Q. Referring to page 2 of Ms. McShane's direct testimony, please provide a copy of the Foreign Property Rule and a copy of all studies reviewed by Ms. McShane that address the impact on foreign issuers and investors to the Canadian Capital Market.

A. Prior to February 2005, the Foreign Property Rule was found in Part XI of the Income Tax Act, Canada. Section XI was repealed in February 2005.

Attachment A contains Section 206 of Part XI which was extracted from the current income tax legislation. The section is shaded because it was repealed.

Attachment B contains excerpts from the "Canadian Income Tax Act" and "Practitioner's Income Tax Act" which describe the repealed Foreign Property Rule.

The following studies address the impact of the Foreign Property Rule and its revocation:

- *Financial System Review*, Bank of Canada, December 2006, filed as Attachment C.
- David Burgess and Joel Fried, *The Foreign Property Rule: A Cost-Benefit Analysis*, November 2002, filed as Attachment D.
- Eric Fontaine, *Canadian Foreign Content Limit: The End of an Era and its Potential Implications*, August 2005, Brockhouse Cooper Insights, filed as Attachment E.
- Rob Carrick, *Finance: Your Bottom Line*, Globe and Mail Update, February 23, 2005, filed as Attachment F.
- Michael Gregory, *Foreign Property Rule: It's a Goner*, BMO, June 24, 2005, filed as Attachment G.
- Chandra Price, *FPR Demise Stuns Pension Industry*, Benefits Canada, February 24, 2005, filed as Attachment H.
- Tom Hockin, *Paving the Way for Change to RRSP Foreign Content Rules*, January 31, 2000, filed as Attachment I.
- Michael Gregory, *A Canadian Welcome Mat for Foreign Bond Issuers*, BMO, November 10, 2005, filed as Attachment J.
- TD Economics, *Time to Eliminate the Foreign Property Rule for Canadian Registered Pension Plans*, February 8, 2005, filed as Attachment K.

Excerpts from the "Income Tax Legislation"

206. (1) [Repealed]

History: Subsection 206(1) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. Subsection 206(1) formerly read:

"206. (1) Definitions — In this Part,".

«société affiliée»

"affiliate" [Repealed]

History: The definition "affiliate" in subsection 206(1) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. The definition "affiliate" in subsection 206(1) formerly read:

" `affiliate' of a corporation (in this definition referred to as the "parent corporation") at any time is any other corporation where, at that time,

(a) the parent corporation controls the other corporation,

(b) the parent corporation or a corporation controlled by the parent corporation owns

(i) shares of the capital stock of the other corporation that would give the parent corporation or the corporation controlled by the parent corporation 25% or more of the votes that could be cast under all circumstances at an annual meeting of shareholders of that other corporation, and

(ii) shares of the capital stock of the other corporation having a fair market value of 25% or more of the fair market value of all the issued shares of the capital stock of that other corporation, or

(c) the other corporation is controlled by a particular corporation and the parent corporation or a corporation controlled by the parent corporation owns

(i) shares of the capital stock of the particular corporation that would give the parent corporation or the corporation controlled by the parent corporation 25% or more of the votes that could be cast under all circumstances at an annual meeting of shareholders of the particular corporation, and

(ii) shares of the capital stock of the particular corporation having a fair market value of 25% or more of the fair market value of all the issued shares of the capital stock of the particular corporation;".

The definition "affiliate" in subsection 206(1) added by 1998, c. 19, s. 210(3), applicable to shares and indebtedness acquired after December 4, 1985 (otherwise than pursuant to an agreement in writing entered into before 5:00 p.m. Eastern Standard Time on December 4, 1985) except that, with respect to shares and indebtedness last acquired before 1996, the expression "primarily from foreign property" in that paragraph shall be read as "primarily from portfolio investments in property that is foreign property".

«valeur comptable»

"carrying value" [Repealed]

History: The definition "carrying value" in subsection 206(1) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. The definition "carrying value" in subsection 206(1) formerly read:

" `carrying value' of a property of a corporation or partnership at any time means

(a) where a balance sheet of the corporation or the partnership as of that time was presented to the shareholders of the corporation or the members of the partnership and the balance sheet was prepared using generally accepted accounting principles and was not prepared using the equity or consolidation method of accounting, the amount in respect of the property reflected in the balance sheet, and

(b) in any other case, the amount that would have been reflected in a balance sheet of the corporation or the partnership as of that time if the balance sheet had been prepared in accordance with generally acceptable accounting principles and neither the equity nor consolidation method of accounting were used;".

The definition "carrying value" in subsection 206(1) added by 1998, c. 19, s. 210(3), applicable to shares and indebtedness acquired after December 4, 1985 (otherwise than pursuant to an agreement in writing entered into before 5:00 p.m. Eastern Standard Time on December 4, 1985) except that, with respect to shares and indebtedness last acquired before 1996, the expression "primarily from foreign property" in that paragraph shall be read as "primarily from portfolio investments in property that is foreign property".

«coût indiqué»

"cost amount" [Repealed]

History: The definition "cost amount" in subsection 206(1) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. The definition "cost amount" in subsection 206(1) formerly read:

" 'cost amount' at any time of a taxpayer's capital interest in a trust that is foreign property is deemed to be the greater of

(a) the cost amount of the interest, determined without reference to this definition, and

(b) where that time is more than 60 days after the end of a taxation year of the trust, the amount that would be the cost amount of the interest if new units of the trust had been issued in satisfaction of each amount payable

(i) after 2000 and at or before the end of the taxation year, by the trust in respect of the interest,

(ii) to which subparagraph 53(2)(h)(i.1) applies (or would apply if that subparagraph were read without reference to clauses (A) and (B) of that subparagraph), and

(iii) that has not been satisfied at or before that time by the issue of new units of the trust or by a

payment of an amount by the trust;".

The definition "cost amount" in subsection 206(1) added by 2001, c. 17, s. 169(2), applicable to months that end after February 2001.

[Related provision released in Bill C-33, s. 173(2)] – In their application to months that end after December 20, 2002 and before 2005, subparagraphs (b)(i) to (iii) of the definition "cost amount" in subsection 206(1) of the Act shall be read as follows:

"(i) after 2000 and at or before the end of the taxation year, by the trust in respect of the interest (otherwise than as proceeds of disposition of the interest), and

(ii) that has not been satisfied at or before that time by the issue of new units of the trust or by a payment of an amount by the trust;".

Explanatory notes: "Cost amount" is defined in subsection 206(1) of the Act for the purposes of Part XI. The definition was introduced in 2001 to deal with arrangements that provided for trust income to be "capitalized" without the trust issuing new units. Under the definition, the cost amount otherwise determined of a taxpayer's interest in such a trust reflects the capitalized amounts. For months that end after December 20, 2002 and before 2005, the definition is to be read to clarify that it applies to trusts under which all beneficiaries are registered plan trusts (e.g., trusts described in paragraph (e) of the definition "trust" in subsection 108(1)).

«valeur désignée»

"designated value" [Repealed]

History: The definition "designated value" in subsection 206(1) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. The definition "designated value" in subsection 206(1) formerly read:

" `designated value' of a property at any time means the greater of

(a) the fair market value at that time of the property, and

(b) the carrying value at that time of the property;".

The definition "designated value" in subsection 206(1) added by 1998, c. 19, s. 210(3), applicable to shares and indebtedness acquired after December 4, 1985 (otherwise than pursuant to an agreement in writing entered into before 5:00 p.m. Eastern Standard Time on December 4, 1985) except that, with respect to shares and indebtedness last acquired before 1996, the expression "primarily from foreign property" in that paragraph shall be read as "primarily from portfolio investments in property that is foreign property".

«action exclue»

"excluded share" [Repealed]

History: The definition "excluded share" in subsection 206(1) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. The definition "excluded share" in subsection 206(1) formerly read:

" `excluded share' means

(a) a share that is of a class of shares listed on a prescribed stock exchange in Canada, where no share of that class has been issued after December 4, 1985 (otherwise than pursuant to an agreement in writing entered into before 5:00 p.m. Eastern Standard Time on December 4, 1985),

(b) a share last acquired after 1995 that is of a class of shares listed on a prescribed stock exchange in Canada, where

(i) no share of that class has been issued after July 20, 1995 (otherwise than pursuant to an agreement in writing made before July 21, 1995), and

(ii) the share would not be foreign property if the expression "primarily from foreign property" in paragraph (d.1) of the definition "foreign property" in this subsection were read as "primarily from portfolio investments in property that is foreign property" and that paragraph were read without reference to "(other than an excluded share)", and

(c) a share last acquired after 1995 as a consequence of the exercise of a right acquired before 1996 where the share would not be foreign property if the expression "primarily from foreign property" in paragraph (d.1) of the definition "foreign property" in this subsection were read as "primarily from portfolio investments in property that is foreign property" and that paragraph were read without reference to "(other than an excluded share)";".

The definition "excluded share" in subsection 206(1) added by 1998, c. 19, s. 210(3), applicable to shares and indebtedness acquired after December 4, 1985 (otherwise than pursuant to an agreement in writing entered into before 5:00 p.m. Eastern Standard Time on December 4, 1985) except that, with respect to shares and indebtedness last acquired before 1996, the expression "primarily from foreign property" in that paragraph shall be read as "primarily from portfolio investments in property that is foreign property".

«bien étranger»

"foreign property" [Repealed]

History: The definition "foreign property" in subsection 206(1) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. The definition "foreign property" in subsection 206(1) formerly read:

" `foreign property' means

(a) tangible property situated outside Canada except automotive equipment registered in Canada,

(b) automotive equipment not registered in Canada pursuant to the laws of Canada or a province,

(c) intangible property (other than any property described in paragraphs (d) to (g)) situated outside Canada including, without restricting the generality of the foregoing, any patent under the laws of a country other than Canada and any licence in respect thereof,

(d) any share of the capital stock of a corporation other than a Canadian corporation,

(d.1) except as provided by subsection (1.1), any share (other than an excluded share) of the capital stock of, or any debt obligation issued by, a corporation (other than an investment corporation, mutual fund corporation or registered investment) that is a Canadian corporation, where shares of the corporation can reasonably be considered to derive their value, directly or indirectly, primarily from foreign property,

[Related provision released on November 9, 2006, s. 173(3)] – In its application to months that end after October 2003 and before 2005, paragraph (d.1) of the definition "foreign property" in subsection 206(1) of the Act shall be read as follows:

"(d.1) any share (other than an excluded share) of the capital stock of, or any debt obligation (other than a debt obligation described in subparagraph (g)(iii)) issued by, a corporation (other than an investment corporation, a mutual fund corporation or a registered investment) that is a Canadian corporation, if shares of the corporation can reasonably be considered to derive their value, directly or indirectly, primarily from foreign property,".

[Related provision released on November 9, 2006, s. 173(4)] – In its application to months that end after October 2003 and before 2005, paragraph (g) of the definition "foreign property" in subsection 206(1) of the Act shall be read as follows:

"(g) indebtedness of a non-resident person, other than

(i) indebtedness issued by an authorized foreign bank and payable at a branch in Canada of the bank,

(ii) indebtedness issued or guaranteed by

(A) the International Bank for Reconstruction and Development,

(B) the International Finance Corporation,

(C) the Inter-American Development Bank,

(D) the Asian Development Bank,

(E) the Caribbean Development Bank,

(F) the European Bank for Reconstruction and Development,

(G) the African Development Bank, or

(H) a prescribed person, or

(iii) a debt obligation that is fully secured by a mortgage, charge, hypothec or similar instrument in respect of real or immovable property situated in Canada or that would be fully secured were it not for a decline in the fair market value of the property after the debt obligation was issued,".

Explanatory notes: "Foreign property" is defined in subsection 206(1) of the Act. Under paragraph (d.1) of the definition, foreign property includes certain shares and debt issued by Canadian corporations, if shares of the corporation may reasonably be considered to derive their value primarily from foreign property. Paragraph (g) of the definition treats as foreign property the indebtedness of a non-resident person other than indebtedness issued by various international organizations or indebtedness issued by an authorized foreign bank and payable at a Canadian branch of that bank.

For months that end after October 2003 and before 2005, paragraphs (d.1) and (g) are to be read to provide that a mortgage obligation that is fully secured by real property situated in Canada is not foreign property.

Paragraph (g) of the definition "foreign property" in subsection 206(1) amended by 2001, c. 17, s. 169(1), applicable after June 27, 1999. Paragraph (g) of the definition "foreign property" in subsection 206(1) formerly read:

"(g) indebtedness of a non-resident person, other than indebtedness issued or guaranteed by

(i) the International Bank for Reconstruction and Development,

(i.1) the International Finance Corporation,

(ii) the Inter-American Development Bank,

(iii) the Asian Development Bank,

(iv) the Caribbean Development Bank,

(iv.1) the European Bank for Reconstruction and Development,

(iv.2) the African Development Bank, or

(v) a prescribed person,".

Subparagraphs (g)(iv.1) and (g)(iv.2) of the definition "foreign property" in subsection 206(1) added by 1998, c. 19, s. 210(2), applicable to months after March 1991, except that subparagraph (g)(iv.2) of the definition "foreign property" in subsection 206(1) of the Act, does not apply to months before 1997.

Paragraphs 206(1)(d.1) and (e) in the definition "foreign property" amended by 1998, c. 19, s. 210(1), with respect to paragraph (d.1) applicable to shares and indebtedness acquired after December 4, 1985 (otherwise than pursuant to an agreement in writing entered into before 5:00 p.m. Eastern Standard Time on December 4, 1985) except that, with respect to shares and indebtedness last acquired before 1996, the reference to "primarily from foreign property" in that paragraph shall be read as a reference to "primarily from portfolio investments in property that is foreign property". Paragraph (e) of the definition "foreign property" in subsection 206(1), applies to months that end after June 1995. Paragraphs 206(1)(d.1) and (e) formerly read:

"(d.1) any share of the capital stock of or any debt obligation issued by a Canadian corporation, if shares of the corporation may reasonably be considered to derive their value, directly or indirectly, primarily from portfolio investments in property that is foreign property, but not including a share of a corporation listed on a prescribed stock exchange in Canada that is of a class of the capital stock of the corporation no share of which has been issued after December 4, 1985 (otherwise than pursuant to an agreement in writing entered into before 5:00 p.m. Eastern Standard Time on December 4, 1985),

(e) any share of the capital stock of a mutual fund corporation that is neither an investment corporation nor a registered investment, except as prescribed by regulation,".

The portion of paragraph (g) of the definition "foreign property" in subsection 206(1) before subparagraph (i) amended by 1994, c. 21, s. 93(1), applicable to months after 1992. That portion formerly read:

"(g) any bond, debenture, mortgage, note or similar obligation of, or issued by, a person not resident in Canada, except any such bond, debenture, mortgage, note or similar obligation issued or guaranteed by".

Subparagraph (i.1) of paragraph (g) of the definition "foreign property" in subsection 206(1) added by 1994, c. 7, Sch. II, s. 166(1), applicable after July 13, 1990.

June 30, 2004 Finance Comfort Letter
Deferred Income Plans – Foreign Property and Qualified Investment Characterization re Mortgage-Backed Securities

Dear xxxxx:

This is in reply to your letter of May 21, 2004 in which you raise concerns with the proposed amendment to the definition "foreign property" in subsection 206(1) of the *Income Tax Act,* and the similar proposed amendment to paragraph 4900(1)(j) of the Income Tax Regulations. The proposed amendments were included in the February 27, 2004 technical amendments package. I also acknowledge your subsequent correspondence and telephone conversations with Tax Legislation officials.

The proposed amendment to the foreign property definition in subsection 206(1) of the Act would exclude from foreign property characterization for a taxpayer any mortgage loan that is secured by real property situated in Canada, provided that the cost amount to the taxpayer of the loan (together with the cost amount to a taxpayer of any other indebtedness in respect of the property that is of equal or superior rank) does not exceed the fair market value of the property, ignoring any subsequent decline in the fair market value of the real property. Proposed subparagraph 4900(1)(j)(i) of the Regulations contains a similar fair market value test as a condition for qualified investment status for mortgage loans. You raise two concerns with the application of these proposed amendments to mortgage-backed securities (MBS) issued using an undivided co-ownership structure.

The first concern relates to the use of cost as the basis for the test. You indicate that this would be difficult to administer in public transactions as it would require a cost/value determination to be made following each subsequent acquisition of an MBS certificate. We agree that this could lead to

administrative difficulties. It would be appropriate, from a tax policy perspective, to use the amount of the mortgage loan at issuance as the basis for the test rather than cost.

The second concern relates to a proposed offering of residential MBS that includes some high-ratio mortgage loans where the principal will exceed the fair market value of the property by as much as 10%. The amount lent is intended to cover the appraised value of the property as well as closing costs. As interests in these mortgage loans would not satisfy the proposed fair market value test, the MBS certificates would not be a qualified investment. However, the certificates would have been a qualified investment under paragraph 4900(1)(j) of the Regulations as it read prior to the February 27, 2004 proposed amendment.

Based on the information presented in your letter, we understand that the MBS certificates have the following characteristics:

- the certificates will represent an undivided co-ownership interest in a pool of mortgage loans secured by real property situated in Canada;

- the mortgage loans were originated in the ordinary course of business between arm's length parties;

- substantially all of the mortgagors are resident of Canada;

- the certificates will be offered to the public by prospectus as part of a minimum offering of at least $25 million;

- the certificates will have an investment grade rating;

- the loan to value ratio of the entire pool will not be more than 100%; and

- no single loan in the pool will represent more than 10% of the fair market value of all of the loans in the pool.

The MBS certificates would appear to satisfy the main policy criteria underlying the qualified investment rules, notably, the presence of an arm's length relationship between the investor and the issuer of the investment, liquidity, and quality. Accordingly, we agree, from a tax policy perspective, that these MBS certificates should not fail to be a qualified investment simply because the proposed fair market value test cannot be satisfied. We are reviewing the qualified investment rules with a view to identifying those amendments that would be necessary to ensure that qualification of MBS certificates is not denied in appropriate circumstances.

I trust that this letter is informative of our general position regarding your submission.

Yours sincerely,
Brian Ernewein
Director
Tax Legislation Division
Tax Policy Branch

«activité d'investissement»

"investment activity" [Repealed]

History: The definition "investment activity" in subsection 206(1) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. The definition "investment activity" in subsection 206(1) formerly read:

" `investment activity' of a particular corporation means any business carried on by the corporation, or any holding of property by the corporation otherwise than as part of a business carried on by the corporation, the principal purpose of which is to derive income from, or to derive profits from the disposition of,

(a) shares (other than shares of the capital stock of another corporation in which the particular corporation has a significant interest, where the primary activity of the other corporation is not an investment activity),

(b) interests in trusts,

(c) indebtedness (other than indebtedness owing by another corporation in which the particular corporation has a significant interest, where the primary activity of the other corporation is not an investment activity),

(d) annuities,

(e) commodities or commodities futures purchased or sold, directly or indirectly in any manner whatever, on a commodities or commodities futures exchange (except commodities manufactured, produced, grown, extracted or processed by the corporation or another corporation with which the corporation does not deal at arm's length),

(f) currencies (other than currencies in the form of numismatic coins),

(g) interests in funds or entities other than corporations, partnerships and trusts,

(h) interests or options in respect of property described in any of paragraphs (a) to (g), or

(i) any combination of properties described in any of paragraphs (a) to (h);".

The definition "investment activity" in subsection 206(1) added by 1998, c. 19, s. 210(3), applicable after 1995.

«bien admissible»

"qualified property" [Repealed]

History: The definition "qualified property" in subsection 206(1) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. The definition "qualified property" in subsection 206(1) formerly read:

" `qualified property' of a corporation means a property (other than a debt obligation or share issued by an affiliate of the corporation or by any corporation related to the corporation) owned by the corporation and used by it or an affiliate of the corporation in a specified active business carried on by it or the affiliate;".

The definition "qualified property" in subsection 206(1) added by 1998, c. 19, s. 210(3), applicable to shares and indebtedness acquired after December 4, 1985 (otherwise than pursuant to an agreement in writing made before 5:00 p.m. Eastern Standard Time on December 4, 1985) except that, with respect to shares and indebtedness last acquired before 1996, the reference to "primarily from foreign property" in that paragraph shall be read as a reference to "primarily from portfolio investments in property that is foreign property".

«participation notable»

"significant interest" [Repealed]

History: The definition "significant interest" in subsection 206(1) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. The definition "significant interest" in subsection 206(1) formerly read:

" `significant interest' has the meaning that would be assigned by section 142.2 if that section were read without reference to paragraphs 142.2(3)(b) and (c);".

The definition "significant interest" in subsection 206(1), added by 1998, c. 19, s. 210(3), applicable after 1995.

«montant d'un placement dans des petites entreprises»

"small business investment amount" [Repealed]

History: The definition "small business investment amount" in subsection 206(1) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. The definition "small business investment amount" in subsection 206(1) formerly read:

" `small business investment amount' of a taxpayer for a month means the greater of

(a) the total of the cost amounts of all small business properties to the taxpayer at the end of the month, and

(b) the quotient obtained when the total of all amounts determined for each of the three preceding months, each of which is the total of the cost amounts of all small business properties to the taxpayer at the end of that preceding month, is divided by three;".

The definition "small business investment amount" in subsection 206(1) amended by 2000, c. 19, s. 60(1), applicable to months that end after 1997. The definition "small business investment amount" in subsection 206(1) formerly read:

" `small business investment amount' of a taxpayer for a month means the quotient obtained when the total of all amounts determined for each of the three preceding months, each of which is the total of the cost amounts of all small business properties to the taxpayer at the end of that preceding month, is divided by three;".

«bien de petite entreprise»

"small business property" [Repealed]

History: The definition "small business property" in subsection 206(1) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. The definition "small business property" in subsection 206(1) formerly read:

" `small business property' of a taxpayer at a particular time means property acquired by the taxpayer after October 31, 1985 that is at that particular time

(a) a property prescribed to be a small business security,

(b) a share of a class of the capital stock of a corporation prescribed to be a small business investment corporation,

(c) an interest of a limited partner in a partnership prescribed to be a small business investment limited partnership, or

(d) an interest in a trust prescribed to be a small business investment trust,

where

(e) the taxpayer is a prescribed person in respect of the property, or

(f) throughout the period that began at the time the property was first acquired (otherwise than by a broker or dealer in securities) and ends at the particular time, the property was not owned by any person other than

(i) the taxpayer,

(ii) a trust governed by a particular registered retirement income fund or registered retirement savings plan if

(A) the taxpayer is another trust governed by a registered retirement income fund or registered retirement savings plan, and

(B) the annuitant under the particular fund or plan (or the spouse, common-law partner, former spouse or former common-law partner of that annuitant) is also the annuitant under the fund or plan referred to in clause (A), or

(iii) an annuitant under a registered retirement income fund or registered retirement savings plan that governs the taxpayer, or a spouse, common-law partner, former spouse or former common-law partner of that annuitant;".

Clause (f)(ii)(B) and subparagraph (iii) of the definition "small business property" in subsection 206(1) amended by 2001, c. 17, s. 247. Subject to s. 248(2) of 2001, c. 17, applicable to the 2001 and following taxation years.

Related provision [2001, c. 17, s. 248(2)] — If a taxpayer and a person have jointly elected pursuant to section 144 of the *Modernization of Benefits and Obligations Act*, in respect of the 1998, 1999 or 2000 taxation years, sections 238 to 247 apply to the taxpayer and the person in respect of the applicable taxation year and subsequent taxation years.

Clause (f)(ii)(B) and subparagraph (iii) of the definition "small business property" in subsection 206(1) formerly read:

"(B) the annuitant under the particular fund or plan (or the spouse or former spouse of that annuitant) is also the annuitant under the fund or plan referred to in clause (A), or

(iii) an annuitant under a registered retirement income fund or registered retirement savings plan that governs the taxpayer, or a spouse or former spouse of that annuitant;".

The portion of the definition "small business property" in subsection 206(1) after paragraph (d) amended by 2000, c. 19, s. 60(2), applicable to months that end after 1997. That portion formerly read:

"where the taxpayer is

(e) a prescribed person in respect of the property, or

(f) the first person (other than a broker or dealer in securities) to have acquired the property and the taxpayer has owned the property continuously since it was so acquired."

«entreprise déterminée exploitée activement»

"specified active business" [Repealed]

History: The definition "specified active business" in subsection 206(1) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. The definition "specified active business" in subsection 206(1) formerly read:

" `specified active business' carried on by a corporation, at any time, means a particular business that is carried on by the corporation in Canada where

(a) the corporation employs in the particular business at that time more than 5 full-time employees and at least

(i) 50% of the full-time employees employed by the corporation at that time in the particular business are employed in Canada, and

(ii) 50% of the salaries and wages paid to employees employed at that time in the particular business are reasonably attributable to services rendered in Canada by the employees, or

(b) one or more other corporations associated with the corporation provide, in the course of carrying on one or more other active businesses, managerial, administrative, financial, maintenance or other similar services to the corporation in respect of the particular business and

(i) the corporation could reasonably be expected to require more than 5 full-time employees at that time in respect of the particular business if those services had not been provided,

(ii) at least 50% of the full-time employees employed at that time by the corporation in the particular business and by the other corporations in the other active businesses are employed in Canada, and

(iii) at least 50% of the salaries and wages paid to employees employed at that time by the corporation in the particular business and by the other corporations in the other active businesses are reasonably attributable to services rendered in Canada by the employees,

but does not include a business carried on by the corporation the principal purpose of which is to derive income from, or from the disposition of, shares and debt obligations the value of which can reasonably be considered to derive, directly or indirectly, primarily from foreign property;".

The definition "specified active business" in subsection 206(1) added by 1998, c. 19, s. 210(3), applicable to shares and indebtedness acquired after December 4, 1985 (otherwise than pursuant to an agreement in writing entered into before 5:00 p.m. Eastern Standard Time on December 4, 1985) except that, with respect to shares and indebtedness last acquired before 1996, the expression "primarily from foreign property" in that paragraph shall be read as "primarily from portfolio investments in property that is foreign property".

«proportion déterminée»

"specified proportion" [Repealed]

History: The definition "specified proportion" in subsection 206(1) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. The definition "specified proportion" in subsection 206(1) formerly read:

" `specified proportion' of a member of a partnership for a fiscal period of the partnership means the proportion that the member's share of the total income or loss of the partnership for the partnership's fiscal period is of the partnership's total income or loss for that period and, for the purpose of this definition, where that income or loss for a period is nil, that proportion shall be computed as if the partnership had income for that period in the amount of $1,000,000."

The definition "specified proportion" added by 1998, c. 19, s. 210(3), applicable to shares and indebtedness acquired after December 4, 1985 (otherwise than pursuant to an agreement in writing entered into before 5:00 p.m. Eastern Standard Time on December 4, 1985) except that, with respect to shares and indebtedness last acquired before 1996, the expression "primarily from foreign property" in that paragraph shall be read as "primarily from portfolio investments in property that is foreign property".

Proposed Amendment
s. 173(1) of Bill C-33
First reading, Senate: June 18, 2007

The definition "specified proportion" in subsection 206(1) is repealed.

Application: Deemed to have come into force on December 21, 2002.

Explanatory notes: Subsection 206(1) of the Act includes a definition of a partner's "specified proportion" of a partnership for a fiscal period. To enable the definition to be used for other purposes as well, it is moved to subsection 248(1) of the Act, and is repealed in subsection 206(1), effective after December 20, 2002.

(1.1) [Repealed]

History: Subsection 206(1.1) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. Subsection 206(1.1) formerly read:

"(1.1) Exception where substantial Canadian presence — Property described in paragraph (d.1) of the definition "foreign property" in subsection (1) does not, at a particular time, include property of a taxpayer that is a share or debt obligation that was issued by a corporation that, at the particular time, is a Canadian corporation where

(a) either at any time in any of the last 15 months beginning before the time (in this subsection referred to as the "acquisition time") when the property was last acquired before the particular time by the taxpayer or at any time in the calendar year that includes the acquisition time, the total of all amounts each of which is the designated value of a qualified property of the corporation or an affiliate of the corporation exceeded $50,000,000;

(b) the particular time is not later than the end of the 15th month ending after the acquisition time and, at any time in any of the last 15 months beginning before the acquisition time, the total of all amounts each of which is the designated value of a qualified property of the corporation or another corporation controlled by the corporation exceeded 50% of the lesser of the fair market value of all of the corporation's property and the carrying value of all of the corporation's property;

(c) the particular time is after the acquisition time and, at any time in any of the first 15 months beginning after the acquisition time, the total of all amounts each of which is the designated value of a qualified property of the corporation or another corporation controlled by the corporation exceeded 50% of the lesser of the fair market value of all of the corporation's property and the carrying value of all of the corporation's property;

(d) the particular time is after 1995 and, at the particular time,

(i) either

(A) the corporation was incorporated or otherwise formed under the laws of Canada or a province, or

(B) where the corporation was not required to maintain an office under the laws by or under which it was incorporated, the maintenance of an office in Canada is required under the constitutional documents of the corporation,

(ii) the corporation maintains an office in Canada, and

(iii) any of the following conditions applies, namely,

(A) the corporation employs more than 5 individuals in Canada full time and those individuals are not employed primarily in connection with

(I) an investment activity of the corporation or another corporation with which the corporation does not deal at arm's length,

(II) a business carried on by the corporation through a partnership of which the corporation is not a majority interest partner, or

(III) a business carried on by another corporation with which the corporation does not deal at arm's length through a partnership of which that other corporation is not a majority interest partner,

(B) another corporation that is controlled by the corporation employs more than 5 individuals in Canada full time and those individuals are not employed primarily in connection with

(I) an investment activity of the other corporation or another corporation with which the other corporation does not deal at arm's length,

(II) a business carried on by the other corporation through a partnership of which the other corporation is not a majority interest partner, or

(III) a business carried on by another corporation with which the other corporation does not deal at arm's length through a partnership of which that other corporation is not a majority interest partner,

(C) the total amount incurred by the corporation for the services (other than services relating to an investment activity of the corporation or another corporation with which the corporation does not deal at arm's length) of employees and other individuals rendered in Canada in any calendar year that ends in any of the last 15 months that end before the particular time exceeds $250,000,

(D) the total amount incurred by another corporation that is controlled by the corporation for the services (other than services relating to an investment activity of the other corporation or another corporation with which the other corporation does not deal at arm's length) of employees and other individuals rendered in Canada in any calendar year that ends in any of the last 15 months that end before the particular time exceeds $250,000, or

(E) in the calendar year that includes the particular time the corporation was continued from a jurisdiction outside Canada, or incorporated or otherwise formed and the total amount incurred in the year by the corporation for the services (other than services relating to an investment activity of the corporation or another corporation with which the corporation does not deal at arm's length) of employees and other individuals rendered in Canada exceeds $250,000; or

(e) the particular time is after 1995 and, at the particular time, all or substantially all of the property of the corporation is not foreign property."

Subsection 206(1.1) added by 1998, c. 19, s. 210(4), applicable after December 4, 1985.

(1.2) [Repealed]

History: Subsection 206(1.2) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. Subsection 206(1.2) formerly read:

"(1.2) Partnerships — For the purposes of paragraphs (1.1)(a) to (c) and this subsection,

(a) a member of a partnership

(i) is deemed not to own any interest in the partnership at any time, and

(ii) is deemed to own the member's specified proportion for the partnership's first fiscal period that ends at or after that time of each property that would, if the assumption in paragraph 96(1)(c) were made, be owned by the partnership at that time; and

(b) the carrying value at that time of that specified proportion of a partnership's property is deemed to be that specified proportion of the carrying value at that time to the partnership of that property."

Subsection 206(1.2) added by 1998, c. 19, s. 210(4), applicable after December 4, 1985.

(1.3) [Repealed]

History: Subsection 206(1.3) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. Subsection 206(1.3) formerly read:

"(1.3) Interpretation — For the purpose of paragraph (1.1)(d),

(a) an employee of a corporation is deemed to be employed in Canada where the corporation's permanent establishment (as defined by regulation) to which the employee principally reports is situated in Canada; and

(b) services are deemed to be rendered in Canada to a corporation where the permanent establishment (as defined by regulation) for which the services are rendered is situated in Canada."

Subsection 206(1.3) added by 1998, c. 19, s. 210(4), applicable after December 4, 1985.

(1.4) [Repealed]

History: Subsection 206(1.4) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. Subsection 206(1.4) formerly read:

"(1.4) Rights in respect of foreign property — For the purpose of determining whether a property owned by a taxpayer is foreign property at any time because of paragraph (f) or (h) of the definition "foreign property" in subsection (1), it shall be assumed that each other property not owned at that time by the

taxpayer was acquired immediately before that time by the taxpayer."

Subsection 206(1.4) added by 1998, c. 19, s. 210(4), applicable after December 4, 1985.

(1.5) [Repealed]

History: Subsection 206(1.5) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. Subsection 206(1.5) formerly read:

"(1.5) Identical property — Notwithstanding paragraphs (d.1), (f) and (h) of the definition "foreign property" in subsection (1), a property shall not be considered to be foreign property at a particular time of a taxpayer because of any of those paragraphs where

(a) the property is

(i) a share or debt obligation issued by a Canadian corporation, or

(ii) an interest in, a right to, a property that is convertible into or a property that is exchangeable for, a share or debt obligation issued by a Canadian corporation; and

(b) the property, or the share or obligation referred to in subparagraph (a)(ii), is identical to another property that is owned at the particular time by the taxpayer and that is not foreign property at the particular time of the taxpayer."

Subsection 206(1.5) added by 1998, c. 19, s. 210(4), applicable after December 4, 1985.

(2) [Repealed]

History: Subsection 206(2) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. Subsection 206(2) formerly read:

"(2) Tax payable — Where, at the end of any month,

(a) the amount, if any, by which

(i) the total of all amounts each of which is the cost amount of a foreign property to a taxpayer described in any of paragraphs 205(a) to (f)

exceeds the total of

(ii) where the taxpayer is described in any of paragraphs 205(b), (c) and (e), all amounts each of which is the cost amount to the taxpayer of a foreign property that was not at the end of the month a qualified investment (within the meaning assigned by subsection 146(1) or 146.3(1) or section 204, as the case may be) of the taxpayer, and

(iii) all amounts (other than an amount included in respect of the taxpayer for the month under subparagraph (ii)) each of which is the cost amount to the taxpayer of foreign property that became foreign property of the taxpayer after its last acquisition by the taxpayer and at a time that is not more than 24 months before the end of the month,

exceeds the total of

(b) 30% of the total of all amounts each of which is the cost amount of a property to the taxpayer, and

(c) in the case of a taxpayer described in paragraph 205(a), (b), (c) or (e), other than a taxpayer described in paragraph 149(1)(o.2), the lesser of

(i) three times the small business investment amount of the taxpayer for the month, and

(ii) 20% of the total of all amounts each of which is the cost amount of a property to the taxpayer,

the taxpayer shall, in respect of that month, pay a tax under this Part equal to 1% of the lesser of the excess and the total of all amounts each of which is the cost amount to the taxpayer of each of its foreign properties that was acquired after June 18, 1971."

Paragraph 206(2)(b) amended by 2000, c. 14, s. 41(1), applicable to months that end after 1999, except that for months in 2000 the reference to "30%" in paragraph 206(2)(b) of the Act, shall be read as "25%". Paragraph 206(2)(b) formerly read:

"(b) 20% of the total of all amounts each of which is the cost amount of a property to the taxpayer, and".

Paragraph 206(2)(a) amended by 1994, c. 7, Sch. VIII, s. 120(1), applicable to months ending after December 20, 1991. Paragraph 206(2)(a) formerly read:

"(a) the total of all amounts each of which is the cost amount of a foreign property to a taxpayer described in any of paragraphs 205(a) to (f) (other than, where the taxpayer is described in any of paragraphs 205(b), (c) and (e), a foreign property that was not at the end of the month a qualified investment, within the meaning assigned by subsection 146(1) or 146.3(1) or section 204, as the case may be, of the taxpayer)".

Subparagraph 206(2)(c)(ii) amended by 1994, c. 7, Sch. II, s. 166(3), applicable to months ending after 1989. Subparagraph 206(2)(c)(ii) formerly read:

"(ii) two times the amount determined under paragraph (b),".

Paragraph 206(2)(b) amended by 1994, c. 7, Sch. II, s. 166(2), applicable to months ending after 1989, except that for months in 1990, 1991, 1992 and 1993, the reference in paragraph 206(2)(b) of the Act to "20%" shall be read as "12%", "14%", "16%" and "18%", respectively. Paragraph 206(2)(b) formerly read:

"(b) 10% of the total of all amounts each of which is the cost amount of a property to the taxpayer, and".

(2.01) [Repealed]

History: Subsection 206(2.01) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. Subsection 206(2.01) formerly read:

"(2.01) Registered investments — Notwithstanding subsection (2), the tax payable under this section by a registered investment in respect of a month is equal to the lesser of

(a) the tax that would, but for this subsection, be payable by the registered investment in respect of the month, and

(b) the greater of

(i) 20% of the amount determined under paragraph (a), and

(ii) the amount determined by the formula

$$\$5,000 + (A \times B/C)$$

where

A is equal to the amount determined under paragraph (a),

B is equal to

(A) where the registered investment is a trust, the total of all amounts each of which is the fair market value at the end of the month of an interest in the registered investment that is held at that time by a taxpayer described in any of paragraphs 205(a) to (f) or by a mutual fund corporation, investment corporation, mutual fund trust, prescribed trust or prescribed partnership, and

(B) where the registered investment is a corporation, the total of all amounts each of which is the fair market value at the end of the month of a share of the capital stock of the registered investment that is held at that time by a taxpayer described in any of paragraphs 205(a) to (f) or by a mutual fund corporation, investment corporation, mutual fund trust, prescribed trust or prescribed partnership, and

C is equal to

(A) where the registered investment is a trust, the total of all amounts each of which is the fair market value at the end of the month of an interest in the registered investment that is held at that time, and

(B) where the registered investment is a corporation, the total of all amounts each of which is the fair market value at the end of the month of a share of the capital stock of the registered investment that is held at that time."

Subsection 206(2.01) added by 1998, c. 19, s. 210(5), applicable to months that end after 1992.

(2.1) [Repealed]

History: Subsection 206(2.1) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. Subsection 206(2.1) formerly read:

"(2.1) Exemption — Notwithstanding section 205, subsection (2) does not apply to a trust described in paragraph 149(1)(o.4) or a corporation described in paragraph 149(1)(o.2) in respect of any month that falls within a period for which the trustee or the corporation, as the case may be, elects in accordance with subsections 259(1) and (3)."

Subsection 206(2.1) amended by 1994, c. 21, s. 93(2), applicable to the 1992 and subsequent taxation years. Subsection 206(2.1) formerly read:

"(2.1) Exemption — Notwithstanding section 205, subsection (2) shall not apply in respect of a trust described in paragraph 149(1)(o.4) in respect of any month that falls within a period in respect of which the trustee has elected in accordance with subsection 259(2)."

(3) [Repealed]

History: Subsection 206(3) repealed by 1998, c. 19, s. 210(6), applicable to months that end after June 1995. Subsection 206(3) formerly read:

"(3) Shares in investment corporation — Notwithstanding the definition "foreign property" in subsection (1), a share of the capital stock of an investment corporation (other than a registered investment) acquired after October 13, 1971 by a taxpayer to whom this Part applies and owned by the taxpayer at a particular time shall, except as prescribed by regulation, be deemed to be a foreign property of the taxpayer at that time."

(3.1) [Repealed]

History: Subsection 206(3.1) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. Subsection 206(3.1) formerly read:

"(3.1) Acquisition of qualifying security — For the purpose of applying subparagraph (2)(a)(iii) at or after a particular time, where a qualifying security in relation to another security is acquired at the particular time by the taxpayer referred to in subsection (3.2) in respect of the security, and the security is foreign property at that time,

(a) the qualifying security is deemed to have been last acquired by the taxpayer at the time the other security was last acquired by the taxpayer;

(b) where the other security was not foreign property immediately before the particular time, the qualifying security is deemed to have become foreign property at the particular time; and

(c) where the other security was foreign property immediately before the particular time, the qualifying security is deemed to have become foreign property at the time the other security became foreign property."

Subsection 206(3.1) amended by 2001, c. 17, s. 169(3), applicable to months that end after 1997. Subsection 206(3.1) formerly read:

"(3.1) Reorganizations, etc. — Where

(a) a security (in this subsection referred to as the "new security") is issued at a particular time by a corporation to a taxpayer

(i) in exchange for another security acquired before the particular time by the taxpayer, and

(ii) in the course of

(A) a corporate merger or reorganization of capital, or

(B) a transaction in which control of the corporation that issued the other security is acquired by a person or a group of persons, and

(b) the new security is foreign property at the particular time,

for the purpose of applying subparagraph (2)(a)(iii) to the taxpayer at or after the particular time,

(c) the new security shall be deemed to have been last acquired by the taxpayer at the time the other security was last acquired by the taxpayer,

(d) where the other security was not foreign property immediately before the particular time, the new security shall be deemed to have become foreign property at the particular time, and

(e) where the other security was foreign property immediately before the particular time, the new security shall be deemed to have become foreign property at the time the other security became foreign property."

Subsection 206(3.1) added by 1994, c. 7, Sch. VIII, s. 120(2), applicable to months ending after December 20, 1991.

(3.2) [Repealed]

History: Subsection 206(3.2) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. Subsection 206(3.2) formerly read:

"(3.2) Qualifying security — For the purpose of subsection (3.1), a qualifying security in relation to another security means

(a) a security issued at any time by a corporation to a taxpayer

(i) in exchange for another security acquired before that time by the taxpayer, and

(ii) in the course of

(A) a corporate merger or reorganization of capital,

(B) a transaction or series of transactions in which control of the corporation that issued the other security is acquired by a person or group of persons, or

(C) a transaction or series of transactions in which all or substantially all of the issued and outstanding shares (other than shares held immediately before the transaction or the beginning of the series by a particular person or related group) of the corporation that issued the other security are acquired by the particular person or related group; or

(b) a security acquired by a taxpayer from a corporation pursuant to a distribution with respect to another security that is an eligible distribution described in subsection 86.1(2)."

Subsection 206(3.2) added by 2001, c. 17, s. 169(3), applicable to months that end after 1997.

(4) [Repealed]

History: Subsection 206(4) repealed by 2005, c. 30, s. 14(1), applicable to months that end after 2004. Subsection 206(4) formerly read:

"(4) Non-arm's length transactions — For the purposes of this Part, where at any time a taxpayer acquires property, otherwise than pursuant to a transfer of property to which paragraph (f) or (g) of the definition "disposition" in subsection 248(1) applies, from a person with whom the taxpayer does not deal at arm's length for no consideration or for consideration less than the fair market value of the property at that time, the taxpayer is deemed to acquire the property at that fair market value, and for those purposes, a particular trust is deemed not to deal at arm's length with another trust if a person who is beneficially interested in the particular trust is at that time also beneficially interested in the other trust."

Subsection 206(4) amended by 2001, c. 17, s. 169(4), applicable in respect of property acquired after December 23, 1998. Subsection 206(4) formerly read:

"(4) Non-arm's length transactions — For the purposes of this Part, where a taxpayer has acquired property from a person with whom the taxpayer was not dealing at arm's length for no consideration or for consideration less than the fair market value thereof at the time of the acquisition, the taxpayer shall be deemed to have acquired the property at that fair market value, and for those purposes, a trust shall be deemed not to deal at arm's length with another trust if any person is beneficially interested in both trusts."

Excerpts from the "Canadian Income Tax Act" and "Practitioner's Income Tax Act"

Canadian Income Tax Act with Regulations

81st Edition 2006

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"(1.4) *Rights in respect of foreign property.* For the purpose of determining whether a property owned by a taxpayer is foreign property at any time because of paragraph (*f*) or (*h*) of the definition 'foreign property' in subsection (1), it shall be assumed that each other property not owned at that time by the taxpayer was acquired immediately before that time by the taxpayer."

S. 206(1.4) was added by S.C. 1998, c. 19, s. 210(4), applicable after December 4, 1985.

► 206(1.5) ◄

(1.5) Identical property. [Repealed by S.C. 2005, c. 30, s. 14(1).]

History: S. 206(1.5) was repealed by S.C. 2005, c. 30, s. 14(1), applicable to months that end after 2004. S. 206(1.5) formerly read:

"(1.5) *Identical property.* Notwithstanding paragraphs (*d.1*), (*f*) and (*h*) of the definition 'foreign property' in subsection (1), a property shall not be considered to be foreign property at a particular time of a taxpayer because of any of those paragraphs where

(*a*) the property is

(i) a share or debt obligation issued by a Canadian corporation, or

(ii) an interest in, a right to, a property that is convertible into or a property that is exchangeable for, a share or debt obligation issued by a Canadian corporation; and

(*b*) the property, or the share or obligation referred to in subparagraph (*a*)(ii), is identical to another property that is owned at the particular time by the taxpayer and that is not foreign property at the particular time of the taxpayer."

S. 206(1.5) was added by S.C. 1998, c. 19, s. 210(4), applicable after December 4, 1985.

► 206(2) ◄

(2) Tax payable. [Repealed by S.C. 2005, c. 30, s. 14(1).]

History: S. 206(2) was repealed by S.C. 2005, c. 30, s. 14(1), applicable to months that end after 2004. S. 206(2) formerly read:

"(2) *Tax payable.* Where, at the end of any month,

(*a*) the amount, if any, by which

(i) the total of all amounts each of which is the cost amount of a foreign property to a taxpayer described in any of paragraphs 205(*a*) to (*f*)

exceeds the total of

(ii) where the taxpayer is described in any of paragraphs 205(*b*), (*c*) and (*e*), all amounts each of which is the cost amount to the taxpayer of a foreign property that was not at the end of the month a qualified investment (within the meaning assigned by subsection 146(1) or 146.3(1) or section 204, as the case may be) of the taxpayer, and

(iii) all amounts (other than an amount included in respect of the taxpayer for the month under subparagraph (ii)) each of which is the cost amount to the taxpayer of foreign property that became foreign property of the taxpayer after its last acquisition by the taxpayer and at a time that is not more than 24 months before the end of the month,

exceeds the total of

(*b*) 30% of the total of all amounts each of which is the cost amount of a property to the taxpayer, and

(*c*) in the case of a taxpayer described in paragraph 205(*a*), (*b*), (*c*) or (*e*), other than a taxpayer described in paragraph 149(1)(*o.2*), the lesser of

(i) three times the small business investment amount of the taxpayer for the month, and

(ii) 20% of the total of all amounts each of which is the cost amount of a property to the taxpayer,

the taxpayer shall, in respect of that month, pay a tax under this Part equal to 1% of the lesser of the excess and the total of all amounts each of which is the cost amount to the taxpayer of each of its foreign properties that was acquired after June 18, 1971."

