

Requiem For A Carry Trade

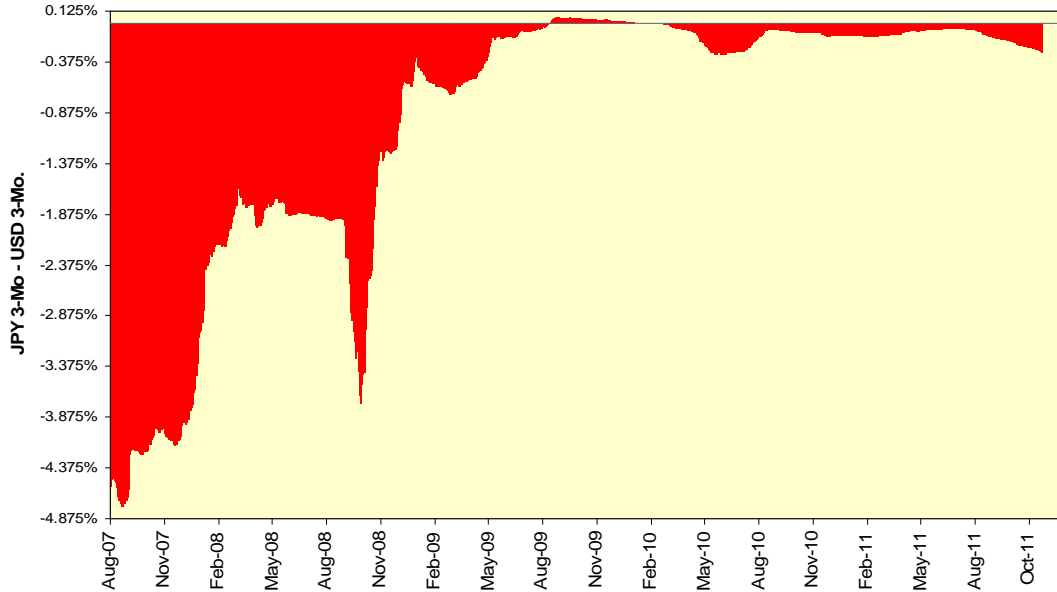
One of the most critical things for any trader or, for that matter, any market commentator, is to know when to “turn the card over,” a reference to those long-ago days when transactions were executed on a trading floor and recorded on pieces of cardboard with one side devoted to longs and the other to – you guessed it – shorts.

Such is the case with the yen carry trade (see “Looking at the Carry Trade,” June 2007). As Japan’s boom-and-bust cycle predated those of the United States and various paragons of exuberance in the Eurozone, their decision to drive short-term interest rates lower and to start stuffing all manner of excess yen reserves into the remnants of their banking system predated everyone else’s too. Japan moved to its zero interest rate policy (ZIRP) in February 1999, thirteen long years ago and first moved to money-printing (excuse me, “quantitative easing”) in March 2001. Those cheap and excess yen were borrowed by other countries to finance both their growth and certainly, with the benefit of hindsight, to finance their financial market bubbles.

But competition in the free-money department started to emerge with the financial crisis beginning in August 2007. We updated an analysis of the dollar carry trade beginning on August 17, 2007 last month (see “The Long, Awful Life of the Dollar Carry Trade,” January 2012). Let’s do a similar update for the yen carry trade and replace the startdate of the analysis, originally the January 4, 1999 inception of the euro, with the March 19, 2009 date when American quantitative easing began for those living on Asian time.

One of the important factors we need to keep in mind is the yen has been cheaper to borrow than the dollar, and often significantly so, since August 2007 with the exception of the August 2009 – March 2010 period when the dollar became modestly cheaper to borrow. However, as the yen is subject to spikes higher due to importers needing to purchase yen to pay their Japanese suppliers and factors such as occasional large-scale Chinese purchases of Japanese bonds, the dollar can be a competitive and even dominant funding source even when it is more expensive to borrow than the yen.

