Hedging Your Bets, With Currency-Hedged ETFs

CPM Music

Thanks for tuning in to **Episode 9** of the Canadian Portfolio Manager podcast, where we help you become a better ETF investor. I'm your host Justin Bender, and joining us once again is Steven Leong, who leads product and capital markets for BlackRock's ETF business in Canada.

Steven Leong: Thanks so much for having me back on the podcast. This was a lot of fun last time, and it's great to be here again.

If you tuned in for our last show, you now know a lot about the currency exposure in your foreign equity ETFs. Our key takeaways were roughly three-fold:

1. First, when you purchase the foreign equity ETFs in our CPM model portfolios, you're instantly exposed to foreign stock markets ***and*** those markets' foreign currencies.

2. Second, we explained how and why it makes NO difference whether you buy your foreign equity ETFs with your Canadian or U.S. dollars. It's completely irrelevant to your actual currency exposure.

3. And third, we showed you how, relative to Canadian loonies, a ***depreciating*** foreign currency ***hurts*** your unhedged investment returns … and an ***appreciating*** foreign currency ***helps*** them.

Fortunately for those who just can't get enough of this topic, we've left plenty more ground to cover today. In particular, our last post begged an important question:

What if you only wanted exposure to foreign stock markets, ***without*** the potentially damaging currency exposure of unhedged ETFs?

This is where currency-hedged ETFs can be useful. If you could eliminate your foreign currency exposure, you would no longer need to be concerned with foreign currency fluctuations.

But, as usual, there are a ton of mind-bending caveats to consider before you decide whether currency-hedged ETFs are the way to go in your own portfolio. Here are three main points we're going to cover today:

1. First, with respect to foreign currency hedging, we Canadians are different from just about anyone else in the world. Not that there's anything wrong with that! But it means we need to be careful about heeding generic rules of thumb on the matter. They may not apply to us.

2. Second, because we are different, we use unhedged ETFs in our CPM model portfolios. I'll explain why in painful detail, but also remember this: ***Whether you use hedged or***

unhedged equity ETFs, don't expect an enormous difference either way when it comes to your actual end returns. At least not compared to other, bigger portfolio management decisions like your global asset allocation.

3. And third, whether you decide to go hedged or unhedged, we recommend picking one strategy or the other, and sticking with it over time. Just as with trying to time the stock markets, an active attempt to chase near-term currency movements is likely to be a futile and costly pursuit.

Okay, one more housekeeping item before we dive in. Today, we're focusing exclusively on currency hedging for foreign ***equity*** ETFs. That's because the decision for foreign ***bond*** ETFs is almost a no-brainer. Volatility is much higher in currency-unhedged vs. currency-hedged foreign bond ETFs. So, especially since bonds should serve as your portfolio's stabilizing force, I generally recommend hedging 100% of your foreign bond currency exposure.

So Steven, if you will, please fill us in on why some investors may want to hedge their foreign currency exposure in their equity ETFs, as well as how the currency hedging process works.

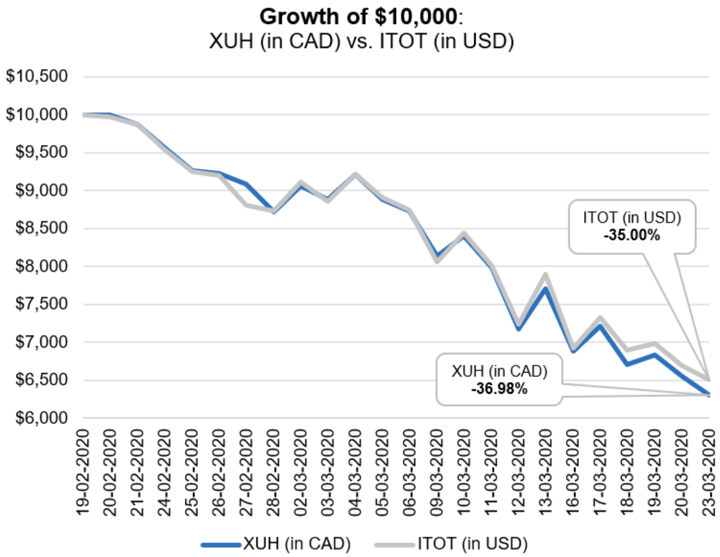
Steven Leong: The purpose of currency-hedging is to try and remove fluctuations in the value of the investment, due to changes in currency values. Essentially, what you're trying to do is hedge the risk that your foreign currencies go down against the Canadian dollar. Currency hedging is intended to smooth out these fluctuations due to currency movements, leaving you only with exposure to stock prices.

So how does it work? To implement a currency hedge, a fund will typically use instruments known as forward contracts – these are derivatives that allow you to sell foreign currency and buy Canadian dollars at an exchange rate that is agreed upon today, but where no money actually changes hands until sometime in the future, typically something like one month from now. You're locking in a price at which you are going to sell foreign currency. So, this means that if the foreign currency subsequently goes down, you'll be protected. At the same time, if it goes up, you won't benefit.

