Report

On

Capital Structure and
Fair Return on Equity

Prepared for

NEWFOUNDLAND AND LABRADOR BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

Prepared by

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GUERNSEY

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INTRODUCTION

QUALIFICATIONS AND EXPERIENCE

My name is Mark Anthony Cicchetti and my business address is 2931 Kerry Forest Parkway, Suite 202, Tallahassee, Florida 32309. I am testifying on behalf of the Newfoundland and Labrador Board of Commissioners of Public Utilities (the Board).

I received a Bachelor of Science degree (BS) in Business Administration in 1980 from Florida State University and a Master of Business Administration degree (MBA) in finance in 1981, also from Florida State University.

I am a Project Manager and Manager of the Tallahassee, Florida Office of C.H. Guernsey & Co. (Guernsey). Guernsey is an engineering, architectural, and consulting firm that has been in business for over 75 years. The services Guernsey provides include: economic and financial analyses; merger and acquisition analyses; antitrust analyses; cost of service and rate design studies; regulatory and litigation support; valuation studies; strategic planning; power supply planning, production modeling, fuel solicitation and procurement; transmission and distribution planning and facilities design; architectural design; environmental assessments and analyses; and security systems.

For ten years prior to joining Guernsey, I was President of Cicchetti & Co., a financial research and consulting firm specializing in public utility finance, economics, and regulation. I also

24   served with the Florida Public Service Commission for seven years where I was Chief of

25   Finance. I have testified in numerous rate cases over the past twenty-five years. Topics I have

26   testified on include, but are not limited to, the cost of equity, capital structure, the overall cost of

27   capital, risk and return, regulatory theory, industry structure, corporate structure, incentive

28   regulation, reconciling rate base and capital structure, establishment of the leverage formula for

29   water and wastewater utilities in Florida, and cross-subsidization. I also have been employed by

30   the Florida State Board of Administration (the State of Florida pension fund) as Chief of

31   Arbitrage Compliance where I was responsible for ensuring that over $16 billion of State of

32   Florida tax-exempt securities remained in compliance with the federal arbitrage requirements

33   enacted by the Tax Reform Act of 1986. I provided investment advice to trust fund managers on

34   how to maximize yields while remaining in compliance with the federal arbitrage regulations.

35

36   I have served as President, Treasurer, and member of the Board of Directors of the Society of

37   Utility and Regulatory Financial Analysts (SURFA) and was awarded the designation of

38   Certified Rate of Return Analyst (CRRA), by SURFA. I am a member of the Financial

39   Management Association (FMA) and I have published several rate of return related articles in

40   industry publications.

41

42   **PURPOSE OF TESTIMONY**

43

44   I have been asked to conduct an appraisal of the capital structure and fair return on equity for

45   Newfoundland Power, including the automatic adjustment formula, and to address the testimony

46   of any other cost of capital witnesses in this case.

47

SUMMARY OF TESTIMONY

49

50 An appropriate allowed return for Newfoundland Power will (1) balance the interests of the

51 ratepayers and shareholders of the Company, (2) allow the Company to maintain its financial

52 integrity and raise capital at a reasonable rate, and (3) be comparable to returns on investments of

53 similar risk.

54

55 Based on my analyses of the cost of common equity for Newfoundland Power, I determined the

56 cost of common equity for the Company falls within a range of 9.00 percent to 9.60 percent and

57 recommend the Board allow a return on common equity of 9.60 percent. Given current market

58 conditions and the relevant risks facing Newfoundland Power, a return on common equity of

59 9.60 percent will allow the company to maintain its financial integrity, attract capital on

60 reasonable terms, and is comparable to returns on investments of similar risk. To arrive at my

61 recommendation, I studied publicly available financial reports and other published financial

62 information regarding the Company including bond rating agency reports, investment research

63 reports, and prior regulatory proceedings and orders. I also studied the current economic and

64 financial environment including current interest and inflation rates. I reviewed the status of the

65 power markets in Canada and the U.S., the characteristics of Newfoundland Power, and

66 examined the related business and financial risks that are important to investors. I compared

67 Newfoundland Power's operating and financial statistics to those of comparable companies and

68 used this comparison as the basis for my analysis. Finally, I estimated the cost of common equity

69 for the company using conventional market-based cost of equity methodologies.

70

71 Regarding the automatic adjustment formula, I believe recent changes in financial market

72 conditions cause the formula to produce a return below the bottom of a reasonable range of the

73 cost of equity for the Company. If the formula were to be implemented for Newfoundland Power

74 as of August 14, 2009, it would produce an allowed return of 8.50 percent, or 50 basis points

75 below the bottom of the range I determined as a reasonable range of the cost of equity for the

76 Company.

77

78 Upon adoption of the formula, the Board noted there were circumstances that could cause the

79 Board to call a hearing "so as to render the use of an automatic adjustment formula to be

80 inappropriate."[1] The examples listed, which the board indicated were not all-inclusive, were:

81   (a) deterioration in the financial strength of the Company, resulting in an inappropriately

82   low interest coverage;

83   (b) changes in financial market conditions which would suggest that the formula is not

84   accurately reflecting the appropriate return on equity; and

85   (c) fundamental changes in the business risk of the Company.

86

87 To date, there has been neither deterioration in the financial strength of the Company resulting in

88 an inappropriately low interest coverage nor fundamental changes in the business risk of the

89 Company. However, changes in financial market conditions over the past year have resulted in

90 particularly low yields on Canadian long-term government bonds, relatively high yields on

91 corporate bonds, and declines in equity values. Given these unique circumstances, it is not

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[1] Newfoundland and Labrador Board of Commissioners of Public Utilities, Order P.U. 16 (1998-99), July 31, 1998.

92 entirely surprising that the automatic adjustment formula established years earlier under different

93 conditions might underestimate the cost of equity. In fact, the Board considered that changes in

94 financial market conditions might render the formula ineffective.

95

96 **ORGANIZATION OF TESTIMONY**

97

98 My testimony from hereon is organized into six broad categories:

99

100 I.   Regulatory Conceptual Framework

101 II.   Analysis of the Economy, Industry, and Company

102 III.   Cost of Equity Analysis

103 IV.   Recommendation

104 V.   Automatic Adjustment Formula

105 VI.   Review of the testimony of Kathleen C. McShane

106

107 The first section addresses regulatory theory and the economic, legal and financial standards

108 associated with setting just and reasonable utility rates. The second section addresses the

109 financial and economic environment facing investors in Newfoundland Power, characteristics of

110 the electric utility industry, and the specific characteristics of the Company. The third section

111 details the determination of the cost of equity and the fourth section is my recommendation. In

112 section V, I present my findings and recommendations regarding the automatic adjustment

113 formula. Section VI addresses the evidence on capital structure and fair return on equity

114 provided by Newfoundland Power witness Katheleen C. McShane.

I. REGULATORY CONCEPTUAL FRAMEWORK

A.   ROLE OF REGULATION

Industries are characterized by market structure. Market structure refers to the range of conditions, such as the number of firms, the economies of scale or scope, the type of product sold, and the demand for that product that may affect the behavior and performance of firms in that market. Market structure is best thought of as a continuum between pure competition and natural monopoly. Purely competitive markets are characterized by minimal economies of scale or scope such that no single supplier has a natural cost advantage over other suppliers. In the short-run, under effectively competitive conditions, a firm can earn economic profits, that is, a return above its cost of capital, only if it is efficient or innovative. In the long-run, under effectively competitive conditions, a firm cannot earn above its cost of capital due to the ease of entry and exit to and from the market. If a firm in an effectively competitive environment is earning above its cost of capital, new firms will enter the market to share those profits.

Regulated utilities are considered to be natural monopolies. Natural monopoly markets are characterized by substantial economies of scale or scope and decreasing average costs such that one supplier can always serve the market at lower per unit cost than two or more suppliers. Under this scenario, barriers to entry are severe because the single most efficient provider will always be able to price below potential entrants. Left unregulated, a natural monopoly will not produce competitive results. Regulation benefits society by reducing price, increasing output, and reducing the economic profits of monopolies. Regulators accomplish this by backing away

138   from strict application of allocative efficiency and marginal cost pricing standards and instead

139   establish a "fair-return" price.

140

141   **B.**   **LEGAL PRECEDENTS**

142

143   A fair return is based on the standards of capital attraction and financial integrity mandated in

144   various legal precedents. An appropriate allowed return adequately compensates investors for

145   the use of the capital used to finance the plant and equipment necessary for the provision of

146   utility service. In evaluating legal standards, I relied on the tenets established by the Supreme

147   Courts of Canada and of the United States. In <u>Northwestern Utilities vs. City of Edmonton</u>

148   (1929), 2 D.L.R. 4, p. 8, the Supreme Court of Canada stated that rate levels should be just and

149   reasonable and that utility earnings should yield a fair return on invested capital. In <u>Bluefield</u>

150   <u>Waterworks and Improvement Company v. Public Service Commission of West Virginia</u>, 262

151   U.S. 679 (1923) and <u>Federal Power Commission v. Hope Natural Gas Company</u>, 320 U.S. 591

152   (1944) the United States Supreme Court indicated that the return to the equity owner should be

153   commensurate with returns on investments having corresponding risks and should be sufficient

154   to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and

155   attract capital.

156

157   **C.**   **RISK AND RETURN**

158

159   Investors require compensation for postponing consumption and exposing capital to risk. The

160   greater the risk, the greater the return required. According to modern portfolio theory, a stock's

161 risk consists of company specific risk known as diversifiable risk and market risk known as non-

162 diversifiable risk. Company specific risk is caused by events that are unique to a particular firm

163 such as the loss of a major customer, strikes, lawsuits, and so on. Because these things occur

164 randomly, their effects can be eliminated through diversification - negative events at one firm

165 will be offset by positive events at another. Market risk, on the other hand, is associated with

166 events that affect all firms simultaneously such as inflation, war, and recession. Because all firms

167 are affected simultaneously, the effect of these events cannot be eliminated through

168 diversification. Therefore, because we assume investors are risk averse (that is, they accept the

169 highest return for a given level of risk or accept the lowest level of risk for a given return) the

170 relevant risk of a stock is the risk that cannot be diversified away. Rational investors do not

171 accept risks that easily can be eliminated. Numerous empirical studies have shown the capital

172 markets are efficient and investors are compensated only for risks that cannot be diversified

173 away. Therefore, the relevant risk of a stock is the risk it contributes to a well-diversified

174 portfolio and is measured by beta. Beta is a measure of a stock's volatility relative to an average

175 stock. A beta of 1.0 indicates that the individual stock's return moves up or down in the same

176 proportion as the market return. A beta above or below 1.0 indicates higher or lower return

177 volatility, and therefore greater or lesser risk, relative to the market as a whole. The concept of

178 beta, in theory, is sound. However, in practice, beta has many documented drawbacks.

179

180 **D.   BUSINESS AND FINANCIAL RISK**

181

182 The relevant risk facing a common equity investor can be disaggregated into business risk and

183 financial risk. Business risk relates to the uncertainty surrounding the level of operating income

184 expected to be earned. Generally, business risk can be broken down into the following

185 components: demand variability; sales price variability; input price variability; the ability to

186 adjust output prices for changes in input prices; and the extent to which costs are fixed, i.e.