The Yen Remains Cheaper To Borrow



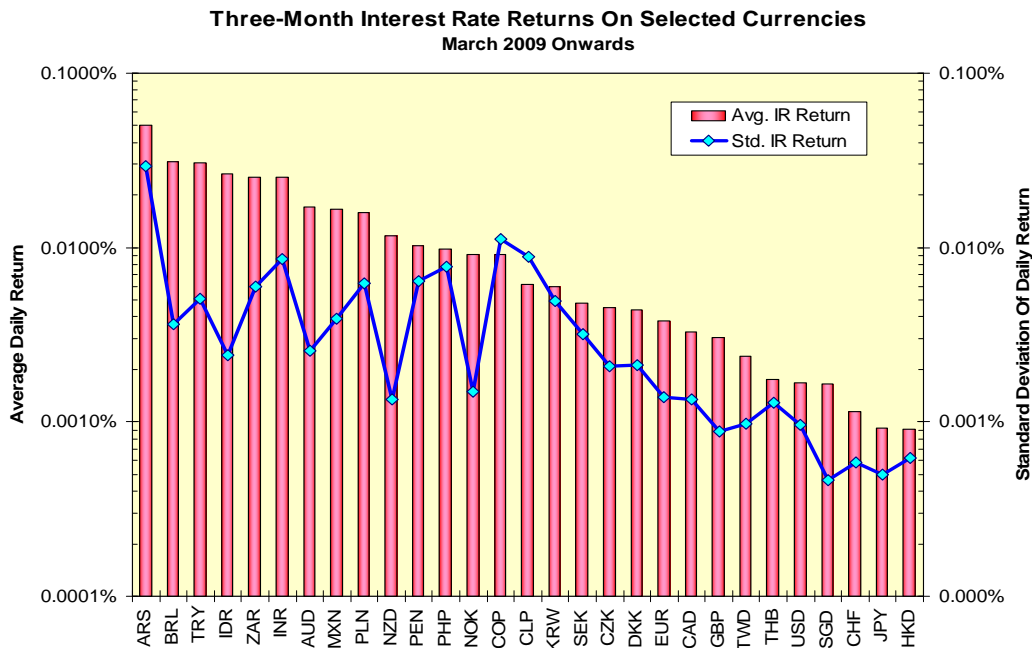
Carry Trade Decomposition

As we did last month, let’s review some of the terms involved. 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. $Long\ Return_t = \left[\left(1 + \frac{HY_{3t}}{260} \right) * \frac{LYS_t}{LYS_{t-1}} \right] - 1$
2. $Short\ Return_t = \frac{LY_{3t}}{260}$
3. $NetCarry\ Return_t = Long\ Return_t - Short\ Return_t$

Interest Rate Returns

As Japan won the race to the bottom for most of the post-March 2009 period, we should expect the average interest rate returns between the JPY and the other currencies examined to be positive, and indeed they have been. However, the HKD has been slightly cheaper to borrow on average, and the USD, CHF and SGD all are in the race. The CHF, as we have established in 2010-2011, is prone to revaluation and the SGD and HKD are relatively tiny. This brings the USD to the fore as the main competition.



While we could note last month for the dollar carry trade the correlation of interest rate returns post-August 2007 was more uniform and positive than seen for the entire post-January 1999 sample, such is not the case for the post-March 2009 sample in the case of the yen carry trade. Large swaths of the table below show negative correlations of interest rate returns (yellow cells). This large-scale divergence of interest rate returns will maintain large-scale tension in currency markets; both volatility and trading opportunities should follow.