S. 206(2)(*b*) was amended by S.C. 2000, c. 14, s. 41(1), applicable to months that end after 1999, except that for months in 2000 the reference to "30%" in paragraph 206(2)(*b*) of the Act shall be read as "25%". S. 206(2)(*b*) formerly read:

"(*b*) 20% of the total of all amounts each of which is the cost amount of a property to the taxpayer, and"

S. 206(2)(*a*) was amended by S.C. 1994, c. 7, Sched. VIII, s. 120(1), applicable to months ending after December 20, 1991. S. 206(2)(*a*) formerly read:

"(*a*) the total of all amounts each of which is the cost amount of a foreign property to a taxpayer described in any of paragraphs 205(*a*) to (*f*) (other than, where the taxpayer is described in any of paragraphs 205(*b*), (*c*) and (*e*), a foreign property that was not at the end of the month a qualified investment, within the meaning assigned by subsection 146(1) or 146.3(1) or section 204, as the case may be, of the taxpayer)"

S. 206(2)(*b*) was amended by S.C. 1994, c. 7, Sched. II, s. 166(2), applicable to months ending after 1989, except that for months in 1990, 1991, 1992 and 1993, the reference in paragraph 206(2)(*b*) to "20%" shall be read as "12%", "14%", "16%" and "18%", respectively. S. 206(2)(*b*) formerly read:

"(*b*) 10% of the total of all amounts each of which is the cost amount of a property to the taxpayer, and"

S. 206(2)(*c*)(ii) was amended by S.C. 1994, c. 7, Sched. II, s. 166(3), applicable to months ending after 1989. S. 206(2)(*c*)(ii) formerly read:

"(ii) two times the amount determined under paragraph (*b*),"

Related Sections: S. 146(1), "qualified investment"; s. 146.3(1), "qualified investment"; s. 149(1)(*o.2*) Pension corporations; s. 204, "qualified investment"; s. 205 Application of Part; s. 206(1), "foreign property", "small business investment amount"; s. 207.1(1) Tax payable by trust under registered retirement savings plan; s. 248(1), "cost amount", "property".

Regulations: 222; Part L (Repealed).

Interpretation Bulletins: *Secondary* — IT-320R3 RRSPs — Qualified investments; IT-412R2 Foreign property of registered plans.

Information Circulars: IC 78-14R3 Guidelines for Trust Companies and Other Persons Responsible for Filing T3IND, T3G, T3D, T3P, T3S, T3RI, and T3F Returns; IC 78-18R6 Registered Retirement Income Funds.

► 206(2.01) ◄

(2.01) Registered investments. [Repealed by S.C. 2005, c. 30, s. 14(1).]

History: S. 206(2.01) was repealed by S.C. 2005, c. 30, s. 14(1), applicable to months that end after 2004. S. 206(2.01) formerly read:

"(2.01) *Registered investments.* Notwithstanding subsection (2), the tax payable under this section by a registered investment in respect of a month is equal to the lesser of

(*a*) the tax that would, but for this subsection, be payable by the registered investment in respect of the month, and

(*b*) the greater of

(i) 20% of the amount determined under paragraph (*a*), and

(ii) the amount determined by the formula

$$\$5{,}000 + (A \times B/C)$$

where

A is equal to the amount determined under paragraph (*a*),

B is equal to

(A) where the registered investment is a trust, the total of all amounts each of which is the fair market value at the end of the month of an interest in the registered investment that is held at that time by a taxpayer described in any of paragraphs 205(*a*) to (*f*) or by a mutual fund corporation, investment corporation, mutual fund trust, prescribed trust or prescribed partnership, and

(B) where the registered investment is a corporation, the total of all amounts each of which is the fair market value at the end of the month of a share of the capital stock of the registered investment that is held at that time by a taxpayer described in any of paragraphs 205(*a*) to (*f*) or by a mutual fund corporation, investment corporation, mutual fund trust, prescribed trust or prescribed partnership, and

C is equal to

(A) where the registered investment is a trust, the total of all amounts each of which is the fair market value at the end of the month of an interest in the registered investment that is held at that time, and

(B) where the registered investment is a corporation, the total of all amounts each of which is the fair market value at the end of the month of a share of the capital stock of the registered investment that is held at that time."

S. 206(2.01) was added by S.C. 1998, c. 19, s. 210(5), applicable to months that end after 1992.

Regulations: 5002.

► 206(2.1) ◄

(2.1) Exemption. [Repealed by S.C. 2005, c. 30, s. 14(1).]

History: S. 206(2.1) was repealed by S.C. 2005, c. 30, s. 14(1), applicable to months that end after 2004. S. 206(2.1) formerly read:

"(2.1) *Exemption.* Notwithstanding section 205, subsection (2) does not apply to a trust described in paragraph 149(1)(*o.4*) or a corporation described in paragraph 149(1)(*o.2*) in respect of any month that falls within a period for which the trustee or the corporation, as the case may be, elects in accordance with subsections 259(1) and (3)."

S. 206(2.1) was amended by S.C. 1994, c. 21, s. 93(2), applicable to the 1992 and subsequent taxation years. S. 206(2.1) formerly read:

"(2.1) Notwithstanding section 205, subsection (2) shall not apply in respect of a trust described in paragraph 149(1)(*o.4*) in respect of any month that falls within a period in respect of which the trustee has elected in accordance with subsection 259(2)."

Interpretation Bulletins: *Secondary* — IT-412R2 Foreign property of registered plans.

► 206(3) ◄

(3) Shares in investment corporation. [Repealed by 1998, c. 19, s. 210(6).]

2005 Federal Budget

Practitioner's

Income Tax Act

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were made, be owned by the partnership at that time; and

(b) the carrying value at that time of that specified proportion of a partnership's property is deemed to be that specified proportion of the carrying value at that time to the partnership of that property.

Notes: 206(1.2) added by 1995-97 technical bill, effective December 5, 1985.

(1.3) Interpretation — For the purpose of paragraph (1.1)(d),

(a) an employee of a corporation is deemed to be employed in Canada where the corporation's permanent establishment (as defined by regulation) to which the employee principally reports is situated in Canada; and

(b) services are deemed to be rendered in Canada to a corporation where the permanent establishment (as defined by regulation) for which the services are rendered is situated in Canada.

Notes: 206(1.3) added by 1995-97 technical bill, effective December 5, 1985. This provision was not in the draft legislation of Dec. 13, 1995.

Regulations: 8201, 8201.1 (permanent establishment).

(1.4) Rights in respect of foreign property — For the purpose of determining whether a property owned by a taxpayer is foreign property at any time because of paragraph (f) or (h) of the definition "foreign property" in subsection (1), it shall be assumed that each other property not owned at that time by the taxpayer was acquired immediately before that time by the taxpayer.

Notes: 206(1.4) added by 1995-97 technical bill, effective December 5, 1985. This was 206(1.3) in the draft legislation of December 13, 1995.

(1.5) Identical property — Notwithstanding paragraphs (d.1), (f) and (h) of the definition "foreign property" in subsection (1), a property shall not be considered to be foreign property at a particular time of a taxpayer because of any of those paragraphs where

(a) the property is

(i) a share or debt obligation issued by a Canadian corporation, or

(ii) an interest in, a right to, a property that is convertible into or a property that is exchangeable for, a share or debt obligation issued by a Canadian corporation; and

(b) the property, or the share or obligation referred to in subparagraph (a)(ii), is identical to another property that is owned at the particular time by the taxpayer and that is not foreign property at the particular time of the taxpayer.

Related Provisions: 248(12) — Whether properties are identical.

Notes: 206(1.5) added by 1995-97 technical bill, effective December 5, 1985. This was 206(1.4) in the draft legislation of December 13, 1995.

(2) Tax payable — Where, at the end of any month,

(a) the amount, if any, by which

(i) the total of all amounts each of which is the cost amount of a foreign property to a taxpayer described in any of paragraphs 205(a) to (f)

exceeds the total of

(ii) where the taxpayer is described in any of paragraphs 205(b), (c) and (e), all amounts each of which is the cost amount to the taxpayer of a foreign property that was not at the end of the month a qualified investment (within the meaning assigned by subsection 146(1) or 146.3(1) or section 204, as the case may be) of the taxpayer, and

(iii) all amounts (other than an amount included in respect of the taxpayer for the month under subparagraph (ii)) each of which is the cost amount to the taxpayer of foreign property that became foreign property of the taxpayer after its last acquisition by the taxpayer and at a time that is not more than 24 months before the end of the month,

exceeds the total of

(b) 30% of the total of all amounts each of which is the cost amount of a property to the taxpayer, and

(c) in the case of a taxpayer described in paragraph 205(a), (b), (c) or (e), other than a taxpayer described in paragraph 149(1)(o.2), the lesser of

(i) three times the small business investment amount of the taxpayer for the month, and

(ii) 20% of the total of all amounts each of which is the cost amount of a property to the taxpayer,

the taxpayer shall, in respect of that month, pay a tax under this Part equal to 1% of the lesser of the excess and the total of all amounts each of which is the cost amount to the taxpayer of each of its foreign properties that was acquired after June 18, 1971.

Proposed Amendment — Foreign property limit eliminated

Federal budget, Notice of Ways and Means Motion, February 23, 2005: *Foreign Property Rule*

(5) That the limit in respect of foreign property that may be held by pension funds and other deferred income plans be eliminated for months that end in the 2005 and subsequent calendar years.

Federal budget, Supplementary Information, February 23, 2005: *Foreign Property Rule*

The Foreign Property Rule (FPR), which was introduced in 1971, limits the amount of foreign property that pension funds and other tax-deferred retirement plans can hold. Foreign property generally consists of shares, units and debt issued by non-resident entities, investments in trusts that hold excess foreign property and investments in certain partnerships. The FPR, which was originally set at 10% of a plan's assets, was raised to 20% in the 1990s and then to its current level of 30% in 2001. Plan assets in excess of those limits are subject to a 1% per-month penalty tax.

The FPR was introduced to ensure that a substantial proportion of tax-deferred retirement savings flowed to Canadian companies and to support the development of Canada's capital markets. As these markets have grown and matured since the early 1990s and become more integrated with global capital markets, access to capital for Canadian companies has improved substantially. At the same time, there has been marked improvement in Canada's fiscal situation, external debt, and balance of payments position over the past decade.

The budget proposes to repeal the FPR effective as of 2005, thus allowing broader international diversification opportunities for retirement investments.

...

The decision in the budget to eliminate the foreign property rule also lifts a restriction that applied, under this rule, to investments in limited partnerships. Limited partnerships have many of the same characteristics, from a tax policy perspective, as business income trusts and other flow-through entities, and correspondingly pose many of the same policy issues.

Notes: It is expected that s. 206 will be repealed entirely. Finance has indicated that all the outstanding foreign-property proposals except for those dealing with segregated funds will be introduced, but will only apply through the end of 2004.

Related Provisions: 107.4(3)(c) — Cost of property after qualifying disposition to trust; 206(2.1) — Limitation — maximum tax payable by registered investment; 206(3.1) — Reorganizations, etc.; 207(1) — Return and payment of tax; 207(2) — Trustee liable for tax; 259 — Proportional holdings in trust property.

Notes: 206(2) effectively limits RRSPs, RRIFs, DPSPs and pensions to 30% foreign property (see 206(1)), based on the cost of each asset. It does not apply to non-qualified investments (see (a)(ii)) because 207.1(1) applies instead.

For the meaning of "reflected in the balance sheet", see Notes to 181(3).

For a ruling that GAAR does not apply when a pension corporation incorporates another corporation to increase the percentage of underlying foreign property, see VIEWS doc 2003-0041823.

206(2)(b) amended by 2000 first budget bill (C-32) to change 20% to 25% for months in 2000 and to 30% for months after 2000. This increases the foreign property limit for RRSPs and other deferred income plans, as announced in the February 2000 budget, to 30% (and to 50% where sufficient amounts are invested in small business property; see 206(2)(c)).

206(2)(a)(iii) added by 1992 technical bill, effective for December 1991 and later months. It provides that where property in the portfolio was not foreign property but becomes foreign property, it will not be subject to the foreign property limits for 2 years. (This could happen, for example, to the shares of a Canadian corporation the value of which, at some point, becomes derived primarily from portfolio investments in foreign property.)

206(2)(b) amended by 1990 Budget, this version effective 1994. The maximum percentage of foreign property is limited as follows: months before 1990, 10%; months in 1990, 12%; 1991, 14%; 1992, 16%; 1993, 18%; months in 1994 and later, 20%.

Regulations: 5000.

I.T. Application Rules: 65.

Interpretation Bulletins: IT-412R2: Foreign property of registered plans.

Forms: T3P: Employees' pension plan income tax return.

(2.01) [Tax payable by] Registered investments — Notwithstanding subsection (2), the tax payable under this section by a registered investment in respect of a month is equal to the lesser of

(a) the tax that would, but for this subsection, be payable by the registered investment in respect of the month, and

(b) the greater of

(i) 20% of the amount determined under paragraph (a), and

(ii) the amount determined by the formula

$$\$5,000 + (A \times B/C)$$

where

A is equal to the amount determined under paragraph (a),

B is equal to

(A) where the registered investment is a trust, the total of all amounts each of which is the fair market value at the end of the month of an interest in the registered investment that is held at that time by a taxpayer described in any of paragraphs 205(a) to (f) or by a mutual fund corporation, investment corporation, mutual fund trust, prescribed trust or prescribed partnership, and

(B) where the registered investment is a corporation, the total of all amounts each of which is the fair market value at the end of the month of a share of the capital stock of the registered investment that is held at that time by a taxpayer described in any of paragraphs 205(a) to (f) or by a mutual fund corporation, investment corporation, mutual fund trust, prescribed trust or prescribed partnership, and

C is equal to

(A) where the registered investment is a trust, the total of all amounts each of which is the fair market value at the end of the month of an interest in the registered investment that is held at that time, and

(B) where the registered investment is a corporation, the total of all amounts each of which is the fair market value at the end of the month of a share of the capital stock of the registered investment that is held at that time.

Notes: 206(2.01) added by 1995-97 technical bill, effective for months that end after 1992.

Regulations: 5002 (prescribed trust and prescribed partnership for 206(2.01)(b)(ii)B).

(2.1) Exemption — Notwithstanding section 205, subsection (2) does not apply to a trust described in paragraph 149(1)(o.4) or a corporation described in paragraph 149(1)(o.2) in respect of any month that falls within a period for which the trustee or the corporation, as the case may be, elects in accordance with subsections 259(1) and (3).

Notes: 206(2.1) amended by 1993 technical bill, effective for 1992 and later taxation years.

Interpretation Bulletins: IT-412R2: Foreign property of registered plans.

(3) [Repealed]

Notes: 206(3) repealed by 1995-97 technical bill, effective for months that end after June 1995. See now 206(1)"foreign property"(e).

(3.1) Acquisition of qualifying security — For the purpose of applying subparagraph (2)(a)(iii) at or after a particular time, where a qualifying security in relation to another security is acquired at the particular time by the taxpayer referred to in subsection (3.2) in respect of the security, and the security is foreign property at that time,

(a) the qualifying security is deemed to have been last acquired by the taxpayer at the time the other security was last acquired by the taxpayer;

(b) where the other security was not foreign property immediately before the particular time, the qualifying security is deemed to have become foreign property at the particular time; and

(c) where the other security was foreign property immediately before the particular time, the qualifying security is deemed to have become foreign property at the time the other security became foreign property.

Related Provisions: 206(3.2) — Qualifying security; 256(6)-(9) — Whether control acquired.

Notes: 206(3.1) amended by 2000 Budget, effective for months that end after 1997.

206(3.1) added by 1992 technical bill, effective for December 1991 and later months.

Interpretation Bulletins: IT-412R2: Foreign property of registered plans.

(3.2) Qualifying security — For the purpose of subsection (3.1), a qualifying security in relation to another security means

(a) a security issued at any time by a corporation to a taxpayer

(i) in exchange for another security acquired before that time by the taxpayer, and

BoC Financial System Review

BANK OF CANADA

Financial System Review

December 2006

The *Financial System Review* and Financial Stability

The financial system makes an important contribution to the welfare of all Canadians. The ability of households and firms to confidently hold and transfer financial assets is one of the fundamental building blocks of the Canadian economy. As part of its commitment to promoting the economic and financial welfare of Canada, the Bank of Canada actively fosters a safe and efficient financial system. The Bank's contribution complements the efforts of other federal and provincial agencies, each of which brings unique expertise to this challenging area in the context of its own institutional responsibilities.

The financial system is large and increasingly complex. It includes financial institutions (e.g., banks, insurance companies, and securities dealers); financial markets in which financial assets are priced and traded; and the clearing and settlement systems that underpin the flow of assets between firms and individuals. Past episodes around the world have shown that serious disruptions to one or more of these three components (whether they originate from domestic or international sources) can create substantial problems for the entire financial system and, ultimately, for the economy as a whole. As well, inefficiencies in the financial system may lead to significant economic costs over time and contribute to a system that is less able to successfully cope with periods of financial stress. It is therefore important that Canada's public and private sector entities foster a financial system with solid underpinnings, thereby promoting its smooth and efficient functioning.

The *Financial System Review* (FSR) is one avenue through which the Bank of Canada seeks to contribute to the longer-term robustness of the Canadian financial system. It brings together the Bank's ongoing work in monitoring developments in the system and analyzing policy directions in the financial sector, as well as research designed to increase our knowledge. The strong linkages among the various components of the financial system are emphasized by taking a broad, system-wide perspective that includes markets, institutions, and clearing and settlement systems. It is in this context that the FSR aims to

- improve the understanding of current developments and trends in the Canadian and international financial systems and of the factors affecting them;
- summarize recent work by Bank of Canada staff on specific financial sector policies and on aspects of the financial system's structure and functioning;
- promote informed public discussion on all aspects of the financial system, together with increased interaction on these issues between public and private sector entities.

The FSR contributes to a safe and efficient financial system by highlighting relevant information that improves awareness and encourages discussion of issues concerning the financial system. The Bank of Canada welcomes comments on the material contained in the FSR.

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Financial System Review

December 2006

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Bank of Canada
December 2006

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Developments and Trends

Notes

The material in this document is based on information available to **23 November 2006** unless otherwise indicated.

The phrase "major banks" in Canada refers to the six largest Canadian commercial banks by asset size: the Bank of Montreal, CIBC, National Bank, RBC Financial Group, Scotiabank, and TD Bank Financial Group.

Assessing Risks to the Stability of the Canadian Financial System

The *Financial System Review* is one vehicle that the Bank of Canada uses to contribute to the strength of the Canadian financial system. The Developments and Trends section of the *Review* aims to provide analysis and discussion of current developments and trends in the Canadian financial sector.

The first part of this section presents an assessment of the risks, originating from both international and domestic sources, that could affect the stability of the Canadian financial system. Key risk factors and vulnerabilities are discussed in terms of any potential implications for the system's overall soundness. The second part of the Developments and Trends section examines structural developments affecting the Canadian financial system and its safety and efficiency, for example, developments in legislation, regulation, or practices affecting the financial system.

The current infrastructure, which includes financial legislation, the legal system, financial practices, the framework of regulation and supervision, and the macroeconomic policy framework, significantly influences the way in which shocks are transmitted in the financial system and in the macroeconomy, and thus affects our assessment of risks.

Our risk assessment is focused on the vulnerabilities of the overall financial system, and not on those of individual institutions, firms, or households. We therefore concentrate on risk factors and vulnerabilities that could have systemic repercussions—those that may lead to substantial problems for the entire financial system and, ultimately, for the economy. In examining these risk factors and vulnerabilities, we consider both the likelihood that they will occur and their potential impact.

Particular attention is paid to the deposit-taking institutions sector because of its key role in facilitating financial transactions, including payments, and its interaction with so many other participants in the financial system. For instance, these institutions assume credit risks with respect to borrowers such as households and non-financial firms. Thus, from time to time, we assess the potential impact that changes to the macrofinancial environment may have on the ability of households and non-financial firms to service their debts.

Risk factors and vulnerabilities related to market risks are also examined. The potential for developments in financial markets to seriously affect the financial position of various sectors of the economy and, ultimately, to disrupt the stability of the Canadian financial system is assessed.

Financial System Risk Assessment

This section of the Review *presents an assessment of the risks arising from both international and domestic sources bearing on the stability of the Canadian financial system. The objective is to highlight key risk factors and vulnerabilities in the financial system and to discuss any potential implications for the system's overall soundness.*

Key Points

- The global economic outlook continues to be favourable.
- The financial positions of the Canadian financial, non-financial corporate, and household sectors remain solid.
- A key short-term risk is the possibility of an abrupt slowing in the U.S. economy, which might affect the financial health of customers of Canadian banks.
- Other (low-probability) risks include the possibility of a disorderly resolution of global imbalances and a significant correction in the prices of risky assets.
- The Canadian financial system appears to be in a good position to withstand these potential shocks.

Overall Assessment

Our overall assessment is largely unchanged from that in the June *Financial System Review* (FSR). Canada's financial, non-financial, and household sectors are in good shape. This reflects the continued prudent behaviour of companies in the financial and non-financial sectors, as well as a generally favourable economic environment in Canada and abroad.

Recently, a number of encouraging external developments have lent support to the base-case scenario of continued solid growth in Canada and abroad and have lessened the risks to financial stability. First, although the weakening in the U.S. housing sector has been greater than expected, growth in U.S. investment and exports seems to be solid. Second, economic activity in Europe and Japan has picked up, while that in Asia remains strong, suggesting that global economic activity should remain robust despite the slowing of the U.S. economy. Energy prices have also declined significantly; while this adversely affects Canada's terms of trade, it also helps to support growth in oil-importing countries and to ease inflation pressures in Canada and abroad. As well, the increase in volatility in financial markets observed at the time of the June FSR was short-lived, and since then markets have been surprisingly calm.

Potential risks

The continued favourable risk assessment is predicated largely on the expectation of continued solid economic growth in Canada and abroad.

We see three key risks to financial stability. One of these is a new short-term risk: the possibility that the slowing of the U.S. economy could be sharper than currently anticipated, which might affect the financial health of certain customers of Canadian banks. The other risks are those identified in the June FSR: (i) a disorderly resolution of global imbalances; and (ii) a significant and widespread reduction in risk appetite. Thus, the overall level of risk has increased somewhat, despite the fact that the risk of a disorderly resolution of global imbalances seems to have diminished.

The Bank's base-case scenario described in the October *Monetary Policy Report* factored in some slowing in the U.S.economy associated with the

weakness in the housing sector. At present, it appears that non-housing demand is continuing to grow at a solid pace. There is, however, a risk that the slowing in the U.S. economy could be greater than currently expected if the decline in the housing sector became more pronounced, or if the weakness in that sector spread to consumption spending.

A significant slowing in the U.S. economy would affect Canadian banks indirectly through its effect on the creditworthiness of Canadian exporters to the United States. It would also affect Canadian banks through their loans to U.S. consumers and businesses and through their exposure to U.S. financial institutions, which might also be hurt by an abrupt slowing of the U.S. economy. However, the strength of the balance sheets of Canadian banks should permit them to absorb this.

The base case referred to above assumes that there will be a gradual and orderly unwinding of global imbalances. The rotation of demand away from the United States towards the rest of the world, and the stabilization of the U.S. current account deficit over the past year, appear to make such an outcome more likely than in June. Nevertheless, the imbalances remain large, and there is a danger that growth outside the United States might falter. Thus, there is still a small risk of a less benign outcome involving abrupt movements in currencies and in the prices of other financial assets, increased protectionism, and much slower world economic growth than expected.

A significant reduction in world economic growth arising from a disorderly resolution of global imbalances would adversely affect Canada. The financial positions of Canadian export-oriented and related sectors would be weakened, increasing credit risk in the Canadian financial system. Even the rotation of demand away from the United States to the rest of the world is likely to have some impact on Canadian exports, given the high proportion of exports that go to the United States. Problems in export-oriented and related sectors would impinge on employment and, thus, might impair the ability of some households to service their debts. A disorderly resolution of global imbalances would also increase volatility in financial markets. While the strong balance sheets of most sectors of the economy would help them to weather these shocks, there could be a sharp tightening of credit conditions and an associated repricing of risk. Markets have demonstrated resilience this year in the face of rising concerns about inflation in May and June, increased tensions in the Middle East in July, and a large loss at a hedge fund in September. Nevertheless, there is still some uncertainty about how markets would react to a sudden significant decrease in risk appetite that could happen, for example, if there were a resurgence of uncertainty about the strength of global economic activity. This would affect the prices of risky assets in Canada and the position of Canadian holders of these assets. This risk remains at much the same level as it was at the time of the June 2006 FSR.

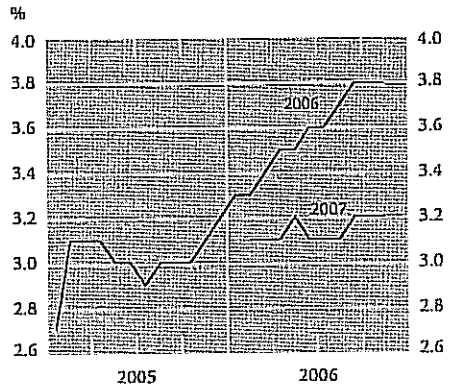
Canadian financial situation

Canadian banks remain in a good position to withstand shocks, since they are well capitalized and are posting strong profits. Credit quality remains good, with non-performing loans at a very low level. Our forward-looking indicator for the sector suggests that the market is viewing the financial position of the major Canadian banks as strong.

The position of the non-financial corporate sector overall is still very favourable. Aggregate profits remain at a high level. Firms are using these profits to finance investment, reduce debt, and accumulate liquid assets. However, the slowing of the housing sector and auto sales in the United States will exacerbate the already difficult position of many companies in the Canadian wood products and auto manufacturing sectors. As in the June FSR, our indicators are signalling some possible weakening ahead in the creditworthiness of the non-financial corporate sector, although from a very high level.

Household sector debt continues to increase at a rapid pace. With rising debt and interest rates, the household debt-service ratio has risen. Nevertheless, the ratio remains at a relatively low level. Updated assumptions based on an analysis of microdata have resulted in a downward revision in our estimates of the debt-service ratio back to 1999. These microdata also show that the situation of the most vulnerable households has improved slightly over the last six years. The continued rapid growth in household credit and the escalation in housing prices in Alberta, however, suggest that the financial position of the household sector bears watching.

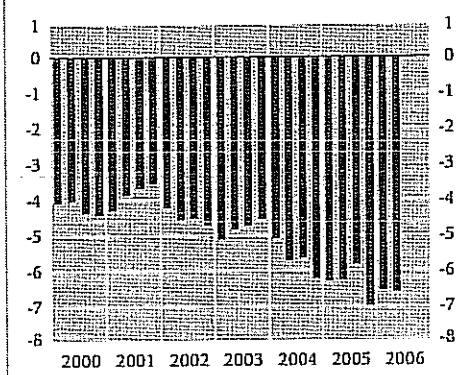
Chart 1 Evolution of Consensus Estimates for Annual Global Economic Growth*



* This estimate covers 46 countries. Country weights are determined using country GDPs converted at 2005 market exchange rates.
Source: Consensus Economics Inc.

Chart 2 U.S. Current Account

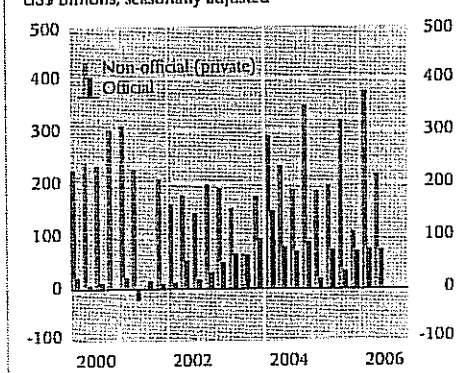
Per cent of GDP



Source: U.S. Bureau of Economic Analysis

Chart 3 Foreign Inflows

US$ billions, seasonally adjusted



Source: U.S. Bureau of Economic Analysis

The Macrofinancial Environment

The international environment

Although the U.S. economy is projected to slow over the coming year, there are signs of stronger activity in Japan and the euro area, as well as a continued robust expansion in emerging economies. Thus, the outlook for global growth remains favourable (Chart 1). This is generally supportive of an orderly resolution of global imbalances. However, risks to financial stability arising from the cooling U.S. housing market may have risen since the June FSR.

Global imbalances

There are signs that conditions facilitating an orderly resolution of global imbalances are now falling into place: the rotation in global growth away from the United States has begun; developments in interest rate differentials may also encourage a depreciation of the U.S. dollar; and recent data revisions suggest that the U.S. current account deficit may be peaking (Chart 2). In the second quarter of 2006, the external deficit stood at 6.6 per cent of GDP, essentially unchanged from the 2005 average.

The risk of a disorderly adjustment remains small. There are no indications of waning foreign investor confidence in U.S.-dollar-denominated assets. Indeed, private sector inflows have reached all-time highs over the past two years (Chart 3). Moreover, much of the increase in inflows over this period has come from private sector agents in advanced countries (Chart 4), somewhat alleviating concerns that the United States had become too dependent on official financing from emerging economies. Indeed, recent data suggest that the extent of foreign central banks' purchases of U.S. federal debt has receded from its 2004 peak, supporting official announcements of a gradual diversification of reserves away from U.S. assets. Financial markets have taken these public announcements in stride, indicating significant resilience.

Nevertheless, the possibility of a disorderly adjustment remains. The ongoing rotation of demand is encouraging, but it will need to be sustained. Moreover, while the U.S. current account deficit may be peaking, the level of imbalances is unprecedented. Foreign holdings of U.S. assets reached over one-fifth of world GDP

(excluding the United States) last year and continue to grow. The larger the global current account imbalances, the larger the adjustment to reduce them will need to be and the greater the risk that the process will be disorderly. An abrupt change in investor expectations, triggered by a severe slowdown in either China or the United States, or some other low-probability event, could potentially disrupt global financial markets.

The U.S. housing market

Attention has recently focused on the cooling U.S. housing market. The anticipated slowdown in residential investment is well under way (Charts 5 and 6), and consensus forecasts are calling for a further moderation in housing activity in 2007.

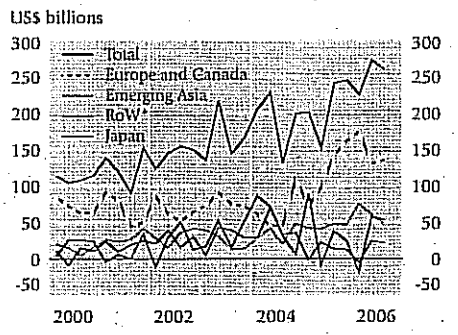
The housing market affects GDP directly as residential investment and indirectly through its effects on the wealth and expenditures of households. The housing market has supported U.S. consumption over recent years. The rapid rise in housing prices helped to offset the effects on household wealth of the sudden decline in equity values in 2000–01, and led to a surge in home equity withdrawals (Chart 7). The preponderant role of housing in household wealth raises concerns that the wealth effects of a housing slowdown could be large. In fact, equity withdrawals and mortgage refinancings are now declining.

Innovative mortgage products have become much more popular since 2000. Adjustable-rate mortgages now make up approximately 30 per cent of all outstanding mortgages in the United States, while subprime mortgages accounted for 20 per cent of all new mortgages in 2005 (Chart 8). The increased use of these mortgage products may pose concerns for financial stability, since they have higher delinquency rates and are more sensitive to increasing mortgage rates.[1] Moreover, a fall in housing prices may lead to negative equity for households with high loan-to-value mortgages.

To date, non-performing loans at financial institutions have remained low by historical standards. Both provisioning and capital positions at financial institutions in the United States are

1. This point was also discussed in the section on the international environment in the June 2006 issue of the FSR.

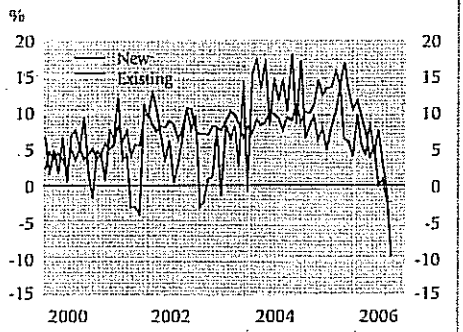
Chart 4 Net Purchases of U.S. Long-Term Securities by Foreigners



* RoW: Rest of world
Source: U.S. Treasury International Capital System

Chart 5 U.S. Median Selling Price for Housing

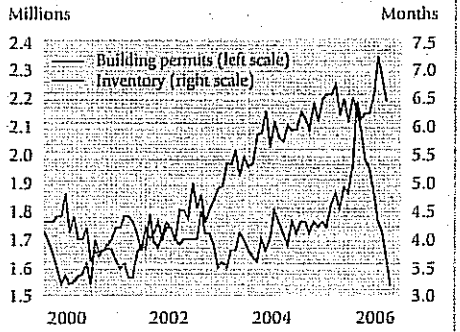
Year-over-year percentage change



Note: The new homes series covers only single-family homes, while the existing homes series includes condominiums.
Source: National Association of Realtors, U.S. Census Bureau

Chart 6 United States: Building Permits and Inventory of New Single-Family Homes

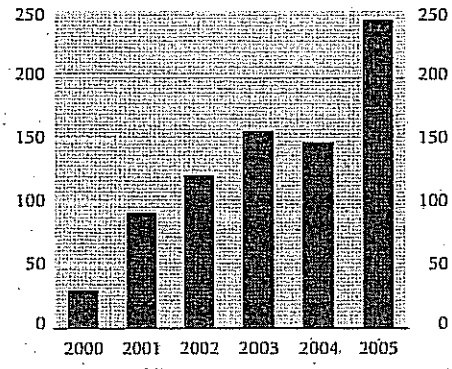
Seasonally adjusted at annual rates



Note: Building permits are in millions of units and inventory data are the number of months of supply at current sales rates.
Source: U.S. Census Bureau

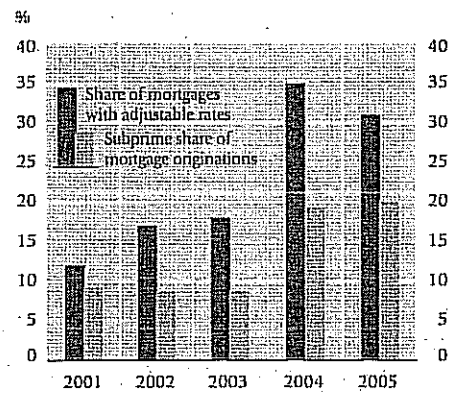
Chart 7 United States: Real Home Equity Cashed Out at Refinance

Billions of 2005 U.S. dollars



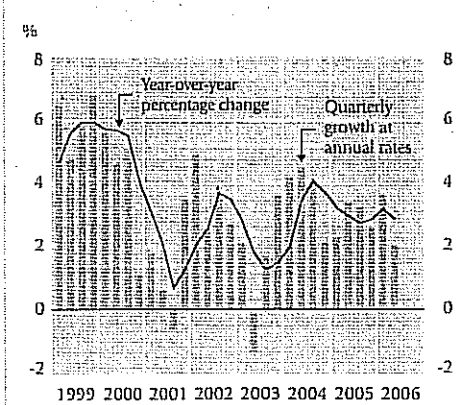
Source: Freddie Mac

Chart 8 United States: Adjustable-Rate and Subprime Mortgages



Source: Harvard University Joint Center for Housing Studies

Chart 9 Real GDP Growth: Canada



Source: Statistics Canada

ample, on average, indicating that they are well positioned to handle an increase in default rates.

There is a risk that the slowing of the U.S. economy could be more pronounced than currently anticipated if the decline in the housing sector was greater than expected or if the weakness spread to consumption expenditures. A sharper slowing in the U.S. economy could affect Canadian banks both directly and indirectly. It would significantly affect Canadian export sales (80 per cent of which are to the United States) and, thus, the creditworthiness of Canadian export-related sectors. There could also be some impact on Canadian banks through their direct exposure to U.S. consumers and non-financial businesses. (As of June 2006, loans by Canadian banks to these sectors represented 12 per cent of their total assets.) Canadian banks could also be affected indirectly if U.S. banks were hurt significantly by an abrupt slowing in the U.S. economy, since the claims of Canadian banks on U.S. banks amounted to 2 per cent of their total assets as of June 2006. But given the strong profit and capital position of the Canadian banks, they appear to be in a good position to cope with these effects.

Canadian developments

Canadian economy

The growth of Canada's real GDP (expressed at an annual rate) eased to 2 per cent in the second quarter of 2006 from an average of just over 3 per cent in the second half of 2005 and the first quarter of this year (Chart 9). Growth in final domestic demand is expected to continue to underpin the economic expansion in Canada through 2008. Net exports will likely exert a significant drag on growth through 2007, but this effect should diminish over time.

The Canadian economy is continuing to adjust to the appreciation of the Canadian dollar, the high prices of many commodities, and strong competition from some Asian countries. Energy and metals prices have been quite volatile over the past year (Chart 10). Although the high prices for both crude oil and metals chiefly reflect strong growth in global economic activity, some uncertainty remains about whether these prices can be maintained. In particular, oil prices have eased since mid-July, reflecting expectations of reduced supply risk and some easing in the prospects for global oil demand.

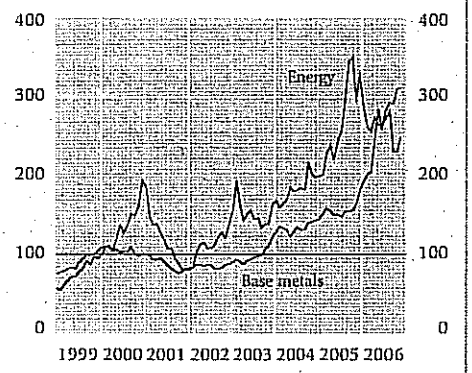
Corporate sector

The financial position of the aggregate non-financial corporate sector continued to be healthy in the third quarter of 2006. Profitability, while easing from the high level reached in the preceding quarter, remained relatively strong, and leverage decreased further, reaching a low level (Chart 11).

Profitability has remained at a high level in most sectors with a low exposure to international trade, as well as in the oil and gas extraction and other mining sectors. However, overall profitability for the other industries with a high exposure to international competition, which has been relatively weak in recent years, decreased markedly in the third quarter (Chart 12).

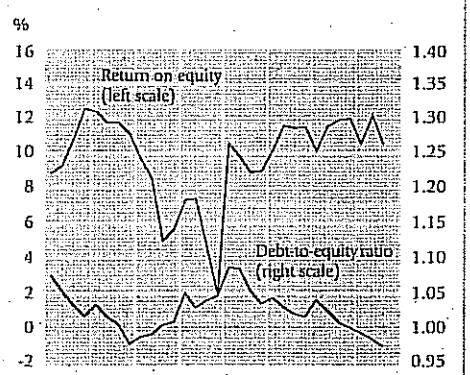
As in June, it is our view that there could be some weakening in corporate credit quality going forward. While corporate bond spreads remain at a very low level, downgrades as a percentage of ratings actions have increased slightly: from 61 per cent in 2005 to 65 per cent for the year to date (Chart 13). The microdata indicator developed by the Bank of Canada, which measures the share of assets concentrated in companies considered to have weak profit margins, liquidity ratios, and leverage ratios, also points to the possibility of worsening corporate credit quality (Chart 14). This share rose to about 8 per cent in 2005, which is well below the peak in 2001, but higher than the levels seen through the last half of the 1990s. This increase appears to be driven by the materials and telecommunications sectors. A second and more current indicator, based on the contingent claims approach, is also signalling a possible increase in risk in the non-financial corporate sector.[2,3] While the rise in this indicator partly reflects movements in the indicators for the

Chart 10 Bank of Canada Commodity Price Index



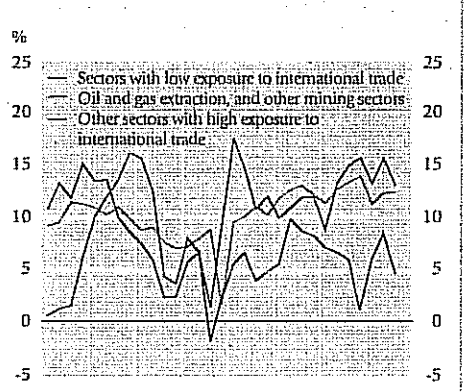
Source: Bank of Canada

Chart 11 Financial Position of the Canadian Non-Financial Corporate Sector



Source: Statistics Canada and Bank of Canada

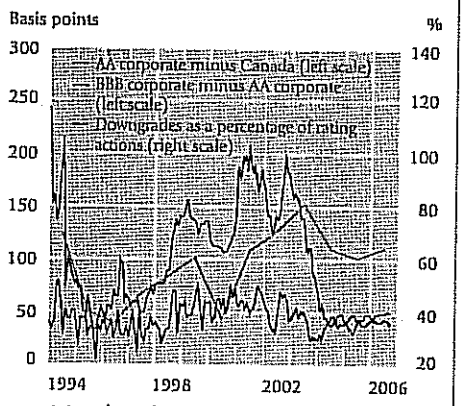
Chart 12 Rate of Return on Equity for Selected Sectors



Source: Statistics Canada

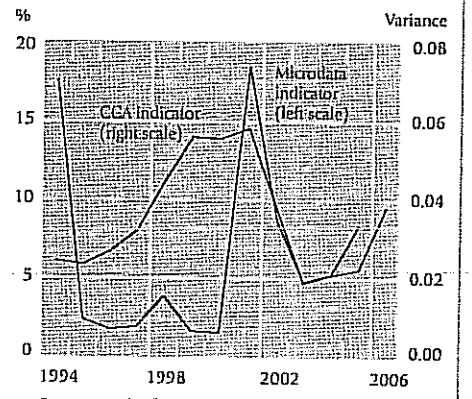
2. The report containing details of the microdata indicator was published in the December 2005 *Financial System Review* (pp. 37–42), and the contingent claims approach (CCA) was discussed in the June 2006 issue (pp. 43–51.)
3. These indicators were used in the analysis of the corporate sector in the June 2006 FSR (p. 11). At that time, balance sheet information for 2005 was available for only about one-half of the sample companies. The indicator now includes information for virtually all companies. The CCA estimate now includes balance sheet information on a larger number of companies than was the case in June, as well as market data up to 17 November 2006.

Chart 13 Bond Yield Spreads* and Ratings Actions



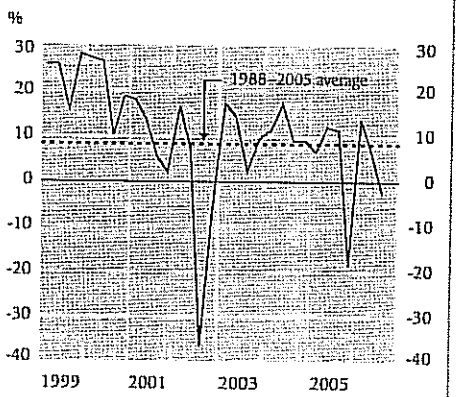
* 4-week moving average
Source: Scotia Capital and Moody's

Chart 14 Microdata and CCA Indicators



Source: Bank of Canada calculation based on data from the *Financial Post*, Thomson Financial Datastream, and *The Globe and Mail*

Chart 15 Return on Equity: Automotive Manufacturing



Source: Statistics Canada

retail trade, forestry, accommodations, and transportation sectors, the result should be viewed with some caution, since it is driven primarily by an increase in volatility in the oil and gas sector between 2005 and 2006.[4]

Industry

A limited number of industries, such as auto manufacturing, wood and paper products, and computer and electronics manufacturing, have been experiencing considerable financial stress over most of the period since 2001.

The Canadian auto manufacturing industry registered a small loss in the third quarter (Chart 15). Profitability is likely to remain weak over the near term. One important contributing factor is the decline in U.S. sales of SUVs and trucks, which typically generate higher profit margins for some manufacturers than do most other vehicles. Still more cutbacks in production likely took place in the second half of 2006, and further restructuring of operations by Ford and several auto parts companies have recently been announced.

Profitability in the wood and paper products industry remained low in the first three quarters of 2006 (Chart 16). Given the impact of the slowdown in the U.S. housing market on lumber prices and export volumes, profitability is likely to remain weak over the near term. Indeed, many firms have recently announced further layoffs and restructuring, especially of their lumber operations. The Canada-U.S. Agreement Ending the Softwood Lumber Dispute will have a positive near-term effect on the financial positions of lumber producers as a result of the return of at least 80 per cent of duties paid since 2002. But while the U.S. duties were revoked, lumber producers are now subject to an export charge of 15 per cent, since lumber prices are currently well below the threshold level for such charges under the Agreement.

The electronics and computer manufacturing industry registered a low rate of return in the third quarter of 2006 (Chart 17). While sales volumes are at relatively high levels, the industry continues to face intense competitive pressures from firms in emerging markets. Consequently, consolidation and restructuring are under way, especially in the global telecommunications

4. The oil and gas sector accounts for about 35 per cent of the market value of assets included in the sample.

equipment industry. These developments may lead to further restructuring of operations in the Canadian segment of this industry.

Grains producers have continued to be adversely affected by past weakness in global grains prices, the appreciation of the Canadian dollar, and rising input costs. As well, the size of the grains and oilseeds crop was down from the record level of 2005 as a result of hot, dry weather conditions on the Prairies. However, the quality of the crop appears to have been above average, and grains prices have also risen markedly in recent weeks.

Canadian banks hold both securities and loans of companies in these sectors, and thus are exposed to both credit and market risk; however, it is unlikely that difficulties in these sectors would have significant adverse effects on the Canadian financial system. Moreover, many of these firms are continuing to undertake major adjustments in their operations to improve their profitability over the longer term.

