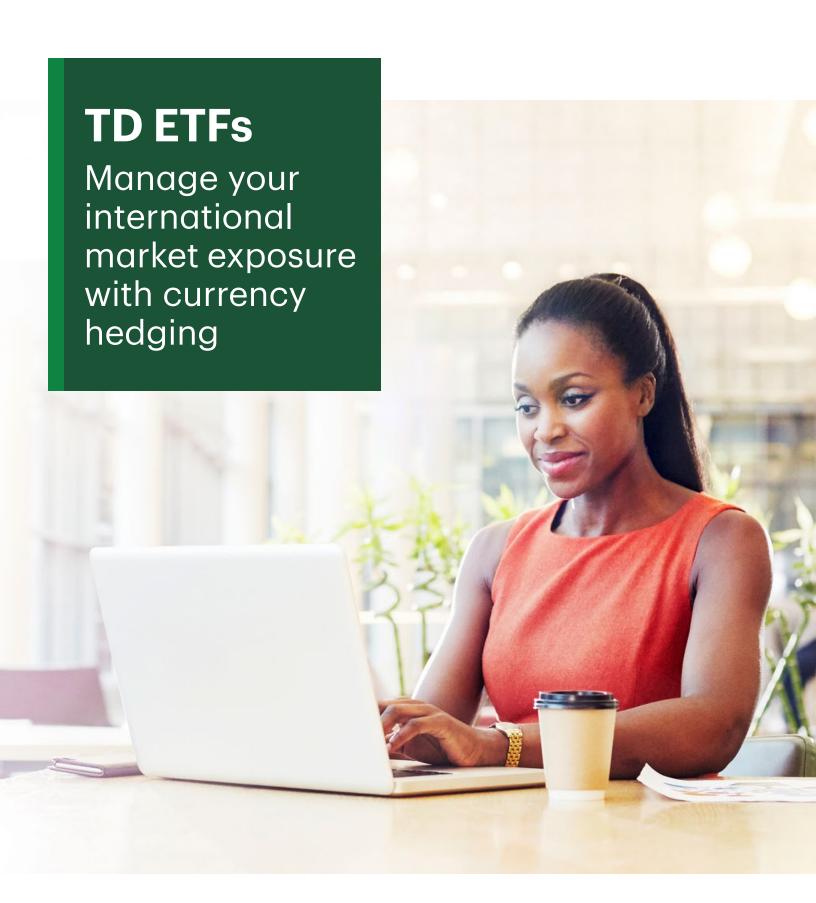
TD Asset Management

Brochure () 10 Minutes





Investing in international assets can open up a world of investment opportunities not available domestically and can provide diversification benefits. Take the Technology sector. To gain exposure to the world's tech giants, Canadian investors must look to invest outside their home markets.

The challenging part is, investing beyond our borders also means investing in a foreign currency. In addition to the asset, investors also buy into the currency in which the international security is denominated.

Currency Risk

Canadian investors typically use their Canadian dollars (CAD) to buy investments. Since a significant amount of investment opportunities (like U.S. or other international stocks or bonds) are outside of Canada, these investments are typically paid for in the currency of the country in which the issuer is based.

Many Canadians will get exposure to international investments through a Canadian based exchange-traded fund (ETF) or mutual fund. The fund will typically be priced in CAD while the fund's underlying investments will be priced in other currencies. This creates potential foreign currency exposure risk — in that the value of an investment held by a fund will be affected by changes in the value of the currency in which the investment is denominated, relative to the base currency of the fund.

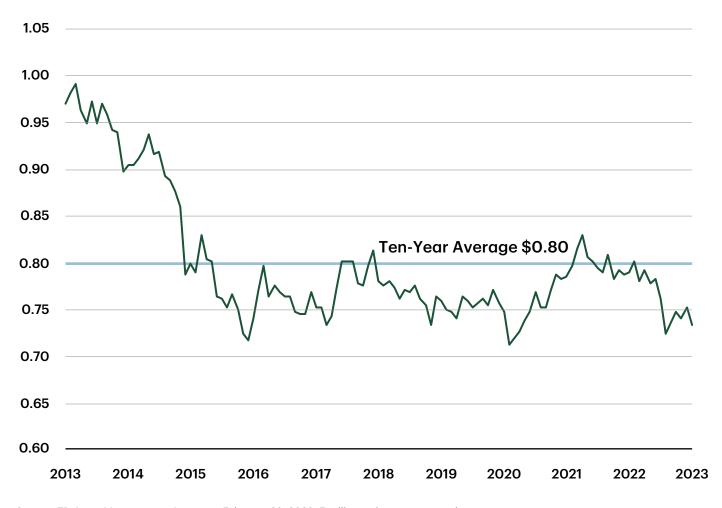
Adverse currency fluctuations can often minimize the performance of portfolios with substantial international exposure. For instance:

- When a foreign currency appreciates against an investor's base currency, it works in the investor's favour, adding to any gains associated with the underlying investment.
- However, the opposite is also true. When a foreign currency depreciates against an investor's base currency, any returns from the underlying investment can erode or even be eliminated completely.