The purpose of holding currency forwards is that they balance out the exposure created by owning foreign stocks. The currency forwards will make money if the foreign currency goes down, but lose money if the foreign currency goes up. This is the opposite of what happens with the foreign stock. Because these contracts expire, in a currency-hedged ETF, like XUH, the fund typically sets up a hedge at the start of the month. At the month end, the position is settled, and the fund has to set-up a new one. This is known as "rolling the forwards". The roll happens in such a way that there's a hedge in place at all times, so there's no interruption in the exposure.

So, take a currency-hedged ETF, like the iShares Core S&P U.S. Total Market Index ETF (with ticker symbol XUH). It's basically trying to provide Canadian investors with a similar return to what a U.S. investor would earn investing in their local U.S. stock market, but with no U.S. dollar exposure drama.

But there have been times when XUH didn't closely follow U.S. stock market returns. For example, between February 19th and March 23rd, 2020, the U.S. stock market lost 35% of its value. An unhedged U.S. equity ETF like ITOT also lost 35% in local currency returns. But the currency-hedged ETF, XUH, lost 37% of its value in Canadian dollar terms. It lagged the U.S. stock market's local currency return by 2% over this short-term period.



Source: BlackRock Inc.

Steven Leong: Currency-hedging doesn't perfectly eliminate all currency exposure, partly because the hedge is being reset on a monthly basis, and during the month, the foreign stocks are going to go up or down a little bit. This makes the hedge slightly too large or too small relative to those stocks. However, hedging on a monthly basis strikes a good balance between adjusting too often and too little. Hedging too frequently is a little bit like chasing your own tail. While the currency forwards are generally not expensive to trade, the cost could still add up if you trade too often. Short-term interest rates also affect how currency forwards are priced, so this introduces a little bit of noise into the performance of hedged ETFs.

One thing I do want to stress is that a fund can't simply make currency exposure disappear. It actually has to transact in financial instruments to implement a hedge. There's no magic "hedge currency" button, much in the same way that there's no magic "minimize tracking error" button.

So, although all of the foreign equity ETFs we include in the CPM model portfolios are unhedged, you can easily swap out the U.S. and international equity ETFs for currency-hedged alternatives. The product costs and foreign withholding tax implications of the hedged ETFs would also be similar to their unhedged Canadian-based counterparts.

Steven Leong: There's really nothing wrong with sticking with non-hedged U.S. and international stock exposure, and foreign currency (especially the U.S. dollar), is often a useful diversifier. All that being said, there are a lot of good and popular options for investors who either have a strong view on the Canadian dollar, or would simply prefer to avoid currency ups and downs. XUU has a hedged cousin, under the ticker XUH, which delivers the same stock exposure, but with a currency hedge. And XEF has a hedged cousin which trades under the ticker XFH. XFH actually has to hedge twelve different currencies, with the yen and the euro being the largest, and the New Zealand dollar and the Israeli shekel the smallest. Each of those are only half of a percent each.

Vanguard Canada also has currency-hedged options available for the U.S. and international equity ETFs found in the CPM model portfolios. VUS is the currency-hedged version of the Vanguard U.S. Total Market Index ETF (with ticker symbol VUN) and VI is the currency-hedged version of the Vanguard FTSE Developed All Cap ex North America Index ETF (with ticker symbol VIU). Both Vanguard and BlackRock have yet to release currency-hedged versions of their emerging markets equity ETFs. Vanguard mentioned in their 2014 paper that, unlike most major developed-market currencies, emerging-market currencies tend to have lower trading volumes and may be more difficult and costly to hedge.

Steven Leong: Canadians are actually pioneers in the currency-hedged ETF space, partly because of our own currency being fairly volatile, and partly because of our history of imposing foreign content limits. The CAD-hedged iShares S&P 500 ETF, XSP, was created in the mid-2000s to deal with those issues, and it was the first currency-hedged ETF ever created. It's still going strong today.

Still going strong, eh? Sounds like Steven is betting on XSP to win in our next (Japanese gong sound) …

ETF Kombat!

… where we pit two ETFs against one another to test their might.

In today's show-down, two currency-hedged U.S. equity ETFs will go head-to-head for your investment dollars. PWL's Director of Marketing, Martin Dallaire, will again be judging the match.

In one corner, we have the currency-hedged iShares Core S&P 500 Index ETF (with ticker symbol XSP). And in the other corner, we have the currency-hedged iShares Core S&P U.S. Total Market Index ETF (with ticker symbol XUH). Both funds transact in Canadian dollars and provide investors with low-cost exposure to U.S. stocks, without the U.S. dollar exposure. As always, there can only be one winner.

Round One... Fight!

XSP follows the S&P 500 Index, which tracks the performance of around 500 larger U.S. companies, like Microsoft, Apple, Amazon, Facebook, and Alphabet. XUH tracks the S&P Total Market Index, which includes the same 500 U.S. large-cap companies, but throws in another 3,000 mid-, small- and micro-cap companies. Although the S&P 500 is arguably the more popular of these two U.S. stock market indexes, the S&P Total Market Index is technically a more accurate gauge of the U.S. stock market. It's more broadly diversified across a greater number of companies. So, why limit yourself to just the biggest 500 U.S. companies through XSP, when you can just as easily invest in 3,500 U.S. companies of all sizes by purchasing XUH?