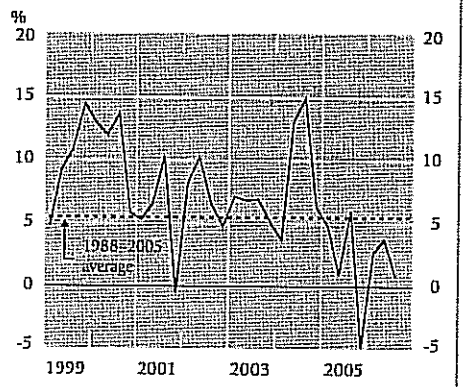
Household sector

Household debt continues to grow at a robust pace (about 10 per cent year over year), although it has slowed slightly in recent months. This slowing is partly due to a deceleration in the still buoyant rate of growth in personal lines of credit. Growth in household credit has been very strong in Western Canada. While this is mainly associated with population movements and growing incomes, the dramatic increase in housing prices in that region has also been a factor.

The increase in debt has contributed to a further rise in the debt-to-income ratio. (For a discussion of some of the factors that may have contributed to this increase since the mid-1980s, see Box 1.) With higher interest rates and debt levels, the debt-service ratio (DSR) rose again in the first half of 2006 (Box 2). However, it remains at a relatively low level, suggesting that the financial health of households remains sound.

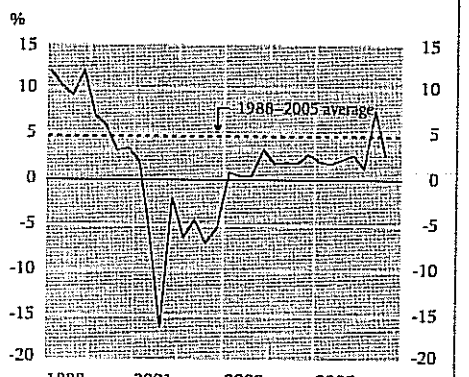
The interest rates on many outstanding mortgages are below current mortgage rates. As these mortgages are renewed, it is likely that many householders will see a higher interest rate on their mortgages. Thus, the debt-service ratio will likely continue to rise.

Chart 16 Return on Equity: Wood and Paper Manufacturing



Source: Statistics Canada

Chart 17 Return on Equity: Electronics and Computer Manufacturing



Source: Statistics Canada

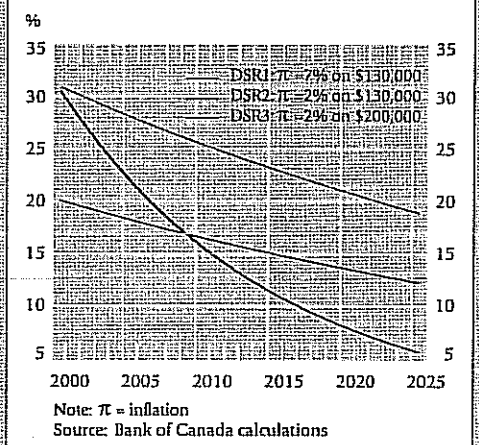
Box 1

Low Inflation and Canadian Household Indebtedness

The ratio of debt to disposable income of the Canadian household sector has increased systematically, from 67 per cent in the mid-1980s, to more than 120 per cent currently. Financial deregulation and technological advances, by increasing competition for loans and lowering transactions costs, have certainly contributed to the higher level of debt.

An environment of low inflation has also contributed.[1] By reducing the front-loading of nominal interest payments on long-term debt (such as mortgage debt), lower inflation has relaxed credit constraints for some borrowers, allowing them to increase their ratios of debt to disposable income.

The Debt-Service Ratio as a Function of Inflation



Note: π = inflation
Source: Bank of Canada calculations

The chart illustrates the impact of different levels of inflation on the evolution of the debt-service ratio (DSR)[2] over time on a $130,000 mortgage loan with a fixed interest rate and an amortization period of 25 years. It is assumed that the typical household income is $50,000 at the beginning of the mortgage contract and that it increases at the same rate as inflation thereafter. The DSR1 line shows the evolution of the DSR for such a mortgage loan (and income growth) when inflation is 7 per cent (the average level over the 1970–85 period), while the DSR2 line shows the DSR when inflation is at 2 per cent. Both scenarios assume that the real interest rate of the mortgage is 4 per cent.

Given the assumed size of the mortgage, the mortgage payments reach a threshold of 30 per cent in the high-inflation regime but fall far short of that threshold (20 per cent) in the low-inflation world.[3] Consequently, the amount of money that can be borrowed before the DSR reaches 30 per cent is higher when inflation is low. For example, the debt-service limit of 30 per cent is reached with a $130,000 debt when inflation is high, as it was in the 1970s and early 1980s. However, when inflation is low (2 per cent), the same 30 per cent limit would be reached only with a much higher debt—$200,000—assuming that real interest rates remain at 4 per cent.[4] This is illustrated by the DSR3 line in the chart.

The upward trend in the ratio of debt to disposable income should occur only during the transition from a high-inflation environment to one of low inflation. After this transition period, the aggregate ratio of debt to disposable income should stabilize at a new level consistent with the low nominal interest rate environment.

A key issue from a financial stability perspective is that the DSR stays higher for a longer period in the low-inflation environment (compare DSR3 with DSR1 in the chart). This is because nominal income is not rising as rapidly when inflation is low, while nominal payments remain fixed. Hence, vulnerable households remain vulnerable for a longer period when inflation is low.

As noted above, lower inflation allows households to borrow more. However, many may choose not to increase their debt to the full extent possible. Rather than increasing debt by an amount that would result in a debt-service ratio equivalent to what they would have had in a high-inflation environment, households might choose instead a debt level that would result in a debt-service ratio between DSR2 and DSR3. It thus seems plausible that the DSR distribution may have shifted to the left (that is, the proportion of households with a high DSR may have declined) as inflation fell, reducing vulnerabilities in the household sector.

1. This analysis is inspired by Guy Debelle (June 2004), "Macroeconomic implications of rising household debt," BIS Working Paper No. 153.
2. Interest and principal payments as a proportion of disposable income.
3. For insured mortgages, CMHC requires mortgage payments (principal and interest) plus heating costs, property taxes, and 50 per cent of applicable condominium fees to represent not more than 32 per cent of the household gross income. Financial institutions use similar eligibility criteria for uninsured mortgages.
4. Since lower inflation also tends to be associated with less inflation uncertainty and a lower inflation risk premium, real interest rates would also be lower in the low-inflation world, pushing up the amount of debt that individuals could take on still more. This is not taken into consideration here.

Box 2

Updating the Estimate of the Aggregate Debt-Service Ratio

In the FSR, the debt-servicing capacity of households is typically gauged by the aggregate debt-service ratio (DSR), which is calculated as the share of disposable income devoted to interest payments on debt.

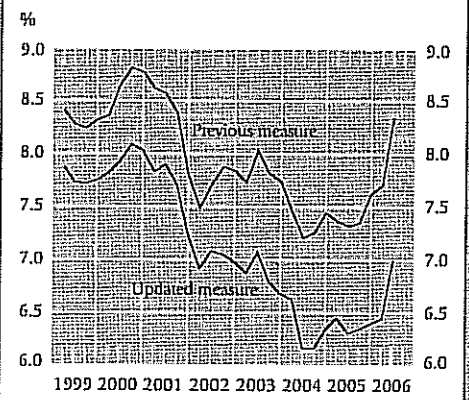
The estimate of the aggregate DSR used in the FSR is based on a number of assumptions.[1] Recently, information from the Canadian Financial Monitor survey, conducted by Ipsos Reid Canada, has allowed us to refine and update our assumptions about the relative importance of the types of debt that households have and the interest rates that they are paying. The estimate of the aggregate DSR from 1999Q1 to 2006Q2 has been updated based on these new assumptions.

Our estimated aggregate DSR has been revised down over that period. This is largely due to (i) lower effective interest rates on consumer loans, owing to the growing importance of secured personal lines of credit, (ii) more pronounced discounting on mortgage loans, especially variable-rate mortgages, than previously assumed, and (iii) larger weights on variable-rate mortgages over the 1999–2005 period than previously assumed.

The new estimate of the DSR in 2006Q2 is 7.0 per cent—1.4 percentage points lower than our previous measure (see chart below).

This suggests that, overall, households are in a better position to service their debt than previously thought.

Household Debt-Service Ratio

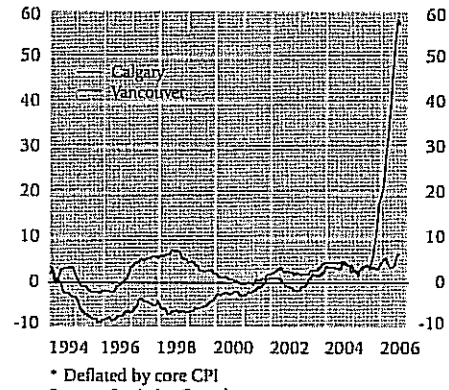


Source: Statistics Canada, Ipsos Reid, and Bank of Canada calculations

1. See Box 1 in the December 2004 FSR.

Chart 18 Real Prices for New Houses, Western Canada*

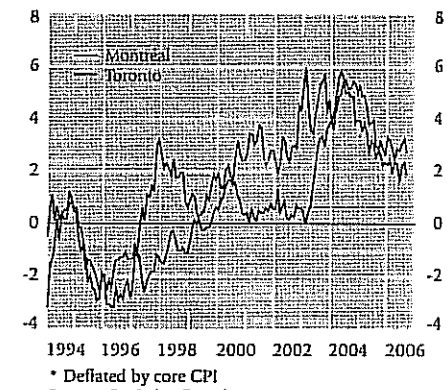
Year-over-year percentage change



* Deflated by core CPI
Source: Statistics Canada

Chart 19 Real Prices for New Houses, Central Canada*

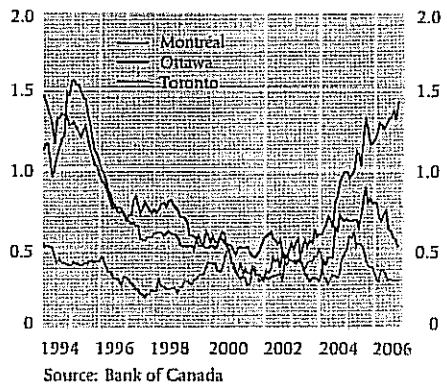
Year-over-year percentage change



* Deflated by core CPI
Source: Statistics Canada

Chart 20 Recently Completed Unoccupied Dwellings, Central Canada

As a percentage of population



Source: Bank of Canada

Housing prices

Despite higher interest rates, average housing prices have continued to increase in Canada, fuelled by income growth and strong employment. Recent innovations announced by mortgage issuers could further support housing demand and prices, since they may lead to lower monthly mortgage payments.[5] Aggregate housing prices, however, mask significant regional differences: while the pace of increase in real housing prices remains very strong in Western Canada, especially in Alberta, it has decelerated significantly in Central Canada.

The increase in housing prices in Alberta has been supported by strong income growth, employment gains, and in-migration, causing housing demand to outstrip supply (Chart 18). There was also some evidence of flipping among buyers over the summer, suggesting some speculation, particularly in Calgary.[6] There are now some indications that price increases in Alberta are slowing as more supply comes on the market, although they continue to increase at a rapid pace. It is thus important to continue to monitor developments closely.

The pace of increase in housing prices in Central Canada has continued to slow gradually, as housing supply is catching up with demand (Chart 19). Rising listings in resale markets suggest that the pace of the price increase should continue to moderate. Nevertheless, with little evidence of widespread excess supply, as measured by the number of unoccupied dwellings as a ratio of population (Chart 20),[7] no major widespread reversal in housing prices is expected.[8]

5. These changes include an increased maximum amortization period for insured mortgages, split fixed/float mortgages, and interest-only mortgages.
6. Some observers have suggested that many purchases of new condominiums in Calgary were for investment purposes.
7. A steady increase in this ratio in Montréal explains the marked slowdown in the pace of increase in real housing prices in Montréal.
8. There could, however, be imbalances in certain segments of local housing markets. See the Highlighted Issue on condominium prices in the June 2006 FSR (p. 14).

Highlighted Issue

An analysis of the financial position of the household sector using microdata

Prepared by Umar Faruqui, Simon Lai, and Virginie Traclet

Household credit accounts for about 70 per cent of the total Canadian-dollar loan exposure of Canadian banks. Consequently, assessing the financial health of Canadian households is an important part of our assessment of risks in the banking sector and in the financial system as a whole. This is especially true in the current context of steadily rising household indebtedness, with the aggregate ratio of debt to income currently standing at 124.7 per cent.

Our past analysis, based on debt-service and debt-to-asset ratios calculated using aggregate data, suggests that financial system risks relating to the Canadian household sector appear to be low. But aggregate data can mask information about the underlying distribution of debt, especially information about the proportion of vulnerable households; i.e., households that could be particularly affected by negative shocks. This Highlighted Issue supplements our past analysis by using microdata to examine the distribution of debt indicators across households (by income and age groups). This analysis supports the view that, overall, the Canadian household sector seems to be in good financial health and, thus, should not pose a major threat to the stability of the Canadian financial system.

The data

The microdata used here come from the Canadian Financial Monitor (CFM), a survey conducted by Ipsos Reid Canada that provides detailed information on household balance sheets. The survey is distributed throughout the year. About 12,000 households participate annually, which represents a response rate of approximately 35 per cent. CFM data are available beginning in 1999.

The CFM is available on a timely basis, while Statistics Canada's Survey of Financial Security (SFS) is conducted infrequently.[9] CFM data are, therefore, useful for analyzing recent developments. However, the most recent results should be interpreted with some caution, because data are available only for the first half of 2006 and, thus, the sample for that year is smaller.[10]

For our analysis, households are divided into five income groups and four age groups, as defined in Table 1.

Two elements suggest that the quality of CFM data is satisfactory. First, a comparison of microdata from the 1999 CFM with microdata from the 1999 SFS shows that CFM and SFS data on gross income, mortgage debt, and consumer debt (which are particularly important for our analysis of the debt-service ratio) are broadly comparable. The asset holdings reported by CFM, however, are lower than those reported by SFS. Second, as illustrated by Table 2, the distribution of debt and assets by age and income groups are consistent with expectations: (i) close to half of total household debt is held by middle-aged households (age group 2); (ii) the debt of higher-income households (income group 5) is large relative to their size in the population; and (iii) asset holdings increase with income.

An analysis of the distribution of various debt indicators

Household indebtedness is traditionally gauged using three indicators: (i) the debt-to-income ratio; (ii) the debt-service ratio, which measures the fraction of their income that households must devote to servicing their debts; and (iii) the debt-to-asset ratio, which shows to what extent debt is backed by assets. Microdata allow us to analyze the distribution of these indicators (i.e., to see how they vary across income groups and how they have evolved over time) and to assess the proportion of vulnerable households (i.e., households that could be more severely affected by negative shocks, because they have either high debt-service ratios and/or high debt-to-asset ratios). The analysis in this Highlighted Issue is based only on households that have debt.

CFM data indicate that the debt-to-income ratio of households across all income groups is currently higher than in 1999. At the same time, they indicate that the proportion of households

9. The 1999 SFS was the most recent available at the time of writing.

10. In the first half of 2006, 5,930 households were surveyed, which compares with an annual target of 12,000 households.

Table 1
Definition of Age Groups and Income Groups

	1	2	3	4	5
Age groups	Below 35	Between 35 and 49	Between 50 and 63	64 and over	
Income groups ($)[a]	Below 32,500	32,500-57,499	57,500-84,999	85,000-124,999	Above 125,000

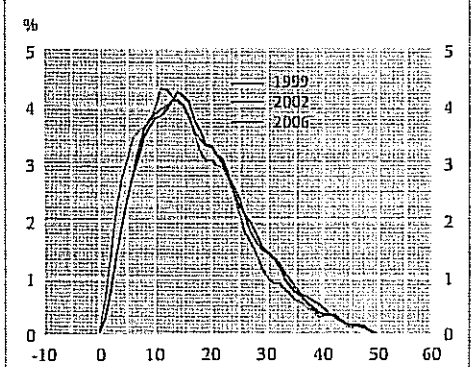
a. Income is measured by gross family income.

Table 2
Distribution of Debt and Assets by Age and Income
Per cent[a]

	Age group									
	1 (22.4%)		2 (36%)		3 (22.6%)		4 (19%)		Total	
Income group	Debt	Asset	Debt	Asset	Debt	Asset	Debt	Asset	Debt	Asset
1 (29.6%)	2.3	0.9	2.5	1.8	1.5	2.7	1.0	4.1	7.3	9.5
2 (27.7%)	7.3	2.7	8.9	5.7	3.6	5.9	1.4	6.9	21.2	21.2
3 (13.1%)	6.2	2.1	7.2	4.8	2.7	4.3	0.6	3.5	16.7	14.7
4 (17%)	9.1	3.6	14.0	9.6	4.6	6.9	0.6	4.0	28.3	24.1
5 (12.6%)	5.7	2.9	14.9	13.2	5.4	9.9	0.5	4.5	26.5	30.5
Total	30.6	12.2	47.5	35.1	17.8	29.7	4.1	23.0	100	100

a. The numbers in brackets represent the proportion of households in each income and age group relative to the whole population.

Chart 21 Distribution of the Debt-Service Ratio, Evolution Over Time



Source: Ipsos Reid and Bank of Canada calculations

with debt has fallen somewhat and is now 75 per cent, compared with 78 per cent in 1999. Thus, the rise in the household debt-to-income ratio occurred not because a larger proportion of households are indebted, but because indebted households are carrying more debt.

The second indicator used to assess household indebtedness is the debt-service ratio (DSR), which is calculated here as total debt payments (interest and principal payments on debt) divided by gross household income. As illustrated in Chart 21, there are more people with a low DSR than with a high DSR, which suggests that debt sustainability should not be an issue for the large majority of households. However, the distribution of the DSR by income group over 1999–2006 suggests that the proportion of low-income households (group 1) devoting a large fraction of their income to debt payments is higher than that of households with higher incomes (Chart 22).[11]

Despite the increase in overall household debt compared with income, the situation of the most vulnerable households has marginally improved (Table 3). Data for the proportion of vulnerable households (i.e., households with a DSR above some vulnerability threshold)[12] show that: (i) the proportion of households with a DSR above 23 per cent has decreased in the past two years and is significantly below the peak value in 2000; and (ii) while the proportion of households with a DSR above 40 per cent increased in the first half of 2006, it is still at about the average since 1999. Overall, the proportion of total debt held by vulnerable households is at its lowest level for the whole sample period.

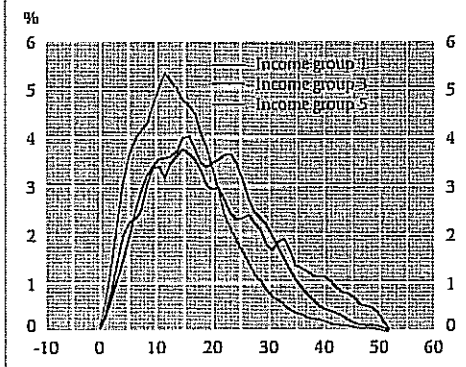
11. Pooled data, rather than individual years, were used to examine the distribution of the DSR by income group because of problems associated with small samples.
12. Vulnerable households are defined using two different vulnerability thresholds for the DSR. The first threshold, which is commonly used in the literature, is reached when debt payments exceed 30 per cent of household net income, which translates into a 23 per cent threshold for our DSR, which is calculated using gross income. (We make the assumption that disposable income is about 75 per cent of gross income.) The second threshold—commonly used by financial institutions—is reached when total debt payments exceed 40 per cent of household gross income.

There are more households with a high DSR in Western Canada (i.e., Manitoba, Saskatchewan, Alberta, and British Columbia) than in the rest of Canada. In British Columbia, this might be explained, at least partly, by higher housing prices in Vancouver. However, thanks to sustained income growth in those provinces, this has not resulted in a rise in the proportion of vulnerable households in Western Canada.

Overall, the DSR distribution suggests that despite rising debt and rising short-term interest rates, the financial position of the household sector has recently shown marginal improvement.

The last indicator used to assess household indebtedness is the debt-to-asset ratio (DAR), which is calculated as total debt divided by total assets.[13] The distribution of the DAR suggests that debt and asset holdings are relatively well matched; i.e., households that have debts also have assets (recall Table 2, left column). We define vulnerable households with regard to the DAR as households with a DAR above 2, which is consistent with the fact that, from 1987 to 2004, the average DAR of insolvent households in Canada hovered around 2 (Office of the Superintendent of Bankruptcy Canada 2006).[14] As illustrated in Table 4, the proportion of vulnerable households (DAR above 2) has risen since 2004. This has been accompanied by a rise in the share of total debt held by these vulnerable households. There is no benchmark for the proportion of vulnerable debt above which there is a risk for the financial system. But since the level of vulnerable debt accounts for 3.6 per cent of household debt, we do not think that the situation poses an increased risk to the financial system. A focus on households that are vulnerable with regard to both the DSR and the DAR supports this view: the debt held by households that have both a DSR and a DAR above vulnerability thresholds accounts for 2.8 per cent of total household debt, using the 23 per cent DSR vulnerability threshold, and for less than 0.4 per cent of total household debt, using the 40 per cent DSR threshold.

Chart 22 Distribution of the Debt-Service Ratio by Income Group



Source: Ipsos Reid and Bank of Canada calculations

Table 3

Proportion of Households with a DSR above Vulnerability Thresholds

	Proportion of households with DSR>23%[a]	Share of total debt held by households with DSR>23%[b]	Proportion of households with DSR>40%[a]	Share of total debt held by households with DSR>40%[b]
1999	29.3	40.5	2.6	4.9
2000	31.2	43.8	4.6	6.3
2001	30.6	43.8	3.9	5.8
2002	28.4	41.1	3.0	4.6
2003	29.2	39.8	2.7	4.3
2004	26.3	36.5	3.6	5.6
2005	25.1	34.7	2.6	4.0
2006	25.2	34.4	3.2	4.0

a. As a percentage of total households with debt
b. Vulnerable debt as a percentage of total household debt

Table 4

Proportion of Households with a DAR above the Vulnerability Threshold (2)

	Proportion of households with DAR>2[a]	Share of total debt held by households with DAR>2[b]
1999	4.7	0.6
2000	5.1	0.6
2001	5.2	0.8
2002	4.7	1.1
2003	5.2	1.9
2004	6.6	3.6
2005	6.8	3.1
2006	6.9	3.6

a. As a percentage of total households with debt
b. As a percentage of total household debt

13. The DAR is interpreted with some caution since, as mentioned before, asset data from CFM may underestimate true asset data.
14. Assets in the OSBC study include: house, financial assets, cars, furnishings, and personal assets.

Overall, this analysis broadly supports our past conclusion: Canadian households seem to be in rather good financial health, with debt largely held by households with sufficient income and/or assets. Therefore, the household sector should not pose a major threat to the stability of the Canadian financial system, at least in the short term.

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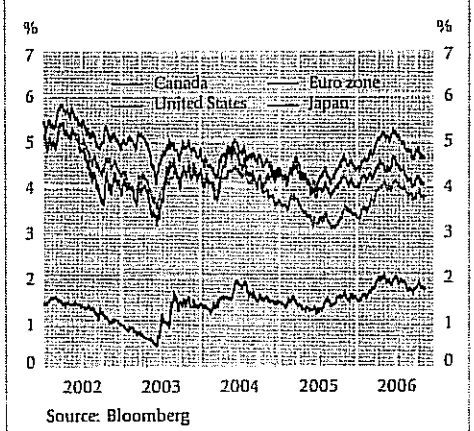
The Financial System

Financial markets

Prices for a number of commodities and riskier assets, including those for global equities, declined sharply in May and June. In a historical context, the market turbulence at that time was relatively minor, with the prices of many risky financial assets remaining above the levels that prevailed at the start of the year. Since the end of June, equity prices have again generally been appreciating. Although the prices of some commodities, particularly energy, have declined since the June FSR, they have done so in an orderly manner. Overall, despite the repricing in May and June, risk appetite remains generally high. As such, there is still some concern, first expressed in the December 2005 FSR, that market risk may be underpriced.

The market turbulence in May and June can be partly attributed to greater uncertainty about the macroeconomic outlook, coupled with market concerns that monetary policy might need to be tightened by more than anticipated to ward off inflationary pressures. This increased level of uncertainty has since largely dissipated, with financial markets generally expecting a slowing in the economies of industrialized countries to restrain inflation and to reduce the need for any significant tightening of monetary policy. This reduction in inflation concerns has contributed to the recent declines in the yields on long-term government bonds in all major industrialized countries (Chart 23). In addition, even though global policy rates have increased and further modest increases are expected in some countries, global economic growth has

Chart 23 Yields on 10-Year Government Bonds

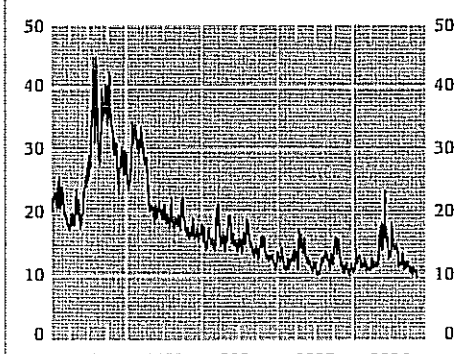


Source: Bloomberg

remained resilient, providing a strong fundamental backdrop for financial-asset prices.

While there is some evidence that investors are paying closer attention to fundamentals (e.g., differentiating among emerging markets), there is little indication of an overall reduction in investors' risk appetite. This most recent period of market turbulence seems to have had little impact on investors' appetite for high-yield, less-liquid assets. Numerous indicators suggest that market participants assess risks to be relatively low and/or that they have a healthy appetite for risk. For example, the implied volatility of the S&P (VIX) and spreads on emerging-market bonds have both fallen back to historically low levels (Chart 24).

Chart 24 Implied Equity Volatility*



* VIX: Implied volatility of the S&P 100
Source: Bloomberg

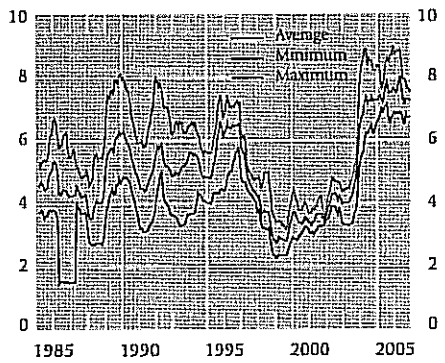
This healthy risk appetite may reflect improvements in risk management and a reduction in systemic risk arising from new financial products, new hedging possibilities, and a higher degree of global capital mobility. Nevertheless, it is still possible that volatility and risk premiums could rise abruptly, perhaps triggered by lower-than-expected global economic growth or higher inflation, resulting in a more substantial and widespread decline in asset prices.

Financial institutions

The large Canadian banks remain very profitable and well capitalized, enjoying record profits through the first three quarters of fiscal 2006. The banks have been generating an underlying return on equity of about 20 per cent, on average.

These strong profits have been broadly based. The domestic personal and small business side of the banks' operations has continued to perform strongly. In addition, growth in corporate lending has increased somewhat in 2006. Banks continue to benefit from very firm credit quality in their retail and corporate loan portfolios, in spite of such potentially adverse factors as the strong Canadian dollar and high oil prices. Securities underwriting and trading activity have also been favourable for earnings. Financial intermediation spreads, which had been declining for some time, are starting to stabilize. Some of the Canadian banks have continued to make investments and strategic moves aimed at enhancing the profitability of their retail banking and wealth-management operations in the United States.

Chart 25 Distance to Default for Major Banks



Source: Bank of Canada calculation based on data from OSFI and Thomson Financial Datastream

Market indicators support the view that Canadian banks are financially healthy. For example, a measure of the perceived riskiness of banks based on the Merton contingent claims approach shows that the banks are in a strong financial position (Chart 25).[15]

The three large Canadian life and health insurance companies also enjoyed firm profits in the first three quarters of 2006. The companies recorded strong operating results in both their protection (individual and group) and wealth-management products, although weaker equity markets in the second quarter affected variable annuity sales to some extent. They have also been benefiting from the strong global economy, given their geographic diversification (although the strong Canadian dollar had some dampening effect on the Canadian-dollar value of profits earned in the United States), and they continue to explore expansion opportunities overseas. The life and health insurance companies are well capitalized and enjoy strong credit quality in their fixed-income portfolios.

The Canadian securities industry reported record profits in the first half of 2006, with operating profits up 43 per cent over the same period a year ago. However, profits in the second quarter were 20 per cent lower than in the robust first quarter. This reduction was largely due to the stock market pullback and increased market volatility in the spring, which adversely affected trading profits.

15. This measure was discussed in the June 2006 FSR.

Important Financial System Developments

This section of Developments and Trends examines structural developments affecting the Canadian financial system and its safety and efficiency.

Financial Markets

Principal protected notes

Principal protected notes (PPNs) are a growing class of investment products that have a fixed term to maturity and offer a rate of return based on the performance of an underlying investment, typically hedge funds, mutual funds, or stock market indexes. One of the main characteristics of this type of financial instrument is a guarantee that the holder will recover the capital invested if the note is held until maturity.[16] The investor is not, however, guaranteed to receive any income in addition to this principal. The ability to earn a profit depends on the performance of the underlying investment, net of fees and other expenses paid to the guarantor, sponsor, fund manager, or other institution involved in creating the product.

The stock of Canadian PPNs roughly doubled between 1999 and 2004 to reach $21 billion.[17] This financial product widens the spectrum of investment opportunities available to retail investors by making it possible to gain exposure to vehicles such as hedge funds without having to make a large investment. PPNs also provide investors interested in gaining exposure to some risky—and potentially high-performing—investments with an opportunity to do so while, in principle, eliminating the downside risk.

As with any other financial asset, investors purchasing PPNs need to understand the characteristics of the instrument. The Investment Dealers Association (IDA) and the Canadian Securities Administrators (CSA) are concerned that, given the increasing complexity of PPNs, disclosure standards may not be sufficient to properly inform prospective investors about the structure of these instruments and about the various factors affecting cash flows, such as fees. This makes it more difficult for investors to assess the value of these notes. The IDA and the CSA are also concerned that investors can buy some types of PPNs from salespeople who are not required either to meet the same proficiency standards as registered investment advisers or to ensure that the investment products sold meet the specific needs of the client.

Securities transfer legislation

This past May, the legislative assemblies of Ontario and Alberta passed legislation to modernize the systems of rules governing the transfer and holding of securities in their respective provinces. These new Securities Transfer Acts are both modelled on Article 8 of the U.S. Uniform Commercial Code and are broadly similar. Other provinces are expected to follow suit. The objective is to have a largely harmonized framework across provinces—and between Canada and the United States—to facilitate capital flows across jurisdictions.

This improvement in the legal foundations that support securities transactions is crucial for the efficiency of the financial system. Modernizing legislation on securities transfer became a priority after previous attempts by Canadian provinces to catch up with progress made internationally

16. Often, PPNs are not insured by the Canadian Deposit Insurance Corporation or the Régie de l'assurance-dépôts du Québec. In these cases, the guarantee is supported by the creditworthiness of the guarantor—generally a Schedule I or Schedule II bank or a credit union—and by the security backing it.
17. Source: Investor Economics

resulted in a patchwork of laws that were inconsistent across jurisdictions. More specifically, the Canadian system continued to rely on the concepts of possession and delivery of negotiable security certificates. These concepts cannot adequately deal with book-entry settlement systems, the indirect holding of securities (i.e., through an intermediary), or the direct holding of securities without certificates, all of which have become an integral part of modern-day reality. The new system replaces outdated concepts of transferring securities held on the books of financial intermediaries through deemed transfers of possession with a new set of legal rights arising from holding securities positions in accounts with the intermediary. The legislation also clearly determines which jurisdiction's law will govern securities transfers that have connections to more than one jurisdiction. This stronger legal framework is expected to increase confidence in the system for transferring and holding securities, particularly for cross-jurisdiction transactions.

Proposal to strengthen the enforcement of securities law

The Task Force to Modernize Securities Legislation was established in June 2005 by the Investment Dealers Association to examine investor protection, corporate governance requirements, access to capital, regulatory burden, and enforcement in Canada. Its goal was to recommend revisions to Canadian securities legislation and regulation to achieve a dynamic, fair, efficient, and competitive capital market. In its October 2006 report, the Task Force recommended 65 Canada-wide reforms, 34 of which relate to the enforcement of securities law.

The recommendations on enforcement encompass multi-level reform across all jurisdictions and emphasize co-operation with respect to resources, evidence, and information. The Task Force envisions a national approach to enforcement in order to develop expertise, ensure the effective use of resources, and foster an independent and accountable enforcement process. A co-operative national enforcement program could also set enforcement priorities and develop reporting and data-collection systems so that quantitative analyses and performance evaluations could be conducted by an independent research body.

The Task Force indicates that ensuring the credibility of securities regulation in Canada through vigorous enforcement will "attract risk-averse investors to our markets, and thereby increase liquidity and correspondingly reduce the cost of capital to Canadian issuers." Policy-makers in Canada are encouraged to "step up" to the challenge and make changes in the regulations governing capital markets and their enforcement.

Highlighted Issue

Lessons learned from international experiences with market transparency

Prepared by Lorie Zorn

Market transparency is often defined as the degree to which trading-related information is publicly disseminated in a timely manner. It encompasses price and quantity details that are available before a trade occurs (pre-trade transparency) and details about the actual transaction (post-trade transparency). Transparency is an important consideration, since it affects the quality of financial markets[18] and, ultimately, the economic well-being of a country.

The Bank of Canada has been a proponent of enhanced transparency in fixed-income markets for some time (Dodge 2004–05; 2005). By increasing participants' information about market conditions, transparency typically allows fixed-income markets to operate more efficiently, providing direct benefits to the Canadian financial system, as well as helping the Bank to fulfill its responsibilities in monetary policy and financial stability and in managing the federal government's debt.

At the same time, the Bank also recognizes that greater transparency will influence the provision of market liquidity and can, at some point, reduce market liquidity and efficiency. For example, transparency can directly affect the risks and costs of making markets. Given the nature of the securities and the participants in fixed-income markets, market-makers are needed to

18. Market quality reflects the implicit and explicit costs of trading and is affected by informational efficiency, volatility, and liquidity, as well as by transparency. See Vu (2003) for a discussion on transparency and market quality.

facilitate trading. This role is played by investment dealers, who commit their own capital to meet investor trading demand. Following a trade, dealers will typically redistribute some of their inventory among their peers to reduce exposure to potential price changes. This inventory management is hindered when competing dealers know the extent of each others' positions, thereby increasing the cost of market-making and, in turn, the costs of trading for investors. Thus, the quality of fixed-income markets depends on a delicate balance between the benefits of greater transparency and any negative impacts on liquidity stemming from such an increase.

Enhanced transparency can result from both regulatory inducement and market-led innovation. In certain countries, transparency in fixed-income markets has advanced more rapidly than it has in Canada. But the relative influence of regulators and the industry on transparency varies widely in these countries.

Canada can benefit from the experiences that other countries have had with market transparency by encouraging the positive aspects and limiting the potential for negative consequences. To inform future policy considerations relating to transparency in fixed-income markets, this article examines the relationship between regulation and transparency, as well as the effects of imposed changes in transparency on market quality.

Regulation and transparency

In most developed countries, the regulatory environment for transparency in fixed-income markets has been shaped by two common experiences. First, regulators and policy-makers became more attuned to transparency issues as electronic trading and data dissemination increased in the 1990s. More recently, as the Enron-era market scandals raised issues of investor protection, regulators focused their efforts on providing investors with more trading-related information. Country-specific influences have helped to shape different regulatory models for transparency in fixed-income markets.

In the United States, high-profile problems in fixed-income markets and active political interest have resulted in detailed rules for transparency, specifically for corporate and municipal bonds. However, U.S. Treasury securities are the exception. In the late 1980s, a Congressional review of the Treasury market included an evaluation of the accessibility of trading-related information. The securities industry pre-empted likely regulatory action to impose transparency rules by establishing GovPX in 1992.[19] Since then, further industry-led initiatives have resulted in a well-functioning U.S. Treasury market, characterized by a high degree of pre-trade transparency without any regulation regarding transparency.

Other industrialized countries do not have an extensive regulatory framework for transparency in fixed-income markets. In the European Union, where policy-makers have focused on the integration of financial markets, transparency rules are not as detailed and currently apply only to debt that is traded on an exchange. Stricter transparency requirements for equities will be implemented in November 2007, but the issue is still under review for other securities. European policy-makers have recognized that debt markets are structurally different from equity markets and, as such, warrant separate consideration.[20]

Within the European Union, the United Kingdom has examined the transparency of fixed-income markets extensively over the past five years. Although limited rules were implemented a few years ago for bonds traded on electronic trading systems, U.K. securities regulators have recently determined that the level of transparency now delivered, particularly pre-trade transparency, is sufficient for wholesale market participants. Based on their assessment that market failure has not occurred, U.K. regulators have concluded that more extensive regulation of transparency is not necessary for U.K. debt markets.[21]

In Australia, regulators have explicitly followed a "light-touch" approach to debt market issues,

19. GovPX Inc. is an initiative by the major U.S. bond dealers and inter-dealer brokers (IDBs) to consolidate and distribute quotation and transaction information from IDB trading systems. This information is available to the public via the Internet, as well as through commercial vendors of information.
20. The European Commission is required to publish its decision on whether or not to proceed with regulations for debt market transparency by the autumn of 2007.
21. U.K. regulators found no evidence of inefficiency in the price-formation process nor of a failure of best execution in U.K. wholesale bond markets. See U.K. FSA (2006).

including transparency. Australian fixed-income markets have functioned well and, on that basis, it has been sufficient for regulation merely to point to the desirability of transparency rather than to mandate specific requirements.

Overall, in terms of regulatory intervention to enhance transparency, the approach of other industrialized countries varies widely, with the United States at one end of the scale and Australia at the other. Although Europe is currently in between, it is not certain what its eventual position will be until its review of non-equity markets has been completed.

Transparency delivered

Given the different regulatory influences and approaches, one might expect the United States, with its detailed, rules-based framework for securities regulation, to have a very high level of market transparency. This is certainly the case. But an abundance of trading-related information is also available in the European Union, where relatively modest regulatory requirements are currently in effect. In the end, the high level of market transparency in these two jurisdictions results mainly from industry innovation rather than from regulation. Not only are their fixed-income markets highly developed and competitive, but there is an extensive amount of electronic trading and data dissemination. In Australia, where electronic trading in bonds is not as widespread, the level of transparency is naturally lower.

Natural experiments in transparency

How have actual changes in transparency influenced market behaviours and dynamics? The academic literature is dominated by studies of so-called natural experiments with transparency in equity markets, and the impact on market liquidity is often examined. In terms of transparency in fixed-income markets, the literature to date encompasses only one event—the implementation of transparency requirements in the U.S. corporate bond market. There are no studies of transparency in government bond markets, probably because of the limited number of transparency rules for government bonds. Given the available body of research, transparency in markets with a dealership structure (i.e., where dealers are market-makers) is most relevant to fixed-income markets.

Three sets of studies examine the effects on market liquidity of changes in transparency in dealer markets. The effects are typically measured in terms of transactions costs, represented by the difference between bid and ask prices: lower transactions costs or smaller bid-ask spreads are associated with greater market liquidity.

The first set of studies examines the effect of the 1997 introduction of Order Handling Rules on the U.S. Nasdaq market,[22] which were designed to significantly increase investor access to pre-trade information. Five different papers found that, on the whole, the Rules prompted more competitive behaviour among dealers, and that both quoted bid-ask spreads and realized transactions costs declined as a result.

The second set of research examines changes in the publication rules for stocks traded on the London Stock Exchange (LSE).[23] Finding the appropriate delay for the dissemination of trade details was motivated by a desire to protect the inventory-management function of LSE market-makers and, hence, to preserve large-size/block trading at the exchange. A number of authors found that adjusting the timeliness of post-trade publication for LSE stocks did not have an adverse effect; in fact, prices were largely unaffected by these changes.

The third set of studies analyzes the introduction of post-trade transparency in the U.S. corporate bond market as part of the TRACE initiative.[24] Of the four papers made public to date, none indicate a negative impact on liquidity. For the most part, transactions costs declined for those bond trades published on TRACE—particularly for small-sized trades—

22. The rules required dealers to display the best price quotes and limit orders across Nasdaq and electronic communications networks.
23. Over a 10-year period, large-size trades intermediated by dealers were subjected to five different publication regimes. This ranged from immediate publication of price and size at the beginning of the period, to a 24-hour delay for price publication; there is currently a 60-minute delay for both price and quantity.
24. Under the Trade Reporting and Compliance Engine (TRACE), the dissemination of details on price and volume for an initial segment of corporate bond trades began in July 2002, with gradual expansion to nearly all corporate bond trades and reductions in dissemination delays over the following 3-year period.

relative to those of other corporate bonds. The reasons given for this vary: some authors indicate that the negotiating power of investors increases with more information; some find that transparency increases price competition among dealers; others note that trading is more widely dispersed among dealers after the cost of acquiring information falls.

In general, the academic research suggests that the *introduction* of transparency in a dealer market does not adversely affect market quality. It seems to increase liquidity, as measured by lower trading costs. Yet, the LSE studies imply that when there is already some transparency in a market, *further* enhancements may be of little benefit to liquidity. Thus, altogether, the research seems to support the widely held theory that transparency engenders declining benefits to market liquidity, to the point of an eventual trade-off once the optimum level has been surpassed.

Caution must be exercised when considering the results of these studies. First, since changes in transparency often occur in tandem with other changes, it is difficult to isolate the effects of transparency on market liquidity and to draw firm conclusions. For example, some attribute the improvements in transactions costs for corporate bonds found by the TRACE studies to increased trading in credit derivatives over the past few years, rather than to increased transparency. These credit instruments can reduce the cost to dealers of providing liquidity in the underlying corporate bond market. This cost reduction may, in turn, be passed on to investors in the form of tighter bid-ask spreads.

Second, the literature examines transparency for equities and corporate bonds, which are not only different from each other, but also from other assets, such as government debt securities. Different market characteristics across asset classes imply differences in the exposure of dealers to transparency-related liquidity risks and, hence, differences in the appropriate level of transparency. Moreover, there can even be differences across markets that trade in similar securities. For example, U.K. regulators have concluded that the implementation of TRACE-like transparency rules would not have the same effects in the United Kingdom as in the United States, owing to the different makeup of the U.K. and U.S. corporate bond markets.[25] So, observations stemming from one particular market cannot necessarily be extended to other markets.

Relevance for Canada

The experiences of other countries, to date, demonstrate that transparency can have benefits for market quality and that both regulators and the industry have a role to play. What is not yet clear is the appropriate level of transparency for fixed-income markets and how this can be achieved, particularly how it might be or should be translated into specific rules.

Stakeholders might focus on the following key points when considering transparency issues in Canada.

Transparency in fixed-income markets warrants separate consideration from transparency in equity markets. The unique trading structure of debt markets implies a unique approach to achieving appropriate transparency, and regulators in both the United States and the European Union have realized this. There are also differences in participation and trading practices between the various sectors of the fixed-income market (e.g., corporate bonds versus government bonds), which suggest different approaches to transparency.

Regulatory intervention should be based upon indications of market failure, as well as on indications that the benefits from regulation will be greater than the costs. The view of U.K. and Australian regulators is that mandatory transparency may not be necessary when a fixed-income market is functioning well. Moreover, market-led innovation can provide solutions to transparency outside of regulation.

The widespread adoption of trading technologies by market participants is an important component of enhanced transparency. U.S. and

25. For example, there is a lower proportion of direct retail participation in the U.K. corporate market, and dealer activity in the United Kingdom tends more towards a principal (market-maker) basis rather than an agency (or brokered) basis as in the United States. This implies that U.K. dealers are more exposed to the risk that greater transparency will lead to lower liquidity.

European experience illustrates that the more participants use electronic trading and data-dissemination services and the more sophisticated these become, the greater is the level of transparency. In assessing the means to address transparency issues, policy-makers should consider the state of technological development, and, if regulation is imposed, it should not stifle future gains from advances in technology.

Pre-trade transparency is valuable to investors and interferes less with the market-making function. More importantly, markets that have a high degree of pre-trade transparency, such as the U.S. Treasury market, can be very efficient. Regulators in the United States and the United Kingdom recognize that pre-trade information can be just as representative of market prices as post-trade information.

The current state of transparency in Canada's fixed-income markets

Canadian regulators, policy-makers, and other stakeholders have been considering transparency in fixed-income markets for many years. As in other countries, the debate intensified in Canada owing to a number of factors, including the appearance of electronic trading systems and an increase in regulatory focus on retail investor issues. Resolution of debt-transparency issues, from a regulatory perspective, is evolving. Currently, transparency rules are applied only to certain corporate bonds, while government securities are exempt until 31 December 2006.[26] Even so, the Canadian requirements for corporate debt transparency are relatively extensive when compared with those of other major countries.[27]

Despite the absence of mandatory transparency for government securities in Canada, industry initiatives have increased the level of transparency available to market participants. Over the past few years, several electronic trading systems and commercial data services firms have been launched in Canada, resulting in a substantial increase in information on fixed-income trading. In addition, the prices of benchmark government securities are now publicly available on several Internet sites. Although technological advances in trading and data dissemination have only recently taken hold in Canada, this industry-driven momentum seems to be building.

Looking ahead

Policy-makers worldwide are still grappling with issues related to transparency in fixed-income markets. Even those jurisdictions that have implemented transparency rules are continually reviewing the impact of these requirements in the context of industry developments. The experiences and deliberations of other countries will continue to provide Canadian regulators, policy-makers, and other stakeholders with insights for determining the appropriate long-run approach to transparency in fixed-income markets in Canada.

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Highlighted Issue

Exchange-traded funds

Prepared by Harri Vikstedt

Although exchange-traded funds (ETFs) were launched in the United States in 1993, they are relatively new to Canada.[28] They are investment vehicles that invest in many of the same types of assets that mutual funds do. They are traded on exchanges, have a high degree of liquidity, and are available to both retail and institutional investors. They provide investors with the ability to acquire exposure in one transaction to a market index or specific asset class, such as commodities, that has not always been easily accessible to retail investors in the past.

Equity funds, either in general index or sector form, account for over 90 per cent of the US$500 billion global ETF market. The remaining 10 per cent of the market is composed of both fixed-income ETFs, which were introduced in 2002, and, more recently, commodity ETFs.

This article provides an overview of ETFs and discusses their role as an alternative for investors seeking exposure to a specific index or asset class. The first section explains the basic structure of ETFs and how they have improved market efficiency by lowering costs, improving transparency, and helping to complete markets by increasing market access for retail clients. The second section provides a summary of the global ETF market, with a focus on Canadian developments.

