WHITE PAPER

Managing Foreign Exchange Risk

The Canadian dollar has made the headlines on numerous occasions in recent years. Its value has changed significantly and rapidly many times, greatly impacting the sales and profits of Canadian companies that do business outside of Canada. When asked, in many surveys, what factors prevented them from increasing their export levels, Canadian companies identified fluctuations in exchange rates as the Number One factor. Studies have also shown that many Canadian companies, particular small and medium-sized ones, lack basic knowledge on how to manage foreign exchange risk. In response to this, EDC has prepared this document which serves as an introduction to the subject of foreign exchange risk. In it, the reader will learn, namely, why it makes sense to reduce the company's exposure to currency risk, and find out more about the common techniques and instruments that can be used to mitigate this risk.

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Table of Contents

3 Introduction to Foreign Exchange Risk

3 What is Foreign Exchange Risk?

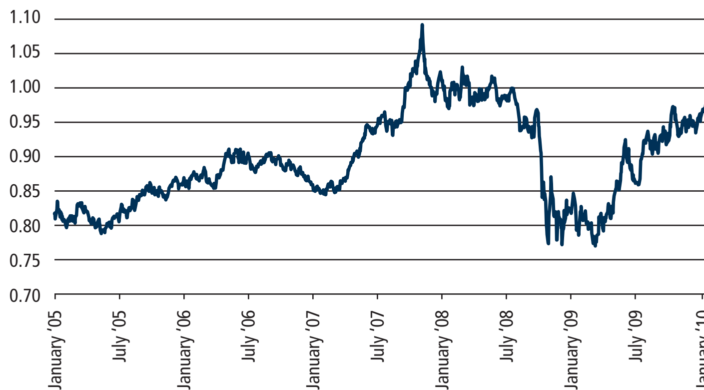
4 Why Hedge Foreign Exchange Risk?

4 Managing Foreign Exchange Risk

6 Common Techniques and Instruments

Introduction to Foreign Exchange Risk

Figure 1: USD/CAD Exchange Rate – January 2005 to January 2010



Source: Bank of Canada and EDC Corporate Research Department

In recent surveys, Canadian companies active in international markets have indicated that the Number One constraint to export growth is volatility in the value of the Canadian dollar (Figure 1). This is understandable given the never-ending fluctuations in exchange rates of all freely-traded currencies. Short-term fluctuations make it difficult for exporters to price their products and to forecast how many Canadian dollars they will be paid since export sales are frequently invoiced in the foreign buyer's currency.

Canadian companies that import goods and services, or have significant long-term assets and liabilities in a foreign currency, are also impacted.

What is Foreign Exchange Risk?

For Canadian companies that sell their goods and services internationally and get paid in a foreign currency, foreign exchange risk is the likelihood that a change in exchange rates will result in the company receiving a lower amount of Canadian dollars than originally anticipated. For Canadian companies that import and pay foreign suppliers in foreign currency, it is the likelihood that a change in exchange rates will mean the company has to pay more than planned. This form of foreign exchange exposure, which impacts the cash flow of the company, is commonly referred to as *transaction exposure*.

Other forms of exposure also exist, such as *accounting exposure* and *economic exposure*. Accounting exposure applies when assets and liabilities denominated in a foreign currency need to be converted into Canadian dollars for accounting purposes. The conversion normally results in foreign exchange gains or losses. This is of particular concern to Canadian companies that have foreign subsidiaries, but can also impact companies that export and import. Economic exposure relates to the overall impact that exchange rate fluctuations can have on a company's value. Canadian companies that only sell domestically can also face economic exposure when, for example, the Canadian dollar strengthens and improves the competitive position of foreign producers.

For most firms, managing foreign exchange risk centres on how to mitigate transaction exposure. This paper focuses on this type of exposure.

Why Hedge Foreign Exchange Risk?

For some companies, managing foreign exchange risk may seem too complex, costly or time-consuming. Others may not know about hedging instruments and techniques or believe that hedging is a speculative activity. Yet companies that choose not to manage foreign exchange risk may be assuming that exchange rates will remain at their present levels or move in a direction that will be favourable to the company – something that closely resembles speculation.