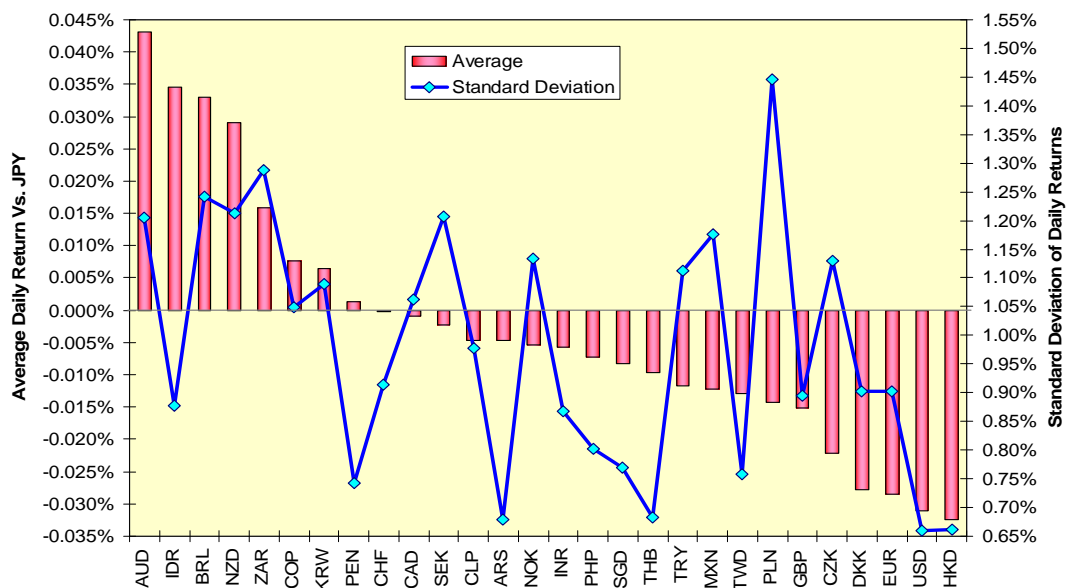
Correlation Of Three-Month Interest Rate Total Returns Since March 2009

	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	-0.462	1.000																												
BRL	0.275	0.045	1.000																											
CAD	-0.040	0.749	0.068	1.000																										
CHF	0.601	-0.511	0.310	-0.140	1.000																									
CLP	0.147	0.620	0.134	0.873	-0.094	1.000																								
COP	0.457	-0.806	0.009	-0.668	0.385	-0.460	1.000																							
CZK	0.423	-0.878	0.144	-0.700	0.605	-0.635	0.716	1.000																						
DKK	0.460	-0.584	0.059	-0.162	0.502	0.064	0.530	0.490	1.000																					
EUR	0.477	0.162	0.130	0.625	0.235	0.811	-0.049	-0.226	0.510	1.000																				
GBP	0.728	-0.322	0.447	0.163	0.630	0.366	0.325	0.369	0.671	0.684	1.000																			
HKD	0.529	-0.226	0.538	0.158	0.575	0.255	0.280	0.367	0.519	0.476	0.840	1.000																		
IDR	0.187	-0.493	0.281	-0.255	0.507	-0.138	0.443	0.571	0.651	0.174	0.611	0.662	1.000																	
INR	0.001	0.664	0.071	0.909	-0.108	0.903	-0.630	-0.663	0.007	0.711	0.235	-0.128	-0.185	1.000																
JPY	0.545	-0.782	0.292	-0.438	0.670	-0.301	0.676	0.812	0.692	0.113	0.684	0.689	0.755	-0.378	1.000															
KRW	-0.253	0.634	-0.096	0.581	-0.282	0.525	-0.555	-0.646	-0.307	0.217	-0.215	-0.246	-0.376	0.571	-0.567	1.000														
MXN	0.461	-0.853	0.226	-0.696	0.576	-0.542	0.809	0.877	0.583	-0.120	0.467	0.512	0.678	-0.640	0.871	-0.639	1.000													
NOK	0.144	0.666	0.350	0.759	-0.046	0.848	-0.389	-0.596	-0.068	0.644	0.328	0.370	-0.130	0.740	-0.277	0.474	-0.427	1.000												
NZD	-0.033	0.230	0.373	0.235	0.135	0.034	-0.277	-0.041	-0.203	-0.099	0.114	0.315	0.069	0.100	0.055	0.021	-0.059	0.191	1.000											
PEN	0.045	-0.182	0.237	0.099	0.361	0.083	0.007	0.296	0.392	0.201	0.482	0.509	0.705	0.137	0.465	-0.144	0.297	-0.055	0.127	1.000										
PHP	0.206	-0.605	-0.218	-0.665	0.287	-0.586	0.628	0.651	0.223	-0.341	0.174	0.264	0.435	-0.673	0.562	-0.514	0.721	-0.416	-0.026	0.161	1.000									
PLN	0.229	0.134	0.012	0.237	-0.018	0.332	-0.030	-0.175	0.041	0.342	0.131	0.019	-0.220	0.262	-0.118	0.134	-0.147	0.307	-0.108	-0.153	-0.174	1.000								
SEK	0.054	0.602	-0.018	0.858	-0.154	0.925	-0.519	-0.660	0.108	0.808	0.250	0.095	-0.208	0.922	-0.380	0.541	-0.606	0.723	-0.053	0.058	-0.665	0.327	1.000							
SGD	0.120	-0.814	0.003	-0.919	0.347	-0.864	0.703	0.817	0.246	-0.561	-0.009	0.044	0.411	-0.876	0.594	-0.607	0.800	-0.730	-0.122	0.062	0.721	-0.248	-0.874	1.000						
THB	0.500	-0.520	0.268	-0.275	0.492	-0.130	0.490	0.524	0.487	0.166	0.553	0.526	0.489	-0.221	0.641	-0.390	0.599	-0.078	0.055	0.246	0.401	-0.022	-0.206	0.346	1.000					
TRY	0.741	-0.645	0.212	-0.277	0.609	-0.034	0.678	0.612	0.654	0.398	0.734	0.609	0.564	-0.193	0.733	-0.414	0.702	-0.035	-0.165	0.272	0.427	0.065	-0.124	0.387	0.575	1.000				
TWD	-0.111	0.144	-0.095	0.202	-0.134	0.223	-0.105	-0.212	0.157	0.221	0.038	0.025	0.069	0.252	-0.078	0.119	-0.159	0.165	-0.034	0.070	-0.131	0.041	0.292	-0.235	-0.062	-0.110	1.000			
USD	0.650	-0.717	0.362	-0.400	0.662	-0.245	0.649	0.771	0.616	0.156	0.722	0.702	0.671	-0.353	0.878	-0.551	0.836	-0.192	0.099	0.395	0.550	-0.069	-0.347	0.524	0.729	0.756	-0.113	1.000		
ZAR	0.163	-0.477	0.070	-0.447	0.278	-0.407	0.446	0.496	0.220	-0.212	0.159	0.209	0.414	-0.444	0.452	-0.358	0.510	-0.319	0.004	0.222	0.450	-0.278	-0.466	0.501	0.297	0.352	-0.124	0.420	1.000	

