Global Investing: The Importance of Currency Returns and Currency Hedging

There is a continuing trend for investors to reduce their home bias in equity allocation and increase the allocation to international equities. An important consideration in move towards global investing is the impact of currencies. An adverse movement in the exchange rate can dramatically change the performance of an international investment. In this research bulletin we review the performance of currencies, both in nominal and real terms, compare domestic and international equity returns and finally look at the impact of currency hedging.

Currency Impact on International Investments

The last 40 years have seen important changes in the international monetary system. Just about the same time as the inception of the MSCI indices, the Bretton Woods system, based on a gold standard and fixed exchange rates, was breaking up. Exchange rate fluctuations, almost nonexistent in the 1960s and early 1970s, started to play a role in international investing.

The table below shows the exchange rate evolution of major currencies. We present two measures: the nominal exchange rate reported here shows the value of a currency against the US dollar. The second measure, the real effective exchange rate, evaluates a currency against a basket of foreign currencies, each weighted according to its importance in the country's trade balance. It is also adjusted by the relative price level changes.

Exhibit 1: Nominal and real effective exchange rate returns for selected currencies, 1970 – 2010*

	1970 - 2009		1970 - 1979		1980 - 1989		1990 - 1999		2000 - 2009		2001 - 2010	
	nominal	real effective	nominal	real effective	nominal	real effective	nominal	real effective	nominal	real effective	nominal	real effective
Swiss franc	3.6%	0.9%	10.5%	2.8%	0.3%	-0.3%	-0.4%	0.4%	4.5%	0.6%	5.7%	1.1%
Japanese yen	3.4%	1.5%	4.2%	3.0%	5.2%	3.1%	3.5%	2.5%	1.0%	-2.4%	3.5%	-1.1%
Deutsche mark / Euro	2.5%	0.1%	7.8%	1.0%	0.2%	-1.4%	-1.4%	-0.3%	3.7%	0.9%	3.6%	0.7%
Danish krone	0.9%	0.4%	3.4%	0.5%	-2.1%	0.2%	-1.2%	-0.2%	3.7%	1.1%	3.6%	1.0%
Norwegian krone	0.5%	0.3%	3.8%	0.0%	-2.9%	1.0%	-2.0%	-0.8%	3.4%	1.0%	4.3%	1.0%
Canadian dollar	0.1%	-0.3%	-0.8%	-1.9%	0.1%	1.2%	-2.2%	-3.1%	3.3%	2.7%	4.2%	3.4%
Australian dollar	-0.5%	-0.2%	-0.1%	-0.9%	-3.3%	-0.6%	-1.9%	-2.2%	3.2%	3.3%	6.3%	4.8%
Swedish krona	-0.8%	-1.2%	2.2%	-1.2%	-3.9%	-0.7%	-3.2%	-1.7%	1.8%	-1.4%	3.4%	-0.1%
British pound	-1.0%	-0.6%	-0.7%	-0.3%	-3.2%	-0.9%	-0.01%	1.7%	0.02%	-2.7%	0.5%	-2.2%
US dollar	0.0%	-1.0%	0.0%	-3.4%	0.0%	-0.1%	0.0%	0.7%	0.0%	-1.1%	0.0%	-2.1%

Source: MSCI, WM/Reuters, BIS (real effective exchange rates)

* Nominal rate is measured in USD per 1 currency unit: a positive change means appreciation of the currency against the US Dollar.

** DEM is used instead of EUR prior to January 1, 1999

When looking only at nominal returns, it might seem that exchange rate fluctuations can be very important. To take an extreme example, the Swiss Franc (CHF) had an annualized appreciation of 10.5% in nominal terms versus the US Dollar in the 1970s. Although this is an impressive performance, what should matter most for international investors in equities are the real currency returns and not nominal returns as capital is not invested in currency alone but in local equities: indeed, if a currency depreciation or appreciation is purely due to a change in the relative purchasing power, the local price of equities should adjust in inverse proportion, at least over the long term. For example, the currency of a country with high inflation will typically depreciate, but the local price of a stock willl appreciate (this is

especially true if the company in question is operating globally). Furthermore, if we assume that an average currency exposure of a company approximately corresponds to its country's share of trade in that currency, a more suitable metric to measure the impact of currency movement on international investing is the real effective exchange rate. Coming back to our example, in real effective terms the Swiss Franc had appreciated by only 2.8% annually during the same period.

Over the very long term (1970-2009), the real effective exchange rate changes are even smaller, exceeding 1% annualized in absolute terms only for the Japanese Yen and the Swedish Krona.