X-U-H wins.

Round Two... Fight!

As Steven mentioned earlier, XSP has been around for many years, and was the first currency-hedged ETF ever created. Since November 15th, 2005, XSP has been providing Canadian ETF investors with low-cost currency-hedged U.S. stock market exposure. And here's a fun fact: prior to this date, it didn't actually hedge away its U.S. dollar exposure, so it was an unhedged ETF tracking the S&P 500. Since its launch, XSP has accumulated over $5.7 billion in assets under management, making it the largest foreign equity ETF managed by BlackRock Canada.

XUH was launched in 2015, making it the relative new kid on the currency-hedged ETF block. Since then, it hasn't gained much interest from investors, accumulating assets of less than $100 million. Although size doesn't always matter in the ETF game, XUH is certainly off to a slow start.

X-S-P wins. (size does matter).

Round Three... Fight!

Even though XSP's fees have come down over the years since its launch, it still sports an MER of 0.10%. This is slightly higher than XUH's MER of 0.07%. Who can really blame BlackRock though? Reducing XSP's MER to 0.07% would also reduce their fees by over $1.7 million. With the release of XUH, new investors have been provided with a cheaper and more diversified alternative to XSP, so they really can't complain.

X-U-H wins.

Currency NEUTRALITY!

So, now that we know what currency-hedging is, and how it works, the next question is: Does it make sense to include currency-hedged ETFs in your portfolio? To help answer this question, let's review currency-hedging from a general risk-and-return perspective.

First, it helps to know which foreign currencies you're actually exposed to in your U.S. and international equity ETFs. If we take the June 30th, 2020 country weights from the popular iShares and Vanguard asset allocation ETFs, we find that the U.S. dollar is by far a Canadian index investor's largest foreign currency exposure, making up around 65 percent of their developed foreign currency weight. The euro and Japanese yen contribute another 20 percent to the currency mix. The pound sterling, Swiss franc and Australian dollar combo add up to another 10 percent of your total foreign currency exposure, with various other currencies making up your remaining 5 percent.

Developed Markets Foreign Currency Exposure

Currency	iShares Asset Allocation ETFs	Vanguard Asset Allocation ETFs
U.S. Dollar	64.3%	65.9%
Euro	10.9%	9.8%
Japanese yen	9.4%	8.5%
Pound sterling	5.2%	4.8%
Swiss franc	3.4%	3.1%
Australian dollar	2.5%	2.3%
Other	4.4%	5.7%
Total	**100.0%**	**100.0%**

Sources: BlackRock Inc., Vanguard Investments Canada Inc., CRSP, MSCI and FTSE Russell Index Fact Sheets as of June 30,

The U.S. dollar and Japanese yen are what many investors think of as their two "safe haven" currencies. They have historically been contra-cyclical, meaning they tend to rise as world stock markets fall, and vice-versa. From a diversification standpoint, this is generally good news for unhedged Canadian investors, as these two currencies make up nearly 75% of our U.S. and international equity currency exposure.

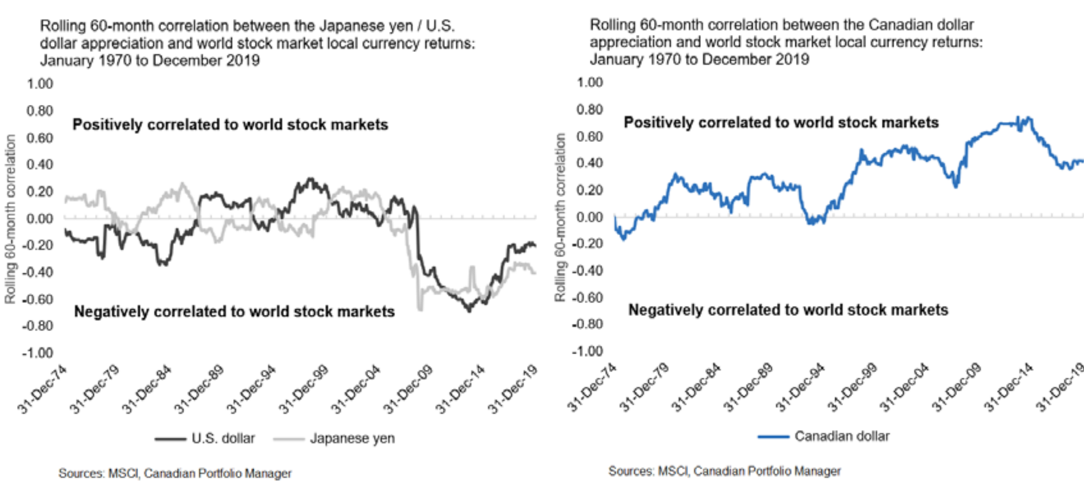
As world stocks rise in value, the U.S. dollar and the Japanese yen tend to ***depreciate*** against other currencies (like the Canadian dollar), reducing the returns for a Canadian investor (remember, a depreciation of a foreign currency is a bad thing for an unhedged Canadian investor).