The ETF structure

ETFs are passive investment vehicles that represent a fractional ownership in an underlying portfolio of securities. They are designed to closely track the performance of either a basket of securities (index) or a single asset. Investors receive returns based on the performance of the index or of the underlying asset, less a management fee paid to the fund manager.

ETFs are a hybrid of an open-end mutual fund and a closed-end mutual fund (Table 5). They are listed on a stock exchange, like a closed-end fund, and can be traded like a standard stock whenever the market is open. However, ETFs possess a unique creation and redemption process that differentiates them from closed-end funds. The number of outstanding shares may be increased or decreased, on a daily basis, to reflect demand.[29] This process removes the potential problem of significant price discounts or premiums of the fund related to the net asset value (NAV) of the underlying assets.

ETFs are an attractive alternative investment vehicle to indexed mutual funds, since they provide the investor with continuous exchange-based pricing, as well as the ability to execute limit and stop-loss orders. The ETF structure also provides a high level of transparency, since investors know the composition of the specific ETF's portfolio on a daily basis. ETFs should also have a lower tracking error compared with traditional indexed mutual funds because they are fully invested and do not need to hold cash for redemptions. The tax treatment of ETFs is more direct, and, given their structure, ETFs usually generate a capital gain only when the actual units are sold.[30] But despite their many advantages, ETFs are not actively managed and, thus, will not outperform a designated index.

As a portfolio-management tool, ETFs can be used for a number of purposes, including short-term hedging or speculative trading, investing in certain sectors of an equity index, and altering overall portfolio exposure to certain assets in a cost-effective manner. ETFs are also used in long-term, buy-and-hold strategies by both retail and institutional investors.

The development of the ETF market has helped to enhance market efficiency, particularly for retail investors, since it provides easier and direct

28. Canadian investors have been able to buy U.S. ETFs since their introduction in 1993.

29. Defined market participants (brokers and/or dealers) can create new ETF shares by delivering additional underlying assets to the ETF when demand for the ETF increases. They can redeem existing shares by taking back the underlying assets from the ETF against the delivery of the ETF shares when demand decreases. They can also do either if the ETF price deviates from its NAV.

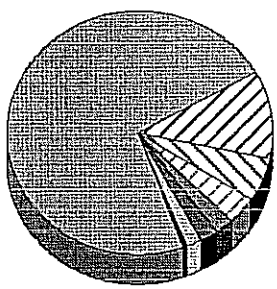
30. ETFs are obliged to distribute portfolio gains to shareholders by year-end. These may arise from index rebalancing or from the need to meet diversification requirements.

Table 5
Funding Structure Comparison

	Open-end fund	Closed-end fund	ETF
Fee level	Varies	High	Low
Transparency	Periodic	Periodic	Daily
Multi-dealer	No	Varies/ exchange	Exchange
Index tracking	Varies	Varies	Yes
Net asset value (NAV)	End of day	End of day	Intra-day
Trade price	NAV	+/- NAV	Real time
Execution	End of day	Real time	Real time

Source: Barclays Capital

Chart 26 Global ETF Market by Currency of Issue



Source: Bloomberg

access to asset classes such as commodities. ETFs are an efficient investment vehicle for both retail and institutional investors interested in portfolio diversification at a global, regional, and industry sector level. These funds have made portfolio investing easier, more transparent, and more cost-effective, particularly for the retail client. The ability to trade at intra-day prices has also allowed investors to manage their portfolio risk more prudently.

Overview of the ETF market

The first ETF was designed to replicate the performance of the S&P500 equity index and began trading on the American Stock Exchange on 22 January 1993. A second ETF, tracking the S&P MidCap 400 index, was added in 1995, and 17 ETFs linked to international stock exchanges began trading in 1996.

The market for ETFs is now over US$500 billion, with over 650 funds, including 20 Canadian-dollar-based ETFs with a total capitalization of over Can$12 billion. The Canadian ETF market is still very small compared with the traditional Canadian mutual fund market, equivalent to just over 2 per cent of its size; this is slightly less than half of the equivalent U.S. percentage. The global ETF market remains U.S. focused, with over 70 per cent of all ETF assets under management denominated in U.S. dollars (Chart 26). Most of these are traded on one of the U.S. exchanges. Initially, participants in the market were primarily institutional investors, but as it developed, retail investors have become increasingly involved.

The majority of Canadian ETFs have been issued by Barclays Global Investors under their iShares trademark, which has the largest global market share of ETFs by market capitalization. The iShares S&P/TSX 60 index accounts for over 60 per cent of the total Canadian ETF market capitalization and tracks the TSX 60 index. Globally, it is the 14th largest ETF by market capitalization. Bond ETFs account for over 8 per cent of the Canadian ETF market—slightly higher than in the United States but below the 12 per cent in Europe. There are no Canadian-specific commodity ETFs, although the US$iShares COMEX Gold Trust is cross-listed on the Toronto Stock Exchange.

The top ten global ETFs by market capitalization have all been issued in the United States.[31] They account for approximately 35 per cent of the global market and are largely dominated by the earliest funds. The first ETF, known as Spiders (Standard & Poor's Depository Receipts), continues to be by far the largest at just over US$56 billion.

The only non-equity ETF in the top ten is the streetTRACKS Gold Trust, which tracks spot gold prices and began trading at the end of 2004. Although still only a small part of the overall market, commodity ETFs[32] possess the potential to greatly improve financial system efficiency by adding to the completeness of markets. Before the establishment of commodity ETFs, retail clients faced significant hurdles in acquiring direct financial exposure to commodity prices because of various factors, including high transactions and storage costs. Commodity ETFs provide small investors with the ability to further diversify their portfolios. In fact, the appreciation of several commodity prices in the first half of 2006 may be partly attributable to the growth of ETFs and the release of pent-up demand from smaller investors.

The ETF market is expected to continue to grow at a brisk rate as additional investors discover the product. However, the development of the ETF market beyond equities will depend on the development of liquidity in the markets for other underlying assets.

31. Bloomberg, as of 25 September 2006
32. Unlike traditional ETFs, some commodity ETFs may hold futures contracts and not the underlying commodity.

Reports

Introduction

Reports address specific issues of relevance to the financial system (whether institutions, markets, or clearing and settlement systems) in greater depth.

Maple Bonds are defined as Canadian-dollar bonds issued by foreign borrowers in the Canadian market. In his article, **The "Maple Bond" Market**, James Hately examines what has become the fastest-growing sector of the Canadian bond market since the elimination of the Foreign Property Rule in 2005. The development of the foreign-issue market reflects the increase in the global mobility of capital and is likely increasing the efficiency of the international financial system. In Canada, the Maple Bond market has contributed to a wider range of possible investments for domestic investors, permitting increased portfolio diversification, lower risk, and potentially higher returns. Although the market for Maple Bonds is still in its infancy, the popularity and durability of foreign-issue bond markets in other countries suggests that it will remain a viable segment of the Canadian bond market.

Since 2000, the funding challenges of defined-benefit pension plans in Canada and in other industrial economies have increased significantly, largely reflecting financial market developments that have adversely affected both pension fund assets and liabilities. Unfunded pension obligations can adversely affect the financial position of the sponsoring corporation or government entity, representing a potential drain on cash flow. At a minimum, this creates a financial "headwind" and, under an extreme scenario, could have adverse consequences for the financial system. In the report, **An Update on the Funding Status of Defined-Benefit Pension Plans in Canada**, Jim Armstrong reviews recent developments related to the funding situation of pension plans in Canada and assesses their impact on the financial system. The article highlights the results of a new study by Mercer Human Resources Consulting that updates an earlier study discussed in the June 2004 issue of the FSR. The study provides an assessment of the current situation and a 5-year projection under three economic scenarios.

In December 2005, the Bank of Canada surveyed the readers of the FSR. In **Results of the FSR Readership Survey**, Jean Mair summarizes the survey findings. The results suggest that the FSR has a diverse audience with a wide range of interests, and that readers seem to be generally satisfied with the FSR.

The "Maple Bond" Market

James Hately

Corporate bond issuance in Canada has grown significantly over the past decade. Since the elimination of the Foreign Property Rule (FPR) early in 2005, one specific sector of that market, Maple Bonds, has shown particularly rapid growth. Maple Bond issuance has totalled over $17 billion so far in 2006 and approximately $30 billion since the beginning of 2005.

Maple Bonds are defined as "Canadian-dollar-denominated bonds issued by foreign borrowers in the domestic Canadian fixed-income market." Foreign-issued bonds are popular in most major fixed-income markets, including the United States (Yankee Bonds), the United Kingdom (Bulldog Bonds), Japan (Samurai Bonds), New Zealand (Kiwi Bonds), and Australia (Kangaroo Bonds). Even though the Canadian fixed-income market possesses the conditions that make these other markets attractive to foreign issuers (including a developed government bond market and a liquid foreign exchange derivatives market), the Maple Bond market was practically non-existent until 2005.

This report discusses the development of the Maple Bond market and how it has likely improved the efficiency of the Canadian financial system. We begin with an examination of the growth of the Maple Bond market, including an analysis of why the market has developed. The second and third sections provide an examination of the reasons why Maple Bonds are attractive to both issuers and investors. The fourth section discusses issues related to secondary-market liquidity. The fifth concludes with an evaluation of the potential impact of this relatively new class of fixed-income securities on the efficiency of Canadian capital markets.

Development of the Maple Bond Market

The rapid development of the market for Maple Bonds can be primarily attributed to the underlying positive financial environment that has supported the continued growth of Canadian corporate bond issuance, combined with the recent elimination of the FPR. While these factors have supported strong investor demand for Maple Bonds, the supply of this nascent fixed-income instrument has also benefited from favourable conditions in the swap market.

A supportive environment for the Canadian corporate bond market

Two features have supported growth in the Canadian corporate bond market. The first is the reduction in federal government borrowing. The fiscal deficits of the 1980s and early 1990s resulted in large borrowing requirements for the federal government, with gross federal debt issuance reaching $60 billion in 1996. This level of government issuance tended to crowd out corporate bond issuance in Canada, and the amount of non-government issuance was relatively small (Chart 1).

The subsequent reduction in gross borrowing by the federal government has been largely mirrored by a significant increase in corporate bond issuance, which has doubled since 1996 (Chart 2).

The second contributing factor is the increasing size and sophistication of fixed-income institutional investors in Canada. The enhanced ability of Canadian institutional investors to analyze credit risk, the increasing range of products, and the ability to hedge some credit risk through the use of derivatives have all helped to increase investor interest in this type of security.

Elimination of the Foreign Property Rule

The federal government announced the abolition of the FPR in its 2005 budget. The FPR was originally introduced in 1971 to limit tax-shielded individual and institutional investments in foreign assets to a maximum of 10 per cent of the total value of a portfolio. In subsequent years, the maximum was increased a number of times and, since 2001, the FPR had restricted Canadian retirement plans and pension funds from holding more than 30 per cent of their portfolios in foreign assets.

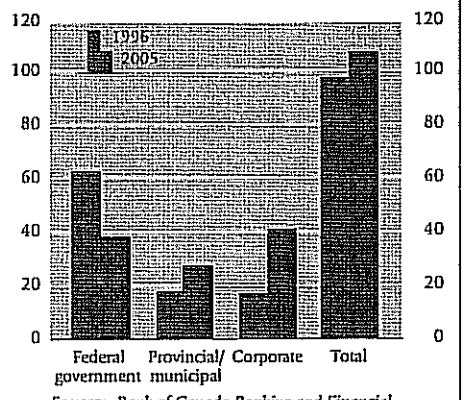
Each time the FPR ceiling was raised, net investment by Canadians in foreign securities also rose. Most investors, however, used almost all of their allowable foreign content to buy foreign equities, which are generally seen as providing more significant diversification benefits and returns than bonds. Reflecting this concentration in equities, the amount of foreign stocks purchased by Canadians almost tripled, increasing from slightly over $20 billion in 1999 to over $60 billion by 2000 as the foreign content was raised from 20 per cent to 25 per cent (Statistics Canada 2006). The total amount invested in foreign bonds, however, remained fairly low, at approximately $3 billion. The Canadian fixed-income market was seen as generally "closed," with investors continuing to hold almost all of their fixed-income assets in domestic Canadian issues. This was generally regarded as causing domestic issues, particularly those of financial firms, to be valued at narrower spreads vis-à-vis Government of Canada bonds in the domestic market than was necessarily warranted by their credit quality.

The removal of the FPR, however, provided investors with an increased opportunity to diversify their holdings, investing not just in foreign equities, but also in foreign debt. Since the abolition of the FPR, the amount of foreign securities purchased by Canadian investors, particularly foreign bond issues that include Maple Bonds, has increased significantly, reaching a monthly record of $5.2 billion in March 2006.

Conditions Supporting the Issuance of Maple Bonds

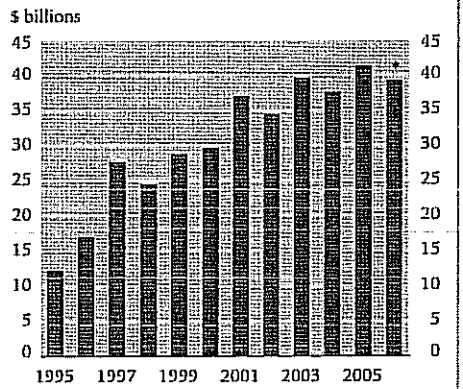
Issuers of Maple Bonds are typically large institutions with sophisticated treasury operations

Chart 1 Gross Canadian Bond Issuance



Source: *Bank of Canada Banking and Financial Statistics*

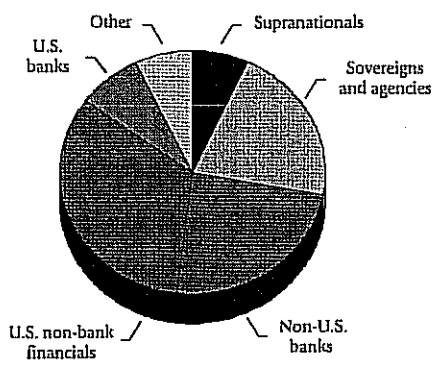
Chart 2 Gross Canadian Corporate Bond Issuance



* 2006 is up to September 30

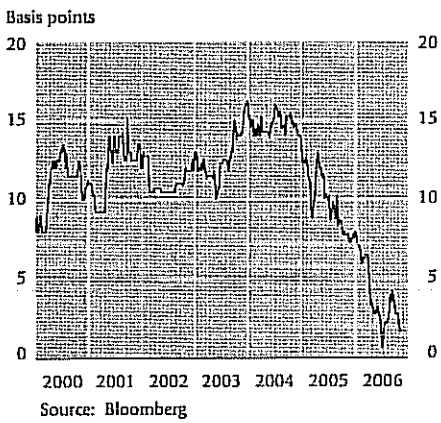
Source: *Bank of Canada Banking and Financial Statistics*

Chart 3 Maple Bond Issuers



Source: Scotia Capital

Chart 4 Canadian 5-Year Basis Swap versus U.S.



Source: Bloomberg

that are active borrowers globally. Approximately 50 per cent of Maple Bond issues have been completed by European-domiciled borrowers, while U.S issuers have been responsible for slightly more than 40 per cent.[1] Approximately two-thirds of the Maple Bonds issued in 2006 have been by sovereigns and agencies and U.S.-domiciled financial firms (Chart 3).

Given that most Maple Bond issuers have no natural need for Canadian dollars, activity in the market tends to be driven by arbitrage opportunities. Borrowers will generally issue in the Maple Bond market if they can attain funding at an equivalent or lower cost than what is available in other markets. The issuance of Maple Bonds is therefore affected by how cost-effective it is for the issuer to borrow in Canadian dollars and swap the proceeds back into their funding currency of choice.

Prior to the elimination of the FPR, transactions in the Canada-U.S. basis swap market were generally driven by large Canadian borrowers, predominantly the provincial governments and chartered banks, issuing U.S.-dollar debt in the U.S. market and swapping the proceeds back to Canadian dollars. The lack of transactions occurring in the opposite direction tended to result in relatively wide basis swap spreads.[2]

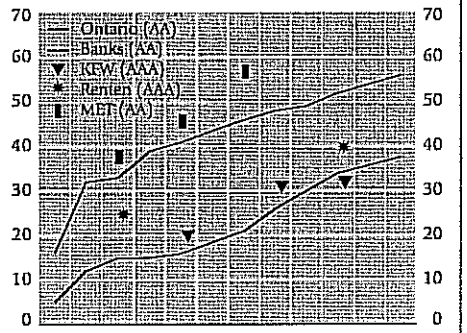
The recent increased issuance of Canadian securities by foreign entities and the resulting need to swap the Canadian-dollar proceeds into a different funding currency have offset, and put downward pressure on, the basis swap (Chart 4). This narrowing of the basis swap should act to reduce the incentive for foreign issuers to issue Maple Bonds, potentially making the supply dependent on the cycles of the basis swap market. This would be consistent with conditions in other foreign-issuer bond markets, such as the Kangaroo market, where issuance diminished in 2002–03 when the Australian basis swap narrowed.[3]

1. The remaining 10 per cent has been from issuers domiciled in Australia and Asia.
2. There is no economic reason why a basis swap should have a spread of anything other than zero. Any positive or negative spread is generally indicative of an imbalance between supply and demand pressures for a particular currency or floating-rate index.
3. See Australian Bureau of Statistics for issuance statistics. For background on Kangaroo Bonds, see Battellino and Chambers (2006).

The general level of corporate bond spreads in the Canadian market also affects the cost competitiveness of issuing in the Maple Bond market. It is generally believed that, owing to the existence of the FPR, the cost of funding for financial firms and provincial governments in Canada has been low in recent years, compared with what entities of a similar credit quality could issue in other markets. As evidence of this, highly rated foreign creditors can often issue Maple Bonds at spreads that are above lower-rated domestic issues, yet still provide cost-effective funding for the issuer. Recent examples include KFW, a AAA-rated German financial institution whose debt is fully guaranteed by the German government. KFW issued in the Canadian market at a slightly higher spread than that available on bonds of similar term issued by the Province of Ontario, which is a AA credit (Chart 5).[4]

Chart 5 Comparative Credit Spreads

July 2006



Source: Bloomberg

KFW's total cost of funds on this issue was, however, comparable to what it could obtain by issuing similar debt in other major bond markets. While most of the issuers in the Maple Bond market have been financial corporations or supranationals, the market is also open to non-financial corporations. For example, Britain's Network Rail, France Telecom, and New Zealand Telecom have also completed Canadian-dollar bond issues.

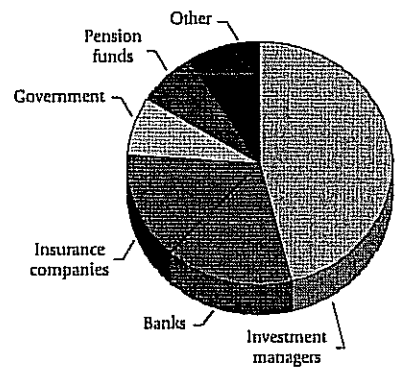
Maple Bond Investors

Investor interest in Maple Bonds continues to grow, and there are currently about 100 institutional accounts buying them, about three times the number recorded a year ago. In addition, other investors have suggested that they will buy Maple Bonds in the coming months.[5]

Maple Bonds expand the universe of investable fixed-income assets available to domestic Canadian institutional investors. They also offer domestic investors the ability to diversify their fixed-income holdings and earn incremental yield (relative to domestic issues of similar credit quality), while avoiding foreign exchange risk.

4. Some of this higher spread is also likely to be compensation for the lower level of liquidity of Maple Bond issues. Rentenbank (Germany's AAA agency for agriculture) and MetLife are also shown on Chart 5.
5. Sources: Scotia Capital Markets and Greenwich Associates.

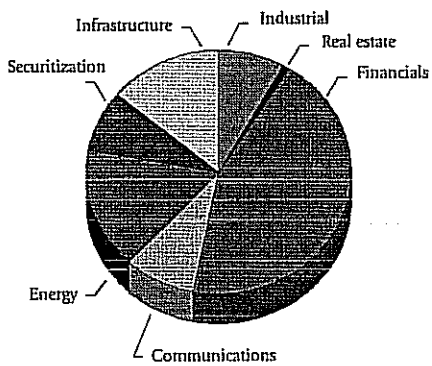
Chart 6 Buyers of Maple Bonds in 2006



Source: Scotia Capital

Chart 7 Scotia Capital Corporate Bond Index

Weightings by sector



Source: Scotia Capital

The largest purchasers are investment managers (Chart 6).

Diversification of credit exposure is the most popular reason cited by investors for purchasing Maple Bonds, because they allow these institutions to reduce their exposure to large provincial and domestic financial issuers. Domestic issuance in the Canadian fixed-income market remains relatively concentrated, with approximately 75 per cent of provincial issuance coming from Ontario and Quebec. In 2005, less than $25 billion in bonds was issued by non-financial firms in Canada. Financial firms, predominantly the major banks, make up 44 per cent of the Scotia Capital Corporate Bond Index (Chart 7).[6] In a recent survey, 35 per cent of institutional clients indicated that they would use Maple Bonds as a substitute for provincial bonds.[7]

Most of the diversification benefits from owning Maple Bonds come in the form of specific credit (or name) diversification, and not diversification across sectors, because of the large number of international financial firms that have issued Maple Bonds. The Maple Bond market does, however, offer investors the ability to diversify their financial holdings away from Canadian financial firms to the larger international firms at similar credit spreads.

Maple Bonds also offer opportunities to diversify credit exposure beyond the large domestic issuers without any currency risk. Issues may also offer more attractive spreads than similar domestic credits, since highly rated Maple Bond issues typically include a risk premium on the yield that is higher than that offered by large domestic issuers.

Domestic fixed-income investors can create this diversification without Maple Bond issues by purchasing a foreign-pay bond in the issuer's local market and then swapping the cash flows into Canadian dollars. This is a more complicated transaction than purchasing the Canadian-dollar-denominated security, because a swap requires that investors have an ISDA agreement with their banks since they may, at some time,

6. The Scotia Capital Corporate Bond Index includes all Canadian-dollar investment-grade corporate bond issuance from Canadian-domiciled issuers, subject to a minimum size of $100 million and at least 10 buyers.
7. Fixed-income survey of 85 institutional clients by BMO in March 2006.

have to post collateral. Keeping track of the value of the swap and a foreign issue may require additional systems and increased operational costs for the investor. Moreover, many investors have mandates that limit their use of swaps.

Liquidity in the Maple Bond Market

Secondary-market liquidity is limited, as would be expected in a developing bond market. Issues may be irregular and are sometimes small in size. There are also two structural factors that may be limiting liquidity in the secondary market.

First, the process of issuing a Maple Bond often differs from that for a regular domestic corporate bond and may be limiting liquidity in the secondary market. Maple Bonds are typically issued as a Foreign Property Private Placement (FPPP), while most corporate bonds are sold through a public offering by a group, or syndicate, of investment dealers. The advantage of an FPPP for a foreign issuer is that the issuer does not need to file a full prospectus in Canada for disclosure purposes.[8] Instead, the issuer uses an outstanding shelf prospectus filed in Europe or the United States. This form of prospectus saves the issuer time and money and is used to issue bonds regularly in other markets. Legal fees are lower, quarterly statements do not have to be audited, and filings with provincial and territorial securities commissions are not required.[9]

While demand for Maple Bonds from institutional investors is relatively strong and continues to grow, it is possible that the reliance by issuers on a self-prospectus route is acting as a constraint to liquidity. A Canadian investor may be required to undertake legal action in another country if the issuer goes bankrupt. Some Canadian investors have restricted their purchases of Maple Bonds because of this concern.

Second, liquidity may also be limited because of the relatively small size of the dealer syndicates used to issue Maple Bonds. Many Maple Bond issues have involved only one, or sometimes two, dealers. This means that few dealers are prepared to make markets in a specific Maple Bond, thus limiting the overall liquidity of the specific issue. This has caused some concern among investors over conditions in the secondary market. These concerns, coupled with the tendency for these bonds to be privately placed (via the FPPP process), may lead investors to hold Maple Bond issues until maturity, thus compounding the lack of liquidity for these securities. As the market matures, issuers would be expected to seek out multiple-dealer syndicates, establish a more frequent issuance calendar, and issue through the public markets, rather than through private placements. This would contribute to a higher level of secondary-market liquidity, similar to that in other foreign bond markets.

Impact on Efficiency of the Canadian Fixed-Income Market

The development of foreign-issuer bonds in a number of countries is contributing to the improvement of market efficiency globally. They have increased the pool of investable assets for investors and provided issuers with more cost-effective financing. The recent growth of the Maple Bond market since the removal of the FPR has allowed the Canadian market to follow this global trend and has helped to improve the efficiency of Canadian capital markets.[10]

The development of the Maple Bond market has increased the completeness of the Canadian bond market by broadening the spectrum of assets available to Canadian investors. This provides investors with increased opportunities for portfolio diversification and the construction of more efficient portfolios.

By increasing competition for domestic investment funds, the development of the Maple Bond market has also enhanced allocative efficiency. This is because the presence of Maple Bonds may lead to better pricing of other

8. The multi-jurisdictional disclosure system is another way that allows firms to issue without having to file a full prospectus. It is a joint initiative by the CSA and the SEC to reduce the need for continuous disclosure and other filings.
9. Many Canadian retail investors are unable to purchase Maple Bonds that are issued as private placements. Provincial securities regulations generally limit the purchase of non-exempt private-placement issues to qualified investors (as defined by net worth and income levels).
10. See Bauer (2004) and Hendry and King (2004) for discussions on the efficiency of financial markets.

domestic corporate issues and a narrowing of the basis swap. While this does not necessarily result in cheaper financing for large domestic borrowers, better pricing of risk benefits the Canadian financial system as a whole. There is some anecdotal evidence that Maple Bond issuance has been putting some upward pressure on domestic credit spreads, particularly for Canadian financial firms and provincial borrowers.[11] Any such widening, however, would be partially offset by the benefit certain Canadian issuers get from the narrowing of the basis swap and the benefit Canadian investors receive from a better, more representative return for their risk. A narrower swap creates cheaper funding opportunities in foreign markets for large domestic issuers.

While the development of the Maple Bond market has helped to improve the efficiency of Canadian fixed-income markets, that contribution has been held back by secondary-market activity and by the limited range of foreign issuers. A more active secondary market in existing Maple Bond issues would further increase market efficiency by lowering the cost of adjusting investor portfolios. In addition, a wider range of foreign issuers would allow investors to further diversify their holdings and benefit from sectoral diversification in addition to name diversification. It is possible that this will occur as the market matures. More gains in efficiency are thus expected in the future.

The Maple Bond market is continuing to develop in important ways. For instance, Scotia Capital has created Canada's first Maple Bond Index. The index started with 55 securities comprising a total market value of approximately $20 billion. The index is important, since it provides a benchmark against which Canadian bond investors can measure their performance. In addition, Moody's announced in May 2006 that they are starting credit research on all rated Canadian bonds issued by foreign entities. Moody's has added more than 70 foreign issuers to its Canadian research service and will add new companies as they enter the market.

11. CIBC World Markets (4 July 2006) suggests that some widening of corporate spreads in 2006 has been due to Maple Bond issuance.

Conclusion

Foreign-issued domestic currency bonds have been popular in most major fixed-income markets for some time. Historically, this has not been the case in Canada, however, since legislative restriction on the amount of foreign assets that could be held by tax-exempt investors had restricted this type of market from developing.

The recent development of this market has increased the efficiency of Canada's financial system. Domestic investors benefit from a wider range of possible investments, allowing for increased portfolio diversification, lower risk, and potentially higher returns. In addition, increased competition for domestic investor funds leads to better pricing of risk on corporate deals. The Maple Bond market is still in its infancy, with limited secondary-market activity, and issuance is highly concentrated in the financial and supranational sectors. But the experience with foreign-issue bond markets in other countries suggests that the Maple Bond market will remain a viable segment of the Canadian bond market in the future, although its relative size is likely to be driven by cyclical factors.

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An Update on the Funding Status of Defined-Benefit Pension Plans in Canada

Jim Armstrong

Since 2000, the funding adequacy of defined-benefit (DB) pension plans in Canada and in other industrial economies has deteriorated, largely reflecting financial market developments that have adversely affected both pension fund assets and liabilities. Unfunded pension obligations can affect the financial position of the sponsoring corporation or government entity, representing a potential drain on cash flow through the need to make special contributions. At a minimum, this represents a financial burden and, under extreme scenarios, can have adverse consequences for the financial system, as well as for the sponsor and its employees.

Of course, employees might well bear some of the burden of persistent deficits in DB pension plans through higher contribution rates, reduced benefits, and, in some cases, plan conversions or terminations. Indeed, pension deficits are one factor that can threaten the viability of DB plans.[1]

The pension system is an important element of the financial system. The focus of this report is on the near-term outlook for the solvency situation of pension plans, particularly its sensitivity to financial market developments. It highlights the results of a new study by Mercer Human Resources Consulting conducted for the Bank of Canada that is an update of a 2004 study (Armstrong 2004). The study is based on Mercer's client database of plan sponsors, which contains information on registered federal and provincial pension plans across Canada in both the public and private sectors.[2]

The study assumes that, over the near term, sponsors bear the burden of a funding deterioration through higher special contributions, although it is understood that this is a simplification of likely outcomes where employees would also have to bear some of the costs.

Background

Weak equity markets from 2000 through late 2002 initially raised concerns about the deteriorating funding condition of corporate defined-benefit pension plans in Canada (Chart 1). This is because the typical large Canadian corporate pension fund has 50 to 60 per cent of its assets invested in equities. An even more important adverse factor for pension plan funding has been the decline in long-term interest rates, which has increased actuarial estimates of pension plan liabilities. These liabilities are a function of the present value of future retirement benefits.[3] While equity markets have subsequently recovered, bond yields have tended to stay low (Chart 1).[4]

Compounding the problem is the fact that many sponsors took contribution holidays in the 1990s when plans were in surplus, either voluntarily or because of the limits imposed by Income Tax Act regulations.

1. For more on the issues concerning the future of DB plans in Canada see Armstrong and Selody (2005).
2. Mercer's plans represent about 35 per cent of the registered pension plan universe in Canada, using Statistics Canada data as the benchmark. It is the private sector database that provides the largest snapshot of the system. Excluded from the study are government plans, such as the Old Age Security (OAS) and the Canada/Quebec Pension Plans (CPP/QPP) that are partially funded and are not registered pension plans, as well as public service pension plans having all or a portion of their assets in governments' consolidated revenue funds, such as the federal and Quebec plans.
3. Lower bond yields increase the value of bond holdings (which typically comprise about 40 per cent of pension plan assets), but also increase the value of 100 per cent of plan liabilities. The net effect is substantially unfavourable for funding. This problem is amplified by the fact that the duration of the bond portfolio tends to be shorter than the duration of liabilities, making liabilities relatively more sensitive to interest rate movements.
4. It should also be noted that the funding positions of plans have been hurt by recent changes in actuarial standards that reflect longer life expectancy. This makes the calculation of solvency liabilities more sensitive to prevailing market interest rates.

Regulations Pertaining to Pension Funding

In Canada, defined-benefit plans are regulated at either the federal or provincial level, depending on whether employees work in business areas that fall under federal or provincial jurisdiction.

Funding rules

With respect to funding, DB pension plans must file an actuarial valuation report at least once every three years with their respective regulator (OSFI at the federal level or one of the provincial pension regulators).

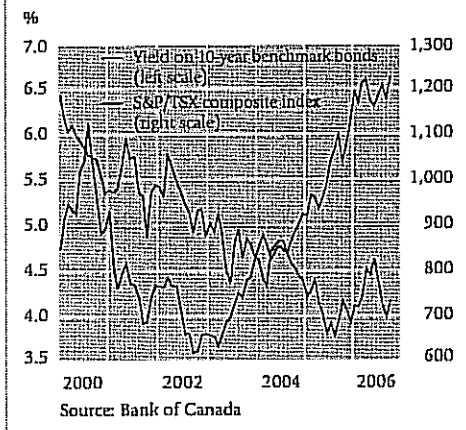
Both a *going-concern* and a *solvency* valuation are required. The going-concern assessment is based on long-run values for plan assets and liabilities.[5] A going-concern deficit (i.e., liabilities exceed assets, resulting in a funded ratio under 100 per cent) must be funded by the employer sponsor over a maximum of 15 years—the sponsor must make special contributions to close the shortfall, in addition to the normal contributions to cover ongoing pension service costs.

A solvency assessment is made on the assumption that the plan is wound up on valuation day. This method typically uses market value or fair value for plan assets and windup values for plan liabilities. A solvency deficit must be funded over a maximum of five years.

If a plan is facing both a solvency and going-concern deficit, the higher required minimum payment is binding. In the vast majority of cases, the higher payment would be the required solvency payment. Thus, the focus of this study is on the solvency situation.

In terms of other applicable funding rules, the federal Income Tax Act prohibits the sponsors of plans in surplus from making contributions

Chart 1 Key Variables Affecting Pension Funding



Source: Bank of Canada

5. The going-concern assessment can be based on either market values or long-run values for plan assets, the latter being derived from smoothing or modelling procedures. Liabilities are calculated as the present value of the expected stream of pension payments, factoring in the effect of variables such as salary increases.

Table 1
Evolution of Solvency Position
$ billions

		31 December 2003	31 May 2006
1	Number of plans	847	761
2	Number of plans in deficit	603 (71%)	594 (78%)
3	Number of plans in surplus	244 (29%)	167 (22%)
4	Assets of plans in deficit/(total assets	79%	44%
5	Aggregate solvency ratio	93%	95%
6	Solvency ratio of plans in deficit	89%	85%
7	Solvency ratio of plans in surplus	112%	104%
8	Aggregate solvency position of all plans-surplus (deficit)	(15.4)	(14.1)
9	Aggregate solvency position of plans in deficit	(20.0)	(20.2)
10	Yield on Canada bonds 10 years and over	5.13%	4.53%

when pension surpluses exceed certain thresholds.[6]

Solvency-relief measures

In the May 2006 Federal Budget, the federal government introduced temporary solvency funding relief—"to help re-establish full funding of federally regulated defined benefit pension plans in an orderly fashion, with safeguards for promised pension benefits." The principal measure (among others) permits plan sponsors to extend the solvency payments from five to ten years, subject to certain terms and conditions. These include achieving a certain level of approval from members and retirees, or obtaining letters of credit for the difference between solvency payments made on a ten-year schedule and those that would have been required on a five-year schedule.

The Province of Quebec, through its pension regulator *la Régie des Rentes*, also implemented similar funding relief measures for Quebec plans.

Estimating the Current Solvency Situation

The Mercer study estimates the current solvency situation as follows. First, for each plan in the sample, Mercer extrapolates the funding situation from the time of its last regulatory filing to 31 December 2005 and 31 May 2006. The projected market value of plan assets is based on the pension fund returns derived from each plan's target asset mix and actual market returns. Plan liabilities are projected based on the information for each client in the database.

Table 1 presents the situation on a solvency basis as of 31 December 2003 (the date of the previous study) and as of the latest estimated date of 31 May 2006. On balance, it appears that there was some improvement in the funding situation over the two-and-one-half-year period:

- the proportion of assets of insolvent plans (solvency ratio less than 100 per cent) to total assets in the sample (row 4) decreased from 79 per cent to 44 per cent;

6. Under Section 147.2 of the Income Tax Act, employer contributions to registered pension plans must stop when a certain maximum allowable surplus is reached, typically 10 per cent of plan liabilities.

- the aggregate solvency ratio (assets/liabilities) for all plans (row 5) increased from 93 per cent to 95 per cent, mainly because some large plans have gone from being moderately underfunded to being moderately overfunded.

The moderate improvement achieved over this period reflects strong equity markets in Canada and the fact that many plans have been making special solvency payments. However, the yield on benchmark Government of Canada bonds declined by about 0.60 per cent over the period (row 10). This factor significantly hindered efforts to improve solvency ratios.

Distribution of solvency ratios

Table 2 presents the distribution of plan assets on a solvency-ratio basis as of the three estimation dates: 31 December 2003; 31 December 2005; and 31 May 2006.

It indicates that, as of 31 May 2006, about 46 per cent of plan assets were in plans with a small surplus (100 to 110 per cent), 22 per cent of assets were in plans that were only moderately underfunded (with a solvency ratio between 90 and 100 per cent), 10 per cent were underfunded at 80 to 90 per cent, and about 12 per cent were severely underfunded, with solvency ratios under 80 per cent.

Note that, between 31 December 2005 and 31 May 2006, there was a large shift in assets from the moderate deficit category (90 to 100 per cent) to the moderate surplus category (100 to 110 per cent). It is also interesting to note that the proportion of plans that were severely underfunded (solvency ratio less than 80 per cent) fell back from 16 per cent at the end of 2005 to 12 per cent at the end of May 2006.

The improvement in the distribution of solvency ratios in the very short period between 31 December 2005 and 31 May 2006 highlights how sensitive the solvency situation is to movements in the bond yield, which increased almost 50 basis points over this period.

Comparison of study results with OSFI solvency test for federal plans

It should be noted that OSFI (2006) released the results of its solvency test for all federally regulated defined-benefit plans, which represent about 10 per cent of all defined-benefit

Table 2

Distribution of Solvency Ratios

Per cent of assets

Ratio (%)	31 December 2003	31 December 2005	31 May 2006
<80	11	16	12
80–90	11	15	10
90–100	37	51	22
100–110	10	9	46
>110	11	9	10

Table 3

Economic Assumptions

Per cent

Yields	Current 31 May 2006	2010 Baseline case	2010 Case A	2010 Case B
Differential between the long-term GOC nominal and Real Return bonds		2.25[a]	2.62	1.94
GOC treasury bill	4.18	3.76	4.49	3.12
GOC bonds 10 years and over	4.53	4.53	5.27	3.90
Real Return Bond	1.87	2.28	2.65	1.96
Average portfolio returns[b]		5.76	8.80	2.88

a. The long-term yield differential between GOC nominal and Real Return bonds is used as a proxy for expected inflation, bearing in mind potential distortions, such as liquidity in the Real Return Bond market. The differential has been 2.25 per cent, on average, since 1998.

b. These are projected returns for a plan with a typical asset mix: 35 per cent Canadian equities, 12 per cent U.S. equities, 10 per cent international equities, 40 per cent fixed-income investments, and 3 per cent short-term investments.

Table 4

Evolution of the Solvency Situation for Plans in the Mercer Study

Per cent

	31 May 2006	2010 Baseline case	2010 Case A	2010 Case B
1. Solvency ratio–all plans	95	109	131	92
2. Solvency ratio–plans in deficit as of 31 December 2005	85	107	128	91
3. Solvency ratio–plans in surplus as of 31 December 2005	104	120	150	100
4. Proportion of system assets accounted for by plans in deficit	44	6	0	94

plan assets in Canada. Its results are broadly similar to the Mercer sample for Canada. OSFI estimates an average aggregate solvency ratio of about 90 per cent as of December 2005, compared with 91 per cent as of June 2005. It estimates that about three-quarters of federally regulated defined-benefit plans are in deficit.

The Mercer sample includes both federal plans and and provincially regulated plans. At the national level, Ontario accounts for about 50 per cent of all plan assets.

Funding Projections to the end of 2010

In a forward-looking exercise, Mercer uses a model to project solvency ratios ahead to 31 December 2010 under three economic scenarios: baseline, Case A (favourable for solvency positions), and Case B (unfavourable for solvency positions).

These scenarios are obtained in two steps. A stochastic model (with percentiles) is used to project the end points in 2010. A deterministic model is then used to project the values of the variables on intervening dates. Each variable converges to its 2010 value.

Table 3 presents these scenarios. The baseline scenario is a continuation of the current low-inflation environment over the projected horizon. The Case A scenario assumes economic developments that are favourable for pension plan solvency assessments; that is, higher interest rates and higher equity returns. This scenario uses the 25th percentiles of these variables under Mercer's stochastic model. The Case B scenario assumes economic developments that are unfavourable for pension plan solvency assessments; that is, lower interest rates and lower equity returns, reflected by the 75th percentiles of these variables coming from Mercer's model.[7]

Table 4 presents the projections for the solvency position in 2010 for the three cohorts as measured at 31 December 2005—*all plans, insolvent plans, and solvent plans*—under the three scenarios.

7. The net impact of inflation on projected solvency positions is complex. It depends of the proportion of plans in the sample that have liabilities indexed to inflation versus non-indexed plans. It also depends on the impact of inflation on portfolio returns.

Incorporated in the projections in Table 4 is the fact that plans starting in deficit are, in most cases, making special contributions to eliminate solvency deficits over five years. The required solvency payment tends to be a "moving target" from year to year, since financial market movements affect the estimated solvency position and, in the study, the required solvency contribution is reset each year to capture this effect.

The bottom line: Solvency projections to 2010

The Mercer solvency projections are as follows.

Under the baseline scenario, there will be a substantial improvement in the system in aggregate, resulting in a surplus of 109 per cent in 2010 (Table 4, row 1). Moreover, only a very small proportion (6 per cent) of pension assets will be in deficit (row 4).

Under the Case A scenario, the system will be robustly in surplus with a projected aggregate solvency ratio of 131 per cent, and a negligible proportion of system assets would be insolvent.

Under the Case B scenario, the system would persist in deficit to the extent of 92 per cent (row 1), lower than at the starting point of 31 May 2006. Furthermore, 94 per cent of plan assets in the sample would be in deficit, compared with 44 per cent at the end of May 2006 (row 4).

Projected Solvency Contributions

The next step in the study is to project solvency contributions to 2010 on a year-by-year basis.

Charts 2 and 3 present projections to 31 December 2010 for total employer contributions (expressed as a per cent of total payroll) for deficit plans and surplus plans, respectively, under Mercer's three scenarios. Implicit in the projections is the assumption of all funding risk by the employer and no adjustment of employee contribution rates or benefit rates to offset current or anticipated changes in financial variables.

Chart 2 shows that the cohort of plans starting in deficit face the need to make contributions that are relatively high as a share of payroll compared with those in surplus (Chart 3). Under the baseline scenario (gold line), the group of sponsors with plans in deficit at the start of the period would need to pay, as a group, between

Chart 2 Deficit Plans

Total employer contributions as a percentage of total payroll under three scenarios

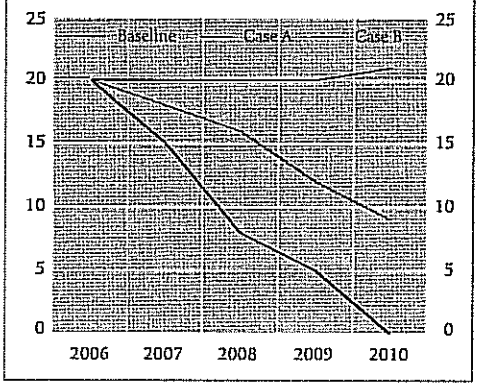
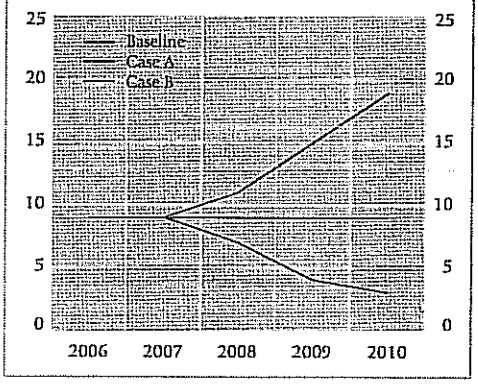


Chart 3 Surplus Plans

Total employer contributions as a percentage of total payroll under three scenarios



16 and 20 per cent of their payroll in total contributions to cover the deficit in the first three years, before falling to 11 per cent in year 4 and 9 per cent in year 5. This compares with a constant 9 per cent of payroll throughout for sponsors with plans starting in surplus at the end of 2005 (Chart 3).

Under the Case B unfavourable scenario (Chart 2, green line), the group of companies with plans in deficit at the start of the period will be paying, through the period, 20 to 21 per cent of their payroll in total contributions to cover the deficit—much more than under the other two scenarios.

Impact of the Solvency-Relief Measures

The updated Mercer projections do not incorporate the potential effects of solvency-relief measures.

To assess the possible impact of the temporary federal and Quebec solvency-relief measures, a projection was made assuming that, on average, employers will elect to amortize solvency deficits over 7 years instead of 5 years.[8] It is estimated that the measures have their maximum benefit in year 1, reducing solvency special contributions by 9 per cent, followed by reductions of 4 per cent in years 2 and 3.

Thus, it appears that, in aggregate, the potential impact of the measures is fairly modest. They could, however, be quite important for individual plans, particularly plans that choose to extend the solvency period to 10 years, as allowed under the regulations.

Other Studies on the Canadian Pension Funding Situation

Other studies have recently reviewed the pension funding situation, using different samples of sponsors than the Mercer study.

For example, Dominion Bond Rating Service (DBRS 2006) has shed some light on the sectoral dimensions of pension deficits. The study notes the following with respect to Canadian and U.S. corporate defined-benefit plans: "Pension plans are only a concern for a minority of industries and companies, typically those that exhibit the risks of an aging workforce and are highly labour-intensive with strong unions. Examples of these industries are auto parts, forestry and manufacturing."

The DBRS study goes on to list about 40 corporations in Canada and the United States that report a pension deficit, on a GAAP basis (rather than a solvency basis), in excess of 20 per cent of net worth. DBRS calculates that a 200-basis-point increase in interest rates would significantly reduce underfunding with no action by the companies necessary.

The firm of Towers Perrin completed its sixth annual review of defined-benefit pension plan financial disclosures by 83 of the 100 largest Canadian companies traded on the Toronto Stock Exchange (S&P/TSX). The study compares a number of key financial results for 2005 derived from the annual reports of non-financial corporations. Towers Perrin found that, in spite of double-digit equity returns and sponsors making record contributions, there was no improvement in the funding position (as measured under GAAP accounting) for the third straight year. The authors attributed this lack of improvement to lower bond yields but expressed hope that rising yields in 2006 would provide some relief for sponsors.

Conclusion

The results of the updated Mercer pension study are moderately encouraging, but highlight the high sensitivity of the pension-solvency situation (and the path of future contributions) to economic conditions, in particular, movements in high-grade bond yields.

