Investment Insights

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Managing currency risk for Canadian Investors

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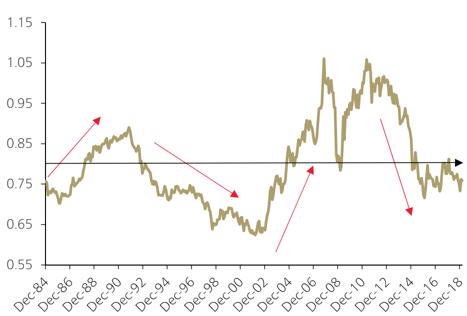
Since the repeal of the foreign content rule in 2005, Canadian pension plans have increasingly invested assets outside of the country. According to the Pension Industry Association of Canada, the allocation to foreign assets as a percentage of total assets has grown from just under 30% in 2005 to over 53% in 2017. Given the increase in foreign assets, the associated currency risk has also grown and has been an exposure that institutional investors have had to determine how to manage.

Currency risk can be defined as the effect that foreign currency movements have on the value of assets denominated in the base currency of an investor. Should an investor own a foreign asset that appreciates, there is a risk that the currency that the asset is denominated in depreciates and minimizes any gains from the underlying asset.

Before addressing the risks associated with holding foreign currency exposure, let's look at the returns associated with currency. Over the long term, it is generally accepted that there should not be a return premium associated with holding a developed currency relative to another developed currency, and that developed currencies are mean reverting. As per exhibit A below, the exchange rates relative to the Canadian dollar for both the US dollar and British pound have been volatile over the past 30 years, but have generally moved around the mean. Emerging market currencies, however, are anticipated to appreciate relative to developed currencies over time given higher growth rates, favourable demographics and maturing capital markets.

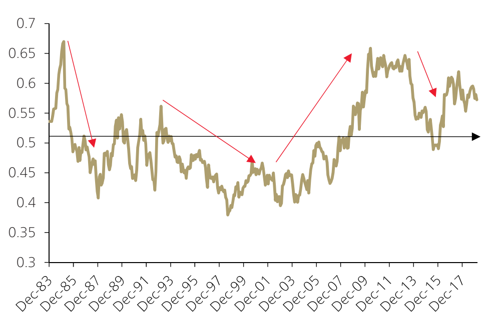
Exhibit A

Historical CAD/USD exchange rate



Source: Bloomberg (data from Jan 1984 to Feb 2019)

Historical CAD/GBP exchange rate



Source: Bloomberg (data from Jan 1984 to Feb 2019)

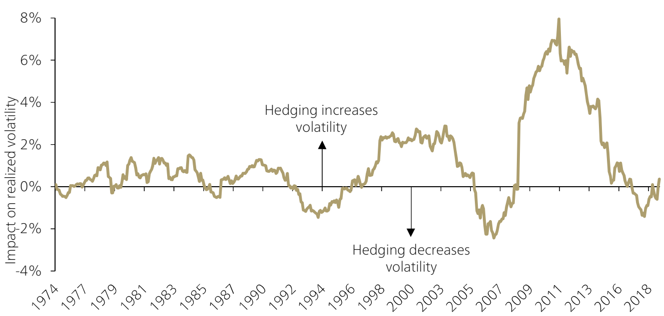
Even though developed market currencies are expected to mean-revert over time, there can be significant short term moves in currencies that can create unexpected return outcomes.

Since the majority of foreign currency risk results from equity investments outside of Canada, we'll focus our analysis on the relationship between foreign currencies and equities. The S&P 500 generated a 26% return during the 2003 calendar year in US dollar terms but given a 21% rise in the value of the Canadian dollar, Canadian investors experienced a 4% return if they did not hedge the currency risk. Unanticipated returns from currency can also provide positive return surprises—the S&P 500 was essentially flat (-0.7%) in 2015 but Canadian investors experienced an 18% return due to the drop in the value of the Canadian dollar.