We can infer from this analysis that currency fluctuations, both in nominal and real terms, have a more important impact on international investments in the short term than in the long term. Over the very long term, exchange rates have tended to revert to the mean. Moreover, when investing in global companies, exchange rates should not play a significant role as these companies are generally exposed to a wide range of currencies and thus the exchange risk is more diversified.

To Hedge or Not to Hedge?

We have shown that currencies can have significant fluctuations over the short term and completely change the return of an investment in international equities. However, knowing that one can limit currency fluctuations by hedging (getting the local return and paying or receiving the interest rate differential between the domestic and foreign currency), would hedging have the potential to improve returns from investing in global equities?

The table below shows the returns of the MSCI ACWI Index, a global equity index consisting of developed and emerging market countries, for major reporting currencies for both the hedged and unhedged variants. We also report the effectiveness of hedging for selected holding periods. This is measured by comparing the hedged and unhedged performance of the index during rolling time windows. We show the percentage of window periods during which the hedged index performed better than the unhedged index.

Exhibit 2: Comparison of hedged and unhedged returns of the MSCI ACWI Index, 1970 - 2010, in local currency

	MSCI ACWI unhedged return	MSCI ACWI hedged return	Frequency of better returns with hedging			
			12 months	36 months	5 years	10 years
Italian lira / Euro	12.0%	12.7%	53.4%	52.3%	53.6%	69.4%
British pound	10.9%	10.8%	53.4%	52.1%	60.3%	63.0%
Swedish krona	10.5%	10.8%	55.1%	51.0%	48.7%	46.1%
Australian dollar	10.0%	11.3%	56.8%	51.4%	47.8%	59.8%
US dollar	9.7%	9.1%	42.0%	38.1%	33.5%	41.0%
Canadian dollar	9.5%	9.6%	52.6%	46.4%	47.8%	46.9%
Norwegian krone	9.2%	10.2%	56.1%	56.9%	59.6%	67.6%
French franc / Euro	9.4%	10.4%	56.5%	65.0%	64.0%	54.7%
Danish krone	8.9%	11.2%	57.8%	70.5%	73.7%	76.1%
Netherlands guilder / Euro	7.7%	8.4%	56.5%	65.2%	64.2%	50.1%
Deutsche mark / Euro	7.3%	8.6%	56.3%	63.5%	65.4%	53.9%
Japanese yen	5.8%	6.7%	56.1%	49.5%	50.1%	52.5%
Swiss franc	5.7%	6.9%	53.2%	57.3%	53.1%	33.8%

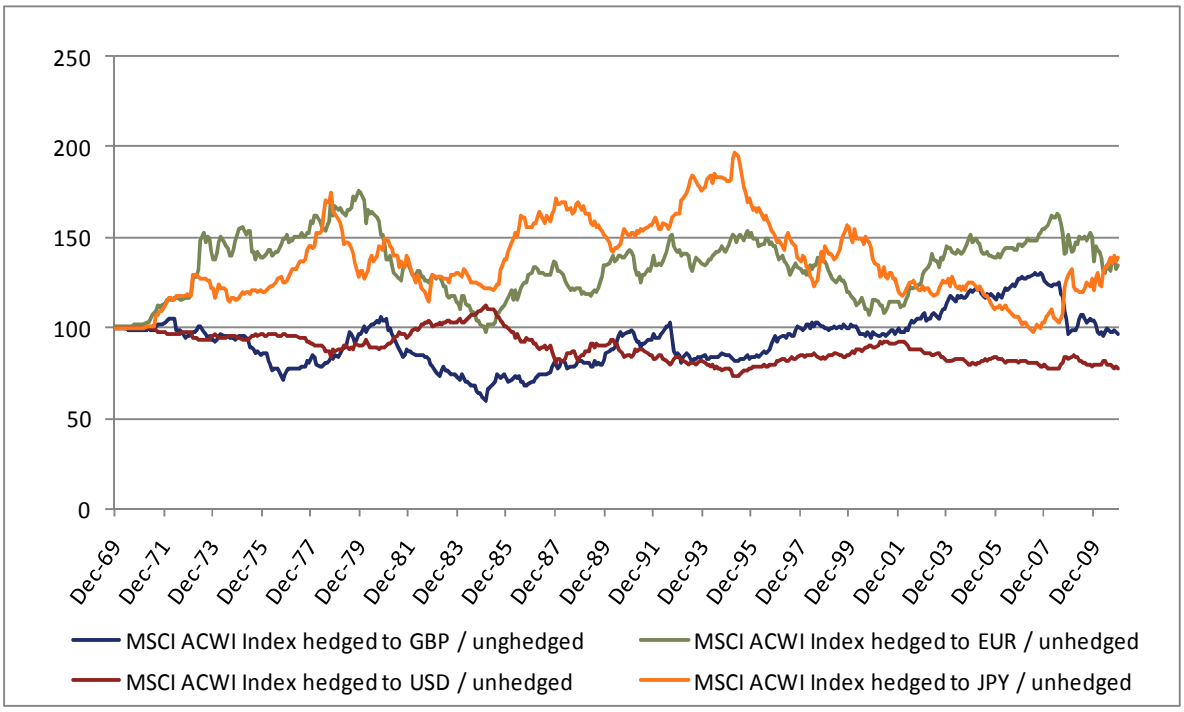
Source: MSCI, OECD, IMF. Italy, Netherlands, France and Germany use the EUR after January 1, 1999. The MSCI ACWI Index is represented by the MSCI World Index prior to January 1, 1988. In addition, in some part of the history, hedged returns are approximated by taking a reduced set of currencies for which forward rates or interest rates are available. Data as of December 31, 2010.

