

Foreign Takeovers and the Canadian Dollar: Evidence and Implications

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- *Since 1995, acquisitions of foreign firms by Canadian residents and acquisitions of Canadian firms by foreign residents have increased. Through most of the period, however, the cumulative net balance was close to zero. In 2000, a small number of large foreign takeovers of Canadian firms had a significant impact on acquisition capital flows into Canada.*
- *Standard models of international asset pricing imply that there should not be a relationship between the Canadian exchange rate and foreign takeovers of Canadian firms because an exchange rate movement does not impart a systematic advantage to foreign over domestic buyers. Empirical analysis provides no evidence of a link between the dollar and foreign takeovers.*
- *Purchases of domestic firms by foreign residents are likely to be welfare-improving. Transactions between foreign and domestic residents are voluntary, and they imply that the foreign buyers expect to obtain higher profits from the firm's assets, most likely by realizing economies of scale and scope in production or distribution or by contributing management expertise or other intangible productive assets to the domestic firm.*

Concerns have been expressed that the recent depreciation of the Canadian dollar has left Canadian firms “undervalued” and thus vulnerable to foreign takeovers and that such changes in ownership are not in Canada’s best interest. This article addresses these concerns. First, the possible rationale behind them is considered. Then, the foreign direct investment (FDI) data on flows of acquisitions between Canada and the rest of the world are examined to determine whether foreign acquisitions of Canadian firms have increased relative to Canadian acquisitions of foreign firms over the 1990s.¹ A theoretical analysis based on a standard model of asset pricing is then used to evaluate the possible links between exchange rate movements and the value of domestic firms. Finally, the welfare implications of purchases of domestic firms by foreign residents are considered.

What is the Possible Basis for These Concerns? Is it Correct?

Before analyzing the empirical and theoretical evidence, it is useful to examine the possible underlying rationale for concerns about the linkage between the recent depreciation of the dollar and foreign takeovers. These concerns are based on two premises, neither of which is correct. First, people often expect exchange rates to be at a level that equalizes prices for goods and services across countries, when measured in a common currency—“the purchasing-power-parity fallacy.” For example, travellers are sometimes astounded by the high price of a cup of coffee in a European country or by the low price of clothing in an

1. Statistics Canada disaggregates FDI flows into three broad categories: acquisitions, other long-term flows (i.e., injections of new capital), and reinvested earnings. The first two categories are generally the largest. For more details, consult Statistics Canada Catalogue No. 67-001.

emerging-market country because they expect the exchange rate to be at such a level that the prices would be the same as they are in Canada. The fact that there is a gap between the purchasing-power-parity (PPP) rate (i.e., the rate that equalizes the prices of national baskets of consumption goods and services) and the actual exchange rate does not necessarily imply that an exchange rate is under- or overvalued. The second misconception is that the purchase of a firm or an asset is the same as the purchase of a good or service for immediate consumption—"the investment/consumption fallacy."

Many explanations have been offered for the deviations between the market-determined exchange rate and the PPP rate.² The most widely accepted explanation is that many goods and services are not traded because of transportation costs and other barriers. In particular, the services provided by labour and by land are not easily traded internationally, nor are many of the final goods and services that use land and labour as inputs. Thus, the absence of trade and price arbitrage implies that deviations in national price levels will occur, and there is no reason to expect the exchange rate to adjust to offset them. Hence, the prevailing exchange rate will, in general, not be equal to the PPP rate.³

The motivation for buying a firm or an asset is inherently different from that which drives the purchase of a final good or service. A good or service is usually purchased for consumption and the resulting increase in consumer welfare or utility; whereas a firm is purchased for the expected future stream of income that it will generate. Thus, the price of the firm is determined by the expected value of an uncertain future income stream adjusted for the cost of the risk associated with that stream that cannot be eliminated by diversification into other assets (i.e., the undiversifiable risk). Hence, if international capital markets are efficient, the price of the firm should fully adjust to an exchange rate change that affects the value of the expected future stream of income. In other words, if markets are efficient, then the firm's price must adjust to a movement in the exchange rate so that the risk-adjusted expected rate of return across international assets is equalized (Froot and Stein 1991). It is important to

2. See Dornbusch (1988) for an insightful analysis of the PPP concept. Although PPP may hold for a narrow set of actively traded standardized products (e.g., gold bullion and crude oil), it does not hold in general.

