7	7.5									
1958	0.6	0.7	1.0	0.8	0.2	0.2	0.8	0.7	0.2	-1.5	-1.6	0.5	-6.1								
1959	0.4	0.5	0.7	0.5	-0.1	-0.1	0.4	0.3	-0.2	-1.7	-1.8	-0.5	-4.2	-2.3							
1960	1.3	1.4	1.7	1.5	1.1	1.2	1.8	1.9	1.6	0.7	1.2	2.9	1.5	5.5	13.8						
1961	1.3	1.3	1.6	1.5	1.1	1.2	1.7	1.8	1.6	0.8	1.1	2.5	1.3	3.9	7.2	1.0					
1962	1.6	1.7	2.0	1.9	1.5	1.7	2.2	2.3	2.1	1.5	1.9	3.2	2.4	4.7	7.1	3.9	6.9				
1963	1.6	1.7	1.9	1.8	1.5	1.6	2.1	2.2	2.0	1.5	1.8	3.0	2.2	4.0	5.6	3.0	4.0	1.2			
1964	1.7	1.8	2.0	1.9	1.6	1.8	2.2	2.3	2.2	1.7	2.0	3.0	2.4	3.9	5.2	3.1	3.8	2.4	3.5		
1965	1.6	1.7	2.0	1.9	1.6	1.7	2.1	2.2	2.1	1.6	1.9	2.8	2.2	3.4	4.4	2.6	3.1	1.8	2.1	0.7	
1966	1.7	1.8	2.0	2.0	1.7	1.8	2.2	2.3	2.2	1.8	2.1	2.9	2.4	3.5	4.3	2.8	3.2	2.3	2.6	2.2	
1967	1.2	1.2	1.4	1.3	1.1	1.1	1.5	1.5	1.3	0.9	1.1	1.7	1.1	2.0	2.5	1.0	1.0	-0.1	-0.5	-1.8	
1968	1.1	1.2	1.4	1.3	1.0	1.1	1.4	1.4	1.2	0.8	1.0	1.5	1.0	1.7	2.2	0.8	0.8	-0.2	-0.4	-1.4	
1969	0.9	0.9	1.1	1.0	0.7	0.7	1.0	1.0	0.8	0.4	0.5	1.0	0.5	1.1	1.4	0.2	0.1	-0.9	-1.2	-2.1	
1970	1.3	1.3	1.5	1.4	1.2	1.3	1.5	1.6	1.4	1.1	1.3	1.8	1.3	2.0	2.4	1.3	1.3	0.7	0.6	0.1	
1971	1.7	1.8	2.0	1.9	1.7	1.8	2.1	2.1	2.1	1.8	2.0	2.5	2.1	2.8	3.2	2.3	2.5	2.0	2.1	1.9	
1972	1.9	1.9	2.1	2.1	1.9	2.0	2.3	2.3	2.3	2.0	2.2	2.7	2.4	3.0	3.4	2.6	2.8	2.4	2.5	2.3	
1973	1.8	1.8	2.0	1.9	1.8	1.8	2.1	2.2	2.1	1.8	2.0	2.5	2.2	2.7	3.1	2.3	2.4	2.0	2.1	2.0	
1974	1.8	1.9	2.1	2.0	1.9	1.9	2.2	2.3	2.2	1.9	2.1	2.6	2.3	2.8	3.2	2.5	2.6	2.2	2.3	2.2	
1975	2.1	2.2	2.3	2.3	2.1	2.2	2.5	2.5	2.5	2.3	2.5	2.9	2.7	3.2	3.5	2.9	3.0	2.7	2.9	2.8	
1976	2.5	2.6	2.8	2.8	2.6	2.7	3.0	3.1	3.1	2.9	3.1	3.6	3.4	3.9	4.3	3.7	3.9	3.7	3.9	3.9	
1977	2.4	2.5	2.7	2.7	2.5	2.6	2.9	2.9	2.9	2.7	2.9	3.3	3.1	3.7	4.0	3.4	3.6	3.4	3.5	3.5	
1978	2.3	2.4	2.6	2.5	2.4	2.5	2.7	2.8	2.8	2.6	2.7	3.1	2.9	3.4	3.7	3.2	3.3	3.1	3.2	3.2	
1979	2.2	2.3	2.4	2.4	2.3	2.3	2.6	2.6	2.6	2.4	2.6	2.9	2.7	3.2	3.5	2.9	3.1	2.8	2.9	2.9	
1980	2.0	2.1	2.2	2.2	2.1	2.1	2.3	2.4	2.3	2.2	2.3	2.6	2.4	2.8	3.1	2.6	2.7	2.4	2.5	2.5	
1981	2.0	2.1	2.2	2.2	2.1	2.1	2.3	2.4	2.3	2.2	2.3	2.6	2.4	2.8	3.0	2.6	2.6	2.4	2.5	2.4	
1982	2.9	3.0	3.2	3.1	3.0	3.1	3.4	3.5	3.4	3.3	3.5	3.9	3.7	4.1	4.4	4.0	4.2	4.0	4.2	4.2	
1983	2.8	2.9	3.1	3.1	3.0	3.1	3.3	3.4	3.4	3.2	3.4	3.7	3.6	4.0	4.3	3.9	4.0	3.9	4.0	4.0	
1984	3.2	3.2	3.4	3.4	3.3	3.4	3.6	3.7	3.7	3.6	3.8	4.1	4.0	4.4	4.7	4.3	4.5	4.4	4.5	4.6	
1985	3.8	3.9	4.0	4.1	4.0	4.1	4.4	4.5	4.5	4.4	4.6	5.0	4.9	5.3	5.6	5.3	5.5	5.4	5.6	5.7	
1986	4.2	4.3	4.5	4.6	4.5	4.6	4.9	5.0	5.0	5.0	5.2	5.6	5.5	5.9	6.3	6.0	6.2	6.1	6.4	6.5	
1987	4.1	4.2	4.3	4.4	4.3	4.4	4.7	4.8	4.8	4.7	4.9	5.3	5.2	5.6	5.9	5.6	5.8	5.8	6.0	6.1	
1988	4.2	4.3	4.5	4.5	4.4	4.6	4.8	4.9	4.9	4.9	5.1	5.4	5.4	5.8	6.0	5.8	6.0	5.9	6.1	6.2	
1989	4.5	4.6	4.8	4.8	4.8	4.9	5.1	5.2	5.3	5.2	5.4	5.8	5.7	6.1	6.4	6.2	6.4	6.4	6.6	6.7	
1990	4.5	4.6	4.8	4.8	4.8	4.9	5.2	5.3	5.3	5.3	5.5	5.8	5.7	6.1	6.4	6.2	6.4	6.3	6.5	6.7	

Table C-4 (page 4 of 6)

Long-Term Government Bonds Total Returns

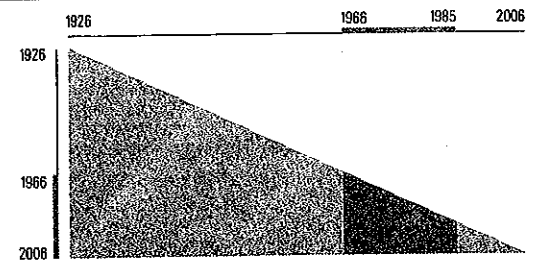
Rates of Return for all holding periods
Percent per annum compounded annually



from 1926 to 2006

To the end of	From the beginning of	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	
1991	4.8	4.9	5.1	5.2	5.1	5.2	5.5	5.6	5.7	5.7	5.8	6.2	6.1	6.5	6.8	6.6	6.8	6.8	7.0	7.1		
1992	4.9	5.0	5.2	5.2	5.2	5.3	5.6	5.7	5.7	5.9	6.2	6.2	6.2	6.5	6.5	6.9	7.2	7.0	7.2	7.2	7.4	7.5
1993	5.2	5.3	5.4	5.5	5.5	5.6	5.8	6.0	6.0	6.0	6.2	6.5	6.5	6.9	7.2	7.0	7.2	7.2	7.2	7.4	7.5	
1994	4.9	5.0	5.1	5.2	5.2	5.3	5.5	5.6	5.7	5.6	5.8	6.1	6.1	6.4	6.7	6.5	6.7	6.7	6.7	6.8	7.0	
1995	5.3	5.5	5.6	5.7	5.7	5.8	6.0	6.1	6.2	6.2	6.4	6.7	6.7	7.1	7.3	7.1	7.3	7.3	7.3	7.5	7.7	
1996	5.2	5.3	5.5	5.5	5.5	5.6	5.9	6.0	6.0	6.0	6.2	6.5	6.5	6.8	7.1	6.9	7.1	7.1	7.1	7.3	7.4	
1997	5.4	5.5	5.7	5.7	5.7	5.9	6.1	6.2	6.3	6.4	6.7	6.7	6.7	7.1	7.3	7.1	7.3	7.3	7.3	7.5	7.6	
1998	5.6	5.7	5.8	5.9	5.9	6.0	6.2	6.3	6.4	6.4	6.6	6.9	6.9	7.2	7.5	7.3	7.5	7.5	7.5	7.7	7.8	
1999	5.3	5.4	5.5	5.6	5.6	5.7	5.9	6.0	6.0	6.0	6.2	6.5	6.5	6.8	7.0	6.8	7.0	7.0	7.0	7.2	7.3	
2000	5.5	5.7	5.8	5.9	5.8	6.0	6.2	6.3	6.3	6.3	6.5	6.8	6.8	7.1	7.3	7.2	7.4	7.4	7.4	7.5	7.7	
2001	5.5	5.6	5.8	5.8	5.8	5.9	6.1	6.2	6.3	6.3	6.4	6.7	6.7	7.0	7.3	7.1	7.3	7.3	7.3	7.4	7.5	
2002	5.7	5.8	6.0	6.0	6.0	6.1	6.3	6.5	6.5	6.5	6.7	7.0	6.9	6.9	7.3	7.5	7.3	7.5	7.5	7.7	7.8	
2003	5.6	5.7	5.9	5.9	5.9	6.0	6.3	6.4	6.4	6.4	6.6	6.8	6.8	7.1	7.4	7.2	7.4	7.4	7.4	7.5	7.6	
2004	5.7	5.8	5.9	6.0	6.0	6.1	6.3	6.4	6.4	6.4	6.6	6.9	6.9	7.2	7.4	7.2	7.4	7.4	7.4	7.6	7.7	
2005	5.7	5.8	6.0	6.0	6.0	6.1	6.3	6.4	6.5	6.5	6.6	6.9	6.9	7.2	7.4	7.2	7.4	7.4	7.4	7.6	7.7	
2006	5.6	5.7	5.9	5.9	5.9	6.0	6.2	6.3	6.4	6.4	6.5	6.8	6.8	7.0	7.2	7.1	7.3	7.3	7.4	7.4	7.5	

Table C-4 (page 5 of 6)

