

The Long, Awful Life Of The Dollar Carry Trade

The world can change a great deal after more than three years and make what once seemed impossible understated. The dollar carry trade, the borrowing and selling of the greenback to fund all manner of other purchases in lands where the printing presses run more slowly, required something of an argument in August 2008 (see “The Short, Awful Life Of The Dollar Carry Trade,” August 2008). This was in the early days of the Federal Reserve’s drive toward near-0% interest rates, before the full force and fury of the 2008 financial panic and more than seven months before the first bout of quantitative easing.

Those monetary policy episodes led to the primacy of the dollar carry trade in world finance, the consequences of which have dominated many of the postings here in 2010 and 2011. All of the analyses and comparisons in August 2008 used the January 1999 inception of the euro as a starting point to have as long of a consistent history as possible. Let’s update the original analysis with a different starting point, here the August 17, 2007 decision by the FOMC to engage in its first rate-cutting move, a pre-opening intermeeting “surprise” cut in the target federal funds rate from 6.50% to 6.00%. It was at this point, a little more than a week after the European Central Bank started the bailout machine going with a backstopping of BNP-Paribas, the Federal Reserve began its era of trying to solve any and all problems in financial markets with more money for less.

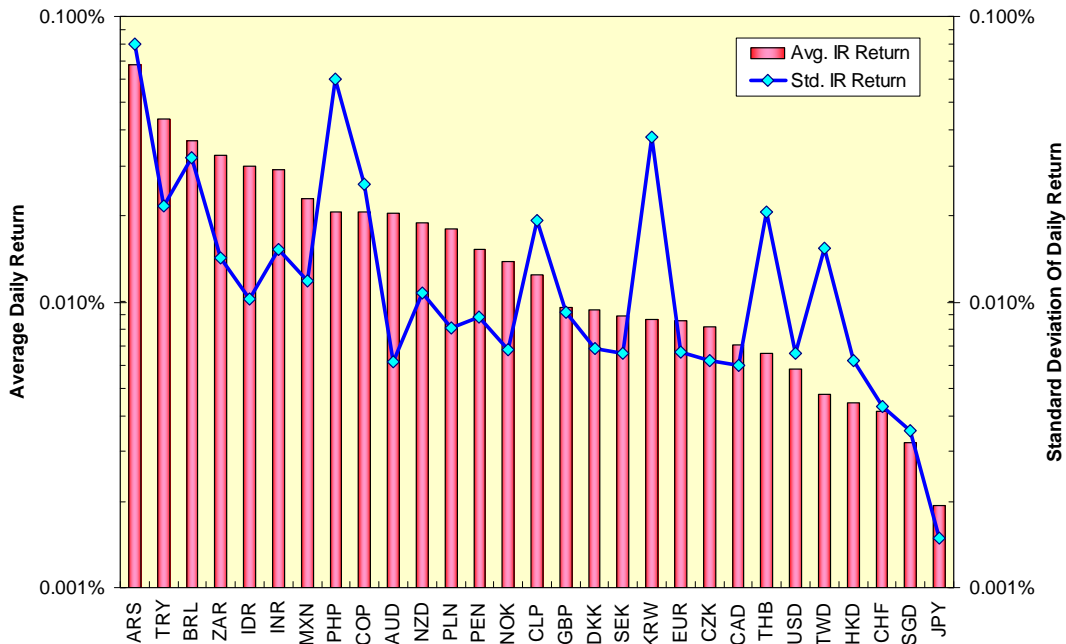
Carry Trade Decomposition

All currency trades can be broken into their interest rate spread component and their spot rate components. The carry trade returns calculated below are based on borrowing at the three-month LIBOR rate of the lower-yielding currency (LY_3) and lending at the three-month LIBOR rate of the higher-yielding currency (HY_3). The returns on the higher-yielding currency are adjusted for the daily changes in the spot rate for the lower-yielding currency (LYS). A 260-day trading year is used.

