CME Group
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Research & Product Development

September 25, 2009

Equity Index Futures Quarterly Roll Summary

What a difference a year makes! One year ago, we were in the throes of the financial crisis, with the buckling of Lehman Brothers and the Government sponsored housing enterprises, as well as the venerable AIG. Saying that the roll market in equity index futures was hit with the ripple effect was quite an understatement. For the ensuing twelve months, the roll market in equity index futures continued to witness much heightened volatility. The credit squeeze led to as much gyration in the spread pricing as it had ever witnessed.

Yet, only one calendar year from this unprecedented turmoil, the spread market during the September/December 2009 roll was remarkably calm. Lacking major market moving news, the spreads traded in a rather narrow range. The table in Exhibit 1 shows the average prices and the associated implied financing rates associated with the prices for the major domestic equity index futures. Note that while the sample was restricted to U.S. daylight trading hours on CME Globex (and open outcry in the case of the standard S&P 500 futures), extending the sampling would have made no appreciable difference.

Exhibit 2 shows the implied financing rate for E-mini S&P 500 futures for the previous nine quarterly rollover periods. To provide context to the financing rate, we have included the prevailing Fed Funds to LIBOR spread in the graph. The Fed Funds rate represents the rate corresponding to the 3-month period book-ended by the two stock index futures expirations. This synthetic term Fed Funds rate was compiled based on the Fed Funds futures listed at CBOT. Likewise, the LIBOR rate was derived, as always, to cover the same 3-month period book-ended by the equity index futures expiries, and had been reported in previous summaries.