Long-Term Government Bonds Total ReturnsRates of Return for all holding periods
Percent per annum compounded annually

from 1926 to 2006

To the end of	From the beginning of			1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	
	1966	1967	1968																		
1966	3.7																				
1967	-3.0	-9.2																			
1968	-2.1	-4.8	-0.3																		
1969	-2.8	-4.9	-2.7	-5.1																	
1970	0.0	-0.9	2.0	3.2	12.1																
1971	2.1	1.8	4.7	6.4	12.7	13.2															
1972	2.6	2.4	4.9	6.2	10.3	9.4	5.7														
1973	2.1	1.9	3.9	4.7	7.3	5.8	2.2	-1.1													
1974	2.4	2.2	3.9	4.7	6.7	5.4	2.9	1.6	4.4												
1975	3.0	3.0	4.6	5.3	7.1	6.2	4.5	4.1	6.7	9.2											
1976	4.2	4.3	5.9	6.7	8.5	7.9	6.8	7.1	10.0	12.9	16.8										
1977	3.8	3.8	5.2	5.8	7.3	6.6	5.5	5.5	7.2	8.2	7.7	-0.7									
1978	3.4	3.4	4.6	5.1	6.3	5.6	4.5	4.4	5.5	5.8	4.6	-0.9	-1.2								
1979	3.1	3.0	4.1	4.5	5.5	4.8	3.8	3.5	4.3	4.3	3.1	-1.0	-1.2	-1.2							
1980	2.6	2.5	3.5	3.8	4.6	3.9	2.9	2.6	3.1	2.9	1.7	-1.8	-2.1	-2.6	-3.9						
1981	2.5	2.5	3.3	3.6	4.4	3.7	2.8	2.5	2.9	2.7	1.7	-1.1	-1.1	-1.1	-1.1	1.9					
1982	4.4	4.5	5.5	5.9	6.8	6.4	5.8	5.8	6.6	6.8	6.5	4.9	6.0	7.9	11.2	19.6	40.4				
1983	4.2	4.3	5.2	5.5	6.3	5.9	5.3	5.3	6.0	6.1	5.8	4.3	5.1	6.4	8.4	12.9	18.9	0.7			
1984	4.8	4.9	5.7	6.1	6.9	6.6	6.1	6.1	6.8	7.0	6.8	5.6	6.5	7.9	9.8	13.5	17.7	7.8	15.5		
1985	6.0	6.1	7.0	7.5	8.3	8.0	7.7	7.8	8.6	9.0	9.0	8.2	9.3	10.9	13.1	16.8	20.9	15.0	23.0	31.0	
1986	6.8	6.9	7.9	8.3	9.2	9.0	8.7	8.9	9.8	10.2	10.3	9.7	10.9	12.5	14.6	18.1	21.6	17.3	23.5	27.7	
1987	6.3	6.5	7.3	7.7	8.5	8.3	8.0	8.1	8.8	9.2	9.2	8.5	9.5	10.7	12.3	14.9	17.2	13.0	16.3	16.6	
1988	6.5	6.6	7.4	7.8	8.5	8.4	8.1	8.2	8.9	9.2	9.2	8.6	9.5	10.6	12.0	14.2	16.1	12.5	15.0	14.9	
1989	6.9	7.1	7.9	8.3	9.0	8.8	8.6	8.8	9.4	9.8	9.8	9.3	10.2	11.3	12.6	14.6	16.3	13.2	15.5	15.5	
1990	6.9	7.0	7.8	8.2	8.9	8.7	8.5	8.6	9.2	9.6	9.6	9.1	9.9	10.8	12.0	13.7	15.2	12.3	14.1	13.9	
1991	7.4	7.5	8.3	8.7	9.3	9.2	9.0	9.2	9.8	10.1	10.2	9.7	10.5	11.5	12.6	14.2	15.6	13.1	14.8	14.6	
1992	7.4	7.5	8.3	8.6	9.3	9.1	9.0	9.1	9.7	10.0	10.0	9.6	10.4	11.2	12.2	13.7	14.9	12.6	14.0	13.8	
1993	7.8	7.9	8.6	9.0	9.6	9.5	9.4	9.5	10.1	10.4	10.5	10.1	10.8	11.7	12.7	14.1	15.1	13.1	14.4	14.3	
1994	7.2	7.3	8.0	8.3	8.9	8.7	8.6	8.7	9.2	9.4	9.4	9.0	9.6	10.4	11.2	12.3	13.2	11.2	12.2	11.9	
1995	7.9	8.1	8.7	9.1	9.7	9.6	9.4	9.6	10.1	10.4	10.4	10.1	10.8	11.5	12.4	13.5	14.4	12.6	13.7	13.5	
1996	7.6	7.8	8.4	8.7	9.3	9.2	9.0	9.1	9.6	9.8	9.9	9.5	10.1	10.8	11.5	12.6	13.3	11.6	12.5	12.3	
1997	7.9	8.0	8.6	9.0	9.5	9.4	9.2	9.4	9.9	10.1	10.1	9.8	10.4	11.0	11.8	12.8	13.5	11.9	12.7	12.5	
1998	8.0	8.2	8.8	9.1	9.6	9.5	9.4	9.5	10.0	10.2	10.3	10.0	10.5	11.1	11.8	12.8	13.5	12.0	12.8	12.6	
1999	7.5	7.6	8.2	8.5	8.9	8.8	8.7	8.8	9.2	9.4	9.4	9.1	9.5	10.1	10.7	11.5	12.1	10.6	11.3	11.0	
2000	7.9	8.0	8.5	8.8	9.3	9.2	9.1	9.2	9.6	9.8	9.9	9.6	10.0	10.6	11.2	12.0	12.6	11.2	11.8	11.6	
2001	7.7	7.9	8.4	8.7	9.1	9.0	8.9	9.0	9.4	9.6	9.6	9.3	9.8	10.3	10.8	11.6	12.1	10.8	11.4	11.1	
2002	8.0	8.1	8.7	8.9	9.4	9.3	9.2	9.3	9.7	9.9	9.9	9.6	10.1	10.6	11.1	11.9	12.4	11.1	11.7	11.5	
2003	7.8	7.9	8.5	8.7	9.2	9.1	8.9	9.0	9.4	9.6	9.6	9.3	9.7	10.2	10.7	11.4	11.8	10.6	11.2	10.9	
2004	7.8	8.0	8.5	8.7	9.1	9.0	8.9	9.0	9.4	9.5	9.6	9.3	9.7	10.1	10.6	11.3	11.7	10.5	11.0	10.8	
2005	7.8	7.9	8.4	8.7	9.1	9.0	8.9	9.0	9.3	9.5	9.5	9.2	9.6	10.0	10.5	11.1	11.5	10.4	10.9	10.7	
2006	7.7	7.8	8.2	8.5	8.9	8.8	8.7	8.7	9.1	9.2	9.2	9.0	9.3	9.7	10.1	10.7	11.1	10.0	10.4	10.2	

Table C-4 (page 6 of 6)-a

Long-Term Government Bonds Total ReturnsRates of Return for all holding periods
Percent per annum compounded annually

from 1926 to 2006

To the end of	From the beginning of	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1986	24.5															
1987	10.1	-2.7														
1988	9.9	3.3	9.7													
1989	11.9	8.0	13.8	18.1												
1990	10.8	7.6	11.2	12.0	6.2											
1991	12.1	9.8	13.2	14.4	12.6	19.3										
1992	11.5	9.5	12.1	12.8	11.0	13.5	8.1									
1993	12.4	10.7	13.1	13.8	12.8	15.1	13.0	18.2								
1994	9.9	8.2	9.9	9.9	8.3	8.9	5.6	4.4	-7.8							
1995	11.9	10.6	12.4	12.8	11.9	13.1	11.6	12.8	10.2	31.7						
1996	10.7	9.4	10.8	11.0	10.0	10.6	9.0	9.2	6.4	14.2	-0.9					
1997	11.1	10.0	11.3	11.5	10.7	11.4	10.1	10.5	8.7	14.8	7.1	15.9				
1998	11.3	10.2	11.5	11.7	11.0	11.6	10.5	10.9	9.5	14.3	9.1	14.4	13.1			
1999	9.7	8.6	9.6	9.6	8.8	9.1	7.9	7.8	6.2	9.2	4.3	6.0	1.5	-9.0		
2000	10.4	9.5	10.5	10.5	9.9	10.3	9.3	9.5	8.3	11.2	7.5	9.7	7.7	5.2	21.5	
2001	10.0	9.1	10.0	10.0	9.4	9.6	8.7	8.8	7.7	10.1	6.8	8.5	6.7	4.7	12.2	
2002	10.4	9.6	10.5	10.5	10.0	10.3	9.5	9.7	8.8	11.0	8.4	10.0	8.8	7.8	14.1	
2003	9.9	9.1	9.9	9.9	9.4	9.6	8.8	8.9	8.0	9.9	7.5	8.7	7.6	6.5	10.8	
2004	9.8	9.1	9.8	9.8	9.3	9.5	8.8	8.9	8.1	9.8	7.6	8.7	7.7	6.8	10.3	
2005	9.7	9.0	9.7	9.7	9.2	9.4	8.7	8.8	8.0	9.6	7.6	8.6	7.7	7.0	9.9	
2006	9.3	8.6	9.2	9.2	8.7	8.9	8.2	8.2	7.5	8.9	7.0	7.8	7.0	6.2	8.6	

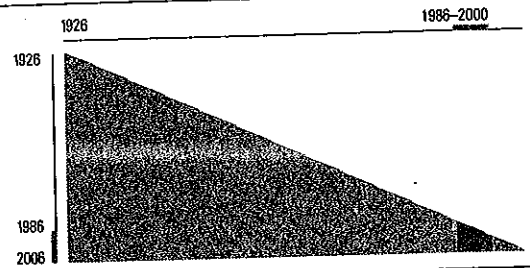
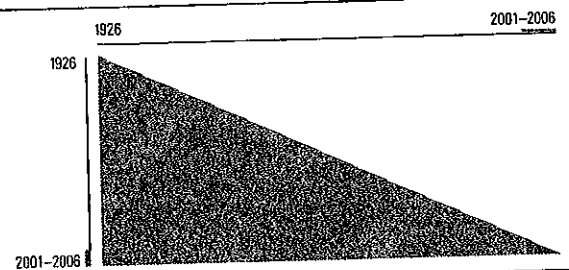


Table C-4 (page 6 of 6)-b

Long-Term Government Bonds Total ReturnsRates of Return for all holding periods
Percent per annum compounded annually

from 1926 to 2006

To the end of	From the beginning of	2001	2002	2003	2004	2005	2006
2001	3.7						
2002	10.5	17.8					
2003	7.4	9.3	1.4				
2004	7.7	9.1	4.9	8.5			
2005	7.7	8.7	5.9	8.2	7.8		
2006	6.6	7.2	4.7	5.8	4.4	1.2	



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And the Factors That Influence Them**

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**EXECUTIVE EDITOR:
RANDELL E. MOORE**

3663 Madison Ave.

Kansas City, MO 64111

Phone (816) 931-0131

Fax (816) 931-0430

E-mail: randy.moore@wolterskluwer.com

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FOMC Policy On Hold Through At Least First Half Of This Year

Domestic Commentary Our February 21st-22nd survey did not reveal material change in the consensus outlook for interest rates over coming quarters. The consensus continues to predict little likelihood of a change either up or down in the Federal Open Market Committee's target federal funds rate during the first half of this year but hints at the possibility of a second half cut in the target by 25 basis points. Two-thirds of our panelists believe the next change in policy will be a cut in rates while the other third forecasts the next shift in policy will be a tightening. The consensus forecast predicts the target fed funds rate will average 5.0% during the first half of next year, just a quarter of a percentage point less than its current level. Consensus forecasts of note and bond yields over the coming year and a half also were little changed over the past month and the yield curve is expected to remain quite flat.

While the consensus predicts government statisticians will sharply revise down their initial estimate of real GDP growth in Q4 of last year to 2.4% from the 3.5% originally reported, consensus estimates of the rate of real growth in the first two quarters of this year were revised up this month by 0.1 of a percentage point to 2.6%. The consensus forecast of real GDP's growth rate in Q3 went unchanged at 2.8% while the forecast of growth in Q4 2007 rose 0.1 of a point to 3.1%. The estimated growth rate during the first half of 2008 remained at 3.1%. Consensus forecasts of inflation also underwent minor modifications. The Consumer Price Index (CPI) is expected to increase at an annualized rate of 2.5% in the current quarter. That's 0.1 of a point higher than a month ago, the upward revision likely the result of the rebound in crude oil and distillate prices over the past month. In the final quarter of last year, the CPI contracted at an annualized rate of 2.0% as energy prices plunged. Further out, the consensus continues to predict overall consumer price inflation will slow to about 2.25% in the second half of this year and the first half of 2008. However, a continued rise in crude oil and distillate prices would obviously upset this fairly rosy scenario. Indeed, our panelists are split with about half predicting crude oil prices will stand below \$60 per barrel (West Texas Intermediate) by the end of this year and the other half of the panel expecting prices in excess of that level.

The two-month rise in Treasury yields came to an abrupt halt in the final days of January and by the end of the final full week of February yields had dropped back to their lowest levels since the first few days of this year. The primary driver of the improvement in prices was the fact that indicators of economic activity released in February tended to be weaker than expected, the reverse of what occurred over the prior two months. Other contributors to the fall back in yields have included short covering, month-end duration buying, technicals and flight-to-quality demand related to the ongoing meltdown in the sub-prime mortgage market and fresh jitters about Iran. Between December 1st of last year and January 29th of this year, constant maturity yields across the entire coupon curve rose by a bit more than 45 basis points. By February 23rd, however, 10-year yields had retraced a bit less than half of that run-up while shorter maturity yields fell back by somewhat lesser amounts.