The baseline scenario—essentially a continuation of the current low-inflation environment with moderate portfolio returns—suggests that the system as a whole will be in surplus in 2010 (enjoying an aggregate 109 per cent solvency ratio). Of course, to achieve this improvement, many plans that are starting in deficit will be making special contributions over the roughly 5-year period, representing a substantial

8. The decision to use 7 years as the effective amortization period in aggregate for applicable plans is a function of Mercer's judgment of the number of federal and Quebec plans that will either chose not to take advantage of the relief measures or will not be able to because of the various conditions attached to the measures.

proportion (up to 21 per cent) of their total payroll costs. It seems reasonable to assume that, in many cases, this will entail hardship for sponsors.

Furthermore, it is important to keep in mind that the unfavourable Case B scenario would have plans making high contributions for almost five years and, in the end, the solvency situation would be worse than at the start.

To conclude, it appears that the direct consequences for the Canadian financial system of current pension deficits are not large. However, they can have important consequences for the financial condition of individual firms in vulnerable sectors, particularly if combined with another shock. And ultimately, plan members will probably have to share in the adverse consequences falling out of a major funding problem, with the potential for increased contributions, reduced benefits, and even the elimination of the plan.

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Results of the FSR Readership Survey

Jean Mair

Table 1
Summary of Survey Responses

Reader profile	Number of respondents	Per cent of total
Domestic	112	83.0
Foreign	16	11.9
Did not identify themselves	7	5.2
Affiliation		
Banking/financial services	34	25.2
Academia	24	17.8
Corporation/business	20	14.8
Government	16	11.9
Student	9	6.7
Other	21	15.6
Did not identify themselves	11	8.1

Table 2
Sections of the FSR Read Regularly

Section	Per cent of respondents
Financial System Risk Assessment	69.6
Important Financial System Developments	71.9
Reports	50.8
Policy and Infrastructure Developments	47.4
Research Summaries	49.6

Table 3
Views on the FSR

Question	Average rating[a]
High-quality writing	4.03
Interesting topics	3.98
Visually appealing layout and design	3.96
Rigorous economic analysis	3.86
Clear assessment of risks to the financial system	3.82
To the point	3.73

a. Respondents were asked to evaluate various aspects of the FSR on a scale of 1 (lowest rating) to 5 (highest rating).

The *Financial System Review* (FSR) has been published since December 2002. Currently, the FSR has about 1,500 subscribers. As well, some 3,000 persons are notified of its publication through Bank Messenger, an email alert service.

Early in 2005, the Bank of Canada decided that it was time to collect readers' views on the publication. A readership survey was circulated with the December 2005 issue and was also posted on the Bank's website. This note presents the results of that survey. We thank those readers who took the time to complete it.

Some 135 readers responded to the survey questionnaire. The results are summarized in Tables 1 to 3. They suggest that the FSR has a diverse audience with a wide range of interests, and that the readership seems generally satisfied with the publication. We will be taking into account the interests and views of our readership as revealed in this survey as we draft future issues of the FSR.

Who reads the FSR?

The survey results indicate that the audience is primarily domestic (close to 90 per cent of those respondents that identified themselves). The audience is also very diverse, with no single group accounting for much more than a quarter of the readership. The largest groups of readers are in banking/financial services, academia, business, and government.

Why do they read the FSR?

The FSR aims to improve the reader's understanding of current developments and trends in the Canadian and international financial systems and of the factors affecting them. It also summarizes recent work by Bank of Canada staff on specific financial sector policies and on aspects of the structure and functioning of the financial system.

About 80 per cent of the respondents said that they read the FSR for "information on developments in the Canadian financial system." Close to half read it for information on the Canadian banking sector, information on the global financial system, and for an assessment of the soundness of the Canadian financial system. About one-third wanted to learn about initiatives to enhance the efficiency of the Canadian financial system. And

about half of the respondents use it as a reference.

Most people were looking for relatively wide coverage:

- Virtually all respondents said that they read the FSR to obtain information on the Canadian financial system. But over 70 per cent were also looking for information on developments outside of Canada.
- Over 80 per cent were interested in current analysis. Two-thirds of those replying read the FSR for the "research articles." And some 60 per cent of respondents said that, on average, they read more than one research article per issue.
- Close to 60 per cent of respondents were looking for both quick updates and in-depth assessments of financial system issues. About 30 per cent wanted only a quick update of these issues, and the balance, only in-depth analysis.

Information content was rated as more important than topic timeliness by a ratio of about 2 to 1.

What do they read?

The Developments and Trends section was the most widely read part of the FSR, with close to 70 per cent of respondents regularly reading both the Financial System Risk Assessment and Important Financial System Developments. Close to 50 per cent stated that they regularly read the other three sections (Reports, Policy and Infrastructure Developments, and Research Summaries).

What do readers think of the FSR?

Overall, survey respondents seemed satisfied with the FSR.

Respondents were asked to assess various aspects of the FSR on a scale of 1 to 5, with 1 being the lowest rating and 5 the highest. The weighted-average answers clustered between 3.7 and 4, a reasonably favourable result. The highest marks were for high-quality writing, interesting topics, and layout. The lowest mark was in the "to the point" category. With these comments in mind, every effort will be made to ensure that the material in the Bank's *Financial System Review* is presented in a clear and direct manner.

Most respondents found the language in the FSR to be at an appropriate technical level.

Over 80 per cent of respondents were satisfied with the current frequency (twice per year) and length of the publication.

How do readers access the FSR?

The print version of the FSR is available to subscribers on request. The FSR can also be accessed on the Bank's website. About two-thirds of those replying to the questionnaire use only the print version of the FSR, while another 13 per cent use both the print and online versions. Some 20 per cent of respondents (many from abroad) read the FSR only online.

Research Summaries

Introduction

Bank of Canada staff undertake research designed to improve overall knowledge and understanding of the Canadian and international financial systems. This work is often pursued from a broad system-wide perspective that emphasizes linkages across the different parts of the financial system (institutions, markets, and clearing and settlement systems) linkages between the Canadian financial system and the rest of the economy, and linkages to the international environment, including the international financial system. This section summarizes some of the Bank's recent work.

Financial institutions and clearing houses face a number of financial risks, including the credit and market risks that arise from their participation in financial infrastructures, such as the securities clearing and settlement system. Collateral in the form of equities and fixed-income instruments is commonly used to manage these risks. But collateral itself can change in value over time. Thus, it is important to require a pledge of collateral large enough to cover any losses should a risk materialize. In **Collateral Valuation for Extreme Market Events**, Alejandro García and Ramazan Gençay propose a framework that can be used to compare different methods of measuring the risk surrounding the future value of collateral. This analysis is useful in determining the amount of collateral required to cover risks.

An efficient and productive financial system is important for the development and longer-run growth of the economy. To better understand the factors that might contribute to improved economic performance, policy-makers are often interested in cross-country comparisons. In this regard, comparisons of Canada-U.S. productivity have become topical, with suggestions of a "productivity gap" in some Canadian industries, including financial services, where Canadian banks play a very prominent role. Jason Allen, Walter Engert, and Ying Liu have recently studied the efficiency of major Canadian banks, measuring it against that of comparable U.S. banks. That work is summarized in **Are Canadian Banks Efficient? A Canada-U.S. Comparison.**

Payments systems are typically characterized by some degree of tiering, with upstream firms (clearing agents) providing settlement accounts to downstream institutions that wish to clear and settle payments indirectly (indirect clearers). Clearing agents provide their indirect clearers with an essential input (clearing and settlement services), while also competing directly with them in the retail market for payment services. In the article, **Credit in a Tiered Payments System**, Alexandra Lai, Nikil Chande, and Sean O'Connor construct a model of a clearing agent with an indirect clearer to examine the clearing agent's incentives to lever its upstream position to gain a competitive advantage in the market for retail payment services. The model demonstrates that a clearing agent can achieve this competitive advantage by raising the indirect clearer's costs; however, the incentive to raise these costs is mitigated by credit risk to the clearing agent arising from the provision of uncollateralized overdrafts to its indirect clearer. The results suggest that tiered payments systems, which require clearing agents to provide overdraft facilities to their indirect clearers, may result in a more competitive retail payment services market.

In the article, **Using No-Arbitrage Models to Predict Exchange Rates**, Antonio Diez de los Rios proposes a model of the joint behaviour of interest rates and the exchange rate in two countries. In the model, movements in these variables are related in such a way as to preclude the existence of arbitrage opportunities. The term structure and the expected rate of depreciation of the exchange rate are functions of both domestic and foreign short-term interest rates.

The author finds that imposing the no-arbitrage restrictions in the estimation of the model produces exchange rate forecasts that are superior to those produced by time-series methods such as a random-walk model or a vector autoregression. This is a notable result, given that the random-walk model has proved very difficult to beat in forecasting exchange rates.

Collateral Valuation for Extreme Market Events

*Alejandro García and Ramazan Gençay**

Clearing and settlement systems are critical to the infrastructure of financial markets because of the large values of funds and securities that settle through them. For instance, in 2005, $49.9 trillion was settled through the Canadian securities clearing and settlement system (CDSX). Given the large values flowing through these systems, regulators and banking professionals have taken initiatives to make them safer.

A common factor in many of these initiatives is the use of collateral to manage financial risks. For example, participants in a clearing and settlement system may have to pledge collateral equivalent in value to the amount they owe. If a participant fails and is unable to pay the amount owing, the collateral can be sold to generate the needed funds. But collateral itself may consist of risky assets and thus can change in value over time. It is therefore necessary to require a pledge of collateral large enough to adequately cover all losses in the event of a failure.

To manage the risk created by the uncertainty surrounding the future value of collateral, the initial value of the collateral is discounted. In other words, participants must pledge a greater amount of collateral than the amount owing. This discount is often referred to as the "haircut."[1] The larger the haircut, the lower the risk, but the higher the costs incurred by participants using the system.

In this article, we propose a framework that can be used to compare different methods for calculating haircuts. Particular attention is paid to selecting an appropriate method for low-probability events (e.g., large, unexpected declines in asset prices) that might affect the stability of the financial system, and one that also takes into account the cost of pledging collateral.

Methods for Estimating Haircuts

Two components are needed to calculate a haircut for collateral. The first is a model of the distribution of losses (i.e., frequency with which the asset declines in value), since the distribution of returns is unknown. The second is a risk measure, which can be thought of as a way of mapping the loss distribution into a single number (the haircut).

There are several ways to model the loss distribution for collateral based on historical data for returns. These include:

- **Parametric approaches** that use historical data to obtain the parameters necessary to characterize a given distribution (e.g., Normal, *t*, etc.). These parameters are then used to approximate the return distribution, and the haircut is obtained from the resulting quantile, given a particular distribution and a confidence level.[2]
- **Non-parametric approaches**, such as historical-simulation techniques, that do not model the return distribution under some explicit parametric model, but instead use the empirical distribution of the data to estimate the quantiles, for a given confidence level.

1. The haircut represents the amount by which the security could decline in value subject to a confidence level and a holding period.

* This article summarizes García and Gençay (2006).

2. Quantiles are points taken at regular intervals from the cumulative distribution function. Dividing the ordered data into q equal-sized data subsets is the motivation for q-quantiles. The quantiles are the corresponding data values marking the boundaries between consecutive subsets.

Along with choosing one of the above approaches, the estimation of haircuts requires a means of quantifying risk: a risk measure. Various risk measures can be used. One of the most common is the Value at Risk (VaR). We also use an alternative risk measure called Expected Shortfall (ES).[3]

The method for calculating a haircut can most easily be explained with an example. Consider an exposure of $100 in a system for clearing and settling securities. This exposure is collateralized by an asset that has a market price of $100. To estimate the haircut for such an asset, we use a parametric approach (e.g., a normal return distribution) and select a risk measure (e.g., VaR). Knowing that the asset has a daily percentange change in price with a mean of zero and a standard deviation of 3 per cent, we estimate the corresponding normal distribution. Next, we choose a confidence level for the haircut (e.g., 0.5 per cent)[4] and then select a holding period (e.g., 1 day). Finally, we calculate the corresponding VaR obtained from a normal distribution with the mean and standard deviation of the data and assign this value as the haircut.[5] This parametric approach, combined with VaR, yields a haircut of 7.72 per cent (quantile of the distribution), which is associated with a tail risk of 0.5 per cent (confidence level). With this haircut, the amount of collateral required to cover the exposure of $100, given the characteristics of the asset pledged, would be $108.36 which is (100/[1–haircut]).

Using Extreme Value Theory to Characterize the Distribution of Returns

A number of empirical observations generally hold for a wide range of financial time series.[6] One of these is that return series have fat tails. This means that compared with a normal distribution, there are fewer observations around the mean, and more in the tails or extremes of the distribution. This is true for many equities and certain fixed-income instruments that may be pledged as collateral. For such assets, it is not appropriate to use a normal distribution to estimate the distribution of market returns. This is because the normal distribution cannot capture values at very low or high tails of the distribution. Extreme value theory (EVT) methods are more appropriate for modelling the tail behaviour of the distribution of returns for securities.[7]

The intuition of EVT is as follows. While the normal distribution is the important limiting distribution for sample averages (central limit theorem), *the family of extreme value distributions is used as the limiting distribution of the sample extremes*. Thus, it is more relevant when we are interested in the extremes of the distribution. This family can be presented under a single parametrization known as the generalized extreme value distribution.[8]

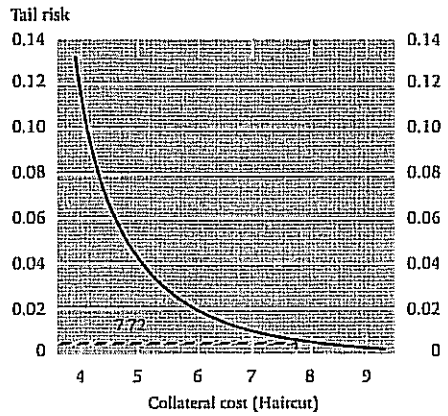
The power of EVT methods to capture extreme events is illustrated in Gençay and Selçuk (2006), where the authors use data for Turkey's overnight interest rate prior to the crisis when the rate reached a level of 873 per cent on 1 December 2000 and 4,000 per cent on 21 February 2001. The authors find that estimation results from the pre-crisis data indicate that a day with overnight interest rates over 1,000 per cent (simple annual) could be expected every 4 years. In other words, the extraordinary levels observed during the crisis were in the nature of the economy before they actually materialized.

The Risk-Cost Frontier

Having suggested some alternative methods for estimating collateral haircuts, we now need a framework for comparing the methods. We propose the "risk-cost frontier" as such a framework. The frontier is a way of summarizing the risk-cost trade-off implied by each method. Each method has its own trade-off between the risk that price fluctuations in collateral value are not covered by a haircut (tail risk), and the cost of pledging collateral, measured by the excess collateral above the exposure that corresponds

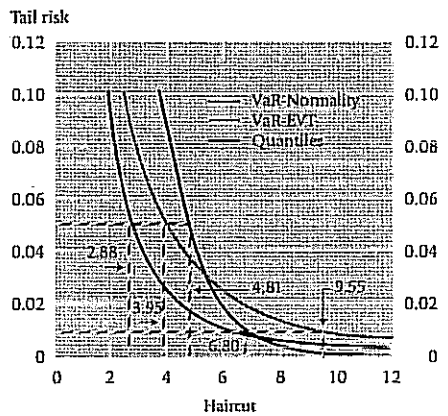
3. ES is a *coherent* alternative to VaR, where *coherence* is defined as axioms that capture the desired properties of a risk measure. This term is from Artzner et al. (1997, 1999).
4. This means that 1 day out of 200, the haircut would not be sufficient to cover the daily price fluctuations.
5. VaR is simply a quantile of the loss distribution of returns. This quantile represents the maximum loss that is not exceeded with a given high probability.
6. A good reference of the stylized facts for financial time series can be found in Mandelbrot (1963).
7. Embrechts, Klüppelberg, and Mikosch (1997) is a comprehensive source of theory and applications of extreme value theory to the finance and insurance literature.
8. This result is known as the Fisher-Tippett theorem.

Chart 1 Risk-Cost Frontier under Normality



Note: Haircuts and tail risk values obtained from a simulation of a normal distribution with a zero mean and standard deviation of 3 per cent.

Chart 2 Comparison of Methods for Calculating Haircuts



Note: Collateral returns are simulated from a *t* distribution with 2.2 degrees of freedom.

to the haircut (collateral cost). The trade-off exists because *larger haircuts* imply *lower tail risk* but *higher collateral cost.*

The risk-cost frontier can be constructed by calculating haircuts for different levels of tail risk but using the same method to model the return distribution. For example, the level of tail risk could start at 0.5 per cent and go up to 10 per cent. We can then calculate the associated haircuts. From these pairs of points, we can construct a risk-cost frontier. Chart 1 depicts the risk-cost frontier corresponding to the example given earlier (normal with mean zero and standard deviation of 3 per cent and a VaR risk measure).

Evaluating Haircut Estimation Methods

The risk-cost frontier can be used to compare different methods of calculating haircuts. Haircuts for the same levels of tail risk are calculated using different methods (i.e., combinations of (i) models for the loss distribution and (ii) risk measures).

The risk-cost frontier can then be used to determine the most appropriate method by selecting one whose frontier is closest to a benchmark frontier constructed from the data, but that does not cross it and, therefore, does not underestimate the haircuts. Consider the following example. First, the returns on a hypothetical asset are simulated using a *t*-distribution with 2.2 degrees of freedom. This specification shares similar statistical properties, such as fat tails, with those in financial time series. Two different methods are then used to estimate the haircuts. Knowing the underlying data-generating distribution allows us to determine that the best method for calculating the haircut is the one that has a risk-cost frontier closer to the risk-cost frontier calculated directly for the simulated data (using a non-parametric approach).

In this example, we compare two methods: both use a parametric approach, but one will assume a normal distribution and one an extreme value distribution. Both methods use VaR as the risk measure. Chart 2 shows the three risk-cost frontiers: the benchmark case with a green line (non-parametric approach for the empirical quantiles), the method based on the normal distribution with a red line, and the method that uses an extreme value theory distribution with a gold line.

Chart 2 illustrates the mismeasurement of risk when comparing the risk-cost frontier of the method that assumes a normal distribution, with the benchmark risk-cost frontier calculated from the simulated data (denoted by a green line). In Chart 2, we also observe that use of an extreme value distribution gives haircuts that are closer to benchmark given by the quantiles of the simulated *t* data (green line in Chart 2). Chart 2 suggests that the method that uses an extreme value distribution is the more appropriate one.

In our study, we also conduct the same analysis using real market data and find similar results. These results can be summarized as follows:

- Methods that use VaR on the assumption of normality overestimate (at high levels of tail risk) and underestimate (at low levels of tail risk) the values for the haircuts. This happens because the risk-cost frontier that uses the normality assumption crosses the benchmark frontier constructed from the empirical quantiles (green line in Chart 2). Thus, for the purpose of covering extreme risk, VaR with normality may not be adequate.
- VaR calculated with EVT methods provides a good fit in terms of slope to quantiles of the data. Nevertheless, VaR with EVT gives larger values for haircuts compared with the actual quantiles of the data. For the purpose of covering extreme risk, VaR with EVT is adequate. It should be kept in mind, however, that although they provide a cushion for extreme events, larger haircuts are costly to participants of the system.

Ultimately, the selection of the method for calculating haircuts depends on the weight placed on collateral costs versus coverage of extreme risk, and this depends on the objectives of the risk manager. Managers in critical financial infrastructures may choose to select a haircut that corresponds to a higher quantile than managers in organizations with greater tolerance for risk. No matter what the weights placed on risk and cost may be, a careful examination of the statistical properties of the return distribution is always recommended in order to select the most appropriate method for calculating haircuts.

Conclusions

We propose a framework that allows us to (i) characterize the risk-cost trade-off for a particular risk measure and method of haircut estimation, and (ii) compare different risk measures from alternative estimation methods, using the risk-cost frontier. The framework proposed is useful for understanding the risk-cost trade-off implied by the method used to calculate the collateral value (haircuts) that institutions must pledge to cover their exposures. These institutions may be clearing houses, central counterparties, payment system operators, central banks, or commercial banks determining their risk capital.

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Are Canadian Banks Efficient? A Canada-U.S. Comparison

Jason Allen (Bank of Canada), Walter Engert (Bank of Canada), and Ying Liu (Université de la Méditerranée)

Box 1

Canadian and U.S. Banks

The six major Canadian banks in our sample comprise over 90 per cent of the assets of the Canadian banking sector. The banks are Royal Bank Financial Group, Bank of Montreal, Canadian Imperial Bank of Commerce, TD Bank Financial Group, Bank of Nova Scotia, and National Bank.

The comparisons reported in this article consider total U.S. banks and a sample of 12 U.S. bank holding companies (BHCs). The BHCs are selected from the top 20 U.S. banks in terms of assets as of 31 December 2004. They were selected because there are continuous data from 1986 to 2004, and because most of these banks have a business mix broadly similar to that of the Canadian banks, benchmarked in a specific manner. That is, most of these BHCs make a similar proportion of revenue from retail banking.

The BHCs are JPMorgan Chase & Co., Bank of America Corp., Wachovia Corp., Wells Fargo & Co., U.S. Bancorp, SunTrust Banks Inc., National City Corp., Citizens Financial Group Inc., BB&T Corp., Fifth Third Bancorp, Keycorp, and The PNC Financial Services Group Inc.

An efficient and productive financial system is important for the development and longer-run growth of the economy. Indeed, a recent comprehensive survey of the research literature suggests that the quality of financial service provision is a key ingredient for economic growth (Dolar and Meh 2002).

To better understand the factors that might contribute to improved economic performance, policymakers are often interested in cross-country comparisons. In this regard, Canada-U.S. productivity comparisons have become topical, with suggestions of a "productivity gap" in some Canadian industries, including financial services—where Canadian banks play a very prominent role.

Given these various considerations, we recently studied the efficiency of major Canadian banks, and compared it with the efficiency of U.S. banks (Allen, Engert, and Liu 2006). This article presents a summary of that work.

Performance Measures

We begin by considering common performance ratios, comparing the six largest Canadian banks (which account for the vast majority of Canadian banking assets) with total U.S. banks, and with a subset of U.S. bank holding companies (BHCs). (See Box 1 for more on these banks.)

The data that we use are from the balance sheets and income statements reported by these institutions to the banking supervisors in Canada and in the United States. We deflate all variables by the consumer price index, excluding food and energy prices, in the respective country. We also adjust the data for the different purchasing powers of the Canadian and U.S. currencies.[1]

1. We use the Rao, Tang, and Wang (2004) calculation of a PPP measure for value-added in financial services (1.09 in 1999).

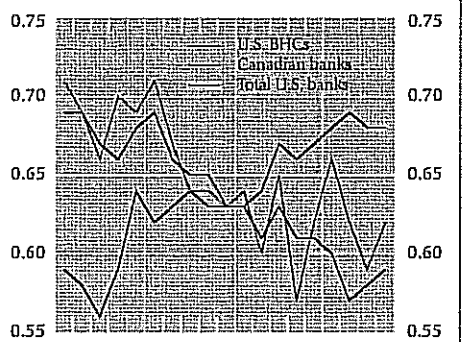
Expense ratio

The expense ratio is often used by analysts to evaluate bank performance. It is defined as the ratio of non-interest expense to net operating revenue (net interest income plus non-interest income).[2]

Chart 1 presents the expense ratio for Canadian banks, the U.S. BHCs, and total U.S. banks. The expense ratio of Canadian banks was lower than that of U.S. banks in the late 1980s and early 1990s. But this measure has been trending up at the Canadian banks and down at the U.S. banks over the sample period, so that the expense ratio of Canadian banks currently exceeds that of U.S. banks.

Our analysis indicates that the difference in the expense ratios can be currently attributed to a higher labour cost component (wages and benefits) at Canadian banks. However, this differential does not imply disparities in productivity, which concerns how much output is produced per unit of input (typically, labour).

Chart 1 Expense Ratio



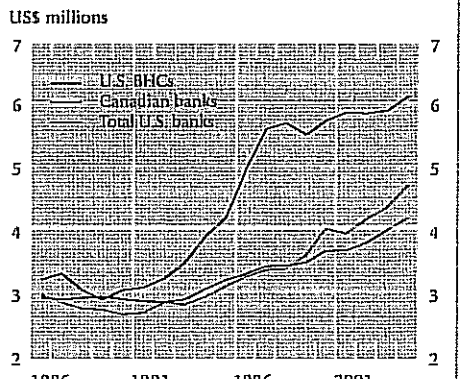
Labour productivity ratio

Accordingly, we also consider measures that focus on the output produced by banks, relative to labour input. Bank output is difficult to measure, on both conceptual and pragmatic grounds. Indeed, it is widely believed that official statistics (based on the system of national accounts) on output in financial-services industries are subject to large errors. (See, for example, Triplett and Bosworth 2004 or Diewert 2005.)

In our study, we do not use national accounts data. As noted above, we draw on data from balance sheets and income statements provided to bank supervisors. To measure productivity, we begin with total assets reported on balance sheets as our measure of output.

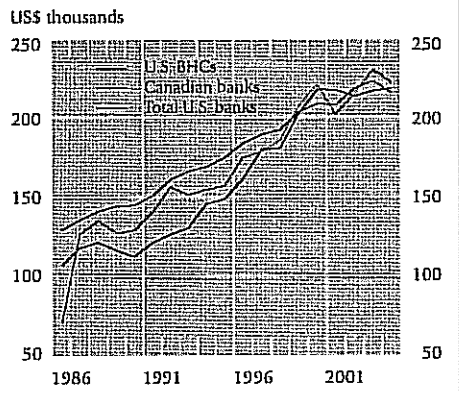
Chart 2 compares total assets per full-time equivalent employee of Canadian banks, the

Chart 2 Assets per Employee



2. The denominator of this ratio—particularly net interest income—depends on the risk differential between assets and liabilities. Therefore, a change in the ratio can be caused by changes in risk taking and not necessarily by changed efficiency. A change in the mix of a bank's services or products (say, towards non-traditional banking services) can also affect this ratio by altering the mix of inputs and expenses. Thus, we prefer the term "expense ratio," and not "efficiency ratio," as it is sometimes called.

Chart 3 Net Operating Revenue per Employee



U.S. BHCs, and total U.S. banks, in constant 1999 U.S. dollars. This chart suggests that the productivity of Canadian banks has been considerably higher than that of U.S. banks in the past decade.[3]

Next, we consider a measure that effectively internalizes differences in asset generation and management, and focuses on overall results. Specifically, Chart 3 shows net operating revenue per full-time equivalent employee of Canadian banks, the U.S. BHCs, and total U.S. banks.

According to this measure, Canadian bank employees were less productive than their U.S. counterparts in the late 1980s, but started to catch up in the early 1990s. In fact, according to this measure, the three groups of banks have converged since the late 1990s, indicating that Canadian banks are as productive as their U.S. counterparts.[4]

Economies of Scale and Cost-Inefficiency

We also consider another means of gauging bank efficiency, based on econometric methods, using disaggregated bank data. In this case, our analytical framework is the translog cost function (as in Allen and Liu 2005), which has become a standard tool in the research literature.

Methodology

In this framework, a bank's cost-minimization problem can be written as a general cost function:

$$C = f(\mathbf{q}, \mathbf{w}) + \theta + \xi,$$

where C is bank costs; $\mathbf{q}$ is a vector of bank outputs; $\mathbf{w}$ is a vector of input prices that a bank faces; and $f(\mathbf{q}, \mathbf{w})$ is a translog function, consisting of the individual and cross-product terms of $\mathbf{q}$ and $\mathbf{w}$. The term θ represents effects unique to each bank, and the error term ξ represents all other unexplained influences on a bank's cost structure.

3. Including a measure of non-traditional activities (such as those related to off-balance-sheet assets) in total assets does not change this conclusion.
4. It follows from these various performance ratios that the return on assets of Canadian banks is less than that of U.S. banks, which is what we see in the data. On the other hand, the return on equity of Canadian banks is comparable to (if not greater than) that of U.S. banks.

Inferences regarding economies of scale are drawn from the derivative of C with respect to **q**; that is, how a bank's costs vary with its scale of output.

The error term ξ provides the basis for the measurement of "cost-inefficiency." We define the efficient frontier as the (benchmark) bank with the lowest inefficiency measure (based on its ξ), and then measure each bank's distance from that efficient frontier. An efficient banking system is represented by relatively small inefficiency measures and convergence over time towards the efficient frontier.

An additional parameter of interest is technological progress, which we approximate initially with a quadratic time trend and then with other variables in different specifications of the model. We also include variables to capture the effects of regulatory changes in Canada and the United States.[5]

Data

Three input prices are included in the model: labour, capital, and deposits. They are measured, respectively, as the average hourly wage of bank employees, the expenses on real estate and fixtures divided by the total stock of these items, and the effective interest rate paid on deposits. A bank's output is divided into five categories: consumer loans, mortgage loans, non-mortgage loans, other financial assets on the balance sheet, and an asset-equivalent measure of non-traditional activities (following the method of Boyd and Gertler 1994).

We estimate the model by panel dynamic least squares using quarterly data from 1983 through 2004 for the Canadian banks, and from 1986 through 2004 for the U.S. BHCs.[6]

Results

For our sample of Canadian banks, we reject the null hypothesis of constant returns to scale. Instead, we find increasing returns to scale (of about 7 per cent), suggesting that Canadian banks would gain (modestly) from being larger.

As regards the measure of cost-inefficiency for Canadian banks, we find that the gap between the efficient frontier and other banks averages less than 10 per cent, depending on the specification considered. More refined measures of technological change (capturing investment in employee training and automated banking machines, for example) lead to measures of cost-inefficiency among Canadian banks averaging about 6.5 per cent. As well, the estimates indicate that Canadian banks have tended to move closer to the efficient frontier over time.

For the U.S. case, the null hypothesis of constant returns to scale is rejected as well. Increasing returns to scale of about 2 per cent are estimated.

Estimates of cost-inefficiency for the sample of U.S. banks indicate that the gap between the efficient frontier and other banks is greater than 10 per cent, which is a typical result in the academic literature on U.S. bank efficiency (for example, Berger and Mester 1997). In our preferred specification, the average cost-inefficiency measure is about 14 per cent. As well, cost-inefficiency among the U.S. BHCs has not narrowed appreciably over the sample period.

We also find that the estimate of technological progress for Canadian banks is greater than for U.S. banks. Indeed, the results suggest that the effect of technological progress in lowering Canadian bank costs is three times greater than in the U.S. case—a result that we find surprising.[7]

Finally, we find that some of the legislative changes that have occurred in the past 20 years have reduced the cost structures of banks in both countries. For example, in Canada, the financial legislation revisions in 1987 and 1997

5. The financial systems in Canada and the United States have been affected by a series of legislative changes over the past 20 years regarding bank powers, organization, and regulation. The specific nature and timing of these changes have been different in the two countries. But a cumulative effect has been the development of essentially universal banks in both countries over time.

6. Given the differences in the development of the institutional and regulatory environments (among other things) in Canada and in the United States, separate cost functions and efficient frontiers are estimated for the two countries. (Pooling the data across countries would make interpretation of ξ unreliable.) Also relevant in this regard is the fact that there is a larger size dispersion among the U.S. BHCs than in the Canadian bank sample.

7. Other research, such as Tang and Wang (2004), also suggests that, in the recent past, productivity growth in Canadian financial services has been greater than in U.S. financial services, but not by a large margin. In our work, the time trend used to proxy technological progress is probably capturing the large increase in Canadian bank assets in the 1990s, when banks were expanding into a wide range of financial services.

were particularly beneficial in lowering banks' costs.

Conclusions

This work examines the efficiency and productivity of Canadian and U.S. banks in three ways. First, we compare key performance ratios and find that (i) the average Canadian bank employee produces more assets than the average U.S. bank employee, and (ii) in terms of producing net operating revenue, Canadian and U.S. bank workers are similarly productive.

Second, we investigate whether there are economies of scale in the cost functions of Canadian banks and a sample of U.S. BHCs. We find larger economies of scale for Canadian banks than for the U.S. BHCs. This suggests that Canadian banks are less efficient with regard to the scale of their operations and would have more to gain in terms of efficiency benefits from becoming larger.

Third, we measure cost-inefficiency in Canadian banks and in U.S. BHCs relative to the domestic efficient frontier in each country (the domestic best-practice institution). We find that Canadian banks are closer to the domestic efficient frontier than are the U.S. BHCs, and that they have moved closer to that efficient frontier over time.

Overall, these results do not suggest relative efficiency or productivity gaps in the Canadian banking industry. On the contrary, Canadian banks compare generally favourably.

Finally, as noted above, legislative and regulatory changes have benefited efficiency in Canadian financial services. This shows the importance of removing any remaining restrictions that inhibit competition and efficiency, but provide little (or no) benefit in terms of financial soundness.

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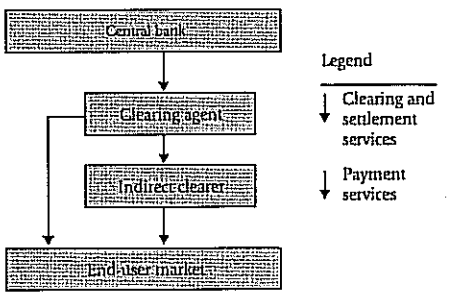
Credit in a Tiered Payments System

*Alexandra Lai, Nikil Chande, and Sean O'Connor**

Figure 1 A Tiered Payments System



Most payment, clearing, and settlement systems are characterized by some degree of tiering. In a tiered system, some of the financial institutions participating directly in a first-tier network for clearing and settlement (clearing agents) operate a second-tier network that provides similar services to other institutions (indirect clearers). Clearing agents not only provide wholesale clearing and settlement services to the indirect clearers participating in their second-tier networks, but also compete against these same indirect clearers in the provision of retail payment services to individuals and businesses. This arrangement is illustrated in Figure 1.

Survey evidence in Canada (Tripartite Study Group 2006) indicates that because of the high fixed costs associated with operating in the first-tier network, indirect clearers prefer to participate in a clearing agent's lower-cost, second-tier network. Clearing agents choose to operate second-tier networks to obtain scale economies and additional fee revenue. There are, however, some questions about the efficiency of pricing in service markets in tiered networks.

In a tiered payments system, a clearing agent has the ability, and may have the incentive, to raise the marginal cost for an indirect clearer in order to gain a competitive advantage in the market for retail payment services. Because of data-processing lags and distribution problems in the flow of settlement funds, the process of settling payments combines settlement services with credit services to network participants. For example, clearing agents provide overdraft credit to indirect clearers. We investigate the impact of uncollateralized overdrafts provided by a clearing agent in a second-tier system on the pricing strategy for its payment services, and on equilibria in the wholesale and retail markets.

If we abstract from inter-network competition to focus on within-network competition, the analysis indicates that the incentive for the clearing agent to raise the indirect clearer's costs is mitigated by the credit risk from the uncollateralized overdrafts that the clearing agent provides to its indirect clearer. In fact, in the model, the wholesale service fee charged by the clearing agent is always lower when credit risk is a meaningful consideration. The results also indicate that a clearing agent would then alter the price of its retail services to allow

* This article summarizes Lai, Chande, and O'Connor (2006).

its indirect clearer to acquire a greater share of the retail service market and higher profits. Furthermore, with a sufficiently high degree of competition in the retail market, customers are charged lower service fees by both the clearing agent and the indirect clearer.

Approach to the Analysis

The analytical approach builds on the existing research on the vertical integration of firms in wholesale and retail markets and on settlement credit. It links and extends these separate bodies of literature.

The literature on vertical integration establishes that where there is imperfect competition in both upstream and downstream markets (Spengler 1950), and even where competition is perfect in the downstream retail market (Salop 1998), incentives exist for a firm to vertically integrate the production of complementary services in both markets. Vertical integration eliminates double markups in the integrated firm's retail price and gives the integrated firm an opportunity to raise its rival's costs. Economides (1998), for example, demonstrates that when the price of upstream (input) services is regulated, a vertically integrated firm has an incentive to impose non-price costs on its downstream rivals. In the absence of input-price regulation, Bustos and Galetovic (2003) show that a vertically integrated firm prefers to increase a downstream rival's costs through the input price.

Similar modelling approaches have been applied to securities settlement systems. In particular, Holthausen and Tapking (2004) demonstrate that a central securities depository (CSD), vertically integrated with a custodian bank, will raise the costs of a rival custodian bank. Rochet (2005) shows that a CSD has an incentive to vertically integrate with a custodian bank and would either refuse to provide a rival bank with settlement services or, if regulation prevents exclusion, would raise the rival's costs.

None of this literature models the joint provision of settlement services and credit by the service provider, which is the case in a payments settlement system. Kahn and Roberds (1998) construct a single-network model for banks facing uncertain payment inflows and outflows through the period, with final settlement at the end on a net basis. In this system, network participants exchange intraday credit bilaterally or multilaterally to settle payments but, in doing so, also face the prospect of credit default.

Key Model Features

By combining the survey information with relevant studies on vertical integration, tiered systems, and settlement credit, we construct a model of a vertically integrated bank (the clearing agent) that competes downstream with a rival bank (the indirect clearer) in the end-user market for retail payment services. The clearing agent and the indirect clearer are Cournot competitors in the market for retail payment services,[1] but the indirect clearer purchases clearing and settlement services, and acquires overdraft credit, from the clearing agent. The clearing agent first chooses a clearing and settlement fee to charge the indirect clearer. Then, the clearing agent and indirect clearer simultaneously choose a desired volume of payment services in the end-user market and charge the corresponding retail service fee. Since each unit of service is measured by a payment transaction, and since the net value of these transactions is allowed to be random, net payment flows and settlement overdrafts from the clearing agent to the indirect clearer are uncertain at the time of their wholesale and retail pricing decisions.

Results

The results are derived from both analytical and numerical solutions to the model. The model shows that, to maximize expected net worth, the clearing agent will take advantage of its upstream position as an essential provider of clearing and settlement services to raise the indirect clearer's costs relative to its own marginal cost of clearing and settling these payments. Consequently, the indirect clearer offers its services at a higher price than those of the clearing agent, which enables the clearing agent to attract a greater share of the retail market and a relatively higher overall profit than the indirect clearer. This is the "integration" effect.

1. Cournot competitors select optimal strategies that take account of the rival's market reaction.

Credit risk to the clearing agent from the provision of overdrafts to its indirect clearer mitigates the clearing agent's incentive to raise the indirect clearer's costs. A default by the indirect clearer on its overdraft credit, resulting from insufficient profits and available assets, will lower the clearing agent's expected net worth. In selecting its pricing strategy, a forward-looking clearing agent will therefore take account of the prospect of overdraft credit to the indirect clearer, the probability of credit default by the indirect clearer, and the possible impact of higher pricing on the indirect clearer's default probability. The clearing agent must balance its potential gains in net worth from vertical integration against the potential losses it might incur by indirectly increasing its credit risk through its own pricing strategy. Therefore, recognizing that a decrease in the indirect clearer's profits implies that the indirect clearer is more likely to default, the clearing agent lowers its service fee. This is the "credit-risk" effect.

Numerical techniques help to determine whether the integration effect or the credit-risk effect dominates under different market conditions. For a broad range of parameter values, the credit-risk effect dominates. Specifically, when credit risk is meaningful to the clearing agent, it selects a wholesale service fee that is lower than the risk-free price. This allows the indirect clearer to acquire market share and earn higher expected profits, which lowers the probability of default on any overdraft credit that it may incur. There is, however, a level of retail competition below which the indirect clearer's profits are sufficiently high (with greater market power) that it can easily repay the settlement overdrafts provided by the clearing agent. Below this critical level of retail competition, credit risk is no longer a meaningful concern to the clearing agent, which allows the agent to charge a higher wholesale service fee. But the range of parameter values for which the integration effect dominates the credit-risk effect is very small. The presence of credit risk generally results in the clearing agent lowering its wholesale service fee relative to the risk-free case.

In addition to lowering its wholesale service fee when faced with sufficient credit risk, the clearing agent also selects a retail service price that lowers its own volume of retail payments. This pricing strategy allows the indirect clearer to raise the volume of its retail payments. Despite the loss of retail market share and a lower wholesale service fee, the clearing agent earns higher expected profits from combining clearing and settlement services with overdraft credit. The indirect clearer also earns higher profits, except where the degree of competition between the indirect clearer and the clearing agent is so low that the credit risk imposed on the clearing agent is insufficient to encourage the agent to lower its fee.

While the price of retail payment services charged by the indirect clearer is always lower in the presence of sufficient credit risk, the clearing agent's price is lower only when there is a high degree of competition between the two. In other words, significant competition is required for credit risk to lower the clearing agent's fee for retail payment services and, thus, make consumers unambiguously better off.

Conclusion

In a tiered payments system, a clearing agent provides its indirect clearer with an essential input (clearing and settlement services), but may also compete against the indirect clearer in the retail market for payment services. In the stylized model developed for this analysis, the clearing agent could take advantage of its position as operator of the second-tier network by strategically pricing its wholesale clearing fee so as to raise its rival's costs. But when the credit effect dominates, the clearing agent's incentive to raise the indirect clearer's costs is mitigated by the provision of overdraft settlement loans to the indirect clearer.

When clearing agents provide uncollateralized overdraft credit to indirect clearers and credit risk is significant, wholesale service fees are generally lower and the market for retail payment services can be more competitive. Furthermore, when there is a high degree of competition between clearing agents and indirect clearers, a tiered arrangement with credit is welfare-superior, from a consumer-price perspective, to one without credit and meaningful credit risk.

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Using No-Arbitrage Models to Predict Exchange Rates

Antonio Diez de los Rios

Exchange rate predictions have many important applications. Risk managers use exchange rate predictions when deciding if (and when) to hedge currency movements. Portfolio managers use exchange rate predictions to obtain expected returns on foreign assets. Academics test their models of exchange rate determination on the basis of their ability to predict exchange rate movements.

Central bankers are also interested in having accurate models of exchange rate determination. For example, it is important to understand the forces that are driving currency movements, because different causes will have different implications for the economy. Ultimately, they may even require a different monetary policy response (Bailliu and King 2005; Ragan 2005). An assessment of international financial market stability and contagion also depends on the ability to understand large movements in currency markets.[1]

Predicting currency movements is, however, a difficult task. Despite the large body of research on exchange rate modelling, a key stylized fact in international finance is that the best prediction for tomorrow's exchange rate is today's rate (known as the "random-walk forecast").[2] This result was first discovered by Meese and Rogoff (1983a, b) and, even 25 years later, few models can do better than this one.[3] A related result, also found in the literature starting in the early 1980s, is that the forward rate does not provide the best prediction for tomorrow's exchange rate.[4] Thus, Clarida et al. (2003) note that "from the early 1980s onwards, exchange rate forecasting in general came increasingly to be seen as a hazardous occupation, and this remains largely the case."

This article summarizes a working paper (Diez de los Rios 2006) that proposes an arbitrage-free model of the joint behaviour of interest rates and exchange rates that provides exchange rate forecasts with improved predictive power when compared with the current set of foreign exchange rate models that do not impose these no-arbitrage restrictions.

No Arbitrage

It is hard to believe that exchange rates move independently of, for example, interest rates. The reason for such a skeptical statement is the concept of arbitrage in financial markets. If the prices of two related securities differ by a great amount, then an investor will have an incentive to buy the undervalued asset and sell the overvalued one to make a profit.[5] Thus, in an efficient market, arbitrage ensures that the prices of both assets do not move independently. For example, spot, forward, and Eurocurrency interest rates are mutually dependent through the familiar covered interest parity condition.[6]

1. See Berg, Borensztein, and Pattillo (2004) for a review on early-warning systems for currency crises.
2. Similarly, the best prediction at the one-month or one-year horizon is also today's exchange rate.
3. See Bailliu and King (2005) for a review of these successful models (including the Bank of Canada's Exchange Rate Equation).
4. Finance theory suggests that a risk-neutral investor should be indifferent between buying a one-month forward contract for a foreign currency or waiting one month and buying the currency directly in the spot market. This theory, known as "uncovered interest rate parity," implies that the best prediction for the future exchange rate is its forward counterpart (see Hansen and Hodrick 1980).
5. The technical definition of the absence of arbitrage states that it is impossible to obtain a portfolio that might provide a positive payoff (and never incur losses) without cost (see Cochrane 2001).
6. See Mark (2001) for more details on the covered interest parity condition.

A similar argument applies to domestic and foreign bonds. These assets are essentially imperfect substitutes with different levels of exchange rate risk. For instance, a Canadian investor who buys a one-year bond in the United Kingdom will know how many pounds sterling he will get in the future, but not how many Canadian dollars. Therefore, a Canadian investor will demand compensation for bearing the exchange rate risk. In other words, he will expect compensation for holding an asset that, from his point of view, is not perfectly risk free. If the rate of return (in Canadian dollars) of this British bond does not reflect this compensation, then the prices of British and Canadian bonds, as well as the bilateral exchange rate, should adjust until any arbitrage opportunities disappear. Therefore, the absence of arbitrage opportunities links the way in which interest rates and exchange rates can move over time.[7]

Overall, these so-called "no-arbitrage restrictions" provide useful information on how to model exchange rate movements and, therefore, how to improve exchange rate predictions.[8]

Model and Methodology

Motivated by the above arguments, Diez de los Rios (2006) uses a two-country affine term-structure model[9] to predict currency movements. The model leverages the no-arbitrage relationship between interest rates and exchange rates, itself a generalized version of the covered interest rate parity relation described above. In this model, the yield curve and the expected rate of depreciation of a currency are functions of the same set of state variables: domestic and foreign short-term interest rates.

The model is estimated for two different currency pairs: U.S. dollar–pound sterling and U.S. dollar–Canadian dollar. The dataset consists of monthly rates of depreciation[10] of these two currency pairs over the period January 1976 to December 2004, along with monthly observations of the corresponding U.S., British, and Canadian Eurocurrency interest rates for maturities of one, three, six, and twelve months. These Eurocurrency deposits are essentially zero-coupon bonds whose payoffs at maturity are the principal plus the interest payment.

The estimations are carried out using data over the period January 1976 to December 1997 in order to reserve the last seven years for an out-of-sample forecasting exercise. The exchange rate forecasts, in particular, are computed according to a recursive procedure: at each month t, the model is re-estimated using data up to and including that month, and then forecasts of the spot exchange rate, up to one year ahead, are obtained.

