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Benefit Analysis**

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Abstract

The foreign property rule (FPR) requires that no more than 30% of the assets held in tax deferred retirement savings accounts be foreign property. The FPR is supposed to increase the value of the dollar and reduce its volatility and decrease the cost of capital and promote investment in Canada as well as decrease the extent of inequality inherent in these plans. On the basis of evidence from the easing of this regulation from 20% to 30% over the period 2001-2002 we find that it accomplishes none of these objectives. There was no measurable impact on the exchange rate predicted from the Bank of Canada's forecasting equation; the capital outflow from the change amounted to no more than 2 days trade in the forex market over the period 2000/01; Canada's equity markets did significantly better internationally while the FPR was eased than in the prior two-year period. Finally, closer inspection reveals that the rule exacerbates income inequality by imposing the largest costs on lower middle-income groups. We estimate that the increase in the FPR from 20% to 30% increased Canadians expected income by between 500 million and one billion dollars annually by permitting greater portfolio diversification. The complete removal of the FPR would increase income by an estimated additional 1.5 billion to 3 billion dollars annually.

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THE FOREIGN PROPERTY RULE: A COST—BENEFIT ANALYSIS

1. Introduction

Countries with private pension plans offered by firms, or registered savings plans available directly to individuals, typically provide a tax deferral for contributions, but impose some restrictions on the type and/or proportion of assets that can be held. One of the most pervasive of these restrictions is a limit on the proportion of the portfolio that can be held in foreign property.¹ Canadian plans have been subject to such a constraint through a provision in the Income Tax Act known as the foreign property rule (FPR) that restricts the amount of foreign property² that can be held in tax deferred savings plans such as Registered Pension Plans (RPPs) and Registered Retirement Savings Plans (RRSPs).³ In 1971 the maximum proportion of assets, measured at book value, which could be foreign property was set at 10%. This was raised to a maximum of 20% over the period 1990 to 1994, and subsequently raised to a maximum of 30% over the period 2000 and 2001. Despite the recognition that the FPR forces 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. As a result, the easing of the FPR in the 1990/94 and 2000/01 periods provide us considerable insight into what the actual costs and benefits of this regulation now are. Not only is this experience instructive for Canadian policy makers, but also the generic nature of a restriction on foreign property on tax deferred savings plans makes it relevant for other countries. In particular, for those OECD countries with financial markets at a similar stage of development, the lessons apply directly. For nations that are not at that stage, the consequences of establishing and maintaining restrictions on foreign property holdings can be better appreciated.

The work of Fried and Wirick (FW) (1999) addressed the costs and benefits of the FPR when it was raised from 10% to 20%⁴. The current paper updates that work by examining costs and benefits of the increase from 20% to 30%. Our research indicates that concerns about the negative effects of relaxing the rule have not materialized, nor do we believe will they if the FPR is completely eliminated. Furthermore, the regulation continues to be costly. In 1999, 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 that it still remains substantially more than a billion dollars annually.⁵

In the next section we review the arguments that have been put forward for retaining the FPR in order to anticipate criticisms that could be made in other nations with similar rules. 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 then, in the fourth section, provide an updated estimate of the costs of the FPR at 30%. The final section provides a brief summary and conclusion as well as a discussion of how the Canadian experience might relate to other countries.

2. The case for retaining 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 the deferred 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 them. This second assertion is critical in defending the FPR since, without it, the regulation can be removed and policy makers can address directly any distributional issues linked to tax deferral plans. Consider first what the benefits of the FPR are supposed to be.

There are two direct benefits that the FPR is supposed to generate. The first is that it protects the country’s 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 general⁶. 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.

Beyond the direct benefits some proponents argue that the FPR is worth retaining because it helps to achieve other ends. Specifically, it contributes toward a more equal distribution of income. The claim is 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 constrains investment choices thereby reducing the attractiveness of tax deferred savings plans. This reduces the amount of tax deferral thereby spreading the benefits from the relatively well off users of these plans to the less wealthy non-participants.⁷ The argument made for retaining the FPR is that it is the most efficient way to achieve this redistribution.

