The Continuum from Passive to Active Currency Management

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In international portfolios, currency risk represents an exposure not wanted, and investors have been passively hedging this exposure for years. Although investors may have been successful at reducing their portfolios' volatility, they also may have been inadvertently increasing their downside risk. Active currency strategies offer the opportunity both to enhance a portfolio's return and to reduce its downside risk.

In this presentation, I will first consider currency exposure as most investors experience it, which is from the perspective of currency exposure that is embedded in international assets and almost always in equity portfolios. I will then briefly consider some freestanding currency strategies. Let me start with a brief topical introduction.

International equity portfolios are usually quite rewarding for investors. They have delivered positive returns in about 70 percent of all quarters between 1975 and 2009. The returns have two components. First is the local equity market return, which is what most people want when they invest in international markets. Second is the return stemming from exchange rate changes, which is the part that most investors do not necessarily want and usually assume will be minor over the long term. Over short periods, currency exposure is the uninvited guest at a global equity party. Investors do not necessarily want it, and it is hard to get rid of after it is embedded in the portfolio. Furthermore, with currency exposure in the portfolio, it is really hard to decide what to do about it because half the time currency gains come from passive exposure and half the time portfolios suffer losses.

The best international equity returns occur when equity markets rise and, for U.S. investors, when the U.S. dollar depreciates. When both equity markets and the dollar have gone in the right direction for a U.S. investor, returns have averaged 11.2 percent per quarter. When international equity markets rise but a strong dollar cuts back the gain, quarterly returns have averaged only 2.5 percent. Sometimes, strong foreign currencies partially offset negative equity market returns, but the result, invariably, is negative total returns. And sometimes, foreign currencies make a bad equity market even worse, which is the situation the United States has been experiencing recently. The dollar started to get materially stronger as the financial markets got much worse in the second half of 2008 and into the first quarter of 2009, although the second and third quarters of 2009 started to undo some of that damage. A question that recent experience raises is whether the dollar has resumed the downward trend that began in early 2002. The downward trend was triggered by a very large U.S. current account deficit that required foreign capital inflows to finance it and a stimulative monetary policy from the U.S. Fed that pegged U.S. short-term interest rates at levels that were too low to attract sufficient capital inflows from private investors.

Recent Behavior of the U.S. Dollar

I believe the trigger for the recent strength of the dollar was the closure of the wholesale funding markets, especially the asset-backed commercial paper market, which took place following the failure of Lehman Brothers and the collapse of the U.S. Reserve Fund in September 2008. That market was

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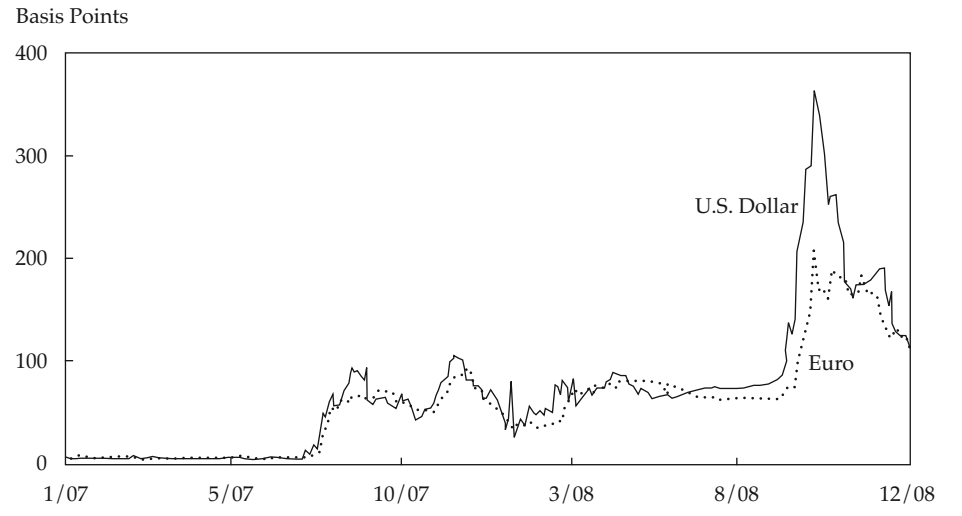
much more important for the dollar funding needs of European banks than for their funding needs in other currencies, which is evidenced by the huge spike in dollar funding spreads compared with euro funding spreads in the interbank market, as shown in **Figure 1**. The spreads are the difference between LIBOR-based borrowing rates and rates for overnight index swaps, which reflects the policy rates of the underlying central banks at a similar maturity. As of mid-2009, the spreads have narrowed as central banks have established new swap facilities and enlarged others to supply banks with the dollar funding they needed.