The Yen Carry

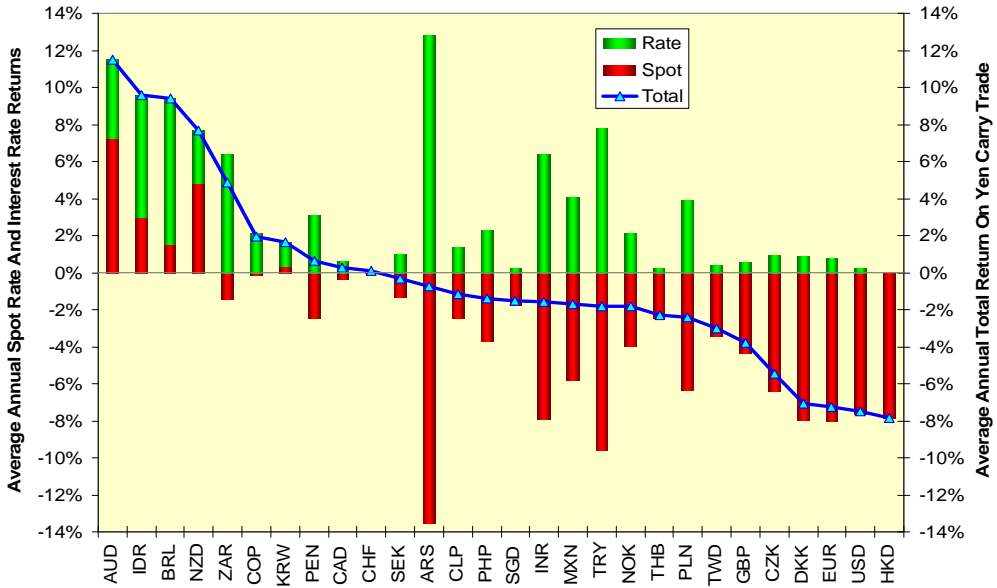
Now let's examine the total return from the carry trade of borrowing three-month JPY and lending the proceeds in three-month LIBOR of the other 28 currencies. Please note how eighteen currencies have negative carries vis-à-vis the yen. These include the low-yielding CHF, TWD, USD and HKD, and the (relatively) higher-yielding ARS, GBP, NOK, CZK, DKK and EUR. This tells us immediately the spot rate changes for these currencies, discussed shortly, had to be sufficiently negative to overwhelm the interest rate gains.