A "horse race" is conducted between the forecasts obtained using this no-arbitrage model and those generated by three alternative benchmarks: a random walk, a vector autoregression on the forward premiums and the rate of depreciation, and the forward-premium regression. A comparison of the author's forecasts with those produced by the random-walk model is motivated by the fact that the random-walk model is considered to be the usual metric by which to evaluate exchange rate forecasts since the original work of Meese and Rogoff (1983a, b). However, Clarida and Taylor (1997) show that if one uses a vector autoregression (VAR) on the forward premiums and the rate of depreciation, it is possible to obtain out-of-sample forecasts of spot exchange rates that beat the random-walk model. Therefore, a VAR model is also included as a second benchmark. Finally, and for completeness, the author also includes the forecasts produced by a standard ordinary least-squares regression of the rate of depreciation onto a constant and the lagged forward premium (the forward-premium regression).

The forecasts produced by the term-structure model, as well as those of the three competing models, are evaluated in terms of two widely used criteria: the root-mean-square error (RMSE) and the mean-absolute error (MAE). The smaller these criteria are, the better the performance of the model.

7. The absence of arbitrage opportunities will not only restrict the way in which interest rates and exchange rates move, but will also restrict how interest rates at different maturities move together.
8. In fact, there is empirical evidence that one can also improve interest rate predictions if such no-arbitrage restrictions are exploited (Duffee 2002; Ang and Piazzesi 2003).
9. For a review of affine term-structure models and their applications, see Piazzesi (2003).
10. Note that a negative rate of depreciation would imply an appreciation in the currency.

Results

The author finds that using no-arbitrage restrictions reduces, for example, the RMSE in forecasting the spot U.S. dollar–pound sterling rate by about 35 per cent at the one-year forecast horizon relative to the VAR approach, and by about 15 per cent for the U.S. dollar–Canadian dollar rate. The gains from using a VAR model over a random-walk model are negligible. For example, the gain at the one-year horizon for the U.S. dollar–pound sterling pair is only 2.4 per cent (versus the 40 per cent reported by Clarida and Taylor 1997). Similar results are obtained when using the MAE criteria.

Conclusions

Overall, these results support the use of no-arbitrage methods to generate more accurate exchange rate predictions. The success of this approach provides indirect support for the assumption that markets are efficient, since it is based on a generalization of covered interest rate parity. Still, more work can be done in this direction. The predictions in these models are based exclusively on the information contained in interest rates, while one would also like to use the information contained in other macroeconomic variables (such as output growth, inflation, or even commodity prices) to obtain even better predictions. Developing a no-arbitrage model of the joint behaviour of macroeconomic variables, interest rates, and exchange rates that, at the same time, is able to deliver good exchange rate forecasts is a new challenge that is left for further research.

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Burgess-Fried Foreign Property Rule

THE FOREIGN PROPERTY RULE: A COST–BENEFIT ANALYSIS

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About the Sponsors of the Paper

The Association of Canadian Pension Management (ACPM/ACARR) represents over 700 professionals involved in the management of, and service delivery to a wide variety of Canadian registered pension plans (RPPs) and registered retirement savings plans (RRSPs). Collectively these plans serve the bulk of the 12 million working Canadians covered by RPPs and RRSPs. ACPM’s mission is "to promote the growth and health of Canada’s retirement income system".

The Pension Investment Association of Canada (PIAC/ACGFR) represents over 135 Canadian pension funds with combined assets in excess of $500 billion and over 6 million Canadians as beneficiaries. Its mission is "to promote the financial security of pension fund beneficiaries through sound investment policy and practices".

Executive Summary

The Foreign Property Rule (FPR) in the Income Tax Act effectively places a ceiling on the proportion of assets that Canadian Registered Pension Plans (RPPs) and Registered Retirement Savings Plans (RRSPs) can invest outside Canada. The original 10% limit was set in 1971. It was raised to 20% in 2% increments between 1990 and 1994, and further raised to 30% in 5% increments between 2000 and 2001*. These changes in foreign property limits provide an excellent source of evidence with which to assess the costs and benefits of this regulation.

The purposes of this study are three-fold:

1. To assess whether the process of raising the ceiling to 30% has had any negative impact on the value of the Canadian dollar or on the cost of equity capital in Canada.

2. To assess what the costs and benefits might be from completely eliminating the FPR.

3. To assess the degree to which even a 30% FPR limit could compromise the intent of Canadian Pension Plan (CPP) reform to provide Canadians with a more secure financial future.

The study of these three questions has led to the following six key conclusions:

1. The primary motivation for raising the FPR ceiling from 10% to 30% over the 1990-2001 period was to permit Canadians to diversify their retirement savings more efficiently by achieving better risk/reward trade-offs in their RPPs and RRSPs. Indeed, we estimate that the increase in the FPR from 20% to 30% may have added as much as $1 billion annually to the value of Canadian retirement-related savings.

2. The FPR certainly disadvantaged most of those savers who did not have access to sophisticated and expensive accounting techniques or financial derivatives at both the 20% and the 30% levels. This is evidenced by the fact that when the FPR was at 20%, more than 80% of a sample of approximately 150 large Canadian pension funds had foreign exposure greater than that amount. That proportion dropped substantially when the restriction was raised to 30%, but even at that level at the end of 2001 more than 35% of the funds had foreign exposure above that 30% limit.

3. Meanwhile, we believe that no measurable costs were incurred in moving the FPR ceiling from 10% to 30%. For example, using the Bank of Canada's own model to predict the CDN$/US$ exchange rate, we found that the model's predictive power was not improved when the FPR limit was added as an additional explanatory variable. This should not be surprising, given that the increase in FPR-related foreign securities purchases due to the ceiling increase from 20% to 30% amounted to roughly one day's C$ trading in the foreign exchange markets over the 2000-2001 period. Similarly, the easing of the FPR did not raise the cost of Canadian equity capital. Relative to other major world stock markets, the TSX ranked third in performance over this 2-year period, compared to thirteenth in the two years prior.

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* The FPR limit is related to book value of assets rather than market value. Also foreign exposure via financial derivatives is not considered foreign property under the rule.

4. However, while the benefit/cost ratio due to raising the FPR ceiling from 10% to 30% was clearly very favourable, that does not mean it could not be improved even more by eliminating the ceiling completely. We estimate that even at 30%, the cost of the FPR to Canadians remains at between $1.5 billion and $3 billion annually. This cost is ultimately borne by the millions of Canadians who are members of employer pension plans, or who save for their own retirement through RRSPs. In total, through their RPP, their RRSP, or both, close to three-quarters of Canadian families continue to be negatively affected by the continued existence of the FPR. Eliminating the FPR completely would be equivalent to giving Canadians a further tax cut worth between $1.5 billion and $3 billion per year.

5. Is there a downside to completely eliminating the FPR? We have already shown that such a move is unlikely to have a material impact on the C$ exchange rate, and it may even have a positive impact on the Canadian equity markets if the move is seen as the final step in the removal of Canadian capital controls. Other arguments in favour of maintaining a FPR that we have heard include (a) that it creates jobs in Canada, and (b) that the beneficiaries of the tax-deferral embodied in RPPs and RRSPs "owe" it to Canadians to "give something back". We have already noted that the beneficiaries of RPPs and RRSPs are not some small, select, privileged group, but in fact the vast majority of the Canadian labour force. What about the argument that the FPR creates Canadian jobs? Not if it raises, rather than lowers the cost of Canadian equity capital, which we believe, and which the empirical evidence suggests is in fact the case. Furthermore, by effectively lowering the efficiency of pension savings, the FPR is equivalent to a tax on real labour income, and hence a deterrent to higher levels of employment.

6. The corner stone of recent reforms to the Canada Pension Plan is the development of a significant financial reserve in the hundreds of billions of dollars, to be managed by the arms-length CPP Investment Board. If the 30% FPR ceiling continues to hold, the CPP could hold a significant stake in virtually all companies traded on the TSX. Such a situation could be viewed with concern by private investors and would likely compromise the CPP Investment Board's arms-length relationship with the government. Furthermore, basic investment theory (as well as common sense) suggests that the minimum-risk strategy for this reserve would be to invest it 100% outside Canada. This would eliminate the 'double jeopardy' for the CPP of having both future CPP contributions and CPP investment returns tied to the same economy. Norway, when faced with a similar decision a few years ago regarding its National Petroleum Fund (also in the hundreds of billions of dollars), got it right. Its Parliament passed a law requiring 100% of the Fund to be invested outside Norway. Right now, the CPP Investment Board is subject to the strict application of the 30% FPR. Even the World Bank, in its recent review of national pension plans around the world, while praising Canada for the establishment of the arms-length CPP Investment Board, was critical of Canada's 30% FPR.

In conclusion, since 1990, Canada has adopted a gradual approach to easing its FPR limit upward. This easing has provided material benefits to millions of Canadians without imposing material costs on any constituency. Even without CPP reform, the complete elimination of the FPR now would bring significant additional financial benefits to these millions of Canadians. However, with CPP reform, and the creation of a massive new reserve fund for the future benefit security of all Canadians, the elimination of the FPR takes on an even higher level of urgency. Its elimination now will certainly make ordinary Canadians better off.

The Foreign Property Rule: A Cost – Benefit Analysis

1. Introduction

Canada's income tax act contains a provision known as the foreign property rule (FPR) that restricts the amount of foreign property[1] that can be held in tax deferred savings plans such as Registered Pension Plans (RPPs) and Registered Retirement Savings Plans (RRSPs).[2] There have been limits on the foreign content of tax deferred savings plans at least since RRSPs began in 1957. At that time no more than 10% of the income from a RPP or RRSP could come from foreign sources. Since 1971 the FPR has been defined in terms of the maximum proportion of assets, measured at book value, which could be foreign property. In 1971 the limit was set at 10%.

This was raised in stages of 2 percentage points per year to a maximum of 20% over the period 1990 to 1994, and subsequently raised to a maximum of 30% in two stages over the period 2000 and 2001. Despite the recognition that the FPR forced savers to take on more risk to achieve any given expected return, or to accept a lower expected return for any risk tolerance, defenders of the FPR have argued that there are substantial benefits if the FPR remains in place. Given this apparent conflict between benefits and costs, the government has taken a cautious approach by altering the existing regulation in stages to ensure that they do not move to a position where the net benefits become negative.

However, between the early 1970s and the 1990s, capital markets -- and economies -- have become more integrated worldwide and these costs and benefits have themselves changed. As a result, the easing of the FPR in the 1990/94 and 2000/01 periods provides us considerable insight into what the actual costs and benefits of this regulation now are. The work of Fried and Wirick (1999) addressed the costs and benefits of the FPR when it was raised from 10% to 20%[3]. The current paper updates that work by examining these same aspects as a consequence of the increase from 20% to 30%.

Our research indicates that concerns about the negative effects of relaxing the rule have simply not materialized nor, we believe, will they if the FPR is completely eliminated. Furthermore, the regulation continues to be costly. In 1999, Fried and Wirick (FW) estimated that the cost to Canadians was between two and four billion dollars annually. At 30 % we estimate that this cost has been reduced by between $500 million and one billion dollars annually, but we find that it still remains substantially more than a billion dollars annually. In this paper we will review the arguments against the elimination of the FPR and use the evidence of the last two years to show that the concerns expressed about raising the limit to 30% from 20% have been unfounded.

In the next section we review the arguments that have been put forward for retaining the FPR. Here we have been more comprehensive than in past studies. This is because some defend the FPR on account of its impact on other government policies such as the level of tax expenditures or foreign investment. In the third section we reexamine the benefits to Canadians of retaining the FPR in light of the information from the most recent increase to 30%. We also address the possible impact of the regulation on other government programs, most notably on the recently established CPP Investment Board and the CPP. We then, in the fourth section, provide an updated estimate of the expected portfolio costs of the FPR at 30%. The final section provides a brief summary and conclusion.

2. The case supporting the retention of the FPR

The defense of the FPR can be broadly summarized by the homily that the tax deferral privilege provided to retirement savings plans represents a subsidy, and those who take advantage of it should, in return, give something back to Canada. The FPR is the mechanism by which this "*quid pro quo*" is assured. Such arguments presume first, that these retirement savings plans do represent a subsidy to some group that is not deserving of it, or that the tax deferral privilege is so generous that normal tax payments are insufficient, in some ethical sense, to compensate the government for this particular subsidy. Second, it supposes that the FPR actually does provide some *net* benefit to Canadians as a whole, or at least to the most deserving among us. This second assertion is critical in defending the FPR since, without it, the regulation can be removed and policy makers can address directly the distributional issues linked to tax deferral plans. Consider first what the benefits of the FPR are supposed to be.

There are two. The first is that it protects our exchange rate and balance of payments. One argument along this line is that if the FPR were to be removed, or at least relaxed, there would be an outflow of capital as Canadians sought to increase their foreign security holdings. This would put downward pressure on the Canadian dollar. Because the Canadian dollar is already "too low", this additional effect would have negative consequences for Canadians in general[4]. A somewhat more sophisticated argument is that the FPR limits capital outflows and thereby limits capital flows in both directions. This is desirable because capital flows are the principal source of instability in the currency. Maintaining the FPR therefore keeps the dollar higher than it otherwise would be, and reduces its volatility.

The second presumed benefit of the FPR is that it provides an assured source of capital to Canadian firms so the cost of capital is lower than it otherwise would be. This in turn means greater investment and higher real wages and/or increased employment. Without the FPR, it is argued, the capital would go abroad and we would, as a nation, be poorer for it.

Some proponents of the FPR also argue that a less tangible, but just as real, benefit of the FPR is a more equal distribution of income. In particular, they argue that tax deferred savings

plans are inherently unfair because the major beneficiaries are the wealthy, and not ordinary Canadians. According to this view the FPR is important from the standpoint of fairness because it imposes a cost on the relatively well off users of these plans. As a result, they will make less use of them[5]and there is less erosion of the tax base so the government has more resources to devote to the needs of the relatively poor non-users.

Next, there appear to be a number of ideological arguments that have been made that we cannot help but believe lie behind some of opposition to the removal of the FPR. One that continues to have some currency among a sector of the population is that *any* increase in foreign ownership of Canadian companies is undesirable. If the FPR is removed, then there will be at least some outflow of capital by pension funds and RRSP savers. If Canadians are net sellers of Canadian equities then foreigners must be net buyers, and this increase in foreign ownership is to be avoided at all costs. A somewhat different argument, also linked to the role of the state, is that Canadians do not know enough about foreign markets to make wise investments there, and the state should intervene to protect Canadians from the potentially bad decisions they might make in foreign markets.

Finally, proponents of the FPR recognize that there are some costs. The most apparent of these is that the return on pension savings may be less than it otherwise would be and/or that pension assets are not as well diversified as they might otherwise be. The argument is that these costs are small, first because many plans hold significantly less than the maximum allowable foreign content, and second because diversification costs can be mitigated by using futures contracts on foreign stock market indexes.[6] Thus an individual or pension fund that wants additional international diversification is actually not constrained by the FPR; foreign exposure can be increased without increasing the amount of foreign property held. In effect, the resources stay within the country, and simultaneously pension funds obtain the necessary diversification. Thus the costs of the FPR are small relative to the above-mentioned benefits.

As best we can tell, the above set of particulars spans the arguments that have been put forward, explicitly or implicitly, to defend the FPR. It is our view that the arguments are not consistent with the evidence amassed from 1990 to the present. We now proceed to the task of documenting our view.

3. Re-examining the benefits of the FPR

3.1. The Exchange Rate

There are two parts to the argument that removal of the FPR would have a negative impact on the Canadian dollar: first, the dollar would have a lower value; and second, it would be more volatile. Neither of these is consistent with the evidence. First of all, the magnitude of the shift toward foreign assets that occurred over the period 2000/02 when the limit was raised from 20%

to 30% was too small to credibly suggest that the FPR had any measurable impact on the exchange rate. Second, evidence from other countries' experience with the removal of capital controls suggests that if there were to be any effect it is just as likely to be to increase the value of the dollar as to decrease it.

To see that the magnitudes of the capital flows would be too small relative to the foreign exchange markets, first note that the Bank of Canada estimated that the Canadian foreign exchange market had an average daily volume of over 50 billion dollars[7]. Using the PIAC survey of the largest Canadian pension funds that, together, accounted for roughly 500 billion dollars of assets, foreign exposure[8] increased over these two years by 4.8% of assets.[9] The value of monies in tax deferred savings plans that are subject to the FPR is estimated to be approximately $1.1 trillion at the end of 2000.[10] If the behaviour of all holders of these assets is similar to that of the members participating in the PIAC survey, the increase in foreign exposure in total would be in the neighbourhood of 53 billion dollars over two years. Thus the portfolio adjustment due to the revision of the FPR amounted to approximately *one day's trading* on the foreign exchange market over a two-year interval. It strains belief that this potential capital flow could have more than a trivial impact on either the level or the volatility of the exchange rate.

To provide further evidence that the FPR did not impact the exchange rate, we re-examined the Bank of Canada's exchange rate equation that is used to explain the dollar's movement over the period 1973 to the present[11]. This equation uses real effects – the ratio of the price of a representative bundle of non-energy commodities exported by Canada to the price of U.S. output (as measured by the U.S. GDP deflator), the ratio of the price of a representative bundle of energy goods exported by Canada to the U.S. GDP deflator, and the short term interest rate differential between Canada and the U.S. – to explain movements of the *real* exchange rate, defined as the nominal exchange rate times the ratio of the price levels in Canada and the United States. If the easing of the FPR over the periods 1990-94 and 2000-01 had any influence on the real exchange rate, changes in the FPR limit would be statistically significant in the regression equation. They were not[12].

Third, Bartolini and Drazen (1997) provide evidence suggesting that when a nation removes capital controls on its own citizens, it actually leads to a net capital *inflow* rather than the anticipated outflow. Why? Because non-residents see such a policy change as a signal that if the government is willing to treat its own citizens better it is likely to treat non residents' international financial transactions better as well. The FPR is just such a capital control on citizens and its total removal would likely lead to the same result documented by Bartolini and Drazen.

Fourth, the FPR does not, in itself, have any direct bearing on the exchange rate. In particular, as we have shown elsewhere (Burgess and Fried (1999)), the use of the futures markets to obtain foreign exposure has *precisely the same effect on the exchange rate* as would a

(hedged) purchase of the underlying securities. What matters is not the ownership of foreign property *per se*, but whether or not that asset is hedged into Canadian dollars. If it is, there will be *no* impact on *net* capital flows; if it is not, there may be[13]. As a result, the impact of pension contributions on the exchange rate depends upon expectations about real factors and the future course of monetary policy and its impact on inflation and interest rates, *not* on the amount of foreign equity exposure desired by Canadian savers.

The above information relates to the move from 20% to 30% foreign property. What does that suggest about the consequences of a complete removal of the FPR? We maintain that there would be no significant impact on either the level or volatility of the exchange rate. First, after any period when the FPR limit has been raised, pension funds in the aggregate did not increase their foreign exposure by as much as they were permitted to in any given year. In effect, portfolio managers for pension plans act slowly in making changes in portfolio direction. Indeed, given that the diversification gains from going from 20% to 25% to 30% are, at the margin, greater than for increasing foreign exposure an equal amount above that level, there is even less likelihood that the rate of increase will be more rapid than in the earlier periods. Thus the magnitudes involved in portfolio shifts would have even less potential for affecting the exchange rate.

Second, savers, and pension managers, already have the opportunity to hold as much foreign currency as they wish in their pension assets through their ability to take unhedged positions in foreign currency. There is no reason why these positions would increase significantly simply because there is a new, added mechanism that allows for unhedged positions. Finally, the complete removal of the FPR sends an even stronger signal that the Canadian government is sufficiently confident about the underlying conditions of the economy - low inflation, a declining debt/GDP ratio, a positive climate for investment etc. – that it is willing to let the rule of law govern international transactions between its citizens and those in other countries. As a result those forces that could cause a capital inflow will be much stronger than in the case of the partial easing undertaken in the 2000/01 period.

Relaxing the FPR over the past decade has given Canadians increased opportunity to diversify their pension savings. Fears about adverse effects on the exchange rate have proved to be unfounded. Exchange rate concerns can no longer be used as a reason for maintaining the FPR.

3.2. The Cost of Capital

There are two parts to the argument that the FPR helps to increase investment and employment in Canada. The first part is that the FPR increases the pool of capital available to Canadian firms and therefore decreases their cost of capital. The second part is that the subsequent increase in investment will increase wages and/or employment. Fried and Wirick (1999)

addressed the issue of the FPR's potential impact on the cost of capital. To have any impact Canadian financial markets must be segmented from, and/or at least be large relative to the rest of the world. Neither of these conditions holds for Canada.

Canada's financial markets constitute less than 3% of world markets. Roughly half of the TSX's 100 largest firms are also listed on US markets ensuring that prices of these securities are explicitly determined internationally. But these, in turn, are substitutes for those Canadian securities that are not inter-listed. As a consequence, the hypothesis that the prices of Canadian securities are set internationally continues to be a reasonable description of the data[14]. It was also pointed out that, to the extent that there is any market segmentation, the removal of a regulation such as the FPR could actually lead to a net capital inflow and a decrease in the cost of capital.

What evidence is there that the easing of the FPR from 20% to 30% raised the cost of capital in Canada? Looked at naively, some might argue that the Canadian stock market performed less well in 2000 and 2001 than in the prior two years. However, to link the FPR to this decline requires that the Canadian markets, indeed the Canadian economy itself, be completely segmented from the rest of the world. This clearly is not the case. Given that linkages exist, the proper measure is how well the Canadian market performed relative to financial markets in other countries. Among the 15 developed markets tracked by *The Economist*, Canada ranked thirteenth over the 1998/99 period, and ranked third over the 2000/01 period.[15] While there are many other factors at play, such a record is hardly consistent with the view that there was a flight from Canadian equities because of the easing of the foreign property rule.[16]

What about the yield on bonds? Did the easing of the FPR cause bond yields to increase? In fact, the yields on long-term bonds were, on average, lower in 2000/01 than in the preceding two years. However, the yield spread between Canadian and US long-term bonds did rise by roughly 25 basis points, from -3 basis points in December 1999 to 22 basis points in December 2001.[17] Nonetheless, it is unlikely that this had anything to do with the easing of the FPR. First of all, the share of domestic bonds in pension portfolios effectively remained unchanged between the end of 1999 and the end of 2001, which hardly suggests that these portfolio shifts caused the Canadian – US bond yield spread to increase.[18] Second, to the extent that savers chose to hedge their overseas investments into Canadian dollars, there would be an offsetting capital inflow into Canadian bonds and bills that is not recorded in the portfolios of pension funds and RRSPs.[19] In effect, the impact of the easing of the FPR suggests a net increase in the demand for Canadian debt instruments, not a decrease.

That the easing of the FPR had little if any effect should also come as no surprise given the magnitude of the portfolio shifts. Our best estimate of the shift to foreign assets is that over 2000/01, increased foreign exposure was under 5 % of total assets.[20] Thus we are talking about a shift of roughly $53 billion. Even assuming that there was no increase in foreign demand this

is trivial relative to the market capitalization of more than $2 trillion in the combined Canadian equity and debt markets. Assertions that the increase in the FPR limit was the cause of any increase in the cost of capital – to the extent that there was any – suggests a very small tail wagging a very large dog.

There is a further point that can be seen in the capital markets that bears on the FPR. The absence of diversification opportunities was especially acute over the last two years because of what has been called, in Canada, the Nortel effect[21]. Not only were holders of RRSPs and RPPs required to place much of their money in one market, but also placing it in Canadian equity meant, on average, making a very large bet on one specific security, Nortel, that, at one point, represented over one third of the market capitalization of the TSE300. The impact of the bursting of the tech bubble no doubt hit these RRSPs especially hard since Nortel was one of the few ways that Canadians could use their pension savings to participate in a diversified portfolio that had a representative amount of technology. When the bubble burst, world technology markets, as represented by the NASDAQ, fell by roughly 75%. Nortel fell more than 99% and Canadians, who would have preferred to invest over a variety of technology companies, were subject to the consequences of taking this diversifiable single firm risk. The Nortel effect reflects the consequences of the FPR in forcing pension managers to act imprudently**.**

There is a final point that may, under current rules, cause problems in the future. In 1999 the CPP Investment Board was established and began accumulating both Canadian and foreign equities using either new contributions or proceeds from coupons and principal of federal and provincial bonds to make those purchases. At the end of June 2002 the Board held $17 billion in these securities. Securities under management by the Board are expected to increase to roughly $300 billion over the next two decades. If the Board has a portfolio allocation similar to the pension industry as a whole, then under the current FPR regulation, the demand for Canadian equity by that organization would be well over $100 billion.

Given the expected growth in the Canadian equity markets, this amount would represent roughly 5% of the market capitalization of the TSX. It would seem that the CPP Investment Board would then hold a sufficient amount to be seen as a/the major shareholder in virtually every security traded on the exchange. Many in the Canadian economy would view this as counter to the best interests of the country and an inappropriate concentration of power in the hands of a government corporation. Indeed, the political independence the CPP Board now enjoys could easily be lost[22]. The obvious way to avoid this is to permit a greater proportion of the CPP portfolio to be in foreign securities.

In summary then, changes, if any, in the cost of capital in Canada over the past few years cannot be attributable to the easing in the FPR: the magnitude of the capital flow has been too small to have exerted an influence on it. The integration of the Canadian and world capital

markets suggests that it would not have an influence even if the capital flows were substantially larger. Justifying the FPR by asserting that doing so decreases the cost of capital is inconsistent with both theory and the data obtained from the recent change in the FPR from 20% to 30%.

3.3. Redistribution: a subsidy to the wealthy?

The reason why policy makers want to decrease the cost of capital is to encourage investment and thereby increase employment and/or wages. However, the discussion in 3.2 suggests that, if anything, the FPR kept the cost of capital higher than it otherwise would have been. But *even if* the FPR had lowered the cost of capital, the net effect would likely have been to *lower* employment and/or real wages rather than increase them. This is because first and foremost the FPR is a tax on the firm's use of labour, causing firms to substitute capital for labour in the production process.

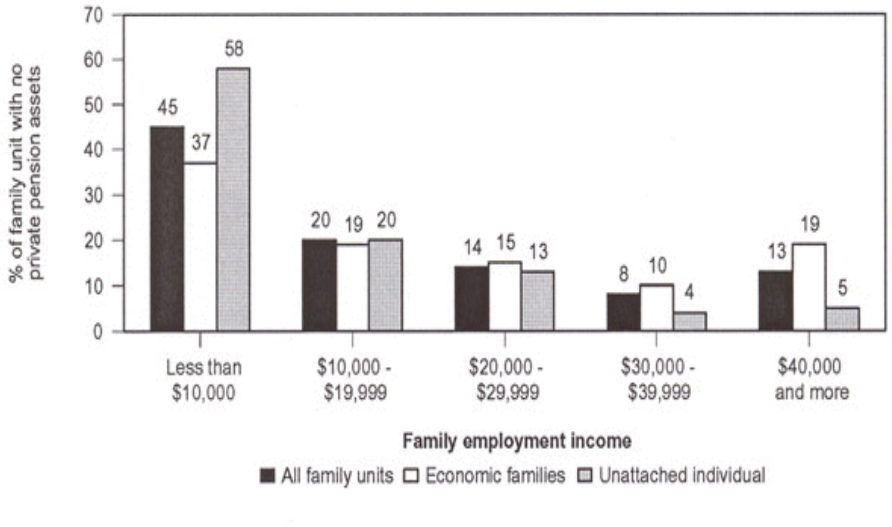
To see this, note first that eligibility for RRSPs depends directly on wage income. Anything that detracts from the return on the savings in these plans impinges directly on the benefits one receives from that wage income. Because the FPR reduces the returns on these plans, it is a tax on those entitled to them, namely workers. Consequently the FPR can be treated as a tax on wage income broadly defined to include benefits as well as money wages, and those "taxed" are the primary losers from the FPR.[23] Indeed the FPR operates in an almost identical fashion as "Employment Insurance" (EI) premiums in creating a disincentive to employment. Both of these initiatives increase the *effective* wage that employers must pay to provide a given *net* wage and benefits package to the worker. Note further that because the CPP is also subject to the FPR, the regulation negatively affects the effective real wage of all working Canadians whether or not they are members of an RPP or hold an RRSP.

By taxing wage income, the FPR is not likely to be successful in redistributing income from the wealthy, and indeed, it is not. But it is the "subsidy" implicit in tax deferred savings plans, not the FPR, that some perceive as redistributing income *to* the wealthy. So, do tax deferred savings plans represent programs designed specifically for the rich? The most recent survey of the wealth of Canadians (Statistics Canada (2001a)) determined that 71% of Canadian family units held some private pension savings[24]. Indeed this is one of the most broadly based of government programs.

Who does not participate in these plans? There are effectively two characteristics that affect that decision, income and age. There are good reasons for this. Low income will lead to less use of the private pension system for two reasons. The first is that the support for seniors in Canada is quite generous. With income from OAS and GIS, a couple could receive roughly 55% of a $30,000 salary or, for a single individual, a $20,000 salary.[25] A rule of thumb in the pension industry is that a retired family unit requires 60% to 70% of its pre-retirement income to maintain the same life style after retirement.[26] In effect, therefore, those with average incomes

below these levels will receive from government transfers sufficient support to maintain their pre-retirement consumption levels without the need for personal savings. Indeed, as Figure 1 shows, the bulk of those individuals without a private pension plan have incomes under $30,000.

Figure 1: Most family units aged 25 to 64 with no private pension assets had earnings of less than $30,000

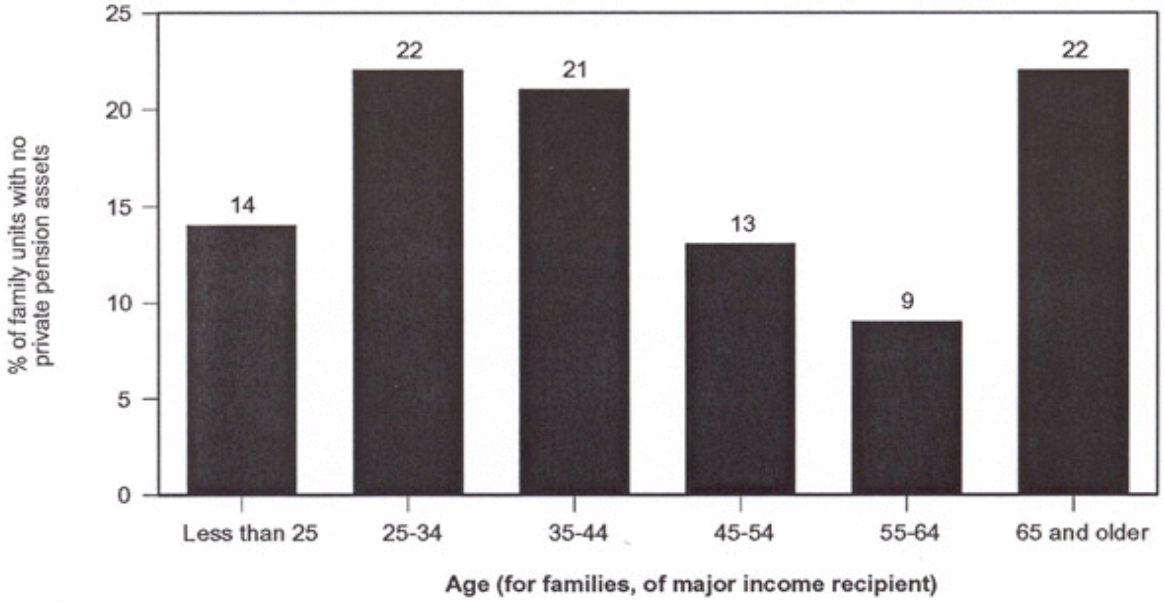


Reproduced from Statistics Canada (2001a), Chart 5.1, p. 20.

Furthermore, the figure shows that the group that uses these plans the most is in the $30,000 to $40,000 income range, hardly the wealthiest of Canadians. In fact, given the contribution cap of $13,500, (restricting those with incomes over $75,000 from the proportional potential benefits received by those with lower incomes) it would appear that the program is focussed on, and used most by, the Canadian middle class – the ordinary Canadian.

The second reason income matters is linked to the issue of age: younger Canadians are less likely to have private pension assets because their current income is below their average expected lifetime income. Deferred tax savings plans act as a means of tax averaging, taking the deferral when income and the marginal tax rates are high and, to the extent possible, withdrawing funds when income and marginal tax rates are low so as to smooth one's consumption expenditures. It makes little sense to save when you are young, raising a family and most need to use the money and then pay taxes on those savings at a higher tax rate in the future. Figure 2 confirms that it is the relatively young, with temporarily low annual incomes, that are less likely to have these private pension assets.[27]

Figure 2: The majority of family units with no private pension assets were under 45



Reproduced from Statistics Canada (2001a), Chart 5.2, p. 20.

Who uses the private pension plans only addresses part of the question of who benefits the most from them. It also matters how much is held in these plans. Here it is true that the higher income groups have more private pension assets, both absolutely and as a proportion of their after tax income.[28] However, *even if* these programs benefit better off Canadians disproportionately, the use of the FPR is a completely inappropriate instrument to use to compensate for this. If the distribution of gains is regarded as not politically desirable, policy makers should redesign the program to address that specific issue. To address the "problem" by deliberately making it a poorly run program is certainly counterproductive. Using the FPR to reduce the benefits to the wealthy is akin to establishing a program with a fixed budget and then destroying a portion of the money allocated to it so that the beneficiaries don't get "too many" benefits. Surely efforts by the government to design sensible programs directed at redistribution would be preferable.

Irrespective of whether or not the distribution of benefits from deferred savings plans is "proper", it is the middle class that would most benefit from the removal of the FPR, with no loss of benefits to any other income group. High-income groups have a greater ability to diversify their *total* asset holdings into foreign assets because a greater proportion of their financial assets are held outside these tax-deferred plans.[29] They are free to invest these assets however they wish. Lower income groups have a reduced ability to do so, largely because they have been unable to accumulate financial assets outside these plans.[30]

Finally, it should be stressed that CPP/QPP are subject to the same foreign property restrictions that RPPs and RRSPs face. Because the FPR reduces the return on contributions to all three of these programs, and CPP/QPP is expected to become partially funded at a targeted 25%, it follows that either contributions will ultimately have to be greater and/or benefits smaller with the FPR than if it were eliminated. Thus, all working Canadians are negatively affected by the continued existence of this rule.

3.4. Tax Expenditure: A Costly Program?

The argument in Section 3.3 addressed the question: all else equal, who receives the benefits from tax deferred savings plans? There is an implicit cost as well, *viz*. the foregone taxes that might otherwise have been collected in the absence of the tax deferred savings plans. These are called tax expenditures and are tracked annually by the Department of Finance (2001). Presumably, revenue that is uncollected cannot be used for other purposes, so the tax expenditure can be treated as the cost of the program that is administered in a somewhat different manner than usually done with government expenditures.

RPPs and RRSPs combined, constitute one of the largest measured tax expenditures recorded by the government. However, as before, *even if* this tax expenditure is regarded as too large, or one holds the view that tax deferral programs represent poor public policy, that is no justification for imposing the foreign property rule. Policy makers could contract the program and/or alter the eligibility requirements rather than embrace poor program design such as the FPR *if,* indeed, policy makers take these revenue and distribution criticisms seriously. Nonetheless, given that the tax expenditure argument has been used to support the FPR, at least some remarks are called for.

First of all, last year the Department of Finance finally took to heart the criticism that its methodology in measuring the tax expenditure of deferred tax plans was seriously flawed and provided new estimates that took many of these criticisms into account. The corrected measures of the tax expenditure ranged from 44% to 53% of the old measures used by those that criticized these programs. For instance, in 2000 the tax expenditure under the old cash flow measure amounted to $14.25 billion whereas the corrected, present value calculation for that year was $7.29 billion.[31]

While it is gratifying that massively overstated magnitudes will no longer be used to assess the costs of these private pension plans, it remains the case, acknowledged even by the Department of Finance, that the new values still overstate the increase in revenue if the tax expenditure were removed. This is because the measures calculated assume that behaviour does not change if the program is eliminated. Not only will behaviour change because relative, after tax, prices will be altered, but also because there will be changes in tax law in an attempt to provide at least some of the services that citizens expect from these programs.

Further, there is nothing in the measurement of tax expenditures that presumes that the existing tax structure, excluding the tax expenditure program under consideration, is optimal in any sense. Those tax expenditures were put in place precisely because there was a political consensus that without them the existing structure would not be optimal. The use of tax deferral for retirement plans has been in place for over 50 years and, indeed, virtually all OECD countries provide some form of tax relief for pension savings, either in the form of tax deferral on contributions, as is done in Canada, or in the form of tax relief on the withdrawals from such accounts upon retirement. Something must be desirable about such plans if they have persisted for so long and have achieved such universality.

Besides providing an incentive for citizens to plan ahead for their retirement, we would argue that such plans are essential for an income tax system. In particular they play an important role in providing a progressive and administratively simple mechanism to transform the tax base from that of current income to one of *lifetime* average income and/or consumption. In its absence some other tax averaging mechanism that is less simple would take its place. RRSPs are especially well suited to serve this purpose because they can be cashed at any time in response to short term fluctuations in taxable income. RPPs are less capable of handling these fluctuations in income because of locking in regulations, but most members of these plans generally have some opportunity to hold RRSPs as well.[32] Canada should be justifiably proud of the comprehensive nature of its two basic plans. Their full integration provides equitable opportunities for all working Canadians.

In summary, then, the use of the FPR to address distribution and/or cost issues linked to tax deferred savings plans can be seen as an extremely inefficient use of scarce government resources. It effectively builds in a program design flaw that wastes resources as a means of limiting a program's attractiveness. The benefits that come from this use of the FPR are essentially negative relative to alternative means of obtaining a similar result by directly restructuring the size and/or eligibility of the program itself.[33]

We would further question the implicit assumption that deferred tax plans favour the rich or that they are too expensive in terms of the government revenue foregone. Their persistence in Canada, and their almost universal application among OECD countries, strongly suggests they provide a progressive and cost effective method of providing desirable services to the citizens of the country. Finally, our reading of the data suggests that it is ordinary Canadians rather than the wealthy that would receive the bulk of the benefits from the removal of the FPR. We can find no net benefits related to income distribution or program costs that can be obtained by retaining the FPR on the assets in these plans.

3.5. Appearances and the State

It is difficult to respond to arguments based on poorly articulated assumptions about the role of the state. Yet a number of arguments in support of the FPR appear to be based on just such assumptions. The two arguments mentioned in Section 2, paternalism and foreign ownership, are just such examples. The statement that the government has imposed this constraint for investors' own well being appears to rest on the assumption that savers do not have the ability to choose good foreign investments, and our regulators cannot protect them if those investments go sour.

But Canadian investors have access to professional portfolio managers who have a solid understanding of both the foreign regulatory environments and the firms that trade in those markets. Furthermore, it is in the interests of these mutual fund and/or institutional portfolio managers to keep the interest of their clients foremost if they wish to maintain the clients' business. Indeed, part of their fiduciary duty is to ensure that the portfolios provided are sufficiently diversified. Such a practice does not appear to be part of the government's mandate in protecting the investor; otherwise the FPR would have been removed years ago. The FPR restricts the ability of the saver to fully diversify and, as all of the previous arguments made for its retention attest, it was not established with the individual investor's best interest in mind.

The argument against foreign purchases of domestically issued assets is also an argument that does not ring true today. Restrictions on the flow of goods, services and capital are falling throughout the world because governments find that removing these barriers leads to an improvement in standards of living. Those who argue for constraints on foreign ownership like the FPR need to show the rest of us why we should pay for their particular prejudices through a diminished level of retirement income. Not only does the Canadian government encourage foreign investment, there are more than sufficient institutions and regulations in place in Canada that address the issue of foreign *control*. Limiting Canadians' ability to own foreign securities hardly seems like an efficient and focussed way to address that question.

There is a third issue regarding the relationship between the state and its citizens that is not often remarked on by defenders of the FPR. This is the level of respect for the statutes of the country. In the case of the FPR this is brought into focus by the use of derivatives to obtain the diversification denied by the FPR.[34] As we have noted before, the impact on the exchange rate and net capital flows of the purchase of currency hedged foreign assets directly in the spot market or indirectly through the futures market is identical. Consequently, in a very real sense, insistence on the maintenance of the FPR is only one of appearance rather than substance except insofar as the cost of operating in the two markets differs. Indeed, the extent that pension funds are exposed to foreign markets averaged 30.7% at the end of 2001 as opposed to the 21.9% value of foreign property that Statistics Canada reports for trusteed pension funds.[35]

But these are averages. Given that different pension boards have different objectives, face different constraints and are willing to undertake different levels of risk bearing, not all faced the same degree of foreign exposure. Indeed, in 1999 more than 80% of the largest 150 pension funds in Canada had foreign exposure *greater than* the 20% foreign property limit. None of these firms violated the letter of the law, but if that 20% had any meaning, then these 80% were certainly violating the spirit of the regulation. The increase in the limit to 30% at least brought half of these funds "morally" on side, as only 35.7% of the funds had more than 30% foreign exposure at the end of 2001.

It is heartening to see that, with Canadian inventiveness, pension funds have found methods to mitigate at least some of the costs imposed by the FPR. It is disheartening to recognize that regulations are in place where so many must violate the spirit, if not the letter, of those regulations in order to do their fiduciary duty. It does not increase one's respect for either the law or the lawmakers.

4. Costs of the FPR

To this point we have argued that there is no evidence to suggest that the FPR provides any benefit in respect to the exchange rate, the cost of capital or the level of employment. We have also indicated that it is an inappropriate instrument to either compensate for any distributional issues linked to tax deferred savings plans, or to address foreign control. In this section we would like to reassess the question of the cost of the FPR to those Canadians that make use of these tax deferred plans. We take as our point of departure the estimates of Fried and Wirick that were made when the FPR constraint was set at 20%. These estimates put the cost of the FPR in the range of two billion and four billion dollars annually. These costs were composed of two types, the opportunity cost of insufficient diversification and the increased level of transactions and administrative costs linked to operating under that regulatory regime. We consider these in turn.

FW estimated that the opportunity cost of the regulation due to the inability to fully diversify was between one and three billion dollars annually, or alternatively, between 8 and 23 basis points on the total assets in tax deferred savings plans. To obtain that estimate they first calculate the risk and expected return on a portfolio roughly corresponding to a representative portfolio held in these plans. Next they generate the expected return on an efficient portfolio that has the same level of risk as the representative portfolio and is not subject to the FPR. The difference between the two expected returns represents the maximum expected gain that could come from removing the FPR and consists of two parts.

The first part is the change in expected return between the unconstrained efficient portfolio and an efficient portfolio that is constrained to have no more than 20% foreign property. The second part is the difference in expected return between the constrained portfolio and the actual portfolio held in

tax-deferred accounts.[36] They argued that this latter amount did not necessarily represent an inefficient allocation, but was the result of some well-recognized offsets. These included home country bias, the use of derivatives, and the foreign content in individuals' total portfolios that are not in tax-deferred plans.[37] The estimate is the result after taking these elements into account.

Rather than go through that entire exercise now that the FPR is 30% instead of 20% we will instead ask what proportion of the difference between the unconstrained efficient portfolio and the efficient portfolio when constrained to 20% was removed by the move to 30% foreign property. We then reduce the FW's estimate of the diversification cost of the FPR at 20% by that proportion to get the cost of the FPR if it remains at 30%.

For our calculations we used data on the quarterly returns on the TSE300 Index, the S&P 500 Index, the MSCI EAFE Index, the SM Universe Bond Index and the SM T-bill Index over the period 1976 Q4 to 2002 Q2. All returns are in Canadian dollars and all investments in foreign property are unhedged. This differs somewhat from that used in FW. First the SM Universe bond index was used instead of the long bond rate. We also suppressed the holding of foreign bonds in the portfolio in recognition of their virtual absence in pension plan portfolios and their absence in the efficient portfolios generated by FW. We also used the historical returns on these asset classes in addition to the expected returns used by FW. Finally, we used 3 sets of portfolio weights to obtain reference risk levels of the portfolios Canadians held. The "most risky" held 70% equity and 30% bonds and the "least risky" held 30% equity and 70% bonds. The third represented the average portfolio held by pension funds reporting in the PIAC survey at the end of 2001.

The results indicate that between 20% and 50% of the expected diversification gains from removing the 20% FPR were realized in moving to the 30% constraint. The greater realization from the move to 30% was the low risk (70% bonds) portfolio. This is not surprising, since if these portfolios continued to hold only 30% equity there would not be a need to hold more foreign equity. However, in the process of diversifying under the 30% FPR, total risk falls for a given level of equity. Thus the pension fund is able to hold greater levels of equity without increasing its risk level above what it undertook previously with a 20% FPR limit. For the representative pension fund reporting in the PIAC survey, the proportion of the expected gains from going to 30% from 20% foreign property was roughly 33% of the possible gain from full elimination of the regulation. Thus the cost of not removing the FPR completely is roughly two thirds of the FW estimate. In other words the average diversification gains available from removing the FPR now is in the range of 670 million dollars to 2 billion dollars annually.

The second cost that FW include in their analysis is the regulatory and administrative cost of the FPR, which they conservatively estimate at 8 basis points. The principal cost here relates to the management expenses charged by mutual funds in Canada relative to the level of fees in the United States. The only significant regulatory difference between the two countries that applies

to pension and mutual funds appears to be the FPR, and indeed, one can argue that the regulation acts as a barrier to entry in that industry. In particular, it reduces the demand for those types of portfolios in which foreign suppliers have a comparative advantage. The lack of competition that arises can in no small part be a cause of the extra 75 basis points in management expenses Canadians pay relative to their US counterparts. So long as the FPR remains we have no reason to believe that these costs are significantly less now than when the FPR was at 20%.

When we combine the regulatory cost with the cost of less than full diversification, our estimate of the cost of the FPR remaining at 30% is between $1.5 billion and $3 billion annually. That is a heavy price to pay for the benefits that the FPR is supposed to provide. Indeed, one way to gauge the magnitude of this cost to users is to compare it to the tax expenditure of $7.25 billion they are assumed to have received from these plans in 2000. If we accept this estimate of the budgetary cost, the added benefit to users of these plans if the FPR was eliminated would be between 20% and 40% of the existing governmental budgetary cost[38]. This can occur with virtually no increase in the cost of the programs to the government. That would be an impressive increase in the efficiency of a government delivered program used, directly or indirectly, by virtually every working Canadian.