Finally, a number of ideological arguments have been made which appear to lie behind some of the opposition to the removal of the FPR. One that continues to have some currency among a sector of the Canadian population is that *any* increase in foreign ownership 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 otherwise make.

Proponents of the FPR recognize that there are some costs connected with the regulation. 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.⁸ Thus an individual or pension fund that wants additional international diversification is not actually 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. Questioning 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 on the exchange rate, 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 dollars⁹. Using the PIAC survey of the largest Canadian pension funds that, together, accounted for roughly 500 billion dollars of assets, foreign exposure¹⁰ increased over these two years by 4.8% of assets.¹¹ 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 2000.¹² 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 present¹³. 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 not¹⁴.

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 could 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 be¹⁵. 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. This further suggests that a foreign property regulation is especially problematic in countries that are now, or will soon become, members of the European Currency Union.

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? The evidence suggests 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 would 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.

We suspect that countries that have foreign exchange markets as developed as those of Canada, such as Japan and Switzerland would exhibit the same non-consequences on their exchange rates if they removed their foreign property restrictions on pension assets. As for countries in or being considered for admission into the EU, the exchange rate issue is moot. Certainly, asset purchases within the currency union will have no impact and those made outside that area would likely be even smaller than Canada's relative to the size of the market.

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. FW 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 the 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 data¹⁶. 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.¹⁷ 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.¹⁸

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 2001.¹⁹ 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.²⁰ 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.²¹ In effect, the impact of the easing of the FPR suggests, if anything, a net increase in the demand for Canadian debt instruments, not a decrease.

That the easing of the FPR had little if any affect 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 or roughly \$53 billion.²² 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.

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%.

Again, markets that are reasonably open and /or where a significant proportion of the equities are traded in multiple markets would have consequences similar to those of Canada. For those countries with developing markets there may be some impact on the cost of capital. This impact will be reduced to the extent the country enjoys a stable monetary regime so that there is little demand for foreign currency denominated assets and to the extent that removing limits leads to the Bartolini and Drazen effect that increases confidence in the economy as a place to invest. Third, one has to ask how long the law of one price will continue to be violated in light of a world that is increasingly open to capital flows. It is likely the case that living without foreign property limits is less disruptive to the country than removal of the limit in the face of pent up demand. Finally, all countries with these quantitative limits on foreign assets should be aware that these limits are borne by workers and this could offset any possible increase in worker productivity generated by the envisioned amount of increased capital.

3.3. The FPR as a Distributive Device

A secondary purpose of the FPR appears to be to mitigate the supposed adverse distributive effects of tax deferred savings plans. In particular, some have argued that these plans favor the relatively well off. By adding the FPR some of the tax expenditure benefits are removed from the direct participants and are extended to the (presumably) less well off non participants. While a redistribution from rich to poor could be a legitimate objective, the FPR is a singularly inappropriate instrument for that purpose.

First of all, tax deferred savings plans are one of the most broadly based tax/transfer programs in

Canada. More than 70% of Canadian family units participate in them.²³ Individuals can contribute up to 18% of their earned (labor) income to a maximum of \$16,500. This contribution limit constrains those in the upper tail of the income distribution from any marginal benefits for earned income more than \$90,000 per annum. Furthermore, these plans, and especially RRSPs, are virtually the only means that Canadians have to income average over their life, effectively transforming the tax base to average lifetime income from current income. As a result, those with volatile employment histories are not penalized. Nor is it at all clear that the programs favor the wealthy. It is middle income Canadians who are most dependent upon RRSPs and RPPs for income during retirement.²⁴

Even if tax deferred savings plans did confer benefits on those who are relatively well off, the FPR would be an inappropriate instrument to rectify the problem. In the first place, to confer benefits on non-participants, the FPR must either have positively influenced either the exchange rate or the cost of capital. The evidence over the last decade suggests that it has either no effect on these variables or it affects them in the opposite manner that proponents claim.