The recent peak in Treasury yields roughly coincided with the FOMC's January 30th-31st meeting. As expected, the FOMC left its target federal funds rate unchanged at 5.25%. In the policy statement, the FOMC upgraded the outlook for both economic growth and inflation, noting that recent indicators show "somewhat firmer growth" and "tentative signs of stabilization" in housing while removing the statement that core inflation has been "elevated" and replacing it with "readings on core inflation have improved modestly". The FOMC, nonetheless, retained its tightening bias by saying that "some inflation risks remain" and that "the extent and timing of any additional firming that may be needed to address these risks will depend on the evolution of the outlook for both inflation and economic growth".

The slightly more dovish tone of the policy statement, coupled with the lack of dissent, the vote to leave rates unchanged was unanimous for the first time since last June, prompted a drop in Treasury yields.

Chairman Ben Bernanke's February 14th-15th testimony on the Fed's Monetary Policy Report to Congress hewed closely to the views expressed in the January policy statement. Policymakers expect the economy to expand at a moderate pace this year and next with the rate of growth picking up as the drag from housing diminishes. Core inflation remains elevated but is expected to moderate in coming quarters. However, minutes of the FOMC's January meeting released on February 21st and commentary from various Fed officials have not been as sanguine on the outlook for inflation as those conveyed by Bernanke's congressional testimony. For example, the minutes noted that "participants did not yet see a downtrend in core inflation as definitely established." While several factors were listed as supporting the notion that inflation would continue to moderate, policymakers expressed concern that high levels of resource utilization posed a larger offsetting risk. San Francisco Fed bank president Janet Yellen said in a February 21st speech that while she was encouraged by the recent easing of inflation, prices remained high than desired and she continues to support the FOMC's tightening bias. Chicago Fed bank president Michael Moskow went even further on February 16th warning that further increases in interest rates might be needed to "tamp down on inflation".

No doubt the January CPI data did little to dissuade the FOMC that inflation remains the "predominate policy concern". The CPI rose a larger than expected 0.2%, despite a decline in energy prices that will almost certainly be reversed in February. Moreover, the core CPI rose a bigger than forecast 0.3%. The rise was the largest since last June and lifted the y/y change in core CPI inflation to 2.7%, 0.1 of a point higher than in the prior two months. The report of a similar-sized increase on March 1st in January's core personal consumption expenditures (PCE) price index--the FOMC's preferred measure of inflation-- would not sit well with bond markets participants.

Other, upcoming reports, however, may take some of the sting out of the worse than expected inflation readings for January. Besides the expected, sharp downward revision in Q4 GDP, economic activity in February looks to have been fairly tepid, burdened by the return of wintry conditions across the much of the nation. The Institute of Supply Management is expected to report that manufacturing activity remained constrained in February though industrial production may inch up a bit after its out-sized drop of 0.5% in January. A rise in initial unemployment claims suggests a second consecutive month of relatively modest growth in nonfarm payrolls during February after registering monthly gains of 190,000 in 2006. Anecdotal reports further hint that sales at chain stores and vehicle dealers in February failed to set the world on fire, potentially leaving retail sales showing little growth for a second straight month. After plunging by 14.3% in January, housing starts seem primed for at least a modest rebound. However, continued February softness in permits and home sales may undercut hopes that residential construction has stabilized.

Consensus Forecast The FOMC will leave interest rates unchanged at its March 20th-21st, May 9th and late June meetings, according to the consensus. There remains a possibility of a 25 basis point reduction in Q3. The consensus continues to predict the 10-year Treasury yield will creep up to the 5.0% level in the second half of 2007 (*see page 2 for summary of this month's U.S. consensus forecasts*).

Special Questions An overwhelming majority of the panelists believe residential fixed investment will remain a drag on GDP growth until the second half of this year. More than half the panelists think business inventories will remain a drag on GDP growth in the current quarter (*see page 14 for details*).

Consensus Forecasts Of U.S. Interest Rates And Key Assumptions¹

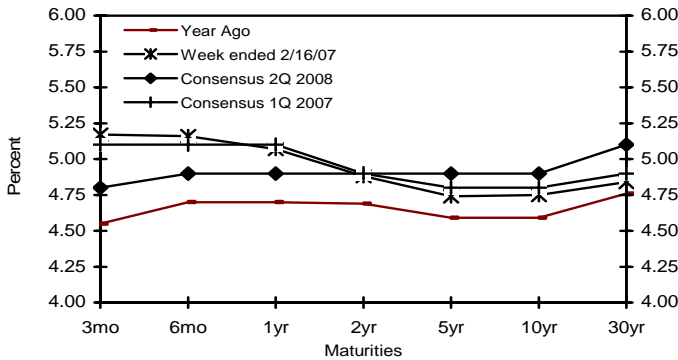
Interest Rates	History								Consensus Forecasts-Quarterly Avg.						
	Average For Week Ending				Average For Month				Latest Q	1Q 2007	2Q 2007	3Q 2007	4Q 2007	1Q 2008	2Q 2008
	Feb.16	Feb.9	Feb.2	Jan.26	Jan.	Dec.	Nov.	4Q 2006							
Federal Funds Rate	5.26	5.25	5.27	5.25	5.25	5.24	5.25	5.25	5.3	5.2	5.1	5.1	5.0	5.0	5.0
Prime Rate	8.25	8.25	8.25	8.25	8.25	8.25	8.25	8.25	8.3	8.2	8.1	8.1	8.0	8.0	8.0
LIBOR, 3-mo.	5.36	5.36	5.36	5.36	5.36	5.36	5.37	5.37	5.4	5.3	5.3	5.2	5.1	5.1	5.1
Commercial Paper, 1-mo.	5.23	5.24	5.19	5.21	5.22	5.23	5.21	5.21	5.3	5.2	5.2	5.2	5.1	5.1	5.1
Treasury bill, 3-mo.	5.17	5.15	5.13	5.13	5.11	4.97	5.07	5.03	5.1	5.1	5.0	4.9	4.9	4.9	4.8
Treasury bill, 6-mo.	5.16	5.16	5.17	5.18	5.15	5.07	5.15	5.11	5.1	5.1	5.1	5.0	5.0	5.0	4.9
Treasury bill, 1 yr.	5.07	5.07	5.10	5.10	5.06	4.94	5.01	4.99	5.1	5.0	5.0	5.0	5.0	5.0	4.9
Treasury note, 2 yr.	4.88	4.90	4.96	4.95	4.88	4.67	4.74	4.74	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Treasury note, 5 yr.	4.74	4.76	4.85	4.82	4.75	4.53	4.58	4.60	4.8	4.8	4.8	4.9	4.9	4.9	4.9
Treasury note, 10 yr.	4.75	4.77	4.86	4.83	4.76	4.56	4.60	4.63	4.8	4.8	4.9	4.9	4.9	4.9	4.9
Treasury note, 30 yr.	4.84	4.86	4.95	4.92	4.85	4.68	4.69	4.74	4.9	4.9	5.0	5.0	5.0	5.0	5.1
Corporate Aaa bond	5.41	5.42	5.50	5.47	5.40	5.32	5.33	5.39	5.5	5.6	5.7	5.8	5.9	5.9	5.9
Corporate Baa bond	6.30	4.21	4.31	4.32	4.23	6.22	6.20	6.28	6.4	6.5	6.7	6.7	6.7	6.8	6.8
State & Local bonds	4.17	4.21	4.31	4.32	4.23	4.11	4.14	4.18	4.4	4.4	4.5	4.5	4.6	4.6	4.6
Home mortgage rate	6.30	6.28	6.34	6.25	6.22	6.14	6.24	6.25	6.3	6.4	6.4	6.5	6.5	6.5	6.5

Key Assumptions	History								Consensus Forecasts-Quarterly Avg.					
	1Q 2005	2Q 2005	3Q 2005	4Q 2005	1Q 2006	2Q 2006	3Q 2006	4Q 2006	1Q 2007	2Q 2007	3Q 2007	4Q 2007	1Q 2008	2Q 2008
Major Currency Index	81.3	83.5	84.7	85.8	84.9	82.2	81.7	81.6	81.7	81.3	80.7	80.5	80.2	79.9
Real GDP	3.4	3.3	4.2	1.8	5.6	2.6	2.0	3.5	2.6	2.6	2.8	3.1	3.1	3.1
GDP Price Index	3.5	2.4	3.3	3.3	3.3	3.3	1.9	1.5	2.3	2.2	2.1	2.1	2.2	2.1
Consumer Price Index	2.1	4.0	5.5	3.5	1.8	5.1	3.0	-2.0	2.5	2.4	2.5	2.2	2.3	2.3

¹Individual panel members' forecasts are on pages 4 through 9. Historical data for interest rates except LIBOR is from Federal Reserve Release (FRSR) H.15. LIBOR quotes available from *The Wall Street Journal*. Definitions reported here are same as those in FRSR H.15. Treasury yields are reported on a constant maturity basis. Historical data for the U.S. Federal Reserve Board's Major Currency Index is from FRSR H.10 and G.5. Historical data for Real GDP and GDP Chained Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index (CPI) history is from the Department of Labor's Bureau of Labor Statistics (BLS).

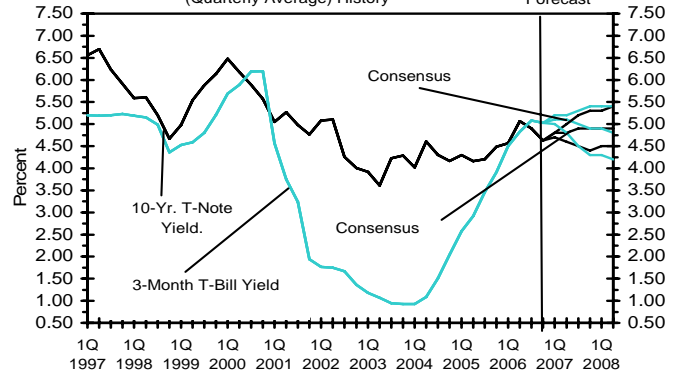
U.S. Treasury Yield Curve

Week ended February 16, 2007 and Year Ago vs. 1Q 2007 and 2Q 2008 Consensus forecasts



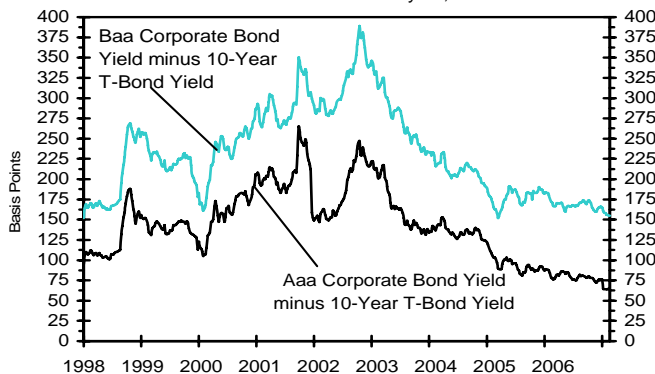
U.S. 3-Mo. T-Bills & 10-Yr. T-Note Yield

(Quarterly Average) History Forecast



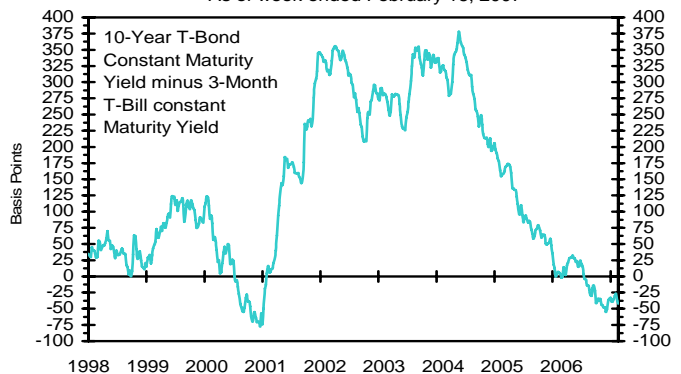
Corporate Bond Spreads

As of week ended February 16, 2007



U.S. Treasury Yield Curve

As of week ended February 16, 2007



-----3-Month Interest Rates¹-----

	History			Consensus Forecasts		
	Month	Year	Months From Now:			
Latest:	Ago:	Ago:	3	6	12	
U.S.	5.38	5.38	4.84	5.16	4.98	5.00
Japan	0.69	0.53	0.09	0.73	0.73	0.96
U.K.	5.53	5.59	4.56	5.60	5.60	5.36
Switzerland	2.28	2.19	1.13	2.37	2.57	2.57
Canada	4.31	4.31	3.84	4.25	4.20	4.12
Australia	6.32	6.38	5.57	6.30	6.23	5.83
Eurozone	3.88	3.78	2.66	4.00	4.14	4.19