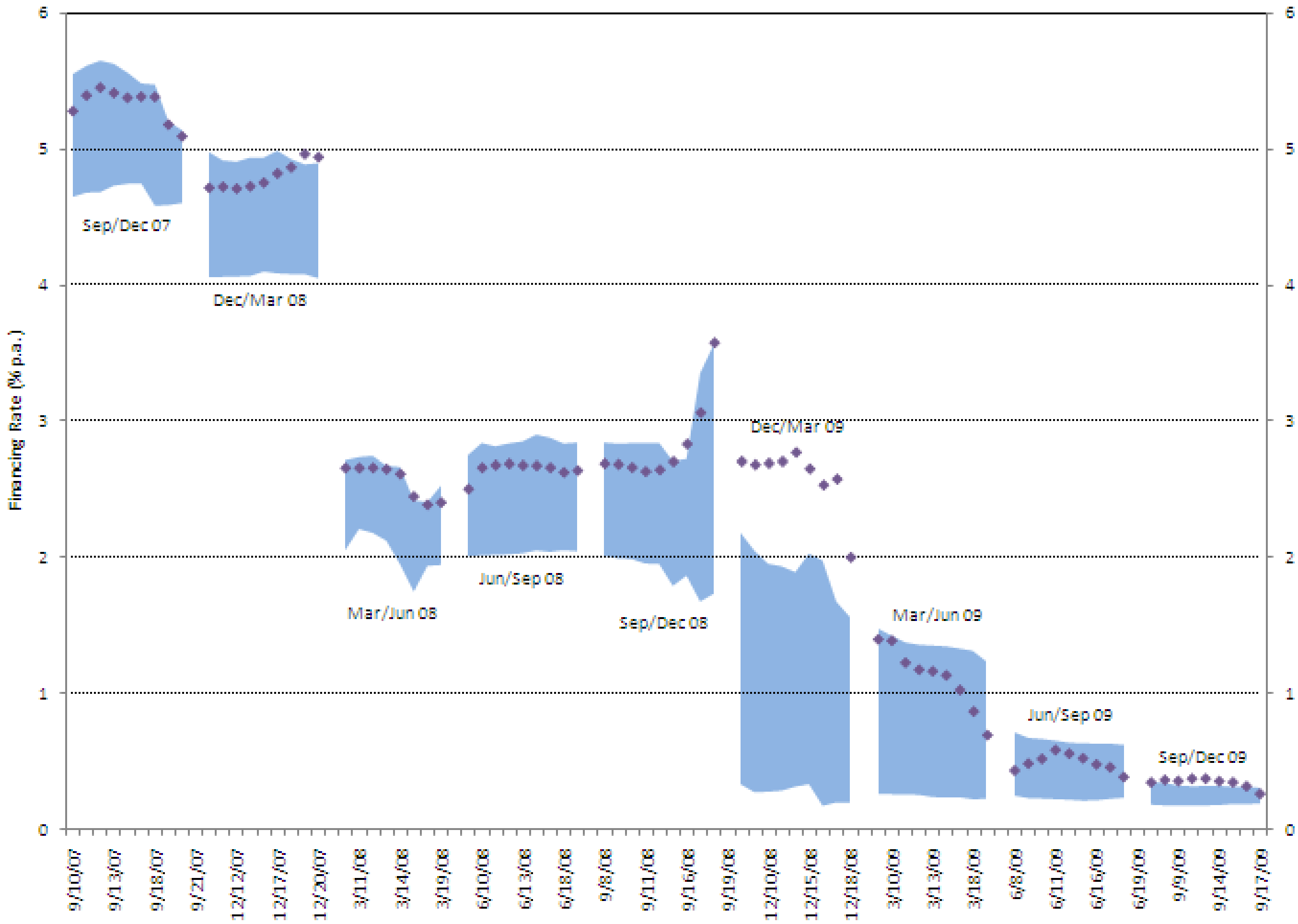
Exhibit 1

Volume Weighted Average Prices and the corresponding volume weighted average implied financing rates of September-December calendar spreads in various domestic equity index futures. Forward LIBOR was constructed using a combination of BBA LIBOR and CME Eurodollar Futures prices.

	S&P 500 VWAP		S&P 500 Impl. Fin.	E-mini NASDAQ-100		E-mini Dow ($5)		E-mini S&P MidCap 400		E-mini S&P SmallCap 600		Forward
Date	Regular	E-mini	E-mini	VWAP	Impl. Fin.	VWAP	Impl. Fin.	VWAP	Impl. Fin.	VWAP	Impl. Fin.	LIBOR
9/4/2009	-4.45	-4.45	0.351	-2.43	0.058	-60.13	0.384	-2.28	0.222	n/a	n/a	0.342
9/8/2009	-4.39	-4.39	0.369	-2.19	0.115	-60.02	0.385	-2.24	0.241	n/a	n/a	0.338
9/9/2009	-4.40	-4.40	0.361	-2.16	0.122	-59.67	0.398	-2.12	0.302	n/a	n/a	0.318
9/10/2009	-4.35	-4.35	0.379	-2.12	0.131	-60.63	0.350	-2.07	0.336	-0.85	0.171	0.313
9/11/2009	-4.35	-4.35	0.378	-1.97	0.165	-60.70	0.346	-2.07	0.334	-0.80	0.241	0.315
9/14/2009	-4.38	-4.39	0.360	-1.84	0.195	-59.97	0.377	-2.11	0.319	-0.80	0.243	0.316
9/15/2009	-4.40	-4.41	0.352	-1.73	0.222	-59.82	0.381	-2.07	0.339	-0.86	0.163	0.310
9/16/2009	-4.47	-4.49	0.323	-1.78	0.216	-60.49	0.362	-2.17	0.276	-0.80	0.225	0.307
9/17/2009	-4.61	-4.64	0.267	-1.89	0.190	-61.50	0.318	-2.19	0.269	-0.92	0.077	0.304

Exhibit 2

Spread-implied financing rate of E-mini S&P 500 futures for the last nine roll periods, in relation to the prevailing LIBOR and Fed Funds rate. Shaded areas represent the spread between LIBOR and Fed Funds for the period.



The lower end of the shaded area represents the Fed Funds rate, while the upper end of the shaded area represents the corresponding LIBOR rate. The Fed Funds-LIBOR spread had widened to almost 200 basis points in December 2008. With the subsiding of the credit crisis, the spread has returned to a more normal 10-20 basis point range this quarter. Consequently, the equity index roll market has settled down across the board.

Perhaps equally interesting is the location of the equity index futures pricing relative to the cash index daily closes. In Exhibit 3, we have included the comparison of E-mini S&P 500 futures pricing and its fair value at the market close. E-mini S&P 500 futures pricing is represented by the volume-weighted average traded prices during the last 30 seconds leading up to the 4 p.m. ET cash close. Incidentally, CME Group publishes this "fixing price" every day, which is used to determine the Weekly and End-of-Month option exercises. Fair value of E-mini S&P 500 futures was determined based on the cash index close for the day based on LIBOR-flat financing. The LIBOR rate in use is interpolated to end exactly on the futures expiration day.

During the financial crisis turmoil, the futures spread to fair value was quite volatile. It was not surprising to see the futures trading at 60 basis points above or below "fair value." The variability has gradually subsided. As of this writing, the spread appears to have returned to the pre-crisis range of 10 bps or under.

Exhibit 3

Lead-month E-mini S&P 500 futures pricing vs. fair value at 4:00 p.m. ET.

