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THE IMPACT OF CURRENCIES ON EMERGING MARKETS RETURN

Recently, the emerging markets asset class has enjoyed large absolute returns as the global economy moved beyond the global financial crisis of 2008. While this performance is welcome, some financial professionals have questioned the contribution of currency exchange rate movements to the emerging markets return stream, citing Brazil's 30%+ rise in 2009. ▸▸

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Upon reviewing the academic literature, we find a general consensus that there should be no expected return for holding currencies over the long term[1,2]. Arguments for this are typically based on variants of Purchasing Power Parity (i.e. all similar goods should cost the same across different currencies) and Uncovered Interest Rate Parity (differences between two countries' interest rates will be mirrored in differences between their exchange rates). However, these remain abstract notions to many and seem somewhat counter to recent experience in the Structured Emerging Markets (SEM) strategy. While the SEM strategy has historically delivered solid relative returns versus its benchmark, the last few years have seen a negative impact due to currency. Below, we investigate the impact of currency movements in the past performance of our strategy. We find that while there exist periods of time where currency movements have material impacts on performance, over longer time horizons, the cumulative effect of currency movements is muted. Furthermore, there is no evidence that there are periods of time where it is generically additive to performance to exclude the currency component of emerging markets returns.

When reviewing the impact of currency effects on the excess returns of the SEM strategy, it is easy to lose the forest for the trees when examining the portfolio at the security level. Because of this, we define two model portfolios which serve to simplify our analysis a great deal, while focusing our analysis on the effects of currency movements on the return of SEM.

The first model portfolio, called "SEM Unhedged", is constructed using SEM's target country weights. For this portfolio, we assume each country experiences the country-level index returns, including currency impacts (i.e. "unhedged"). The second model portfolio, called "SEM Hedged", is also constructed using SEM's target country weights, but here each country's exposure is assumed to experience country-level index returns with the currency exposure hedged back to the US dollar. That is, the two portfolios have the same exposure to country-level risk, but only the first portfolio has the additional exposure to currency movements. Historical returns for these two portfolios are as follows:

- SEM Unhedged returns = Sum of (SEM country weights) X (country level index returns)
- SEM Hedged returns = Sum of (SEM country weights) X (country level index returns, hedged to USD)

From the above equations, it is plain to see that taking the difference between the returns of SEM Unhedged and the historical benchmark yields the excess returns due to the country and currency positions that arise from the SEM's active country weighting decisions. Similarly, the difference between the historical hedged benchmark and SEM Hedged allows us to isolate the excess returns due only to the differences in country weightings, as neither the index nor the portfolio have any currency exposure. Put another way,

[1]Perold and Schulman (1988): Perold, André F. and Evan C. Schulman, "The Free Lunch in Currency Hedging: Implications for Investment Policy and performance Standards," Financial Analysts Journal, Vol. 44, No. 3, 1988, pp. 45-50.

[2]Froot (1993): Froot, Kenneth, "Currency Hedging Over Long Horizons," NBER Working Paper #4355, 1993

- SEM Unhedged – EM Benchmark = Excess Return from Country + Currency Decisions
- SEM Hedged – Hedged EM Benchmark = Excess Return from Country Decisions

Clearly, the difference of these two excess return streams gives a close approximation of the currency impact on SEM's historical excess returns. The following table summarizes these results over the past decade.

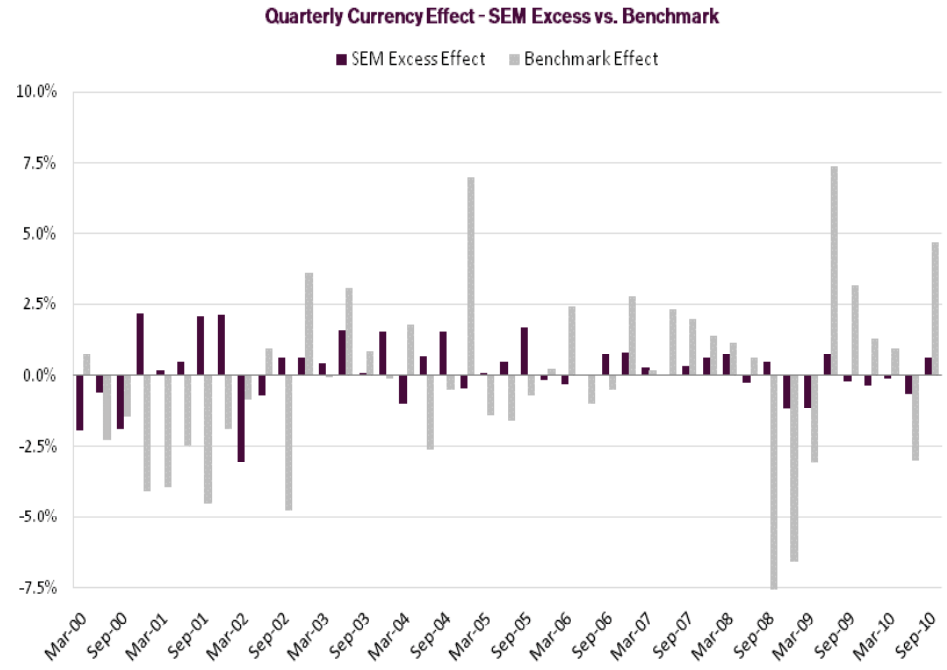
Currency Effects / Parametric SEM Model Portfolios: (1/1/00 - 9/30/10)