Anecdotal examples of currency impacts are enlightening but we can also utilize the conventional method of measuring risk by calculating volatility or standard deviation of returns. The realized volatility of monthly returns for the S&P 500 has been 15% since 1971 but when measured in Canadian dollars, the realized volatility is reduced to 13.9%. As evidenced from exhibit B below, realized rolling 3-year volatility has generally been higher when currency hedging occurs, meaning that currency exposure has generally reduced volatility as opposed to increasing it. This is due to the negative correlation between the US dollar relative to the Canadian loonie and the direction of global stock markets. This means that an unhedged Canadian investor usually experiences slightly lower returns in times when global stock markets are rallying as the loonie is typically performing well. However, an unhedged Canadian investor does benefit from some downside protection when stock markets are selling-off as the value of their foreign holdings are increasing as the loonie slides.

Exhibit B

Impact of hedging on rolling 3 year US equity volatility



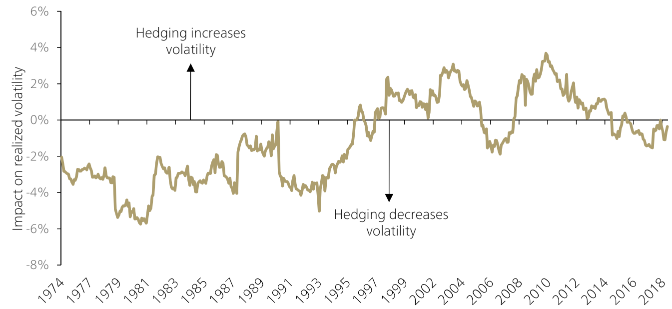
Source: Bloomberg, Scotia Global Asset Management (data from Dec 1971 to Jan 2019)

Our analysis so far has focused on the impact of US dollar currency exposure to portfolio risk and return, but what about other currencies? As mentioned above, EM currencies are expected to appreciate over time, meaning strategic exposure to EM currencies should help future returns. Additionally, the cost associated with hedging EM currencies can be significant due to the large interest rate differential between Canada and EM countries. Hedging is typically done with currency forwards, meaning that in order to hedge the currency, an investor needs to sell the foreign currency and buy Canadian dollars. In selling the foreign currency, a Canadian investor is essentially paying an overnight rate in a foreign currency and receiving a Canadian overnight rate. Other issues that investors experience when hedging EM currencies include capital controls and increased bid-ask spreads.

In developed markets outside of the US, historical analysis of volatility reduction from currency hedging shows a mixed picture. As per exhibit C below, hedging EAFE currencies as a basket prior to the mid-90s provided a reduction in volatility but since that time, hedging has generally increased volatility.

Exhibit C

Impact of hedging on rolling 3 year EAFE equity volatility



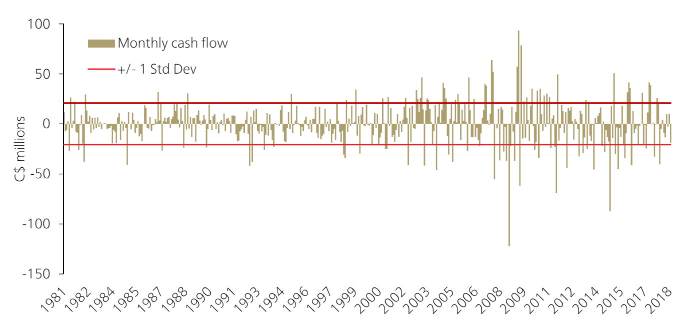
Source: Bloomberg, Scotia Global Asset Management (data from Dec 1971 to Jan 2019)

After looking at historical analysis of the impact of currency hedging on equity volatility, can we finalize an answer as to the appropriate hedging policy for Canadian investors when allocating capital to foreign equities? It appears that Canadian investors would experience less volatility with a policy of not hedging US dollars and hedging EAFE currencies purely based on historical statistics. However, the historical drivers of currency movements may not play-out in the future. From a practical perspective, most Canadian institutional investors institute a 50% hedge ratio policy for foreign equities, which is typically known as the decision of least regret given it is never entirely wrong or right.