These liquidity-driven dollar purchases were a more important aspect of demand for the dollar than was demand for the dollar as a safe haven currency, although this motivation was present as well. **Figure 2** shows that foreign demand for U.S. Treasuries held up much better than did foreign demand for risky U.S. assets, such as equities, corporate debt, or direct foreign investment through merger and acquisition activity. But as this crisis continues its course, the underlying fundamentals of the dollar have changed. One of the important changes is that the U.S. current account deficit has shrunk from an unprecedented 6 percent of GDP to less than 4 percent, which diminishes the size of the required foreign capital inflow needed to finance the deficit. It also reduces the pace at which the United States is becoming indebted to international lenders. But a stronger dollar also causes the national balance sheet of the United States to deteriorate because most foreign assets held by U.S. investors are denominated in foreign currencies, whereas most of its liabilities, often Treasury debt, are denominated in dollars. As the dollar strengthens, this currency mismatch reduces the value of U.S. assets relative to liabilities and causes the U.S. net external liability position to deteriorate. At the same time, the United States also holds a much larger portion of its assets in the form of equities. But as equity markets plunge and fixed-income assets appreciate, the deterioration of the U.S. balance sheet is further aggravated by capital market returns.

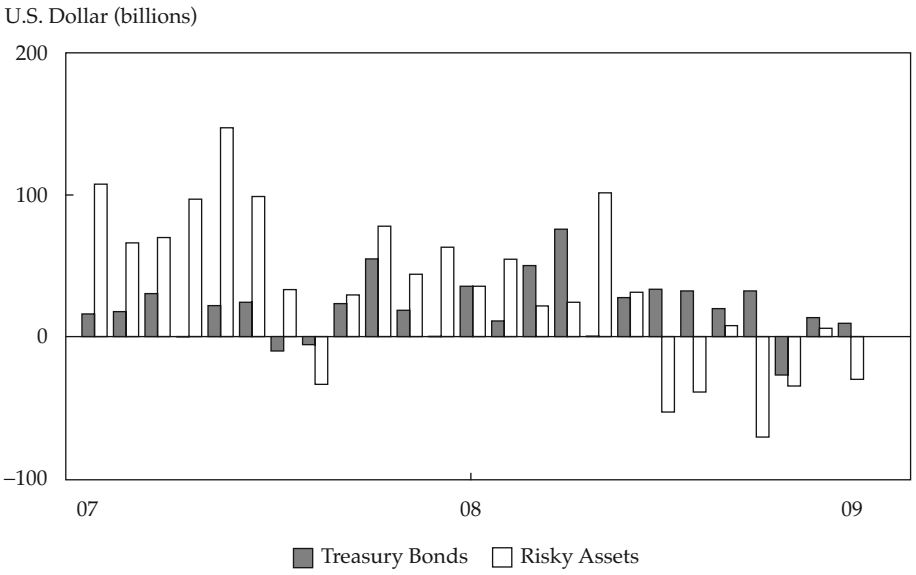
In determining the outlook for the dollar, a number of other considerations exist. First, at the beginning of its rally, the dollar was undervalued on the basis of purchasing power parity. Clearly, it is less undervalued now. Second, and very importantly, the Fed is engaged in an aggressive policy of maintaining U.S. short-term interest rates at very low levels. As **Figure 3** shows, the United States has gone from a yield advantage before the crisis began to an extreme yield disadvantage in the early stages of this crisis. But as other central banks started cutting short-term interest rates after the Fed began to do so in September of 2007, that yield disadvantage has closed somewhat. Still, the United States is left with negative short-term interest rates, which is a serious problem for a country that needs to attract capital inflows from the rest of the world. With the disadvantages the dollar has, if the Fed decides to maintain low short-term interest rates for an extended period to ensure strong U.S. economic activity, then it seems likely that the dollar will weaken despite a recovery in the U.S. economy.

Figure 1. Spread of Funding for the U.S. Dollar over Funding for the Euro, January 2007–December 2008



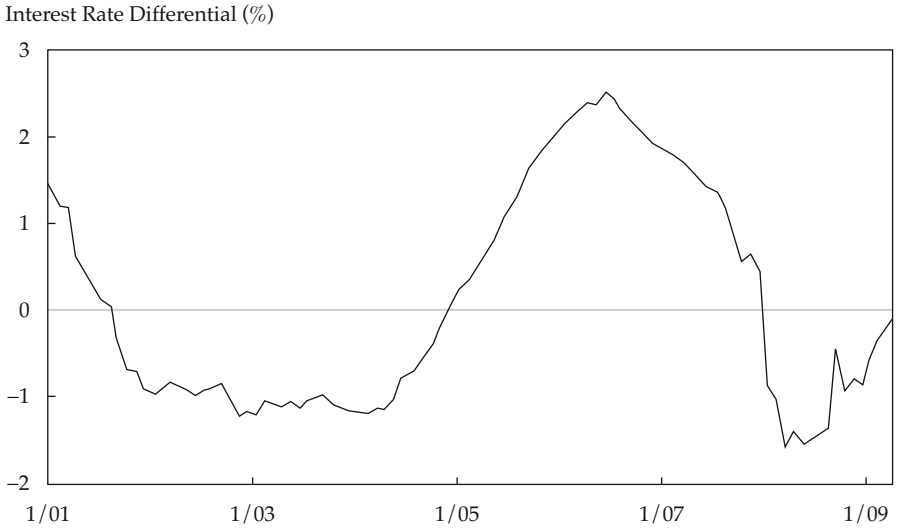
Sources: Bloomberg and AllianceBernstein.