The chart below shows the Canadian dollar (CAD) to U.S. dollar (USD) exchange rate over the past ten years highlighting potential currency exposure risk as currencies fluctuate over time.

Ten-Year Historical CAD/USD Exchange Rate



Source: TD Asset Management Inc. as at February 28, 2023. For illustrative purposes only.

Gurrency

Currency Hedging

Currency hedging is similar to the concept of insurance and can help protect investors from currency risk. Most currency hedging strategies will attempt to minimize foreign currency risk by using foreign exchange derivative instruments. These instruments attempt to reduce (or 'hedge') the increase or decrease in the value of an investment due to changes in the exchange rate, so that the main factor in the fund's return becomes the performance of the underlying securities.

When a derivative is used as a hedge against a position that a fund holds, a reduction in the value of the currency being hedged should substantially be offset by a gain in value generated by the derivative, and vice-versa. Overall, a currency hedged portfolio aims to even out returns that may otherwise be more volatile due to fluctuations in exchange rates.

Why Would Exchange Rates Fluctuate?

The exchange rate between currencies change based on the supply and demand for each currency. There are a multitude of reasons why one currency may find itself more in demand relative to another, including a country's economic prospects, outlook on inflation, interest rates, and capital flows, among other factors. What matters is the perceived value in owning one currency over the other, either to pay for a good or service, or as an investment.

Canada is known as an exporting nation. Greater demand for Canadian goods, whether resources or manufactured goods, typically increases the value of the CAD relative to other currencies. The reverse is also true.

The USD is a relatively stable currency compared to many others. Investors from countries with a less stable currency may prefer to own USD or hold USD denominated investments as protection from the fluctuating exchange rate of their local currencies.



Currency Hedging in Action

Currency hedging is designed to smooth out currency fluctuations. The table below illustrates the effects of an increase or decrease in the CAD currency value relative to the USD within an unhedged, fully hedged and 50% hedged USD portfolio.

Effects of changes in currency value:	Unhedged USD portfolio	Fully hedged USD portfolio	A 50% hedged USD portfolio
C\$ ↑ 10% vs. US\$	-10%	0%	-5%
C\$ ▼ 10% vs. US\$	+10%	0%	+5%
C\$ ▲ 20% vs. US\$	-20%	0%	-10%
C\$ ▼ 20% vs. US\$	+20%	0%	+10%

