Rocaton

INSIGHTS

Currency Hedging: *Is It Worth It?*

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203.621.1700 | **rocaton.com**

Most U.S. investors invested in foreign markets do not have long term strategic policies in place to hedge currency exposures arising from non-U.S. equity investments. Over the past five years, investors generally have further globalized their equity portfolios. Additionally, many investors have become more sensitive to shorter term volatility for a variety of reasons. Given these last two points, as well as the dramatic move of the U.S. dollar over the past year, we decided to review the topic of currency hedging. While there are reasons investors might want to hedge their currency exposure on a strategic basis, **we generally believe investors should maintain their unhedged developed international equity exposures**. The following provides a more detailed discussion of Rocaton's views on hedging currencies.

EXECUTIVE SUMMARY

* Currency market volatility has risen in recent months and the U.S. dollar has strengthened to multi-year highs, highlighting the potential impact of non-dollar exposures in an investment portfolio.
* Since 2008, hedging FX exposure in international equity allocations has reduced total portfolio volatility to varying degrees, although this was not generally true prior to that date.
* Historically, drawdown risk has not been consistently reduced by hedging FX risk.
* Hedging FX on a tactical basis is very difficult with few records of consistent success.
* Given the differing impacts of currency movements on companies with global sources of revenues and costs, it is difficult to measure a portfolio's actual FX risk.
* There are operational costs and challenges associated with hedging international equity exposures which create a hurdle that investors should consider.
* While there are reasons investors might want to hedge their currency exposure on a strategic basis, we generally believe investors should maintain their unhedged developed international equity exposures.

Introduction

Currency markets have come to the forefront in recent months, particularly after the U.S. dollar strengthened against nearly all major currencies in 2014. Part of the increase in news flow has been driven by volatility in currency markets. Notably, the unexpected removal of the Swiss franc/euro peg by the Swiss National Bank in January 2015 caused extreme volatility in that currency pair and resulted in insolvency for several retail foreign exchange ("FX") brokerage firms. Additionally, U.S. corporate earnings have come under pressure as a strengthening dollar has generally put downward pressure on profits. Institutional investors may be wondering if it is appropriate to hedge currency movements in their non-U.S. equity portfolios. The balance of this paper will provide our thoughts on this topic. Importantly, this paperfocuses exclusively on developed international equity mandates and does not address hedging emerging market equities or international fixed income exposures, both of which have different sets of considerations[1].

Recent Currency Market Events

Diverging global monetary policies and growth rates have been partially responsible for the U.S. dollar reaching a 12-year high. Since the start of 2014 through April 13, 2015, the U.S. dollar index (DXY), which measures the dollar against a basket of foreign currencies such as the euro, yen and franc, is up 24%. Naturally, this has led to weaker performance for non-U.S. equity and fixed income markets from the perspective of a U.S. based investor. Local equity market returns have generally been robust over this time period. For example, the MSCI EAFE Index is up 18% annualized in local terms over the prior two year period. U.S. dollar investors, however, have gained slightly less than half of that return (8.4% annualized) over the same time period due to a strengthening dollar. The table below shows additional performance data for various equity and fixed income indexes from a local market and U.S. dollar standpoint.

Figure 1:
Performance in USD and Local Terms

	Trailing Performance (as of 4/13/2015)			Calendar Years		
	1 Year	2 Year	3 Year	2014	2013	2012
MSCI EAFE (USD)	3.0%	8.4%	12.0%	-4.5%	23.3%	17.9%
MSCI EAFE (Local)	24.6%	17.7%	20.0%	6.4%	27.5%	17.9%
Difference	*-21.7%*	*-9.4%*	*-8.0%*	*-10.9%*	*-4.2%*	*0.0%*
MSCI Emerging Markets (USD)	5.4%	4.0%	3.4%	-1.8%	-2.3%	18.6%
MSCI Emerging Markets (Local)	16.7%	11.8%	9.2%	5.6%	3.8%	17.4%
Difference	*-11.3%*	*-7.8%*	*-5.9%*	*-7.4%*	*-6.1%*	*1.2%*
S&P 500	17.6%	17.2%	17.6%	13.7%	32.4%	16.0%

All returns shown are total returns. Performance for periods greater than 1 year are annualized.

Source: Bloomberg

1 The cost of hedging emerging market equities is often very high and Rocaton generally believes clients should leave these exposures unhedged. International fixed income strategies are available in a number of different formats, both hedged and unhedged. Investors should consider the desired exposure before selecting a strategy.