Numerous studies have found that managing this risk can successfully reduce your company's foreign exchange exposure. Managing foreign exchange risk provides the following benefits to many Canadian companies:

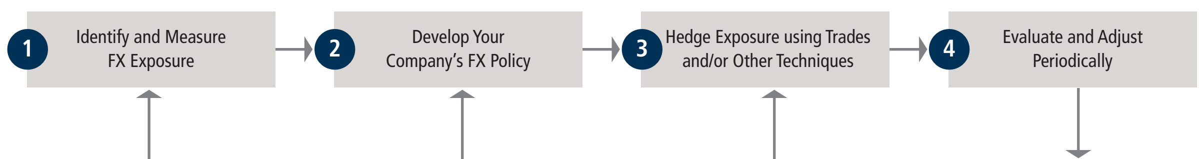
- minimize the effects of exchange rate movements on profit margins
- increase the predictability of future cash flows
- eliminate the need to accurately forecast the future direction of exchange rates
- facilitate the pricing of products sold on export markets
- protect, temporarily, a company's competitiveness if the value of the Canadian dollar rises (thereby buying time for the company to improve productivity)

If a risk can be reduced at a reasonable cost, then it is generally accepted that steps should be taken by managers to protect their companies. The decision to purchase foreign exchange hedging instruments is similar to the one made when the company buys other forms of insurance. The insured risk, in this case, is the reduction in cash flows and profit margins caused by unfavourable changes in an exchange rate. Many firms do not hesitate to protect their accounts receivable from the risk of non-payment and all firms obtain property and casualty insurance. They do so in order to protect cash flow and ensure that the company's efforts and talent are focused on its core business activities. Many Canadian companies involved in international trade view foreign exchange risk management this way.

Managing Foreign Exchange Risk

Managing foreign exchange risk is a four-step process, as illustrated in Figure 2.

Figure 2: Steps in the Management of Foreign Exchange Risk



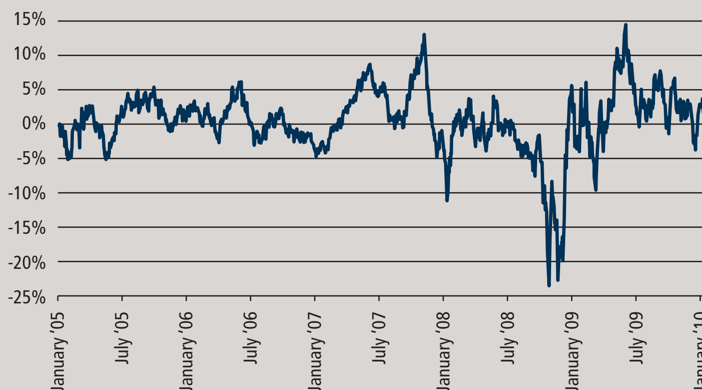
Source: EDC Corporate Research Department

Step one involves identifying and measuring the foreign exchange exposures that you want to manage. As mentioned earlier, the focus for most companies is on *transaction risk*. For an exporting company paid in U.S. dollars, measuring exposure involves subtracting the U.S. dollars it expects to receive over a one year period, for example, against the money it will need in order to make payments in U.S. dollars over the same period. The difference determines the exposure to be hedged. If your company already has U.S. dollars in the bank, subtract the account balance to determine the net exposure. Some companies only include confirmed transactions while others include both confirmed and forecasted foreign currency cash flows over the designated time period.

To Hedge or Not to Hedge?

Many Canadian companies, particularly smaller and medium-sized ones, do not actively manage foreign exchange risk. This is surprising given how costly, in terms of cash flow and profitability, unfavourable changes in the value of the Canadian dollar can be. As Figure 3 below shows, changes of more than 5% in the value of the Canadian dollar relative to the U.S. dollar are commonplace over a 60 day period.

Figure 3: Percentage Change in the Value of the CAD Against the USD Over Rolling 60 Day Periods – January 2005 to January 2010



Source: Bank of Canada and EDC Corporate Research Department

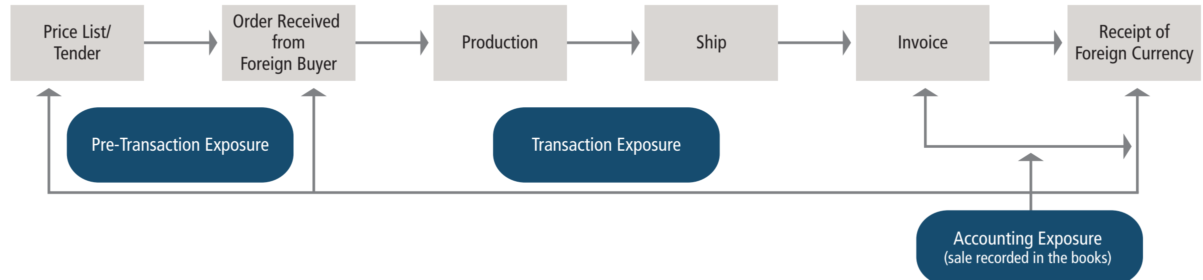
Such variations in exchange rates directly impact the profit margins of Canadian companies that export (and receive U.S. dollars) or that import (and need to make payments in U.S. dollars). For instance, if a Canadian exporter sells to a U.S. buyer component parts, for US$300,000, and has based its price on a USD/CAD exchange rate of 0.9375, then this means that it expects to receive CAD$320,000. If, at the time it receives the US$300,000 payment, the Canadian dollar is now worth 0.9920USD/CAD (equivalent to a 5.8% increase in value in the Canadian dollar), then the company will only receive CAD302,419. This represents CAD$17,581 less Canadian dollars than expected.