187 operating leverage.

188

189 Financial risk relates to the types of securities used to finance the firm, that is, financial leverage.

190 The greater the amount of debt and fixed-cost obligations used to finance the firm, the greater the

191 financial risk. It is generally accepted that companies with high business risk should capitalize

192 their operations with a relatively lower amount of debt and fixed-cost obligations. Conversely,

193 firms with low business risk can "trade on the equity" and finance their operations with a

194 relatively greater amount of debt.

195

196 Utilities also face regulatory risk which relates to the quality of regulation received regarding the

197 fairness and rationality of regulatory decisions.

198

199 **E.   STAND-ALONE APPROACH**

200

201 Many operating utilities are subsidiaries of larger conglomerate corporations that have both

202 regulated and higher risk non-regulated operations. The stand-alone approach to utility regulation

203 recognizes that the reasonable and prudent costs associated with the provision of utility service

204 should be based on the costs that would be incurred if the utility was an independent "stand-

205 alone" entity.

206

II. ECONOMIC, INDUSTRY AND COMPANY ANALYSIS

A.   ECONOMIC OVERVIEW

Economic and financial market conditions form the backdrop for the evaluation of investor risk perceptions and the determination of the cost of equity. Economic conditions and local market demographics drive the demand for utility services.

The Newfoundland and Labrador economy is highly dependent on the natural resource sector. Over the last ten years, large resource based projects spurred average annual growth of 4.6 percent per year. Annual growth in the mining sector averaged 18 percent and in 2008 accounted for 30 percent of the total economy.[2] However, in 2008, economic output was hampered by contractions in the oil production and mining sectors and the Conference Board of Canada is forecasting the provincial economy will contract "by 5 percent in 2009 before rebounding with modest growth of 1 percent in 2010."[3]

Housing starts, which are the primary driver of customer growth for the Company, are expected to decline to 2,719 in 2009 from 3,261 in 2008 and are expected to decrease further to 1, 947 in 2010. The unemployment rate for the province is expected to rise to 14.9 percent in 2009 from 13 percent in 2008 and increase further to 15.7 percent in 2010.[4] Over the long-term, the real

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[2] Newfoundland Power, 2010 General Rate Application, Customer, Energy and demand Forecast.
[3] Shaw, K., Newfoundland and Labrador, *Warning: Sharp contraction Ahead*, Conference Board of Canada, Provincial Outlook, Spring 2009.
[4] Ibid.

227 growth in gross domestic product for Newfoundland and Labrador is expected to lag real growth

228 in gross domestic product for Canada.

229

230 Although the effects of the global economic slowdown are expected to linger through 2009 and

231 into 2010, the general consensus, as shown on Schedules MAC-4 and 5, is that economic activity

232 is expected to improve steadily through 2010 albeit with corresponding increases in inflation and

233 interest rates.

234

235 **B.   THE CREDIT AND CAPITAL MARKETS**

236

237 The prospects for inflation and interest rates are important considerations for utility investors.

238 Regulated utilities are particularly sensitive to the effects of inflation and interest rates. As with

239 other industries, rising labor and other operating expenses directly impact public utility

240 companies' earnings. However, due to the capital intensive, high fixed cost nature of public

241 utilities, plant costs and the related financing costs have a particularly strong impact on earnings.

242 As shown on Schedules MAC-4 and 5, inflation in Canada and the U.S. is expected to moderate

243 in 2009 before increasing in 2010 along with expected increases in economic activity.

244

245 Recent volatility in the global debt and equity markets and the ongoing slowdown in global

246 economic activity highlight the risks facing utility investors. Increases in the yields on utility

247 debt, in conjunction with declines in utility stock prices over the past two years, have increased

248 utilities required returns. Schedule MAC-1 shows that Canadian A-rated utility bonds averaged

249 6.86 percent over the first six months of 2009. Schedule MAC-1 also shows that Canadian and

250   U.S. A-rated utility and government bonds have tracked each other closely over the last two and

251   a half years. Schedule MAC-2 shows that the yields on 10-year government bonds for both

252   Canada and the U.S. are expected to increase over the next twelve months. The yield on the 10-

253   year Canadian government bond is expected to increase to approximately 4 percent over the next

254   12-months from 3.55 percent today, while the yield on the 10-year U.S. government bond is

255   expected to increase to 4.40 percent from approximately 3.60 percent today. Schedule MAC-3

256   shows that yields on Canadian and U. S. government securities, as well as yields on U.S.

257   corporate securities, are expected to increase over the coming year and continue to respectively

258   track each other closely. U.S. AAA corporate rates are expected to increase to 6.00 percent by

259   the end of 2010 from 5.44 percent today and U.S. BBB corporate rates are expected to increase

260   to 7.60 percent by the end of 2010 from 7.15 percent today. Consequently, I expect the yields on

261   A-rated Canadian and U.S utility securities to increase commensurately.

262

263   **C.   INDUSTRY OVERVIEW**

264

265   Electric utilities are not immune to the effects of the worldwide slowdown in economic activity

266   and the upheaval in the global credit and capital markets. However, as regulated entities, electric

267   utilities are better situated to deal with such crises relative to their unregulated counterparts. The

268   Canadian and U.S. electric utilities recently have faced declining equity valuations, increases in

269   the marginal cost of debt, volatile fuel prices, reduced sales, and increasing infrastructure and

270   environmental requirements. On the positive side, the industry effectively maintained access to

271   the capital markets during the worldwide financial crises and the recent decline in commodity

272   prices from record levels has eased certain cost pressure. By its nature, the utility industry

273 continues to be viewed as a low risk, defensive group relative to the market as a whole. Given

274 the challenges facing utilities, regulatory relations are expected to be important considerations

275 for both Canadian and U.S. utilities into the foreseeable future.

276

277 For Canadian utilities, there is concern that further decreases in the long-term Canadian

278 government bond rate used in conjunction with ROE formulas could pressure credit metrics and

279 consequently the access to capital.

280

281 **D.   COMPANY OVERVIEW**

282

283 Newfoundland Power is a predominately transmission and distribution electric utility serving

284 approximately 235,000 customers on the island portion of the province of Newfoundland and

285 Labrador. The Company is a wholly-owned subsidiary of Fortis Inc., a utility holding company

286 engaged primarily in regulated utility operations in Canada, the U.S, and the Caribbean.

287 Newfoundland Power purchases approximately 92 percent of its electricity needs from province-

288 owned Newfoundland and Labrador Hydro (NLH) and generates the remainder of its needs

289 through 139 MW of its own generation assets. The Company's first mortgage bonds are rated

290 single A by DBRS and Baa1 by Moody's. The Company's deemed regulatory capital structure is

291 45 percent equity which is effectively the same as its actual capital structure. Newfoundland

292 Power operates under supportive regulation that features the pass-through of all power

293 generation and procurement related costs, a weather normalization reserve that reduces earnings

294 volatility, a rate stabilization account for tracking energy and supply cost variances and a

295 demand management incentive account which includes a mechanism for tracking demand supply

296 cost variances. Together, these mechanisms significantly reduce the business risk of the

297 Company. Additionally, PUB annual review and approval of the Company's capital expenditure

298 budget limits the likelihood of significant cost disallowances.

299

300 The Company faces very little competition as its isolated geographic location limits competition

301 from natural gas. The Company has a stable customer base and serves 85 percent of the

302 electricity customers on the island. The Company's customer mix is primarily residential and

303 commercial (NLH serves most industrial customers) so there is virtually no risk associated with

304 customer concentration. That is, there is little risk of losing significant load with the loss of one

305 or a few customers. Because the Company's customer base is stable, capital expenditures, and

306 the need to raise capital, are expected to be relatively modest into the foreseeable future.

307

308 The Company's credit metrics are slightly below those of other low risk Baa-1 regulated utilities

309 rated by Moody's. According to Moody's:

310

311   NPI's credit metrics in 2008 demonstrated improvement primarily as a result of a 2.8%

312   average rate effective January 1, 2008. However, NPI's ratios generally continue to be

313   somewhat weaker than those of other Baa 1-rated peers predominately engaged in T&D

314   such as Atlantic City Electric Company (ACE), Connecticut Light and Power Company

315   (CLP) and FortisAlbeta Inc. (FAB, a sister company). ACE and FAB have reported CFO

316   pre-wc to debt in the 15% to 20% range versus NPI's roughly 15% level. Similarly, ACE,

317   CLP and FAB have reported CFO pre-wc interest coverage in the range of 4X versus

318   NPI's sub-3x range in recent years. In general, Moody's anticipates that NPI's CFO pre-

319   wc to debt will remain in the 15 to 16% range while its CFO pre-wc interest coverage

320   stays above 3x going forward.[5]

321

322   Challenges facing Newfoundland Power include limited growth prospects, maintaining

323   supportive regulatory relations, maintaining sound credit metrics for its debt rating, and

324   managing forecast risk. Overall, Newfoundland Power is characterized as a low risk, regulated,

325   transmission and distribution electric utility operating in a low risk market under supportive

326   regulation.

327

328

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[5] Moody's Investor Service, Credit Opinion: Newfoundland Power Inc., March 6, 2009.

III. COST OF EQUITY ANALYSIS

It is important to note that estimating the cost of equity is a subjective procedure. It is impossible to measure the cost of equity precisely and it is generally estimated within a range. The cost of equity is a function of risk and investor expectations and it is impossible to know all investor's expectations at any point in time. Consequently, professional judgement must be excised when determining proxies for investor expectations. When analyzing cost of equity estimates, it is important to understand the rationale underlying the subjective inputs and how well the models relied on reflect reality.

A.   COST OF EQUITY METHODOLOGIES

To determine the required return on common equity for Newfoundland Power I performed discounted cash flow analyses on indices of comparable electric and gas distribution utilities and a risk premium analysis on an the index of comparable natural gas distribution companies. Relying on an index of comparable companies, rather than a single company, helps minimize forecasting errors.

The discounted cash flow model is the most commonly used market-based approach for estimating a utility investor's required return on common equity capital. In a DCF analysis, the cost of equity is the discount rate (required rate) which equates the present value of the expected cash flows associated with a share of stock to the present price of the stock. The expected cash flows consist of expected dividends plus the price investors expect to receive when they sell the

352   stock. Therefore, the sales price in any period will equal the present value of the dividends and

353   sales price expected to be received after that period. Consequently, applying this concept to all

354   future sales prices, the current stock price can be shown to be equal to the present value of all

355   dividends expected to be paid in the future, including any liquidating dividend. It is important to

356   note that an appropriately derived DCF model is essentially the same equation that is used to

357   calculate the yield on a debt instrument. For example, in calculating the yield on a bond, the

358   expected cash flows are the contractual interest payments and the repayment of principle. Using

359   the price paid for the bonds and the expected cash flows, the yield on the bonds (the required

360   return) can be easily and accurately calculated by solving the equation. The difference in

361   applying the discounted cash flow equation to a stock is that the expected cash flows associated

362   with a share of stock are not known with certainty. Consequently, determining a valid proxy for

363   investor expectations regarding the expected cash flows of a stock (the expected dividends) is the

364   most important, and often most contentious issue in determining the cost of equity using the DCF

365   formula. However, if valid proxies for investor expectations for expected dividends are available,

366   then the DCF method is by far the most accurate and theoretically sound direct market-based

367   method to determine the required return on equity.

