

1998

Canadian Tax Deferred Savings Plans and the Foreign Property Rule

David Burgess

Joel Fried

Follow this and additional works at: <https://ir.lib.uwo.ca/economicsresrpt>



Part of the [Economics Commons](#)

Citation of this paper:

Burgess, David, Joel Fried. "Canadian Tax Deferred Savings Plans and the Foreign Property Rule." Department of Economics Research Reports, 9806. London, ON: Department of Economics, University of Western Ontario (1998).

50158

ISSN:0318-725X
ISBN:0-7714-2083-8

RESEARCH REPORT 9806

**Canadian Tax Deferred Savings Plans and the
Foreign Property Rule**

ECONOMICS REFERENCE CENTRE

by

David Burgess Joel Fried

MAY 21 1998

UNIVERSITY OF WESTERN ONTARIO

February 1998

Department of Economics
Social Science Centre
University of Western Ontario
London, Ontario, Canada
N6A 5C2
econref@sscl.uwo.ca

Canadian Tax Deferred Savings Plans and the Foreign Property Rule

David Burgess and Joel Fried*

February 5, 1998

Abstract

This paper argues that the Foreign Property Rule, which limits the foreign content of a Registered Savings Plan to no more than 20% of book value, should be removed as quickly as possible. Given the globalization of financial markets, the FPR does not protect what it is meant to protect - a pool of savings for investment in Canada. Instead, it distorts the allocation of credit among firms, and forces agents to use more costly instruments - derivatives - to achieve desired foreign risk exposure. Since the FPR lowers the return on registered savings without benefiting any identifiable group, removing it would be an unequivocal gain to Canadians.

1. Introduction

Canada's aging population, and the anticipated increase in the proportion of retirees as the boomers begin to retire, is very much in the news today, and the government is in the process of restructuring Canada's retirement income programs to deal with this demographic change. One of the three pillars of the system - the Old Age Security(OAS) and Guaranteed Income Supplement(GIS) programs - is to be replaced with the Seniors Benefit in which tax-free benefits are to be provided to retirees, conditional on income, and the highly contentious clawbacks

*Department of Economics, University of Western Ontario. We would like to thank, without implicating, Martin Lally, Louise Koza and Ron Wirick for helpful comments and assistance on earlier drafts, and Jim Franks of Frank Russell Canada and Robert Leckey of IFIC for help with data and background material.

of the earlier programs are avoided. The focus is more on providing a minimum income support program for the elderly which is financially sustainable. A second pillar of the system – the Canada Pension Plan(C/QPP) – has also been modified in the interest of financial sustainability, though its basic structure remains intact: contribution rates have been increased and benefit levels lowered, and the growing pool of CPP funds is to be invested by an arms-length agency with a mandate to maximize risk-adjusted return, rather than being lent to provinces at below market rates. OAS/GIS and C/QPP are programs that involve direct cash transfers from the government to the individual, but these programs represent only a fraction of the resources available to the elderly. Much of the consumption of the retired is, in fact, financed by individuals' private savings, and an even greater proportion will have to be in the future if intergenerational conflict is to be avoided.¹ The federal government has encouraged individual saving for retirement by allowing taxes to be deferred on contributions made to registered savings plans (RSPs), and it is currently re-examining this third pillar of the retirement system to ensure that its structure is consistent with the objective of individuals taking greater responsibility for financing their own retirement.

Canada's registered savings plans have played a central role in Canadians' savings decisions for many years.² In addition to the Registered Pension Plans (RPPs) that employers have established for their employees, there is the Registered Retirement Savings Plan (RRSP) that serves as a principal vehicle for the long term savings of those Canadians not covered by private pension plans. RPPs and RRSPs defer taxes on monies accumulated in registered accounts until such time as the individual withdraws them. Withdrawals are then treated as earned income and taxed at prevailing progressive income tax rates. As a consequence, these plans alter the individual's tax base from current income to average lifetime income, so the tax system becomes more equitable for individuals who face variable incomes either by choice of occupation, such as self employment or work in the more cyclical industries, or circumstance, such as spells of unemployment. Indeed, the structure of these plans is an international model for both its flexibility and equity. We take as a given that a desirable objective of tax policy in Canada

¹Total pension income of Canadians in 1996 was \$76 billion, consisting of \$22 billion from OAS/GIS, \$22 billion from C/QPP, and \$32 billion from RSP's.(The Seniors Benefit: Securing the Future, Federal Budget, Mar. 6, 1996, p.20.)

²Useful recent sources of information on Canada's retirement income programs are Canada's Retirement Income System: A Statistical Overview, Cat. 74-507-XPB, Statistics Canada, Feb. 1996, and Pension Plans in Canada, January 1 1996, Cat. 74-401 XPB, Statistics Canada, Oct 1997.

is to encourage the use of such vehicles. The purpose of this paper is to examine one aspect of existing plans that deters agents from using them efficiently. This is the so called "Foreign Property Rule" (FPR), a restriction on the amount of foreign property that can be held in a registered savings account without incurring a tax penalty.

The FPR is not the only aspect of these plans that has, until now, mitigated the willingness and ability of agents to use them efficiently as savings vehicles. Nor is it the principal one: constraints on the amounts that can be put into a registered plan, and on when and how funds can be removed are major deterrents.³ Nonetheless, the FPR can be a serious obstacle to agents wanting to commit funds to registered plans, and it does raise a number of issues regarding the purpose that the FPR is supposed to serve, and the role that RSPs are supposed to play in the Canadian economy. Sorting out these issues represents a partial step toward giving RSPs a greater role in the tax system.⁴

Although a clearly stated rationale for the existence of the FPR cannot be found, comments made by the Minister of Finance on several occasions indicate that there are two principal reasons for retaining it: first, it encourages Canadians to invest their saving in Canada, and this is supposed to result in more investment and job creation in Canada; and second, because Canada has a large stock of government debt outstanding, and is a debtor nation with a large amount of government and corporate debt held by foreigners, the timing is inappropriate for changing the rule. Presumably, these arguments rest on the belief that removing the FPR would result in a net capital outflow, an increase in foreign indebtedness, higher interest rates, an increase in the cost of capital for Canadian firms, and a reduction in real investment in Canada. Other arguments that have been put forth to keep the FPR in place include: paternalism – it protects savers from undertaking more risk than is prudent; that it is a desirable objective of government to encourage Canadian ownership and control of Canadian based corporations; and that "subsidized" savings plans ought to be used to finance investment and job-creation in Canada and not to benefit non-Canadian corporations.

³Examples include the imposition of maximum dollar amounts that can be contributed absolutely and/or as a proportion of current – and now, past, – labor income, and limits on the maximum that can be withdrawn from a Life Income Fund in any year. The Canadian RRSP plan, unlike the U.S. system of IRAs and 401K plans, has no financial penalties for withdrawal of funds prior to retirement. It is this aspect that allows Canadians the ability to tax average.

⁴The foreign content restriction is not the only asset allocation restriction imposed on RSPs. Contributions are also generally restricted to financial claims, principally to avoid monitoring and valuation problems.

In arguing for the removal of the FPR we make the point that if the FPR is to affect investment and employment in Canada it can only do so by altering *flows* of resources. The FPR is concerned with how *stocks* are allocated. Its impact on flows will arise only indirectly through its impact on relative prices, and it is not clear that the relative price effects from removing the FPR would discourage either investment or employment in Canada. Central to our evaluation of the effects of the FPR is the view that the principal role of the equity market is as an insurance market where risk is bought and sold. Its lesser role is in the provision of new funds for firms and in transferring control of corporations.⁵

In the next section we provide a brief description of the structure of Canadian registered savings plans and a brief history of the Foreign Property Rule. In section 3 we examine the effects of the rule on the balance of payments and the exchange rate to assess the rule's impact on international capital flows. From this we can obtain some implications for financial markets if the FPR were removed. These are discussed in section 4. Section 5 looks at the possible impact of these changes on saving, investment and employment in Canada. Section 6 briefly discusses the issue of nationalism, and section 7 concludes.

2. Registered Savings Plans: A Brief Review

Canada's registered savings plans were established in 1957. They consist of a variety of programs that permit tax deferral of wage income. Established primarily as a retirement savings plan, there are two general forms these plans take. The Registered Retirement Savings Plan (RRSP) allows individuals to deduct from current taxable income monies contributed to the plan. Income earned within the plan, as well as contributions, are treated as part of taxable income only on the withdrawal of funds. There are no penalties attached to the withdrawal of monies so consumption needs can be met prior to retirement⁶. Currently, the plan must be closed and monies withdrawn by age 69, but these funds can be rolled over into either an annuity or a Registered Retirement Income Fund (RRIF) with no

⁵The capitalization of the TSE 300 was \$607 billion at year-end 1996, and the index accounted for 84 percent of the value of stocks listed (Frank Russell Canada). Net issues of common and preferred stocks by Canadian firms was \$20.4 billion in 1996 (*Bank of Canada Review*, Spring, 1997, Table F8). Therefore the value of new issues as a proportion of market capitalization was only 2.8 percent.