3. Since 1991, the PPP exchange rate for Canada has averaged US\$0.83, while the dollar has averaged US\$0.73, yet Lafrance and van Norden (1995) and Laidler and Aba (2002) show that the exchange rate was well explained by the Bank of Canada's empirical exchange rate equation.

recognize, however, that exchange rate movements often occur gradually, and thus the firm's price would, other things being equal, also adjust gradually. In practice, other things are not held the same, and the price of the firm is affected by a variety of factors. Hence, the price adjustment that should take place in response to an exchange rate movement may not be easy to discern.

An exchange rate depreciation . . . does not normally confer any special advantage on foreign over domestic buyers.

In summary, it is critical to recognize that two important conceptual mistakes are made when one argues that domestic firms are attractive targets for foreign takeovers when the exchange rate is below the PPP rate. First, the deviation of the actual exchange rate from the PPP rate does not, in general, imply that an exchange rate is under- or overvalued. Second, unlike the price of a domestic good or service, the price of a domestic firm does not remain relatively constant when the exchange rate changes. The firm's price adjusts to incorporate any impact of an exchange rate movement on the expected stream of future income. Therefore, an exchange rate depreciation, for example, does not normally confer any special advantage on foreign over domestic buyers.⁴

Recent Evidence on Acquisitions: Canada and the Rest of the World

Any evidence of a major increase in takeovers of Canadian firms by foreign residents because of the depreciation of the dollar since 1991 should be captured by FDI data on acquisition flows.⁵ Charts 1

4. Froot and Stein (1991) argue that an exchange rate movement could affect foreign direct investment only if the exchange rate movement substantially affects the relative wealth of foreign and domestic buyers and there are significant imperfections in international capital markets so that a potential investor's cost of capital (i.e., the interest rate at which the investor can borrow to finance the investment) is influenced by the investor's own wealth. A real exchange rate movement, such as that which occurred in Canada over the 1990s, will affect the relative wealth of domestic and foreign residents. It is unlikely, however, that global capital markets are sufficiently imperfect that this movement in relative wealth had a significant impact on the relative cost of capital facing Canadian and foreign investors.

5. The vast majority of international acquisitions involving Canadian residents (over 80 per cent) are sales to and purchases from Americans.

Foreign Direct Investment: Annual Acquisition Flows

Chart 1: Canada and the Rest of the World

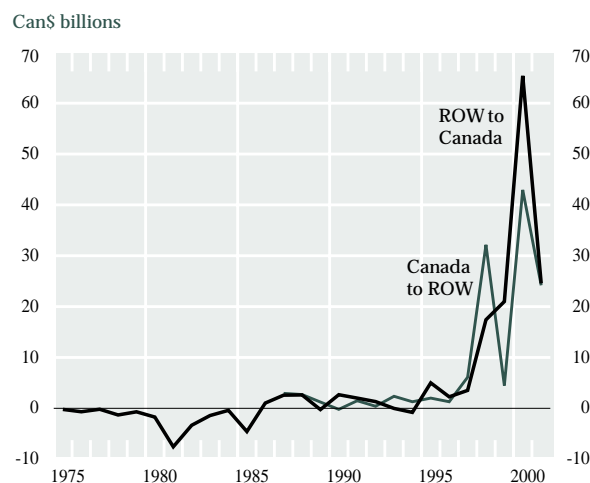
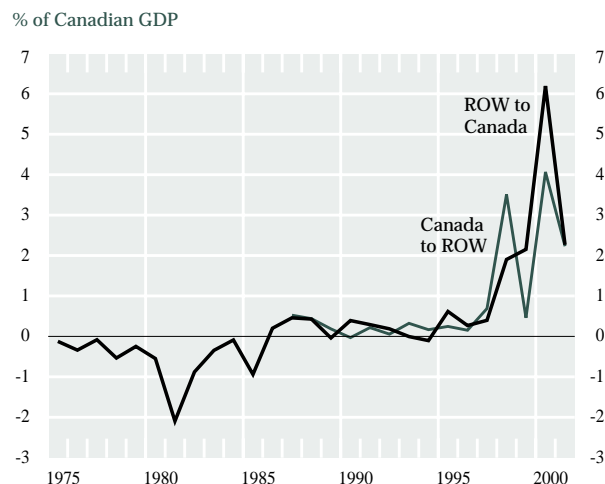


Chart 2: Canada and the Rest of the World



and 2 show annual acquisition inflows and outflows between Canada and the rest of the world in absolute terms and as a percentage of Canadian GDP.⁶ Data on inflows from the rest of the world are available from 1975 to 2001, and data on outflows are available from

6. For the purpose of this paper, a positive acquisition *inflow* occurs when sales of Canadian assets by Canadians to foreign residents exceed purchases of Canadian assets by Canadians from foreign residents. A positive acquisition *outflow* occurs when purchases of foreign assets by Canadians from foreign residents exceed sales of foreign assets by Canadians to foreign residents.