368

369   A risk premium analysis recognizes that equity is riskier than debt. The return to equity owners

370   is a residual return, available only after debt holders have been paid, and is less certain than the

371   payment of interest on a company's debt. Consequently, equity investors require a "risk

372   premium" over the cost of debt as compensation for assuming additional risk. To apply the

373   methodology, a risk premium over some measure of debt cost must be determined.

374

375 **B.   COMPARABLE COMPANIES**

376

377 Newfoundland Power is a small, low risk, predominately transmission and distribution electric

378 operating in a low risk market under supportive regulation. Transmission and distribution only

379 electric utilities are considered the lowest risk companies in the low risk electric utility industry.

380 Newfoundland Power has bond ratings of single A from DBRS and Baa 1 from Moody's. To get

381 an as accurate as possible market-based cost of equity estimate for Newfoundland Power, a

382 group of publicly traded investor-owned utility companies similar to Newfoundland Power is

383 required. The comparable companies also must have analyst forecasts available.

384

385 To determine a group of comparable companies for Newfoundland Power I examined the

386 publicly traded utility companies in Canada and the U.S.   To find comparable Canadian

387 companies, I examined the companies listed by Standard and Poor's as electric utilities on the

388 Toronto Exchange (Atco Ltd., Canadian Utilities Limited, Emera Incorporated, Fortis Inc, Just

389 Energy Income Fund, Canadian Hydro Developers, Inc., Northland Power Income Fund, and

390 TransAlta Corporation). I also examined the companies listed by Value Line as the Canadian

391 Energy Industry (Canadian Natural Resources, EnCana Corp., Imperial Oil Ltd., Nexen Inc.,

392 Pengrowth Energy, Provident Energy, Talisman Energy, TransAlta Corp., and TransCanada

393 Corp).   I also examined Enbridge Inc. However, none of the Canadian companies I examined

394 were similar to Newfoundland Power and had long-term analyst forecasts for growth, earnings,

395 return on equity, and dividends. In the U.S. market, I also was not able to find publicly traded

396 transmission and distribution only electric utility companies similar to Newfoundland Power but

397 I was able to find regulated electric and natural gas distribution companies with characteristics

398   otherwise similar to Newfoundland Power. Consequently, I believe relying on these regulated

399   U.S. utility companies that are similar to Newfoundland Power except that they are not

400   transmission and distribution only utilities will provide the best estimate of the cost of equity for

401   the Company. Additional reasons supporting the use of U.S. regulated utilities as proxies for

402   Newfoundland Power include: (1) Canadian and U.S. utilities generally have similar operating

403   and regulatory environments, (2) there is significant integration between the Canadian and U.S.

404   capital markets, and (3) rating agencies have considered utilities with similar characteristics but

405   domiciled in different countries to be peers.

406

407   Regarding the use of natural gas distribution companies as proxies for Newfoundland Power, it

408   should be noted it is helpful to have results from a different, but similar, industry to verify the

409   reasonableness of cost of equity results. The fact that the natural gas distributors are regulated

410   utilities is significant. Financial theory does not require firms be in the same industry to be

411   comparable in risk. The business and financial risk factors that drive a firm's required return are

412   the determinants of risk comparability, not the industry in which a firm operates.

413

414   To determine the companies comparable to Newfoundland Power, I reviewed electric utilities

415   and natural gas distributors listed in Value Line that are small or mid-cap companies, have a

416   Value Line Safety Rank of 1 or 2, a bond rating of Baa 1 or better, and are not currently involved

417   in a merger. I calculated and compared the common equity ratios in Schedules MAC-6 and

418   MAC-7.

419

420 The investment characteristics for the comparison group of electric utility companies are: a *Value*

421 *Line* Safety Rank of 1.67, a *Value Line* beta of 0.69, a S&P bond rating of A-, and an average

422 equity ratio of 51.89% of investor capital. Schedule MAC-8 shows the investment characteristics

423 for the comparison electric companies.

424

425 The investment risk parameters for the comparison group of natural gas distribution companies

426 are: a *Value Line* Safety Rank of 1.5, a *Value Line* beta of 0.66, a S&P bond rating of A, and an

427 average equity ratio of 57.17% of investor capital. Schedule MAC-9 shows the investment

428 characteristics for the comparison natural gas distribution index.

429

430 **C.   CAPITAL STRUCTURE**

431

432 The Company's deemed capital structure includes a common equity ratio of 45 percent and the

433 Company's forecast actual capital structure also has an equity ratio of 45 percent. I believe the

434 Company's equity ratio is reasonable. Optimal equity ratios fall within a range and it is generally

435 accepted that firms with less business risk can finance their operations with a greater amount of

436 financial leverage. Newfoundland power is a low risk, transmission and distribution utility that

437 operates in a low risk market with supportive regulation. The Company's equity ratio is

438 favorable compared to other Canadian utilities. Schedule MAC-7 and 8 show the equity ratios of

439 the comparison companies. Relative to the U.S. electric and natural gas distribution comparison

440 companies, Newfoundland Power's equity ratio is below the average of both groups. However,

441 given the Company's characteristics including the predominately transmission and distribution

442   nature of its operations, I believe its equity ratio is appropriate and no adjustment is necessary to

443   recognize the difference in equity ratios between the Company and the comparison groups.

444

445   **D.   DISCOUNTED CASH FLOW ANALYSIS**

446

447   For my DCF analyses, I used a two-stage variable growth rate DCF model in order to take

448   advantage of the specific dividend forecasts for the next five years provided by *Value Line*. I

449   calculated expected dividends after year five using the earnings retention method also known as

450   the sustainable growth method or the *b* times *r* approach. Schedule MAC-10 shows the two-stage

451   DCF model. The two-stage model estimates dividend growth on an individual basis for an initial

452   growth period. After the initial period, I assumed dividends will grow into perpetuity at the

453   expected long-term growth rate.

454

455   I determined the current stock price (P_o) by averaging the recent (July 2009) high and low stock

456   price for each company. To calculate expected cash flows, I assumed an initial growth period

457   based upon *Value Line's* explicit dividend forecasts (n). I used *Value Line's* forecast of dividends,

458   and assumed a constant rate of growth in between to interpolate the expected dividends (D_t)

459   during the initial growth period. I calculated the long-term constant rate of growth expected (g_n)

460   using the earnings retention method and *Value Line's* expected return on equity (r) and expected

461   retention rate (b).

462

463th   The DCF calculations I performed include an adjustment of 5% to recognize the expenses

464   associated with issuing stock. An allowance for issuance costs enables the utility to recover the

465   costs incurred when issuing common stock. Issuance expenses include registration, legal, and

466   underwriter fees, and printing and mailing expenses. Investors would never be able to earn the

467   required return on their investment without an issuance cost adjustment because the sales price

468   will always exceed the net proceeds to the company as a result of incurring issuance costs. These

469   costs will be incurred whether the stock is publicly traded or privately held. Conceptually, the

470   situation with common stock is similar to that of bonds and preferred stock. With bonds for

471   example, the issuance expenses are reflected in the cost charged to ratepayers and are recovered

472   over the life of the bond. The cost to the company for a specific bond issue is the interest expense

473   plus the amortization of issuance costs divided by the principal value less the unamortized

474   issuance costs. The result is that the cost to the utility is greater than the return to the creditor.

475   Unlike the case of bonds, however, common stock does not have a finite life. Therefore, issuance

476   costs cannot be amortized and must be recovered by an upward adjustment to the allowed return

477   on equity. This adjustment reflects the fact that, due to the issuance costs, the utility earns a

478   return on an equity balance that is less than the actual amount paid by investors. (See Brigham,

479   E.F., Aberwald, D., and Gapenski, L.D., "Common Equity Flotation Costs and Rate Making,"

480   Public Utilities Fortnightly, May 2, 1985, pp. 28-36). Historically, utility underwriting expenses

481   associated with issuing common stock have averaged 3 to 5.5 percent of gross proceeds. (See

482   Lee, I., Lochead, S., Ritter, J., and Zhao, Q., "The Costs of Raising Capital." Journal of Financial

483   Research, Vol. XIX, No. 1, Spring 1996 and Pettway, R.H., "A Note on the Flotation Costs of

484   New Equity Capital Issues of Electric Companies," Public Utilities Fortnightly, March 18, 1982,

485   pp. 68-69. When the adjustment for flotation costs (FC) is recognized, the cost of equity is given

486   on Schedule MAC-10.

487

488   Solving the equation on Schedule MAC-10 for the cost of equity (K) produces a required return

489   on common equity for the index of comparison electric utilities of 9.57 percent. Solving the

490   equation on Schedule MAC-11 for the cost of equity (K) produces a required return on common

491   equity for natural gas distribution index of 9.53 percent.

492

493   I relied on *Value Line* as a source of analyst forecasts because it is an independent, well-

494   respected, widely circulated source of investment information. *Value Line* is readily available,

495   and therefore, it is a source that is likely to influence investor's decisions. A second important

496   consideration for using *Value Line* is that it does not underwrite or sell securities. Consequently,

497   *Value Line* does not have conflicts of interest similar to other organizations that have been

498   criticized in the past for benefitting from an underwriting relationship, while providing

499   investment advice.

500

501   **E.   RISK PREMIUM ANALYSIS**

502

503   To determine the risk premium cost of equity for Newfoundland Power, I began by estimating

504   the required market returns for the comparison natural gas distribution index for each month of

505   the 1999 to 2009 ten-year period (120 data points) using the same DCF methodology described

506   previously. I accomplished this by using the *Value Line* data that was available to investors each

507   month of the 1999 to 2009 period, and the then current stock prices.

508

509   For each month, I compared the required returns on common equity derived from my DCF

510   analyses to the then current yield on long-term government bonds, as reported by the U.S.

511   Federal Reserve, to determine the risk premium for common equity over the yield on long-term

512   U.S. government bonds.

513

514   As shown on Schedule MAC-12, the equity-debt risk premium for the index averaged 4.35

515   percent (rounded) over the period 1999 to 2009. For the risk free rate, I used the August 1, 2009

516   *Blue Chip Financial Forecasts* consensus forecast for long-term government bond yield for the

517   coming year of 4.625 percent. Combining the next four quarters expected yield on long-term

518   government bonds of 4.625 percent with the equity-debt risk premium of 4.35 percent results in a

519   risk premium cost of equity of 9.00 percent for the index. Schedules MAC-12 and MAC-13

520   show the results of the Risk Premium analysis including the *Blue Chip* forecast for the 30-year

521   Treasury rate.

522

523

IV. RECOMMENDATION

524

525

526 Based on my DCF and Risk Premium analyses, I conclude the investor required rate of return on

527 common equity for Newfoundland Power is within the range of 9.00 percent to 9.60 percent. The

528 average of the analyses is 9.375 percent (rounded). Recognizing the volatile credit and capital

529 markets, uncertain economic environment, and forecasts that interest rates and inflation rates are

530 expected to increase, I recommend Newfoundland Power be allowed the top of the range, 9.60

531 percent, for ratemaking purposes. Schedule MAC-14 shows the results of my analyses and my

532 recommendation.