⁶These funds can therefore operate as a method of tax averaging over the agent's lifetime. They also provide a method of tax averaging across spouses through the use of spousal contributions, which are taxed at the recipient's tax rate on withdrawal.

tax penalty. Funds in an annuity or RRIF have the same tax deferral properties as an RRSP. RRIFs specify a minimum amount that must be withdrawn each year, and they must be wound up by age 90. Prior to that age an annuity can be purchased to maintain the tax status of the funds, or it can be cashed out and taxes paid.

The other type of plan includes Registered Pension Plans (RPPs), "locked in RRSPs," and Life Income Funds (LIFs) that are virtually identical to the first type except that funds cannot be withdrawn before retirement. There are also (province specific) limits to the size of the withdrawals after retirement, as well as additional limitations on when and how the monies can be allocated when the account is closed. This second type of fund is used principally by the employer in providing retirement benefits to workers in either a defined benefit or a money purchase (defined contribution) plan. The contribution limits – currently 18% of wage income up to a limit of \$13,500 per year – are integrated over the two types of plans: roughly speaking, an additional dollar allocated to an RRP reduces by one dollar the amount that can be contributed to one's RRSP.

RRSPs and RPPs have been subject to foreign investment restrictions of one form or another at least since 1957. Prior to 1971 no more than 10% of the income on an RRSP or an RPP could be derived from foreign sources. It was alleged that this had the effect of encouraging investors to increase their foreign content by buying foreign stocks, since most of the return on equity consists of capital gains rather than dividends. Indeed, the effective foreign content could be as high as 25% or more if dividends constitute only 40% of the total return on equity.⁷ With the June 1971 revisions to the Income Tax Act the Foreign Property Rule was rewritten to be more effective in limiting foreign content. It stipulated that no more than 10% of the book value of the assets in an RRSP or an RPP could consist of foreign securities or foreign real property. Otherwise, an effectively prohibitive tax of 1% per month would be charged on the book value of foreign holdings in excess of the FPR limit. The definition of foreign securities consists of cash, bonds and equities issued by firms or other organizations not domiciled in Canada.⁸ In response to concerns that the FPR prevented retirement savings from being adequately diversified, the foreign property limit was increased from 10% to 20% in stages of 2 percentage points per year beginning in 1990.⁹

⁷See Conway(1970).

⁸Liabilities of certain international bodies such as the World Bank are exempt from the FPR because the debt is guaranteed by world governments and Canada is a member country.

⁹As early as 1979 the Economic Council of Canada had recommended that "as balance of

At the time the FPR was introduced there were no financial futures markets. These began in 1972 with financial futures in currencies being offered by the International Money Market (IMM) of the Chicago Mercantile Exchange, a leading commodity futures exchange in the United States. Subsequently, futures markets developed for a wide array of financial assets, including major stock indices around the world. Most notably, the S&P 500 future was established in 1982.¹⁰ Futures on stock market indexes in at least nine other foreign countries are currently operating and are economically viable.¹¹ They are roughly as representative of their markets as is the S&P 500 contract for the U.S. In a ruling by Revenue Canada in 1990 non-Canadian financial futures were deemed to be foreign property with a zero cost base – in effect, they have no weight as foreign securities in the context of the 20% limit on foreign security holding. Since the time of that decision, foreign equity futures markets have played an increasing role in retirement portfolios.¹²

The reason Revenue Canada ruled that futures contracts did not, in practice, constitute foreign assets in pension portfolios is that the contracts are not assets but rather are promises to purchase or sell assets *at some future date*. Adding force to the argument is the fact that one can terminate a futures contract at any time prior to expiration, so RSPs need never hold the underlying security. The futures contract only replicates movements in foreign assets but is not itself a foreign asset. Indeed, the assets listed on the manager's books will be short term Canadian issued bills¹³: The market value of a fund holding financial futures will

payments and other circumstances permit, the Government of Canada amend the Income Tax Act to permit an increase in the proportion of the assets of Canadian pension funds that can be held in the form of foreign securities". (Recommendation 10, p.105, Economic Council of Canada (1979))

¹⁰The S&P 500 represents a value weighted average of 500 of the largest companies traded on U.S. equity markets. The value of these firms represent approximately two thirds of the value of *all* equities traded on the U.S. equity markets. There are a number of Canadian firms and depository receipts of firms from other parts of the world traded in U.S. markets, and some of these are also included in the S&P index itself. The S&P index has become one of the most representative indices of price behavior on U.S. stock exchanges.

¹¹These countries are Australia, France, Germany, Hong Kong, Italy, Japan, Netherlands, Switzerland, and the United Kingdom.

¹²For instance, the Ontario Teachers' Pension Plan had a foreign exposure of 31.5% at year-end 1995, with three quarters of foreign exposure consisting of index investments using derivatives. The University of Western Ontario Pension Plan's Equity Fund is targeted to have a 70% exposure to foreign markets but only a 15% foreign security holding. The remaining 55% of that exposure is "invested" in Canadian issued short term bills used to back equity futures contracts in ten foreign markets.

¹³U.S. pay bills issued by Canadian institutions may be used for an unhedged portfolio, while

be identical to the Canadian funds held in the portfolio since the value of the futures contract is zero at the close of each day, because of the daily "marking to market".¹⁴

3. The FPR and the Balance of Payments

While Revenue Canada's interpretation was based on whether or not futures contracts were assets in the meaning of the Pension Benefits Act, the economic interpretation is that the futures markets allow an agent to separate the characteristics of a store of value and of risk that arise from holding a risky asset. That is, the decision on the type and degree of risk an agent may choose to be exposed to can be completely independent of the type of asset held. Furthermore, the impact of any decision on asset holdings can also be broken down into its components of a transfer of a risk free asset and the transfer of risk itself. This distinction serves as a useful starting point in assessing the impact of the FPR on the exchange rate and balance of payments. To the extent that there are any effects, there is the possibility of some capital outflow from Canada.

3.1. Hedged Purchase of Foreign Securities

Consider the following experiment. Suppose the manager of a Canadian fund wishes to purchase a share of the index of the U.S. equity market and wishes to hedge that position into Canadian dollars. Given her existing portfolio she wishes to make this purchase by reducing the fund's exposure to cash in the form of short term Canadian pay securities. Table 1 shows the results of the two ways she can do this, where a + denotes a purchase and a - denotes a sale.

The first method (Case I) involves the purchase of an S&P futures contract using the cash as 100 % margin. If the contract increases in value she converts the proceeds into Canadian dollars (marked to market) and purchases more Canadian pay securities. If the contract decreases in value she sells some of her bills, converting them to U.S. dollars to cover her losses. The initial purchase has a balance of payments impact only insofar as the seller of the futures contract (the "U.S. agent") wishes to rebalance her portfolio. The subsequent flows of cash resulting from the daily marking to market act the same as an export of services on current

Canadian pay bills will be used for a hedged portfolio.

¹⁴This refers to the process of computing any daily gains or losses in the value of the futures contract and adding or subtracting them from the investor's margin account.

account. Indeed, the transaction is fundamentally identical to a Canadian insurer issuing a policy to a U.S. resident, and the insurer hedging the premiums from the policy into Canadian dollars. The insurance contract itself does not have any significant impact on any economic magnitudes,¹⁵ and the flow of premiums to the insurer and payments to the insuree corresponds to the cash flow from the futures contract. If the premiums are immediately converted to Canadian dollars, and the payments are made by selling Canadian pay securities, the insurance policy is fully hedged.

Table 1: Hedged Purchase of S&P Risk

Security/contract	U.S. agent	Canadian agent	Fin. int.	Net Impact
Case I				
S&P future	-	+		0
Case II				
S&P equity	-	+		0
U.S. bill	+		-	0
Can. bill		-	+	0
Can. \$ future		+	-	0

The second method to effect the same portfolio choice (Case II) is to buy the underlying equity represented by the S&P 500 by first exchanging short term Canadian pay securities for U.S. dollars, and then purchasing a long position in the Canadian dollar futures market. Dividends paid are then converted immediately into Canadian dollars and repatriated. This equilibrium will be identical to that of the first method of purchasing risk.¹⁶ To see this, note that, to keep the experiment the same, the American seller of securities will find herself with a U.S. pay bill instead of equity, *which is equivalent to owning the equity and selling a futures contract on the equity*. On the Canadian side of the exchange there will be, in principle, two agents affected: the original purchaser will hold the equity

¹⁵There is, in principle, an impact in the U.S. market as the U.S. resident now faces less risk and may therefore alter his asset portfolio. However, we shall assume throughout the paper that the Canadian action is small relative to the rest of the world so there is no change in "world" prices.

¹⁶See Appendix 1 for a more formal description of these two portfolio strategies and their equivalence.

and a Canadian dollar futures contract and will have sold Canadian pay bills. The second actor can be viewed as an intermediary who will have sold a U.S. pay bill to purchase the Canadian pay bill and will have sold a Canadian dollar future to maintain the same exchange rate exposure. So long as the “no arbitrage” condition holds in S&P futures, and covered interest rate parity holds internationally, market forces will be the same no matter which method of purchasing equity risk is chosen by the Canadian agent. Thus, this second policy choice – one that is currently constrained by the FPR – will also be qualitatively the same as the sale of an insurance policy to an American: There are no immediate net capital flows,¹⁷ and the balance of payments effects over time are the same as would follow a successful export of such an insurance policy.