Aside from the poor general performance of non-U.S. currencies, volatility in FX markets has also increased in recent months. While the euro/franc case is an extreme example, other currency pairs have seen a pickup in volatility. For example, the sell-off in the yen during 2012 and 2013 year pushed volatility up for the Japanese currency.

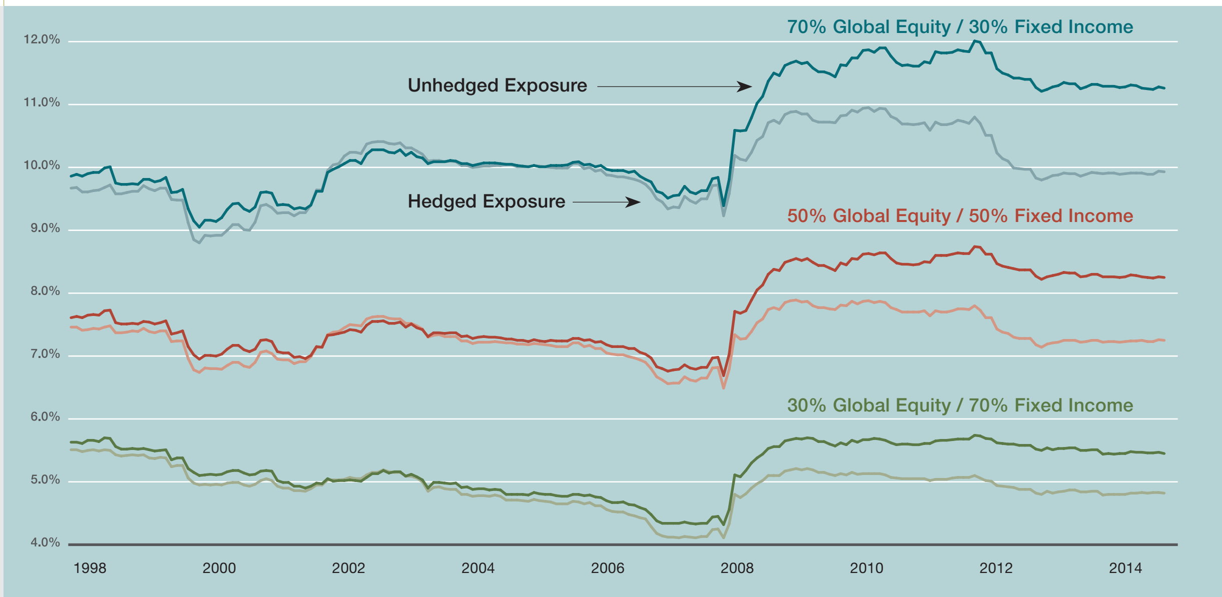
Why might institutional investors hedge their FX exposure?

In light of recent market volatility, investors may be weighing the merits of hedging currency exposure. There are several reasons why investors might choose to hedge their FX exposure. However, as we will explore, we typically do not believe these reasons are sufficient to warrant establishing a currency hedging program, particularly when implementation costs and other issues are also considered.

Investor wants to reduce total portfolio volatility

As there is typically not a meaningful difference in total return over long time horizons for hedged versus unhedged global equities, the primary reason why investors might want to strategically hedge their FX exposure is to reduce total portfolio volatility. Recently, unhedged developed equity exposures have been more volatile than hedged exposures. Over the trailing 10-year period ending March 31, 2015 an unhedged EAFE equity exposure had a realized volatility of 18.1% versus 14.5% for a hedged exposure. The difference in volatility profiles is similar over other recent rolling 10-year periods with unhedged exposures generally having realized volatility 2-4% greater than hedged exposures. However, for much of the late 1990s and early- to mid-2000s, hedged and unhedged equity exposures had almost identical volatility as non-U.S. currency exposure acted as a diversifier to the local equity market exposure. At the total portfolio level, these differences become far less meaningful (see Figure 2). Further, as we have pointed out, the large differences in volatility are a more recent phenomenon and for many years, hedged and unhedged exposures had nearly identical volatility profiles. Of course, it is difficult to predict whether this recent trend is permanent or if the trend will reverse course.

Figure 2:
Total Portfolio Volatility – Rolling 10 Year Periods (Unhedged and Hedged Equity Allocations)



Analysis assumes global equity exposure is half U.S. equity and half non-U.S. developed equity. Fixed income exposure is proxied with the Barclays Aggregate.

