

Getting a handle on the impact of currency

Currency returns are an important factor impacting any investor purchasing a non-Canadian asset. Since the underlying investments of these assets are bought in a foreign currency, the appreciation or depreciation of the foreign currency against the Canadian dollar can either add or detract from the total return.



The objective of currency hedging is to remove the effects of foreign exchange movements, giving Canadian investors a return that approximates the return of the local market.

ETF providers offer both hedged and unhedged options giving Canadian investors more tools to efficiently execute their investment strategies. A common institutional approach is to use a blended application, typically 50% hedged, 50% unhedged. Portfolio managers may take an active approach to generate alpha from moves in currency, while others may choose to remain 100% hedged and eliminate currency risks.

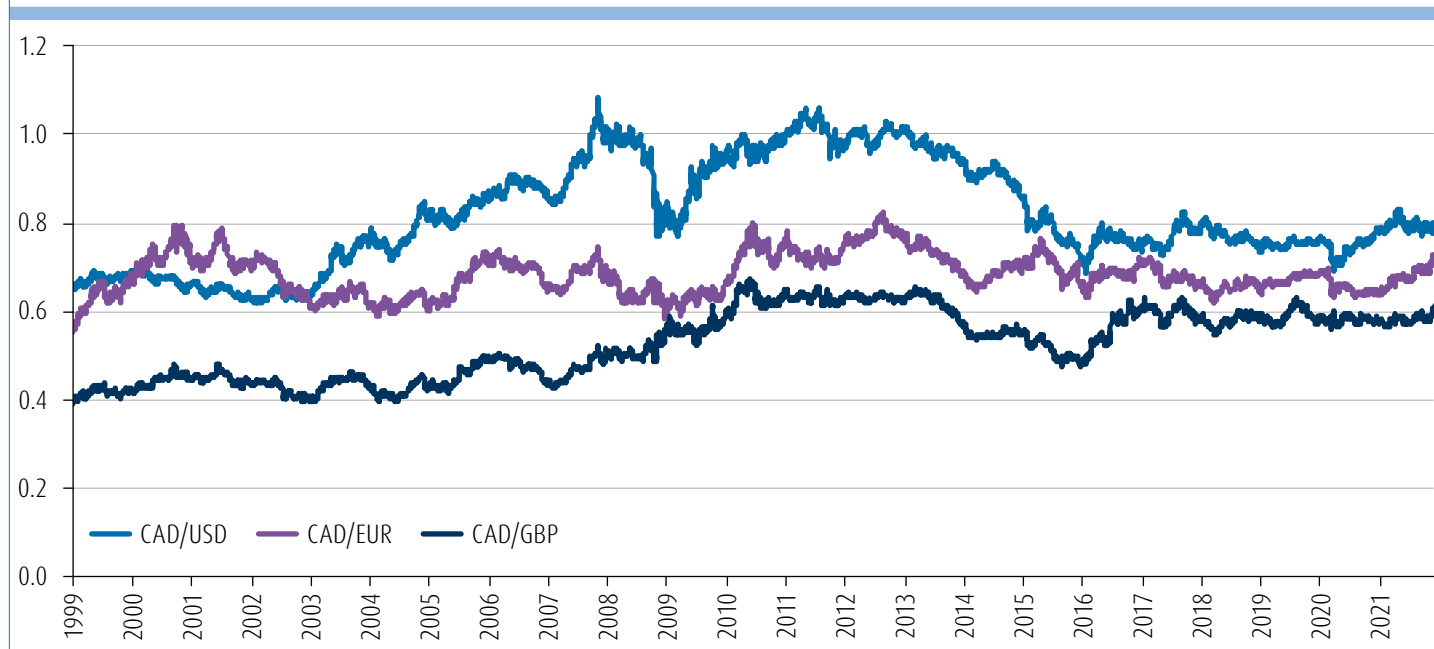
The impacts of currency should not be overlooked

In theory, there is purchasing power parity (PPP) between two currencies, to which they will revert to over time. In practice however, currencies can trade beyond their PPP for extended periods of time, and not all investors are looking to hold an investment over the long-term. Over

Hedging is accomplished by taking a short position in the foreign currency to match the underlying portfolio. If the underlying currency of the foreign investment loses value relative to the Canadian dollar, these losses would be offset by the gain in the currency forward contract. Conversely, if the underlying foreign currency appreciates against the Canadian dollar, these gains would be offset by the losses in the currency forward.

the short-term, the impact of currency can actually be quite substantial and add volatility. The chart below shows a historical look at the Canadian Dollar versus other major currencies.