3.2. Unhedged Purchase of Foreign Securities

In the next experiment suppose the same portfolio choice as before *except* that the manager wishes to hold *an unhedged position* in S&P risk. Again, there are two ways, shown in Table 2, to obtain this position: if the S&P future is purchased, the Canadian agent simultaneously sells a Canadian dollar future (Case I).¹⁸ This policy choice is not constrained by the FPR because non-Canadian financial futures carry no weight as foreign securities. *Moreover, it does not immediately show up on the capital account because no international asset transactions have taken place.* Nonetheless, there will be pressure on the exchange rate because some other agent must be induced to take a long position in Canadian dollar futures.¹⁹

If, instead, the manager acquires the S&P equity (Case II), then no currency future is required of the principals. However, the financial intermediary who sold her the U.S. dollars to purchase the equity must sell the Canadian dollar future to remain unaffected.²⁰ This, too, will imply some downward pressure on the Canadian dollar relative to a hedged purchase because some other agent must

¹⁷There are *gross* capital flows, however: the purchase of S&P equity will be recorded as a long term portfolio capital outflow (debit), while the intermediary’s sale of U.S. pay bills will be recorded as an offsetting credit to short term capital.

¹⁸In effect, the agent described in Table 1, Case I simply sells a Canadian dollar futures contract.

¹⁹Indeed, the agent that takes a long position in Canadian dollar futures will want to restore his initial foreign exchange exposure by purchasing U.S. dollar securities, which will give rise to a short-term capital outflow.

²⁰In effect, the agent described in Table 1, Case II simply closes (i.e., sells) her long position in Canadian dollar futures.

cover the futures position of the financial intermediary.²¹ Thus, whether the asset acquired is equity itself or a future contract to purchase the equity is immaterial to the exchange rate pressure: what matters is whether the intent of the manager is to obtain a hedged or an unhedged position. However, whether the asset acquired is equity itself or a future contract to purchase the equity is absolutely crucial insofar as the FPR is concerned. since the former is constrained by the FPR but the latter is not.

Table 2: Unhedged Purchase of S&P Risk

Security/contract	U.S. agent	Can. agent	Fin. int.	Net Impact
Case I				
S&P future	-	+		0
Can. \$ future		-		-
Case II				
S&P equity	-	+		0
U.S. bill	+		-	0
Can. bill		-	+	0
Can. \$ future			-	-

The pressure on the exchange rate arising from the Canadian dollar futures market implies that there is the potential for some *net* capital flow. Precisely how much depends on how the various other economic actors respond to the potential exchange rate change. First suppose the price of the Canadian dollar falls. This will induce an increase in the flow of Canadian net exports to "finance" the capital outflow and will generate a capital inflow in the opposite direction to allow the holder of the long Canadian dollar futures to close her position. Thus the excess supply in the Canadian futures market is converted into a decrease in Canadian credit by the full amount by which the fund manager decreased her demand for Canadian dollar denominated assets. Once that has been effected, the exchange rate will return to its original level.²² The second possible response to the exchange rate pressure is that the Bank of Canada enters the market to

²¹Note that this policy choice will be measured as a capital outflow, i.e., a debit to long term portfolio capital (acquisition of U.S. equity).

²²In fact, at the margin, the Canadian dollar may be higher than originally since Canadian residents have successfully exported more insurance services in the form of purchasing S&P risk. This represents an increase in the *flow* of services exported.

maintain the exchange rate. To do this the Bank sells foreign exchange reserves for Canadian denominated assets – effectively it purchases the bill that the fund manager sold rather than having the intermediary do so. The difference is that, in this case, the Bank is willing to accommodate the private sector’s currency choices by letting their own mix of currencies adjust passively²³. However, rather than the central bank entering the market, it is also possible that private sector traders would conduct similar operations by taking open positions in Canadian securities: that is, Canadian firms issuing Canadian pay securities would switch to U.S. pay securities, or U.S. lenders would purchase Canadian pay securities. The fact that rational expectations would be for the Canadian dollar to return to its original value provides an incentive for them to do so.

If asset traders are sufficiently indifferent to exchange rate risk, or the central bank is willing to sterilize capital flows, there will not be any appreciable exchange rate movement nor change in credit availability in Canada from the purchase of unhedged assets abroad. This is true whether the initiating asset purchase dealt in a futures contract or in the underlying cash securities. Indeed, any exchange rate movement that does occur is the result of a shift in demand for the currency in which investors wish to denominate their existing wealth. The effects would be the same if a holder of Canadian equities or bonds decided to take a short position in the Canadian dollar futures market using his Canadian assets as collateral! The FPR does not directly bear on such a decision.

Finally, for completeness, consider the experiment of a fund manager who decides to alter the fund portfolio out of some Canadian equities (or bonds) into a hedged position of U.S. equities and/or bonds. As in the first experiment, it is immaterial whether this is done through the futures markets or in the underlying securities: and because the currency denomination is unchanged, there are no material balance of payments consequences from such a decision. The *only* change is that there will be an excess supply of Canadian equity and an excess demand for Canadian short term securities. All else equal, the effect might be viewed as generating downward pressure on Canadian equity prices and, perhaps, on short term interest rates. It will not have an effect on total credit in Canada: Canadian capital markets are not “deprived” of capital resources.

²³Instead of sterilizing, the bank could have chosen to decrease the money supply which would have liquidated the cash that the fund manager sold to purchase the foreign equity.

3.3. Implications for the FPR

The above experiments bear on the relevance of the FPR in at least two ways. First, with respect to a large part of foreign equity markets, the foreign property rule has effectively been emasculated by the ruling on the foreign content of futures markets: given the broad coverage of the existing stock index futures, more than half the value of non-Canadian equity is already accessible to agents in retirement savings plans with *no* foreign content implications.²⁴ This is not to say, however, that the FPR cannot seriously limit investor choice in Canada. First it requires some level of sophistication in derivative securities as well as sufficient capital in a fund to be willing and/or able to undertake these types of investments; second, it restricts the type of portfolio strategy that can be undertaken to one that is largely passive; and third, it still leaves a sizeable section of the world market inaccessible to this type of derivative investment.²⁵

The second point that bears on the FPR is that any balance of payments consequences arise from the manager's decision whether or not to hedge her investment portfolio. It *does not arise* from the form in which her foreign exposure is undertaken. The economic effects of a hedged (unhedged) derivative investment will be identical to a hedged (unhedged) position in the underlying cash market. Furthermore, a hedged position does not have any impact on the total availability of funds *in Canada*, although it may alter the relative demands between Canadian bonds and equity. An unhedged position will exert some exchange rate pressure that *may* manifest itself as a net capital outflow. However, whether the unhedged position is the result of a purchase of foreign currency denominated securities or is a futures market sale of Canadian dollars "backed" by a completely Canadian securities portfolio is irrelevant to the exchange rate pressure or the degree of capital outflow.

²⁴The S&P index contains 70% of U.S. stock market capitalization, and the MSCI EAFE index contains 60% of non-North American stock market capitalization. Also, the U.S. and EAFE each comprise somewhere between 40% and 45% of world stock market capitalization. (Frank Russell Canada). Therefore, using derivatives a Canadian investor has access to between 52% and 58% of foreign equity markets.

²⁵Further, it would appear that using derivatives for long-term investment is more expensive than investing in the cash equity markets themselves. This is revealed by the fact that traders not subject to rules like the FPR choose to purchase indices directly in the equity markets rather than use the derivative markets.

4. The FPR and Financial Markets

Suppose the government decided to remove the limit on foreign property for funds in tax deferred saving plans, and individuals were to take advantage of this new found freedom to convert some of their Canadian security holdings into foreign securities. What would be the consequences for Canadian financial markets? Presumably, the direct demand for Canadian equity and bonds in registered plans would fall as agents reallocated funds to other markets. Additionally, there would likely be some net movement into foreign currency denominated assets, but not to the same extent as the move to foreign property because of the option to hedge exchange rate risk discussed in the previous section. While the change in total financial assets would be negligible from our analysis of the effects on the balance of payments, there would likely be some change in relative prices and this might ultimately affect Canadian economic activity.

4.1. Measuring the Quantitative Impact of the FPR

To assess the effect of removing the FPR on relative prices we first need some method to determine the order of magnitude of the portfolio shifts that would occur. For this we require some counter-factual. One possible counter-factual follows from the Capital Asset Pricing Model (CAPM): if Canada constitutes 2.5% of the world equity market then, in equilibrium, Canadians should hold roughly 2.5% of their equity in Canadian securities and 97.5% of their equity abroad, with 97.5% of Canadian equity being held by non-residents.²⁶ Appealing as the logic of this view is, it does not appear to be the outcome in any country that has the freedom to choose the country in which to make its equity purchases. Take Britain as an example: despite the absence of foreign investment restrictions since 1979, U.K. residents owned 82% of the equity of U.K. domiciled firms in 1989, but the U.K. only accounted for 11% of the world equity market.²⁷ Apparently the diversification gains do not compensate for the additional costs of obtaining information in foreign countries. Since Canada accounts for only 2.5% of the world equity market, Canadians would likely hold proportionately less of their equity market than the British hold of theirs, but the proportion would be nowhere near

²⁶C.f. Solnik (1974).