533

534 As shown on "Exhibit 5: 2010 Credit Metrics," included in the Company's 2010 General Rate

535 Application, a return on common equity of 9.50 percent will allow Newfoundland Power, on an

536 accrual basis at a 45 percent equity ratio, a pre-tax interest coverage of 2.48X, a cash flow

537 interest coverage of 3.35 times and a cash flow to total debt percentage of 17.9 percent.

538 Consequently, with regard to the Moody's credit metrics cited earlier, an allowed return of 9.60

539 percent will allow Newfoundland Power the opportunity to maintain its financial integrity, raise

540 capital at reasonable rates and compare favorably to firms of similar risk.

541

542

544

545 Regarding the automatic adjustment formula, I believe recent currently changes in financial

546 market conditions cause the formula to produce a return below the bottom of a reasonable range

547 of the cost of equity for the Company. If the formula were to be implemented for Newfoundland

548 Power as of August 14, 2009, it would produce an allowed return of 8.50 percent, or 50 basis

549 points below the bottom of the range I have determined as a reasonable range of the cost of

550 equity for the Company.

551

552 Upon adoption of the formula, the Board noted there were circumstances that could cause the

553 Board to call a hearing "so as to render the use of an automatic adjustment formula to be

554 inappropriate."[6] The examples listed, which the board indicated were not all-inclusive, were:

555   (d) deterioration in the financial strength of the Company, resulting in an inappropriately

556   low interest coverage;

557   (e) changes in financial market conditions which would suggest that the formula is not

558   accurately reflecting the appropriate return on equity; and

559   (f) fundamental changes in the business risk of the Company.

560

561 To date there has been neither deterioration in the financial strength of the Company resulting in

562 an inappropriately low interest coverage nor fundamental changes in the business risk of the

563 Company. However, changes in financial market conditions over the past year have resulted in

564 particularly low yields on Canadian long-term government bonds, relatively high yields on

---

[6] Newfoundland and Labrador Board of Commissioners of Public Utilities, Order P.U. 16 (1998-99), July 31, 1998.

565   corporate bonds, and declines in equity values. Given these unique circumstances, it is not

566   entirely surprising that the automatic adjustment formula established years earlier under different

567   conditions might underestimate the cost of equity. In fact, the board considered that changes in

568   financial market conditions could render use of the formula ineffective. If the Board retains the

569   automatic adjustment formula, I recommend the risk premium applied to the long-term Canadian

570   bond be adjusted to reflect more recent market data regarding risk premiums and I recommend

571   the use a forecasted rate for long-term risk free rate. I believe the use of a consensus forecasted

572   rate for the risk free rate in the determination of the required return will better reflect investor

573   expectations.

574

575

VI. REVIEW OF THE TESTIMONY OF KATHLEEN C. MCSHANE

577

578 I reviewed the testimony of Kathleen C.. McShane and I have a couple of specific criticisms of

579 her methods and one conceptual disagreement that I believe have led her to overestimate the

580 required return on equity for Newfoundland Power.

581

582 Regarding the "utility equity risk premium" Ms. McShane calculated on page 59, line 1486, Ms.

583 McShane stated, "At a 2010 forecast long Canada yield of 4.25% and assuming that the absolute

584 cost of a long-term debt for A-rated utilities remains in the range of 6.50% to 6.75%, the A rated

585 utility bond/long-term Canada bond yield spread will be approximately 225-250 basis points."

586

587 As shown on PUB-NP-4, Attachment A, Schedule 1, page 1 of 2, the yield on A-rated utility

588 bonds has fallen to 5.98 percent. Updating Ms. McShane's calculation to reflect this indicates the

589 A-rated utility bond/long-term Canada bond yield spread is 175 basis points and not 225-275

590 basis points.

591

592 On pages 60 and 61, beginning on line 1499, Ms. McShane calculates a risk premium cost of

593 equity of 10.50 percent using historical experienced returns. However, required return is a

594 function of expectations and not a function of *ex post* performance. Actual performance may

595 deviate substantially from what was expected but it is expectations relative to requirements that

596 determine if an investment should be made. Relying on earned returns in the ratemaking process

597 as the basis for required returns can produce incorrect results. For example, just because a

598 company had an earned return on equity of either 5% or 25% does not mean that the company's

599   cost of equity was either 5% or 25%. In "The Risk Premium Approach to Measuring a Utility's

600   Cost of Equity" (a University of Florida, Public Utility Research Center working paper written in

601   August 1984), Brigham, Shome and Vinson stated, "... we concluded that, for cost of capital

602   estimation purposes, risk premiums must be based on expectations, not on past, realized holding

603   period returns."

604

605   In her DCF analysis beginning on page 61, line 1544, Ms. McShane used expected growth in

606   earnings in place of expected growth in dividends. This is incorrect because the discounted cash

607   flow (DCF) model is a dividend discounting model. Earnings growth is not a valid proxy for the

608   expected growth in dividends. All earnings are not paid out as dividends when they are realized.

609   A fundamental principle of the DCF approach is that investors value a dollar received in the

610   future less than a dollar received today. This is because, if they had a dollar today, they could

611   invest it in an interest earning account and increase their wealth. This principle is known as the

612   time value of money. Generally, utility companies increase dividends in a lock-step fashion and

613   only when it is anticipated that a higher level of earnings can support a higher level of dividends.

614

615   Finally, with regard to the broad conceptual disagreement I have with Ms. McShane, in

616   Appendix F on page F-6, Ms. McShane states, "With respect to the notion that the market-to-

617   book ratio of utility shares should be approximately 1.0 times, that conclusion is incompatible

618   with the standard of comparable returns."

619   I submit, if there is a problem in this regard, it is with Ms. McShane's application of the

620   comparable return standard. As shown on schedule MAC-15, it is indisputable that, all other

621   things being equal, if the expected return on a stock exceeds the required return, the market to

622   book ratio will be above unity (one) and vice versa[7]. Although many factors affect a company's

623   market-to-book ratio, and I do not advocate setting utility rates by targeting the market-to–book

624   ratio, as a general proposition, there is nothing theoretically or conceptually wrong with the idea

625   that utility market-to-book ratios should approximate unity (with an allowance for flotation

626   costs). Generally, utility rates are set using original cost. Under this method, the utility recovers

627   the cost of invested capital and shareholders receive an appropriate return that includes an

628   allowance for expected inflation. It appears Ms. McShane would like utility rates to be set using

629   the "fair value" method because that is effectively the outcome if her methodology to allow for

630   increases in returns to account for inflation with regard to replacement cost is accepted.

631

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[7] Morin, Roger A. "Chapter 12: Market-to-Book and Q-Ratios," New Regulatory Finance, (Public Utilities Reports, Inc., Arlington, VA, 2006), page 360.

Canadian and U.S. Long-term Interest Rates
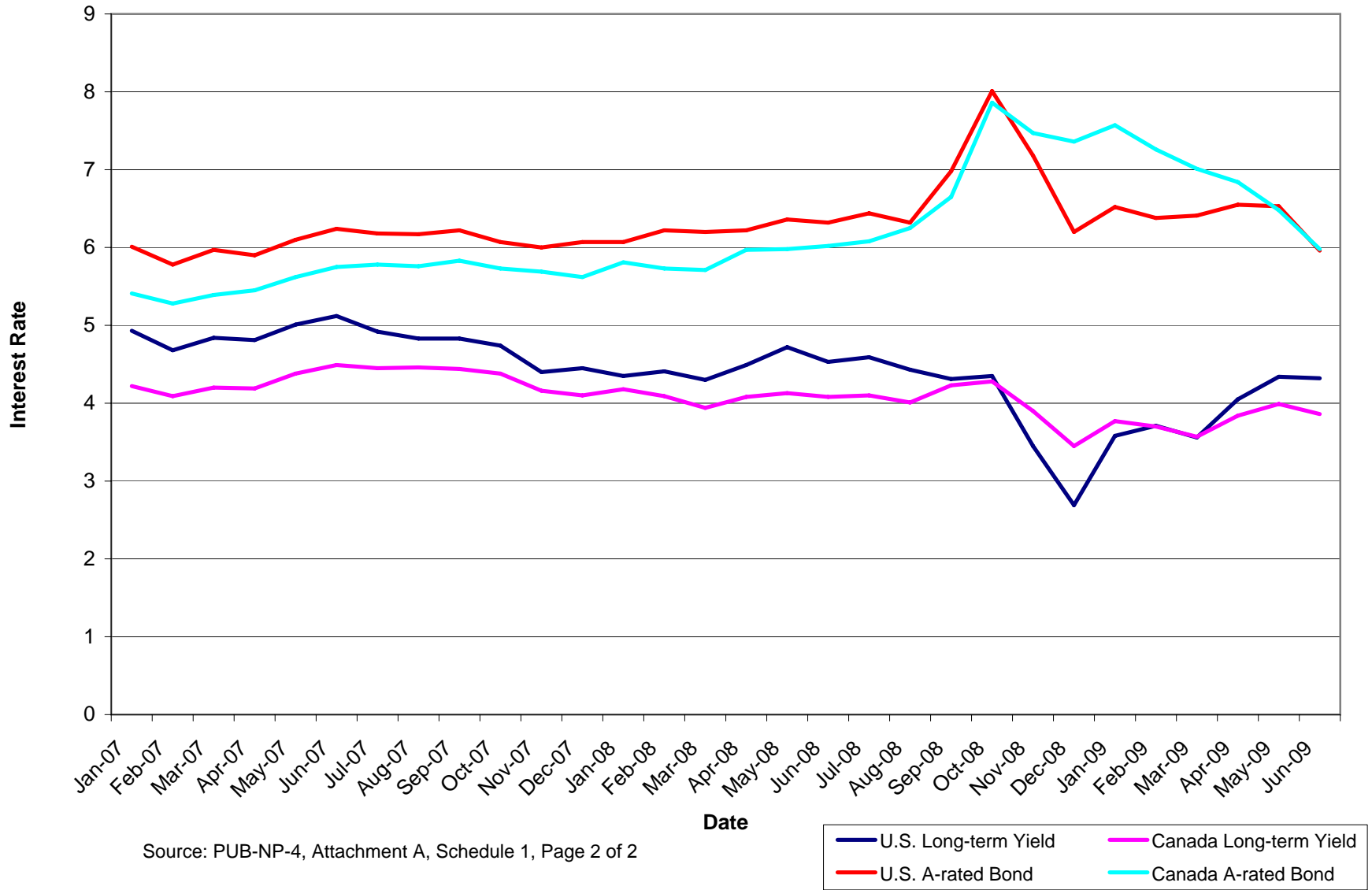
Source: PUB-NP-4, Attachment A, Schedule 1, Page 2 of 2