Currency volatility – a 20 year picture of CAD vs other major currencies



The return of the Canadian dollar vs. other major currencies

Year	U.S. Dollar	Euro	British Pound	Japanese Yen
2008	-18.12%	-14.51%	11.34%	-33.55%
2009	15.90%	13.00%	4.54%	18.76%
2010	5.41%	12.89%	9.28%	-7.96%
2011	-2.31%	0.85%	-1.89%	-7.35%
2012	2.96%	1.18%	-1.48%	16.06%
2013	-6.60%	-10.35%	-8.37%	13.39%
2014	-8.59%	3.84%	-2.83%	3.96%
2015	-16.01%	-6.43%	-11.22%	-15.71%
2016	2.96%	6.25%	22.92%	0.17%
2017	6.91%	-6.28%	-2.34%	3.04%
2018	-7.83%	-3.50%	-2.40%	-10.31%
2019	4.99%	7.37%	1.06%	4.00%
2020	2.01%	-6.36%	-1.03%	-2.99%
2021	0.75%	8.17%	1.71%	12.26%
20 Year Average Return	1.28%	0.31%	1.68%	1.66%
20 Year Standard Deviation	9.17%	8.73%	8.96%	11.97%

Source: BMO Asset Management Inc., Bloomberg.

A closer look at the impact of currency on Canadian returns

Year	S&P 500 Index (Currency Hedged)	S&P 500 Index Total (Currency Unhedged)
2005	4.06%	2.29%
2006	14.64%	15.35%
2007	3.79%	-10.53%
2008	-39.02%	-21.20%
2009	24.08%	7.39%
2010	13.55%	9.06%
2011	1.71%	4.64%
2012	16.26%	13.43%
2013	33.33%	41.27%
2014	14.32%	23.93%
2015	0.91%	21.59%
2016	11.40%	8.09%
2017	21.16%	13.83%
2018	-5.70%	4.23%
2019	29.87%	24.84%
2020	15.79%	16.32%
2021	34.81%	16.32%
15 Year Average Return	11.47%	11.87%
15 Year Standard Deviation	16.44%	21.01%

Source: BMO Asset Management Inc., Bloomberg.

Currency risk: to hedge or not hedge

The decision can be based on a number of different factors that are specific to the investor.

1. Investor outlook on the currency

As an example, an investor believes the U.S. dollar may appreciate against the Canadian dollar. If this individual is looking to invest in U.S. equities, an unhedged U.S. equity ETF may be more suitable. If the investor's assumption is correct, he will receive both the returns on the underlying securities and the gains on the currency. On the other hand, if an investor believes the foreign currency will depreciate against the Canadian dollar, a hedged U.S. equity ETF may be the better solution. Given his assumption is

correct, the investor will get the returns from the underlying securities, however, the loss of the U.S. dollar relative to the Canadian dollar will be mitigated.

2. Time horizon of the investor

Over shorter periods, it is more likely that currencies can deviate from their equilibrium values as measured by PPP. Given the higher unpredictability over shorter time horizons, hedging currency risk may be a consideration for these investors.

3. Correlation of investments and currency

An understanding of the correlation between investments and its currency may also impact the decision. Some currencies, such as the U.S. dollar, tend to be negatively correlated with equity markets. Consequently, the currency can provide an additional source of diversification for investors. An unhedged position can potentially reduce the volatility of the investors portfolio.

On the other hand, an investor may wish to currency hedge their Euro exposure given the currency has tended to move in the same direction as equity markets. For currencies that tend to be positively correlated to equities, the currency can add additional volatility to the portfolio.