1987 to 2001. In absolute terms and relative to GDP, acquisition flows in both directions generally rose over the latter part of the 1990s and in 2000, only to fall off in 2001. Canada's recent experience is similar to that in the rest of the world; UNCTAD (Table 1, 2001) reports that cross-border merger and acquisition flows increased by an average of 50 per cent per year over the period 1996 to 2000. This incredible increase was driven by several factors; in particular, the forces of globalization and consolidation, financed by low interest rates and strong stock markets.

Net acquisition flows (inflows less outflows) are shown in Charts 3 and 4. Over most of the sample period, these flows have been remarkably balanced. For example, from 1987 to 1999, the cumulative sum of the net flows was a modest inflow of \$1.08 billion or 1 per cent of GDP. The recent peak in the Canadian dollar occurred in 1991, and since then, the dollar has depreciated from approximately US\$0.87 to US\$0.66 in 1999, or by 25 per cent. Yet over this period, 1991 to 1999, the cumulative balance of net acquisition flows was only \$114 million or roughly 0.1 per cent of GDP. The large net inflow in 2000 is an anomaly because it was dominated by the \$66.5 billion sale of Seagram Co. Ltd. to Vivendi Universal SA and the \$17.9 billion sale of the tobacco operations of Imasco Ltd. to British American Tobacco. These two transactions were by far the largest ever recorded in Canada. Moreover, there is no evidence to indicate that the Canadian exchange rate played any significant role in the sale of these multinational corporations. Net acquisition flows returned to a more normal balance of 0.39 per cent of GDP in 2001.

Although the Canadian dollar has generally depreciated since 1991, no clear relationship between movements in the Canadian dollar and net acquisitions can be identified from the data presented in Chart 3. In addition, a simple regression of net acquisition flows on the exchange rate over the period 1987 to 2001 produces no evidence of any significant correlation between the two variables.⁷

Nonetheless, it is clear from Charts 3 and 4 that the volatility of the net flows increased in the last four years of the sample, with a record net outflow of \$14.7 billion in 1998, followed by record net inflows of \$16.5 billion and \$22.4 billion in 1999 and 2000,

7. Several different specifications of the regression model were tried, and the results were similar. These findings are consistent with those of Lafrance and Tessier (2001) who find no causal relationship between the exchange rate and FDI over the 1970–2000 period.

Foreign Direct Investment: Net Annual Acquisition Flows

Chart 3: Canada Minus the Rest of the World

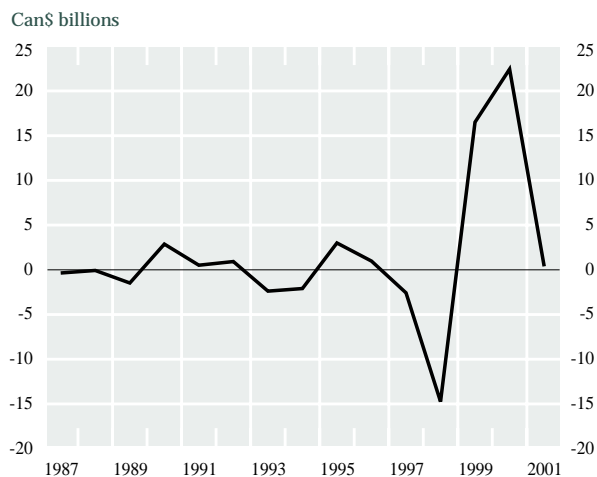
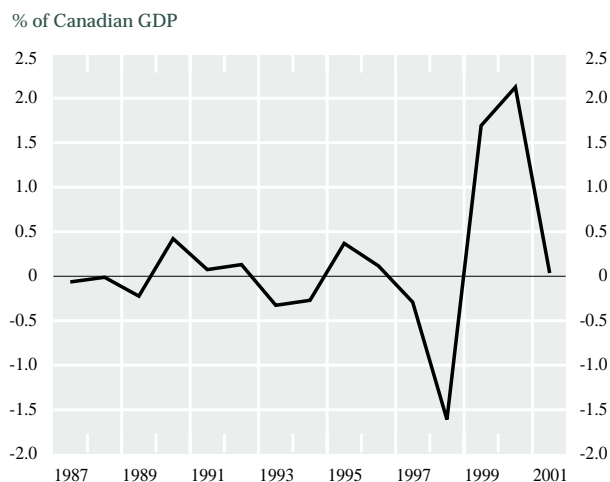