Once you have calculated your exposure, you need to develop your company's foreign exchange policy as part of **step two**. This policy should be endorsed by the company's senior management and usually provides detailed answers to questions such as:

- When should foreign exchange exposure be hedged?
- What tools and instruments can be used under what circumstances?
- Who is responsible for managing foreign exchange exposure?
- How will the performance of the company's hedging actions be measured?
- What are the regular reporting requirements?

The question of when to hedge is interesting. As Figure 4 illustrates, *transaction exposure* can begin much earlier than *accounting exposure*. As well, *pre-transaction exposure* cannot be ignored as selling prices, once quoted, can rarely be changed in today's global marketplace. Therefore you must carefully assess when to start hedging your exposure.

Figure 4: Pre-Transaction, Transaction and Accounting Exposure



Source: Accountancy *(September 2002) and EDC Corporate Research Department*

Step three involves putting in place hedges that are consistent with your company's policy. For example, you may want to increase the value of raw materials imported from the U.S. to partly offset the exposure created by sales to U.S. buyers. Alternatively, you may put in place basic financial hedges with a bank or foreign exchange broker. The most commonly used financial hedges are discussed further below.

Step four requires that you periodically measure whether the hedges are effectively reducing your company's exposure. Establishing clear objectives and benchmarks will help facilitate this evaluation. It will also alleviate the fear of those responsible for implementing the policy that they have somehow failed if the exchange rate moves in the company's favour and the hedges they put in place prevent the company from benefiting from that move.

Common Techniques and Instruments

There are two methods that companies can use to manage foreign exchange risk: natural hedging and financial hedging. Many companies use both methods.

Natural hedging

The objective of natural hedging is to reduce the difference between receipts and payments in a given foreign currency. For example, a Canadian manufacturer exports to the United States and expects to collect US$5 million over the next year. If it expects to make payments of US$500,000 during that time, the company's forecasted exposure to the US dollar is US$4.5 million (assuming it holds no U.S. dollars in a bank account at present).

To reduce this exposure, the company may decide to borrow US$1 million and to increase its procurement from American suppliers by US$1.5 million. This reduces the company's exposure to US$2 million. Alternatively, the company could decide to build or buy a production facility in the United States to eliminate most of the *transaction exposure*.

Natural hedging can be effective at reducing a company's foreign exchange risk but it can take time to implement natural hedges (e.g. finding new suppliers in another country) and these solutions often constitute long-term commitments (e.g. borrowing in U.S. dollars).

Financial hedging

The other method involves buying foreign exchange hedging instruments that are typically sold by banks and foreign exchange brokers. The ones most commonly used are: foreign exchange forward contracts, currency options and swaps.

Forward contracts allow a company to set the exchange rate at which it will buy or sell a given quantity of foreign currency in the future (on either a fixed date or during a fixed period of time). They are flexible instruments that can easily match future transaction exposures (generally up to one year). For example, if a company expects to have, over the coming year, a foreign exchange exposure where it receives US$350,000 more than it needs to pay every month, it can enter into a series of forward contracts to sell, at a predetermined exchange rate, this (or a lower amount) of U.S. dollars each month. By entering into these forward contracts, the company will have eliminated all or most of the transaction exposure it faces.

Forward contracts are easy to use and carry no purchase price – which makes them very popular with Canadian companies of all sizes. However, you do have a contractual commitment to deliver to (or purchase from) a bank or foreign exchange broker a fixed quantity of foreign exchange at a future date. If you don't, then the forward contract could be terminated or extended which could carry a price tag for your company.

This last point is important because it explains why banks and foreign exchange brokers set limits on the maximum amount that a company can hedge using forward contracts. It also serves to explain why collateral is often required when you buy a forward contract. If you buy from a commercial bank, the collateral required is usually a reduction in the amount that you can draw under your line of credit. EDC can help eliminate the need for collateral by providing your bank or foreign exchange broker with a guarantee. Information on EDC's Foreign Exchange Facility Guarantee (FXG) program is available at www.edc.ca/english/bonding_foreign_exchange.htm.