Legend: U.S. Long-term Yield | Canada Long-term Yield | U.S. A-rated Bond | Canada A-rated Bond

Newfoundland Power Company

Canadian and U.S. Long-term Interest Rates

	U.S. Long-term Yield	Canada Long-term Yield	U.S. A-rated Bond	Canada A-rated Bond
Jan-07	4.93	4.22	6.01	5.41
Feb-07	4.68	4.09	5.78	5.28
Mar-07	4.84	4.20	5.97	5.39
Apr-07	4.81	4.19	5.90	5.45
May-07	5.01	4.38	6.10	5.62
Jun-07	5.12	4.49	6.24	5.75
Jul-07	4.92	4.45	6.18	5.78
Aug-07	4.83	4.46	6.17	5.76
Sep-07	4.83	4.44	6.22	5.83
Oct-07	4.74	4.38	6.07	5.73
Nov-07	4.4	4.16	6.00	5.69
Dec-07	4.45	4.10	6.07	5.62
Jan-08	4.35	4.18	6.07	5.81
Feb-08	4.41	4.09	6.22	5.73
Mar-08	4.30	3.94	6.20	5.71
Apr-08	4.49	4.08	6.22	5.97
May-08	4.72	4.13	6.36	5.98
Jun-08	4.53	4.08	6.32	6.02
Jul-08	4.59	4.10	6.44	6.08
Aug-08	4.43	4.01	6.32	6.25
Sep-08	4.31	4.23	6.98	6.65
Oct-08	4.35	4.28	8.01	7.86
Nov-08	3.45	3.90	7.18	7.47
Dec-08	2.69	3.45	6.20	7.36
Jan-09	3.58	3.77	6.52	7.57
Feb-09	3.71	3.70	6.38	7.26
Mar-09	3.56	3.57	6.41	7.01
Apr-09	4.05	3.84	6.55	6.84
May-09	4.34	3.99	6.53	6.48
Jun-09	4.32	3.86	5.96	5.98

Source: PUB-NP-4, Attachment A, Schedule 1, Page 2 of 2

Canadian and U.S. 10 Year Treasury Rates

Forecast

Interest Rate

Date

U.S. 10 year Treasuries
Canada 10 year Treasuries
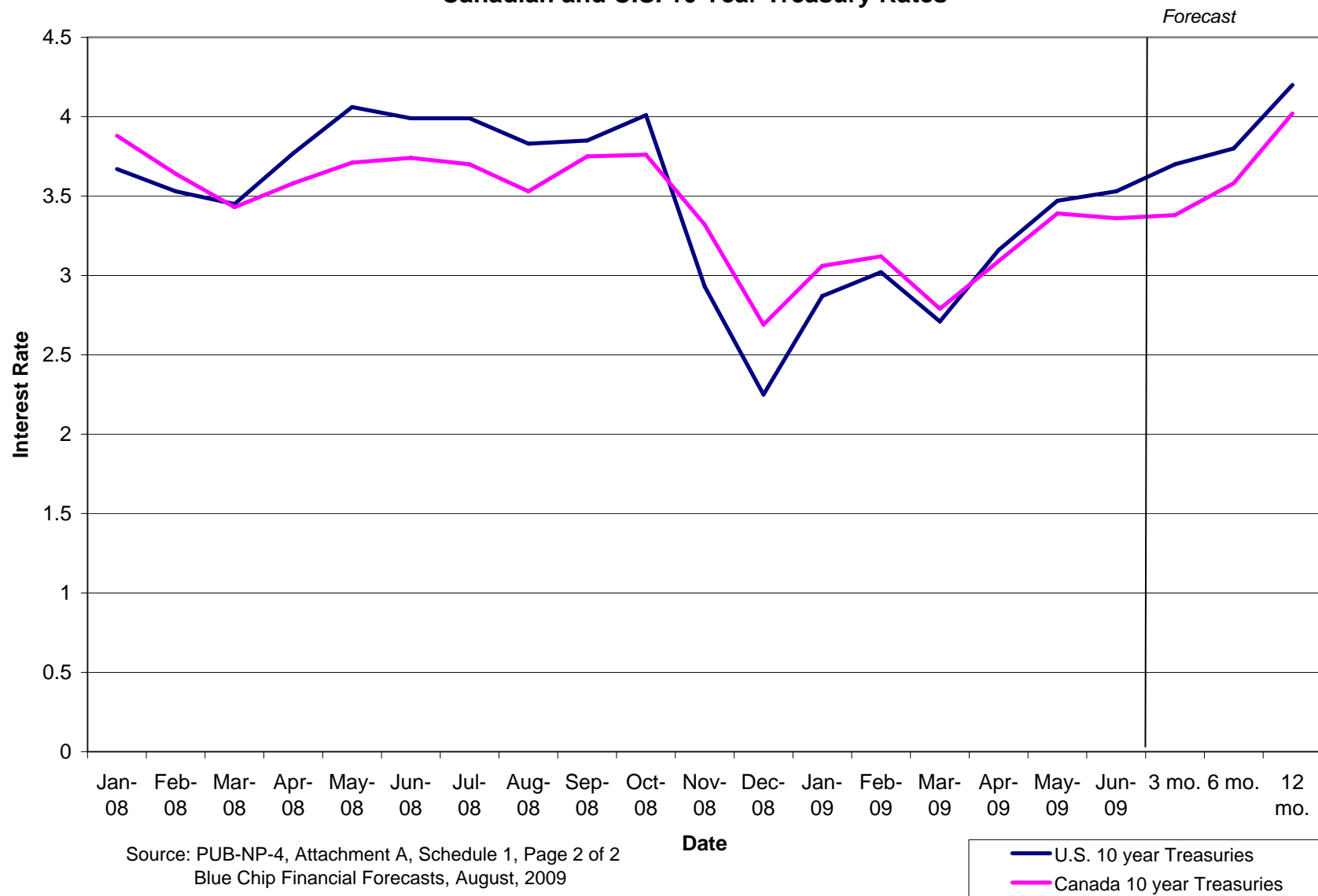
Newfoundland Power Company

Canadian and U.S. 10 Year Treasury Rates

	U.S. 10 year Treasuries	Canada 10 year Treasuries
Jan-08	3.67	3.88
Feb-08	3.53	3.64
Mar-08	3.45	3.43
Apr-08	3.77	3.58
May-08	4.06	3.71
Jun-08	3.99	3.74
Jul-08	3.99	3.70
Aug-08	3.83	3.53
Sep-08	3.85	3.75
Oct-08	4.01	3.76
Nov-08	2.93	3.32
Dec-08	2.25	2.69
Jan-09	2.87	3.06
Feb-09	3.02	3.12
Mar-09	2.71	2.79
Apr-09	3.16	3.09
May-09	3.47	3.39
Jun-09	3.53	3.36
3 mo.	3.70	3.38
6 mo.	3.80	3.58
12 mo.	4.20	4.02

Source: PUB-NP-4, Attachment A, Schedule 1, Page 2 of 2
Blue Chip Financial Forecasts, August, 2009

Canadian and U.S. Interest Rate Forecasts

Source: Blue Chip Financial Forecasts, August 2009

Legend:
- U.S. 10 Year Treasuries
- 10 Year Canadian
- U.S. BBB Corporate
- U.S. 30 Year Treasuries
- U.S. AAA Corporate
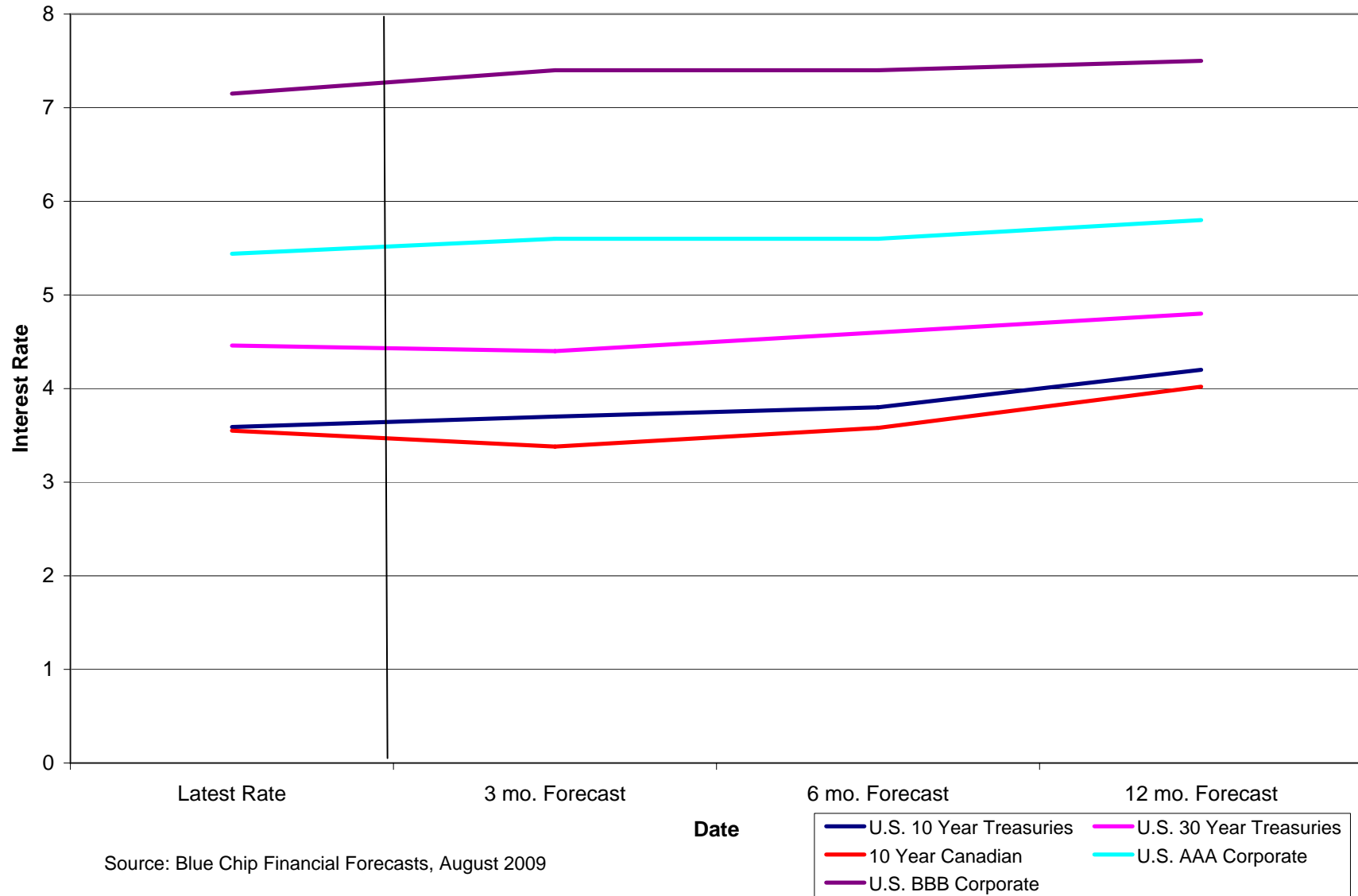
Newfoundland Power Company