Chart 4: Canada Minus the Rest of the World



respectively, to almost a net balance in 2001. In general, a significant portion of these large movements from 1998 to 2000 represents the impact of a few major transactions involving Canadian firms such as Seagram's, Imasco, MacMillan Bloedel, and Nortel. As noted earlier, this volatility is not specific to Canada but is a worldwide phenomenon, as the competitive forces of globalization lead large multinational companies to merge and rationalize their operations in order to reduce costs by taking advantage of economies of scale or scope.

Exchange Rate Movements and Foreign Takeovers: A Theoretical Analysis

According to the Capital Asset-Pricing Model (CAPM), an investor's decision to invest in an asset is based on the asset's expected return relative to its undiversifiable risk, where this risk is defined as the covariance between the asset's expected return and the expected return on the market portfolio (which consists of all possible assets). The model predicts that for a given level of covariance risk, the asset must generate an expected return of a certain amount in excess of the risk-free rate in order for the asset to be willingly held by investors. If the expected return is higher or lower than that warranted for a certain level of risk, then the price of the asset will adjust.⁸

Thus, for an exchange rate movement to cause a foreign resident to purchase a domestic firm, the movement must increase the return that the foreign resident expects to receive by owning the domestic firm relative to that expected by a domestic buyer. There are a number of channels through which an exchange rate movement could potentially affect the expected return by altering the future path of the firm's revenues and costs, but none of these channels would necessarily increase the expected return in favour of the foreign purchaser.

First, consider Canadian exporters. The primary channel through which the exchange rate could influence expected future returns would be via the effect on export revenue. For example, suppose a Canadian firm exports all its production at a fixed world price in U.S. dollars. (Assume initially that it uses no imported inputs.) Clearly, all else unchanged, a permanent exchange rate depreciation would increase the revenue and income of the firm, measured in Canadian dollars. If shares in the firm are actively traded and the nature of the firm's operations is widely known, then the price of the shares in Canadian dollars should increase in response to the exchange rate depreciation, thus maintaining the expected return from holding the company's shares. According to the CAPM, this must occur, because the exchange rate movement has not affected the firm's covariance risk, and thus the expected return should remain the same for both domestic and foreign buyers. To summarize, an exchange rate movement should not alter the expected return on the firm because the Canadian-

8. See Sharpe (1964) for the original exposition of the CAPM.

dollar share price will adjust to reflect the expected impact on the firm's future income stream.

This simple example can be extended in various ways. Suppose that only a fraction of the firm's products are exported, or that some of the inputs must be imported. Once again, a depreciation will tend to increase revenues and also costs, and again the price of the firm's shares should adjust to maintain the expected return required by the market. A change in the level of the exchange rate does not affect the underlying risk of the asset or the expected return required by the market, nor does it favour the foreign buyer.

Some observers have argued, however, that the share price of Canadian firms in domestic currency does not, in fact, adjust to leave the expected return unchanged, but that the price adjusts too little, thus increasing the expected return and attracting foreign buyers. This conjecture is not substantiated by any empirical evidence, and is inconsistent with the conventional wisdom that much of the information about a firm's operations is in the public domain (and available to residents of both countries) and that financial markets process this information efficiently so that it is fully incorporated into the share price.

Suppose, however, that the shares of a firm are not publicly traded. How will the price adjustment take place? If the owners of the private Canadian firm are rational, they will adjust the reservation price they have for selling the firm based on the expected impact of the depreciation on the stream of future cash flows. They should realize that the exchange rate movement will affect the value of the firm in Canadian dollars, and again, there is no reason for the domestic owners to have any preference concerning the nationality of the buyer.