-----10-Yr. Government Bond Yields¹-----

	History			Consensus Forecasts		
	Month	Year	Months From Now:			
Latest:	Ago:	Ago:	3	6	12	
U.S.	4.70	4.76	4.57	4.75	4.76	4.91
Germany	4.06	4.01	3.48	4.03	4.11	4.20
Japan	1.70	1.66	1.57	1.55	1.80	1.93
U.K.	4.89	4.89	4.13	4.86	4.83	4.86
France	4.10	4.07	3.51	4.04	4.15	4.21
Italy	4.28	4.21	3.69	4.19	4.28	4.36
Switzerland	2.60	2.55	2.21	2.63	2.68	2.80
Canada	4.09	4.13	4.14	4.13	4.17	4.37
Australia	5.80	5.92	5.18	5.62	5.60	5.68
Spain	4.10	4.07	3.50	4.03	4.11	4.20
Eurozone	4.13	4.09	3.54	4.05	4.17	4.25

-----Foreign Exchange Rates¹-----

	History			Consensus Forecasts		
	Month	Year	Months From Now:			
Latest:	Ago:	Ago:	3	6	12	
U.S.	81.83	82.51	85.21	81.9	81.1	82.4
Japan	120.99	121.56	117.00	118.0	116.5	113.5
U.K.	1.9524	1.9772	1.7522	1.98	1.98	1.93
Switzerland	1.2393	1.2484	1.3083	1.19	1.18	1.19
Canada	1.1609	1.1758	1.1512	1.17	1.16	1.15
Australia	0.7899	0.7893	0.7397	0.79	0.78	0.76
Euro	1.3126	1.2957	1.1923	1.33	1.34	1.31

Consensus
3-Month Rates
vs. U.S. Rate

	Now	In 12 Mo.
Japan	-4.69	-4.04
U.K.	0.15	0.36
Switzerland	-3.10	-2.43
Canada	-1.07	-0.88
Australia	0.94	0.83
Eurozone	-1.50	-0.81

Consensus
10-Year Gov't
Yields vs. U.S. Yield

	Now	In 12 Mo.
Germany	-0.64	-0.71
Japan	-3.00	-2.99
U.K.	0.19	-0.05
France	-0.60	-0.70
Italy	-0.42	-0.55
Switzerland	-2.10	-2.11
Canada	-0.61	-0.55
Australia	1.10	0.77
Spain	-0.60	-0.71
Eurozone	-0.57	-0.66

Forecasts of individual panel members are on pages 10 and 11. Definitions of variables are as follows: ¹Three month currency interest rates. Government bonds are yields to maturity. Foreign exchange rate forecasts for U.K., Australia and the Euro are currencies per U.S. dollar. For the U.S. dollar, forecasts are of the U.S. Federal Reserve Board's Major Currency Index.

International Commentary Sovereign bond yields across Europe and Japan drifted upward over the past month. Bond prices in the U.S., Australia and Canada posted small gains while yields in the U.K. were basically unchanged. The value of the U.S. dollar on a trade-weighted basis drifted a little lower during February but the major foreign exchange news of the month was the rise in the value of the euro versus the yen to a fresh record high.

The Bank of Japan (BoJ) finally bit the bullet, voting 8-1 on February 21st in favor of a 25 basis point increase in its overnight call rate to 0.5%. The increase came in the wake of news that real GDP grew at its fastest pace in almost three years during Q4 2006. Some analysts had criticized the central bank for not raising interest rates at its January meeting, accusing policymakers of bowing to political pressure. Real GDP grew 1.2% q/q (4.8% annualized) in the final quarter of last year versus a downwardly revised 0.1% q/q rate in Q3. News of the BoJ rate hike initially lifted the yen, but it sank anew when officials said policy would remain accommodative and that rates would continue to be adjusted gradually. The "carry trade" lives! The consensus foresees only more quarter-point rate hike over the next 12 months.

The European Central Bank (ECB) left policy unchanged in February but is widely expected to raise its repo rate by 25 basis points to 3.75% at its March 8th meeting. Real GDP grew at a faster than expected q/q rate of 0.9% in Q4 2006. That left growth for the year up 2.7%, the best performance since 2000. The pace of real GDP growth is expected to moderate in Q1 due to higher taxes and rising interest rates, but is still forecast to register an increase of 2.1% or better in 2007. Healthy growth dropped the harmonized unemployment rate to 7.5% in December, the lowest since 1993. While consumer price inflation dipped below 2.0% late last year, most analysts expect a rebound in 2007. ECB officials still view policy as accommodative and worry that rapid money and credit growth pose inflationary risks. The consensus looks for another 50 basis points of tightening this year.

The Bank of England's Monetary Policy Committee (MPC) left its official overnight rate unchanged at a five-year high of 5.25% on February 8th following January's surprise 25 basis point hike. However, minutes of the February meeting clearly left the door open to further increases. Indeed, announcement of another quarter point hike in March or April remains a distinct possibility. Economic growth remains strong and inflation uncomfortably high. Real GDP grew 0.8% (q/q) in the final quarter of last year, the best performance in 2 ½ years. For all of 2006, GDP was up 2.7% and grew 3.0% on a Q4/Q4 basis. While growth in manufacturing ground to a halt in Q4, activity in the bigger service sector accelerated. Consumer price inflation fell back to a y/y rate of 2.7% in January after hitting 3.0% in December, the highest level in a decade.

The Bank of Canada (BoC) is expected maintain an unchanged policy stance at its March 6th meeting. Canadian economic growth slowed noticeable in the second half of last year and the inflation outlook remains non-threatening. Real GDP grew just 1.7% in Q3 of last year and the pace of growth likely fell to a bit less than that in Q4. Hopes for a Q1 sharp rebound have been dashed due to the nationwide railroad strike. Nonetheless, employment and income growth has remained healthy and bodes well for consumption going forward. Retail sales surged 2.3% in December, easily out-pacing expectations.

The Reserve Bank of Australia (RBA) left its official cash rate unchanged at 6.25% for a third consecutive month in February. Consumer price inflation did moderate a bit in Q4 though most measures of core inflation remain near the top of the RBA's target range of 2.0%-3.0%. Worrisome, the unemployment rate fell to a 31-year low in January, exacerbating a worsening worker shortage that the RBA fears may stoke wage and price inflation (see 10 and 11 for individual panel members' forecasts).

International Interest Rate And Foreign Exchange Rate Forecasts

Blue Chip Forecasters	3 Mo. Euro Dollar Rate		
	In 3 Mo.	In 6 Mo.	In 12 Mo.
Scotiabank	5.20	4.95	4.45
Deutsche Bank AG	na	na	na
WestLB	5.20	4.60	4.90
ING Financial Markets	4.90	5.00	5.30
Mizuho Research Institute	5.35	5.35	5.35
March Consensus	5.16	4.98	5.00
High	5.35	5.35	5.35
Low	4.90	4.60	4.45
Last Months Avg.	5.08	4.76	4.69

Blue Chip Forecasters	3 Mo. Euro Yen Rate		
	In 3 Mo.	In 6 Mo.	In 12 Mo.
Scotiabank	0.83	0.83	1.10
Deutsche Bank AG	na	na	na
WestLB	0.70	0.70	1.00
ING Financial Markets	0.70	0.70	0.80
Mizuho Research Institute	0.70	0.70	0.95
March Consensus	0.73	0.73	0.96
High	0.83	0.83	1.10
Low	0.70	0.70	0.80
Last Months Avg.	0.68	0.79	0.99

Blue Chip Forecasters	3 Mo. Euro Sterling Rate		
	In 3 Mo.	In 6 Mo.	In 12 Mo.
Scotiabank	5.80	5.80	5.55
Deutsche Bank AG	na	na	na
WestLB	5.40	5.30	5.40
ING Financial Markets	5.60	5.60	5.10
Mizuho Research Institute	5.60	5.70	5.40
March Consensus	5.60	5.60	5.36
High	5.80	5.80	5.55
Low	5.40	5.30	5.10
Last Months Avg.	5.55	5.59	5.40

Blue Chip Forecasters	3 Mo. Euro Franc Rate %		
	In 3 Mo.	In 6 Mo.	In 12 Mo.
Scotiabank	2.45	2.70	2.70
Deutsche Bank AG	na	na	na
WestLB	2.25	2.50	2.50
ING Financial Markets	2.40	2.50	2.50
Mizuho Research Institute	na	na	na
March Consensus	2.37	2.57	2.57
High	2.45	2.70	2.70
Low	2.25	2.50	2.50
Last Months Avg.	2.32	2.43	2.38

Blue Chip Forecasters	3 Mo. Euro Dollar Rate		
	In 3 Mo.	In 6 Mo.	In 12 Mo.
Scotiabank	4.25	4.05	3.70
Deutsche Bank AG	na	na	na
WestLB	4.30	4.30	4.30
ING Financial Markets	4.20	4.25	4.35
Mizuho Research Institute	na	na	na
March Consensus	4.25	4.20	4.12
High	4.30	4.30	4.35
Low	4.20	4.05	3.70
Last Months Avg.	4.13	3.98	3.97

United States		
10 Yr. Gov't Bond Yield %		
In 3 Mo.	In 6 Mo.	In 12 Mo.
4.85	4.65	4.40
na	na	na
4.80	4.60	5.00
4.50	4.90	5.20
4.85	4.90	5.05
4.75	4.76	4.91
4.85	4.90	5.20
4.50	4.60	4.40
4.53	4.48	4.75

Japan		
10 Yr. Gov't Bond Yield %		
In 3 Mo.	In 6 Mo.	In 12 Mo.
1.80	1.80	1.90
na	na	na
1.00	1.80	1.90
1.70	1.80	2.00
1.70	1.80	1.90
1.55	1.80	1.93
1.80	1.80	2.00
1.00	1.80	1.90
1.74	1.83	2.00

United Kingdom		
10 Yr. Gilt Yields %		
In 3 Mo.	In 6 Mo.	In 12 Mo.
4.95	4.90	4.75
na	na	na
4.90	4.80	4.90
4.60	4.60	4.70
5.00	5.00	5.10
4.86	4.83	4.86
5.00	5.00	5.10
4.60	4.60	4.70
4.83	4.78	4.83

Switzerland		
10 Yr. Gov't Bond Yield %		
In 3 Mo.	In 6 Mo.	In 12 Mo.
2.75	2.75	2.80
na	na	na
2.70	2.70	2.90
2.45	2.60	2.70
na	na	na
2.63	2.68	2.80
2.75	2.75	2.90
2.45	2.60	2.70
2.53	2.58	2.68

Canada		
10 Yr. Gov't Bond Yield %		
In 3 Mo.	In 6 Mo.	In 12 Mo.
4.20	4.00	3.70
na	na	na
4.30	4.30	4.80
3.90	4.20	4.60
na	na	na
4.13	4.17	4.37
4.30	4.30	4.80
3.90	4.00	3.70
3.90	3.83	4.17

Fed's Major Currency \$ Index		
In 3 Mo.	In 6 Mo.	In 12 Mo.
81.0	80.5	80.0
na	na	na
82.0	80.0	84.0
83.1	82.2	82.7
81.6	81.6	82.9
81.9	81.1	82.4
83.1	82.2	84.0
81.0	80.0	80.0
81.2	80.1	80.8

Yen/USD		
In 3 Mo.	In 6 Mo.	In 12 Mo.
118.0	114.0	108.0
na	na	na
118.0	116.0	112.0
116.0	116.0	117.0
120.0	120.0	117.0
118.0	116.5	113.5
120.0	120.0	117.0
116.0	114.0	108.0
115.5	111.0	109.8

USD/Pound Sterling		
In 3 Mo.	In 6 Mo.	In 12 Mo.
1.97	2.00	2.01
na	na	na
1.99	2.01	1.91
1.97	1.92	1.87
na	na	na
1.98	1.98	1.93
1.99	2.01	2.01
1.97	1.92	1.87
1.98	1.99	1.94

CHF/USD		
In 3 Mo.	In 6 Mo.	In 12 Mo.
1.18	1.16	1.13
na	na	na
1.21	1.17	1.22
1.19	1.20	1.22
na	na	na
1.19	1.18	1.19
1.21	1.20	1.22
1.18	1.16	1.13
1.18	1.14	1.16