1. $Long\ Return_t = \left[\left(1 + \frac{HY_{3_t}}{260} \right) * \frac{LYS_t}{LYS_{t-1}} \right] - 1$
2. $Short\ Return_t = \frac{LY_{3_t}}{260}$
3. $NetCarry\ Return_t = Long\ Return_t - Short\ Return_t$

What do these interest rate carry returns look like since August 2007? First, the interest rate return on the USD has slipped down toward the zone populated by Asian exporters such as Hong Kong, Taiwan Singapore and Japan; only Switzerland, which also has tried to solve problems via printing money (see “How Eastern Europe Got Carried Away,” August 2009) is in this low-rate neighborhood. Four Asian countries, the Philippines, Korea Thailand and Taiwan, have unusually high standard deviations of returns on their interest rate returns, a sign they are using short-term interest rates in lieu of currency fluctuations as a macroeconomic adjusting device. Finally, both the absolute interest rate returns and their standard deviations require one less cycle on their semilogarithmic axes to display: The world became a lower-rate place after August 2007.

Three-Month Interest Rate Returns On Selected Currencies August 2007 Onwards



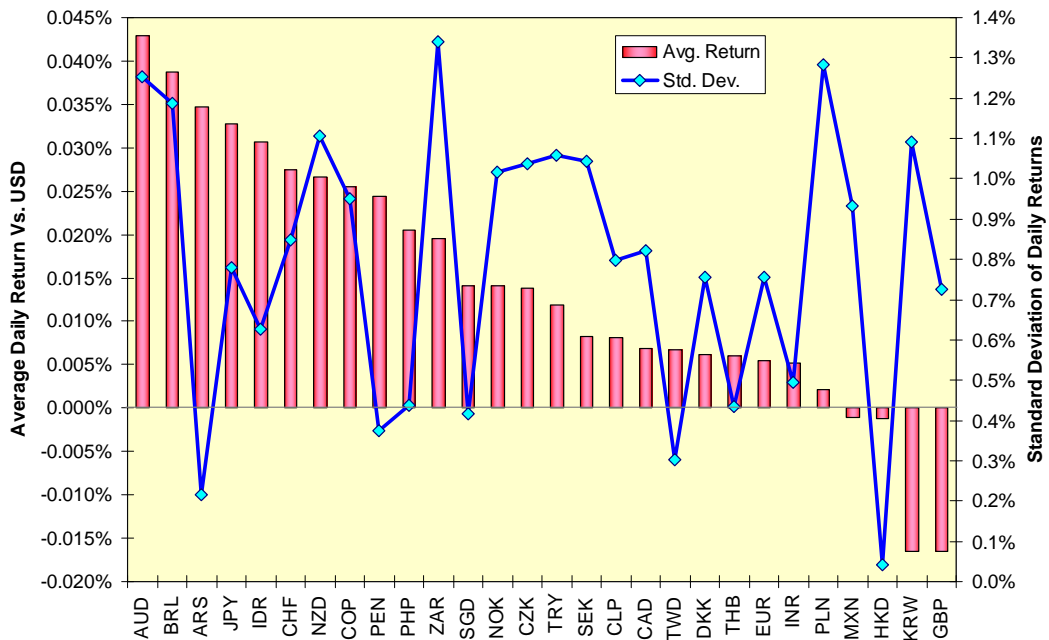
In addition to global short-term interest rates shifting lower, their correlation matrix between them became more uniform and more positive. Whereas large swaths of the table below for the ARS, BRL, AUD and NZD showed negative correlations of interest rate returns (yellow cells), the current correlation matrix has only a small handful of USD and TWD correlations as negative. The implications here are indisputable: The U.S. adopted and maintained a short-term interest rate policy way out of synch with the rest of the world.