Canadian and U.S. Interest Rate Forecasts

	U.S. 10 Year Treasuries	U.S. 30 Year Treasuries	10 Year Canadian	U.S. AAA Corporate	U.S. BBB Corporate
Latest Rate	3.59	4.46	3.55	5.44	7.15
3 mo. Forecast	3.70	4.40	3.38	5.60	7.40
6 mo. Forecast	3.80	4.60	3.58	5.60	7.40
12 mo. Forecast	4.20	4.80	4.02	5.80	7.50

Source: Blue Chip Financial Forecasts, August 2009

Consensus Forecasts Of U.S. Interest Rates And Key Assumptions[1]

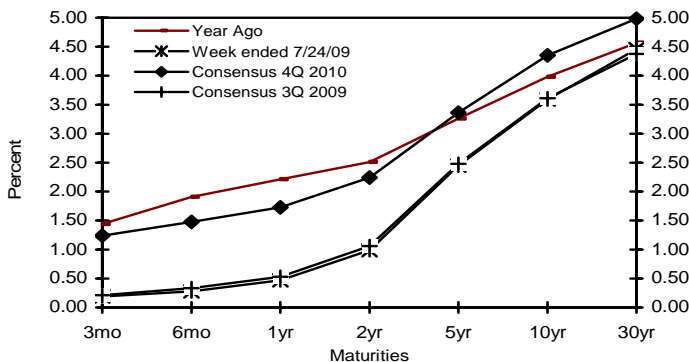		------------------------------------History------------------------------------							Consensus Forecasts-Quarterly Avg.					
	---------Average For Week End--------				----Average For Month----			Latest Q	3Q	4Q	1Q	2Q	3Q	4Q
Interest Rates	July 24	July 17	July 10	July 3	June	May	Apr.	2Q 2009	2009	2009	2010	2010	2010	2010
Federal Funds Rate	0.15	0.14	0.17	0.19	0.21	0.18	0.15	0.18	0.2	0.2	0.2	0.4	0.8	1.1
Prime Rate	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.2	3.2	3.3	3.5	3.8	4.2
LIBOR, 3-mo.	0.50	0.51	0.52	0.58	0.62	0.82	1.12	0.85	0.7	0.7	0.7	0.9	1.2	1.6
Commercial Paper, 1-mo.	0.18	0.18	0.20	0.18	0.18	0.22	0.22	0.21	0.3	0.3	0.4	0.6	0.9	1.4
Treasury bill, 3-mo.	0.19	0.18	0.19	0.18	0.18	0.18	0.16	0.19	0.2	0.3	0.4	0.5	0.9	1.2
Treasury bill, 6-mo.	0.28	0.28	0.27	0.34	0.31	0.30	0.35	0.36	0.3	0.4	0.5	0.8	1.1	1.5
Treasury bill, 1 yr.	0.47	0.48	0.46	0.53	0.51	0.50	0.55	0.57	0.5	0.6	0.8	1.1	1.4	1.7
Treasury note, 2 yr.	0.99	0.99	0.94	1.06	1.18	0.93	0.93	1.01	1.1	1.2	1.4	1.6	1.9	2.2
Treasury note, 5 yr.	2.45	2.43	2.31	2.50	2.71	2.13	1.86	2.13	2.5	2.6	2.7	2.9	3.1	3.4
Treasury note, 10 yr.	3.59	3.55	3.42	3.53	3.72	3.29	2.93	3.16	3.6	3.7	3.8	4.0	4.2	4.4
Treasury note, 30 yr.	4.46	4.42	4.27	4.32	4.52	4.23	3.76	3.97	4.4	4.4	4.6	4.7	4.8	5.0
Corporate Aaa bond	5.44	5.44	5.34	5.40	5.61	5.54	5.39	5.50	5.5	5.6	5.6	5.7	5.8	6.0
Corporate Baa bond	7.15	7.19	7.10	7.18	7.50	8.06	8.39	8.10	7.3	7.4	7.4	7.5	7.5	7.6
State & Local bonds	4.69	4.68	4.71	4.81	4.81	4.56	4.76	4.85	4.8	4.8	4.9	4.9	5.0	5.1
Home mortgage rate	5.20	5.14	5.20	5.32	5.42	4.86	4.81	5.08	5.3	5.3	5.4	5.6	5.8	5.9

	------------------------------------History------------------------------------								Consensus Forecasts-Quarterly Avg.					
	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q*	3Q	4Q	1Q	2Q	3Q	4Q
Key Assumptions	2007	2007	2008	2008	2008	2008	2009	2009	2009	2009	2010	2010	2010	2010
Major Currency Index	77.0	73.3	72.0	70.9	73.5	81.3	82.7	79.4	77.6	77.3	77.4	77.1	77.5	77.5
Real GDP	4.8	-0.2	0.9	2.8	-0.5	-6.3	-5.5	-1.3	0.9	1.9	2.3	2.7	2.7	2.9
GDP Price Index	1.5	2.8	2.6	1.1	3.9	0.5	2.8	0.9	1.4	1.3	1.5	1.5	1.7	1.7
Consumer Price Index	2.4	5.8	4.5	4.5	6.2	-8.3	-2.4	1.3	2.4	1.6	1.7	1.7	2.0	2.1

Individual 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). *Figures for 2Q 2009 Real GDP and GDP Chained Price Index are consensus forecasts based on a special question asked of the panelists this month (see page 14)*
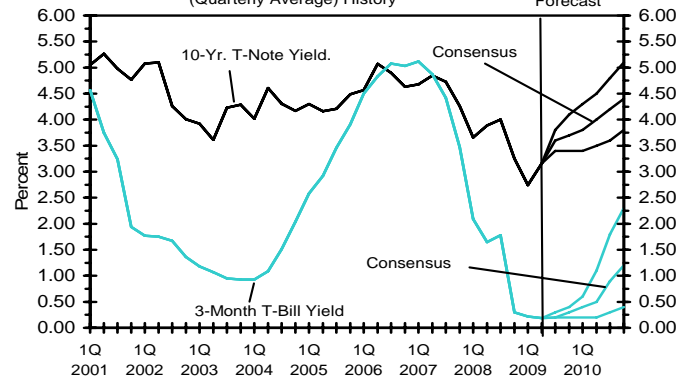
U.S. Treasury Yield Curve
Week ended July 24, 2009 and Year Ago vs.
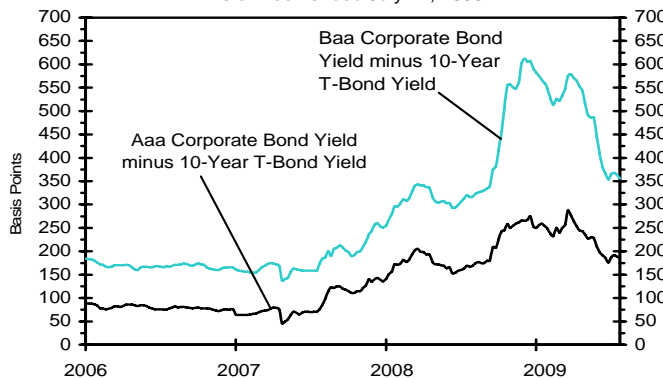3Q 2009 and 4Q 2010 Consensus Forecasts

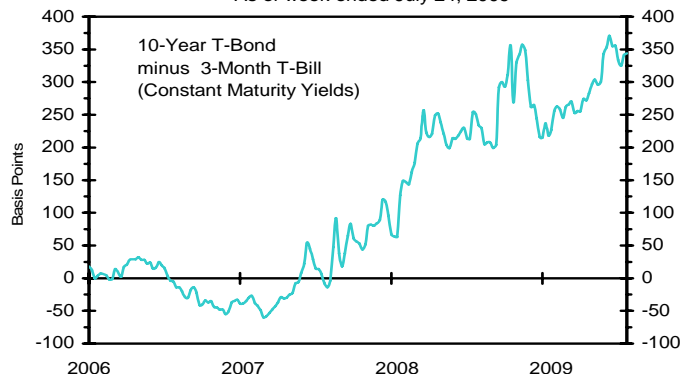### U.S. 3-Mo. T-Bills & 10-Yr. T-Note Yield

Corporate Bond Spreads
As of week ended July 24, 2009

U.S. Treasury Yield Curve
As of week ended July 24, 2009

-------------3-Month Interest Rates[1]----------------

	----------History----------		Consensus Forecasts Months From Now:		
	Month	Year			
Latest:	Ago:	Ago:	3	6	12
U.S.	0.93	1.06	3.00	0.56	0.59	0.68
Japan	0.58	0.67	0.96	0.49	0.50	0.59
U.K.	1.03	1.21	5.83	1.03	0.98	1.30
Switzerland	0.54	0.59	2.73	0.42	0.42	0.60
Canada	0.70	1.05	3.45	0.68	0.82	0.93
Australia	3.78	3.80	7.78	3.45	3.45	3.80
Eurozone	1.05	1.27	4.96	0.98	1.04	1.19

-----------10-Yr. Government Bond Yields[1]------

	----------History----------		Consensus Forecasts Months From Now:		
	Month	Year			
Latest:	Ago:	Ago:	3	6	12
U.S.	3.71	3.55	4.15	3.56	3.80	4.03
Germany	3.47	3.43	4.66	3.48	3.49	3.56
Japan	1.39	1.39	1.67	1.43	1.45	1.59
U.K.	3.97	3.70	5.05	3.68	3.84	4.15
France	3.79	3.78	4.82	3.78	3.75	3.76
Italy	4.35	4.53	5.21	4.43	4.39	4.43
Switzerland	2.20	2.36	3.31	2.25	2.28	2.50
Canada	3.55	3.41	3.89	3.38	3.58	4.02
Australia	5.69	5.81	6.45	5.43	5.38	5.53
Spain	4.04	4.18	4.94	4.28	4.19	4.16
Eurozone	4.14	4.29	4.98	3.63	3.58	3.67

----------------Foreign Exchange Rates[1]-----------

	----------History----------		Consensus Forecasts Months From Now:		
	Month	Year			
Latest:	Ago:	Ago:	3	6	12
U.S.	76.281	76.960	70.976	81.1	82.9	84.2
Japan	94.08	96.15	107.68	97.5	99.0	101.8
U.K.	1.6330	1.6537	2.0021	1.61	1.60	1.62
Switzerland	1.0766	1.0773	1.0372	1.08	1.06	1.09
Canada	1.1168	1.1287	1.0088	1.15	1.17	1.20
Australia	0.8013	0.8111	0.9636	0.81	0.81	0.81
Euro	1.4120	1.3998	1.5708	1.37	1.37	1.37

	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	-0.35	-0.09	Germany	-0.24	-0.46
U.K.	0.10	0.63	Japan	-2.32	-2.44
Switzerland	-0.39	-0.08	U.K.	0.26	0.13
Canada	-0.23	0.26	France	0.08	-0.26
Australia	2.85	3.13	Italy	0.64	0.40
Eurozone	0.12	0.51	Switzerland	-1.51	-1.53
			Canada	-0.16	-0.01
			Australia	1.98	1.50
			Spain	0.33	0.14
			Eurozone	0.43	-0.36

Forecasts of individual panel members are on pages 10 and 11. Definitions of variables are as follows: [1]Three month currency interest rates. Short term rates are call for the US Dollar and Yen, others: two day's notice. 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 Growing investor appetite for riskier assets returned global corporate credit spreads to their pre-Lehman levels over the past month and major stock market indexes to their highest levels early November. The tremendous rally in corporate credits and stocks that began in early March coincided with a cresting of fear that government efforts designed to prevent a financial and economic Armageddon were failing. The rallies have been sustained by increasing evidence that the pace of contraction in global economic activity eased markedly in Q2 and that a massive liquidation of business inventories has set the stage for a revival of global growth in industrial production as inventories are replenished in the second half of this year. Improved trade flows are expected to accompany the pick-up in industrial output. The question confronted by investors is whether the rebuilding of inventories will be sustained by a recovery in personal consumption and capital spending given the considerable headwinds that some analysts suspect will continue to dampen aggregate demand well into next year.