When world stocks fall in value, the U.S. dollar and Japanese yen tend to ***appreciate***, dampening the losses for a Canadian investor by providing them with some currency gains. So, the highs are not as high, but the lows are not as low. This would suggest that exposure to these sorts of safe haven currencies is expected to lower portfolio risk for an unhedged Canadian investor.

In fact, the U.S. dollar and Japanese yen have historically been uncorrelated to world stock markets, and even negatively correlated, especially since the Global Financial Crisis.

In contrast, the Canadian dollar has historically been pro-cyclical. This means it often strengthens against other currencies at the same time world stock markets rise, and weakens when world stock markets fall. You could also say that the Canadian dollar has historically been, on average, positively correlated to world stock markets. This is largely due to the overall make-up of the Canadian stock market. We are a large exporter of natural resources, and these companies tend to prosper during periods of favourable global economic growth.

So, as a Canadian, when you hedge away your foreign currency exposure, you're effectively getting rid of these "safer" currencies. In other words, at least in theory, Canadian investors are expected to increase their portfolio risk by hedging away their foreign equity ETFs' currency exposure.



Then again, theory isn't always reality. In real life, correlations between currencies and world stock markets are not static. They fluctuate over time, making it impossible to predict whether hedging your exposure to foreign currencies will reduce or increase foreign equity volatility.

During the 50-year period from January 1970 through December 2019, hedging a Canadian investor's foreign currency exposure back to Canadian dollars reduced their volatility in about 48 percent of the rolling 10-year periods, increasing their volatility about 52 percent of the time. On average though, hedging increased the risk for a Canadian investor.

It's important to note that this result appears to be specific to Canadian investors. In a 2011 research bulletin, MSCI analyzed 13 developed countries from 1970 through 2009. They found currency hedging resulted in lower volatility in 12 of them. Canada was the ***only*** outlier with higher volatility from hedging. A currency-hedged Canadian investor saw their volatility increase by an average of 2.3 percent over this time frame. On average, all other countries' experienced risk reductions from currency-hedging, ranging from a 5.4 percent reduction for an Australian investor, to an 18.7 percent reduction for a Swiss investor.

Exhibit 4: Comparison of the volatility of hedged and unhedged variants of the MSCI ACWI Index and volatility reduction as a function of the investment horizon, 1970 – 2009

	MSCI ACWI unhedged volatility	MSCI ACWI hedged volatility	reduction in volatility	Frequency of volatility lowered by hedging			
				12 months	36 months	5 years	10 years
Switzerland	17.5%	14.2%	-18.7%	90.6%	56.2%	100.0%	100.0%
Italy	16.5%	14.5%	-12.3%	80.8%	52.8%	96.4%	100.0%
Japan	16.5%	14.2%	-13.8%	80.0%	48.1%	99.3%	100.0%
Germany	16.3%	14.2%	-12.6%	80.8%	64.0%	95.0%	100.0%
Netherlands	16.1%	14.2%	-11.8%	78.5%	65.8%	86.7%	100.0%
France	16.1%	14.3%	-11.3%	79.1%	65.8%	94.1%	100.0%
Denmark	16.0%	14.3%	-10.6%	75.1%	71.5%	85.5%	100.0%
United Kingdc	15.9%	14.3%	-10.1%	74.0%	53.5%	96.7%	100.0%
Norway	15.5%	14.4%	-7.3%	70.8%	57.8%	91.9%	100.0%
Sweden	15.4%	14.3%	-7.2%	67.6%	51.7%	88.4%	92.8%
Australia	15.1%	14.3%	-5.4%	60.6%	50.1%	70.5%	72.3%
USA	15.1%	14.3%	-5.5%	72.7%	38.4%	91.0%	95.8%
Canada	13.9%	14.2%	2.3%	55.9%	46.7%	58.2%	62.6%

Source: MSCI. Based on monthly data and proxy hedged indices. The MSCI ACWI Index is represented by the MSCI World Index prior January 1, 1988

In another 2014 research report, Vanguard took their study to the next level, by running a statistical analysis to determine the percentage of rolling ten-year time periods between 1971 through 2013 when hedging significantly reduced volatility. They couldn't find a single time period when hedging foreign currencies back to the Canadian dollar reduced the volatility for a

Canadian investor at a significance level of 0.05. In contrast, all other regions experienced rolling ten-year periods where hedging significantly reduced the volatility for their investors, ranging from 35.9 percent of periods for Australian investors to 89.9 percent of periods for Japanese investors.

So, there you have it. Besides producing the world's best hockey players, Canada appears to be the only developed country whose investors cannot expect to reduce their portfolio risk by hedging away currency exposure.

	Australia	Canada	Euro area	Japan	Switzerland	United States	U.K.	Degrees of freedom	Critical value at 0.05	Critical value at 0.01
1971–2013	1.12	0.93	1.31	1.56	1.50	1.41	1.24	514	1.1563	1.2281
1971–1990	1.46	1.06	1.40	1.39	1.54	1.56	1.33	226	1.2452	1.3640
1990–2013	0.89	0.84	1.26	1.70	1.47	1.31	1.17	287	1.2147	1.3169
2000–2013	0.69	0.72	1.02	1.73	1.27	1.47	1.09	167	1.2908	1.4356
Percentage of rolling ten-year time periods from 1971 through 2013, during which hedging signficantly reduced volatility at 0.05 level:	35.9%	0.0%	68.4%	89.9%	89.1%	58.1%	42.2%			

Notes: Figure displays F-statistics for tests of whether hedging reduced volatility of an international equity investment from perspective of investors in the stated regions. Degrees of freedom are identical for numerator and denominator. Red values indicate that hedging lowered volatility relative to remaining unhedged, when tested at the 0.05 significance level. See appendix for details on data.