	ARS	AUD	BRL	CAD	CHF	CLP	COP	CZK	DKK	EUR	GBP	HKD	IDR	INR	JPY	KRW	MXN	NOK	NZD	PEN	PHP	PLN	SEK	SGD	THB	TRY	TWD	USD	ZAR	
ARS	1.000																													
AUD	-0.010	1.000																												
BRL	0.326	0.471	1.000																											
CAD	0.136	0.894	0.408	1.000																										
CHF	0.170	0.817	0.211	0.904	1.000																									
CLP	0.373	0.672	0.885	0.649	0.428	1.000																								
COP	0.350	0.601	0.816	0.657	0.589	0.778	1.000																							
CZK	0.359	0.701	0.632	0.776	0.783	0.676	0.890	1.000																						
DKK	0.450	0.686	0.363	0.840	0.901	0.569	0.702	0.848	1.000																					
EUR	0.243	0.804	0.185	0.902	0.969	0.466	0.545	0.741	0.931	1.000																				
GBP	0.208	0.857	0.334	0.953	0.979	0.550	0.671	0.828	0.925	0.970	1.000																			
HKD	0.258	0.783	0.585	0.927	0.808	0.723	0.792	0.835	0.799	0.775	0.876	1.000																		
IDR	0.489	0.395	0.707	0.420	0.360	0.700	0.702	0.654	0.560	0.382	0.446	0.504	1.000																	
INR	0.327	0.646	0.858	0.570	0.357	0.957	0.689	0.595	0.474	0.389	0.464	0.639	0.628	1.000																
JPY	0.524	0.643	0.450	0.804	0.856	0.592	0.761	0.884	0.945	0.856	0.881	0.834	0.572	0.501	1.000															
KRW	0.126	0.490	0.952	0.388	0.150	0.844	0.734	0.523	0.231	0.104	0.273	0.541	0.619	0.832	0.294	1.000														
MXN	0.651	0.490	0.718	0.613	0.592	0.736	0.858	0.839	0.793	0.597	0.666	0.737	0.763	0.642	0.855	0.562	1.000													
NOK	0.276	0.888	0.374	0.916	0.946	0.616	0.650	0.798	0.912	0.963	0.964	0.819	0.486	0.553	0.866	0.296	0.679	1.000												
NZD	0.181	0.913	0.501	0.953	0.929	0.666	0.756	0.871	0.878	0.904	0.969	0.898	0.519	0.588	0.858	0.454	0.706	0.949	1.000											
PEN	0.450	0.522	0.600	0.641	0.612	0.694	0.695	0.760	0.764	0.625	0.672	0.693	0.678	0.644	0.789	0.469	0.807	0.671	0.691	1.000										
PHP	0.359	0.460	0.977	0.407	0.236	0.852	0.834	0.649	0.378	0.195	0.351	0.596	0.716	0.818	0.468	0.940	0.738	0.379	0.508	0.591	1.000									
PLN	0.273	0.618	0.765	0.555	0.412	0.813	0.732	0.640	0.497	0.423	0.503	0.613	0.568	0.781	0.514	0.744	0.631	0.555	0.609	0.522	0.750	1.000								
SEK	0.204	0.880	0.292	0.903	0.890	0.612	0.523	0.685	0.856	0.943	0.913	0.753	0.405	0.572	0.758	0.254	0.543	0.948	0.883	0.607	0.285	0.536	1.000							
SGD	0.149	0.687	0.650	0.796	0.641	0.690	0.834	0.836	0.643	0.580	0.719	0.909	0.454	0.624	0.708	0.609	0.660	0.646	0.785	0.595	0.650	0.620	0.567	1.000						
THB	0.247	0.585	0.960	0.571	0.355	0.891	0.867	0.707	0.445	0.307	0.475	0.739	0.665	0.849	0.526	0.951	0.719	0.471	0.625	0.610	0.956	0.778	0.399	0.792	1.000					
TRY	0.472	0.702	0.662	0.807	0.772	0.765	0.882	0.921	0.883	0.771	0.833	0.880	0.608	0.689	0.919	0.525	0.884	0.832	0.863	0.803	0.662	0.673	0.734	0.837	0.724	1.000				
TWD	0.003	0.214	0.099	0.199	0.194	0.144	0.067	0.045	0.179	0.218	0.231	0.088	0.441	0.057	0.069	0.192	0.143	0.218	0.230	0.132	0.142	0.116	0.242	-0.160	0.115	-0.050	1.000			
USD	0.113	0.558	-0.145	0.780	0.868	0.117	0.289	0.517	0.758	0.868	0.841	0.673	0.130	0.017	0.704	-0.198	0.369	0.755	0.713	0.409	-0.113	0.092	0.723	0.456	0.039	0.526	0.208	1.000		
ZAR	0.372	0.665	0.789	0.692	0.639	0.781	0.900	0.867	0.739	0.607	0.717	0.778	0.729	0.704	0.779	0.705	0.857	0.719	0.802	0.780	0.803	0.677	0.597	0.743	0.822	0.865	0.207	0.337	1.000	