CAD/USD		
In 3 Mo.	In 6 Mo.	In 12 Mo.
1.18	1.19	1.15
na	na	na
1.16	1.15	1.17
1.17	1.14	1.12
na	na	na
1.17	1.16	1.15
1.18	1.19	1.17
1.16	1.14	1.12
1.18	1.16	1.14

International Interest Rate And Foreign Exchange Rate Forecasts

Blue Chip Forecasters	3 Mo. Euro Dollar Rate		
	In 3 Mo.	In 6 Mo.	In 12 Mo.
Scotiabank	6.30	6.30	5.80
Deutsche Bank AG	na	na	na
WestLB	6.30	6.20	5.70
ING Financial Markets	6.30	6.20	6.00
Mizuho Research Institute	na	na	na
March Consensus	6.30	6.23	5.83
High	6.30	6.30	6.00
Low	6.30	6.20	5.70
Last Months Avg.	6.42	6.37	5.90

Australia		
10 Yr. Gov't Bond Yield %		
In 3 Mo.	In 6 Mo.	In 12 Mo.
5.75	5.70	5.35
na	na	na
5.60	5.40	5.80
5.50	5.70	5.90
na	na	na
5.62	5.60	5.68
5.75	5.70	5.90
5.50	5.40	5.35
5.57	5.47	5.37

USD/AUD		
In 3 Mo.	In 6 Mo.	In 12 Mo.
0.78	0.77	0.76
na	na	na
0.78	0.78	0.77
0.80	0.78	0.76
na	na	na
0.79	0.78	0.76
0.80	0.78	0.77
0.78	0.77	0.76
0.79	0.79	0.76

Blue Chip Forecasters	3 Mo. Euro Rate		
	In 3 Mo.	In 6 Mo.	In 12 Mo.
Scotiabank	4.05	4.30	4.30
Deutsche Bank AG	na	na	na
WestLB	3.90	4.10	4.10
ING Financial Markets	3.90	4.00	4.20
Mizuho Research Institute	4.15	4.15	4.15
March Consensus	4.00	4.14	4.19
High	4.15	4.30	4.30
Low	3.90	4.00	4.10
Last Months Avg.	3.90	3.95	3.95

Eurozone		
10 Yr. Euro Bond Yield %		
In 3 Mo.	In 6 Mo.	In 12 Mo.
4.15	4.25	4.20
na	na	na
4.15	4.15	4.35
3.85	4.10	4.20
na	na	na
4.05	4.17	4.25
4.15	4.25	4.35
3.85	4.10	4.20
3.85	3.90	4.13

USD/EUR		
In 3 Mo.	In 6 Mo.	In 12 Mo.
1.34	1.36	1.39
na	na	na
1.32	1.35	1.30
1.33	1.31	1.29
1.32	1.32	1.28
1.33	1.34	1.31
1.34	1.36	1.39
1.32	1.31	1.28
1.33	1.34	1.33

Blue Chip Forecasters	10 Yr. Gov't Bond Yields %											
	Germany			France			Italy			Spain		
	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.
Scotiabank	4.15	4.25	4.20	4.20	4.30	4.25	4.35	4.45	4.40	4.15	4.25	4.20
West LB	4.00	4.00	4.20	4.00	4.00	4.20	4.15	4.15	4.35	4.00	4.00	4.20
ING Financial Markets	3.85	4.10	4.20	3.85	4.10	4.20	3.95	4.20	4.30	3.85	4.10	4.20
Mizuho Research Institute	4.10	4.10	4.20	4.10	4.20	4.20	4.30	4.30	4.40	4.10	4.10	4.20
March Consensus	4.03	4.11	4.20	4.04	4.15	4.21	4.19	4.28	4.36	4.03	4.11	4.20
High	4.15	4.25	4.20	4.20	4.30	4.25	4.35	4.45	4.40	4.15	4.25	4.20
Low	3.85	4.00	4.20	3.85	4.00	4.20	3.95	4.15	4.30	3.85	4.00	4.20
Last Months Avg.	3.89	3.95	4.13	3.90	3.96	4.14	4.11	4.15	4.23	3.91	3.95	4.06

	Consensus Forecasts			
	10-year Bond Yields vs U.S. Yield			
	Current	In 3 Mo.	In 6 Mo.	In 12 Mo.
Japan	-3.00	-3.20	-2.96	-2.99
United Kingdom	0.19	0.11	0.06	-0.05
Switzerland	-2.10	-2.12	-2.08	-2.11
Canada	-0.61	-0.62	-0.60	-0.55
Australia	1.10	0.87	0.84	0.77
Germany	-0.64	-0.73	-0.65	-0.71
France	-0.60	-0.71	-0.61	-0.70
Italy	-0.42	-0.56	-0.49	-0.55
Spain	-0.60	-0.73	-0.65	-0.71
Eurozone	-0.57	-0.70	-0.60	-0.66

	Consensus Forecasts			
	3 Mo. Interest Rates vs U.S. Rate			
	Current	In 3 Mo.	In 6 Mo.	In 12 Mo.
Japan	-4.69	-4.43	-5.71	-4.04
United Kingdom	0.15	0.44	0.63	0.36
Switzerland	-3.10	-2.80	-2.41	-2.43
Canada	-1.07	-0.91	-0.77	-0.88
Australia	0.94	1.14	1.26	0.83
Eurozone	-1.50	-1.16	-0.84	-0.81

Viewpoints:

A Sampling of Views on the Economy, Financial Markets and Government Policy Excerpted from Recent Reports Issued by our Blue Chip Panel Members and Others

Small Inflation Setback With Softer Economic Data Ahead

An early-year reversal of the recent downward core inflation trend dominated the financial landscape in the week ended February 23rd, as the core CPI rose a rounded 0.3% for the first time in half a year. While we remain optimistic that core inflation will drift down, the disappointing release reminded markets that inflation typically evolves gradually, and underlined Fed vigilance stressed in the January 30-31 FOMC minutes and recent Fed speeches. Upcoming releases will continue the recent pattern of economic moderation, with a sizable downward revision to Q4 GDP growth, softer income and consumer spending in January, and the reversal of recent home sales' improvement.

The recently improving inflation trend suffered a small setback in January as core CPI rose 0.3% for the first time since last June. The headline CPI rose 0.2%, as falling energy prices were partially offset by rising costs for food. Year-over-year headline inflation receded to 2.1% in January, the 5th consecutive month in which the 12-month headline rate has run below the corresponding core inflation rate. While housing costs were relatively subdued last month, higher medical care and tobacco costs pushed up the core index. Year-over-year core inflation also rose to 2.7% in January, after 3 monthly declines. With the core index up just above 0.25%, pushed higher by rounding, it is likely that the core PCE price index favored by the Fed rose a rounded 0.2% last month, still likely lifting its year-over-year rise to 2.3%. The report underlines our confidence that the Fed will retain its implicit bias to tighten over the next few meetings.

The Fed's predominant concern over higher inflation was also the takeaway from the January 30-31 FOMC minutes. In mild contrast to Chairman Bernanke's relatively optimistic remarks on inflation in his semiannual testimony, the minutes revealed continuing inflation concerns as well as diminishing downside risks to the U.S. economy. All Committee members felt that the press release should indicate that additional firming was possible. Meeting participants did not see a downtrend in core inflation as being definitively established. Further, members saw downside economic risks as somewhat diminished, noted upside economic risks as well, and judged that labor markets "remained relatively taut."

Recent Fed speeches and interviews (Moskow, Yellen, Poole) reinforced members' discomfort with the current level of core inflation, and concerns that it would not come down, along with their view of reduced downside risk to the economy. Despite agreeing on generally firm labor markets, it is worth observing that several Fed officials remarked about the absence of a clear link between the degree of labor market tightness and inflation, reinforcing comments made by Chairman Bernanke before Congress. The recent trend toward moderate economic releases will continue as 4Q 2006 GDP growth is revised significantly downward to 2% to 2.5% annualized growth, broadly consistent with the pace of economic growth since 1Q 2006. The revisions reflect dramatically slower inventory building and a wider trade deficit than estimated in the 3.5% advance report; however, domestic demand in Q4 likely grew close to its advance estimate of 2.4% annualized.

Our forecast of 2.5% GDP growth in 1H 2007 remains intact: domestic final sales may moderate just below this pace, but modest inventory rebuilding will likely lift domestic production. While real economic growth will likely pick up later this year as the housing drag dissipates, our forecast implies a remarkably stable string of 5 consecutive quarters near 2.25% to 2.5% annualized growth, indeed a successful soft landing. Note that the recent downward revisions set the stage for an expected nominal GDP deceleration to 4.1% year-over-year growth in 2Q

2007. Past decelerations in nominal spending growth have involved economic soft patches, like the current one, and have been typically followed by declining inflation. This relationship affirms our longer-term inflation optimism. Personal income and consumer spending also began the new year on a moderating note. Along with a well-advanced inventory correction, partial retracement of recently improving home sales, still declining construction and a large drop in aircraft orders, the recent pattern of moderation will likely persist in coming reports.

Mickey Levy and Peter E. Kretzmer, Bank of America, New York, NY

The Worst Is Over?

We have no clue as to why so many pundits have claimed that the worst is over in the construction recession: Going back seven cycles to 1950, the average peak-to-trough decline in residential construction from the GDP accounts is 28% and lasts an average of 10 quarters (minimum length is four quarters, max is 16 quarters and the median was 11 quarters). This construction downturn this time around has only been five quarters and has only seen a 12.8% decline in activity (in terms of magnitude, the minimum decline was 13% and the maximum decline was 45% and the median was 27%).

So by the standards of the past, it can be argued that this housing recession is barely past the half-way point. Moreover, considering the massive inventory backlog that needs to be absorbed, and the still-stretched level of affordability, it can be further argued that this cycle will turn out to be (i) longer and (ii) harsher than the average of the past. Same holds true for employment -- construction payrolls typically decline 11.4% during a bear market in housing and so far the decline has been only one-third as intense. There is a long row to hoe even if housing starts have managed to find a bottom (latest mortgage application data suggest a renewed downtrend in home sales — and purchase applications are down almost 20% since early January and now just 1.5% shy of making a new cycle low). What happens between the time housing completions follow starts down to the 1.4 million unit mark is where a lot of the "pain" is going to be felt in construction, GDP growth and payrolls, in our view.

David A. Rosenberg, Merrill Lynch, New York, NY

The Fed Loves The Economy – So Far

Chairman Bernanke's testimony and the Fed's "Monetary Policy Report to Congress" indicated more satisfaction with the economy and especially inflation than observers had expected. The comment that "the U.S. economy appears to be making a transition from the rapid pace of expansion... to a more sustainable ... growth" was no surprise, as the data and Fed statements have been indicating that. However, that "inflation pressures are beginning to diminish" was more upbeat than expected, especially after several Fed presidents and board members had suggested a rate hike might be needed.

The incoming data may test the stability of rates. The sharp downward revision expected for the fourth quarter leaves growth on a weaker trajectory, although the fact that most of the downward revision is from inventories makes it less important in setting this year's expectations. The weak January housing makes the "tentative signs of stabilization... in the housing market" seen by Chairman Bernanke even more tentative. We still expect no change in the funds rate until late in the year, but the possibility of a rate hike has diminished and an early cut (mid-year) is not out of the question.

David Wyss and Beth Ann Bovino, Standard & Poor's, New York, NY

Viewpoints

A Sampling of Views on the Economy, Financial Markets and Government Policy Excerpted from Recent Reports Issued by our Blue Chip Panel Members and Others

Charts Signal Treasury Yield Surge In 2007

U.S. Treasury yields have been range-bound through the middle years of the expansion, as housing contagion fears and the global bond market "conundrum" waged a tug-of-war with robust global economic growth and strength in the U.S. "ex-housing" economy. The 10-year note has been confined to a 4.30% to 5.25% range since Q4 2005, and the stagnation in the 30-year bond has lasted even longer. The 30-year bond has been confined to a 4.15% to 5.60% range since 2003-2004. Chart patterns suggest that the bond market bears will prevail in 2007, as yields posture for an upside break-out, with a potential out-sized gain in yields through the year as a whole.

Looking at the chart below, the 2005-2006 increase in 10-year note yields stalled after a test of long term trend-line resistance drawn off of the 1994-2000 peaks at 5.245% in late June of 2006. The subsequent corrective retracement briefly dipped below the top of a three-year wedge pattern near 4.530% in late November of 2006, but held comfortably above the 61.8% retracement of the 2005-2006 rally in yields at 4.362% to keep the long term bullish trend in yields intact.