Before concluding, there is one other cost of the FPR related to diversification that we have not quantified. The investment arm of the CPP is expected to accumulate several hundred billion dollars over the next two decades and these funds are also subject to the FPR. However, the proper diversification strategy for that institution is to invest virtually 100% of those assets *outside* of Canada[39]. To see this, note than the plan has two basic sources of income: that earned from investments and that from contributions from working men and women. The level of contributions depends on the state of the Canadian economy. If investments are also restricted to domestic sources, they too will depend upon the state of the Canadian economy. If the Canadian economy has difficulty then both income sources will decline; if it does well, both sources do well. In effect, investing domestically increases the volatility of the income flows to meet the stable payments to Canadian retirees. This hardly serves as a good diversification policy and is akin to requiring a pension plan to invest the bulk of its assets in the stocks and debt of the plan sponsor. Indeed, the law forbids private pension plans from acting in that manner[40].

To require the CPP to act contrary to what regulators consider prudent for private companies is indeed puzzling and compromises the CPP Board's mandate to act in the best interests of CPP contributors and beneficiaries, and to ultimately establish a financially sound pension plan for all Canadian workers. Norway, for one, has got it right. They require that all the investments of its National Petroleum Fund (also amounting to several hundreds of billions of dollars) be invested outside Norway to avoid having the beneficiaries of the fund have both their wages and the return on investments dependent on the same events. Recently the World Bank[41] has had high

praise for the Canadian pension system relative to other plans throughout the world with the exception of the continued use of the FPR. It would indeed appear that the FPR is an anachronistic relic whose time has passed.

5. Concluding Remarks: What do savers "have to give back?"

This brings us to the overarching defence of the FPR: "The government has provided Canadians a special subsidy in the form of tax deferred savings plans. We should therefore give something back to Canada. The FPR is the mechanism to ensure that we do so." In light of the evidence we fail to see the logic of this position.

It is true that tax deferred savings plans are preferred by virtually all Canadians, but we have argued that this is not a "special subsidy". Rather it is an integral part of a progressive and efficient tax system that recognizes that lifetime income is a preferred tax base compared to annual income. These tax deferred plans are an efficient way of providing that base, as evidenced by the almost universal use of such systems by member nations in the OECD. Furthermore, these plans provide benefits across the entire spectrum of Canadian society and are seen to be particularly attractive to the ordinary Canadian rather than a special benefit to high income Canadians. Not only that, new evidence from the Department of Finance makes it clear that the "budgetary cost" of such plans is no more than *half* of what has previously been reported. It was, in part, the high budgetary cost estimates that proponents of the FPR used to justify making these programs less efficient than they could otherwise be.

What do Canadians "pay", in the form of the FPR, to have access to these programs? We *do pay* by a decrease in real wages, broadly defined to include benefits, and likely some decline in employment. We *do pay* in the form of less competitive and efficient capital markets, increased costs of regulation and bearing more risk, all of which lead to lower retirement incomes because of the decreased ability to diversify at reasonable cost. We estimate that this cost is in the range of $1.5 billion to $3 billion annually.

What do we, as Canadians, get in return for these payments? We *do not get* a higher or more stable exchange rate. We *do not get* more domestic investment or employment. We *do not get* a more equitable distribution of resources, because the FPR constrains the middle class to a much greater degree than the wealthy. We *do get* a greater familiarity with derivative securities. We *do get less* respect for lawmakers and bureaucrats who maintain and enforce laws that continue to cost Canadians an expected $1.5 billion to $3 billion a year.

The cautious approach used by past governments of easing the FPR first from 10% to 20% and later from 20% to 30% now has the potential to pay off. We now have a large body of evidence and theory that confirms that the FPR has been a very costly regulation that provides little if any benefits. It would be a tragedy if that information were not acted upon. Ordinary Canadians will certainly gain with the complete removal of the Foreign Property Rule.

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Endnotes

[1] Foreign property is defined as foreign real property, foreign cash, foreign bonds and equities issued by firms or other organizations not domiciled in Canada. The liabilities of certain International bodies are exempt presumably because the Government of Canada, among others, guarantees the debt of those institutions.

[2] Two smaller programs, Deferred Profit Sharing Plans and Registered Retirement Income Funds (RRIFs) are also subject to the FPR. RRIFs are the larger of the two and were estimated at $60 billion in 1999 by Fried and Wirick (1999).

[3] Indeed there have been a number of past studies that have addressed the issue of the costs and benefits of the FPR. In addition to FW, work by Ambachtsheer (1995) and by Burgess and Fried (1999) examine the cost of the FPR remaining at 20%, and Ambachtsheer (1984) looks at the costs and benefits when it was set at 10%.

[4] To paraphrase, even if it was desirable to remove the FPR, now is certainly the wrong time to do so.

[5] Even if the FPR does not cause RRSP and RPP contributions to fall, it does reduce the investment returns and if the beneficiaries are the relatively well off this improves the distribution of income.

[6] Derivatives are regarded as foreign property but have a net asset value of zero because they are promises to purchase foreign assets some time in the future. Managers roll over the futures contract before maturity so that they never take delivery of the underlying assets. The Canadian content is retained because the assets backing the contracts are generally short term paper issued by Canadian governments or firms and are therefore Canadian property.

[7] Bank of Canada (1999), p. 49.

[8] Foreign exposure is the sum of foreign property plus the market value of the assets backing derivative contracts for foreign securities. The PIAC survey includes these latter amounts whereas the data from Statistics Canada does not. As we note later, the value of these derivatives and their backing amounts to approximately 8% of the portfolios of these pension funds.

[9] Foreign *exposure* rose from 25.9% at the end of 1999 to 30.7% at the end of 2001. The market value of foreign *property* for trusteed RPPs reported by Statistics Canada (2001b) rose 1.7%, from 20.2% to 21.9%, over this same interval.

[10] Statistics Canada (2001b), p. 4, estimated that RPP assets amounted to $818 billion, RRSP assets excluding self-administered RRSPs were $285 billion, and CPP/QPP assets were $57 billion. Investor Economics has estimated that self administered RRSPs were $152 billion at the end of 2000. Roughly $211 billion of the RPPs were not subject to the FPR – Insurance company contracts, consolidated revenue funds, and Government of Canada Annuities. This gives an estimate of $1.1 trillion that was subject to the FPR at the end of 2000.

[11] Laidler and Aba (2001, 2002).

[12] We included a dummy variable in the Bank of Canada Equation for the periods that the FPR was relaxed and found that it was statistically insignificant. We conclude that relaxing the FPR had no effect on the exchange rate. The econometric results are available from the authors.

[13] Holding a futures contract backed by Canadian bills is a hedged position as changes in the value of the Canadian dollar will not affect the Canadian dollar return on the position. To unhedge the position requires a purchase of a foreign currency futures contract. That purchase exposes the counterparty, which would then sell Canadian dollar assets for foreign currency in order to maintain their previous foreign currency

exposure. This unhedged position is equivalent to buying foreign property directly. To hedge a foreign property purchase requires a forward/futures purchase of Canadian dollars, which would require the counterparty to buy Canadian dollar assets to maintain their previous currency exposure.

[14] See Fried and Wirick (1999), pp5 – 8. They also present a convincing case that it is not an absence of funds that limits venture capital projects in Canada.

[15] These numbers are based on the MSCI index returns, all measured in US dollars.

[16] If the Toronto stock exchange index less Nortel were to be used instead of the full 300 securities, the relative performance would be even more dramatically in favour of Canada in 2000/01 relative to 1998/99 because Nortel outperformed the overall market in 98/99 and under performed in 2000/01.

[17] Bank of Canada, (1998-02), Table F1.

[18] Statistics Canada (2001b) indicates that the share of domestic bonds in pension plan portfolios decreased by 1.1% whereas the PIAC survey indicates an increase of .75%.

[19] See footnote 11. The inflow is the result of the foreign exchange contract as the counterparty attempts to rebalance their currency exposure.

[20] From the Statistics Canada (2001b) data the increase in foreign property was less than 2%.

[21] It is equally the Nokia effect in Finland, the Ericsson effect in Sweden, etc.

[22] The imposition of the FPR on the CPP puts that institution in much the same position that the Caisse de Dépôt et Placement has found itself in the past with the dual mandate of working for the beneficiaries of the plan and simultaneously "developing the Quebec economy".

[23] The losses to labour can occur in one of two ways. For an individual who has no company pension plan at all and who saves for retirement using an RRSP, the worker's choice of how she allocates her savings is directly limited by the FPR. She will have a lower return on her savings and/or must undertake greater risks. In effect, the FPR reduces the *real value* of her wage income relative to what it would be if the FPR had been removed. (Workers in companies with defined contribution pension plans, or group RRSPs, will be affected in a similar fashion.) For those workers who have company provided defined benefit pension plans, the tax burden is less transparent but just as real. Here it costs the firm sponsoring the pension plan more to provide a given level of retirement income if the FPR is in place. The firm will therefore respond by reducing the benefits package it offers its workers, offering a lower money wage, and/or hiring fewer workers. In short, by increasing the effective cost of employing a worker, the FPR can lead to an increase in unemployment.

[24] This includes RPPs, RRSPs and registered retirement income funds (RIFs). It excludes claims on CPP/QPP and any other means tested sources of retirement income such as OAS and GIS.

[25] C.f. Statistics Canada, (2001a), p19.

[26] But see Hamilton (2000) who argues that even 60% will, in most cases, continue to maintain a higher standard of living post retirement than was enjoyed pre-retirement.

[27] The over 65 age group are less likely to hold these because the pension assets they accumulated while working often have gone to purchase an annuity including an annuity paid out of a defined benefit pension plan. The assets backing these annuities are not counted as private pension assets.

[28] Statistics Canada (2001a), Table 2, p.14.

[29] This is in no small part because of the regulatory cap on total contributions.

[30] There is, of course nothing that precludes those with lower incomes from saving outside these plans. Indeed some who have chosen not to have a private pension plan may have done so because they believe the expected benefit from properly diversifying exceeds any tax benefits available through these pension plans.

[31] Department of Finance, (2001), Table 7, p.57.

[32] These locking in regulations can explain why many firms choose group RRSPs over RPPs despite the higher costs in terms of management expenses. Apparently workers find that the additional flexibility and ability to smooth taxable income of RRSPs is worth the increased cost.

[33] Two other examples where the FPR is used instead of more direct programs are with Labor Sponsored Funds and with partnership units. To encourage the former, for every dollar invested in the fund in a tax deferred plan, the saver may invest twice the allowable maximum amount in foreign property. For tax purposes, partnership units (except for Gaz Metropolitan) are treated as foreign property even if the assets are located in Canada and they are listed on a Canadian exchange. Apparently the Department of Finance believes that if a firm uses these units instead of income trust units tax revenue will fall. Subjecting them, but not income units, to the FPR is meant to decrease the demand for them in an attempt to boost tax revenue.

[34] See footnote 7.

[35] Statistics Canada (2001) table 5, p.12. The numbers for foreign exposure are from the PIAC survey. At the end of 1999 the amounts were 25.9% and 20.2% respectively.

[36] FW calculated the total amount to be 67 basis points. The difference between the unconstrained and the 20% constrained portfolios amounted to 28 basis points, while that between the constrained “efficient” and actual portfolios amounted to 39 basis points.

[37] See FW, pages 19-23, for an extended discussion of these offsets and the determination of the resulting measure of cost.

[38] As we made clear in section 3.4, our view is that the true budgetary cost is substantially less than the Finance Department’s estimate used here.

[39] See Baxter and Jermann (1997) for an extended analysis of this point.

[40] For private pension plans, no more than 10% of the portfolio can be held in the debt and equity of any single company.

[41] See Palacios (2002).

Fontaine Canadian Foreign Content Limit

Brockhouse Cooper

Insights

Canadian Foreign Content Limit: The End of an Era and its Potential Implications

By Eric Fontaine, FSA, FCIA, CFA

In the Federal budget tabled on February 23, 2005, Canadian Finance Minister Ralph Goodale proposed to put an end to the 30% foreign content limit (also referred to as the Foreign Property Rule or FPR). But with a minority government in place, it looked as though the budget and its contents were doomed. However, four months and one high-profile party defection later, the budget and the foreign property proposal finally squeaked through by the narrowest of margins Needless to say this long awaited change came as a nice surprise to the financial/pension investing community which had been pressuring the Federal government for several years to make the

change but without success. Although many were expecting to see some increase in the FPR, few would have guessed at its total removal.

Having been criticised for some years as a sub-optimal and costly rule putting Canadian investors at a disadvantage to those living in other countries, the decision of the minister to repeal it at the present juncture is hardly accidental. *First*, after a prolonged period of underperformance, Canada has been one of the best performing markets of the developed world in recent years, led by strong performance of the resource sector (note that when we factor in the contribution of active managers, the results are even more impressive). *Secondly*, the appreciation of the Canadian dollar against its US counterpart in a very short time span (2002 to 2004) quickly led investors to realize (the hard way, unfortunately) that foreign investing was "no free lunch". In a sense, the quick dollar appreciation might have given the Government the margin needed to prevent unwanted downward pressure on the Canadian dollar in the event an exodus developed, in light of a FPR change, from Canadian into foreign securities. Some industry experts are going further by even suggesting that the Government has, through this change, implicitly introduced a monetary policy to indeed put some downward pressure on the Canadian dollar.

Although no one knows how this ` will ultimately affect the overall investment structures/strategies of investors, we can speculate that it has the potential of leading to profound changes in the way we think about them. Personally, I foresee endless opportunities opening up to investors; however, my optimism is tempered when I study the behavior of investors living in countries without any foreign property restrictions. I begin to doubt that anything will really change.

For sure we will see many plans/funds which were already exceeding the limit, through the use of derivative products, adjusting quickly and easily (if they have not already done so) to the new rule. Those invested in passively managed, foreign indexed products, will now have the option of de-indexing all or part of their funds in favor of actively managed products. For those investing in actively managed products, using swaps and swap-options (clone fund structures), we should see limited change with the exception of an immediate cost savings (elimination of the swap cost and other related fees). Finally, even those still below the 30% limit are likely to re-assess their structural positions. Below, we discuss the key implications of the new rule and the issues that will likely be raised by investors, managers, fiduciaries and consultants in the near future.

(Continued on page 8)

Volume 6, Issue 2

Second Quarter 2005

August, 2005

Inside this issue:

Global Equity Markets Move Upwards in Second Quarter.

Global equity markets advanced slightly in the second quarter of 2005 with the MSCI World index posting a +1.9% return in Canadian dollar terms. Both US and EAFE equity markets were up slightly with the S&P 500 index advancing 2.6% and the MSCI EAFE posting a +0.5% gain during the quarter. These latest movements bring the year-over-year returns of the S&P 500 and MSCI EAFE indices in 2004 to –2.9% and +4.3% respectively.

Chart 1 below plots the relative performance of the S&P 500 and the MSCI EAFE indices against the MSCI World index over rolling 12-month periods. We note that the MSCI EAFE index has outperformed the S&P 500 over the latest 8 quarterly periods.

The Brockhouse Cooper sample median Global equity manager matched the MSCI World index return during the first quarter with a +1.9% return. Year over year, the Brockhouse Cooper survey median Global equity manager returned +1.7% before investment management fees, compared to the MSCI World index return of +1.0%.

YK

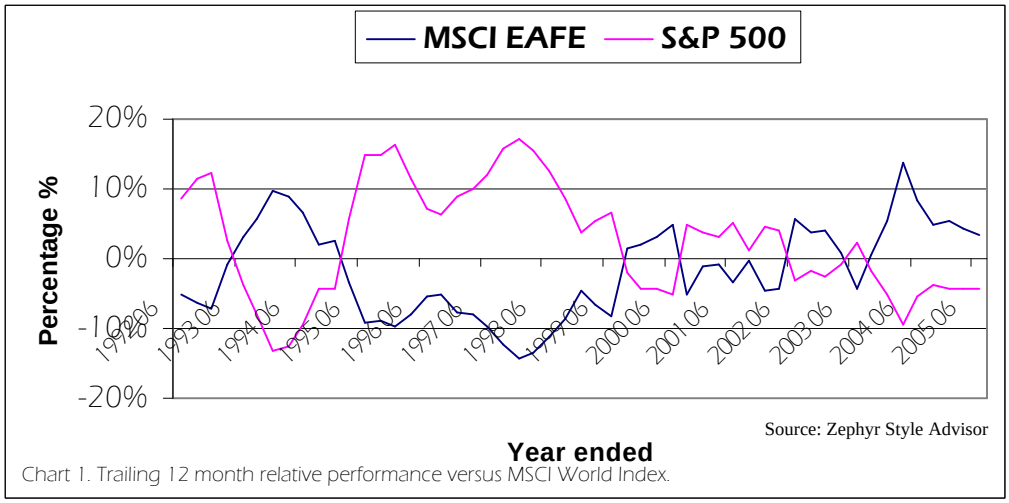

Chart 1. Trailing 12 month relative performance versus MSCI World Index.

International Equity Markets Up Slightly in Quarter

The MSCI EAFE index ended the first quarter with a +0.5% gain. The index's total return over the preceding 12 months was +4.3%.

European markets were up during the quarter while the Pacific area was flat in Canadian dollar terms. The MSCI Europe Index returned +0.7% during the second quarter while the MSCI Pacific Index returned –0.1%. The MSCI Japan Index was down — 2.4%. Emerging Markets advanced during the quarter with the MSCI Emerging Markets index posting a +5.5% gain; the Emerging Markets index was up +23.2% over the preceding 12 months.

The Brockhouse Cooper sample median EAFE manager outperformed the MSCI EAFE index by 40 basis points while the sample median EAFE Plus manager underperformed the MSCI EAFE index by 30 basis points over the past twelve months.

YK

Mandate	4-Year Standard Deviation
EAFE	17.8
EAFE Plus	18.4
Emerging Markets	26.1

Table 1

Median 4-year Standard Deviations of investment products included in Brockhouse Cooper survey.

INTERNATIONAL MANDATES (2Q 2005)

	Last Quarter	1 Year	4 Year	7 Year	10 Year
INTERNATIONAL					
B&C Global Equity Database Median	*1.9*	*1.7*	*-0.3*	*2.6*	*8.5*
B&C EAFE Equity Database Median	*0.8*	*4.7*	*2.1*	*2.5*	*6.7*
B&C EAFE Plus Equity Database Median	*0.9*	*4.0*	*1.5*	*2.2*	*7.0*
B&C International Small Cap Equity Database Median	*2.3*	*11.1*	*9.5*	*9.4*	*9.7*
MSCI World Index	1.9	1.0	-1.8	0.0	6.3
MSCI EAFE Index	0.5	4.3	1.1	0.7	4.4
MSCI AC World Index	2.1	2.0	-1.3	0.4	6.0
MSCI AC World ex-US Index	1.2	6.8	2.4	1.7	4.6
Citigroup EMI World ex-US Index	0.7	9.9	8.8	5.1	6.2
ASIA PACIFIC					
B&C Pacific Equity Database Median	*1.7*	*1.3*	*0.6*	*5.6*	*1.7*
B&C Japan Equity Database Median	*-1.0*	*-8.8*	*-2.5*	*4.0*	*3.0*
MSCI Pacific Index	-0.1	-2.3	-1.0	2.3	-1.3
MSCI Japan Index	-2.4	-9.9	-4.5	-0.2	-3.1
EUROPE					
B&C European Equity Database Median	*0.5*	*8.4*	*3.2*	*2.2*	*9.1*
MSCI Europe Index	0.7	7.3	2.0	0.1	8.3
EMERGING MARKETS					
B&C Global Emerging Markets Equity Database Median	*5.7*	*25.1*	*13.6*	*10.1*	*6.8*
MSCI Emerging Markets Index	5.5	23.2	12.1	7.9	3.1

Selected International Mandate Median and Quartile Breaks (2Q 2005)

	B&C EAFE Equities	B&C EAFE Plus Equities	B&C Global Equities	B&C Global Emerging Markets Equities	B&C European Equities	B&C Pacific Equities
5th Percentile	2.9	3.0	4.6	8.6	4.6	4.1
1st Quartile Break	1.5	1.9	2.8	7.1	1.4	2.6
Median	0.8	0.9	1.9	5.7	0.5	1.7
3rd Quartile Break	0.1	0.1	1.1	5.0	-0.2	0.4
95th Percentile	-0.7	-1.0	0.1	3.4	-2.1	-0.3

All returns reported in Canadian Dollars.
Returns not annualized for periods of less than 1 year.

US Equities Up in Second Quarter; Currency Fluctuations Help.

US Large Cap equities were up in the second quarter of 2005 with the benchmark S&P 500 index posting a +2.6% return in Canadian dollar terms; the Russell 1000 Index returned +3.3% during the same period. The Brockhouse Cooper sample median US Core equity manager returned +3.2% during the second quarter thus outperforming the S&P 500 Index by 60 basis points. Year over year, the Brockhouse Cooper sample median US Core equity manager returned –1.0% before investment management fees compared to the S&P 500 return of –2.9%. The US Dollar gained 1.2% against the Canadian Dollar over the latest quarter.

The Russell 1000 Growth index outperformed the Russell 1000 Value index during the quarter (+3.7% vs. +2.9%). The Brockhouse Cooper survey median Large Cap Value manager outperformed the Value index by 10 basis points with a +3.0% return and the survey median Large Cap Growth manager also out-performed the Growth index by 10 basis points with a 3.8% return during the quarter.

Year over year, the Russell 1000 Growth index lost –7.1% compared to the Brockhouse Cooper sample median Large Cap Growth manager's return of -4.7%, while the Russell 1000 Value index advanced by +4.2% compared to the Brockhouse Cooper sample median Large Cap Value manager's return of +1.9% over the same period.

Chart 2 below plots the relative performance of the Russell 1000 Growth and Value indices against the Russell 1000 index over rolling 12-month periods. We observe that the 1-year performance differential between the Growth and the Value indices has continued to favour the Value index in most cases since late 2000, including the most recent period.

In Mid and Small cap markets, the Russell Mid Cap index returned +5.5% during the quarter, while the Russell 2000 index advanced by +5.6%. Year over year, the Russell Mid Cap and Russell 2000 indices posted returns of +7.0% and +0% respectively. The Brockhouse Cooper survey median US Small Cap Growth equity manager returned +5.2% during the quarter compared to the Russell 2000 Growth index return of +4.8%, while the Brockhouse Cooper survey median US Small Cap Value equity manager returned +5.0% compared to the Russell 2000 Value index return of +6.4%.

YK

Mandate	4-Year Standard Deviation
Core US Equities	17.2
Large Cap Growth	18.3
Large Cap Value	16.9
Mid Cap Growth	21.1
Mid Cap Value	18.4
Small Cap Growth	24.4
Small Cap Value	19.8

Table 2

Median 4-year Standard Deviation of investment products included in the Brockhouse Cooper survey.

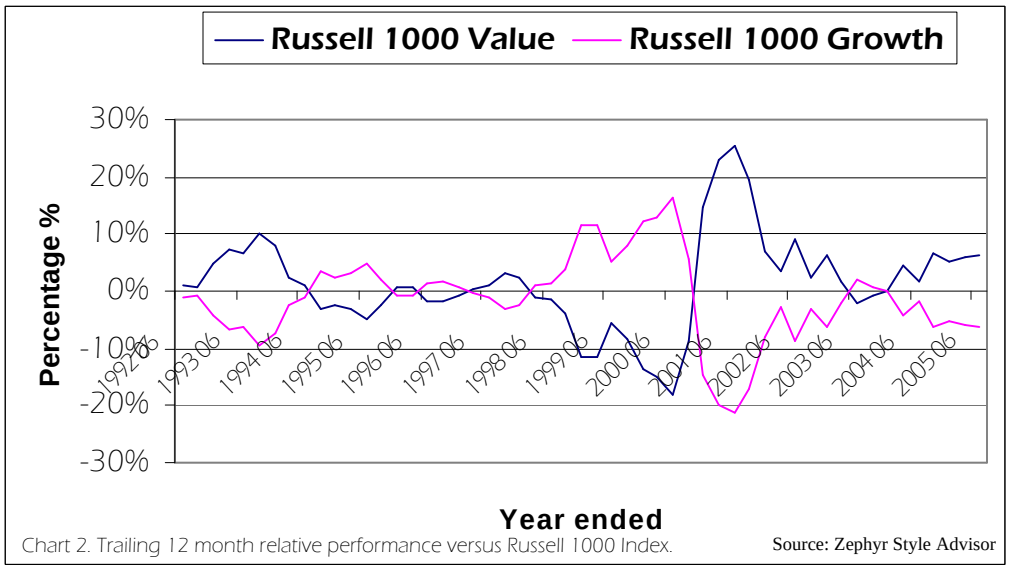

Chart 2. Trailing 12 month relative performance versus Russell 1000 Index. Source: Zephyr Style Advisor

US MANDATES (2Q 2005)

	Last Quarter	1 Year	4 Year	7 Year	10 Year
US LARGE CAP EQUITIES					
B&C Large Cap Growth Equity Database Median	*3.8*	*-4.7*	*-5.8*	*0.2*	*9.0*
B&C Large Cap Value Equity Database Median	*3.0*	*1.9*	*0.0*	*3.6*	*11.1*
B&C Core US Equity Database Median	*3.2*	*-1.0*	*-3.0*	*1.4*	*10.0*
Russell 1000 Index	3.3	-1.4	-3.6	0.1	8.9
S&P 500 Index	2.6	-2.9	-4.3	-0.4	8.7
Russell 1000 Growth Index	3.7	-7.1	-7.5	-3.6	6.2
Russell 1000 Value Index	2.9	4.2	0.1	2.8	10.7
US MID CAP EQUITIES					
B&C Mid Cap Growth Equity Database Median	*4.9*	*0.8*	*-1.1*	*5.3*	*10.8*
B&C Mid Cap Value Equity Database Median	5.0	6.5	5.9	8.2	13.3
S&P 400 Index	5.6	4.2	2.7	8.0	13.4
Russell Midcap Index	5.5	7.0	3.3	5.9	11.6
Russell Midcap Growth Index	4.7	1.3	-2.6	1.9	8.2
Russell Midcap Value Index	6.0	11.3	6.8	7.1	13.0
US SMALL CAP EQUITIES					
B&C Small Cap Growth Equity Database Median	*5.2*	*-0.9*	*0.2*	*5.4*	*10.9*
B&C Small Cap Value Equity Database Median	*5.0*	*5.0*	*7.5*	*9.1*	*14.5*
Russell 2000 Index	5.6	0.0	1.5	3.5	8.7
Russell 2000 Growth Index	4.8	-4.7	-4.4	-1.2	4.0
Russell 2000 Value Index	6.4	4.5	6.8	7.4	12.6

Selected US Equity Mandate Median and Quartile Breaks (2Q 2005)

	B&C Core US Equities	B&C Large Cap Growth Equities	B&C Large Cap Value Equities	B&C Small Cap Growth Equities	B&C Small Cap Value Equities
5th Percentile	5.9	7.0	5.8	9.14	8.4
1st Quartile Break	4.2	5.0	3.7	6.79	6.2
Median	3.2	3.8	3.0	5.23	5.0
3rd Quartile Break	2.4	2.8	2.1	4.05	3.5
95th Percentile	0.9	1.0	0.8	2.29	1.5

All returns reported in Canadian Dollars.

Returns not annualized for periods of less than 1 year.

Canadian Equities Post Another Gain in the Second Quarter of 2005.

Canadian equities were up again in the second quarter of 2005 with the broad S&P/TSX Composite index posting a +3.6% gain. The Brockhouse Cooper survey median Canadian equity manager returned +3.3% during the same period. These latest results bring the Brockhouse Cooper survey median Canadian equity manager's return to +19.1% over the latest 12 months, thus out-performing the S&P/TSX Composite by 110 basis points before investment management fees. Six of ten sectors were up during the quarter with the Energy section again leading the way with a +12.0% return during the quarter. The Information Technology sector again showed the weakest performance posting a –6.4% loss.

The Brockhouse Cooper survey median Canadian Small Cap equity manager again underperformed the Large Cap alternative during the quarter with a +0.8% return; the Nesbitt Burns Small Cap index posted a –1.0% return. Year over year, the Brockhouse Cooper survey median Canadian Small Cap manager's return matched that of the median Large Cap manager with a +19.1% return; the Nesbitt Burns index returned +12.5% over the same period.

YK

Balanced Managers Post Another Positive Quarter; Bond prices continue to Advance.

Canadian Balanced managers posted another positive return in the second quarter of 2005 with the Brockhouse Cooper survey median Canadian Balanced manager advancing by +3.1%, outperforming the Brockhouse Cooper Canadian Balanced benchmark return of +2.8% over the same period. During the past 12 months, the Brockhouse Cooper survey median Canadian Balanced manager returned +12.0% thus also outperforming the Brockhouse Cooper Balanced benchmark return of +9.8%.

The Brockhouse Cooper survey median Canadian Fixed Income manager posted a +4.3% during the quarter, underperforming the Scotia Universe index by 20 basis points.

The Brockhouse Cooper balanced benchmark is constructed as follows:

40% SCM Universe

30% S&P/TSX Composite

15% S&P 500 Index

15% MSCI EAFE Index

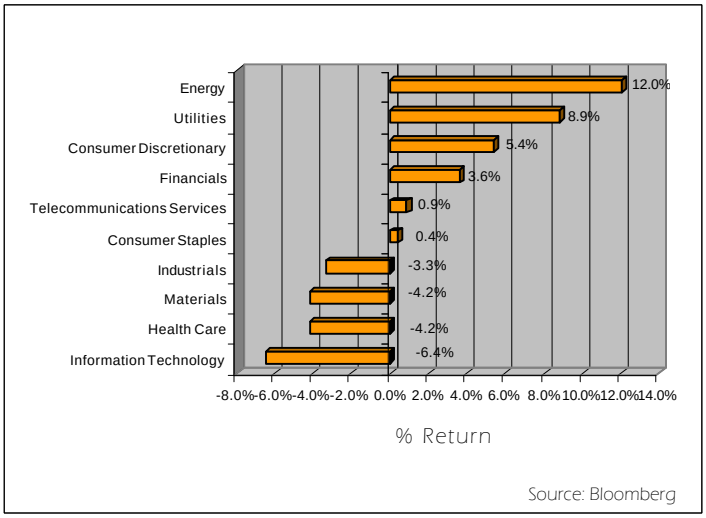

Chart 3
TSX Composite sector performance
As at June 30, 2005

CANADIAN MANDATES (2Q 2005)

	Last Quarter	1 Year	4 Year	7 Year	10 Year
CANADIAN EQUITIES					
B&C Canadian Equity	*3.3*	*19.1*	*10.5*	*9.8*	*12.8*
S&P/TSX Composite	3.6	18.0	8.3	6.1	10.0
CANADIAN SMALL CAP					
B&C Canadian Small Cap Equities	*0.8*	*19.1*	*16.7*	*12.2*	*15.4*
Nesbitt Burns Small Cap Index	-1.0	12.5	12.4	9.1	10.1
CANADIAN FIXED INCOME					
B&C Canadian Fixed Income	*4.3*	*11.8*	*8.9*	*7.2*	*8.6*
Scotia Capital Universe	4.5	12.0	8.8	7.1	8.5
CANADIAN BALANCED					
B&C Canadian Balanced Database Median	*3.1*	*12.0*	*7.6*	*7.2*	*10.0*
B&C Canadian Balanced Index	2.8	9.8	6.1	5.3	8.8

Canadian Mandate Median and Quartile Breaks (2Q 2005)

	B&C Canadian Equities	B&C Canadian Small Cap Equities	B&C Canadian Fixed Income	B&C Canadian Balanced
5th Percentile	5.4	4.6	5.2	4.6
1st Quartile Break	4.2	3.0	4.5	3.6
Median	3.3	0.8	4.3	3.1
3rd Quartile Break	2.5	-0.6	3.9	2.7
95th Percentile	0.6	-2.4	1.7	1.5

All returns reported in Canadian Dollars.

Returns not annualized for periods of less than 1 year.

Foreign Property (Cont.)

(Continued from page 1)

Impact on Fixed Income

In the past, for several reasons, Fixed Income (FI) has never been an area where we have seen much activity. First, most people view bonds as a long term buy-and-hold play, to some extent used to match liabilities. Secondly, in comparison to equity's 'expected growth and dividend yield', the words 'duration and convexity' never got too many of us excited (with the exception of a group of actuaries, of which, I admit, to being part). But perhaps the real reason is that 'return and value expectations' have never been as high as those associated with equities (I mean have you ever heard of a bond doubling in value within a year?). With the new legislation, this may change.

Due to my actuarial background, I have always been (and still am) a big believer in investing in Canadian (long term) fixed income investments for pension plans. However, I also realize that the potential for equity-like value-added is somewhat limited, some would say non-existent, without major duration bets. We should therefore expect the FPR change to bring new opportunities to diversify the active bets (domestic vs foreign duration, yield curve, sector and stock) and therefore improve the Information Ratios. Some FI mandates that come to mind in this regard are: Global Corporate Bond mandates, High-Yield Debt, Global Emerging Markets Debt, etc. Exhibit 1 below provides basic pros and cons of Canadian vs Foreign Fixed Income securities.

Under the previous 30% FP restriction, it probably made sense to spend the 30% foreign exposure limitation on equities rather than fixed income securities. Under the new dispensation, for those interested in investing in actively managed fixed income products, new opportunities have arisen. Canadian money managers who have suffered from the invasion of foreign equity managers in the past, will have to adjust quickly to the new reality in order to prevent further loss of Canadian assets to foreign firms and to keep their hands on control of the Canadian pension fixed income markets.

Impact on Currency Management

Perhaps the biggest impact of the new rule will be felt at the currency level. For some years now, I have recommended to several funds/clients that they change their approach towards currency management. (Ref. Insights – Vol. 3, Issue 2) I have always believed that currency management should be played at the portfolio level using, as a starting point, a benchmark portfolio fully hedged to the liabilities the fund is supporting. In practice, this means that in the case of a Canadian pension plan which pays benefits in Canadian dollars, the least risky portfolio (in liability terms) is one that has its foreign exposures fully hedged back into Canadian dollars. Thereafter, if the pension/investment committee believes in currency management, an active strategy can be implemented on top of the whole structure (referred to as an overlay structure). Is there any reason to limit the currency strategies to the foreign assets or to implicitly expose the portfolio to foreign currencies by not doing anything? Why should two investors domiciled in different countries be getting different returns from the same stocks?

After *gradually* benefiting from a decline in the Canadian dollar (vs the US dollar) in the '90s (about 2% per year), many plans learned the hard way what a currency mismatch is all about. Even if someone believes that currency movements tend to be a "wash" over time (and I do buy the argument to some extent), on a shorter-term basis, the picture can be quite different. And that's what risk is all about; unexpected Short-Term Results. The removal of the 30% rule might be what was missing to get plan sponsors really to think about the currency issue. I have always considered that once a particular exposure exceeds 3%, be it a stock, a bond or a currency, it is perhaps time to get very serious about doing something about it. Today the bulk of Canadian plans are approximately 12-15% exposed to the US dollar, 3-5% to the Yen, 3-5% to the Euro and 3-5% to Sterling and the new ruling is

(Continued on page 9)

Exhibit 1

Canadian Fixed Income Securities Only	Adding Foreign Fixed Income Securities
Pros	**Pros**
- Better matching of the liabilities	- Broadening of the opportunity set
- Higher yielding securities (historically)	- Diversification of active bets
Cons	**Cons**
- Limited potential for value added	- Limited knowledge of foreign products
- Limited corporate exposures	- Potential Liability/currency mismatch *

* Such risk can be mitigated by segregating the Alpha from the underlying Beta of the foreign index.

Foreign Property (Cont.)

(Continued from page 8)
likely to raise these levels even higher. Needless to say "the time has come to get serious about currencies". Exhibit 2 below presents key benefits and drawbacks between investigating the issue or not.

Impact on Equities

For years, foreign equities have been the area of choice for plans/investors wanting to invest part of their funds outside Canada. As mentioned earlier, not only are equities considered more exciting than fixed income, but foreign stocks, led by the US, have historically delivered better total returns. And as the foreign property limit increased from 10% to 20% and then 30%, the bulk of foreign allocation was made to equities. However, it is not clear what direction Canadian funds will take this time with the total removal of the foreign property limit.

Looking outside Canada, parochial bias seems to be prevalent in most countries, with U.S. investors, who have historically been heavily invested in the U.S. stock market, leading the way. Many would argue that because of the nature of the US equity market - in terms of breath and depth, but also because many company stocks are global leaders - U.S. investors do not need to diversify as much as others. But perhaps the real reason is that for several years, U.S. investors have not been rewarded for investing outside their home market due both to its own strength and that of the US dollar. But in recent years things have changed and many U.S. investors have found the hard way what risk (and diversification) is all about. Perhaps one element the U.S. investors have been overlooking is that, because of its nature and level of coverage, the U.S. market is one of the most efficient markets in the world and therefore likely to have lower potential for Value Added. This seems to be supported by various recent empirical studies.

But leaving the U.S. aside, it seems that even less diversified markets also present strong home biases despite having no foreign equity limitations. For example, in Australia, often considered a country with characteristics similar to Canada (small population, resources driven economy, etc.), between 20 to 25% of investors' funds are invested in home-country stocks.

That being said, back in Canada, with the exception of those plans that are already investing more than the 30% limit abroad, we can expect that only incremental changes will be made to foreign equity with allocations to non-traditional equity mandates, such as Global Emerging Markets and Non-Domestic Small Cap equities being most likely. What is more likely to occur is a comprehensive revision of the structure of the foreign equity allocation. Examples of some potential changes are listed below:

- Continued interest/Introduction of Global Equity Mandate (stand-alone or in addition to US/EAFE);
- Introduction of Regional Equity Mandate (North-America, Europe and Asia); and/or,
- Combination of Alpha generating products (from less efficient markets) to Efficient Beta markets.

Conclusion

Although it is still too early to tell exactly how the removal of the FPR will ultimately impact the overall investment structures/strategies of investors going forward, we can speculate that the opportunities are endless. The areas most likely to be affected are summarized below:

- More exposure to foreign fixed income securities (to diversify the active risk)
- Growing interest in currency management (to reduce the risk of mismatch and to increase return)
- Review of the foreign equity structure, with more interest in GEM and Small Cap mandates
- More interest in Alpha generating products (more efficient Alpha/Beta combination)

As mentioned earlier, I am very enthusiastic about the FPR change and have great hope that it will lead to improved fund structures. Being a small part of the world's total market capitalization provides not only more flexibility but also huge possibilities. If Canadians are up to the challenge, we should not hesitate to take this opportunity to become market "leaders" (rather than followers).

Exhibit 2

Don't do anything	Address the issue
Benefits	**Benefits**
- Less time consuming	- Better understanding of true 'risk' - Improving the matching of liabilities - Broadening the opportunity set - Diversification of the active bets
Drawbacks	**Drawbacks**
- Implicit exposure to foreign currencies - Mismatch of the liabilities - Short term fluctuations	- More time consuming

GLOBAL FIXED INCOME AND CURRENCY (2Q 2005)

	Last Quarter	1 Year	4 Year	7 Year	10 Year
FIXED INCOME					
B&C Global Fixed Income Database Median	*0.1*	*-1.0*	*6.2*	*4.2*	*5.9*
Citigroup World Government Bond	-0.2	-1.7	5.1	3.9	4.3
Currencies					
Major World Currency Returns in Canadian Dollars					
US Dollar	1.2	-8.7	-5.2	2.6	-1.1
British Pound	-4.0	-9.7	0.7	-1.6	0.0
Japanese Yen	-2.3	-10.1	-2.4	0.6	-3.7
Euro	-5.7	-9.1	3.7	N/A	N/A

All returns reported in Canadian Dollars.
Returns not annualized for periods of less than 1 year.

Canadian Dollar Down Slightly Against US Dollar; Continues to Rise Against Other Major World Currencies.

The Canadian dollar declined slightly against the US Dollar in the second quarter of 2005 but gained against other major world currencies. The loonie lost 1.2% against the US dollar in the quarter but remains up 8.7% against the greenback over the past 12 months.

The Canadian Dollar was up 5.7% against the Euro, the Yen lost 2.3%, while the Pound was down 4.0% in the second quarter. The Canadian Dollar also remains up against these currencies on a year over year basis.

The appreciating Canadian dollar has had a negative impact on the return obtained from un-hedged foreign assets by Canadian investors.

YK

Book Review by John Shingler

Freakonomics: A Rogue Economist Explores the Hidden Side of Everything by Steven D. Levitt and Stephen J. Dubner,

Steven D. Levitt and Stephen J. Dubner, *Freakonomics: A Rogue Economist Explores the Hidden Side of Everything,* New York, William Morrow, 2005, pp. xii, pp. 242. US$25.95, C$34.95.

Freakonomics: A Rogue Economist Explores the Hidden Side of Everything is what the French call a *jeu d'esprit*, a phrase for which there is really no good English equivalent – 'game of the mind' simply won't do. It is provocative to reflect on how writers such as Adam Smith, David Ricardo, John Stuart Mill, Ludwig von Mises or Friedrich von Hayek would have responded to the title and contents of this book.

Let's deal with the title first. It says perhaps more than we may want to know about our times that this kind of title is thought necessary to attract attention to a book. It is about 2500 years since the term economics was first used in Athens; it derives from the combination of the Greek words for household and law – law of the household, which is why when the subject matter took on a wider scope in the 18th Century

Book Review (Cont.)

(Continued from page 10)
to embrace society as a whole, the phrase "political economy" was adopted. Now, at the dawn of the 21st century, we have "freakonomics".

The title attempts to convey, I suppose, that the book is a mixture of light-hearted braggadocio, brilliantly insightful analysis and sober reflection. It may however also be marred by what some critics claim are serious interpretive errors of the data in the contentious abortion/crime debate. I don't think the work was intended to be ranked among the masterpieces of economic literature. In fact I think – I certainly hope – there is a measure of self-mockery in the hubristic sub-title. At the same time this is not a comic strip; the intention of the authors is that we take their work seriously. Unfortunately, however, the one brief excursion (pp.13-14) into the intellectual underpinnings of the book can charitably be dismissed as lightweight. To quote:

"This book, then, has been written from a very specific worldview, based on a few fundamental ideas:

Incentives are the cornerstone of modern life.

The conventional wisdom is often wrong.

Dramatic effects often have distant, even subtle, causes.

"Experts" – from criminologists to real-estate agents – use their informational advantage to serve their own agenda.

Knowing what to measure and how to measure it makes a complicated world much less so."

The above phrases, italicized in the original, are supposedly key points and are followed in each case by brief adumbrations. It is ironic that much of this approach can be applied quite devastatingly to the very book in which it appears. It is striking that while the authors inveigh against "experts" and "conventional wisdom", they themselves present themselves as experts offering a new conventional wisdom. Dubner, who is a kind of Levitt alter ego, explains his co-author's preferred topics of inquiry as follows: "His abiding interests – though he says he has never trafficked in them himself – are cheating, corruption, and crime." There is nothing wrong with this range of interests; just identify it and them as such.

I should make clear that much of this book is an amusing read – it has many really funny remarks, phrases and descriptions. There is however something seductive about this capacity to entertain, so we should be careful; seduction is usually more to the advantage of the seducer than the seduced. I confess to other misgivings. There is a sophomoric quality to much of the writing – a combination of breathlessness and glibness, a willingness to please and an eagerness to excite, a lack of gravitas, all combined frequently with an unwarranted authoritativeness of tone. When one makes extraordinary claims about important policies or practices, these should, I believe, be supported by a deliberateness, a weight befitting the argument. It is not a slight matter to claim that the legalization of abortion leads to a reduction in crime.

The text of the work is just 200 pages long and one can breeze through it in a few hours – the claims one finds in it, however, remain long after the book is laid down, and many of them are admittedly thought provoking. The references to be found in the end notes are at least as rich as the main body of the work itself, and many of them are worth examining more closely.

The book opens with "An Explanatory Note", which provides the background to the collaboration between and dual authorship of Steven D. Levitt, the academic economist, who has up till now confined his publications to the more recondite professional journals, and Stephen J. Dubner, the journalist and well known author of two interesting books, *Turbulent Souls: A Catholic Son's Return to His Jewish Family* and *Confessions of a Hero-Worshiper*.

Collaboration can be a hazardous undertaking with its attendant minefields (Gilbert & Sullivan, Russell & Whitehead, and many professional and commercial partnerships), and this joint effort may turn out to be an enterprise both writers come to regret. Apparently their relationship started out with Dubner writing about Levitt for *The New York Times Magazine*, bringing the man and his ideas, previously sheltered in the academy, to a wider public. Harper Collins, sensing a publishing coup, in turn urged Levitt to write a book which would bring together his ideas in a fashion more accessible to this broader readership. He demurred on the grounds that he preferred his chosen field of research and its rather modest mode of presentation, namely, concentration on particular topics, the findings of which are made available in the usual refereed academic format. Levitt proposed instead that he work on the proposed book with a coauthor – and that the coauthor be Dubner.

Book Review (Cont.)

The two authors have now become minor celebrities with the vaulting of their book to the bestseller lists. Unfortunately for them however they are increasingly caught up in an acrimonious debate about the claims made in their Chapter 4, where they try to establish a direct causal link between the decision in *Roe v. Wade* in 1973, permitting abortion on demand throughout the United States, and a supposed decline of violent crime in the 1990s. Anyone who follows the politics of the U.S. knows that the abortion issue is one of the most bitter and divisive in the country, bringing in as it does differences of opinion across a wide spectrum and in many dimensions – ideology, ethics, biology, religion, theology, science, feminism, political affiliation, you name it.

The "Introduction" which follows makes some egregious claims about the intellectual foundations of this work. Significantly, this brouhaha is in keeping with the hype surrounding the book, which has now become a best seller. All of the above constrain one to look with skepticism at the puffery of publicists and the vacuity of what passes for serious commentary in the current climate. Perhaps the faux 18th century chapter titles and descriptions are a necessary part of this style. But what are we to make of the following: "Why knowing what to measure, and how to measure it, is the key to understanding modern life"? Or, even more provocatively, "Jane Roe, crime stopper: how the legalization of abortion changed everything".