²⁷In 1989 U.S. citizens owned 94% of the equity of U.S. domiciled firms while the U.S. accounted for 40% of world equities, and Japan owned 98% of its own equity while accounting for almost 40% of world equities. See French and Poterba (1991). More recent data, which is qualitatively similar to the above, is reported in Tesar and Werner (1995).

as low as 2.5%.

As yet there are no good theoretical explanations of this "home country bias" in portfolio behavior, although, (definitionally) we can say that the diversification gains from investing in foreign markets do not appear to outweigh the information costs of doing so. One way to derive an estimate of the extent to which information costs (rather than investment restrictions like the FPR) produce a home country bias in the Canadian case is to compare the foreign content of assets held inside and outside RSP programs. This can be done by comparing the asset mix of mutual funds to that of pension funds. All assets held in a registered pension fund are tax sheltered, but only those assets in mutual funds that are held in an RRSP are tax sheltered, provided in each case that the FPR is not violated. Suppose that mutual fund managers are, on average, just as informed as pension fund managers, and their clientele are equally risk averse and have the same planning horizon.²⁸ Then any difference between the foreign-domestic asset mix of pension funds and mutual funds is the result of institutional factors, differences in tax treatment, or government restrictions like the FPR.

Although the Income Tax Act imposes no statutory limit on the proportion of equities that a pension fund can hold, there are restrictions on asset selection; *e.g.*, subject to some qualifications, only equities that pay dividends are eligible, and there is a 30% limit on the proportion of the outstanding stock of any particular corporation that can be held. These restrictions tend to concentrate the equity holdings of the large pension funds in relatively conservative, large capitalization stocks.²⁹ Public sector pension funds have also been subject to additional restrictions by their sponsors such as having to invest a minimum proportion of assets in government bonds of one type or another, or, in the case of the Caisse de Depot, having a ceiling on the proportion of equities that can be held.³⁰ Many of these institutional restrictions are gradually being removed, but their presence may explain why pension funds have historically held a higher

²⁸Time horizons for mutual fund investors may be shorter than for pension fund investors since the ability to withdraw funds from an RRSP at any time means that the motive for holding an RRSP can be to shift taxes between periods rather than to provide for one's retirement.

²⁹Weitz (1992), Ch.8. and The Economic Council of Canada (1979), Ch.6 provide good discussions of the various institutional factors that have influenced the investment patterns of pension funds in Canada.

³⁰The Caisse de Depot has had a 40% ceiling on the proportion of equities that can be held, up from 30% in 1992. Recent legislation introduced by the PQ government would eliminate the ceiling.

proportion of bonds than the proportion held by mutual funds.³¹ As well, since mutual funds are typically only part of an individual's RRSP portfolio they would be weighted more toward equities if the rest of the portfolio is weighted towards fixed income instruments like GICs or Canada Savings bonds. With respect to taxes, the dividend tax credit and the U.S. withholding tax each have differential effects on assets that are tax-sheltered as opposed to assets that are not.³² Even without the FPR, the tax system makes it relatively more advantageous to hold debt instruments in sheltered accounts and equity in unsheltered accounts. However, we shall ignore all these factors in our initial calculation and attribute any difference in the foreign-domestic asset mix of pension funds versus mutual funds solely to the workings of the FPR. In particular, the foreign content of a pension fund or a mutual fund is assumed to be independent of the proportion of equity that it holds.

The foreign content of mutual funds is a weighted average of the foreign content of those funds that are held in RRSPs and those funds that are not, where the weights represent the proportions held in each category. Let the proportion of foreign assets held by individuals in mutual funds that are not tax-sheltered in RRSPs be denoted by x , and the proportion of foreign assets held individuals in mutual funds that are tax-sheltered in RRSPs be denoted by y . Let a represent the proportion of mutual fund assets held by individuals in tax-sheltered accounts, so $1 - a$ is the proportion that is not tax-sheltered. Finally, assume that the proportion of foreign assets that would be held by individuals in mutual funds is equal to the proportion that individuals currently hold in mutual funds that are not tax-sheltered in RRSPs. Then $ax + (1 - a)y = z$, where z represents the proportion of foreign assets that are held in mutual funds whether they be tax-sheltered or not.

How do we estimate the foreign content of mutual funds that are tax-sheltered in RRSPs? A reasonable first approximation is to assume that it is equal to the foreign content of pension funds, since both enjoy the same tax-deferred status and both are constrained by the FPR. However, this might be an understatement

³¹ According to data obtained from PIAC and IFIC, at year-end 1996 pension funds held 52% of their assets in equities and 48% in bonds, whereas mutual funds held 64% in equities and 36% in bonds. These estimates are at market value and include real estate and venture capital in equities, and mortgages, cash and short term instruments in bonds.

³² The dividend tax credit makes it relatively more advantageous to hold Canadian equity outside RRSPs (where the credit can be used), despite the inability to shelter taxes, whereas the U.S. withholding tax makes it relatively more advantageous to hold foreign securities outside RRSPs (where the tax can be credited against other taxes).

since, unlike pension funds whose foreign content cannot exceed 20% (at book value), the foreign content of mutual funds held in an RRSP can exceed 20% if the foreign content of the non mutual fund component is below 20%. On the other hand, in choosing the asset mix for their RRSPs individuals may be less informed, on average, than the managers of pension funds so the foreign content of tax-sheltered mutual funds would tend to be lower than it is for pension funds on this account.

The proportion of foreign assets (including foreign stock index futures) held by pension funds at year-end 1995 was 20% (at market value) according to the Pension Investment Association of Canada's (PIAC) annual survey, and virtually all of this was in equities.³³ Alternatively, InterSec Research of London, U.K., the most comprehensive data source for pension funds worldwide, estimates that the foreign content of Canadian pension funds was 18% in 1996, but their estimate does not take into account foreign stock index futures contracts.³⁴ Because we are interested in estimating the amount of foreign *exposure* that individuals would choose to have in their RSPs in the absence of the FPR, we shall assume that the *effective* foreign content of pension funds and tax-sheltered mutual funds is currently 20%.³⁵

According to data obtained from the Investment Funds Institute of Canada (IFIC) the proportion of foreign assets held by mutual funds was 26% (at market value) as of year-end 1996, and virtually all of this was in equities.³⁶ Also, according to IFIC the proportion of mutual fund assets that are tax sheltered in RRSPs is currently approximately 50%. Substituting $z=.20$, $y=.26$, and $a=.5$ in the above formula gives $x=.32$, which is to say that the proportion of foreign

³³ According to Statistics Canada, the proportion of foreign assets held by pension funds was 16% as of the first quarter of 1997, but their survey measures assets at book value and it underestimates foreign exposure by treating foreign stock index futures contracts as domestic investments since they are fully backed by Canadian T bills. (Quarterly Estimates of Trusteed Pension Funds, Cat. 74-001, Statistics Canada, Ottawa, March 1997)

³⁴ This data is reported in Ernst and Young (1997).

³⁵ The foreign content of the average RRSP is only 9% according to a recent survey released by the Bank of Nova Scotia and reported in the Globe and Mail on Dec 12, 1997, and mutual funds constitute about 50% of the average RRSP portfolio. Our estimate of 20% foreign content for mutual funds held in RRSPs is consistent with this evidence if the non-mutual fund component has a foreign content of close to zero.

³⁶ This estimate makes some adjustment for the foreign content of those funds that are classified as 100% Canadian. These funds can have a foreign content of 20% without affecting their status as 100% Canadian. The effective foreign content can be increased further by using derivatives.

assets (including foreign stock index futures) that would be held by mutual funds, or by pension funds, in the absence of the FPR is 32%.³⁷

Thus, a first approximation to the change in the portfolio mix that would occur if the FPR were removed is that the foreign content of pension funds would increase from 20% to 32% and the foreign content of mutual funds would increase from 26% to 32%. Using the market value of pension fund and mutual fund assets as of mid 1997 (approximately \$420 billion for pension funds and \$280 billion for mutual funds), this amounts to an increase in foreign assets of \$50 billion for pension funds and \$17 billion by mutual funds, for a total increase of \$67 billion.³⁸

We view this estimate as an *upper bound* on the likely shift into foreign assets for two reasons. First, we have assumed that the foreign content of mutual funds currently held outside RRSPs with the FPR in place represents what individuals would hold if the FPR were removed. But individuals probably *overinvest in foreign assets* in their non tax-sheltered accounts to compensate for any FPR-induced under-investment in foreign assets in their RRSPs. What matters to the individual is his *total* portfolio allocation, and given the restriction on RSP allocations it becomes more advantageous to hold one's foreign allocation outside the RSP. Indeed, in the limit, the removal of the FPR could generate no net increase in individuals' total foreign holdings as agents simply transfer their non-sheltered foreign assets into tax-sheltered accounts. Therefore, the foreign content that individuals would actually hold in their RRSPs if the FPR were removed will be less than the proportion that they currently hold in unsheltered accounts.