The European Central Bank left its refi rate at 1.0% in July amid evidence the economy is stabilizing. Although the ECB has not ruled out additional interest rate cuts, most analysts, likely including those within the ECB, believe rates have bottomed. Little in the way of fresh news is expected to come out of the ECB's August 6th meeting, though there may be some discussion of whether or not the bank will increase its purchases of covered bonds. Both the flash PMIs and the German IFO survey registered substantial increases in July. The improvement in manufacturing activity has been rapid and the output component of the manufacturing PMI is on the verge of breeching the level normally associated with stable output. Moreover, the new orders to inventory ratio hit a record high in July, suggesting further output gains in coming months. Real GDP in Q2 likely contracted at less than half its Q1 pace and is expected by many to be slightly positive in the second half of this year. Nonetheless, worries persist that European banks remained saddled with hundreds of billions in toxic assets that will stymie credit creation for some time to come.

The Bank of England's Monetary Policy Committee (MPC) is expected to leave interest rates steady at its August 6th meeting but just might announce an increase in quantitative easing purchase program. Britain's economy contracted by 0.8% (3.1% saar) in Q2, bringing the y/y decline to 5.6%, the most since records began in 1955. Although substantially slower than in Q1, the Q2 contraction was more than double expectations and helped produce the fastest rise in unemployment since 1971. Improving PMI data suggest the beginnings of recovery in the second half of this year, led by a rebound in manufacturing and trade. The BOE is not expected to tighten policy until 2010.

The Bank of Japan (BoJ) maintained its overnight rate at 0.1% on July 15th but announced it would extend its purchases of commercial paper through December. Following extraordinary large declines in GDP over the prior two quarters, real GDP is believe to have registered positive growth of 3% or more in Q2 on improving trade, gains in public construction and stabilizing household spending. GDP is likely to register further gains in Q3, but sustained improvement in domestic demand remains doubtful in the estimation of many. The national core CPI is contracting at its fastest pace in three decades

The Bank of Canada left its benchmark overnight rate unchanged on July 21st and maintained its commitment to leave it at 0.25% until the end of Q2 2010. The bank's quarterly Monetary Policy Report (MPR), expressed a little more optimism about the economy, looking for a resumption of real GDP growth in Q3 and 3.0% growth in 2010.

The Reserve Bank of Australia (RBA) will likely be the first of the G-7 central banks to begin raising interest rates. Australia narrowly avoided a technical recession by posting slightly positive GDP growth in Q1 and retail sales and job growth have been stronger tan expected. Nonetheless, a hike in rates is unlikely before Q1 2010 *(see 10 and 11 for individual panel members' forecasts).*

Schedule MAC-5

Key Economic Indicators: Newfoundland and Labrador
(forecast completed Apr. 21, 2009)

	2008:1	2008:2	2008:3	2008:4	2009:1	2009:2	2009:3	2008:4	2009:1	2009:2	2009:3	2009:4	2008	2009	2010
GDP at market prices (current $)	30,528	32,357	32,780	30,218	27,616	27,477	27,924	28,682	28,840	28,792	29,006	29,392	31,471	27,925	29,007
	0.4	6.0	1.3	−7.8	−8.6	−0.5	1.6	2.7	0.5	−0.2	0.7	1.3	6.6	−11.3	3.9
GDP at basic prices (current $)	28,920	30,735	31,161	28,643	26,055	25,922	26,354	27,093	27,224	27,151	27,336	27,690	29,865	26,356	27,350
	0.8	6.3	1.4	−8.1	−9.0	−0.5	1.7	2.8	0.5	−0.3	0.7	1.3	7.2	−11.7	3.8
GDP at basic prices (constant $ 2002)	17,953	17,971	17,950	17,806	17,080	16,985	16,994	17,017	17,044	17,129	17,249	17,365	17,920	17,019	17,197
	0.1	0.1	−0.1	−0.8	−4.1	−0.6	0.1	0.1	0.2	0.5	0.7	0.7	−0.5	−5.0	1.0
Consumer Price Index (2002 = 1.0)	1.124	1.145	1.161	1.142	1.133	1.145	1.155	1.164	1.170	1.177	1.184	1.191	1.143	1.149	1.180
	0.8	1.9	1.4	−1.7	−0.8	1.1	0.8	0.8	0.6	0.6	0.5	0.6	2.9	0.5	2.7
Implicit price deflator— GDP at basic prices (2002 = 1.0)	1.611	1.710	1.736	1.609	1.526	1.526	1.551	1.592	1.597	1.585	1.585	1.595	1.666	1.549	1.590
	0.7	6.2	1.5	−7.3	−5.2	0.0	1.6	2.7	0.3	−0.8	0.0	0.6	7.8	−7.1	2.7
Average weekly wages ($, industrial composite)	708.9	716.1	721.5	726.3	719.9	715.6	718.8	723.5	730.0	735.4	741.0	746.6	718.2	719.5	738.3
	0.9	1.0	0.7	0.7	−0.9	−0.6	0.4	0.7	0.9	0.7	0.8	0.8	3.5	0.2	2.6
Personal income (current $)	15,503	15,744	15,850	16,072	15,884	15,958	16,095	16,252	16,349	16,461	16,626	16,787	15,792	16,047	16,556
	−3.5	1.6	0.7	1.4	−1.2	0.5	0.9	1.0	0.6	0.7	1.0	1.0	0.5	1.6	3.2
Personal disposable income (current $)	12,393	12,722	12,825	13,010	12,836	12,907	13,020	13,148	13,208	13,310	13,440	13,560	12,738	12,978	13,380
	−4.4	2.7	0.8	1.4	−1.3	0.6	0.9	1.0	0.5	0.8	1.0	0.9	0.7	1.9	3.1
Personal savings rate	2.03	3.64	1.87	4.39	3.97	3.27	2.92	2.79	3.00	3.29	3.56	3.71	2.98	3.24	3.39
Population of labour force age (000s)	425	426	426	427	428	428	428	429	429	430	430	430	426	428	430
	0.3	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.4	0.5	0.3
Labour force (000s)	255	255	252	253	253	254	256	256	256	257	257	258	254	255	257
	1.9	0.2	−1.3	0.2	0.2	0.3	0.6	0.2	0.0	0.2	0.2	0.3	1.0	0.4	0.9
Employment (000s)	222	222	218	218	216	217	217	217	217	216	217	218	220	217	217
	2.1	−0.1	−1.9	0.0	−0.9	0.4	0.1	0.1	−0.4	−0.1	0.1	0.5	1.4	−1.5	0.0
Unemployment rate	12.7	13.0	13.6	13.7	14.7	14.6	15.1	15.2	15.5	15.7	15.8	15.7	13	14.9	15.7
Retail sales (current $)	6,970	6,986	7,268	7,066	6,850	7,041	7,142	7,230	7,241	7,288	7,343	7,417	7072.3	7,066	7,322
	3.4	0.2	4.0	−2.8	−3.1	2.8	1.4	1.2	0.2	0.6	0.8	1.0	8	−0.1	3.6
Housing starts (units)	2,859	3,106	3,414	3,665	3,095	2,821	2,508	2,453	1,981	1,892	1,984	1,930	3261.0	2,719	1,947
	−9.7	8.7	9.9	7.4	−15.6	−8.9	−11.1	−2.2	−19.2	−4.5	4.9	−2.7	23	−16.6	−28.4

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; CMHC Housing Time Series Database.

Newfoundland Power Company

Comparable Electric Companies

Comparison of Equity Ratios

Company	Equity Ratio
Newfoundland Power	45.00%
Allete	55.50%
Alliant Energy	55.50%
OGE Energy Corp.	50.00%
NSTAR	53.00%
Scana Corp.	40.50%
Wisconsin Energy	46.00%
MGE Energy Inc.	64.00%
Vectren Corp.	51.50%
CH Energy Group	51.00%
Electric Companies Average	51.89%

Source: Value Line Investment Survey

Newfoundland Power Company

Comparable Gas Companies

Comparison of Equity Ratios

Company	Equity Ratio
Newfoundland Power	45.00%
AGL Resources	52.00%
New Jersey Resources	61.50%
Northwest Natural Gas	53.00%
Piedmont Natural Gas	52.50%
South Jersey Industries	62.00%
WGL Holdings	62.00%
LDCs Average	57.17%

Source: Value Line Investment Survey

Newfoundland Power Company

Comparable Electric Companies

Comparison of Investment Characteristics

Company	Safety Rank	Beta	Equity Ratio	S&P Bond Rating	Revenues ($Million)
Allete	2	0.70	55.50%	BBB+	$950
Alliant	2	0.70	55.50%	BBB+	$2,700
OGE Energy	2	0.75	50.00%	BBB+	$2,600
NSTAR	1	0.65	53.00%	A+	$3,100
SCANA Corp.	2	0.70	40.50%	A-	$3,500
Wisconsin Energy	2	0.65	46.00%	BBB+	$4,700
MGE Energy Inc.	1	0.65	64.00%	AA-	$750
Vectren Corp.	2	0.75	51.50%	A-	$1,900
CH Energy Group	1	0.65	51.00%	A	$675
Average	1.67	0.69	51.89%	A-	$2,319

Source: Value Line Investment Survey, Standard & Poor's

Newfoundland Power Company

Comparable Gas Companies

Comparison of Investment Characteristics

Company	Safety Rank	Beta	Equity Ratio	S&P Bond Rating	Market Capitalization ($Million)
AGL Resources	2	0.75	52.00%	A-	$2,300
New Jersey Resources	1	0.65	61.50%	A	$1,500
Northwest Natural Gas	1	0.60	53.00%	AA-	$1,200
Piedmont Natural Gas	2	0.65	52.50%	A	$1,700
South Jersey Industries	2	0.65	62.00%	BBB+	$1,000
WGL Holdings	1	0.65	62.00%	AA-	$1,600
Average	1.5	0.66	57.17%	A	$1,550

