

EQUITY PRODUCTS

Updated Tracking Error History of E-mini MSCI Emerging Markets Index Futures

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It has been almost two full years since E-mini MSCI Emerging Markets futures contract were initially listed by CME in late October 2007. Given the recent global financial crisis, it is time to review how the increased volatility in the market has impacted the performance of the futures contract with respect to its tracking error versus the underlying index. Therefore, we have updated the tracking error history to include the nine-month period following the last study.

With October 2007 being the first full calendar month of the contract, we can show performance of the last 22 full months. We observed that:

- The monthly tracking error average during the past 22 months is attractively low, at just a few basis points;
- The monthly performance, however, does show considerable volatility, and was most pronounced in estimated standard deviation during the end of last year. The estimated standard deviation of 229 basis points was a result of the recent heightened variability. But note that there is a distinct pattern to the fluctuation, so that if a large deviation one month occurs one month, an offsetting deviation generally occurs in the following month.

As we have reasoned in the previous article, the pattern behavior may be explained by the asynchronous closing time between the futures and the underlying cash market: The 800 stocks from 25 emerging markets countries are traded in 11 different time zones. The monthly performance of the futures contract is measured against the closing price of the futures at 3:15 p.m. Chicago time and the end of each calendar month. Asian markets, which represent almost 45 percent of the Index, would have closed some 13 hours prior to this time. Information flow during the American time zone will impact both futures and the underlying stocks, but the latter would not show up

TABLE 1:
E-mini MSCI EM Futures Tracking Error Since Inception

	Monthly Performance			Monthly Tracking Error	
	Index/Net	Index/Gross	Futures	vs. Net	vs. Gross
Nov-07	-7.09%	-7.08%	-8.46%	-1.37%	-1.37%
Dec-07	0.56%	0.56%	-0.89%	-1.45%	-1.45%
Jan-08	-12.53%	-12.53%	-9.50%	3.03%	3.02%
Feb-08	7.30%	7.30%	3.00%	-4.30%	-4.30%
Mar-08	-5.17%	-5.17%	-2.11%	3.06%	3.06%
Apr-08	8.06%	8.07%	8.52%	0.46%	0.45%
May-08	1.85%	1.86%	2.05%	0.20%	0.19%
Jun-08	-10.01%	-10.01%	-10.44%	-0.43%	-0.43%
July-08	-3.75%	-3.75%	-6.50%	-2.75%	-2.75%
Aug-08	-8.04%	-8.04%	-6.32%	1.72%	1.72%
Sep-08	-17.53%	-17.52%	-15.69%	1.84%	1.84%
Oct-08	-27.39%	-27.38%	-28.34%	-0.96%	-0.96%
Nov-08	-7.63%	-7.63%	-7.66%	-0.03%	-0.03%
Dec-08	7.61%	7.61%	8.98%	1.38%	1.38%
Jan-09	-6.61%	-6.61%	-10.52%	-3.91%	-3.91%
Feb-09	-5.70%	-5.70%	-4.74%	0.96%	0.96%
Mar-09	14.16%	14.16%	19.02%	4.87%	4.87%
Apr-09	16.29%	16.29%	13.65%	-2.65%	-2.65%
May-09	16.66%	16.66%	17.93%	1.27%	1.27%
Jun-09	-1.53%	-1.53%	-1.37%	0.16%	0.16%
July-09	10.87%	10.87%	9.29%	-1.59%	-1.59%
Aug-09	-0.54%	-0.54%	0.39%	0.93%	0.93%
			Average	0.0203%	0.0179%
			Std Dev	2.2900%	2.2900%

until the following business day. As such, the same-day cash index would not have reflected the latest market movements. Because the underlying index trails the futures in this sense, the unaccounted-for market movement will be reflected in the performance of the underlying Index in the next calendar month, causing the tracking error to reverse.



For more information on E-mini MSCI Emerging Markets Index futures,
visit www.cmegroup.com/equities.

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