The second reason for believing that our estimate is an upper bound is that it assumes that the foreign content of pension funds, or of mutual funds held in RRSPs, is independent of the proportion of equities. Since the foreign asset holdings of pension funds and mutual funds consist almost entirely of equities,

³⁷This estimate is broadly consistent with the experience of other countries. According to InterSec, the foreign content of U.K. pension funds (approximately 3 times the size of Canada's) was 26% at year-end 1996 despite no foreign investment restrictions since 1979. The foreign content of the Netherlands' private sector pension funds (approximately equal in size to Canada's and also subject to no foreign investment restrictions) was 27%. Both the U.K. and the Netherlands have a tax treatment of pension funds similar to Canada's: contributions and asset returns are tax free, while benefits are taxed. (See Ernst and Young (1997))

³⁸The total stock of Canadian short-term and long-term debt instruments and corporate stocks was \$1656 billion (at book value) at year-end 1996 according to the Conference Board of Canada (1997). If \$67 billion were withdrawn from the Canadian securities markets to buy foreign securities this would amount to a 4% reduction in the direct demand for these securities.

this implies that the ratio of foreign to domestic equity that individuals hold in their RSPs is of no concern to them. But this is almost certainly false. The proportion of foreign assets can be written as the product of the proportion of foreign equity (F) in total equity (E) and the proportion of equity held to total assets (A), i.e. $F/A = (F/E)*(E/A)$. Suppose investors actually make their RSP portfolio decisions in two stages: first they decide on the proportion of equity to hold, and then they decide on the foreign content of their equity.³⁹ We have noted that mutual funds hold a significantly greater proportion of equities than do pension funds, 64% versus 52% as of mid-year 1997. This difference reflects institutional factors unrelated to the FPR, so removing the FPR is unlikely to change it. However, removing the FPR would remove the constraint on holding foreign equities for pension funds and for individuals in their RRSPs. If pension fund managers and individuals managing their RRSPs made similar decisions about the foreign content of their equities then we would expect the foreign content of pension funds to be lower than for mutual funds simply because the proportion of equities is lower. All this leads to the prediction that the foreign content of pension funds would be less than the 32% estimate that we have derived above.

What does our upper bound estimate of foreign content imply about the extent of a preference for domestic equity? If the foreign content of mutual funds were to increase to 32% with no change in the proportion of bonds, then the implied ratio of foreign to total equity would be 50%. If the foreign content of pension funds were to increase to 32% with no change in the proportion of bonds, then the implied ratio of foreign equity to total equity would be 62%. However, investors will want to consume at least part of the efficiency gain, and perhaps all of it, in increased return rather than in reduced risk, so they will sell Canadian bonds as well as Canadian equities to increase their foreign content. This means that a given foreign content will be achieved with a lower proportion of foreign equity to total equity.⁴⁰ We conclude that an *upper bound* on the proportion of foreign equity

³⁹Davis(1996) p.276 provides evidence to support this form of hierarchical decision making.

⁴⁰Removing the FPR will enable investors to achieve the same expected return with a lower risk or an increased return with the same risk, or any combination. It is reasonable to assume that the expected rates of return on Canadian and foreign equities are equal, and greater than the expected rate of return on bonds. Then only if investors wanted to consume the entire efficiency gain in reduced risk would they sell Canadian equities to buy foreign equities. The more investors prefer increased return over reduced risk, the more will they sell Canadian bonds rather than Canadian equities to increase their foreign content. The experience of other countries is informative here. After foreign investment restrictions were removed in the U.K., pension funds increased their foreign content by reducing their holdings of domestic bonds rather than

to total equity for mutual funds if the FPR were removed would be 50%, and for pension funds 62%. These estimates are far from the 97.5% proportion that is implied by the CAPM. We therefore predict that a substantial home country bias would remain even if the FPR were removed completely.

If investors were to increase their foreign content to 32% by reducing their holdings of Canadian bonds and Canadian equities in equal proportions, what would be the impact on investment returns? Over the period 1970-1996 the return on equities averaged 13.65% and the return on bonds averaged 10.58% so the equity premium averaged 3.07% per annum.⁴¹ These rates of return are nominal, not real, and Canada's inflation rate averaged 5.8% over this period, well above what it is expected to be for the foreseeable future. Also, the equity premium is much lower than the 6% premium reported by Mehra and Prescott (1985), but it is in line with the more recent evidence of Blanchard (1993).⁴² Looking forward to a period of substantially lower inflation, suppose the expected return on equities, both Canadian and foreign, is 10.5% and the expected return on Canadian bonds is 7.5%, so the implied equity premium is 3.0%. Then the expected return on the FPR- constrained portfolio (consisting of 52% equities and 48% bonds with 20% foreign content) is 9.06%, whereas the expected return on the unconstrained portfolio (consisting of 58% equities and 42% bonds with 32% foreign content) is 9.24%, an increase of 18 basis points per annum.⁴³

stocks. The same response occurred in the Netherlands and Japan. See Davis (1996) pp262-70.

⁴¹The return on equities is defined as the return on a portfolio of equities consisting of 50% Canadian equities (as measured by the return on the TSE 300), 25% of U.S. equities (as measured by the hedged return on the S&P 500) and 25% non North American equities (as measured by the hedged return on the MSCI EAFE index). The return on bonds is defined as a weighted average of the return on the Scotia Universe bond index and the return on T bills, with weights of .75 and .25 respectively. We are indebted to Jim Franks of Frank Russell Canada for supplying us with this data.

⁴²The equity premia calculated by Mehra and Prescott(1985) and Blanchard(1993) reflect the difference between the real returns on equities and bonds, not the difference between nominal returns. If we subtract Canada's annual inflation rate from the nominal returns data to determine the real returns, the implied equity premium for the period 1970-1996 averages 2.97%.

⁴³We consider our estimate of an 18 basis point gain from removing the FPR as a conservative one because it is based upon what we believe to be low estimate of the equity premium. If the equity premium were 4% rather than 3% the implied gain from removing the FPR would be 22 basis points. However, our estimate is in line with Ambachtsheer (1995), who used hypothetical estimates of expected returns on domestic bonds and domestic and foreign equities to arrive at an estimate of a gain of 20 basis points from increasing the FPR limit from 20% to 30%. Ernst and Young (1997) use historical data on domestic and foreign equity returns to estimate that the return on a 100% equity portfolio held in an RSP could have increased by between 26 and

If removing the FPR enabled individuals to earn an additional return of 18 basis points per annum on their RSP contributions with no increase in risk, how much would this add to the value of their RSPs after, say, a 30 year period? Suppose one's annual RSP contribution were \$5,000. Then after 30 years the value of one's RSP would be \$752,000 under the FPR constraint whereas it would be \$779,000 without the constraint. Removing the FPR to allow investors to earn a higher return with no increase in risk would therefore increase the value of their RSP at retirement by 3.6%. Put differently, the annual contribution to an RSP worth \$752,000 upon retirement would be \$4,826 rather than \$5,000, which is a cost saving of 3.5%. To put the cost of the FPR in even greater perspective, the pool of RSP funds is currently valued at \$560 billion and the loss of 18 basis points of return on these funds amounts to \$1 billion of foregone income per annum: the FPR can be seen as a regulatory tax that collects no revenue but costs Canadians \$1 billion per year, and growing.

4.2. Price Effects of the FPR

If Canadians were to shift \$67 billion of their portfolio into foreign equities⁴⁴, what effect would this have on Canadian equity prices? Several considerations suggest that the impact would be small. First, the increase in foreign equity holdings would come only partly at the expense of Canadian equities. If investors consumed the efficiency gains entirely in increased return then only about half the increase in foreign equity holdings would come at the expense of Canadian equities.⁴⁵ If the direct demand for Canadian equities were to fall by, say, \$40 billion, this would amount to less than 6% of stock market capitalization of the TSE at year-end 1996. But, and this is the second point, removing the FPR is not likely to cause an immediate capital flight from Canadian equities; previous experience suggests that when new investment opportunities open up for pension funds and mutual funds their managers tend to adjust the asset mix gradually over time as market

48 basis points (depending upon the time period) if the FPR limit had been 30% instead of 20%.

⁴⁴Most of the increase in foreign assets is likely to be in foreign equities, because foreign equity markets offer greater scope for international diversification.

⁴⁵Ambachtsheer(1995) shows, for plausible values of the covariance matrix of returns on Canadian bonds and Canadian and foreign equities, that if investors were to consume the efficiency gain from removing the FPR entirely in increased return, they would increase their foreign equity holdings by reducing their Canadian bond and equity holdings in approximately equal amounts.

conditions permit by changing the proportions in which new investment funds are allocated rather than by immediately changing the composition of existing assets.⁴⁶ Third, even if there were an immediate portfolio shift from Canadian to foreign equities, it is not as if the Canadian and world equity markets are completely segmented or that evaluation techniques in Canada differ from those in the rest of the world.⁴⁷ The effects on asset prices should be viewed in a general equilibrium context. Small changes in valuations in Canada may well generate sufficient investor interest to keep equity prices at or near their current values. There are institutional funds in Canada other than RSPs that would find it in their interest to move out of bonds and into a greater equity position. Non-resident investors too, have not been averse in the past to taking both hedged and unhedged positions in the Canadian markets. It bears emphasizing that Canadian equities are attractive instruments for diversification for foreign investors; and the rapid growth in pension fund and mutual fund assets, and the increased international diversification of these assets, is a world-wide phenomenon. The issue is what is the price of risk; and the removal of the FPR is simply indicating that Canadian markets should be priced as are the relevant world markets.

