

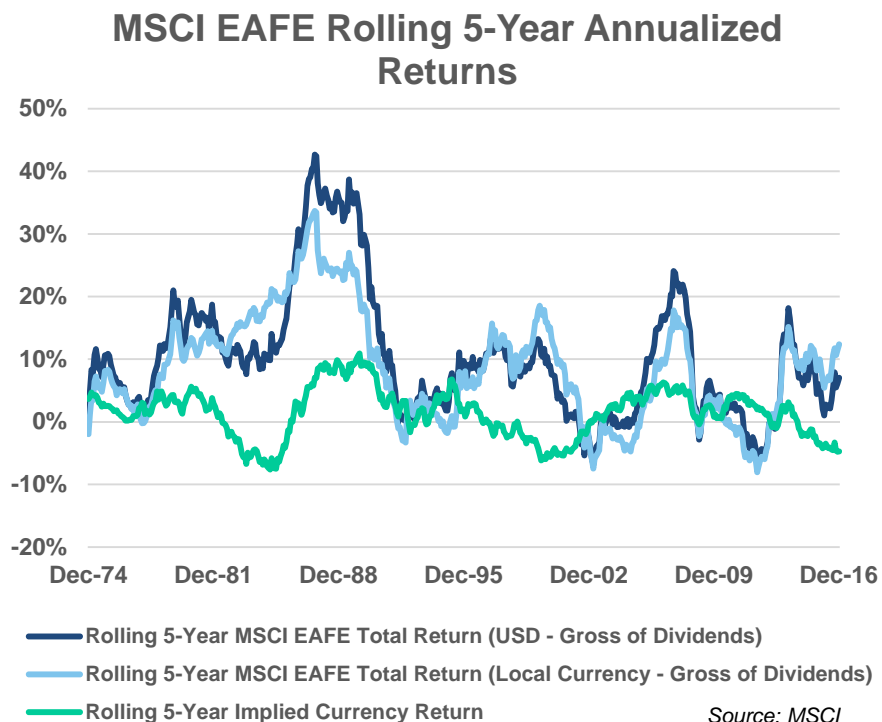
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International Equity Investing and Currency Impact

With the strength in the U.S. dollar continuing to make headlines, a common question nowadays is whether U.S. investors ought to bear currency volatility of non-U.S. dollar denominated assets. For those not familiar, a U.S. investor could theoretically own a foreign currency-denominated asset and also purchase a common forward contract to insulate their portfolio from future currency movements, which would leave the investor solely with the performance of the asset in local currency terms.

By measuring the MSCI EAFE index in both local currency and U.S. dollar terms, we can isolate the historical currency impact and see in which periods dollar strength has been a headwind. The exhibit to the right shows rolling five year annualized returns of the index both ways, as well as the implied currency return as the green line. The implied currency return is a fairly defined historical range of approximately -7% to +10%. Each time there is a bottom of negative returns as a result of U.S. dollar strength, reversion has followed and dollar denominated performance has been helped by appreciating foreign currencies. Interestingly, of 505 rolling five year periods since the inception of the MSCI EAFE index in January 1970, the U.S. dollar denominated return on the index has been higher than the local currency denominated return in 344 periods, or approximately 68% of the time.

Thus, despite the current environment of foreign currency headwinds, bearing currency risk has historically *helped* U.S. investors. Annualized returns also confirm this, with the compound annual return on the U.S. dollar denominated index of 9.3% outperforming the local currency index return by approximately 1.1% per year. Given the data spans 47 years, including multiple periods of both dollar strength and dollar weakness, these results are a reasonable guide to suggest bearing foreign currency risk has not harmed long term investors, and to some degree, has helped.



Since there are few, if any, free lunches in investing, additional return does not often come with no strings attached. Without exception here, there is indeed some additional volatility by way of a higher standard deviation for the MSCI EAFE index when measured in U.S. dollars compared to when measured in local currencies. This additional volatility has ranged from approximately zero to approximately +6% at various times. However, like returns, excess volatility has also reverted from highs and been range bound historically. The current additional volatility of approximately 2.1% more in standard deviation over the last five years is about 15% of the overall standard deviation of the dollar denominated index. This is not overly significant when compared to other asset classes, like bonds for example, where the currency volatility might be *two times* the volatility of the underlying assets. In such an instance, hedging might be considerably more helpful and improve risk-adjusted returns considerably.

The above analysis fully excludes the transaction costs of hedging currency risk, which can be considerable over long holding periods. Since equities are long duration assets and do not have finite lives like bonds, derivative contracts with terms of a year or less must be rolled to new contracts before expiration in order to maintain the hedge in place. This requires paying execution costs on both sides of these trades. Additionally, if an investor wishes for a manager to pursue this currency management and execution on their behalf, it might lead to a higher fee charged by the manager. For taxable investors, rolling of derivative contracts can often lead to adverse tax outcomes, which is another cost on top of the two mentioned previously. All taken together, these costs can be very significant for investors to pay in order to negate only a small portion of the volatility of the asset class. Therefore, we don't believe the asset class requires currency hedging over the long term.

MSCI EAFE Rolling 5-Year Annualized Standard Deviation