The obvious question remaining is, how will a takeover of a domestic firm by a foreign resident ever take place if the price of the firm is constantly adjusting to generate the expected return demanded by the market? A takeover will occur when the potential buyer (foreign or domestic) and the current owner have different expectations about the future stream of profits. More importantly for our purposes, there is no reason for the profit expectations of a potential foreign buyer to be systematically higher than those of the domestic owner (or another domestic buyer) or for any difference in profit expectations to be related to the exchange rate. Most likely, the difference is the result of the foreign buyer reducing costs by taking advantage of economies of scale or scope in production or distribution or by bringing a specific, and often intangible,

asset to the firm (such as management skill, new technology, or increased market access) that raises the expected profits that can be generated from the firm's existing assets.

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Welfare Implications of Foreign Takeovers: Benefits and Costs

Benefits

- *Transactions are voluntary and are likely to be welfare-improving*

Takeovers of domestic firms by foreigners are voluntary exchanges and thus, in the absence of externalities or government-based distortions, should be welfare-improving. Nobody is forcing Canadians to sell firms at prices they deem to be too low; transactions are between "consenting adults." Because the seller is likely to have better knowledge about the value of the firm than the buyer, any argument based on asymmetric information is likely to be in the domestic owner's favour.

- *Increased labour productivity and output*

Foreign buyers of domestic firms must believe that they can increase the expected profit stream generated by the firm's assets; otherwise, no purchase will take place. To raise profits, the buyer must reduce costs by realizing economies of scale or scope, or raise revenue by contributing some specific asset to the firm, whether it be management skill, new technology, or improved market access. These changes to the firm will tend to increase not only its profits but also the productivity of its workers and the level of output.

- *Stable source of foreign capital*

Foreign direct investment is generally considered to be a more stable source of foreign capital than short-term equity or bond flows. For a country like Canada

that has traditionally been a large importer of foreign capital, reliance on direct investment for foreign financing may reduce its vulnerability to certain types of financial crises.

Costs

• *Reduced competition*

A foreign takeover of a competing domestic firm may reduce overall competition and could lead to higher prices and reduced domestic welfare. This negative effect, however, would be mitigated or potentially eliminated by the entry of other firms attracted by the high prices and abnormal profits. Moreover, if entry barriers were high, then any takeover (foreign or domestic) that materially reduced the level of competition in the Canadian market would be blocked under existing Canadian legislation.

• *Externalities*

The impact of a foreign takeover, notably in the high-technology sector, where productive assets (typically human) are highly mobile, may be welfare-reducing if there are significant research, production, or management externalities. For example, there is potentially a social cost if a foreign firm buys a domestic high-technology firm and relocates research or leading-edge production activities outside of Canada. These activities could produce positive externalities in the Canadian economy (for example, the development of a critical mass of skilled workers that could supply other firms in the area). Such external benefits are at the heart of the economies of certain geographic areas that specialize in a particular product (e.g., communications and software in Ottawa, and motor vehicles

and parts in southern Ontario). Similarly, if managers are relocated, there may be less demand for head-office support services (e.g., legal, finance, architectural, and advertising) in Canada.⁹ Any relocation of Canadian factors of production would, however, reduce the cost advantage of the takeover, because these factors would have to be paid at U.S. levels. Although these externalities may exist, foreign takeovers typically do not generate an exodus of skilled workers or technology, because domestic production is rarely eliminated.

Conclusion

Since 1995, there has been an increase in acquisition FDI flows in both directions between Canada and the rest of the world, yet the net balance over this period has been close to zero. This trend towards high levels of cross-border FDI acquisition flows is a worldwide phenomenon: competition at the global level is forcing firms to consolidate and rationalize their operations. The value of the Canadian dollar plays no direct role in this process. Indeed, models of asset pricing and the empirical evidence on Canadian FDI acquisition flows also imply no direct link between the value of the dollar and acquisition flows. Finally, because these flows are driven by the expectation of higher profits, primarily generated through higher productivity, they should be welfare-enhancing.

9. When a Canadian firm is purchased by a foreign resident, not all head-office functions would be relocated; it would depend on the degree of autonomy given the Canadian subsidiary. Also, Canadian takeovers of foreign firms could result in head-office functions being moved to Canada. Hence, Canada need not be a net loser in this regard.

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