Risk And Return In Three-Month Carry Against JPY
March 2009 Onwards



If we redisplay these carry trade returns as the combination of their interest rate spreads and spot rate changes, we see how the JPY's strong spot price appreciation over this period determined far more of the net carry trades' returns than did interest rate spreads. Equally striking is the large number of currencies where both components of the carry trade return, interest rate spread as well as spot rate change, were positive. That list down to a 4% total carry return includes the AUD, IDR, BRL, NZD and ZAR.

Decomposing The Yen Carry Trade March 2009 Onwards



The Stock Market Connection

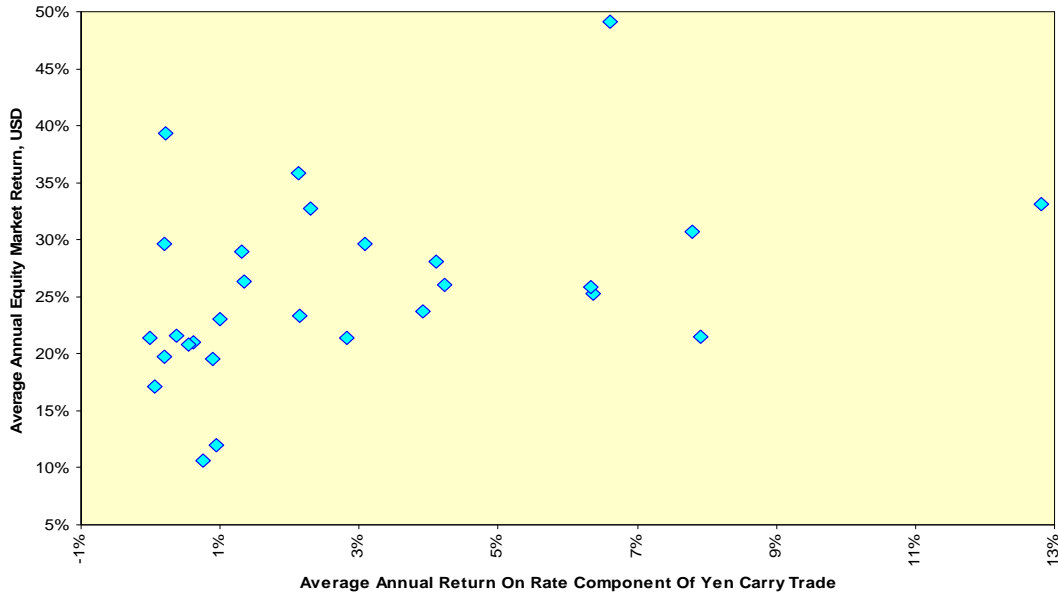
Our real clues to the diminished importance of the yen carry trade come in its relationship to equity returns. If we map national index returns against the yen carry return since March 2009, the relationship is a weak and albeit positive one.