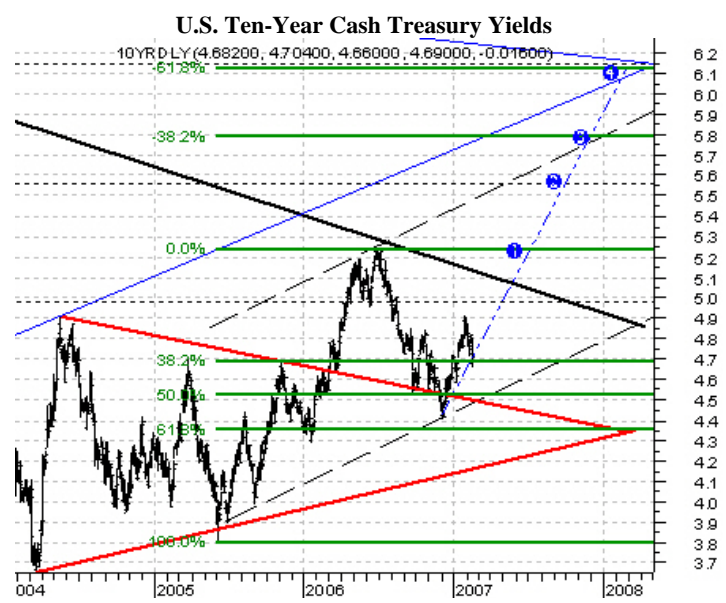


As a result, we view the retreat in late 2006 as a pullback to affirm the long term bullish breakout. An impulsive rally took hold between December and January that unwound about half of the July-November retracement. The current corrective pullback should find some footing in the vicinity of 4.600%-4.625% in the next couple of weeks, but the 50% retracement of the 2005-2006 advance at 4.530% should not be challenged. If 10-year note yields bottom near 4.600%-4.625% (or merely hold above 4.530%) in the next two weeks and begins to firm, the market will be coiled for another major leg higher in yields.

In the chart below we zoom in for a closer look. The next advance should be strong enough to break-out above long term trend-line resistance drawn off of 1994-2000 highs. When the 10-year note breaks out above this trend-line term trend-line, we would expect upward momentum in yields to bring the market to a quartet of upside targets which would leave a sizable swing in market yields through the year if the entire sequence of objectives is ultimately met.

The first target would be a re-test of the 2006 high in yields at 5.245%. This is where the current Fed funds target rate is, but we're skeptical that it would stymie upward pressure on yields. Given the upward momentum yields would have after a bullish breakout trend-line 13-year trend-line resistance, it is unlikely that 5.25% could stop the advance.

Consequently, penetration of 5.25% would give the market additional technical momentum. The second bullish target on yields would be the 50% retracement of the 1994-2003 decline in yields at 5.563%. This target doesn't have any affirming tools (channels, trend lines, former peaks or troughs) associated with it, so we're skeptical that it could act as a cap on yields by itself.



The third target is at 5.810%, and is the 1.382% fibonacci extension of the 2005-2006 advance. This formidable barrier corresponds well with the parameters of the high-end of a two-year bull channel during December of 2007. As a result, the 5.810% target would be a difficult ceiling late this year, but won't necessarily be a top in yields. The fourth target, and the strongest of them all, is at 6.135%. It marks the 61.8% retracement of the 1994-2000 drop in yields, as well as the 1.618% fibonacci extension of the 2005-2006 rally. The 6.135% level would mark extremely stout resistance and should act as a very formidable cap on yields. Given the pace set by previous rallies during the 2003-2004 up-leg and 2005-2006 advance, we wouldn't expect the 6.135% target to be challenged until February 2008.

We maintain a rather benign technical assessment of the 2s-10s yield spread, as we expect a flat long-term range trade between -25 and +25 basis point to dominate the action through the year. As a consequence, our technical outlook is likely very dependent on the market to discount three more Fed rate hikes through the year. Such a switch in market expectations from an assumed small chance of an easing through the year to three tightenings sounds dramatic, though it hardly reflects an unprecedented or even particularly unusual swing in interest rate expectations from the start to the end of a year.

For this swing in expectations to hold, the economy would likely need to register a growth bounce around mid-year as the housing market stabilizes, and as the inventory liquidation period of Q4 and Q1 is followed by a potential new round of restocking. Essentially, the scenario suggests a resolution of the market's bi-polar views on the significance of the housing and auto sector adjustments in favor of the optimists. Though a 100 basis point swing in Fed policy expectations seems large now, the emergence of renewed strength in the economy, and perhaps a scare or two from the monthly inflation reports, would be more than enough to boost Fed tightening fears, and fuel the above bearish scenario for U.S. bonds.

Jack Adkins, Action Economics, Boulder, CO

Special Questions:

1. A bigger drawdown in the level of business inventories, a wider real net export deficit and slower growth in real personal consumption are expected to result in a sizable downward revision in the government's estimate that real GDP grew at an annualized rate of 3.5% in Q4 2006. What do you now believe was real GDP's rate of growth in the final quarter of last year?

	<u>Annualized rate of real GDP growth in Q4 2006</u>
February Consensus	2.4%
Top 10 Average	3.0%
Bottom 10 Average	2.0%

2. A. Will the next change in the target federal funds rate by the Federal Open Market Committee (FOMC) be an INCREASE or DECREASE?

(Percentage of those responding)

	<u>Increase</u>	<u>Decrease</u>
March 2007 Consensus	32.6%	67.4%
February 2007 Consensus	33.3%	66.7%
January 2007 Consensus	28.0%	72.0%
December 2006 Consensus	24.3%	75.7%

B. Did Fed Chairman Ben Bernanke's recent semi-annual testimony before Congress alter your view about whether the next change in the target federal funds rate will be an increase or a decrease?

(Percentage of those responding)

	<u>Yes</u>	<u>No</u>
	0.0%	100.0%

3. Will business inventories continue to subtract from real GDP growth in Q1 of this year??

(Percentage of those responding)

	<u>Yes</u>	<u>No</u>
	55.6%	44.4%

4. Real residential fixed investment has been contracting for more than a year. When will we next witness the first positive quarter of growth in real residential fixed investment?

(Percentage of those responding)

	<u>Q1 2007</u>	<u>Q2 2007</u>	<u>Q3 2007</u>	<u>Q4 2007</u>	<u>Later</u>
March Consensus	0.0%	2.2%	45.7%	21.7%	30.4%
February Consensus	2.2%	4.3%	37.0%	30.4%	26.1%

5. Will the per barrel price of West Texas Intermediate crude oil be ABOVE or BELOW \$60 at the end of this year?

(Percentage of those responding)

	<u>Above \$60 per barrel</u>	<u>Below \$60 per barrel</u>
	51.1%	48.9%

6. As of January, average hourly earnings were rising at a y/y rate of 4.0%. What will be the y/y rate of growth in average hourly earnings in December of this year?

Y/Y % change in average hourly earnings in December 2007

Consensus	3.9%
Top 10 Average	4.3%
Bottom 10 Average	3.3%

7. Will the unemployment rate be ABOVE or BELOW 5.0% in December of this year?

(Percentage of those responding)

	<u>Above</u>	<u>Below</u>
March 2007 Consensus	15.2%	84.8%
February 2007 Consensus	15.9%	84.1%

2007

Monthly Indicator	Jan	Feb	Mar	Apr	May	Jun	Jly	Aug	Sep	Oct	Nov	Dec
Retail and Food Service Sales (a)	0.0											
Auto & Light Truck Sales (b)	16.7											
Personal Income (a, current \$)												
Personal Consumption (a, current \$)												
Consumer Credit (e)												
Consumer Sentiment (U. of Mich.)	96.9											
Household Employment (c)	31											
Non-farm Payroll Employment (c)	111											
Unemployment Rate (%)	4.6											
Average Hourly Earnings ('82\$)												
Average Hourly Earnings (current \$)	17.09											
Non-farm Workweek (hrs.)	33.8											
Industrial Production (d)	2.6											
Capacity Utilization (%)	81.2											
ISM Manufacturing Index (g)	49.3											
ISM Non-Manufacturing Index (g)	59.0											
Housing Starts (b)	1.568											
Housing Permits (b)	1.408											
New Home Sales (1-family, c)												
Construction Expenditures (a)												
Consumer Price Index (nsa., d)	2.1											
CPI ex. Food and Energy (nsa., d)	2.7											
Producer Price Index (n.s.a., d)	0.2											
Durable Goods Orders (a)												
Leading Economic Indicators (g)	0.1											
Balance of Trade & Services (f)												
Federal Funds Rate (%)	5.25											
3-Mo. Treasury Bill Rate (%)	4.98											
10-Year Treasury Note Yield (%)	4.75											

2006

Monthly Indicator	Jan	Feb	Mar	Apr	May	Jun	Jly	Aug	Sep	Oct	Nov	Dec
Retail and Food Service Sales (a)	3.0	-0.9	0.7	0.7	0.2	-0.5	1.4	0.0	-0.6	-0.2	0.4	1.2
Auto & Light Truck Sales (b)	17.6	16.5	16.5	16.7	16.0	16.2	17.1	16.0	16.6	16.1	16.0	16.7
Personal Income (a, current \$)	0.8	0.3	0.5	0.7	0.4	0.4	0.5	0.5	0.5	0.3	0.3	0.5
Personal Consumption (a, current \$)	0.9	0.5	0.5	0.6	0.7	0.3	0.7	0.1	0.0	0.3	0.5	0.7
Consumer Credit (e)	4.1	2.1	0.7	5.7	8.2	5.9	6.5	6.9	1.9	1.2	6.9	3.0
Consumer Sentiment (U. of Mich.)	91.2	86.7	88.9	87.4	79.1	84.9	84.7	82.0	85.4	93.6	92.1	91.7
Household Employment (c)	317	220	361	83	282	341	-56	288	288	431	286	303
Non-farm Payroll Employment (c)	206	300	249	144	103	124	222	186	198	109	196	206
Unemployment Rate (%)	4.7	4.8	4.7	4.7	4.6	4.6	4.8	4.7	4.6	4.4	4.5	4.5
Average Hourly Earnings ('82\$)	8.18	8.21	8.21	8.19	8.17	8.19	8.18	8.17	8.25	8.34	8.37	8.35
Average Hourly Earnings (current \$)	16.43	16.49	16.55	16.63	16.66	16.73	16.79	16.84	16.88	16.94	16.99	17.06
Non-farm Workweek (hrs.)	33.8	33.8	33.8	33.9	33.8	33.9	33.9	33.8	33.8	33.9	33.9	33.9
Industrial Production (d)	3.3	3.0	3.7	4.4	4.0	4.3	4.7	4.6	6.1	4.6	3.4	3.1
Capacity Utilization (%)	81.1	81.1	81.4	81.9	81.7	82.3	82.4	82.4	82.0	81.7	81.5	81.8
ISM Manufacturing Index (g)	55.3	56.1	55.3	56.9	54.7	54.0	54.4	54.3	52.7	51.5	49.9	51.4
ISM Non-Manufacturing Index (g)	59.1	60.5	59.6	61.1	59.2	56.9	55.7	56.9	54.6	57.4	58.3	56.7
Housing Starts (b)	2.265	2.132	1.972	1.832	1.953	1.833	1.760	1.659	1.724	1.478	1.565	1.643
Housing Permits (b)	2.195	2.147	2.085	1.973	1.946	1.869	1.763	1.727	1.638	1.553	1.513	1.613
New Home Sales (1-family, b)	1.173	1.038	1.121	1.121	1.101	1.078	.979	1.021	1.022	.995	1.069	1.120
Construction Expenditures (a)	0.0	0.5	1.0	0.2	-0.4	0.0	-0.7	0.0	-0.8	-0.8	0.1	-0.4
Consumer Price Index (s.a., d)	4.0	3.6	3.4	3.5	4.2	4.3	4.1	3.8	2.1	1.3	2.0	2.5
CPI ex. Food and Energy (s.a., d)	2.1	2.1	2.1	2.3	2.4	2.6	2.7	2.8	2.9	2.7	2.6	2.6
Producer Price Index (n.s.a., d)	5.6	3.9	3.6	4.1	4.5	4.9	4.0	3.8	0.9	-1.6	0.9	1.1
Durable Goods Orders (a)	-7.8	3.6	6.0	-4.7	0.3	3.3	-2.8	0.0	8.7	-8.1	2.3	3.1
Leading Economic Indicators (g)	0.4	-0.5	0.4	-0.1	-0.5	0.1	-0.3	-0.2	0.4	0.1	-0.1	0.6
Balance of Trade & Services (f)	-66.4	-62.8	-62.2	-63.5	-65.3	-64.6	-67.6	-68.6	-64.4	-58.9	-58.1	-61.2
Federal Funds Rate (%)	4.29	4.49	4.59	4.79	4.94	4.99	5.24	5.25	5.25	5.25	5.25	5.24
3-Mo. Treasury Bill Rate (%)	4.24	4.54	4.51	4.60	4.72	4.79	4.95	4.96	4.81	4.92	4.94	4.85
10-Year Treasury Note Yield (%)	4.42	4.57	4.72	4.99	5.11	5.11	5.09	4.88	4.72	4.73	4.60	4.56

(a) month-over-month % change; (b) millions, saar; (c) thousands, saar; (d) year-over-year % change; (e) annualized % change; (f) \$ billions; (g) level. Most series are subject to frequent government revisions. Use with care.