Figure 2. Foreign Demand for U.S. Assets, January 2007–January 2009



Sources: Thomson Reuters Datastream and AllianceBernstein.

Figure 3. Differential of U.S. Interest Rates Compared with G–10 Countries, January 2001–January 2009



Sources: Thomson Reuters Datastream and AllianceBernstein.

Key Considerations in Currency Hedging

Of course, if investors knew what the dollar was going to do, there would be no need to discuss currency hedging. Currency hedging is important precisely because so much uncertainty exists regarding exchange rate movements, particularly in the short run. As a result, I think the right approach is to step back and think more generally about the characteristics of asset returns and how currency affects them. To begin, all investors agree that higher returns are better than lower returns—that is, a distribution with a higher mean is what investors want. They also all agree that more-reliable returns (meaning a lower standard deviation) are preferred

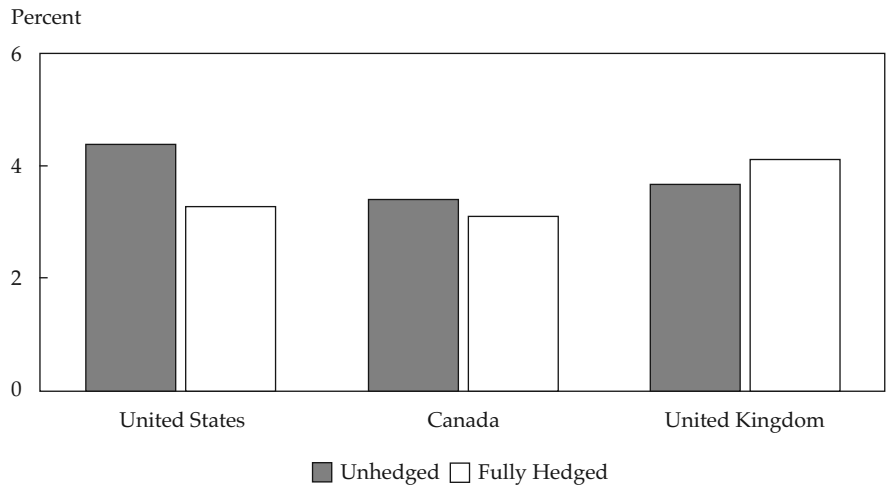
as well as distributions with less negative skew. Distributions with large negative skew mean that when surprises take place, they tend to be unpleasant ones. Also, given normal investor risk aversion, distributions with fat tails are similarly unattractive. Finally, investors prefer returns that are more independent of those from their other holdings, meaning returns that come from different sources.

Returns. Consider how foreign currency exposure affects each of the characteristics just mentioned, starting with returns. In **Figure 4**, unhedged excess returns are compared with fully hedged excess returns for investors in global equities with three different base currencies. In each case, the returns are "excess"—that is, over and above the country's risk-free rate. Unhedged returns translate the foreign exchange exposure in the portfolio back into the base currency at the end of each month. At the beginning of each month, the hedged returns take currency forward positions that offset the foreign currency exposure in the equity portfolio so that a change in exchange rates during the month does not affect returns. As shown, hedged returns are noticeably lower for a U.S. investor over this 35-year period. They are also slightly lower for a Canadian investor but higher for a U.K. investor. This difference means that getting rid of foreign currency exposure hurt U.S investors but helped U.K investors. This result may seem somewhat counterintuitive because if investors look only at the behavior of the exchange rates, all three currencies depreciated during this time relative to a basket of foreign currencies. **Figure 5** shows the spot price movement of each currency against a market-capitalization-weighted basket that matches the MSCI World Index excluding the base country. The assumption is that unhedged returns should outperform hedged returns, especially for the British pound, which had been the weakest of the three during this period. Yet, this scenario was not the case for the pound, and the question is, why?

To understand the reason, keep in mind what happens when currency exposure is hedged. To offset the foreign currency exposure associated with a long equities position in a foreign market, an investor must take on a short currency position by borrowing in that foreign currency the amount embedded in the equity position. When investors borrow foreign currency, they pay the interest rate in that currency and then translate that borrowing into their base currency, and they earn an interest rate in their home currency. The return on the currency hedge, therefore, consists of two parts: the interest rate differential between the two countries at the time of the forward sale of the currency and the exchange rate change over the investment period.

