

Research & Product Development

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Updated Tracking Error History of CME Group E-mini MSCI EAFE Futures

This article documents the monthly performance of CME Group E-mini MSCI EAFE futures with respect to its tracking error versus the underlying index. Given the recent turmoil in the markets, we have received inquiries about how the increased volatility in the market has impacted the performance. Therefore, we have updated the tracking error history to include the six-month period following the last study.

With April 2006 being the first full calendar month of the contract, we have the performance of the last 28 full months. We observed that:

- The long-term performance of the futures remains very attractive. The average monthly tracking error is close to zero in the 28-month sample.
- The monthly performance, however, does show additional volatility, especially during the past six months. The estimated standard deviation of 100 basis points was a result of the recent heightened variability.

As we have reasoned in the previous article, the monthly performance of the futures contract is measured against the closing price of the futures at 3:15 p.m. Central Time at the end of the month, or approximately five hours following the European close. Information flow during that time will impact both futures and the underlying stocks, but the latter would not show up until the following business day. As such, the volatility in the tracking error is expected.

	Monthly Performance			Monthly Tracking Error	
	Index/Gross	Index/Net	Futures	vs. Gross	vs. Net
Apr-06	4.84%	4.83%	4.81%	-0.03%	-0.03%
May-06	-3.73%	-3.76%	-3.65%	0.08%	0.11%
Jun-06	0.06%	0.04%	-0.22%	-0.28%	-0.26%
Jul-06	1.00%	0.99%	1.06%	0.06%	0.07%
Aug-06	2.80%	2.76%	2.45%	-0.35%	-0.32%
Sep-06	0.16%	0.14%	0.05%	-0.11%	-0.09%
Oct-06	3.91%	3.91%	4.02%	0.11%	0.12%
Nov-06	3.03%	3.01%	3.18%	0.15%	0.17%
Dec-06	3.15%	3.14%	3.33%	0.18%	0.18%
Jan-07	0.69%	0.69%	1.22%	0.53%	0.53%
Feb-07	0.84%	0.82%	-0.35%	-1.20%	-1.17%
Mar-07	2.58%	2.56%	3.52%	0.93%	0.96%
Apr-07	4.53%	4.51%	3.52%	-1.01%	-0.99%
May-07	1.90%	1.88%	1.72%	-0.19%	-0.16%
Jun-07	0.20%	0.19%	0.41%	0.21%	0.23%
Jul-07	-1.47%	-1.47%	-2.54%	-1.07%	-1.06%
Aug-07	-1.51%	-1.55%	-0.20%	1.31%	1.35%
Sep-07	5.35%	5.34%	5.57%	0.21%	0.23%
Oct-07	3.94%	3.93%	3.71%	-0.23%	-0.22%
Nov-07	-3.25%	-3.27%	-3.37%	-0.12%	-0.10%
Dec-07	-2.25%	-2.26%	-2.32%	-0.06%	-0.06%
Jan-08	-9.20%	-9.20%	-8.58%	0.62%	0.62%
Feb-08	1.48%	1.46%	-0.84%	-2.32%	-2.29%
Mar-08	-0.98%	-1.02%	2.55%	3.53%	3.56%
Apr-08	5.54%	5.52%	4.51%	-1.03%	-1.02%
May-08	1.17%	1.13%	0.68%	-0.49%	-0.45%
Jun-08	-8.14%	-8.15%	-8.57%	-0.44%	-0.43%
July-08	-3.21%	-3.21%	-3.94%	-0.73%	-0.72%
			Average	-0.06%	-0.04%
			Std Dev	1.002%	1.003%

Table 1 E-mini MSCI EAFE Futures Tracking Error since inception.

This phenomenon is “self-correcting,” however, in that a lower mark for this month also set a lower starting point for the ensuing month. Thus, the tracking error tends to be negatively auto-correlated, as evidenced in the data.

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