Sources: Vanguard, based on data from MSCI and International Monetary Fund.

Your portfolio's asset allocation also plays a role in the currency-hedging decision. So far, we've been discussing all-equity portfolios. Most investors also allocate a portion of their portfolio to safer bonds. And depending on their asset mix, this can change the results.

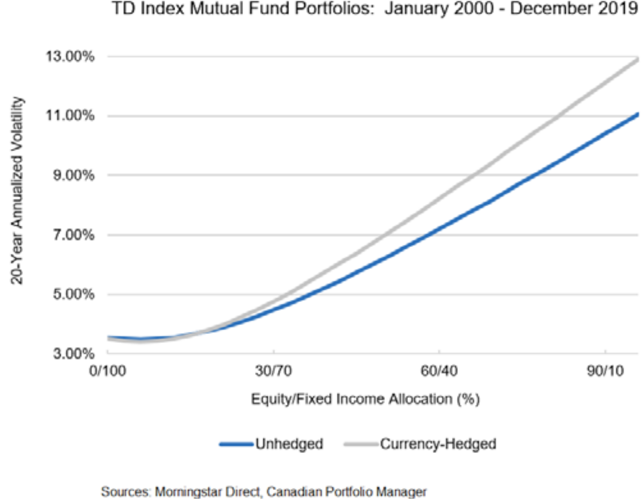
For example, let's compare different asset allocations using actual data from TD's Index Mutual Funds, with equity allocations split evenly among Canadian, U.S., and international equities. I've used the TD index fund return data, as these funds have been around longer than currency-hedged ETFs. They also have both hedged and unhedged versions of their U.S. and international equity index funds.

Over the past 20 years ending December 31st, 2019, higher equity allocations proved more volatile when investing in currency-hedged funds, which is what we would expect. But as the portfolio allocation to equities drops, so does the difference in volatility (or risk) for the unhedged vs. hedged portfolios.

This means that a very conservative Canadian investor with a 30/70 stock/bond asset mix would have experienced very little risk reduction by remaining unhedged. But a very aggressive Canadian investor with a 90/10 stock/bond asset mix would have experienced a noticeable reduction in their portfolio's risk by remaining unhedged.

This has some important portfolio management implications for Canadian retirees. If you adjust to a more conservative asset allocation as your investment horizon decreases in retirement, you may want to also consider gradually switching your unhedged foreign equity ETFs to currency-hedged versions. You're no longer expected to reduce your portfolio volatility as much by

holding unhedged foreign equity ETFs. In fact, for extremely conservative portfolios, currency-hedged ETFs could potentially *reduce* rather than increase a portfolio's risk.

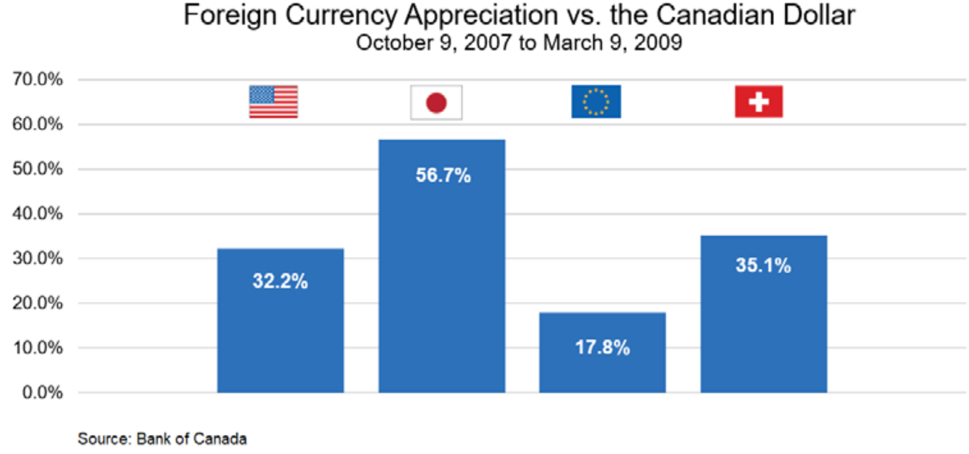


From a behavioural perspective, foreign currencies can also come to the rescue here in Canada when we need them most – during severe market downturns. Let's check out how currency-hedged and unhedged ETFs held up during the Global Financial Crisis and the current Global Pandemic … at least so far.