The Dollar Carry

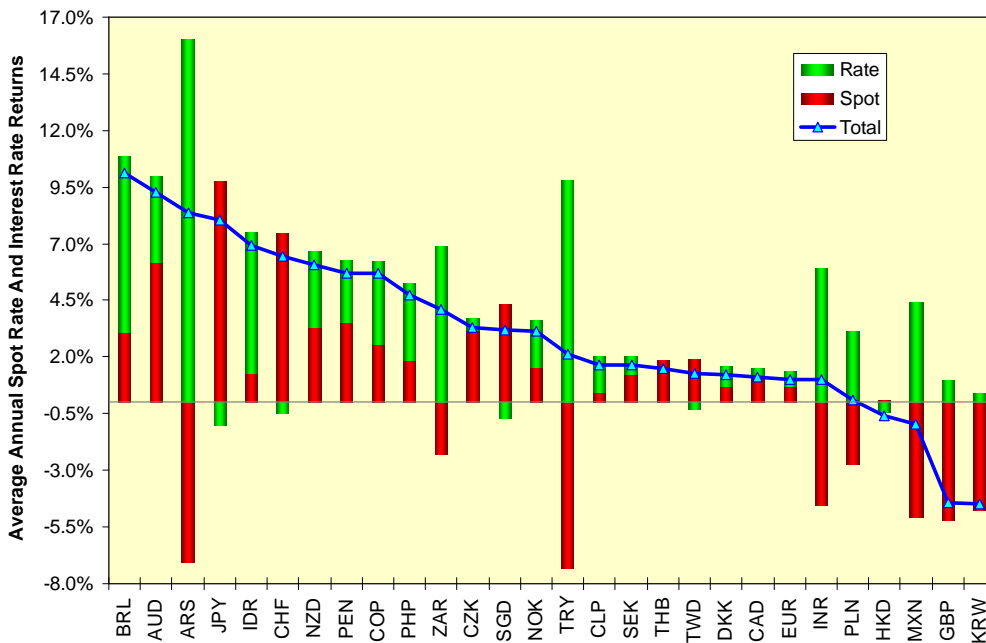
Now let's examine the total return from the carry trade of borrowing three-month USD and lending the proceeds in three-month LIBOR of the other 28 currencies. Please note how three currencies, the MXN, HKD, KRW and GBP shift into a negative carry return as the result of weak spot rate returns. The AUD, which has benefited immensely from Australia's role as a supplier to fast-growing East and South Asian economies, stands out on the other side as having a very strong carry return from both its spot rate and interest rate spread components.

Risk And Return In Three-Month Carry Against USD
August 2007 Onwards



If we redisplay these carry trade returns as the average annual combination of their interest rate spreads and spot rate changes, we see how several of the strongest currencies on a carry trade basis, such as the ARS and TRY, actually have negative spot rate changes offset by high interest rate spreads. Japan is an exception in the other direction; the JPY has gained on the carry trade even as the interest rate component has been negative.