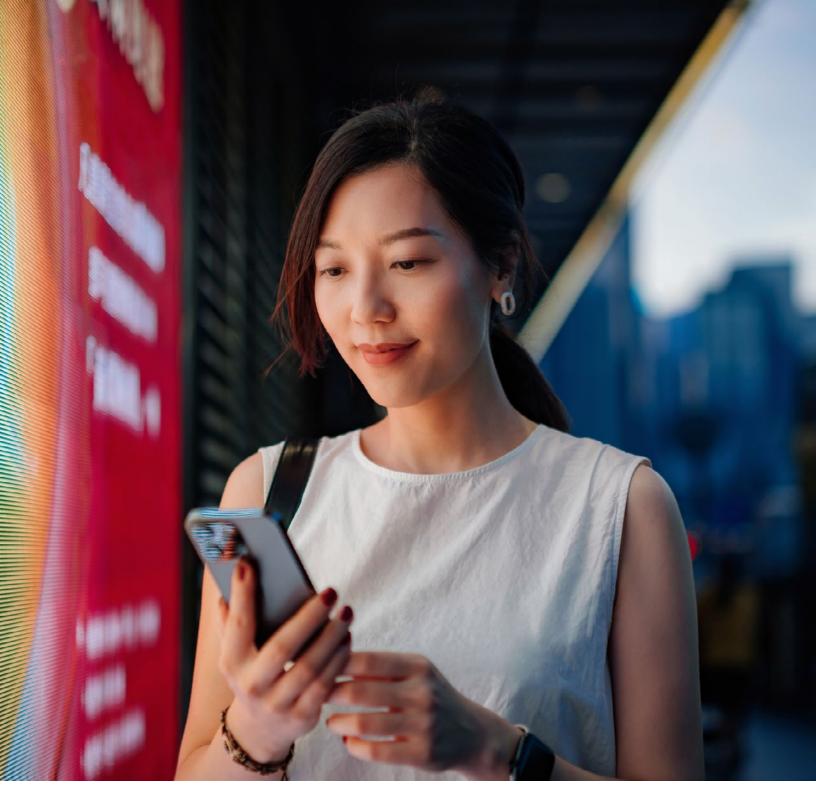
Source: TD Asset Management Inc. as at February 28, 2023. For illustrative purposes only. "Effects of changes in currency value" are for an undetermined period as the time period will not alter/affect the other data shown. The "Unhedged USD Portfolio" will have the inverse return of the change in the value of the CAD vs. USD due to currency effects alone. "Fully hedged USD portfolio" assumes a perfect currency hedge which will gain or lose on the currency movement perfectly offsetting gains or losses of the Unhedged USD portfolio due to currency movement. The "50% hedged portfolio" assumes a perfect 50% hedge which will gain or lose 50% of the currency movement which offsets half of the gains or losses due to currency movement. Underlying portfolio returns are not shown or can assumed to be zero for illustration purposes.

Benefits of Currency Hedging

- Foreign exchange markets can be very volatile, especially in the short term. Currency hedging can help protect against the risks of currency fluctuations on investment performance.
- If you are a Canadian investing outside of Canada, you may want to minimize the currency risk from your investment by buying a product like a currency hedged fund that reduces its currency exposure – leaving you the returns of the actual underlying investments in CAD terms.

Risks of Currency Hedging

- If the currency moves in a way that would have been to your advantage, you will miss out on this benefit due to the loss from the derivative currency hedge.
- It is extremely difficult to predict the timing of currency movements and the impact of currency movements tend to diminish over time.
 A well-diversified portfolio with exposure to many different currencies tends to see currency movements even out over the long term.



What Derivatives are Used for Currency Hedging?

Portfolio Managers can hedge against foreign currency risk through:

- Forward / Future contracts A currency forward
 or future is a binding contract that locks in a
 certain exchange rate for the purchase or sale of a
 currency at a future date. This protects the buyer
 or seller from adverse exchange rate events that
 may occur. Forward contracts are customizable
 while future contracts are standardized.
- Options Options give the right, but not the obligation, to exchange one currency for another at a certain rate for a specified period of time. This makes it less likely that exchange rate fluctuations will affect the return on investment.

The Bottom Line

Before investing in ETFs or mutual funds that invest in foreign markets, it is important to note whether the manager of the fund hedges their currency exposure. In certain cases, investors will find that they have a choice between a currency hedged version and one that is not.

An investor's level of comfort with short-term fluctuations in their investments due to foreign exchange rate movements, or their outlook on a particular currency (or basket of currencies), may determine whether hedging may be suitable for them.

Another strategy may be to invest in both hedged and unhedged versions. An even 50%-50% split between a hedged and unhedged version of the same fund can help minimize the downside if currency fluctuations move against an investor, while also allowing for some upside.

Alternatively, investors who already have USD in their investment account may consider using a USD denominated series of some funds (identified by the '.U' after the ticker symbol). This helps remove costs inherent in exchanging one currency for another. In these ETFs, the market price and trades are denominated in USD and distributions are paid in USD.

TD Asset Management Inc. now offers 4 ETFs with both currency hedged and non-hedged versions, as well as 5 USD versions:

ETF	Unhedged	CAD Hedged	U.S. Dollar
TD U.S. Equity Index	TPU >	THU >	TPU.U >
TD International Equity Index	TPE >	THE >	n/a
TD Active U.S. Enhanced Dividend	TUED >	TUEX > NEW	TUED.U >
TD Active Global Enhanced Dividend	TGED >	n/a	TGED.U >
TD Global Technology Leaders Index	TEC >	TECX > NEW	TEC.U >
TD Global Healthcare Leaders Index	TDOC >	n/a	TDOC.U >

Note: The management fees for each of the hedged versions of these equity funds is the same as their unhedged versions.





For more information, visit www.td.com/ETFs or contact your investment professional.

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