	(a)	(b)	(c)	(d)	(e) =(c)-(a)	(f)=(d)-(b)	(g) =(e)-(f)	(h) =(b)-(a)
	EM Benchmark	EM Benchmark (Hedged)	SEM Unhedged (Modeled)	SEM Hedged (Modeled)	Excess Return from Country + Currency	Excess Return from Country Effect	Excess Return from Currency Effect	EM Benchmark Currency Effect
2000	-32.84%	-27.82%	-24.37%	-17.14%	8.48%	10.68%	-2.20%	-6.96%
2001	-0.55%	13.34%	-1.01%	7.42%	-0.46%	-5.91%	5.45%	-12.25%
2002	-8.86%	-7.75%	2.24%	5.74%	11.09%	13.49%	-2.39%	-1.20%
2003	50.49%	44.94%	69.02%	58.03%	18.53%	13.09%	5.44%	3.83%
2004	22.39%	15.96%	35.37%	27.21%	12.98%	11.24%	1.74%	5.54%
2005	31.22%	35.96%	35.63%	38.00%	4.41%	2.05%	2.36%	-3.48%
2006	33.60%	28.86%	40.15%	33.79%	6.54%	4.93%	1.61%	3.68%
2007	40.27%	32.34%	41.49%	32.05%	1.22%	-0.29%	1.51%	5.99%
2008	-53.82%	-47.31%	-51.05%	-43.98%	2.77%	3.32%	-0.55%	-12.36%
2009	82.00%	67.34%	70.02%	58.43%	-11.98%	-8.91%	-3.08%	8.76%
YTD-2010	11.88%	9.09%	15.38%	12.87%	3.50%	3.78%	-0.28%	2.56%
1 Yr	21.61%	17.05%	22.19%	18.38%	0.58%	1.33%	-0.75%	3.90%
3 Yr	-0.85%	-0.56%	0.57%	1.34%	1.42%	1.89%	-0.48%	-0.29%
5 Yr	13.66%	11.99%	14.91%	13.23%	1.25%	1.24%	0.02%	1.49%
10 Yr	12.43%	13.07%	18.65%	18.00%	6.22%	4.93%	1.29%	-0.57%
Full Period	9.27%	10.16%	15.07%	15.30%	5.81%	5.14%	0.66%	-0.81%

Examining the data above provides some useful insights.

First, currency is a relatively small portion of the excess return generated in our simplified portfolios. In most of the annual periods displayed above, currency effects are dominated by country effects. This becomes even more pronounced when examined over longer periods, e.g. for the full period under examination, total excess returns are 5.81% annualized with only 66bps due to currency effects. We arrive at a similar conclusion comparing the absolute returns in SEM Hedged (15.30%) to SEM Unhedged (15.07%), reflecting only a 23bp difference for the full period under review.

Second, further scrutiny of the currency effect reveals that it is not consistent over time. As can be seen in the below chart, the currency component of excess returns flips from negative to positive numerous times, and has had periods of being a strong contributor or a strong detractor from excess returns. It is worth noting that in the chart below, the benchmark effect is in relation to the absolute benchmark returns, where the SEM measure deals only with its excess portion. While there is a small difference of scale, the key item we wish to highlight remains. The two series behave quite independent of one another.



Indeed, over the most recent three years, the effects of currency have hampered the overall return of the strategy. However, for the five years preceding this, currency returns were additive to the strategy's returns. As the time period lengthens, however, the overall impact of currency decreases. Given our 'a priori' expectations that currency hedging is a zero sum game, these results are in line with the classic economic theories.

Finally, one can observe from the above table that time periods where currency exposures benefitted the SEM model strategies do not align neatly with time periods where currency exposures benefitted the overall benchmark, as shown in column (h). While on the one hand, this can be explained as simply arising from the different currency exposures present in the two "unhedged" portfolios, it also provides compelling evidence that there is no time period where it is generically "good" or "bad" to hedge away EM currency exposure. If there were, then we would see a similar return pattern between columns (g) and (h) above.

While the preceding discussions are based on a simplified version of the SEM strategy, they capture the majority of the currency drivers in the SEM strategy returns, and the results reflect the basic tenets of the SEM strategy. In particular, the following conclusions can be made with regards to SEM:

- First, currency is a small component of the excess returns generated by the strategy.
- Second, the currency component of SEM's excess return is inconsistent over time, demonstrating no particular trend.
- Finally, it is difficult to predict time periods where including or excluding currency exposures will generically benefit an Emerging Market investor.

All in all, the above numbers give us confidence that the basic economic arguments regarding EM currency returns are correct; currency contributions to returns will remain a zero sum game over longer time periods.