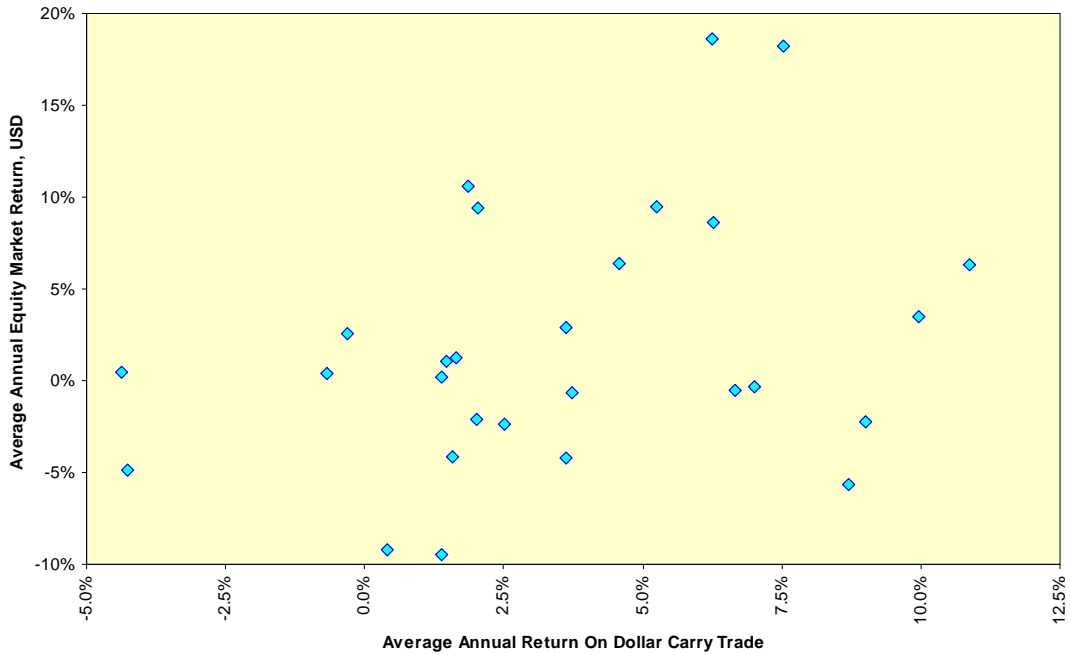
Decomposing The Dollar Carry Trade
August 2007 Onwards



The Logical Rejoinder

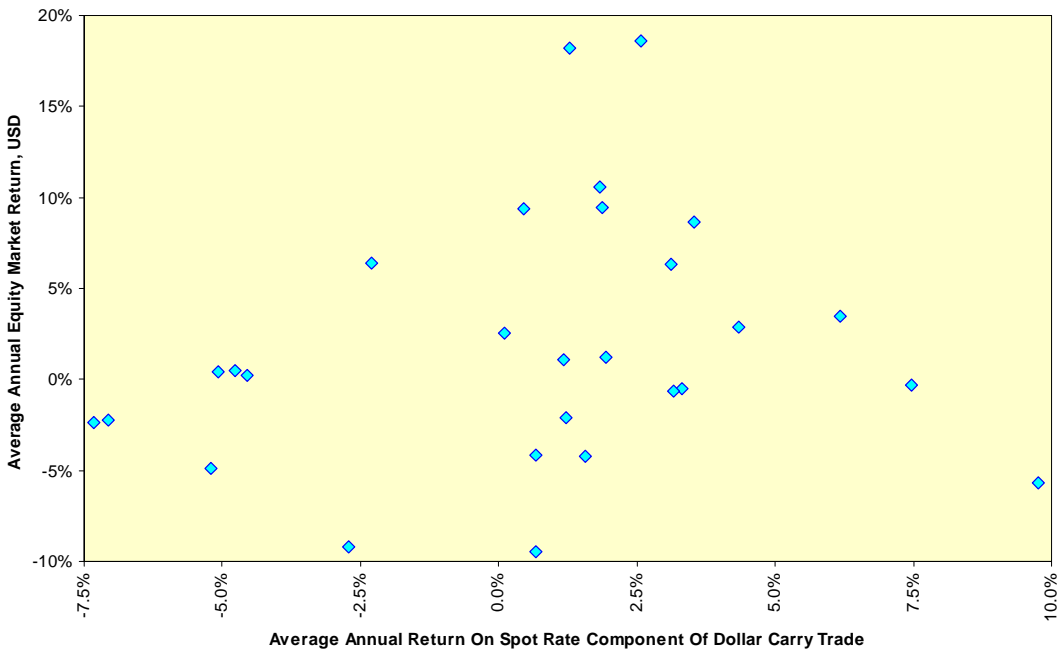
When we last looked at average annual global equity returns as a function of the return on the dollar carry trade, we saw a marked positive correlation. That has deteriorated into a weak positive correlation with a sub-unitary beta of 0.599 as opposed to the 1.492 beta (ex Turkey and Argentina) we saw in August 2008. This suggests global equity returns are less a function of the dollar carry trade now than they were previously.