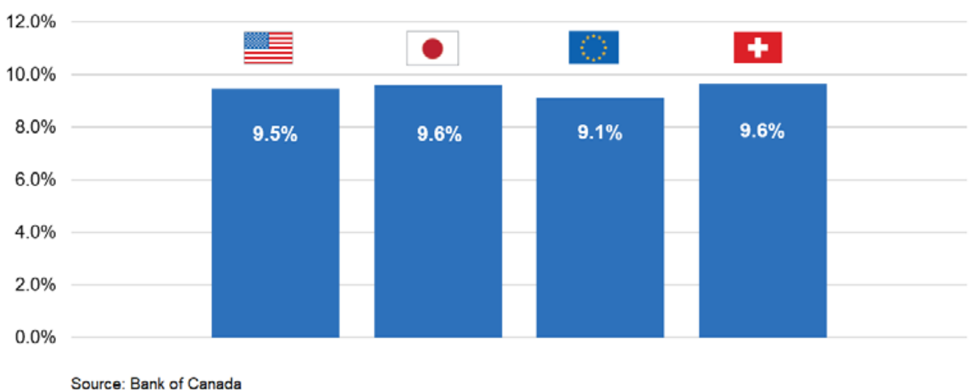
The worst period of the Global Financial Crisis was the 17 months from October 9th, 2007 through March 9th, 2009. During that time, currency-hedged U.S. and international equity ETFs lost 60% of their value in Canadian dollar terms. Unhedged Canadian investors' returns were noticeably better, losing around 42% and 49%, respectively, on their U.S. and international equity ETFs.

This was mainly due to the 32% appreciation of the U.S. dollar, and 57% appreciation of the Japanese yen, relative to the Canadian dollar. Other foreign currencies also pitched in to dig us out of this mess, with the euro and Swiss franc appreciating against the loonie by 18% and 35%, respectively.

In other words, it was a bad time for Canadian investors, but even worse for Canadian currency-hedged investors.

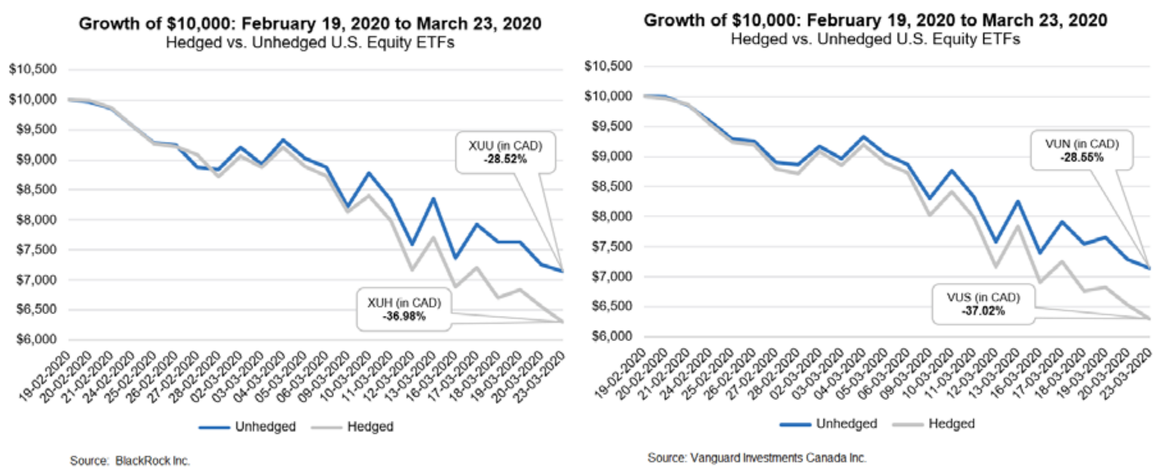


The most recent 2020 stock market crisis followed a similar theme. Between February 19th and March 23rd, 2020, the U.S. dollar, Japanese yen, euro, and Swiss franc, all appreciated against the Canadian dollar by around 9-10%.



In turn, currency-hedged U.S. and international equity ETFs underperformed their unhedged counterparts. The currency-hedged iShares Core S&P U.S. Total Market Index ETF (with ticker symbol XUH), lost 37 percent of its value, while its unhedged cousin, XUU, lost only around 29 percent. XUU's better performance was a result of the U.S. dollar appreciating by 9.5 percent, relative to the Canadian dollar.