Indeed, if Canadians are purchasing foreign equity, then non-Canadians must be selling these risky securities. These sellers *may* be doing so to reduce their overall risk exposure, or they may be doing so because there is more attractively priced risk available elsewhere. If the cost of risk purchases in Canada falls, these agents may well move their funds here. Furthermore, many Canadian securities are inter-listed in U.S. markets. Indeed, of the TSE 300 securities, 13 are not only inter-listed but are included in the S&P 500 index, and they account for about 20% of the market capitalization of the TSE 300 index. If institutional factors do cause some segmentation, and prices in Canadian markets fell significantly, firms having non-inter-listed securities would be inclined to add foreign listings to aid

⁴⁶This is consistent with the response of pension funds and mutual funds to the increase in the FPR from 10% to 20% over the period 1990-1994. According to Statistics Canada, the foreign content of pension funds increased gradually from 5.6% to 12.9% over this period, and subsequently to 15.3% at year-end 1996. (These estimates are at book value and do not include futures contracts.) At no time was the foreign content level near the FPR limit for pension funds as a whole, which is not to say that it was not a binding constraint for many *individual* fund managers.

⁴⁷Mittoo(1992), following up on a previous study by Jorion and Schwartz(1986), using both the CAPM and the Arbitrage Pricing Theory, cannot reject the hypothesis that the prices of the equities included in the TSE 35 index behave as if they are integrated with the U.S. S&P index. This result does not depend on whether or not the stocks are interlisted on the S&P.

their existing shareholders.⁴⁸

Finally, arguments can be made that suggest that Canadian equity prices will *rise* if the FPR is abolished. One such argument is that the FPR tends to concentrate ownership, reducing liquidity, and at least provides a perception of some agents with inside information. Outsiders will therefore withhold funds until there is a sufficient discount in price to compensate them for the expected losses that would be incurred from trading in an illiquid market or against these “insiders.” Removal of the FPR may broaden the market sufficiently that this premium is ultimately reduced⁴⁹. A second argument is provided in the recent work by Bartolini and Drazen (1997). They indicate that when nations remove or reduce controls on capital outflows there is often an *inflow* of capital instead of the anticipated outflow. They argue that the reason for this is that the removal acts as a signal about future government policies of taxation of capital, and the liberalization acts as a favorable signal.

To the extent that the move to foreign equity is hedged we have shown, in section 3, that total available credit in Canada is unaffected. We also noted that bonds may well decrease in investors’ tax deferred portfolios because foreign securities provide an alternative mechanism to reduce risk. Who, then, is supplying the funds to purchase the assets sold by the tax sheltered plans? Ultimately, the replacement funds will come from non-residents: *gross* Canadian debt owed to non-residents will increase to match the increase in gross foreign debt owed to Canadians — the initial purchase of foreign securities in RSPs. But the *net* foreign debt position of Canadians will remain unchanged and it is that net debt position that is relevant for any economic magnitude of interest. Furthermore the ultimate borrowers and lenders need not notice any difference about where their funds are coming from: Canadian borrowers who wish to borrow in Canadian dollars will still obtain their funds from intermediaries or in the open market where intermediaries will purchase the securities with money borrowed abroad. Foreign

⁴⁸It should also be noted that because non-interlisted shares compete with interlisted ones in the Canadian market, any “subsidy” from the FPR is likely to be quite small.

⁴⁹This point is not lost in the business press. The Toronto Globe and Mail, in a recent editorial (Sept.19, 1997, p. A19), points out that FPR currently forces Canadian equity markets to be too highly concentrated, with some large mutual funds having too large a presence in small stocks. Hence, eliminating FPR might well make the Canadian equity market more attractive (i.e. competitive) to foreign investors by allowing the large Canadian players to go abroad and increasing the float. Note that this editorial was in response to a major Canadian mutual fund (Altamira) running afoul of the securities laws by having unreported holdings in a small company above the level that required the firm to report its holdings.

asset holders who sold securities to Canadian pension and mutual funds will still have the opportunity to purchase assets in their own currency that are being supplied by Canadian intermediaries, either directly or indirectly through their own intermediaries who themselves purchased the foreign currency pay Canadian securities. In addition, intermediaries will not be exposed to any additional foreign exchange risk than they were prior to the action of the tax-sheltered funds. They will simply be covering those foreign exchange positions initially generated by those actions, and described in Table 1, Case II. Finally, given covered interest parity, the cost of the hedged borrowing abroad by intermediaries will be the same as the cost of funds obtained in Canada, so that the cost of funds to the ultimate Canadian borrowers will be unaffected by the nationality of the agents supplying those funds.

5. Effects of the FPR on Economic Activity

To affect economic activity, altering the FPR must alter the expenditure and/or supply response of government, households or firms. We consider the effects on each of these sectors of the economy in this section.

5.1. Government

The removal of the FPR will affect government revenues both because it will encourage a shift to a greater degree of tax averaging and because of its impact on financial markets. The former means that, over time, in the absence of induced employment effects there will be a lower *current* cash flow to government coffers.⁵⁰ This should be put in context, however. A major reason for these tax deferral schemes is to provide a more equitable tax based on average lifetime income, rather than use current income as the tax base. Altering tax rates to provide the same revenue as before, but with a fairer and less distorting tax regime, should not be viewed as a negative change. Furthermore, while the timing of borrowing may be different, the implicit taxes on monies in deferred plans remains an asset on the government's books. Proper accounting procedures will take this into account

⁵⁰Since the government collects no revenue from the FPR, because (virtually) no RSP exceeds the FPR limit, there is no *direct* tax revenue loss from removing it. Any loss in *current* tax revenue will occur only to the extent that removing the FPR causes an increase in RSP contributions. No tax revenue loss will occur if individuals simply increase the foreign content of their existing RSP contributions.

so any change in average tax rates would be quite small.

Suppose the present value of tax payments remains unchanged. Should there be an increase in interest rates on government debt due to the decrease in domestic demand for these securities? The answer is a qualified no. For hedged purchases of foreign property by RSP managers the government can do one of two things. It may find it in its interest to issue more foreign pay securities, matched by a forward long position in foreign currencies. In this case, the government, too, is acting as the intermediary accommodating the flow of Canadian purchases of foreign equity. Given that covered interest rate parity holds, the effective interest paid will be at Canadian market rates rather than at foreign rates. The second option is simply to offer the securities on the Canadian market. Financial intermediaries will still lend to them on the same terms as before, since they will be anxious to cover their long positions in foreign exchange by borrowing abroad and lending at home. *Gross* foreign indebtedness will increase in both cases, but *net* foreign indebtedness will be unchanged and there will be no balance of payments pressure causing either interest rates or exchange rates to change. Any additional exposure to foreign interest rates will arise only to the extent that some of the increased foreign security holdings in RSPs are unhedged.⁵¹ The extent that these unhedged positions will be taken depends more on how the government handles the Canadian political and economic environment than on the status of the FPR.

5.2. Households

Households will be affected by the removal of the FPR through a variety of mechanisms. In particular, the change in effective rates of return they receive on their assets, the change in tax treatment of their income and expenditure, and the change in relative factor prices will all have some effect.

Risk adjusted, the effective rate of return agents will receive on their savings will increase. If substitution effects dominate, this will increase saving and ultimately consumption. If wealth effects dominate, saving will fall and consumption increase, now and in the future. In general, interest elasticities of savings tend to be low in the short and intermediate runs, so no major change in saving is likely to occur. As far as welfare is concerned, removing the FPR will have the greatest impact on average Canadians whose retirement incomes are heavily dependent upon the return on their RSPs.

⁵¹In this case there may be a fall in *net* indebtedness to non-residents; that is, a net capital outflow.

One group for whom RSPs are especially appealing are those whose incomes are highly variable such as the self employed and those in construction and other cyclical industries. It turns out that these are precisely the same groups for which the ability to save in the form of foreign securities is most important. The Canadian equity market return is highly correlated with the Canadian growth rate, and capital and labor incomes tend to move together over the cycle. Workers in these sectors bear the brunt of the changes in labor income. Thus, for these cyclical workers, investing in Canadian equity provides less in the way of insurance than to others with more stable incomes – Canadian equity markets decline just when their labor incomes decrease. To the extent that foreign equity markets are less correlated with the Canadian market – and with these individuals' human capital – they benefit from a larger share of foreign securities in their portfolios.⁵² Because self employment now appears to be a significant, and growing, factor within the economy, removing the FPR provides greater effective compensation for those choosing (or being forced to choose) this method of compensation.

While the removal of the FPR will have a potentially important effect on the effective wage for workers with volatile labor incomes, the effective wage for those with reasonably certain incomes will also increase somewhat. In particular, the “benefits package” a worker receives is effectively increased by the higher risk adjusted return she receives in her pension plan. Even for defined benefit plans this will be the case. To see this, note that the firm will face a lower cost to providing pensions to its workers. Hiring workers thus becomes more attractive at the existing wage *and* benefits package, and, in a competitive market, will increase the demand for workers and/or the effective wage offer. The FPR, in other words, works much like a payroll tax. Workers, it would appear, are the ones that ultimately benefit from its removal.