Weakly Positive Correlation Between Dollar Carry And Equities



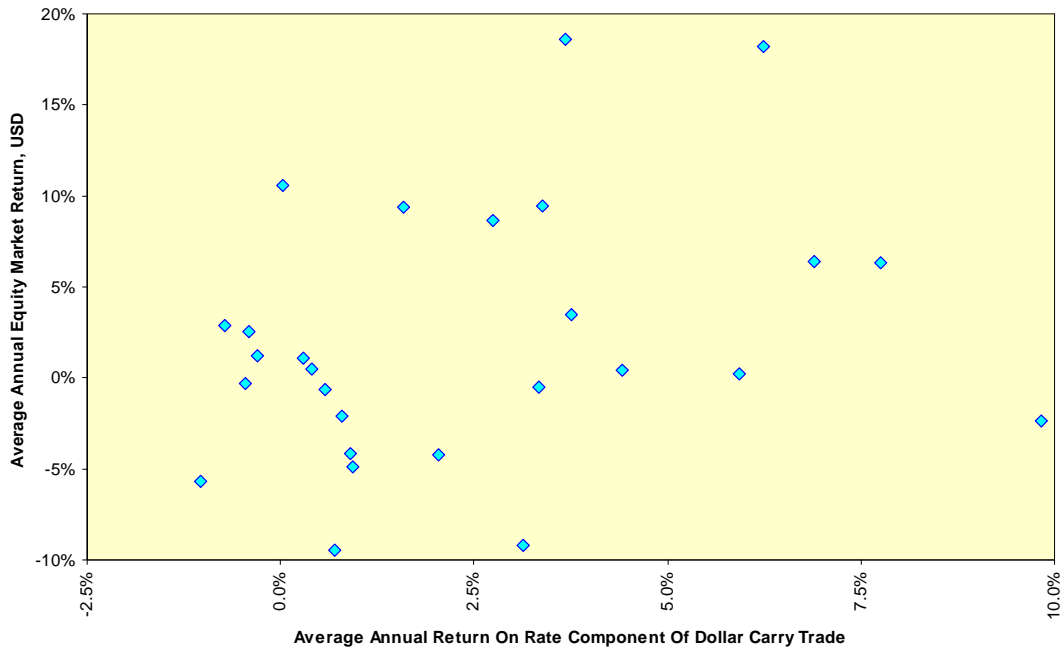
Much of this deterioration is the result of the breakdown in the spot rate component. The assertion made so often in these pages, equity markets are agnostic to any level of currency spot rates, is borne out in the absence of a defined relationship.

No Correlation Between Spot Component of Dollar Carry And Equities



The interest rate spread component has a stronger but not very significant deterministic relationship to relative equity performance. While the assertion higher short-term interest rates in a country contribute to a relatively strong stock market performance might have seemed incongruous throughout much of history, such are the dynamics of capital flows in a carry trade world.

Weakly Positive Correlation Between Rate Component of Dollar Carry And Equities



Implications

We excoriated the behavior of the U.S. Treasury and the Federal Reserve in the August 2008 analysis, noting how monetary policy appeared to be set in response to equity market downturns and in callous disregard to the global consequences of money-printing, including dollar weakness, asset bubbles outside of the U.S. and the financing of economic growth outside of the U.S. via carry trade mechanisms.

The opposite has not been true. While three-month USD LIBOR fell in response to weaker equity prices as measured by the MSCI World index, it has yet to rise in response to higher equity prices as it had in 2004-2006. The abject unwillingness to maintain the return on the world's principal reserve currency will lead to the end of its use as such, if not now then once an alternative becomes available. As the U.S. has benefited immensely from the dollar's role as the reserve currency over the years – other countries hold it and maintain its value despite the best efforts of American policymakers – the cheap-dollar policy will lead to a longer-term diminution of relative American welfare in the global economy. It quite literally is being carried away.

World Equities No Longer Affect U.S. Short-Term Rates