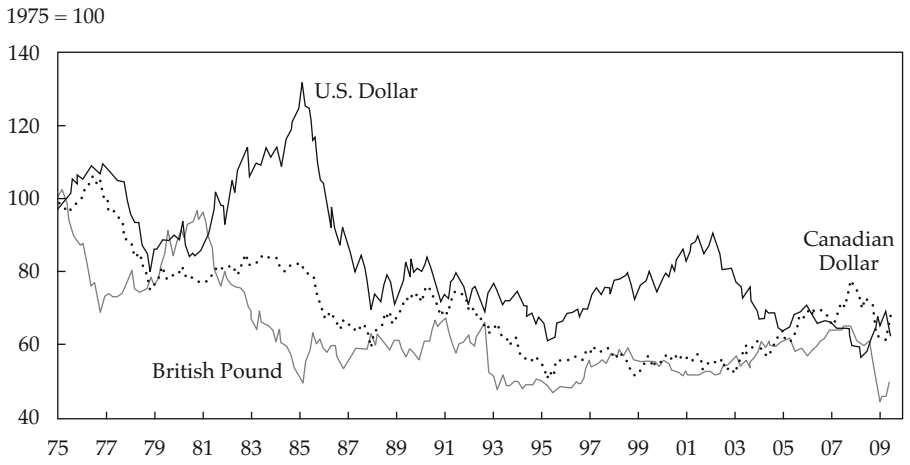
This example is how a basic hedge works. An investor whose base currency is pounds hedges dollar exposures by borrowing dollars today and paying the interest rate in dollars. These dollars are sold for pounds at the current spot rate, and the proceeds are reinvested. The hedge is unwound at the future date by selling pounds for dollars at the current spot

Figure 4. U.S., Canadian, and U.K. Unhedged Returns Compared with Fully Hedged Returns, January 1975–March 2009



Sources: Morgan Stanley Capital International, Thomson Reuters Datastream, and AllianceBernstein.

Figure 5. Changes in Exchange Rates for the U.S. Dollar, Canadian Dollar, and British Pound, January 1975–May 2009

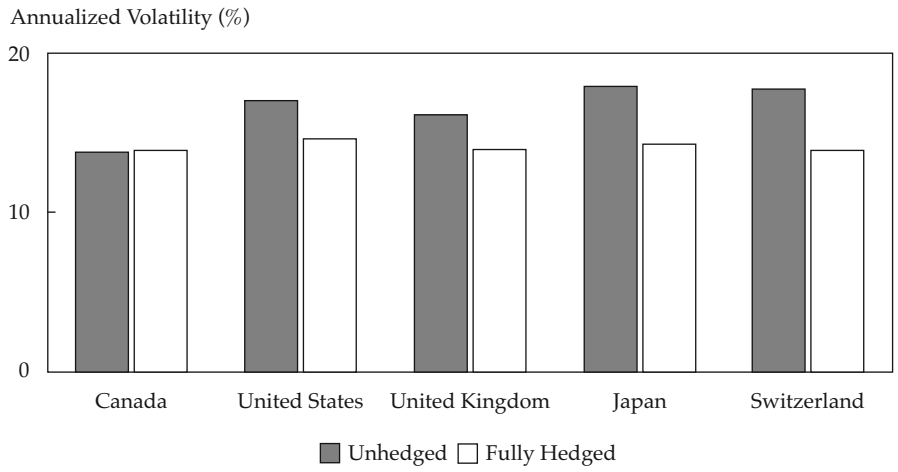


Sources: Morgan Stanley Capital International, Thomson Reuters Datastream, and AllianceBernstein.

rate and then repaying the loan in dollars. This type of hedge is costly when the interest rate in pounds is lower than the interest rate in dollars—in other words, when a negative carry exists on the exposure. The hedge is profitable when a positive interest rate differential exists. On a net basis, the hedge pays off if the interest rate differential is greater than any dollar appreciation.

Volatility. Let us now consider how hedging currency exposure affects a portfolio's volatility. For dollar investors, hedging reduces volatility. An unhedged U.S. equity portfolio's volatility (as measured by standard deviation) is about 17 percent. Fully hedging currency exposure reduces volatility to just under 15 percent. Volatility is reduced more rapidly during the initial stages of hedging—that is, about 75 percent of the risk reduction is achieved for about a 50 percent hedge. This effect, however, is not uniform for all countries. **Figure 6** shows that Canadian investors will see no decline in volatility with a 100 percent hedge on their foreign currency exposure, but results for U.K. investors are similar to U.S. investors, and Japanese and Swiss investors fare even better. The differential effects of currency

Figure 6. Effect on Volatility of Hedging Currency Exposure for Various Countries



Note: Returns from MSCI World Index excluding the base country.

Sources: Morgan Stanley Capital International, Thomson Reuters Datastream, and AllianceBernstein.

hedges are caused by the correlation between the underlying local equity returns and the movements of the currency basket. If strong foreign equity returns are associated with local currency weakness, then the currency exposure of an unhedged portfolio will widen the distribution of returns. So, in some countries, hedging currency exposure will reduce portfolio volatility. In other countries, if the local currency behaves in the opposite manner—that is, when foreign equity returns are strong, the local currency tends to strengthen—then taking away the foreign currency exposure will actually make returns more volatile.

This latter scenario is typically true for currencies that are sensitive to global economic activity, such as Canada, Australia, and New Zealand. Investors in these countries should keep the foreign currency exposure in their portfolio because it acts like a natural hedge. And by the way, this scenario is also true for most export-driven emerging market countries. Although the U.S. economy has an export-to-GDP ratio of about 15 percent, Singapore's economy has an export-to-GDP ratio of more than 100 percent. Clearly, strength in Singapore's economy (and its equity market) is driven by strength in the global economy. Singapore, therefore, is an excellent example of a country where investors should not hedge foreign currency exposure.