5.3. Firms

Firms gain from the reduced effective cost of the benefit portion of the wage bill they pay, and this provides an inducement to employ more workers. Canadian corporations can be said to lose on the cost of capital to the extent that the price they must pay to sell the residual risk of the enterprise to investors increases. We have already argued that this increase in cost is likely to be small for a number of reasons. But it will *not* mean that the available credit for domestic firms will necessarily be more meagre. First, the removal of the FPR will have a once over

⁵²For more on this point see Baxter and Jermann(1997).

impact on those holding the residual claims on existing firms and not on the firms themselves. Second, the raising of funds for new investment is principally done in the debt market, or internally, and the demand for these will rise to the extent that RSP managers wish to hedge their foreign security purchases. Nonetheless, it does represent an increase in the cost of capital for Canadian corporations, and therefore the set of attractive investment projects available to them will decrease to the extent that it does rise. Real capital investment expenditures by Canadian *corporations* may therefore be somewhat reduced. On the other hand, since total credit availability in Canada is relatively unchanged, unincorporated Canadian businesses – who do not have publicly traded equity shares and traditionally obtain funding from financial intermediaries – may find both restrictions on borrowing and the cost of capital for themselves are, if anything, lower. Thus the net effect on investment by Canadian owned businesses in total could rise or fall from the removal of the FPR.

5.4. Summary

In summary then, the net effects on domestic actors will be small. Governments will face a change in interest rate costs only to the extent that there is a change in the currency in which investors wish to hold their funds. This, plus the other changes affecting them, are not large. There will be ambiguous asset accumulation effects on households, and they will face an increased effective wage and benefits package. It is difficult to imagine that the net effects of these would be significant. Some firms may face a somewhat higher cost of capital, but any price impact is pretty much confined to existing claimants on the residual incomes of firms. Since the vast majority of new investment is financed internally or by debt issue, and since the total available amount of credit available in Canada will be little changed, real investment is unlikely to be affected by the removal of the FPR.

6. Secondary Concerns about the Removal of the FPR

Governments, by their very nature, have an inclination to be paternalistic. The regulations on RSPs, of which the FPR is one of many, certainly is a case in point. One hopes, perhaps forlornly, that when a set of rules is actually making things worse instead of better, the rule maker will change the rules. We have argued that the existing FPR does not “protect” what the government wishes to protect, vis, “a pool of funds invested in Canada.” It has also meant that the Canadian

owners of these funds face greater risks than otherwise, or are willing to tolerate a more meagre life-style in their "golden years." One wonders, then, what this paternalism is in aid of.⁵³

Ownership and control are quite different things and an individual's equity market positions need not have a bearing on either of them. Owners of the firm include debt holders as well as equity holders – as, say, the recent experience with Eaton's makes abundantly clear. Further, the ownership of equities discussed above is quite distinct from control. Neither the pension funds nor the owners of RRSPs can be viewed as exerting effective control over the Canadian firms that issued the debt and equity that they hold.⁵⁴ One gets the impression that the nationalistic arguments over ownership by foreign nationals has only to do with warm and fuzzy feelings that the capitalist east and/or west of you is a nicer sort of chap than the capitalist south of you. If these nationalists admitted their dislike of all capitalists, we could be done with this particular debate⁵⁵.

The third non-economic claim against removal of the FPR mentioned in the introduction was that doing so would subsidize foreign companies. Two points need to be mentioned here. First, RSPs do not represent a subsidy scheme: it is simply a part of a tax regime that uses a different, but equally progressive and reasonable base instead of the ostensible base that most Canadians are aware of. It, in fact, taxes *lifetime income* from whatever source at the same progressive rates that *current income* is taxed outside the RSP system. In doing so it is fairer to those with volatile incomes. To call it a tax subsidy scheme is self-serving. Secondly, it would provide no "subsidy" to the foreign firms whose shares might be purchased with the FPR removal. The monetary amounts are too small to alter prices more than marginally, even if the firm itself, rather than the actual holders of the residual claims, could actually gain from any such price movement.

⁵³To put it somewhat more starkly: If the FPR were to be removed, and a pension manager persisted in operating in both the letter *and spirit* of the now existing FPR, we would argue that the members of that pension pool would have cause to sue him for violation of his fiduciary duty of prudent management of their funds.

⁵⁴In the one case that a firm used pension monies in a fight over control (R.v.Blair, supra.) the Ontario Court-Provincial Division found the pension administration committee of Enfield guilty of abrogating its fiduciary duty to the pension members. The CEO, VP Finance, and Outside Director were all charged and fined.

⁵⁵The alternative is that the nationalist is one of those Canadian capitalists who argues this way to protect his privileged position so that the rest of us will subsidize him.

7. Concluding Remarks

The Foreign Property Rule was initially established to direct resources into Canada's stock and bond markets in order to ensure an adequate supply of funding for investment and job creation in Canada. Financial markets — both in Canada and abroad — may have been under-developed and inefficient when the FPR was introduced, and the government may therefore have had a useful role to play in helping to guide the flow of saving into productive investment opportunities, but the situation has changed dramatically since then. Financial instruments such as financial futures contracts have developed that allow institutions to hold assets issued in one jurisdiction with all the risk characteristics of another: a pension fund manager can use her Canadian issued assets as collateral to buy risk in the Japanese equity market and hedge it into U.S. dollars (or deutschemarks) if she so chooses. Financial markets have also become more integrated internationally so that, for a large portion of the Canadian equity market, asset substitution is quite high. As a result, large changes in asset holdings by one group of investors has little, if any, effect on prices. What matters for the availability of credit to Canadian borrowers is not whether Canadian *pension saving* stays in Canada but rather whether agents are willing to have their assets — issued by any jurisdiction — denominated, or hedged, in Canadian dollars. That willingness is influenced more by the political climate in Canada than by regulations requiring that Canadians hold their long term savings in Canadian bonds and equity. In short, the FPR does not promote investment and job creation in Canada. Rather, it re-allocates funds *among* Canadian companies helping some to the disadvantage of others. Indeed, the FPR may actually detract from achieving these objectives: by lowering the expected rate of return on pension funds, it increases the cost to firms of providing any given benefits package. In effect, the FPR acts as a payroll tax on workers, disadvantaging those workers with uncertain and/or variable incomes the most.

The House of Commons finance committee has recently reviewed the FPR and has recommended an increase in the ceiling on foreign property in RSPs to 30% by increments of 2% per annum over the next five years.⁵⁶ This move is in the right direction, but it is our belief that it is much too modest a plan. It does not take full advantage of the potential gains for savers. Instead, we would argue that the FPR should be removed completely as quickly as possible for at least three

⁵⁶Ambachtsheer(1995) also recommended a gradual increase in the ceiling to 30%, but he proposed that when the 30% level was reached the FPR be removed completely.

reasons.

First of all, although we estimate that aggregate foreign exposure in the absence of the FPR would not likely exceed the 30% ceiling proposed by the Commons finance committee, this does not mean that individual investors would be minimally affected by the 30% limit. Not all investors will take full advantage of the increased ability to hold foreign risk: some will wish to hold more than the finance committee's allowance, and others less.⁵⁷ For those wanting to hold more, derivative investments can be used, but that still limits their portfolios both in terms of the mix and the coverage that can be undertaken, and it penalizes small investors who cannot afford the cost of transacting in derivatives. Since there are virtually no gains to other Canadians from limiting the choices of these individuals and institutions, no purpose is achieved by the Commons committee's restrictions.

Second, the FPR does not accomplish its objective of increasing investment and employment in Canada. Rather, it distorts the allocation of credit among Canadian firms, especially to the detriment of small unincorporated firms. Given that it does not provide the benefits desired and, in addition, imposes bureaucratic costs on households, investment managers, and the government, there would be an unambiguous gain from the complete removal of the entire apparatus. Simplifying the lives of Canadian savers and allowing them to make choices not based on arbitrary accounting rules such as book values is, in our opinion, an eminently desirable objective.

Finally, the complete removal of the FPR will act as a signalling device that Canadian policy makers are more willing to treat international investment on a level playing field, and it will remove a perception that Canada is so defensive about its investment prospects that it must devise schemes in an effort to keep an adequate pool of saving available to finance them. The work by Bartolini and Drazen(1997) suggests that removing restrictions on capital *outflows* may well lead to a capital *inflow*. In effect, the *removal* of the FPR will lead to the results that the *imposition* of the FPR was meant to accomplish! Giving the managers of Canada's large investment pools more freedom to purchase foreign risk will reduce the concentration of ownership in the Canadian equity market and make Canadian equities more attractive to foreign savers.

⁵⁷ As an example, the existing regulations have pension managers holding an *average* 20% in foreign exposure based on market value data. Of the 125 members of PIAC that we have data on 59% hold 20% or less, 41% hold 20% or more, 15% hold more than 25%, and 7% hold more than 30%.