Calendar Of Upcoming Economic Data Releases

Monday	Tuesday	Wednesday	Thursday	Friday
<p>February 26 Dallas Fed Manufacturing Survey (Feb)</p>	<p>27 Existing Home Sales (Jan) Consumer Confidence (Conference board, Feb) Richmond Fed Manufacturing survey (Feb) Durable Goods Orders (Jan) S&P Case/Shiller Home Price Index (Dec) Weekly Store Sales ABC Consumer Comfort Index</p>	<p>28 GDP (Q4, Preliminary) New Home Sales (Jan) Chicago PMI (Feb) Agricultural Prices (Feb) Mortgage Applications Weekly Store Sales</p>	<p>March 1 ISM Manufacturing survey (Feb) Light Vehicle Sales (Feb) Construction Spending (Jan) Personal Income and Consumption (Jan) Weekly Jobless Claims Factors Affecting Monetary Reserves</p>	<p>2 Consumer Sentiment (University of Michigan, Final, Feb)</p>
<p>5 ISM Non-Manufacturing Survey (Feb)</p>	<p>6 Factory Orders (Jan) Pending Home Sales (Jan) Productivity and Costs (Q4, Revised) ABC Consumer Comfort Index Weekly Store Sales</p>	<p>7 ADP Employment (Feb) Consumer Credit (Jan) Beige Book EIA Crude Oil Stocks Mortgage Applications</p>	<p>8 Flow of Funds (Q4) Chain Store Sales (Feb) Weekly Jobless Claims Factors Affecting Monetary Reserves</p>	<p>9 Employment Report (Feb) Trade Balance (Jan) Wholesale Trade (Jan)</p>
<p>12 Federal Budget (Feb)</p>	<p>13 Retail Sales (Feb) Business Inventories (Jan) ABC Consumer Comfort Index Weekly Store Sales</p>	<p>14 Current Account (Q4) Import Prices (Feb) Mortgage Applications</p>	<p>15 Producer Price Index (Feb) Empire State Survey (Mar) Philadelphia Fed Survey (Mar) TIC data (Jan) Weekly Jobless Claims Factors Affecting Monetary Reserves</p>	<p>16 Consumer Price Index (Feb) Industrial Production (Feb) Consumer Sentiment (University of Michigan, Mar-Preliminary)</p>
<p>19 NAHB Housing Index (Mar)</p>	<p>20 FOMC Meeting Housing Starts (Feb) Weekly Store Sales ABC Consumer Comfort Index</p>	<p>21 FOMC Meeting Mortgage Applications</p>	<p>22 Leading Indicators (Feb) Weekly Jobless Claims Factors Affecting Monetary Reserves</p>	<p>23 Existing Home Sales (Feb)</p>
<p>26 Dallas Fed Manufacturing Survey (Feb) New Home Sales (Feb)</p>	<p>27 Consumer Confidence (Conference Board, Mar) Richmond Fed Manufacturing survey (Mar) S&P Case/Shiller Home Price Index (Jan) Weekly Store Sales ABC Consumer Comfort Index</p>	<p>28 Durable Goods Orders (Feb) Mortgage Applications</p>	<p>29 GDP (Q4, Final) Corporate Profits (Q4) Help Wanted Index (Feb) Kansas City Fed Manufacturing Survey (Mar) Agricultural Prices (Mar) Weekly Jobless Claims Factors Affecting Monetary Reserves</p>	<p>30 Personal Income and Consumption (Feb) Chicago PMI Survey (Mar) Construction Expenditures (Feb) Consumer Sentiment (University of Michigan, Final, Mar)</p>
<p>April 2 ISM Manufacturing Survey (Mar)</p>	<p>3 Light Vehicle Sales (Mar) Pending Home Sales (Feb) ABC Consumer Comfort Index Weekly Store Sales</p>	<p>4 ISM Non-Manufacturing Survey (Mar) ADP Employment (Mar) Factory Orders (Feb) Challenger Layoffs (Mar) Mortgage Applications</p>	<p>5 Weekly Jobless Claims Factors Affecting Monetary Reserves</p>	<p>6 Employment Report (Mar) Wholesale Trade (Feb) Consumer Credit (Feb) Good Friday: U.S. Stock Market Closed Bond Market Open With 10:30 Close</p>

BLUE CHIP FORECASTERS

CONTRIBUTORS TO DOMESTIC SURVEY

Action Economics, LLC, Boulder, CO
Dr. Michael Englund

Argus Research Corp., New York, NY
Dr. Richard A. Yamarone

Bank of America, New York, NY
Dr. Mickey Levy and Dr. Peter E. Kretzmer

Bank of Tokyo-Mitsubishi UFJ, Ltd., New York, NY
Christopher S. Rupkey

Barclays Capital, New York, NY
Dean Maki

Bear Stearns & Co., New York, NY
Dr. John Ryding and Conrad DeQuadros

BMO Capital Markets, Toronto, Canada
Dr. Sherry Cooper and Douglas Porter

Briefing.com, Boston, MA
Timothy E. Rogers

Chmura Economics & Analytics, Richmond, VA
Dr. Christine Chmura and Dr. Xiaobing Shuai

ClearView Economics, LLC, Cleveland, OH
Dr. Kenneth T. Mayland

Comerica Bank, Detroit, MI
Dana B. Johnson

Cycledata Corp., San Diego, CA
Robert S. Powers

Economist Intelligence Unit, New York, NY
Leo Abruzzese and Jan Friederich

DePrince & Associates, Murfreesboro, TN
Dr. Albert E. DePrince Jr.

Fannie Mae, Washington, DC
Dr. David W. Berson

Georgia State University, Atlanta, GA
Dr. Rajeev Dhawan and Emin Hajiyev

Goldman Sachs & Co., New York, NY
Jan Hatzius, Ed McKelvey, Andrew Tilton

ING Investment Management, Inc., Hartford, CT
James A. Griffin Jr.

J.P. Morgan Chase, New York, NY
Bruce Kasman and Robert Mellman

JPMorgan Private Client Services, New York, NY
Dr. Anthony Chan

J.W. Coons Advisors, LLC, Columbus, OH
James W. Coons

Kellner Economic Advisers, Port Washington, NY
Dr. Irwin L. Kellner

LaSalle/ABN AMRO Treasury Research, Chicago, IL
Carl R. Tannenbaum

Lehman Brothers, New York, NY
Dr. Ethan Harris

Loomis, Sayles & Company, L.P., Bloomfield, MI
Brian Horrigan and David Sowerby

Merrill Lynch Economics, New York, NY
David Rosenberg, Gerald E. Cohen and Thomas Porcelli Jr.

Mesirow Financial, Chicago, IL
Diane Swonk

Moody's Economy.com, West Chester, PA
Dr. Mark M. Zandi

Moody's Investors Service, New York, NY
John Lonski

Naroff Economic Advisors, Philadelphia, PA
Dr. Joel L. Naroff

National Association of Realtors, Washington, DC
Dr. David A. Lereah and Dr. S. Lawrence Yun

National City Corporation, Cleveland, OH
Richard DeKaser

Nomura Securities International, Inc., New York, NY
Dr. David H. Resler

PNC Financial Services Group, Pittsburgh, PA
Dr. Stuart G. Hoffman

Prudential Equity Group LLC, New York, NY
Robert Hughes

RBS Greenwich Capital Economics, Greenwich, CT
Stephen Stanley and Michelle Girard

Scotiabank, Toronto, Canada
Aron Gampel and Dr. Warren Jestin

Standard & Poor's Corp., New York, NY
Dr. David Wyss

State House Policy Office, Providence, RI
Gary L. Ciminero

Stone Harbor Investment Partners, LP, New York, NY
Brian Keyser

SunTrust Banks, Inc., Atlanta, GA
Gregory L. Miller and Christopher P. George

Swiss Re, New York, NY
Kurt Karl

The Northern Trust Company, Chicago, IL
Paul L. Kasriel and Asha G. Bangalore

Thredgold Economic Associates, Salt Lake City, UT
Jeff K. Thredgold

Trusco Capital Management, Richmond, VA
Alan Gayle

UBS Warburg, Stamford, CT
James O'Sullivan and Samuel Coffin

U.S. Trust Co., New York, NY
Dr. Robert T. McGee and Nora C. Mirshafii

Wachovia, Charlotte, NC
Dr. John Silvia and Mark Vitner

Wayne Hummer Investment, LLC., Chicago, IL
William B. Hummer

Wells Capital Management, San Francisco, CA
Gary Schlossberg

Woodworth Holdings, Ltd., Summit, NJ
Jay N. Woodworth

CONTRIBUTORS TO INTERNATIONAL SURVEY

Deutsche Bank AG, Frankfurt, Germany

ING Financial Markets, London, England

Mizuho Research Institute, Tokyo, Japan

Scotiabank, Toronto, Canada

WestLB AG, Dusseldorf, Germany

Dr. Stephen A. Ross, “Is Beta Useful?”
The CAPM Controversy: Policy and Strategy Implications
for Investment Management, AIMR
1993

Is Beta Useful?

Stephen A. Ross

Sterling Professor of Finance and Economics

Yale University School of Organization and Management

Most empirical tests have failed to find a systematic relationship between beta and expected return. Nevertheless, beta is a useful variable because it provides information about relative risk among portfolios

The controversy over the CAPM is not new. In a recent *Economist* article, Richard Roll and I reviewed what is being discussed about the CAPM in the press and in academic literature (Ross and Roll 1993). The article was triggered by the recent Fama and French article (1992), which concludes that the beta of any particular stock does not appear to have a very strong relationship to the return of that stock. What Fama and French found was not new—many researchers have observed the same thing—but they did it in such a forceful and comprehensive fashion that the world took note. For all the discussions implying caution about beta, the empirical truth is that no systematic relationship can be discerned between expected return and beta.

The Beta/Expected Return Relationship

The theoretical relationship between beta and expected return is well known. The theory says the capital market line should rise at a rate equal to the slope of the excess return of the market portfolio over and above the risk-free rate. Most empirical studies, however, have not supported this relationship.

My first acquaintance with the conflict between theory and reality happened years ago when a company asked me to help with a cost-of-capital issue. It seemed natural to look at an empirical estimation of the relationship between beta and expected return. We believed that, if this theory had merit, on average, over time, the stocks with betas in the bottom 10 percent would have the lowest return and those in the highest beta class would have the highest return; an upward-sloping line would connect them. What we got was a flat line, which means that having a low, middle, or high beta does not matter; the expected return is the same. This result is very depressing.

Over the years, a steady stream of papers has examined this phenomenon. These papers have certain common elements. One is that most people do not find a relationship between the expected return on a stock and its beta. About a third of the papers do find such a relationship, because it can be tickled out of the data if you work at it enough. A Turkish friend of mine has a wonderful phrase: "If you torture the data long enough, it will confess to any crime." These findings are an example of torturing to get the desired result. The papers also tend to agree on the following observation: Almost anything else you add to the equation to explain the return on stocks seems to do better than beta by itself.

“Beta is not very useful for determining the expected return on a stock, and it actually has nothing to say about the CAPM. For many years, we have been under the illusion that the CAPM is the same as finding that beta and expected returns are related to each other. That is true as a theoretical and philosophical tautology, but pragmatically, they are miles apart.”