Skewness. Next, I will discuss a surprising relationship between currency hedging and the skewness of returns. **Table 1** shows that hedging currency exposure for investors in the United States and United Kingdom reduces portfolio volatility. But it also results in greater negative skewness. These results mean that hedging foreign currency exposure may increase the likelihood of negative surprises. The combined effect of reduced volatility and increased negative skewness was examined for returns from the 15 worst quarters (between the first quarter of 1975 and the first quarter of 2009) for an unhedged portfolio and a fully hedged portfolio. Returns for a U.S. and a U.K. investor were essentially the same. Returns for a hedged Canadian portfolio, however, were substantially worse. I doubt this result is what investors expect when they hedge foreign currency exposure.

Table 1. Relationship between Currency Hedging and Skewness of Returns for Different Countries

Country	Hedged?	Volatility	Skewness
United States	No	17.0%	–0.37
	Yes	14.6	–0.73
United Kingdom	No	16.2	–0.56
	Yes	14.0	–0.81
Canada	No	13.8	–0.22
	Yes	13.9	–0.79

Note: Statistics reflect monthly data for January 1975–March 2009.

Sources: Thomson Reuters Datastream and AllianceBernstein.

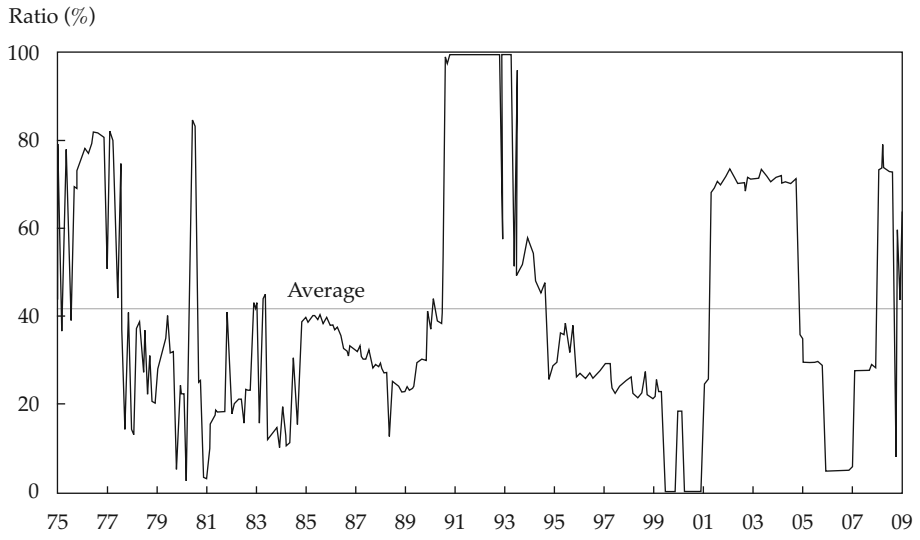
The negative skewness tends to be worse for such countries as Singapore where the currency and equity markets strengthen with good global economic activity. Hedging currency exposure in a country such as Singapore will make the bad times worse. This result is usually not the case for such countries as Switzerland and Japan, which are net lenders to the rest of the world. During periods of financial stress, net lending stops and may even reverse. As a result, these currencies strengthen during times of financial stress, and for those countries, having foreign currency exposure is disadvantageous during stressful periods. For such countries as Switzerland and Japan, hedging currency exposure is much more likely to produce the expected results.

Exploiting the Carry Trade

So far, I have shown that foreign currency exposure does not have a systematic effect on returns. So, a passive 100 percent hedge may not solve a currency exposure problem. If not hedging, then what would work? I propose a simple, dynamic strategy based on the carry trade. In effect, it allows the hedge ratio to vary from a completely unhedged ratio of 0 percent to a fully hedged ratio of 100 percent. The strategy considers the interest rate in the base country currency and compares it with the interest rate of any other country with foreign currency exposure. Any currency exposure with a higher short-term interest rate will be left unhedged, and any country with a lower short-term interest rate will be fully hedged. The idea is to avoid the expense associated with borrowing in high interest rate currencies and investing in the home currency at a lower rate while fully exploiting the reverse situation. The risk associated with this strategy is that, periodically, sell-offs can occur in high-yielding currencies. The question is whether it is worth running this risk.

Although this strategy is simple, it is also very dynamic. **Figure 7** shows how much the hedge ratio can change over time. During the period of 1975–2009, a U.S. investor would have averaged a hedge ratio of slightly more than 40 percent. But the hedge ratio would have varied between 100 percent and 0 percent. Positive returns to the carry trade are among the most attractive returns that global financial markets offer. **Table 2** shows the Sharpe ratios for various currency pairs. The columns show the

Figure 7. Changes in the Hedge Ratio for a U.S. Investor, January 1975–January 2009



Sources: Thomson Reuters Datastream and AllianceBernstein.