But it is worse than having no effect. The FPR is first and foremost 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 reduces the return and/or increases the risks on the savings in these plans impinges directly on the net 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.²⁵ 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 Canadian Pension Plan (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 RRSP.

Furthermore, it is the lower to middle income Canadians that would most benefit from the

removal of the FPR. 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.²⁶ 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.²⁷

In summary, then, the use of the FPR to redistribute the benefits of 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 themselves. 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.

4. 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, based on paternalism and concerns about 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 in this day and age. 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 the standard of living for their citizens. 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 is neither an efficient nor focused 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 at least some of the diversification denied by the FPR.²⁸ 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 trustee pension funds.²⁹ 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.

As is the case with capital controls in other countries, Canadian pension funds have found ways 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.

5. Quantifying the costs of the FPR

To this point we have argued that there is no evidence from the 1990-2004 period 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 plans³⁰. 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.³¹ 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.³² 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 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 use 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 is used instead of the long bond rate. We also suppress 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 use the historical returns on these asset classes in addition to the expected returns used by FW. Finally, we use 3 sets of portfolio weights to obtain reference risk levels of the portfolios Canadians held. The "most risky" hold 70% equity and 30% bonds and the "least risky" hold 30% equity and 70% bonds. The third represents the average portfolio held by pension funds reporting in the PIAC survey at the end of 2001, which was approximately 60% equity and 40% bonds.

The results indicate that between 20% and 50% of the expected diversification gains from

removing the FPR were realized in moving it from 20% to 30%. Those holding the low risk (70% bonds) portfolio achieved the highest proportion of their potential diversification gain, but this proportion, at 50%, is well below what would be available if the FPR were removed entirely. This is not surprising. If these portfolios continued to hold only 30% equity a 30% FPR would pose no constraint. 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 a higher proportion of equity without increasing its risk level above what it undertook previously with a 20% FPR limit. The FPR at 30% is still a constraint for these investors because it prevents them from holding the equity mix that offers the highest expected return consistent with their initial level of risk. 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. The 30% FPR is more costly for this group because the portfolio that offers the highest expected return consistent with their initial level of risk is even further away from what is attainable under the constraint. Thus we estimate that the cost of not removing the FPR completely is roughly two thirds of the FW estimate. In other words, the 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.³³ 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 2000³⁴. 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. 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.

5. Concluding Remarks

This brings us to the overarching defence of the FPR in Canada: “The government has provided Canadians a special subsidy in the form of tax deferred savings plans. These recipients should therefore give something back to Canada. The FPR is the mechanism to ensure that we do so.” For Canada the evidence does not support this conclusion. Canadian markets are integrated globally so there is no measurable effect of the regulation on the cost of capital or on the price of foreign exchange. The cost of the regulation is borne by the workers who use these plans to save for retirement. For countries in the European Union, or with financial markets at a similar stage of development as Canada’s, foreign property restrictions will generate similar results. Indeed, for members of the EU, the issue of the exchange rate or balance of payments is moot and should be of no more concern than the Canadian balance of payments is to the government of Nova Scotia. As for those countries seeking entry into that organization, foreign property restrictions will impede the capital market integration that entry would otherwise bring about. Indeed, we conjecture that the Bartolini-Drazen result that capital controls on outflows reduce net inflows would tend to dominate if the portfolio restrictions continued in place.³⁵

Furthermore, the presumed ancillary benefits for Canadians of a more equal income distribution and/or reduced foreign control can be provided at lower cost outside of portfolio restrictions on tax deferred savings plans. The plans themselves probably reduce lifetime income inequality by

providing a tax averaging mechanism, and caps on maximum contribution levels can focus benefits to lower income groups. Indeed, for Canada, the FPR impacts the middle class, not the wealthy. The regulation does little for foreign control because its (minimal) impact is on foreign ownership. There is no reason to believe it would act otherwise in the OECD countries.