Weakly Positive Correlation Between Yen Carry And Equities

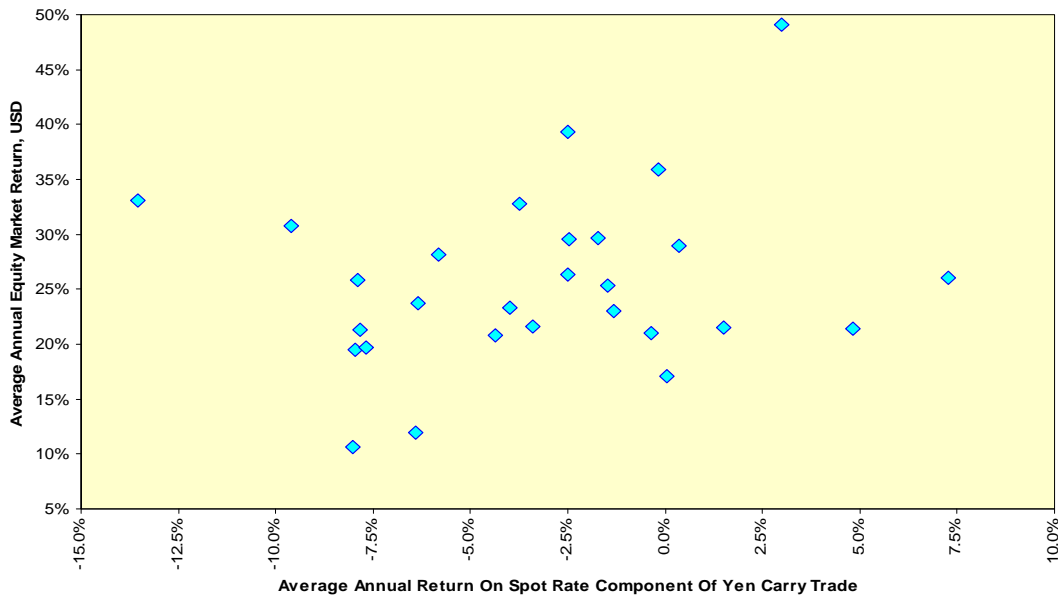


If we break the chart above into separate ones for the interest rate and spot rate components of the carry trade, we see the same weak and generally non-tradable relationships.

Weakly Positive Correlation Between Rate Component of Yen Carry And Equities

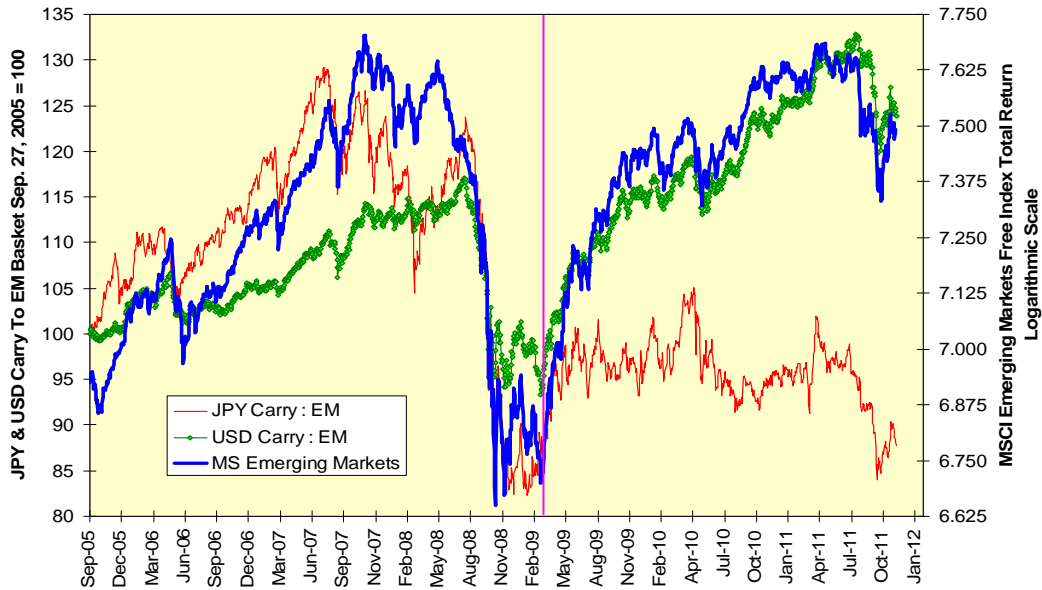


Weakly Positive Correlation Between Spot Component of Yen Carry And Equities



The *piece de resistance*, however, comes not from mapping the carry trade and its components against the national equity indices but rather in comparing the dollar and yen carry trades into a basket of emerging market currencies at the weights corresponding to those in the MSCI Emerging Market Free index. Let's map the excess carry returns for the carry trades of the USD and JPY into the EM basket against the logarithm of the total return for the MSCI EM index.

USD Carry Into EM Currencies More Important After 2008



Please note how closely the USD carry's path matches the return of the emerging market stock index after April 2009 while the relationship between the yen carry and the stock index collapses. What used to be important, the yen carry trade, has been usurped and replaced by the dollar carry even though Japan did everything in its power to win the race to the bottom.

Two lessons emerge. First, the races you want to win are those to the top, not to the bottom. Second, the Federal Reserve's protestations all through the money-printing era that it was not fueling an asset bubble in emerging markets are shown to be hogwash. If those bubbles formerly were made in Japan, they are made in the U.S. now.