As expected hedging does not systematically improve (or lower) equity returns. The answer depends on the currencies of choice and the investment horizon. For example, by hedging, an investor from Denmark would have improved his annual return from 8.9% to 11.2 % over the past forty years. On the other hand, a US based investor would have seen the return diminish from 9.7% to 9.1%.

On average and in the long-term, the decision to hedge or not to hedge does not seem to lead to systematic long-term gains. The frequency of better returns achieved through hedging for various currencies and holding periods mostly hovers around 50%. The graph below, displaying the relative performance of the MSCI ACWI Index (hedged versus unhedged) for four major currencies further confirms this finding.

In addition, we can note that our test has certain limitations as it is heavily dependent on the period under consideration, the fact that the US Dollar has an important weight in the MSCI ACWI Index and that it has depreciated against most of the currencies during this period. This explains why hedging has delivered slightly better results than non hedging for most of the currencies other than the US Dollar.

Exhibit 3: Relative performance of the hedged MSCI ACWI Index to the unhedged version, 1970 – 2010



Source: MSCI, OECD, IMF. The MSCI ACWI Index is represented by the MSCI World Index prior to January 1, 1988.

Risk Reduction Effects of Hedging

We now take a more detailed look at the potential effects of currency hedging on portfolio risk.

As we have seen in the first section, currency movements can have an important influence on returns from global investing in the short term. Currency hedging is generally viewed as a means for the reduction of this kind of risk, lowering the volatility of foreign stocks when these are expressed in a domestic currency.

The table below shows the long-term volatility of the MSCI ACWI Index expressed in different currencies – both hedged and unhedged.

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

These numbers illustrate that, over this period, hedging did decrease the volatility of global stocks for all investors' currencies except the Canadian dollar (interestingly, the MSCI ACWI Index is the least volatile when measured in CAD), although this reduction has been relatively small (the biggest reduction is observed for the Swiss Franc where hedging changes the volatility from 17.5% to 14.2%). Hedging has reduced volatility most of the time for most currencies at all horizons.

Conclusions

There is a continuing trend for investors to reduce their home bias in equity allocation and increase the allocation to international equities. In that context understanding the impact of currency returns on the overall investment return is crucial for investors. Our analysis indicates that currency fluctuations, both in nominal and real terms, seem to have a more important impact on international investments in the short term than in the long term. Additionally we see that hedging does not systematically improve (or lower) equity returns but generally reduces volatility most of the time for most currencies at all horizons.

Appendix

MSCI Hedging &Currency Indices

MSCI Hedging & Currency Indices are designed to help analyze and manage equity and currency exposures.

Index	MSCI FX Hedge Indices	MSCI Hedged Indices	MSCI Global Currency Indices
Use Case	Investors seeking to measure the impact of hedging a market index	Investors seeking to measure the return of a currency hedged market index	Investors seeking to measure only the currency return of a market index
Objective	Reflect the performance impact of currency hedging an MSCI equity index	Reflect the equity performance on an MSCI equity index, removing the currency effect	Reflect the total return of currencies and accrued interest from holding the currencies in the weighting of an MSCI equity index
Investment Process Reflected in the Index	Notionally "sell" FX forwards based on the market capitalization	Notionally "buy" equity portfolio and "sell" FX forwards based on the market capitalization	1. Notionally "buy" FX forwards based on the market capitalization 2. Notionally "buy" home currency Libor deposits to capture the interest rate returns
Interest	Returns will be impacted by interest rate differences in the home and foreign currency interest rates	N/A	The index provides the interest rate of the foreign current interest rate
Dividends	N/A	Dividends will be included in the gross and net versions of the indices	N/A

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