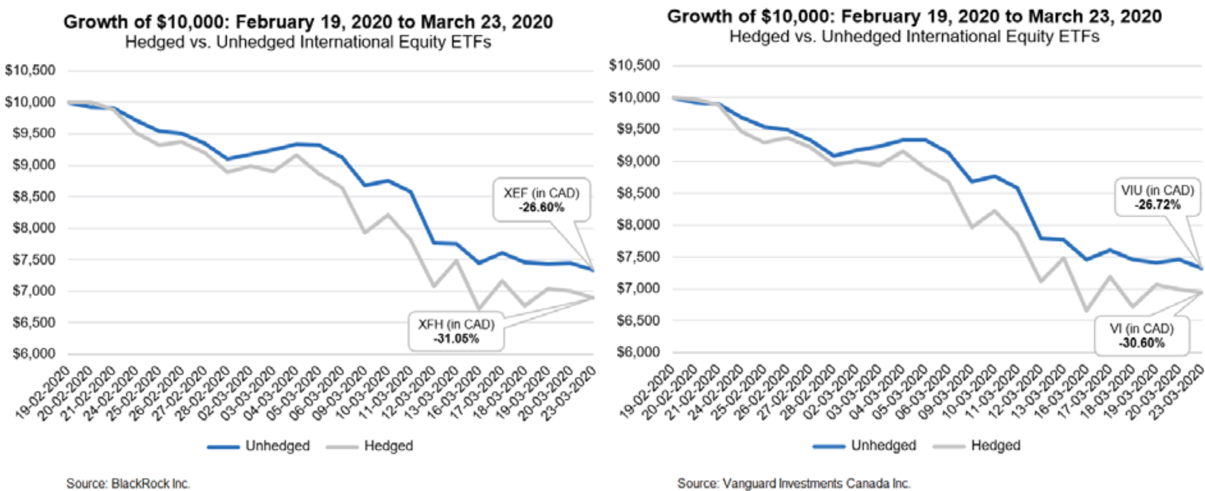
Vanguard also experienced similar results as their BlackRock rivals. The currency-hedged Vanguard U.S. Total Market Index ETF (with ticker symbol VUS), lost 37 percent of its value, while its unhedged counterpart, VUN, only lost around 29 percent.



And in developed stock markets outside of North America, the currency-hedged iShares Core MSCI EAFE IMI Index ETF (with ticker symbol XFH) lost around 31 percent of its value, while its unhedged counterpart, XEF, lost only 27 percent.

In comparison, Vanguard experienced similar results to the iShares hedged and unhedged international equity ETFs. The currency-hedged Vanguard FTSE Developed All Cap ex North

America Index ETF (with ticker symbol VI) also lost around 31 percent of its value, while its unhedged counterpart, VIU, lost only 27 percent.



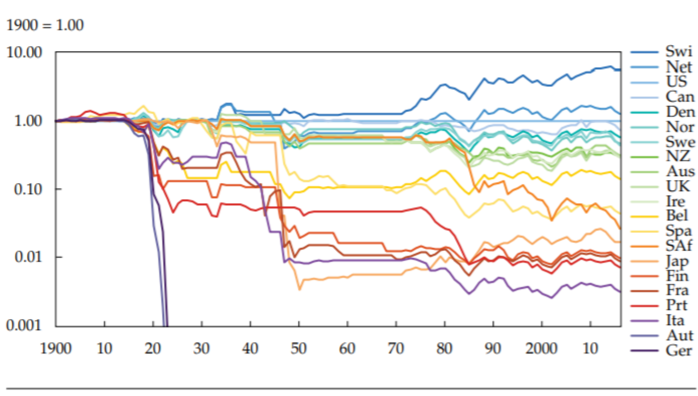
So, from a risk perspective, there are some very compelling reasons to avoid currency-hedged ETFs. But what about the return side of things? Should investors expect higher or lower returns from currency-hedging? At least historically, the results have mostly been mixed. ***From a return perspective, you might as well flip a coin when choosing whether or not to hedge the currency exposure of your foreign equity ETFs.***

In MSCI's 2011 research bulletin, they compared a Canadian investor's hedged and unhedged global stock market returns between 1970 and 2010 over various rolling time periods, such as 1 year, 3 years, 5 years, and 10 years. Over the entire measurement period, unhedged global equities returned 9.5 percent on average in Canadian dollar terms vs. 9.6 percent when the returns were hedged back to the Canadian dollar.

By the way, the time period analyzed didn't make much difference. Hedging resulted in better performance in 53% of rolling 1-year periods, 46% of rolling 3-year periods, 48% of rolling 5-year periods, and 47% of rolling 10-year periods. Across most other countries analyzed, the decision to hedge or not hedge also led to similar results.

For investors with more years behind them than ahead, historical return comparisons spanning 40, 50, or even 100+ years will likely add very little confidence to their currency-hedging decision. In a 2016 update to their original study on long-term asset returns, Dimson, Marsh and Staunton concluded that ***currencies fluctuated considerably*** during the 116-year period from 1900 through 2015.

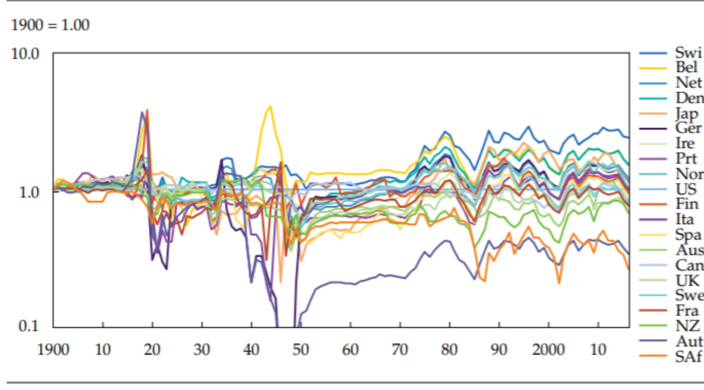
Figure 1.5. Nominal Exchange Rates, 1900–2015, in US Dollars per Unit of Local Currency (rebased to 1900=1)



Sources: DMS (2002, 2016b, 2016c).