Sources: MSCI, Barclays.

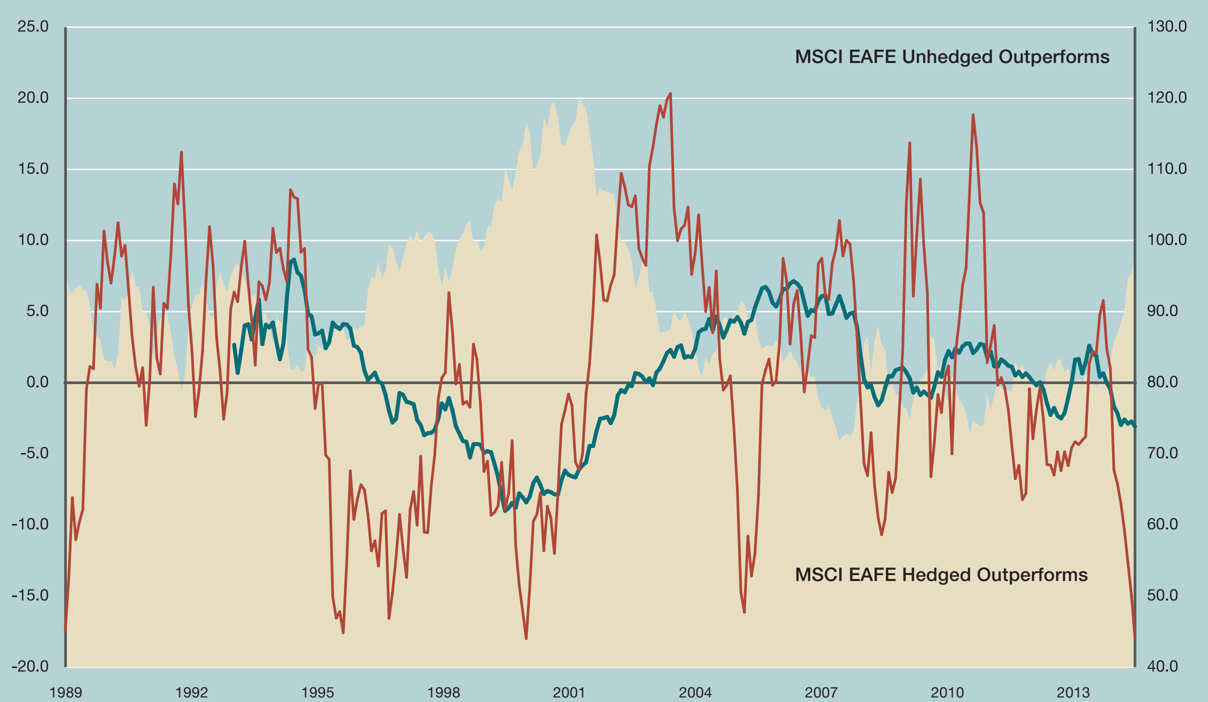
Investor wants to reduce portfolio drawdowns

Aside from reducing volatility, investors may believe hedging non-U.S. currency exposures reduces portfolio drawdowns. However, historical data suggests that the reduction in drawdowns at the total portfolio level is relatively modest when moving to a hedged exposure. For example, during the 2008-2009 market crisis, a portfolio with 25% in unhedged non-U.S. developed equities, 25% in U.S. equities and 50% in core fixed income would have experienced a draw-down of 29.0%. The same portfolio with hedged international equities was down 26.8%, an improvement of just 2.3%. Drawdowns during other market corrections were similar and, in some cases, an unhedged exposure would have improved outcomes. Notably, during the tech bubble crash of 2000-2002, investors would have been better off holding unhedged equities as the U.S. dollar weakened during this market correction.

Investor has a view on the direction of the U.S. dollar

Given the recent divergence in monetary policies and growth rates between the U.S. and other developed markets, an investor might conclude that the U.S. dollar has more room to run. However, as we show in Figure 3 below, currency performance tends to be cyclical. Given this view, it seems possible to conclude that reversing course immediately following losses (or sacrificed gains) from being fully hedged or unhedged could lead to a painful outcome. What's more difficult to assess is where we are in the currency cycle. As mentioned, the U.S. dollar has already risen 24% versus a basket of non-U.S. currencies. As with most macro-economic decisions, this is an extremely difficult call to make even for the most experienced and well-resourced firms. We believe it is best for investors to determine the appropriate strategic position based on portfolio risk expectations and objectives without developing too high a confidence in the ability to time currency markets.