We honestly do not know why Canada adopted a foreign property restriction. Our conjecture is that, at the time, capital markets were less integrated than they are now and portfolio theory less well understood so that, superficially, it sounded like a good idea. With limited capital mobility the restriction may have led to some decrease in the cost of capital. Developing countries perhaps perceive themselves to be in a similar position compounded by a balance of payments problem. Before a government decides to go down the path of a foreign property rule on retirement savings it ought to consider that in doing so it is attempting to use one instrument to address at least two problems: the cost of capital and the balance of payments, and in the process, increasing risk bearing and reducing net saving. It is far better to choose instruments that are specific to the problems at hand. For instance monetary policy can address the balance of payments and reduced business taxes can lower the cost of capital to firms. These instruments will address those problems in a way that is not dissipated over time as it would be with a foreign property rule, nor will they have the negative impact on one of the few effective instruments to encourage retirement saving.

One problem that arises with government policies that are established for temporary conditions is the inability to end them once the environment has changed. This certainly was the case for Canada and the FPR. Nonetheless, through a sequence of partial changes in that regulation Canada has provided sufficient evidence to suggest that the removal of the regulation does not entail significant costs and indeed, generates substantial benefits. It is that lesson that Canada provides to those nations that currently have such a regulation in place in their country.

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Endnotes

¹ As of 1998, the US, UK and the Netherlands had no restrictions and rely on the prudent person rule. Finland, Italy, Germany and Sweden had restrictions ranging from 5-10% whether on foreign assets, non EU assets or non OECD assets. Japan has a 30% limit on foreign currency assets. See Davis (2001), Table 1.10, and Davis and Steil (2001).

² 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. 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.

³ 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).

⁴ 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%.

⁵ All figures are in Canadian dollars which, in 2000, was roughly .67USD.

⁶ *Ceteris paribus*, a strong dollar makes Canadians better off. If the FPR does support the currency, now is the time to remove it with the dollar experiencing upward pressure *vis a vis* the US dollar

⁷ It also means that there is a reduced use of these programs and thus less erosion of the tax base. Presumably the increased taxes could be used in other programs directed toward ordinary Canadians

⁸ 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.

⁹ Bank of Canada (1999), p. 49.

¹⁰ 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.

¹¹ 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 trustee RPPs reported by Statistics Canada (2001b) rose 1.7%, from 20.2% to 21.9%, over this same interval.

¹² 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.

¹³ The original specification of the Bank of Canada equation is found in Amano and van Norden (1993). Subsequent analysis is found in McCallum (1998) and Laidler and Aba (2001, 2002).

¹⁴ 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.

¹⁵ 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 \$ 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.

¹⁶ See Fried and Wirick (1999), pp. 5 – 8. They also present a convincing case that it is not an absence of funds that limits venture capital projects in Canada.

¹⁷ These numbers are based on the MSCI index returns, all measured in US dollars.

¹⁸ 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.

¹⁹ Bank of Canada, (1998-02), Table F1.

²⁰ 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%.

²¹ See footnote 13. The inflow is the result of the foreign exchange contract as the counterparty attempts to rebalance their currency exposure.

²² From the Statistics Canada (2001b) data, the increase in foreign property was less than 2%.

²³ See Statistics Canada (2001a), p19.

²⁴ See Burgess and Fried (2002) for an extended discussion of this point.

²⁵ 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.

²⁶ This is in no small part because of the regulatory cap on total contributions.

²⁷ 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.

²⁸ See footnote 6.

²⁹ Statistics Canada (2001b) 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.

³⁰ The absence of diversification opportunities was especially acute over the last two years because of what has been called, in Canada, the Nortel effect. 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.

³¹ 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.

³² See FW, pages 19-23, for an extended discussion of these offsets and the determination of the resulting measure of cost.

³³ There may be some movement however due to the increase from 20% to 30%. This is an increase in both mergers and alliances between Canadian management firms and management firms in the rest of the world. While this observation has not been statistically tested it does suggest that the increase in the FPR has led to some greater level of competition in the industry.

³⁴ Department of Finance (2001) Table 7, p57.

³⁵ Furthermore, the balance of payments issue becomes moot when monetary policy pertains to the entire union rather than to the individual nation.