Correlation of asset classes and currency

Asset Class	U.S. Dollar	U.S. Equity	U.S. Fixed Income
U.S. Dollar	1.000	-0.096	0.572
U.S. Equity	-0.096	1.000	0.075
U.S. Fixed Income	0.572	0.075	1.000

U.S. Equity proxy: S&P 500 Index

U.S. Fixed Income proxy: Bloomberg U.S. Aggregate Bond Index 10 year correlation, as of March 31st, 2022.

Source: BMO Asset Management Inc., Bloomberg, March 31st 2022.

4. Cost of the underlying hedge

Currencies forwards that are very liquid, such as the U.S. dollar, are less expensive to hedge. On the other hand, for underlying currencies that are less liquid, such as those for emerging markets, hedging foreign exchange exposure becomes more costly and less efficient.

In recent years, ETFs have made accessing U.S. and international markets easier for investors. However, the decision on whether to hedge currency risk tends to be overlooked by many investors. As currency could signifi-

cantly benefit or disadvantage the total performance of a foreign investment, it should not be taken lightly. The number of hedged and unhedged ETFs allow investors more opportunities to meet their investment objectives.

BMO ETFs Currency Road Map

Equity												
BMO S&P 500 ZUE hedged to CAD ZSP unhedged ZSP.U unhedged USD traded			BMO S&P US Mid Cap Index ETF ZMID.F hedged to CAD ZMID unhedged ZMID.U USD units			BMO S&P Small Cap Index ETF ZSML.F hedged to CAD ZSML unhedged ZSML.U USD units			BMO NASDAQ 100 Equity ZQQ hedged to CAD ZNQ unhedged ZNQ.U USD units			
BMO US Dividend ZUD hedged to CAD ZDY unhedged ZDY.U USD units			BMO MSCI USA High Quality ZUQ.F hedged to CAD ZUQ unhedged ZUQ.U USD units			BMO Low Volatility US Equity ZLH hedged to CAD ZLU unhedged ZLU.U USD units			BMO Equal Weight US Banks ZUB hedged to CAD ZBK unhedged		BMO Equal Weight U.S. Health Care ZUH hedged to CAD ZHU unhedged	
BMO MSCI USA ESG Leaders Index ETF ESGY unhedged ESGY.F hedged to CAD			BMO MSCI EAFE ZDM hedged to CAD ZEA unhedged			BMO Japan Index ETF ZJPN unhedged ZJPN.F hedged			BMO International Dividend ZDH hedged to CAD ZDI unhedged		BMO Low Volatility International Equity ZLD hedged to CAD ZLI unhedged	
Yield Focused												
BMO Covered Call Canadian Banks ZWB hedged to CAD ZWB.U USD Units			BMO US High Dividend Covered Call ZWS hedged to CAD ZWH unhedged ZWH.U unhedged USD traded			BMO US High Dividend Covered Call ZWE hedged to CAD ZWP unhedged			BMO US Put Write ZPH hedged to CAD ZPW unhedged ZPW.U unhedged USD traded			
BMO Premium Yield ETF ZPAY.F hedged to CAD ZPAY unhedged ZPAY.U unhedged USD traded			BMO Monthly Income ETF ZMI unhedged ZMI.U USD Units			BMO US Preferred Share ZHP hedged to CAD ZUP unhedged ZUP.U unhedged USD traded			BMO Laddered Preferred Share ETF ZPR unhedged ZPR.U USD Units			
Fixed Income												
BMO Short-Term US Treasury Bond ZTS unhedged ZTS.U USD units				BMO Mid-Term US Treasury Bond ZTM unhedged ZTM.U USD units				BMO Long-Term US Treasury Bond ZTL unhedged ZTL.F hedged units ZTL.U USD units				
BMO Short-Term US Bond ZUS.U USD units ZUS.V USD accumulating units		BMO High Yield US Corporate Bond ZHY hedged to CAD ZJK unhedged ZJK.U unhedged USD traded			BMO Mid-Term US IG Corporate Bond ZMU hedged to CAD ZIC unhedged ZIC.U USD units			BMO Short-Term US TIPS Index ETF ZTIP.F hedged to CAD ZTIP unhedged ZTIP.U USD Unit				



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