Source: Value Line Investment Survey, Standard & Poor's

Newfoundland Power Company

Comparable Electric Companies

Two Stage, Annually Compounded Discounted Cash Flow

	Expected Dividends					Est. EPS	Est. ROE	Dividend Growth	Stock Price
	2009	2010	2011	2012	2013	2013	2013	2013	Jul-09
Allete	1.76	1.80	1.84	1.88	1.92	2.75	9.00	2.72%	$30.08
Alliant	1.50	1.60	1.70	1.81	1.92	3.20	10.50	4.20%	$26.09
OGE Energy Corp.	1.43	1.46	1.52	1.58	1.65	3.25	11.50	5.66%	$28.48
Nstar	1.53	1.63	1.73	1.84	1.95	3.25	14.50	5.80%	$31.34
Scana Corp.	1.88	1.92	1.98	2.04	2.10	3.50	10.50	4.20%	$34.04
Wisconsin Energy	1.35	1.55	1.73	1.93	2.15	4.50	12.00	6.27%	$41.95
MGE Energy	1.45	1.47	1.49	1.52	1.54	2.80	12.00	5.40%	$35.18
Vectren Corp.	1.35	1.39	1.43	1.47	1.51	2.25	10.00	3.29%	$23.90
CH Energy Group	2.16	2.16	2.16	2.16	2.16	3.00	8.00	2.24%	$48.56
Average	1.60	1.66	1.73	1.80	1.88	3.17	10.89	4.42%	$33.29

The cost of common equity is calculated using a two-stage, annually compounded discounted cash flow model:

$$P_0(1-fc) = \sum_{t=1}^{n} D_t/(1+k)^t = (D_n(1+g_n))/(k-g_n) * (1/(1+k))^t$$

Solving the above equation for k, for the group, using P_0 = $33.29, fc = 5%, and n = 5, provides a cost of common equity of 9.57%.

Sources:
   Value Line Investment Survey
   The stock price is the average of the high and low July 2009, Yahoo! FINANCE

Newfoundland Power Company

Comparable Gas Companies

Two Stage, Annually Compounded Discounted Cash Flow

	Expected Dividends					Est. EPS	Est. ROE	Dividend Growth	Stock Price
	2009	2010	2011	2012	2013	2013	2013	2013	Jul-09
AGL Resources	1.72	1.76	1.80	1.84	1.88	3.30	14.00	6.02%	$32.24
New Jersey Resources	1.24	1.28	1.32	1.36	1.40	2.90	10.50	5.43%	$38.30
Northwest Natural Gas	1.58	1.66	1.77	1.88	2.00	3.45	11.00	4.62%	$44.12
Piedmont	1.07	1.10	1.14	1.19	1.23	2.00	13.00	5.01%	$23.84
South Jersey Industries	1.20	1.28	1.35	1.42	1.50	3.10	13.50	6.97%	$35.75
WGL Holdings	1.45	1.50	1.53	1.57	1.60	2.75	11.00	4.60%	$32.08
Average	1.38	1.43	1.49	1.54	1.60	2.92	12.17	5.44%	$34.39

The cost of common equity is calculated using a two-stage, annually compounded discounted cash flow model:

$$P_0(1-fc) = \sum_{t=1}^{n} D_t/(1+k)^t = (D_n(1+g_n))/(k-g_n) * (1/(1+k))^t$$

Solving the above equation for k, for the group, using P_0 = $34.39 fc =5%, and n = 5, provides a cost of common equity of 9.53%.

Sources:
   Value Line Investment Survey
   The stock price is the average of the high and low July 2009, Yahoo! FINANCE

Newfoundland Power Company

Risk Premium Analysis

1999 - Present

Month	Index ROE	Risk Free	Premium
August-99	10.00	6.28	3.72
September-99	10.08	6.43	3.65
October-99	10.25	6.50	3.75
November-99	10.28	6.66	3.62
December-99	10.24	6.48	3.76
January-00	10.57	6.69	3.88
February-00	11.08	6.86	4.22
March-00	11.49	6.54	4.95
April-00	11.42	6.38	5.04
May-00	10.81	6.18	4.63
June-00	10.66	6.55	4.11
July-00	10.64	6.28	4.36
August-00	10.48	6.20	4.28
September-00	10.26	6.02	4.24
October-00	10.14	6.09	4.05
November-00	9.98	6.04	3.94
December-00	9.79	5.98	3.81
January-01	9.38	5.64	3.74
February-01	9.55	5.65	3.9
March-01	9.69	5.62	4.07
April-01	9.84	5.49	4.35
May-01	9.70	5.78	3.92
June-01	9.69	5.92	3.77
July-01	9.74	5.82	3.92
August-01	10.16	5.75	4.41
September-01	10.24	5.58	4.66
October-01	10.38	5.53	4.85
November-01	10.38	5.34	5.04
December-01	10.43	5.33	5.10
January-02	10.52	5.76	4.76
February-02	10.47	5.69	4.78
March-02	10.72	5.61	5.11
April-02	10.50	5.93	4.57
May-02	10.18	5.85	4.33
June-02	10.34	5.81	4.53
July-02	10.39	5.65	4.74
August-02	10.9	5.51	5.39
September-02	10.75	5.19	5.56
October-02	10.76	4.87	5.89
November-02	10.71	5.00	5.71
December-02	10.65	5.04	5.61
January-03	10.67	5.01	5.66
February-03	10.47	5.02	5.45
March-03	10.79	4.87	5.92

Newfoundland Power Company

Risk Premium Analysis

1999 - Present

Month	Index ROE	Risk Free	Premium
April-03	10.80	4.82	5.98
May-03	9.86	4.91	4.95
June-03	9.61	4.52	5.09
July-03	9.50	4.34	5.16
August-03	9.11	4.92	4.19
September-03	9.25	5.39	3.86
October-03	9.14	5.21	3.93
November-03	9.14	5.21	3.93
December-03	9.22	5.17	4.05
January-04	9.16	5.11	4.05
February-04	8.84	5.01	3.83
March-04	8.83	4.94	3.89
April-04	8.78	4.72	4.06
May-04	8.70	5.16	3.54
June-04	8.99	5.46	3.53
July-04	8.94	5.45	3.49
August-04	8.76	5.24	3.52
September-04	8.79	5.07	3.72
October-04	8.64	4.89	3.75
November-04	8.84	4.85	3.99
December-04	8.69	4.89	3.80
January-05	8.71	4.88	3.83
February-05	7.99	4.77	3.22
March-05	7.90	4.61	3.29
April-05	7.92	4.89	3.03
May-05	8.48	4.75	3.73
June-05	8.48	4.56	3.92
July-05	8.30	4.35	3.95
August-05	8.37	4.48	3.89
September-05	8.55	4.53	4.02
October-05	8.64	4.51	4.13
November-05	8.75	4.74	4.01
December-05	8.83	4.83	4.00
January-06	8.9	4.73	4.17
February-06	8.72	4.65	4.07
March-06	8.70	4.73	3.97
April-06	8.68	4.91	3.77
May-06	8.70	5.22	3.48
June-06	8.79	5.35	3.44
July-06	8.64	5.29	3.35
August-06	8.47	5.25	3.22
September-06	8.48	5.08	3.40
October-06	8.53	4.93	3.6
November-06	8.89	4.94	3.95

Newfoundland Power Company

Risk Premium Analysis

1999 - Present

Month	Index ROE	Risk Free	Premium
December-06	8.85	4.78	4.07
January-07	8.82	4.78	4.04
February-07	8.65	4.95	3.7
March-07	8.57	4.93	3.64
April-07	8.57	4.81	3.76
May-07	8.76	4.95	3.81
June-07	8.75	4.98	3.77
July-07	8.91	5.29	3.62
August-07	9.03	5.19	3.84
September-07	9.06	5.00	4.06
October-07	9.05	4.84	4.21
November-07	8.95	4.83	4.12
December-07	8.98	4.56	4.42
January-08	8.99	4.57	4.42
February-08	9.04	4.35	4.69
March-08	9.15	4.49	4.66
April-08	9.37	4.36	5.01
May-08	9.07	4.44	4.63
June-08	9.03	4.60	4.43
July-08	9.03	4.74	4.29
August-08	9.15	4.62	4.53
September-08	9.19	4.53	4.66
October-08	9.03	4.32	4.71
November-08	9.46	4.45	5.01
December-08	9.00	4.27	4.73
January-09	9.17	3.18	5.99
February-09	9.76	3.46	6.3
March-09	9.87	3.83	6.04
April-09	10.29	3.78	6.51
May-09	9.87	3.84	6.03
June-09	10.00	4.22	5.78
July-09	9.87	4.51	5.36

	Risk Premium	4.336167

Sources:
Value Line Investment Survey
Federal Reserve Board

Newfoundland Power Company

Risk Premium Analysis

Blue Chip Financial Forecasts - Long-Term Treasury

4Q 2009	1Q 2010	2Q 2010	3Q 2010
4.4	4.6	4.7	4.8

Risk Premium Cost of Equity = Projected Risk Free Rate + Equity Risk Premium

8.975% = 4.625% + 4.35%

Source: Blue Chip Financial Forecasts, August 2009

Newfoundland Power Company

Comparable Utility Companies

Risk Premium Analysis

DCF Cost of Equity - Comparable Electric Companies	9.57%
DCF Cost of Equity - Comparable Gas Companies	9.53%
Risk Premium Index Cost of Equity	9.00%
Average	9.37%
Range	9.00%- 9.57%
Recommendation	9.60%

12.1 The M/B Ratio and the Cost of Capital in Theory

The theoretical relationship between r, K, and M/B can be demonstrated by a simple manipulation of the standard DCF equation. Starting from the seminal DCF model:

$$P_0 = \frac{D_1}{K - g} \qquad (12\text{-}1)$$

and expressing next year's dividend, D_1, as next year's earnings per share, E_1, times the earnings payout ratio $(1 - b)$, we have:

$$D_1 = (1 - b)E_1 \qquad (12\text{-}2)$$

Substituting the latter equation into Equation 12-1:

$$P_0 = \frac{E_1(1 - b)}{K - g} \qquad (12\text{-}3)$$

But next year's earnings per share, E_1, are equal to the expected rate of return on equity, r, times the book value of equity per share, B, at the end of the current year:

$$E_1 = rB \qquad (12\text{-}4)$$

Substituting Equation 12-4 in Equation 12-3:

$$P_0 = \frac{rB(1 - b)}{K - g} \qquad (12\text{-}5)$$

Dividing both sides of the equation by B, and noting that $g = br$:

$$P_0/B = \frac{r(1 - b)}{K - br} = \frac{r - br}{K - br} \qquad (12\text{-}6)$$

From Equation 12-6, and under the auspices of the DCF model, it is clear that the market-to-book, or P_0/B, will be unity if r = K, greater than unity if r > K, and less than unity if r < K:

$$M/B \gtreqless 1.0 \quad \text{as} \quad r \gtreqless K$$

Solving Equation 12-6 for K, a basic measure of cost of equity adjusted for the prevailing M/B ratio can be obtained:

$$K = \frac{r(1 - b)}{M/B} + br \qquad (12\text{-}7)$$