Table 2. Sharpe Ratios for Various Currency Pairs

		Sharpe Ratio	
Grouping	Currency	U.S. Dollar Base	Pound Base
Majors	U.S. dollar	—	0.39
	Pound	0.45	—
	Euro	0.62	0.18
	Yen	0.17	(0.02)
Sub-majors	Swiss franc	0.17	0.12
	Australian dollar	0.43	0.23
	Canadian dollar	0.25	0.46
Others	New Zealand dollar	0.55	0.37
	Norwegian krone	0.33	0.52
	Swedish krona	0.53	0.46
Euro legacies	French franc	0.53	0.39
	Spanish peseta	0.28	0.27
	German mark	0.22	0.25
	The Netherlands guilder	0.20	0.26
	Italian Lira	0.05	0.19

Notes: Data from June 1979 through December 2008 except Australian dollar (January 1984–December 2008), New Zealand dollar (November 1986–December 2008), and euro-legacy currencies (July 1979–December 1998). Returns were calculated by going long the currency against the base currency whenever three-month swap rates in the home country are above those in the base country and short the currency against the base currency whenever three-month swap rates in the home country are below those in the base country.

Sources: Bloomberg, Thomson Reuters Datastream, and AllianceBernstein.

result of being long the pound against the dollar whenever short-term interest rates in the United Kingdom are above short-term interest rates in the United States and being short the pound against the dollar whenever the interest rate relationship is reversed. The most striking aspect of this table is that almost every Sharpe ratio is positive. Moreover, nearly all of the Sharpe ratios are statistically significant. Remarkably, doing something as simple as being long positive carry and short negative carry delivers excess returns over time, and the effect is independent of the base currency.

Market Anomaly or Compensation for Risk

It has been known for some time that, in academic terminology, forward rate bias exists or, alternatively, that uncovered interest rate parity fails to hold in the markets as a whole. Two schools of thought attempt to explain this phenomenon. The first is that it represents a market anomaly that will be arbitraged away over time. The second explanation is that investors are paid to hold this exposure because it embeds a systematic risk premium. I believe the evidence in favor of the risk premium explanation is exceedingly strong and getting stronger.

If this phenomenon were just a market anomaly that had been known and exploited for the past 15 years, arbitrage would have eroded some of the returns to this strategy. But the fact is that no such

erosion has been seen. It looks more like a risk premium for at least two other reasons. First, if this same analysis is performed for emerging market currencies, the Sharpe ratios for emerging market currencies are higher than for developed currencies. This result is exactly what investors would expect to find if this strategy's returns represented a risk premium. Also, the beta exposure of this strategy has a small, positive, and statistically significant exposure to other risky asset returns, which also suggests that these returns are compensation for systematic risk. The systematic risk explanation for these returns is consistent with finance theory.

Moreover, it just makes sense. Short-term interest rates are not high in a country for no reason. Countries with high short-term interest rates are, typically, countries that have cyclical economic risk or inflation risk or are countries with unsustainable public sector budget deficits or current account deficits. As a result, investors need to be paid a risk premium to hold exposure in these currencies because the underlying economies and markets are generally less stable than those in countries where interest rates are low.

Table 3 shows that the excess returns from the dynamic carry hedging strategy for five major currencies are higher than those from either the unhedged or the hedged alternative. Interestingly, volatility for the United States and the United Kingdom is barely higher than it is for the fully hedged alternative. In the case of Canada, volatility is actually lower than for the fully hedged alternative. It is also interesting to note that in most cases, skewness is lower overall compared with the fully hedged alternative. This factor is significant for the United States, United Kingdom, and Canada because although the carry trade results in a higher standard deviation, it also has the effect of shifting the mean of the return distribution to the right enough to compensate for the higher standard deviation. But the carry-driven strategy is questionable in such safe haven countries as Japan and Switzerland where the downside risk of the carry-driven strategy is essentially the same as for the unhedged alternative.

The desirability of pure currency carry exposure, divorced from the underlying equities, can be evaluated by examining the behavior of a balanced-carry "benchmark." This benchmark serves as a basis for evaluating a continuum of currency management strategies from passive to active. To create this benchmark, at the beginning of each month we look at three-month LIBOR interest rates for major currencies and rank them from highest to lowest nominal interest rates. We then create a portfolio that takes long positions in currencies within the top half of positive interest rate differentials and short positions in currencies within the bottom half of negative interest rate differentials, with net currency exposure kept at zero and the portfolio rebalanced monthly. As elementary as this approach sounds, it produces some remarkable results. **Table 4** shows that the passive carry exposure delivers a Sharpe

Table 3. Comparison of Returns from Unhedged, Hedged, and Carry-Driven Hedge Strategies for Various Countries

Country	Strategy	Excess Return	Volatility	Skewness
United States	Unhedged (U)	4.4%	17.0%	–0.37
	Hedged (H)	3.3	14.6	–0.73
	Carry driven (CD)	5.5	15.3	–0.52
United Kingdom	U	3.7	16.2	–0.56
	H	4.1	14.0	–0.81
	CD	5.4	14.2	–0.73
Canada	U	3.4	13.8	–0.22
	H	3.1	13.9	–0.79
	CD	4.2	13.4	–0.57
Japan	U	4.2	18.0	–0.77
	H	3.6	14.3	–0.85
	CD	5.2	17.7	–0.80
Switzerland	U	5.5	17.6	–0.54
	H	4.3	13.9	–0.79
	CD	6.1	16.8	–0.61

Notes: Statistics apply to a U.S. investor and refer to the MSCI EAFE plus Canada for January 1975–March 2009. A carry-driven hedge means that currencies with interest rates lower than dollar rates are fully hedged and those with higher interest rates are left unhedged; both are rebalanced monthly.