The CAPM says the market portfolio is a mean-variance-efficient portfolio. No other portfolio can be constructed with the same long-run average return and lower risk. Furthermore, the statement that the market portfolio is mean-variance efficient is equivalent to the CAPM. Everything we know about the CAPM is contained in that sentence. If the market is really mean-variance efficient, then it should explain cross-sectionally expected returns. In particular, expected returns should be linearly related to betas on the market portfolio. We do not find that to be the case.

Several explanations have been offered for why empirical tests of the CAPM are so poor. One is that the indexes used for the efficient market portfolio are

not good proxies of the market. The S&P 500 does not represent the whole market. The market includes real estate, government bonds, corporate bonds, human capital, educational capital, and so forth, but the S&P 500 covers only large-capitalization stocks.

A second possibility is that the theory is not true and the market is not efficient. An efficient market would be very useful in its own right. If we knew that the market portfolio is efficient and that the CAPM is true, that knowledge would be a powerful guide to investment management. Investors could buy the index knowing that it is an efficient portfolio: You cannot construct a portfolio with lower risk and the same return.

So, either these tests of the CAPM are not using the right proxies (or they are so plagued by measurement error one cannot tell), or the theory is not true.

Is the Market Portfolio Efficient?

The empirical question is: Does the expected return on a stock have a linear relationship, so that the portfolio of stocks with higher betas has a higher expected return? Our results suggest the answer is no. In this framework, γ_0 is the risk-free rate—maybe T-bills—and γ_1 is the risk premium, or the expected return on the market minus the risk-free rate. Assuming an average yearly return of about 14 percent for the market and a risk-free rate of about 3, the risk premium would be 11 percent. Instead, we find $\gamma_1 = 0$, and we do not find any relationship between the expected return and the beta.

The second question is: How far inside the efficient frontier must a portfolio be to get a relationship of zero? Our results suggest not very far. We discovered another curve, which is about 22 basis points inside the efficient frontier. At every combination of return and standard deviation inside that curve, one can find a portfolio with a zero relationship between expected return and its beta. Being on the efficient frontier requires a straightforward, positive relationship between expected return and beta. If the index is inefficient, that relationship may not exist.

What is somewhat remarkable is that one can be very close to the efficient frontier and still find no relationship. This result is depressing, because measuring to the precision of 20–30 basis points is difficult. In fact, 10,000 years would be needed to determine whether the theory is correct or whether the S&P 500 Index is within 20 basis points of the efficient frontier (assuming a standard deviation of about 20 percent a year and no change in the market). If the portfolio is not within 20 basis points of the efficient frontier, the exact results we found are entirely possible.

The current state of financial researchers' knowledge comes largely from testing whether betas are related to expected returns. Theory is almost silent on whether the portfolio being used as a benchmark is efficient. This current testing and all the noise have nothing to do with whether one should be buying the market portfolio or managing to a market portfolio benchmark, or with whether the market portfolio will be a long-run efficient portfolio. The simple truth is we do not know. We have done some direct tests, but they are weak and cannot tell the difference between being efficient and being between 3 percent and 4 percent away from being efficient. Can we reject the hypothesis that the market is efficient? No, but we cannot reject the hypothesis that it is not efficient either. Statistics may not be a good guide in this case.

The first thing Roll and I discovered in our recent analysis is that distinguishing between being efficient and inefficient is difficult. In particular, a portfolio with no ability to explain expected returns may be very close to an efficient portfolio. This troublesome fact circumscribes the kinds of interpretations we are used to. It says that we are not testing the CAPM but testing whether we can find a portfolio that explains expected return. This search relates to the cost-of-capital problem. From a corporation's perspective, as opposed to that of an investment manager, the expected return on the firm's stock is the cost of the capital stock the corporation issues. Corporations like to use portfolios of like stocks as a guide to help them assess the actual cost of issuing stock. The CAPM, if it worked, would provide a nice way to do that. If I wanted to determine the expected return on a new project, for example, all I would need to do is determine the beta of that project. But this method does not work empirically.

Is the CAPM Useful?

The CAPM is an elegant way to encapsulate our understanding about return and risk issues and how they relate to each other. The problem is that the theory cannot be tested in any practical sense. It cannot be proved or disproved. The theory discusses real-world factors, but there is no way to determine whether it is a truth teller or falsehood teller. It is irrelevant to what is happening in the world. Nonetheless, the CAPM is an elegant theory. It says that if everyone thought about means and variances and added them up in all the right ways, if no one had any constraints, and if everyone were rational, then the market portfolio would be a mean-variance-efficient portfolio.

People have argued with us about these results. One question they ask is: If the CAPM is wrong, what

should we do? One possibility is to use the arbitrage pricing theory (APT). What if the analyst does not want to go through all that trouble? An analyst is better off saying, "If you want my return forecast on your stock, you will get the same as the market." If the theory cannot tell the difference between two stocks on the basis of their betas, then the analyst cannot either. If the analyst wants a rough bottom line of what the market thinks will occur to a particular stock, that line is what the analyst thinks will happen to the market. That is the best an analyst can do.

The CAPM does have one practical use. We are pretty good at measuring beta, and all other things being equal, on average, a stock with a higher beta will increase more when the market goes up and it will fall more when the market goes down than stocks with lower betas. The long-run average return on the stock, however, will not be higher or lower simply because it has a higher or lower beta. If the market goes up relevant to its long-run expectation, then stocks with higher betas will fare better on average and stocks with lower betas will suffer on average.

Unfortunately, the relationship of beta with stock ups and downs does not always hold. During the 1987 crash, for example, when the market dropped 20 percent, MCI Communications Corporation dropped about 12 percent. MCI went into the market with a beta of 1.4, according to our best measurements, but it fell like it had a beta of 0.6. Which was right, 0.6 or 1.4? I did not know, so I averaged the two, which is where I would have been if I had simply started out thinking the beta was 1.0. Because empirical research shows that the slope of the line is zero, and if the CAPM is the only theory you use, then you are in the position of believing that all stocks have the same expected return.

Methodological Issues

Many people have complained about the methodologies used to test the CAPM. They believe these studies do not use the best statistics in econometrics: If something is done in the simplest way, no result is found, and the researchers try something fancy and find a result, they are falling into my Turkish friend's regime. They must wonder if the fancy methodology, rather than the actual facts, is responsible for the finding.

A simple sorting modification can improve the

results achieved from the standard methodology. Some stocks have a lot of imprecision in the relationship between beta and expected returns; others are very precise. Mixing them together willy-nilly does not do the theory justice. The analyst should measure how precise each relationship is, stock by stock, and correct for imprecision. That process is sometimes called a heteroscedasticity correction, or generalized least squares regression (GLS).

Using the GLS technique, I got the same results from our research, but with a different effect. Using the old statistical methods, for any index anywhere inside the efficient frontier, I could find a portfolio that has no relationship with expected return. Using the fancy technique, the line starts at the lowest risk (with a minimum-variance portfolio) and goes straight across horizontally: Indexes above the line demonstrate a positive relationship between expected returns and beta, and vice versa. This result means that finding a positive or negative relationship has nothing to do with whether the theory is true or not. This pattern indicates only whether the benchmark being used has more return than the lowest risk portfolio that can be constructed. Anything used as a benchmark with a higher return than the lowest risk portfolio automatically produces a positive in these tests. Because systematic errors are associated with every stock, however, simply observing that something will produce a positive slope tells the analyst nothing about whether it will be a good predictor of the expected returns of the stock.

Conclusion

The CAPM is a wonderful theory. It is also useless in a practical way. It is not useful for telling people about the cost of capital or expected return, but it does have other uses. For example, beta alone is a useful variable. It tells us something about the relative risk of two portfolios, but not about their long-run returns. I am interested in both the expected return on a stock and in the stock's beta. What I have lost is the CAPM's notion that the two are related.

When managing a large portfolio, I am interested in its beta because that is a good measure of how risky the portfolio is. Beta provides some indication of the portfolio's tracking error relative to some benchmark. I cannot state with confidence, however, that because the portfolio has a higher beta, it will produce a higher expected return in the long run.

Question and Answer Session

Stephen A. Ross

Question: You stated that the risk premium could be zero if the market is 22 basis points from the frontier. Is this always the case?

Ross: Yes. The exact number will vary, but not the order of magnitude over any period using any of the measurements we have. Within a 25- or 30-basis-point distance from the efficient frontier is a portfolio that has a zero relationship between expected returns and beta.

Question: Can the market portfolio ever be efficient *ex post*?

Ross: The market portfolio is not efficient *ex post*. That still leaves the question of whether it is efficient *ex ante*. In any finite time period, you will always discover some stock that beat the S&P 500. Throughout 20 years of our history, owning Xerox Corporation was far more efficient than owning the S&P 500. Microsoft Corporation is another example of a stock that was better to own *ex post* than owning a market portfolio.

Ex ante, however, we are still in a quandary. The measurement error is so great that we cannot tell whether the market is efficient or not. Not being able to tell does not put us in the comfortable position of saying we will assume the market is efficient, because other portfolios may exist that are computable and discoverable that will do better than a market portfolio.

Question: Does the CAPM have validity when used in a discounted cash flow valuation because the purpose is to find a required rate of return rather than

an expected rate of return?

Ross: There is no real distinction between a required rate of return and an expected rate of return in a well-functioning, liquid, efficient market. Maybe such a distinction exists in the actual market, but we cannot measure the difference because the stock markets are pretty efficient.

Figuring out what the discount rate should be in a discounted cash flow model is the challenge. I would recommend that you try the one suggested by the theory and also try the one suggested by the falsity of the theory. The only comfortable place to be is to remember that, no matter what sensible discount rate you use, you want to buy or sell the stock. If that decision overlaps the choice of a sensible rate—for a low-enough rate, it is a buy, and for a high-enough rate, it is a sell—then I am unsure about whether you would want to buy or sell that stock.

Question: If you create index portfolios that are enhanced, whether for low volatility or for excess return, are you approaching a more efficient portfolio or are you doing something beyond an efficient portfolio?

Ross: You are not doing anything beyond an efficient portfolio, because by definition, you cannot. If you have succeeded in enhancing the index, then you have succeeded in moving from the index toward the efficient frontier. Because whether the index is on the efficient frontier is difficult to tell, you should look hard at how you are improving it.

I have heard of many different ways to enhance a particular benchmark—some legitimate and some not.

Question: What is your view on mean-reverting characteristics relative to the CAPM and efficient markets?

Ross: I have the same negative view as to whether the CAPM is useful. I have looked at many studies that purport to determine what will happen to the market return over long periods. The arguments are always the same. We cannot tell what will happen to the market next month, but we are good at telling what will happen during the next four or five years. The marketplace has long-run trends. If the P/E is too high now, we know the market will decline; if the P/E is too low, it will rise. All the various theories about what the market will do make some sense.

When the first CAPM studies came out, researchers went through a complicated statistical analysis to verify that, although they could not predict what the return would be next month, they could predict what would happen three to four years from now. So, we took the 800 months of market data that all these studies used and created artificial history (bootstrapping). We looked back over the 800 months from about 1920 to the present and picked a month at random from 1922, 1936, 1984, and so forth.

There was no predictability at all. We could not tell the next three years from the past three years. Then, we ran the same numbers other people had and

got the same results they did. We proved we could, given the past four years in our artificial history, predict four years from now. Yet, I know I could not predict; I made the numbers up.

What does that say about the studies that claim to be predicting? It says they are fundamentally in error. They severely underestimated the potential significant errors, so they overestimated the significance of their results.

Nothing is scientifically documented yet on the predictability in long-run stock returns. There is no strong documentation, even from volatility tests, that a long-run predictability inhabits these returns. Indeed, because they do not seem to be working, people are now doing few such tests.

Question: If you must come up with a viable cost of capital for a corporation, what approach do you use?

Ross: I use APT.

Question: Where do your comments leave us with respect to APT?

Ross: APT does not say some mean-variance-efficient portfolio exists. The market portfolio has no special role in an arbitrage pricing context. When I do an APT analysis, I am looking for "pure play." I am looking for several stocks with returns I can measure, which I then form into a portfolio similar to the company for which I am trying to figure

out the cost of capital.

Suppose I have a company with eight divisions. One division might be purely a food company, one might be purely an electronics company, and so forth. I form a portfolio of food companies, electronic companies, and so forth that mimics my company. By looking at the long-run return of that portfolio, I obtain an estimate of the long-run return or expected return for my particular stock. That is the germ of a superior way to make capital budgeting decisions within firms as opposed to determining expected rates of return and discount rates. We are so comfortable discounting cash flows, however, we like to think in those terms.