The body of the work consists of six discrete chapters, all of them interesting, none of them sequentially or logically connected. Each of the chapter titles is, in keeping with Steven Levitt's purportedly limitless curiosity, presented as a question. The first, "What Do Schoolteachers and Sumo Wrestlers Have in Common?", compares cheating by professionals in four environments; the Chicago Public School system, the University of Georgia, the *makuuchi* and *juryo* divisions in the sumo wrestling hierarchy in Japan, and Paul Feldman's bagel business in Washington, D.C. It shows patterns of cheating, tries to explain its motivation and points to ways in which it may be identified and controlled.

The second chapter, "How is the Ku Klux Klan Like a Group of Real-Estate Agents?", explores information asymmetry – or the way in which the exclusive control, and above all the hoarding, of information is critical to the maintenance of power in any group or organization. Stetson Kennedy's role in the unraveling of the KKK in the years after World War II is described with élan – a fascinating story in its own right, and also an invaluable primer on how to discount the information advantage. The analysis of real-estate agents should be obligatory reading for any putative buyer or seller of residential real estate.

"Why Do Drug Dealers Still Live with Their Moms?", the third chapter in this collection of vignettes, is by far the most amusing and dramatic, presenting as the leading personality a hapless graduate student named Sudhir Venkatesh who was dispatched by his supervisor to conduct a survey in the poor parts of Chicago. Venkatesh, who subsequently became a co-author with Steven Levitt of a number of academic papers on this research, escaped with his life following a debacle during his first encounter with the gang that he would come eventually to study in depth. He went on to do the detailed research which provides the basis of this chapter and which he presented in an academic monograph, *American Project: The Rise and Fall of a Modern Ghetto*. Dubner, I take it, is the author describing Venkatesh's night held as a captive by members of the gang in a stairwell in one of the Chicago housing projects. Frightening though it must have been at the time, Dubner manages to cast the incident in a hilarious light and it provides the book with a hysterically funny episode.

"Where Have All the Criminals Gone?" makes the claim that the decision in *Roe v. Wade* was the central factor in the decline of crime in the 1990s – those who would have grown up as unwanted children and would thus have been more likely to become criminals in their teens, were aborted as fetuses in the 1970s; thus a rise in the number of abortions led to a fall in the number of criminals. This argument raised sharp criticism when it was first articulated in academic circles. It is the basis of sustained attack now that the claim has been presented in its present popular form.

The chapter starts with a quick overview of the consequences of the prohibition of abortion under Ceausescu's Communist dictatorship in Rumania in 1966, and includes the argument that his violent fall and death were at least in part brought about ". . . by the youth of Rumania – a great number of whom, were it not for his abortion ban, would never have been born at all." Ceausescu's prohibition of abortion was based, apparently, on the claim that, "the fetus is the property of the entire society", a claim that reveals in telling fashion the totalitarian character of his regime. From this introduction the chapter moves on to a detailed analysis of data around the issue in the United States, and, to a lesser extent, elsewhere.

In preparing the present review I came across an interesting web-

Book Review (Cont.)

site http://www.isteve.com/abortion.htm where one finds a freely available 80 page analysis entitled "Did Legalizing Abortion Cut Crime? The Levitt Freakonomics theory critically analyzed." My reading of this rather polemical piece persuades me that, beyond the bitter personal clash, there are some major differences in the interpretation and handling of the data. Two things in regard to this heated debate stand out as being pertinent to the investment community:

First, we have here clear evidence of the capacity of the web to make accessible to a very wide range of people – at least to those who have the intellectual energy and curiosity to use it – a huge body of information and opinion. What we also have is a likely indication that relatively few reviewers of *Freakonomics* actually made use of this resource.

Second, the fragile and contentious character of quantitative data and its statistical analysis and manipulation stands clearly revealed for all to observe.

"What Makes a Perfect Parent?", Chapter 5, explores the relationship between various characteristics of parents and the lives of their children. It is I imagine a reflection of the co-authors' personal concerns – at the time of writing they had, between the two of them, six children under the age of five. They mine the data in the Early Childhood Longitudinal Study (an extensive survey over a long time period of parenting practices and characteristics, and children's test scores) and come up with some counterintuitive conclusions – for instance, taking your children to museums, or reading with or to them, is not a predictor of academic success. Apparently what you *are* rather than what you *do*, as a parent, makes the difference.

The 6th and last chapter, "Perfect Parenting, Part II; or: Would a Roshanda by Any Other Name Smell as Sweet?" explores the names and naming of children by their parents. Does naming matter in the life of a child? Do names outside the mainstream, or at least outside the upper crust, put those who carry them at a disadvantage? Why, for instance, did Winner Lane have a criminal record of over thirty arrests at the time of writing, while his younger brother, Loser Lane, built a successful career in the New York Police Department?

By now you will not be surprised to learn that the work starts, and concludes, with the acknowledgement that there is no central underlying argument, no interpretation of a particular historic event, no presentation of a specific thesis, no attempt to integrate this succession of analytical vignettes; the book is a smorgasbord – not Swedish so much as cosmopolitan. To mix the metaphors, "everything" (to use a favoured word of the authors) has been thrown into this stew.

There is no concluding summing up – and no concluding chapter. Instead, the book ends with an Epilogue entitled "Two Paths to Harvard", which provides the identity of two men – both relatively well known individuals, Roland G. Fryer, Jr. and Ted Kaczynski – whose remarkably different childhoods, which had been described in some detail earlier (pp. 155-6), led to adult lives the obverse of what would have been predicted. In this sketch there is a frank acknowledgement that the authors' attempts to identify predictability in patterns of behavior get them only so far, that there is a randomness in life, an elusiveness in understanding and interpretation, which makes the hope of flawless forecasting, at least at the individual level, a chimera.

The construction, and reception, of this work tells us a great deal about the culture in which we live. With a plethora of information brought to us by a variety of electronic media, with hundreds of newspapers, magazines and journals, and literally thousands of books, how does make oneself heard? Given that much, in fact almost all, of the substance and the argument to be found in *Freakonomics* was already in the public domain – that is, in books produced under the imprint of university presses, in research papers and in various articles in academic journals, the question clearly was, "How do we bring this interpretation of the world to the widest public possible?" Enter Stephen J. Dubner. His rhetorical skills, displayed in the formulation, presentation, construction and promotion of this book, are clearly formidable.

The current best seller status of *Freakonomics* also demonstrates the fad-prone character of much contemporary discourse in North America. The initial success was doubtless fostered by the initial laudatory reviews which, it turns out, are now coming under increasing criticism. There are several important characteristics of this battle of the reviewers: much of this debate is taking place on the web; the conviction that there is a relationship between moral issues and economic ideas and practices is shared by people on both sides of the debate; statistical analysis often falls short of proof and almost invariably seems to have two sides to its interpretation.

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Book Review (Cont.)

(Continued from page 13)

To sum up. Reading *Freakonomics* is time well spent – for several reasons: the text itself contains many interesting analyses and interpretations of a wide variety of phenomena – some of them illuminating, all of them thought provoking; it throws more light than many of its participants may want on the character of marketing and promotion in the publishing industry; it reveals the ideological bias, the laziness and the gullibility of many reviewers in the mainstream media; it shows the resources available on the web, for those willing to make use of it, in exploring the diversity of views and information on almost all topics; and it highlights the many perils of statistical analysis – inadequate or misinterpreted data, clumsy attempts to impose cause on correlation, and the use of apparently identical data by rival schools of thought to back conflicting positions.

So why did *Insights* offer a review of this book, only to damn it with faint praise? Well, for one thing we cannot have a quarterly chorus of adulation – books do vary in quality and interest, and we should explore the wider field; for another, it is often worth while to place a book in its critical cultural and social context, in this instance the conventional print media, the world of the bloggers, and the publishing sector; and finally, this particular book, which is pertinent to the investment community, has been extravagantly praised, to the point where the chorus needed a countervailing view – a contrarian voice as it were.

The Brockhouse & Cooper Inc. survey described in this publication draws upon data gathered within Brockhouse Cooper's proprietary Investment Manager Databases. The database currently consists of Performance and Qualitative information on approximately 860 investment management firms representing approximately 3600 investment management products. Brockhouse & Cooper Inc. does not independently verify the accuracy of information supplied directly by investment management firms. Median and Percentile breaks are calculated by ranking the appropriate statistics and then determining the appropriate percentile values. Past performance is no guarantee of future results.

Carrick Your Bottom Line

Posted AT 4:10 PM EST ON 23/02/05

Finance: Your bottom line

ROB CARRICK
GLOBE AND MAIL UPDATE

Ottawa — Look past the near-insignificant tax relief in the federal budget and you'll find close to half a dozen measures that will make you better off financially.

People saving for retirement or already retired are the biggest beneficiaries. Most importantly, the 30-per-cent cap on the amount of a registered retirement savings plan or pension plan that can be invested outside the country is gone. As well, the budget raises the contribution limit for RRSPs to $22,000 in 2010, up from an $18,000 limit that was to take effect in 2006.

Seniors who rely on guaranteed investment certificates to generate their retirement income will benefit from an immediate increase in Canada Deposit Insurance Corp's coverage of these and other bank deposits to $100,000 from $60,000. There's also an increase in Guaranteed Income Supplement benefits for low-income seniors.

Tax relief in the budget hinges on a five-year increase $10,000 from $8,148 in the basic personal amount, which is the sum you can earn before taxes kick in. Total savings to actual taxpayers? An Ontario resident earning $80,000 a year would pay about $195 less in taxes in 2009 than he or she would have otherwise, said Tim Cestnick, managing director of national tax services for mutual fund company AIC Ltd. "The savings amount to about a cup of coffee a week."

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The elimination, effective immediately, of the foreign content limit for RRSPs and pension plans might have the broadest long-term impact of any personal finance measure in the budget. Global stock markets, accessible to any investor through global equity mutual funds, have historically made higher returns than the Canadian market, which only accounts for just over 2 per cent of the world's stock market value.

A side benefit for both investors and financial services companies is that they no longer have to go to the trouble of monitoring foreign content levels in individual accounts to avoid the penalties that applied for going over the 30-per-cent limit.

The higher RRSP contribution limits announced in the budget are strictly a benefit to higher earners — to make the maximum $22,000 contribution in 2010, you'd need to have a salary of just over $122,000. Starting in 2011, RRSP limits will be allowed to rise annually at the rate of average wage growth.

Gregory Foreign Property Rule

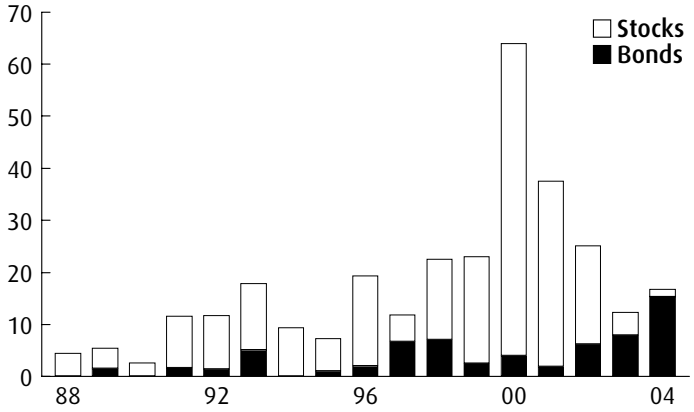
Foreign Property Rule: It's A Goner

Michael Gregory, CFA, Senior Economist

The federal budget bill passed third reading in the House this week, so the foreign property rule (FPR) will soon be put to rest. The FPR was born in 1971, at a time when economic nationalism permeated policy-making. The rule forbade registered (tax-shielded) institutional and individual investments from having more than 10% of their assets in deemed foreign property. The FPR was established to ensure sufficient domestic financing for Canadian governments and businesses, because it was believed that too many Canadian investors would be attracted to the diversity and depth of capital markets south of the border. Lack of diversification resulted in higher risks and lower returns for Canadian pensions and RRSPs. The ceiling was eventually raised to 14% in 1991, 16% in 1992, 18% in 1993, 20% in 1994, 25% in 2000 and 30% in 2001. Increased Canadian net investment in foreign securities followed each lift, particularly during the 2000-01 period. (*Chart 1*).

Chart 1

Canadian Net Investment in Foreign Stocks and Bonds
(C$ blns)



A recent Finance Canada study suggested that $67 billion could flow out of the country during the next two years owing to the FPR's elimination, as pensions raise their average foreign content from 26% to 33%. These estimates were based on the 2000-02 experience. However, there are two reasons to think that the actual outflow could be larger.

First, other major pension markets have a median foreign content of 42% in equities and 29% in bonds for an aggregate of 38% (*Table 1*). More importantly, for smaller pension markets (3%-or-less domestic share of the global capital market which is Canada's peer group), the median is 48% equities and 41% bonds for an aggregate of 43%. Smaller-sized capital markets tend to lack industrial diversification and have insufficient numbers of domestic companies that operate globally to permit geographic diversification.

Second, with the FPR's punitive 1% monthly penalty on the value of excess foreign assets, there was a tendency to keep foreign content below the ceiling. Also, derivatives and other tools are being used to increase foreign exposure but not necessarily foreign content. Reversals of these tendencies could add to capital outflow.

Foreign bond purchases might make up a larger share of capital outflows than was the case after

Table 1

Home Country Bias
Select Pension Markets—Foreign Asset Share (percent)

	Stocks	Bonds	Stocks & Bonds	Domestic Share of Global Capital Market
Australia	42	23	36	2
Japan	39	29	34	10
Netherlands	84	80	82	2
Sweden	43	47	46	1
Switzerland	52	35	41	3
U.K.	42	20	38	11
U.S.	23	3	16	53
Median	**42**	**29**	**38**	

Source: Benefits Canada (2003 figures)

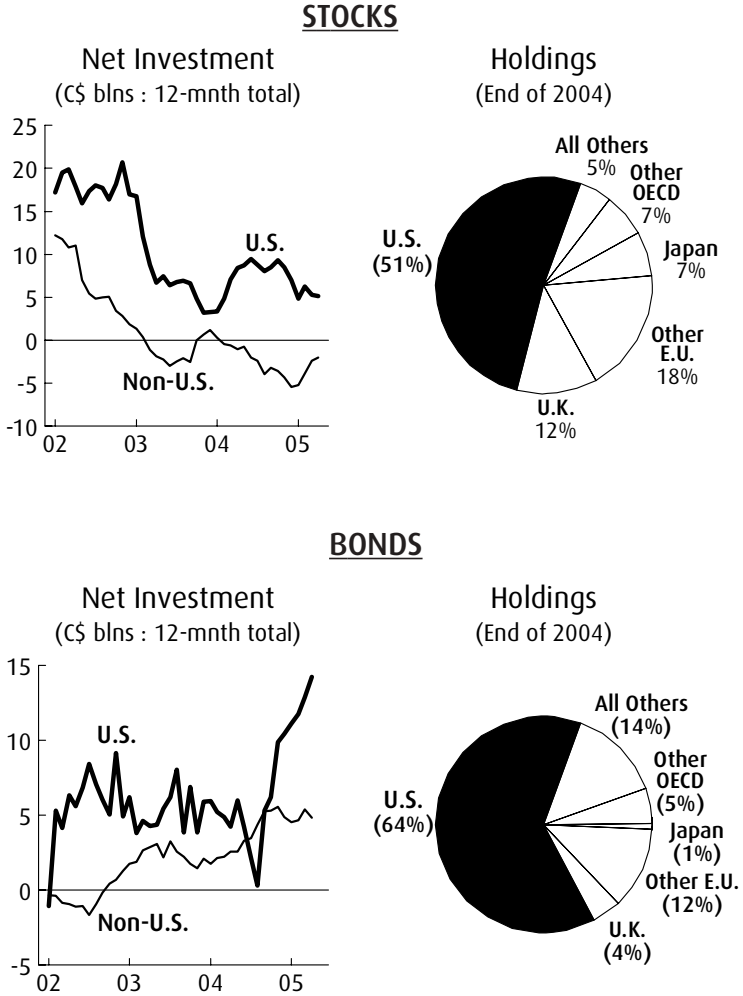
the 1991-94 and 2000-01 FPR changes. In the past, pensions used their foreign asset allocations to basically buy only equities, since this provided the biggest gains from diversification. Compared to the S&P 500 and the MSCI EAFE, the Canadian equity market is not only minute, but it is also significantly overweight the energy, financials and materials sectors, and underweight consumer discretionary, consumer staples and industrials. According to a Greenwich Associates survey, large pension funds' holdings of foreign assets were 50% U.S. equities, 49% EAFE equities, and only 1% foreign bonds at the end of 2003.

Meantime, investors have already been increasing their purchases of foreign bonds, partly in search of higher yields. During the 12-months ending May 2005, cumulative foreign bond purchases totaled C$19 billion, representing more than 80% of total foreign securities purchased, both record highs (*Chart 2*).

Forthcoming portfolio adjustments will likely involve some selling of Canadian assets. However, the net price impacts will likely be negligible, except, perhaps, in the bond market. History shows that adjustments to FPR changes tend to take a year or two, thus spreading out the impacts. On the equity side, further diversification outflows will occur amid strong global demand for Canada's concentrated strength in energy and commodities, thus providing some offset.

Chart 2

Southern Comfort—Canadian Portfolio Investment Abroad



Even if the additional capital outflows were to top $100 billion, they would still represent an average $133 million per day, which is a small drop in the US$75 billion bucket of daily turnover of Canadian dollars in the global FX market, so this should have little impact on the loonie. Some analysts argue that the 2000-02 outflows contributed to Canadian dollar weakness at the time; however, the contemporaneous decline in non-energy commodity prices can fully explain the move.

One legacy of the FPR and the focus on equities in foreign asset allocations was the creation of a captive investor base for domestic bonds that likely resulted in credit spreads being tighter than they otherwise would have been, particularly when governments were running massive deficits. It also stunted development of a domestic market for bonds issued by foreigners (the Canadian equivalent of the U.S. Yankee market). As bond diversification outflows pick up, this will likely cause some widening in credit spreads. Meantime, we look forward to the birth of an active domestic market for bonds issued by foreigners. But what to call them? We like "Canucks".

Price FPR

FPR demise stuns pension industry

February 24, 2005
Chandra Price

Federal Finance Minister Ralph Goodale's decision to scrap the 30% Foreign Property Rule (FPR) has taken the pension industry by pleasant surprise.

"I don't think anybody in the industry expected it to be removed totally," says Dave Clapperton, vice-president and actuary in Aon Consulting's retirement practice in Toronto. "It allows pension plans - that are governed by the foreign content - to expand the investment base beyond where it has been up until now."

Clapperton says he doesn't expect a massive shift in the short-term but does expect yesterday's move by the federal government to be positive for plan sponsors and individual plan members. Goodale cancelled the FPR in his 2005-2006 budget.

"It will help them to better diversify their portfolio, which will lead to better diversification and likely better protection from a risk standpoint," Clapperton says. "So, I think there might be a benefit for plan members and plan sponsors. It will also require plan sponsors to do some better changes to their investment policies and procedures - where they've already indicated a higher number than 30% for the foreign content limit."

Paul Malizia, senior investment consultant with James P. Marshall in Toronto, questions why the FPR was there to begin with.

"Was it really a huge risk to allow pension plans to invest more than 30% of their money outside of Canada?" asks Malizia. "This limit didn't apply to foundations and endowments, it only applied to registered pension plans. And

- Canadian Investment Review
- Canadian Healthcare Manager
- 2003 Pulse Survey
- 2005 Media Planner

so that was an inconsistency towards a little more of a level playing field."

Malizia says in the long-term there will probably be an increase in the average asset mix for pension plans in terms of foreign content.

"I've heard it was maybe 15 % to 20%, somewhere in that range - nowhere near the 30% limit," says Malizia. "And, I think probably over time you would see that increase to what's considered some type of a natural level like we've seen in foreign markets, like in the U.K. and other places, where probably it's kind of leveled out at about a third."

Malizia thinks Canadian plans will probably end up at about a third as well.

"I certainly don't expect it to be 50%, or 60%, or 75%," says Malizia. "The liabilities still have to be paid in Canadian dollars."

Pension funds could receive a boost from the elimination of the FPR in dealing with underfunding and shortfalls. "This definitely could probably be seen as a way to deal with that situation," Malizia says.

Pension industry associations are thrilled that Goodale axed the foreign content limit.

"I think history and experience have shown that the rule outlived its usefulness," says Scott Perkin, president of the Association of Canadian Pension Management in Toronto.

Russell Hiscock, chair of the Pension Investment Association of Canada's government relations committee in Montreal, adds: "I think the Finance Minister is to be congratulated. It is a change that we think is going to be positive for all Canadians."

*Filed by **Chandra Price**, assistant editor of Benefits Canada, with contributions by Jim MacDonald.*

(02/24/05)

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Hockins Paving The Way

Paving the way for change to RRSP Foreign Content Rules
Tom Hockin, January 31, 2000

PAVING THE WAY FOR CHANGE TO RRSP FOREIGN CONTENT RULES
Clone Funds and Other RRSP Foreign Funds Conference
Institute for International Research
1:10 p.m. - January 31, 2000
Tom Hockin, President and CEO
The Investment Funds Institute of Canada

CHECK AGAINST DELIVERY

IFIC has been paving the way for change to RRSP foreign content rules for a number of years. And hopefully in the next month we'll finally arrive at our destination - higher limits that benefit both the investor and the industry. There are a number of very strong reasons why IFIC has taken up this issue on behalf of Canadian investors and the Canadian investment funds industry. Until the introduction of clone funds, average Canadians were more or less boxed in. Very rich Canadians are able to invest freely outside their RRSPs where there are no restrictions. But for many Canadians their RRSP is their main saving vehicle. IFIC commissioned three studies over the past few years on the foreign property rule and the results clearly show that raising the foreign content limit would not be detrimental to Canada's economy and would, in fact, be very beneficial to Canadians.

OVERHEAD: ARGUMENTS TO RAISE THE RULE 1
Let's start with why the economy wouldn't be negatively impacted.

Our research shows that:

- There was no negative effect the last time the foreign property limit was increased from 10% to 20% in 1991 (by 2% increments).
- Existing limits create inefficiencies in the financial markets by restricting the movement of capital.
- Raising the limit does not create concern about the cost of capital and it will not increase Canada's international debt position.
- Funds subjected to the FPR are only about one fifth of the total investment pool.

Even more importantly are the lost opportunities and direct costs with respect to the restrictive 20% rule:

OVERHEAD: ARGUMENTS TO RAISE THE RULE 2
Our research shows that:

- 20% foreign property increases returns portfolios by 1%
- 30% foreign property would increase returns by another .5% (Note: A Canadian investor making annual contributions of $5,000 to an RRSP for the last 25 years could have earned $32,000 more with 30% foreign content.
- exposure to industries not readily available in Canada
- greater geographic diversification

With respect to lost opportunities and geographic diversification, lets look at these numbers.

OVERHEAD (CANADA'S COMPARATIVE PERFORMANCE)
It shows that Canada is definitely near the bottom of the pack when looking at long term returns.

A more recent argument for lifting the rules is the impact of the cost to investors of clone funds, which have been developed by our industry. I'll leave the details of clone funds to this conference's expert speakers but I wanted to point out the extra cost involved in investing in these 100% RRSP eligible funds.

OVERHEAD: IMPACT OF CLONE FEES ON INVESTORS (1)

- There were $8.7 billion in clone funds at the end of December
- On average, clone funds have MERs of 50 basis points greater than the underlying fund
- Annual impact of these fees to the investors in clone funds is $43.5 million

OVERHEAD: IMPACT OF CLONE FEES ON INVESTORS (2)
The cost to the investor in lost capital appreciation over 20 years using the asset base of $8.7 billion is:

RATE OF RETURN COST (loss in capital appreciation)
8% -- $3,594,052,579
10% -- $5,097,224,253
12% -- $7,183,667,787

IFIC has been very vocal in our lobbying to have the limit raised. Our initiatives over the past few years include:

Prior to 1998, IFIC was involved in three studies, the findings of which we have already discussed. Each of these studies was presented to the government and press releases were issued. IFIC has also been giving pre-budget presentations to the finance committee each year asking for changes to the 20% limit, among other requests.

Through the summer of 1998, a flier was distributed to over two million Canadians through our Member's mailings. This flyer educated investors about why they should care about the foreign property rule and contained a call to action for them to contact their MPs to demand a change to the rule.

OVERHEAD (POSTER)
In addition, this poster was personalized and sent to all 156 Liberal Members of Parliament in November. The posters were sent to all Liberal Senators in early January 1999. From the feedback we received, it caused quite a stir in Ottawa and was very effective in raising awareness of the issue at MPs offices.

We are also working closely with the Retirement Coalition of Canada which has 15 Members representing such varied interests as the Canadian Association of Retired Persons, Retired Teachers of Ontario, IFIC, and Canadian Real Estate Association among others.

We have also had direct communication of our messages to Finance Minister Paul Martin and his office.

IFIC has been very pleased to see the support of this issue by a number of other key influencers;

- The McKay Report - November 19, 1998 - Report of the Standing Senate committee on Banking, Trade and Commerce
- The Stromberg Report - Investment funds in Canada and consumer protection (January 7, 1999)
- The House of Commons Finance Committee - December 4, 1998
- June 1999 the Senate passed a bi-partisan motion earlier this year supporting lifting the 20% limit to 30%.

OVERHEAD (INTERNATIONAL COMPARISON)
One of the arguments IFIC has been using in its lobbying efforts on behalf of investors and the industry is that Canadians are at a disadvantage internationally when it comes to diversifying their RRSPs.

In October I attended an International mutual funds conference and took the opportunity to poll the other countries attending.

As you can see from these overhead showing first the countries that do not have any restrictions and secondly the countries that do have restrictions, Canada is grouped with a select group of countries with less developed economies.

CONCLUSION:

The whole issue of diversification has now become much more urgent with the dominance of Nortel and BCE on the TSE 300 Index. If fund managers didn't have to concentrate their portfolios so much in Canadian stocks, the issue of diversification may not be so controversial right now.

Last month the Globe and Mail newspaper reported that Finance Minister Paul Martin was set to increase the foreign property rule "in the not too distant future".

We are very pleased to hear that but if he had moved earlier on this issue Canadian mutual fund investors and the Canadian mutual fund industry would have been better served. Clone funds might have not been as necessary to help investors properly diversify their retirement portfolios and fund managers would have been

able to address the diversification issue with a wider choice of stocks to choose from for their portfolios.

Back to **Statistics**

Gregory – A Canadian Welcome Mat

A Canadian Welcome Mat for Foreign Bond Issuers

Michael Gregory, CFA, Senior Economist

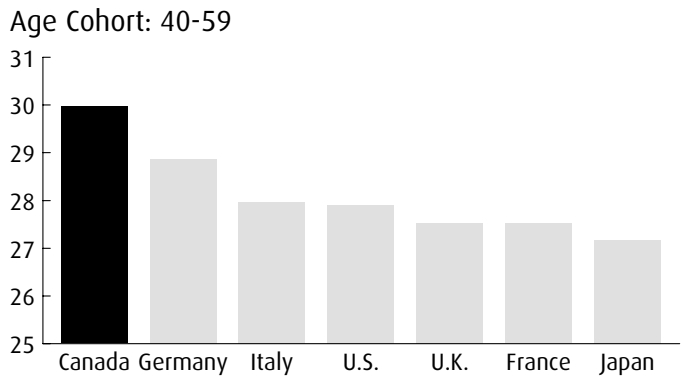
As the Baby Boom generation ages, the resulting demographic demand for fixed income assets is one of the secular trends underpinning bond markets around the world. For Canada, the proportion of the population in the critical 40-59-year age cohort is the highest in the G-7 (*Chart 1*). With the first of the boomers turning 60 next year, Canada will likely experience relatively stronger growth in the demand for fixed income assets. Arguably, some of this demand might benefit income trusts; however, it appears that the availability of these investment vehicles might be more constrained in the future as the government reviews its policy options. Thus, the focus could be more on bonds, particularly as bond yields continue to creep up.

Meantime, net new issuance of bonds by Canadian governments and corporations (including securitizations) ran less than $35 billon during the past year, much lower than the $60-billion pace often surpassed since the early 1990s (*Chart 2*). As a share of GDP, the deceleration in net bond issuance has been even more dramatic, falling three to four fold below prior peaks. The key factor was the emergence of federal government budget surpluses since the 1997/98 fiscal year, which are expected to continue for the foreseeable future (*Chart 3*). The provincial governments combined are also on track for their second consecutive surplus year. Elsewhere, solid earnings growth and cautious capital spending have kept a rein on corporate borrowing. Looking forward, while corporate issuance is likely to pick up, we judge that government bonds will continue to shrink as a share of the market.

These bond market trends are combining with June 2005's elimination of the foreign property rule (FPR) to sow the seeds of a bona fide domestic market for C$-denominated foreign bonds. The FPR was born in 1971, and forbade registered (tax-shielded) institutional and individual investments from having more than

Chart 1

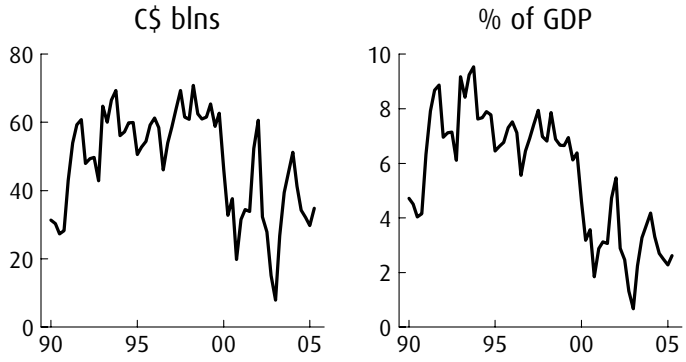
A Baby Boom for Bonds
2005 (% of population)



Source: U.S. Census Bureau

Chart 2

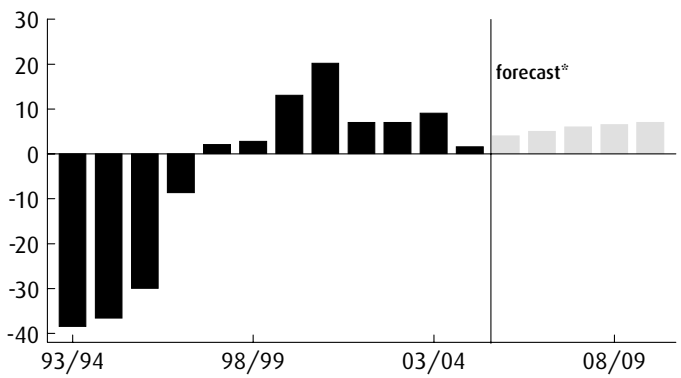
Slim Pickings
Net New Domestic Bond Issues*



* Government, corporate and MBS/ABS; 4-quarter total

Chart 3

Surpluses as Far as the Eye Can See
Federal Government Budget Balance (C$ blns)



* Underlying budget surplus

10% of their assets in deemed foreign property. Starting in the early 1990s, the ceiling was raised in a series of steps to 30% by 2001. Increased Canadian net investment in foreign securities followed each lift.

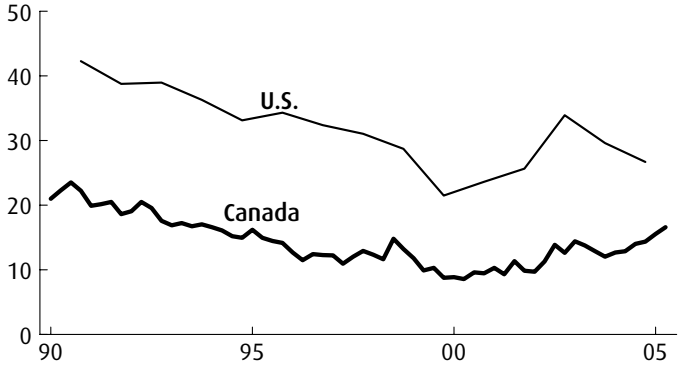
The forced lack of diversification resulted in lower returns and higher risks for Canadian investors, generally, and a skewed, heavy weighting in equities within their foreign asset allocations, specifically. Although Canadians are considered to be more conservative investors than their U.S. counterparts, the FPR drove investors to seek the biggest diversification "bang-per-buck". In consequence, bond weightings in Canadian investors' foreign portfolios have run well below those for U.S. investors, although the gap is closing (*Chart 4*). Currently, the bond weighting is about 20%, but this reflects investors both previously bound and not bound by the FPR. Looking at pension plans only, foreign bond holdings are well below the national average (*Chart 5*).

Together, a growing demand for fixed income assets, a lean supply of new domestic bonds, and increasing bond allocations among expanding foreign asset portfolios—along with favourable longer-term prospects for the loonie and the perennial desire to diversify from the limited list of Canadian corporate names—emphasize the fertile domestic ground for C$-denominated foreign bonds. As such, the foreign names that have recently issued in the Canadian market are probably the thin edge of the wedge. So far this year, we are on track for record net foreign bond buying by Canadian investors (*Chart 6*).

The only remaining question is what to call foreign bonds issued in the Canadian market. Some have proposed "Maple" bonds (too sweet); others have suggested "Beaver" bonds (the alliteration is nice, but we already name our currency after a bird). We have proposed in the past and continue to prefer "Canuck" bonds, a hardy moniker that stands up nicely alongside U.S. Yankees, U.K. Bulldogs and Japanese Samurais.

Chart 4

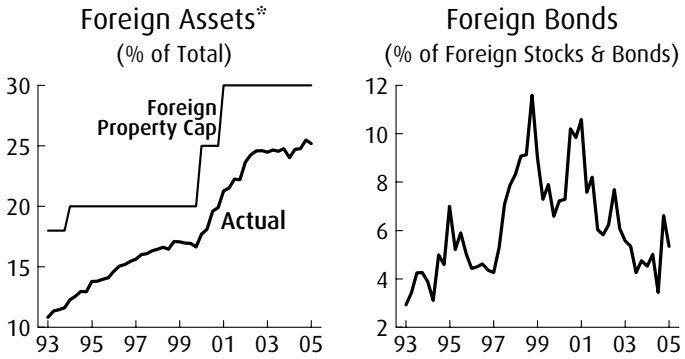
What Happened to Being More Conservative?
Share of Foreign Bonds*



* as a % of total foreign stock and bond holdings

Chart 5

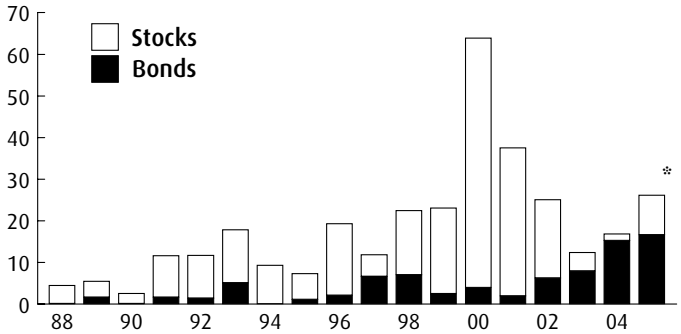
Caps Off
Trusteed Pension Funds



* Book value

Chart 6

Record Foreign Bond Buying
Canadian Net Investment in Foreign Stocks & Bonds
(C$ blns)



* Year-to-August

TD Economics – Time To Eliminate

TD Bank Financial Group

TD Economics

Topic Paper

February 8, 2005

TIME TO ELIMINATE THE FOREIGN PROPERTY RULE FOR CANADIAN REGISTERED PENSION PLANS

HIGHLIGHTS

- **Foreign Property Rule forces registered savings plans in Canada to incur unnecessary risk**
- **Rationale for FPR no longer exists, and arguments for abandoning it are compelling**
- **Ottawa should take action on FPR in 2005 Budget**

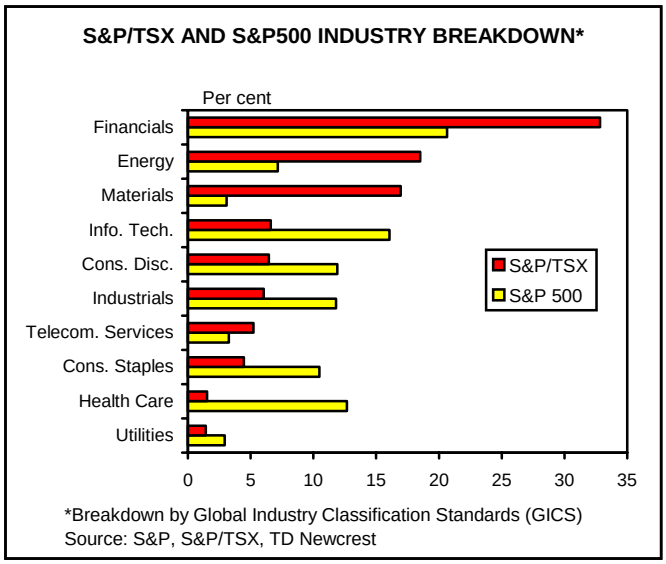
The Foreign Property Rule (FPR) restricts the portion of savings allocated to foreign assets in Canadian Registered Retirement Savings Plans (RRSPs) and Registered Pension Plans (RPPs) including the Canada Pension Plan (CPP). In their annual Top Ten list (*TD Newcrest Top 10 Predictions Report: 2005*, published Feb. 2, 2005), TD Securities' Index Products group identified raising or repealing the FPR as a highly desirable, but low-probability event for 2005. Their skepticism about the prospects for near-term action is understandable. Although the Liberal minority addendum to the December 2004 pre-budget consultation report of the House of Commons Standing Committee on Finance recommended "immediately raising the RRSP and CPP foreign content limits", the proposal did not appear in the main (consensus) document or in any of the other parties' minority reports. This suggests there may be some disagreement across party lines, which does not bode well in a minority parliament. However, we share our TD colleagues' enthusiasm for the idea. Indeed, it's hard to see what there is not to like in the Liberal proposal.

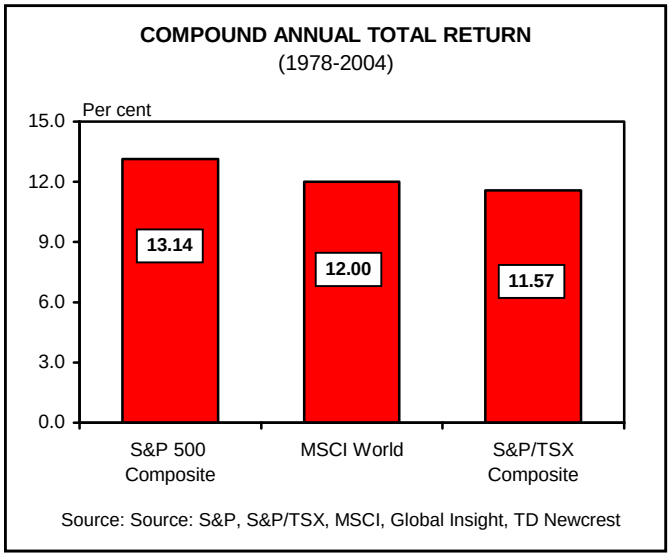
TD Economics urges Finance Minister Goodale to act upon the FPR in the 2005 Budget. Moreover, we believe that Canadians would not allocate more than 50 per cent of their retirement savings to foreign assets, so, in practical terms, there is little to distinguish between raising the limit and eliminating it altogether.

Why the FPR has to go

From the original 10 per cent in 1971, the FPR was raised to 20 per cent in 1994 and then the current 30 per cent in 2001. The rule means that Canadian RPP managers and RRSP holders have to maintain at least 70 per cent of their funds in Canadian assets – an allocation that is way out of line with the relative size of Canadian financial markets globally. The Canadian market for government debt accounts for less than 3 per cent of the world market for sovereign debt. Similarly, the Canadian stock market makes up about 2 per cent of the world equity market, and in addition, is highly concentrated in particular sectors, as the chart at the top of the next page makes clear. Factor in the underperformance of the S&P/TSX versus other major global equity indices over the last 25 years, and it's clear that the FPR triply compromises Canadian investors' ability to construct well-diversified portfolios that maximize risk-adjusted returns.

Given these disadvantages, it's not surprising that investors have looked for ways to skirt the FPR. They have several options. The simplest is to purchase a mutual fund that has 30 per cent or less of its holdings in foreign assets. These funds are still considered "Canadian content" for tax purposes. So, if an investor were to put 30 per cent of his money directly into foreign assets and the remaining 70 per cent into mutual funds that maximize their foreign content, he could boost the foreign content of his portfolio to 51 per cent. Another way of getting around the FPR is to buy futures contracts that are backed by Canadian assets (satisfying the Canadian content rule) but linked to the performance of foreign bond or stock markets. A related alternative is a clone fund, where the portfolio mimics the performance of foreign equities without taking on actual equity ownership.





Interestingly, despite the availability of these strategies, most Canadians' foreign property holdings fall well below the 30 per cent limit. There are no official estimates of foreign content in RRSPs, but bank surveys suggest that only a tiny fraction of Canadian RRSP investors maximize their foreign content, while far more have no foreign content at all in their portfolios. Trusteed RPPs allocate about 25 per cent of the book value of their investments to foreign assets, but this figure reflects a combination of little or no foreign content in many small plans and close to the full 30 per cent for most large plans. In fact, some of the larger company pension plans have achieved a foreign content exposure of more than 30 per cent through the use of some of the derivative-based strategies noted above.

So, if a majority of Canadians has chosen not to take advantage of even the 30-per-cent limit, and those who want more foreign exposure have found ways of circumventing the rule, why bother changing it? Because the strategies for evading the FPR are complex, increase risk, limit the types of investments that can be made and involve higher management fees. Typically, only larger employer pension plans have the resources to make use of these opportunities. As a result, the application of the foreign property rule is patently unfair for the vast majority of pension savers.

Rationale for the FPR no longer exists

The original intent of the FPR seems to have been to provide a (cheaper) source of financing for Canadian industry. A related argument refers to the idea of a "patriotic duty" – the line of reasoning being that, since Canadians bear the burden of the tax deferral feature of registered savings plans, they should also share in the bulk of the savings benefit. A third concern is that raising the FPR limit would result in an exodus of capital from Canada and put downward pressure on the Canadian dollar.

With respect to the first argument, there is ample evidence that Canadian firms today have almost unfettered access to world capital markets and that their cost of capital is determined on those markets. Similarly, the notion of a "patriotic duty" makes sense only if Canadians really are the winners – and, they are not. In fact, *no* segment of Canadian society wins under the FPR. The rule raises the risk profile of retirement savings and lowers the rate of return. As Canadians are made poorer, they have less money to invest in Canadian businesses and spend on Canadian products. As for the impact on Canadian financial markets, it's hard to see how some downward pressure on the Canadian dollar would be a problem at this point, given the currency's 30-per-cent appreciation over the past two years. And, in any case, the net outflows triggered by the removal of the FPR would be small relative to the amount of capital that enters and exits the country on a daily basis.

Indeed, it's important to recognize that, while eliminating the FPR would result in a larger portion of registered retirement savings being allocated to foreign assets, the ratio would not come anywhere close to 100 per cent. The reason is that investors typically demonstrate a strong "home-country bias" in their asset allocation. The United Kingdom provides a good example of this phenomenon. The U.K. government eliminated foreign property restrictions more than 30 years ago, yet U.K. pension funds still

allocate almost 75 per cent of their holdings to domestic assets despite the fact that the U.K. market makes up only about 10 per cent of the global market. Ultimately, the domestic market is the one that investors know best and are most comfortable with. Canadians are no different in this respect. And, investing at home has the added virtue of eliminating exchange rate risk – something Canadians should appreciate all the more, after two years of watching the returns on their U.S. dollar-denominated investments eroded by a falling U.S. dollar.

Benefits of removing FPR significant

Meanwhile, the arguments for eliminating the FPR are as compelling as the case for maintaining it is weak. In a 2000 paper, "Estimating the costs of Canada's foreign property rule", Kevin Milligan and Michael Smart calculated that increasing the then-20-per-cent FPR limit to 30 per cent would raise the annual rate of return on registered investments by 0.31 per cent – which corresponds to a 9.9-per-cent increase in terminal portfolio wealth over 20 years. The FPR limit subsequently was raised to 30 per cent, and in a 2003 paper, "The Foreign Property Rule: A cost-benefit analysis", David Burgess and Joel Fried estimated that this increase had boosted the annual revenue from pension savings by $1 billion per year. They also calculated that the 30 per cent limit continues to depress pension earnings by $1.5 to $3.0 billion per year.

These findings apply to all Canadian registered investments, but they are particularly pertinent to the Canada Pension Plan – a critically important savings vehicle for working Canadians. In a speech last fall, CPP Investment Board President and Chief Executive Officer John MacNaughton characterized the FPR as a source of "long-term portfolio risk" for the fund, citing the reasons enumerated above – *i.e.*, the small size and sectoral concentration of Canadian equity markets. But, that's not the only reason Canadians should be concerned about the FPR's impact on the CPP. According to the 21st Actuarial Report on the Canada Pension Plan (as at December 31, 2003), the CPP will have amassed $332 billion (in 2004 dollars) of assets by 2020. By requiring that 70 per cent of those funds stay in Canada, the FPR ensures that the CPP will become an increasingly dominant player in Canadian equity and debt markets. Having that much market influence concentrated in one player is not healthy.

Furthermore, investing so much of the CPP in Canada creates a form of "double jeopardy" for Canadian pensioners. As it stands now, the FPR means that nearly three-quarters of the CPP's investment income comes from the Canadian economy, which is also the source of 100 per cent of the fund's premium revenue. As a result, if there were an economic downturn in Canada – or worse, a prolonged period during which Canada underperformed other economies – the CPP would be doubly hit.

In fact, a credible argument can be made that all of the CPP's assets should be invested outside Canada. Norway's Government Petroleum Fund provides an instructive case in this regard. The Fund was established in 1990 as a fiscal tool for managing the revenues from Norway's offshore oil sector. It is administered by the central bank on behalf of the Ministry of Finance, and all of its assets are invested in foreign securities. Part of the rationale for this investment strategy is to shield Norway's economy from fluctuations in crude oil prices and extraction rates in the petroleum sector. But, an equally important reason is to ensure that the government has adequate savings to meet the challenges of an aging population. As Norges Bank Governor Svein Gjedrum explained in a recent speech, "these two purposes imply that the Petroleum Fund must be invested outside the Norwegian economy."

Conclusion

Eliminating (or at least substantially raising) the foreign asset restriction on registered investments would be a win for all segments of the Canadian economy. By being able to achieve higher returns on their pension savings, Canadians could prepare better for retirement. The positive wealth effect to the Canadian economy would benefit the corporate sector and raise government revenues. The federal government should use the occasion of the 2005 Budget to take action on delivering this positive result.

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