Sources: Thomson Reuters Datastream and AllianceBernstein.

Table 4. Comparison of Passive Carry Exposure with Other Types of Portfolios, July 1979–December 2008

Portfolio Type	Benchmark	Sharpe Ratio	Standardized Value at Risk
Passive currency	Balanced-carry basket	0.60	–1.81
Equities	S&P 500	0.34	–1.81
	MSCI World ex U.S. (hedged)	0.20	–1.86
	MSCI World ex U.S. (unhedged)	0.19	–1.70
Fixed income	Global government bonds (unhedged)	0.29	–1.58
	Barclays Aggregate	0.35	–1.71
Commodities	S&P Goldman Sachs Commodity Index	0.11	–1.67

Note: Global government bonds include 10-year government bonds from Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, the Netherlands, New Zealand, South Africa, Spain, Sweden, the United Kingdom, and the United States.

Sources: Barclays Capital, Global Financial Data, Goldman Sachs, Morgan Stanley Capital International, Standard & Poor's, Thomson Reuters Datastream, and AllianceBernstein.

ratio that is almost twice that of the S&P 500 Index, three times that of hedged non-U.S. equities, very attractive relative to bonds, and much better than commodities. If the downside risk of the balanced-carry benchmark is evaluated by using standardized value at risk (the fifth percentile monthly return less mean divided by the standard deviation), then its downside risk is in the same range as equities and only somewhat less favorable than that of fixed income and commodities.

Active Currency Management Strategies

Still, the fact that the returns of all the assets shown in the table are negatively skewed cannot be overlooked. For that reason, it would be ideal to find a currency strategy with a positive skew that could be exploited in conjunction with the carry trade. I think such a strategy can be designed around exchange rate fundamentals, such as purchasing power parity. The approach is to rank all currencies based on their underlying long-term fair value as determined by purchasing power parity. This approach would then go long an equally weighted basket of the most undervalued currencies and short an equally weighted basket of the most overvalued ones. Although this strategy has lower risk-adjusted returns than does the carry strategy, it is profitable. But more importantly, its returns are positively skewed. Thus, it can be combined with pure carry to improve risk-adjusted returns in a multifactor approach.

Active and passive strategies can be compared with each other in a few ways. From the standpoint of return, the fully active strategy that takes more sources of return into account will fare better, as shown in **Table 5**. In terms of volatility, the hedged strategy has the lowest volatility, although it is somewhat of an illusion because it has the greatest potential downside as indicated by its skewness. The unhedged strategy has the most favorable skewness, but it has somewhat higher kurtosis than the hedged strategy. Kurtosis is the fourth moment of a distribution. Distributions that have more kurtosis than a normal distribution are more peaked and have fatter tails, thereby indicating a greater probability of extreme events relative to a normal distribution. In terms of correlation, all the strategies are quite similar relative to the S&P 500.

Table 5. Comparison of Active and Passive Currency Strategies using MSCI EAFE Annualized Returns, 1989–2009

Measure	Hedged	Unhedged	Carry Driven	Fully Active
Annual return	3.3%	3.7%	5.2%	5.9%
Annual volatility	15.8	17.2	18.2	18.3
Skewness	–0.77	–0.48	–0.68	–0.61
Kurtosis	1.20	1.28	2.06	1.46
Correlation with S&P 500	0.74	0.69	0.70	0.69

Sources: Morgan Stanley Capital International, Standard & Poor's, Thomson Reuters Datastream, and AllianceBernstein.

When investors are trying to choose among these possibilities, the choice really depends on what is most important to them. If minimizing volatility is their biggest concern, then they might want to be fully hedged and disregard the impact that being fully hedged has on skewness. If investors, however, are willing to accept greater risk for higher returns, then either the carry-driven hedge or a fully active approach would be the better choice.

Active alpha–seeking currency strategies constitute a very attractive form of portable alpha. Starting with a zero position in a currency, investors simply ask if that currency represents an exposure they want to have. If so, then they should take a long position. But if it is an exposure they want to sell, then they should take an outright short position. In this way, the active currency strategy is divorced from the underlying portfolio. Moreover, because the return that is earned and the risk that is allowed are functions of the currency strategy's Sharpe ratio and the amount of leverage used, returns are completely scalable. As long as the currency strategy is executed through forward contracts, no upfront capital is required.