Once an investor makes a decision to hedge, a significant implication from currency hedging is settling mark-to-market gains or losses that occur as a result of settling FX forwards. Cash flows can be a significant percentage of underlying assets and creating liquidity for settling hedging transactions could potentially be challenging. For example, the Canadian dollar dropped by 12% in a month relative to the US dollar during the financial crisis and as a result, cash needed to be raised in a tough liquidity environment in order to settle those losses. Aside from liquidity concerns, transactions costs of raising cash to meet settlement requirements can also be significant. One method to reduce cash flow volatility associated with currency hedging is to stagger FX forward settlement dates so that cash flows are spread-out as opposed to occurring at month end. As per the exhibit D below, the cash flow volatility is significantly reduced when moving FX forward transactions from a 1 month settlement period to a staggered 3 month settlement cycle. The information presented uses historical USD/CAD exchanges rates and assumes a $1 billion portfolio that is 100% currency hedged.

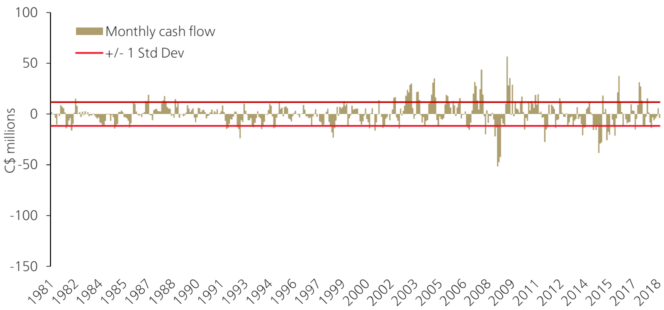
Exhibit D

Monthly cash flow volatility—1 month settlement



Source: Bloomberg, Scotia Global Asset Management (Dec 1980 to Oct 2018)

Monthly cash flow volatility—3 month settlement



Source: Bloomberg, Scotia Global Asset Management (Dec 1980 to Oct 2018)

Institutional investors not only have to make a decision with respect to hedging equity exposure, but also other asset classes such as fixed income and alternative investments. It is widely accepted that it is appropriate to fully hedge any developed market fixed income exposure as currency volatility is typically higher than volatility associated with rates or credit. When it comes to fixed income allocations that are denominated in emerging markets currencies, similar to emerging markets equities, the cost of hedging is often excessive and can eliminate the additional return benefits of an allocation to emerging market debt. Currency hedging policies for alternative investments typically set hedging at 100% for developed currencies as there are usually periodic cash flows associated with private equity, real estate and infrastructure that investors typically have little control over. Additionally, general partner structures are incented to maximize returns in the currencies of the funds that they are responsible for managing given performance fees and investors would be wise to align their interests by hedging currency exposure.

In summary, when deciding on strategically managing currency exposure, Canadian investors should take the following into consideration:

- Based on historical relationship, Canadian investors experience lower volatility on equity investments by leaving US currency exposure unhedged and hedging EAFE currencies.
- Fixed income currency exposures should be fully hedged as volatility associated with currency movements is often in excess of the volatility and expected returns from fixed income portfolios.
- Emerging market currency exposures are costly to hedge and we recommend that investors avoid hedging in all asset classes.
- When any currency hedging activity takes place, investors should consider staggering the settlement dates associated with outstanding notional amounts in order to reduce cash flow volatility resulting from settling FX forwards.

In closing, whatever strategic policy decisions are made by investors with respect to currency hedging, we would caution against making abrupt or frequent changes to this policy when currency markets become volatile. It is human nature to question policy decisions when they underperform, but the mean reverting nature of developed currency markets should be kept in mind when assessing the long term success of policy setting with respect to currency risk.

1 Bloomberg.
2 Pension Investment Associated of Canada website.
3 Scotia Global Asset Management.