Foreign Exchange Pointers – Part 1

- If your company does not manage foreign exchange risk, then implicitly (or explicitly) you are assuming the exchange rate will remain stable or trend in a direction favourable to your company. This does not happen consistently over time.
- Managing foreign exchange risk does not mean you need to forecast the future direction of exchange rates.
- You can still protect your company from foreign exchange risk even if you don't know exactly when you will get paid for your export sales.
- An effective foreign exchange risk policy does not necessarily eliminate all risk, but focuses instead on protecting against those risks that are unacceptable to your company.
- Your exposure begins well before the point in time when you invoice your foreign customers (see Figure 4).
- Used in conjunction with natural hedges, forward contracts and swaps can meet the foreign exchange management objectives of most Canadian companies.
- Managing foreign exchange risk doesn't need to be time-consuming.

Currency options are other tools that can be used to mitigate transaction exposure. Standard options give a company the right, but not the obligation, to buy or sell foreign exchange in the future at a pre-determined exchange rate. Because these options do not oblige the company to sell or buy foreign currency (contrary to forward contracts), they are often used by companies that bid on contracts. Currency options allow companies to benefit from favourable movements in exchange rates, which is why most types of currency options carry an upfront cost.

For example, a company has purchased an option giving it the right to sell U.S. dollars at an exchange rate of 0.9635USD/CAD six months from now. If, at that time, the exchange rate is 0.9170USD/CAD, the company won't exercise its right to sell its U.S. dollars at 0.9635USD/CAD. If, however, the exchange rate is 0.9855USD/CAD, then the company will exercise its right to sell U.S. dollars at a rate of 0.9635USD/CAD.

The perceived complexity of currency options and the fact that most of them carry a purchase price has limited their use by Canadian companies, in particular smaller or medium-sized companies. Yet basic options are not difficult to understand and some of them, commonly called "Zero-Cost Collars" or "Participating Forwards", cost nothing to purchase (some collateral may be required). The principle behind these "free" options is simple: in return for accepting some downside risk (i.e. an unfavourable change in the exchange rate) your company will be able to benefit from *some* favourable movement in the rate of exchange.

Finally, **swaps**, which involve the simultaneous selling and buying (or buying and selling) of a foreign currency, can help firms match receipts and payments in a foreign currency. For example, if a company receives a US$250,000 payment today and knows it will have to make a payment of US$250,000 in 45 days, it could enter into a swap arrangement whereby it sells US$250,000 today (in exchange for Canadian dollars) and commits to purchase the same amount of U.S. dollars in 45 days at an exchange rate that is pre-determined. Entering into a swap allows the company to have access to the Canadian dollar equivalent of US$250,000 for the next 45 days. It also eliminates foreign exchange exposure during this period. However, the company now has a contractual commitment to purchase U.S. dollars in 45 days and will need to pay for these with Canadian dollars at that time.

Swaps are simply a combination of a "spot" transaction (purchase or sale of foreign currency for delivery within 24–48 hours) and a forward contract. There are no direct costs associated with the purchase of swaps (some collateral may need to be posted). Swaps are extensively used by Canadian companies for cash management purposes. They are also regularly used by larger Canadian firms that borrow in foreign currencies.

Foreign Exchange Pointers – Part 2

- There is no single "best" approach to use when deciding how to hedge foreign exchange risk. For example, some companies protect only confirmed sales while others protect forecasted sales. Factors such as the company's risk tolerance, sensitivity of earnings to changes in exchange rates and the predictability of future sales will influence this decision.
- Don't hesitate to shop around in order to get the best price and service for your foreign exchange needs.
- If a banker or foreign exchange broker requires that you post collateral, EDC can help through its **Foreign Exchange Facility Guarantee (FXG)** program. (www.edc.ca/english/bonding_foreign_exchange.htm)
- Managing foreign exchange risk can only protect your company in a temporary way against long-term increases in the value of the Canadian dollar. In order to adapt to a stronger loonie, your company will need to take steps such as improve productivity, reduce costs, find new buyers, develop new products and improve customer service. EDC can help by providing **financing** (www.edc.ca/english/financing.htm), **insurance** (www.edc.ca/english/insurance.htm) and **bonding** solutions (www.edc.ca/english/bonding.htm) as well as **market intelligence** (www.edc.ca/search/countryinformation_home.asp?sLang=e).

Learning more about foreign exchange risk management

If your company would like to learn more about foreign exchange and/or wants assistance in developing a foreign exchange policy, contact directly (or consult the web sites of) some of the following types of organizations: banks, foreign exchange brokers, foreign exchange consultants, management consultants, accounting firms, chambers of commerce and industry associations.

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