If investors believe that their active currency strategy has a Sharpe ratio greater than that of the S&P 500, then, based on our simulated results (in which our simulations indicate a 3.9 percent excess return to our active currency strategy with 5 percent volatility), **Table 6** shows how this situation can be creatively exploited. Over the 20-year period through the end of 2008, the S&P 500 produced a 470 bp premium over cash with 14.5 percent annual volatility. An alternative to buying the S&P 500 is to invest in a cash portfolio that earns 4.5 percent and then lever up a currency strategy to earn the equity risk premium of 470 bps over cash. This strategy provides the same 9.2 percent return as the S&P 500 but with only 6.3 percent volatility (after adjusting for the volatility of cash) and lower downside risk.

If an investor is comfortable with the S&P 500's 14.5 percent volatility, he or she could lever up the currency strategy to have the same risk as the S&P 500 to obtain more return than equities would give. This approach, however, does result in more downside risk than that of equities in the short term. Under the circumstances, it is not hard to see why portfolio managers are looking at currency strategies as a way to obtain decent returns over cash without having a big downside.

Conclusion

Whether managers like it or not, currency management is likely to be even more important in the future than it has been in the past. From a macroeconomic perspective, if the Fed fails to raise interest rates sufficiently as the U.S. economy recovers, then the dollar is likely to resume its fall.

With regard to portfolio management, currency hedging reduces volatility, but it does not necessarily reduce risk. Finally, active currency management may be able to provide better return potential with lower risk than does simple passive hedging.

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Table 6. Simulation of an Active Currency Strategy Tailored for Return and Volatility Targets, January 1989–December 2008

			Downside Risk: Biggest Losses				
Item	Annualized Return	Annualized Volatility	1 Month	3 Months	12 Months	36 Months	Largest Drawdown
Index returns							
U.S. cash	4.5%	0.6%	0.0%	0.1%	1.0%	4.2%	0.0%
S&P 500	9.2	14.5	–16.8	–29.6	–38.1	–40.9	–44.7
U.S. cash + currency—portable alpha simulation							
S&P 500 return equivalent	9.2	6.3	–10.2	–11.6	–11.3	–1.4	–13.6
S&P 500 volatility equivalent	15.3	14.5	–23.8	–26.5	–28.4	–19.8	–30.6

Sources: Standard & Poor's and AllianceBernstein.

Question and Answer Session

Giulio Martini

Question: What is your outlook for the relationship between the dollar and the euro?

Martini: In the short run, I see above-average volatility for all currency pairs because of the huge amount of uncertainty that exists concerning the future direction of monetary and fiscal policies as the global economy exits this crisis. In terms of long-term expectations for the relationship between the dollar and the euro, I think the dollar is going lower. I think the decline is partly because the Fed's mandate to maintain high employment and low inflation is conflicted.

Before the euro, the Bundesbank was a very good guardian of the German mark's currency value because all it cared about was keeping inflation low as a result of Germany's disastrous experience with inflation earlier in the 20th century. And the European Central Bank (ECB) has the same focus as the Bundesbank did. As a result, I believe the euro will emerge from the crisis stronger than it has been relative to the dollar because of the ECB's clear mission.

I see occasional reports in the media about how the euro is in danger of collapsing and is thus an inferior, unstable currency. I completely disagree. I think the idea of the euro's fragility is contrary to the fact that the euro has had enormous benefits by dramatically lowering the cost of capital in Europe and by reducing the financing costs for European governments.

For example, consider the case of Italy. Italy has a public debt-to-GDP ratio of 150 percent, serious demographic problems, and very bad economic policy. But because of the euro, Italian government bonds are trading at a spread to German bonds of under 140 bps. In prior crises, that spread has been as high as 800 bps. Post the euro's introduction, however, Germany has continued to seek efficiency in its industry, pursue rationalization, cut costs, and be a manufacturing power.

And because countries such as Italy and Spain are no longer trying to devalue their way out of their problems, Germany's trade performance has improved dramatically during the euro period by exporting to European countries that would have opted for devaluation in the past. The euro is working for Germany and the Netherlands on one side and for Italy and Spain on the other. And because the monetary policy of the ECB will not be as permissive as the Fed, I think the euro is going back up and ultimately will see new highs.

Question: Do you agree with the research that says disequilibrium in purchasing power parity takes too long to adjust to permit profitable currency strategies?

Martini: Recent research in purchasing power parity (PPP) indicates that the speed of reversion to PPP depends on the price measure being used. When price measures representing very homogenous goods are used, a very rapid reversion to PPP occurs. But when broader price indices are used, such as the producer price index, then reversion to PPP occurs slowly. For the consumer price index, which includes both goods and services, reversion occurs even more slowly.

It is also important to be aware that two concepts of PPP exist: relative purchasing power parity and absolute purchasing power parity. The textbook version is based on absolute PPP—that is, based on absolute price levels. The practitioner version is relative PPP, which is based on differences in inflation rates over time. The problem with basing reversion on differences in inflation rates is that an analyst has to select a base period when two currencies are at fair value, which is difficult to do objectively because many different approaches exist.

In our models, we use the Organisation for Economic Co-Operation and Development measure of absolute PPP, which is based on a direct price survey that compares the same goods and services among different economies and seems to generate the best results empirically.