Figure 3: MSCI EAFE Unhedged vs. Hedged Return Difference & DXY Index



Legend:
- U.S. Dollar (DXY) Index (RHS)
- Rolling 1 Year Difference (LHS)
- Rolling 5 Year Difference (LHS)

Sources: Bloomberg, MSCI.

Evaluating Portfolio FX Exposure

Simply aggregating the value of stocks in a portfolio which trade on non-U.S. exchanges may not be an accurate gauge of the actual FX exposure in a portfolio. The increasing importance of global trade has meant that the location of a company's headquarters may not be indicative of that company's foreign exchange risk. This fact is most obvious in the case of large multi-nationals (e.g. Coca-Cola, General Electric, Nestle, Toyota, etc.) where a fall in the home country currency might not have a material impact on the company's valuation. In the case of BMW, for example, if the euro falls, it is not obvious how the stock price will react. It could be argued that the stock price should rise in value as a fall in the euro might decrease BMW's expenses, increase the nominal value of revenues, and enhance the competitiveness of the company on the global stage. Further, it is not uncommon for companies with foreign revenues or costs to hedge their foreign currency risk.

We generally believe investors should maintain their unhedged developed international equity exposures.

Implementation Considerations for Hedging

If investors do wish to hedge their international equity exposures, they should be aware of the operational requirements for implementing such a hedge. A hedging program also requires additional monitoring and oversight from investment staff and/or the investor's consultant.

A simple approach to hedging would be to choose investment strategies that are hedged by the investment manager. There are, however, only a few hedged non-U.S. equity strategies, both active and passive, that are broadly available. Additionally, the strategies that do exist generally have small assets and may not be available to all investor types. One potential solution would be to use hedged international equity exchange traded funds (ETFs), although we recognize that ETFs do not work for all investor types. There are approximately 6 broad non-U.S. hedged equity ETFs available that have assets in aggregate of $24.4 billion[2]. Expense ratios for these products are between 40–70 basis points and have experienced modest tracking error (1-3%) relative to their underlying hedged benchmarks.

Another potential option would be to implement a passive currency hedging program that is executed by an investor's custodial bank. There are, however, a number of questions that must be answered before this exposure can be put in place. These questions include: Which currencies should be hedged? What is the appropriate hedge ratio (i.e. 100% or something smaller)? How frequently should the hedge be adjusted? What term structure should be used (e.g. 1-month or 3-month currency forwards)? Investors should also be aware that in addition to the explicit and implicit transaction costs associated with a passive hedging program, the management fees required for this exposure might be cost prohibitive for smaller investors. Taken in total, the overall cost of a strategic hedging program is likely to cost large investors a minimum of 5-15 basis points annually for management and transaction costs and potentially many multiples of this for smaller investors.

2 There are a number of single country hedged ETFs available. For the purpose of this paper, Rocaton examined ETFs that were broadly diversified across non-U.S. developed or emerging markets. It is also worth noting that HEDJ, a broad Europe hedged ETF, is responsible for $19.5 billion of the total assets cited.

Conclusion

Historically, U.S.-based institutional investors generally have left currency exposure unhedged in their international equity portfolios. Increasing allocations to non-U.S. markets coupled with recent volatility in FX markets have caused many investors to re-think the currency exposure embedded in their portfolios. As we have demonstrated, moving to a hedged exposure has historically had a modest impact on total portfolio risk, at best. Historical evidence also suggests that hedging currency will not materially impact a portfolio's outcome during a market drawdown. Further, the operational hurdles that investors face when implementing a hedged international equity exposure are not trivial. Finally, determining the exact size of the FX risk within a portfolio may be difficult given the increasing globalization of companies' revenues and expenses. For these reasons we continue to believe that most investors should not hedge international equity exposures.

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Disclosures

Performance Information and Return Expectations

The analysis contained in this document may include projections of long-term return and risk expectations. There is no guarantee that the projected returns or risk will be realized. The projections are based in part on historical performance of various asset classes, and past performance is no guarantee of future performance. The projections include assumptions, including those regarding risk and return. These assumptions are used for modeling purposes only and may not be realized. Because the analysis is based on assumptions and projections, there can be no warranties or guarantees.

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