There does remain the issue: why should the Commons finance committee only countenance a gradual relaxation of the FPR? A number of possibilities come to mind. It could be that they are simply being cautious and the intention is to remove the FPR after 5 years. After all, relaxing the FPR limit by 2% per annum from 10% to 20% over the period 1990-1994 seems to have had no adverse effects, so why run the risk of upsetting the patient with a stronger prescription? Alternatively, they may believe the government should use the FPR as a bargaining chip in international negotiations — continuing to shoot ourselves in the foot unless other countries agree to stop shooting themselves, so to speak. But since the countries that have been the main recipients of Canadian savings, and the main foreign sources of funds for Canadian investment — the U.S. and the U.K.— have dismantled all restrictions on their own savers years ago, it is hard to imagine that there is much of a bargaining chip available here to play. Or there may be special interests that are being protected such as, *e.g.*, some middle-sized corporations whose equity is thought not to be integrated into world markets, the existing holders of Canadian equities who (mistakenly) fear a sudden reduction in the value of their shares from the removal of the FPR, some asset managers fearful of added competition. or the bureaucracy administering the regulation. Finally, it may simply be a matter of saving face. It is difficult to admit publicly that a policy undertaken for a long period of time and recently taken as gospel is, in fact, an unambiguous failure that has cost Canadian citizens billions of dollars over the last decade. Besides, the current policy plays well with those economic nationalists who prefer appearances to reality.

Of the above alternatives, the most generous is the first, that members of the Commons committee decided to err on the side of caution. This may be because members' beliefs about the efficacy of the market diverge from those of most economists. So suppose we are overly optimistic about the impact of removing the FPR on Canadian equity prices — short run elasticities of demand for Canadian equities are much lower than we anticipate. In that case it is possible that an even more rapid removal than 2% per year is warranted. This is because CPP administrators will have a mandate to invest their funds in the Canadian equity market. Estimates are that funds available for such investments constitute about \$100 billion over the next decade. Our *maximum* estimate of the monies directed to foreign risk markets if the FPR were abolished is \$67 billion. If the constraints discussed by the Commons finance committee are binding, then fewer funds than this will be removed. Thus, instead of a decrease in equity prices that *might have* occurred from easing the FPR, there would be an increase above

fair market value when combined with the actions of the CPP. Now increases in equity prices are not necessarily a bad thing — the capital inflow suggested by Bartolini and Drazen, based on a changed perception of market fundamentals can be quite desirable and lead to a permanently higher market valuation in the context of a more internationally integrated market. On the other hand, a once over portfolio shift by the CPP, in the absence of any other real changes in the structure of markets and, *by assumption*, based on an inelastic short run demand for Canadian equity will only be transitory. Canadians will then be confronted with the spectacle of seeing their CPP monies invested in a high but stagnating market and simultaneously be constrained to remain in Canadian securities with their RSP savings. High equity prices may allow us to feel good in the short run but not during the subsequent stagnation and decline, and it does nothing for Canadians' long run objectives. Indeed, having bought high with its initial purchases of equity, the CPP may have to go through yet another request for an increase in contribution rates.

While we do not put much stock in the assumptions that lead to this scenario, it does suggest that the recommendation to eliminate the FPR completely makes sense under quite diverse assumptions. Rather than quibble about what assumptions lead to this result, it seems desirable to get on with the business at hand and let ordinary Canadians go about making those savings decisions for their retirement that are best for themselves, free of any arbitrary, non-economic, restrictions on what they can and cannot hold.

8. Appendix 1

In this appendix we show that, with the No Arbitrage Condition and Covered Interest Rate Parity, the use of futures or hedged cash purchases of the S&P index will provide the same returns.

Define

$$\begin{aligned}
 R_f &= \text{return on the S\&P futures contract,} \\
 R_s &= \text{return on the S\&P spot market contract,} \\
 R_c (R_u) &= \text{Canadian (US) short term interest rate,} \\
 E_0 &= \text{US \$ price of Canadian dollars at } t = 0, \\
 \tilde{E}_\tau &= \text{US \$ price of Canadian dollars at } t = \tau > 0, \text{ and} \\
 \tilde{\mu}_i &= \tilde{R}_i - \hat{R}_i = \text{the unanticipated return on contract } i, i = s, f,
 \end{aligned}$$

where tildes describe random variables and circumflexes identify expected values conditional on information at $t = 0$.

The No Arbitrage Condition is:

$$1) \quad \tilde{R}_f + R_u = \tilde{R}_s.$$

Note that it also implies that $\tilde{\mu}_f = \tilde{\mu}_s \equiv \tilde{\mu}$.

The Covered Interest Parity Condition is:

$$2) \quad E_0 (1 + R_u) / \tilde{E}_\tau = 1 - R_c$$

The futures contract (Case 1 of Table 1) consists of holding an S&P future with a 100% margin in Canadian pay short term securities *plus* a hedged position for the *expected* appreciation of the futures contract. The return on this contract is then:

$$3) \quad R_c + \hat{R}_f E_0 / \hat{E}_\tau + \tilde{\mu} E_0 / \tilde{E}_\tau \equiv \phi.$$

The hedged cash purchase (Case 2 of Table 1) consists of buying the S&P index in the spot market and hedging the principal plus expected appreciation (and dividends) in the contract. Its return is thus:

$$\begin{aligned}
 &4) \quad (1 + \hat{R}_s) E_0 / \hat{E}_\tau + \tilde{\mu} E_0 / \tilde{E}_\tau - 1 \\
 &= (\hat{R}_f + R_u) E_0 / \hat{E}_\tau + \tilde{\mu} E_0 / \tilde{E}_\tau - (1 - E_0 / \hat{E}_\tau) \quad (\text{from (1)}) \\
 &= \hat{R}_f E_0 / \hat{E}_\tau + (R_c + 1 - E_0 / \hat{E}_\tau) + \tilde{\mu} E_0 / \tilde{E}_\tau - (1 - E_0 / \hat{E}_\tau) \quad (\text{from (2)}) \\
 &= \phi. \quad \blacksquare
 \end{aligned}$$

References

- [1] Ambachtsheer K. P., (1995) 'Canada's Foreign Property Rule: Why and How It Should be Eliminated.' IFIC. September.
- [2] *Bank of Canada Review* (1997) (Ottawa: Communication Services), Spring.
- [3] Bartolini, L. and A. Drazen (1997) 'Capital Account Liberalization as a Signal,' *American Economic Review*, 87: 138-54.
- [4] Baxter, M. and K. Jermann (1997) 'The International Diversification Puzzle is Worse Than You Think,' *American Economic Review*, 87: 170-80.
- [5] Blanchard, O. (1993) 'The Vanishing Equity Premium,' in R. O'Brien (ed.), *Finance and the International Economy*, 7 (Oxford, U.K.: Oxford University Press).
- [6] Conference Board of Canada (1998) 'Maximizing Choice: Economic Impacts of Increasing the Foreign Property Limit,' January.
- [7] Conway, G. R., (1970) 'The Supply and Demand for Canadian Equities: A Study prepared for the Toronto Stock Exchange Toronto.'
- [8] Davis, E. P. (1996) 'An International Comparison of the Financing of Occupational Pensions,' in Bodie, Z. et al. (eds.), *Securing Employer-Based Pensions: An International Perspective* (Philadelphia, PA: University of Pennsylvania Press).
- [9] Economic Council of Canada (1979) *One In Three: Pensions for Canadians to 2030* (Ottawa: Supply and Services Canada).
- [10] Ernst & Young (1997) *An Analysis of the Impact of the Foreign Property Rule*. Study prepared for IFIC, November.
- [11] Finance Canada (1996) *The Seniors Benefit: Securing the Future, Federal Budget* (Ottawa: Finance Canada Distribution Centre), March.
- [12] French, K. and J. Poterba (1991) 'Investor Diversification and International Equity Markets,' *American Economic Review*, May, 81: 222-26.
- [13] Investment Funds Institute of Canada (1997) *Monthly Statistics on Asset Holdings of Mutual Funds*, various issues.

- [14] Jorion, P., and E. Schwartz (1986) 'Integration vs. Segmentation in the Canadian Stock Market.' *Journal of Finance*, June, 41: 603-14.
- [15] Mehra, R. and E. C. Prescott (1985) 'The Equity Premium: A Puzzle,' *Journal of Monetary Economics*, March, 15: 145-61.
- [16] Mittoo, U. R. (1992) 'Additional Evidence on Integration in the Canadian Stock Market,' *Journal of Finance*, December, 47: 2035-54.
- [17] Pension Investment Association of Canada (1995) *Asset Survey At December 31, 1995*.
- [18] Solnik, B. (1974) 'An Equilibrium Model of the International Capital Market,' *Journal of Economic Theory*, August, 8: 500-24.
- [19] Statistics Canada, *Quarterly Estimates of Trusteed Pension Funds* (Ottawa: Catalogue No. 74-001 Quarterly), various issues.
- [20] Statistics Canada (1996) *Canada's Retirement Income Programs: A Statistical Overview* (Ottawa: Catalogue No. 74-507-XPB) February.
- [21] Statistics Canada (1996) *Pension Plans in Canada, January 1 1996* (Ottawa: Catalogue No. 74-401-XPB), October.
- [22] Tesar, L. and I. Werner (1992) 'Home Bias in the Globalization of Securities Markets.' NBER Working Paper No 4218, November.
- [23] Weitz, H. (1992) *The Pension Promise: The Past and Future of Canada's Private Pension System*. (Scarborough, Ontario: Thomson Canada Limited).