However, over more than a century, real exchange rates (against the U.S. dollar) changed by an annualized amount that was almost always below 1% per year. Now, until you find a way to cheat death, I'm not sure how relevant this 116-year statistic is for the average mortal investor.

Figure 1.6. Real Exchange Rates, 1900–2015, in US Dollars per Unit of Local Currency (rebased to 1900=1)



Sources: DMS (2002, 2016b, 2016c).

Since most of our investment horizons have an expiry date that's nowhere near 116 years, ***considerable currency fluctuations*** could be a good enough reason to consider hedging a portion of your foreign currency exposure.

In other words, all things considered, you could take what I call a "hedge-of-least-regret" approach – splitting your foreign equity ETFs 50/50 between hedged and unhedged. If this strategy helps you stay invested over the long term, it could end up being an optimal choice from a behavioural perspective.

So far, we have been discussing currency hedging as a “yes” or “no” decision. That is, should you hedge or not hedge – or maybe hedge a certain target percentage – and maintain this static position over the long-term?

But what about taking a more tactical approach to currency hedging? In other words, could you come out ahead by shifting in and out of currency hedging at just the right times?

If you’ve been a CPM fan for any length of time, you probably already know I frown on trying to successfully engage in short-term market-timing as an investment strategy. So, it may come as no surprise that I feel the same way about trying to time your currency hedging decisions.

Once again, my position is grounded in research, which has indicated that short-term currency movements are extremely volatile and difficult to forecast. For example, in his 2002 essay, “The Failure of Exchange Rate Models”, Kenneth Rogoff concluded that *explaining the yen, dollar and euro exchange rates is still a very difficult task, even ex-post* (which means, “after the fact”).

Vanguard has suggested the same. In a 2014 article, “To Hedge or Not to Hedge”, they stated that *“Persistent arbitrage between a hedged and unhedged investment seems a difficult proposition over the long term.*

Again, I agree with this stance. However, this doesn’t stop some investors from trying to outsmart currency markets anyway.

A tactical strategist might try switching to a currency-hedged ETF when a foreign currency is considered expensive relative to the Canadian dollar. They then switch back to an unhedged ETF when the same foreign currency is considered cheap. The goal is to outperform a passive, “stay-put” currency-hedging strategy.

Earlier on, we mentioned the “nothing burger” impact of currency hedging on portfolio returns. We can continue that theme by exploring active currency-hedging with The Big Mac Index.

The Simpsons: Mmmmm … burger.

The Economist launched its Big Mac Index in 1986 as a playful guide to exchange rates. It is based on purchasing-power-parity (PPP), which is the law of one price. Put another way, PPP is the theory that long-run exchange rates between two countries should move toward the rate that would equalise the price of an identical basket of goods and services. In the Big Mac Index, the basket contains a single McDonald’s burger.

For example, in January 2020, a Big Mac cost $6.77 in Canada and $5.67 in the U.S. Based on the law of one price, this would imply that we should be able to exchange 1 U.S. dollar for 1.194 Canadian dollars. This is calculated as the Canadian dollar cost of the burger divided by the U.S. dollar cost of the burger.

What if we compare this implied Big Mac exchange rate with the actual 1.3066 exchange rate from January 2020? It would suggest the U.S. dollar was overvalued relative to the Canadian dollar by 9.4%. The U.S. dollar would be expected to ***depreciate*** against the Canadian dollar over time, as it makes its way closer to the fair exchange rate. In this case, a Canadian index

investor following an active PPP currency valuation strategy would want to hedge their U.S. dollar equity exposure by investing in a currency-hedged ETF, like XUH or VUS.

Again, over the short-term, purchasing power parity has been found to be a poor predictor of future exchange rates, which is one reason we'd avoid trying to be tactical about your currency hedging.

That said, over the long term, PPP's predictive power has tended to improve. *The Economist* analyzed data going back to 1986, which showed that currencies deemed undervalued by the Big Mac index tend to strengthen, on average, in the subsequent 10 years (and vice versa). Even so, *The Economist's* editors stressed that "Burgernomics" (as the Big Mac Index was aptly named) was never intended as a precise gauge of currency misalignment. It was merely a tool to make exchange-rate theory more digestible.

In other words, following the Big Mac Index near- or long-term could be bad for your financial health.

In the end, I would suggest the best currency-hedging decision is the one you can live with over the long-term. We use mostly unhedged equity ETFs to construct our clients' PWL portfolios in Toronto. We feel the potential behavioural and risk reduction benefits are too good to pass up. If you're invested in one of the BMO, iShares or Vanguard asset allocation ETFs, you'll also have similar unhedged currency exposure in your own portfolio.

Some of our other PWL offices use partial currency-hedging with their clients' portfolios, and that's fine too. If you're still having trouble deciding, there's nothing wrong with splitting the difference with a 50 percent hedged, 50 percent unhedged, "hedge of least regret" equity allocation.

That's it for today's show, so thanks for tuning in. There are more great episodes on the way, but in the meantime, feel free to check out the Canadian Portfolio Manager Blog and the Canadian Portfolio Manager YouTube Channel for more investing tips. Until then, stay safe, and stay the course.