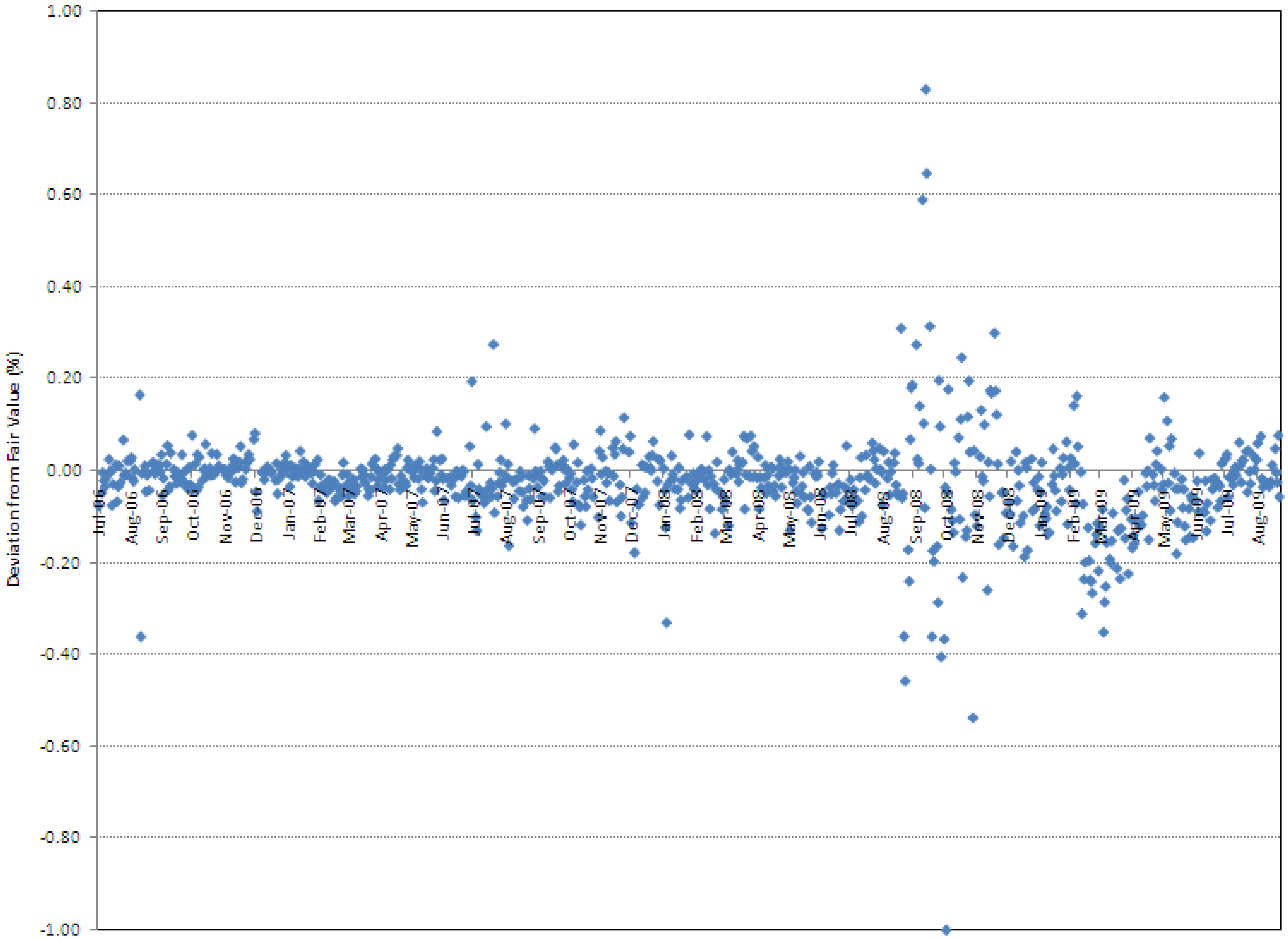


Exhibit 4 shows the daily summary for the rollover of the two MSCI international index futures contracts – E-mini MSCI EAFE futures and E-mini MSCI Emerging Markets futures. Even here, the story shares some similarity with the U.S. domestic index contracts. The spread market this quarter has been in a much tighter range than in the previous four quarters. The bulk of the spread volume in E-mini MSCI EAFE futures was consummated in the three trading days between 9/10 - 9/14/09, at a price of 30-45 bps over LIBOR. The importance of block trades in the roll continued to diminish. There were moments during this three-day period when the market was one-tick wide with several hundred contracts on bid and offer.

Likewise, the E-mini MSCI Emerging Markets contracts had a fairly orderly roll by its own standard. Volume was spread over a longer period, with much more stable pricing than in the previous few rolls.

Insofar as the open interest levels go, the E-mini MSCI EAFE contracts regressed slightly following the rollover. The new lead month E-mini MSCI EAFE index futures emerged from the rollover with 23,465 contracts open, down from 26,397 and 28,792 contracts in the last two quarters. The E-mini MSCI Emerging Markets index futures, on the other hand, gained open positions after the rollover. The new lead month contract emerged with 17,098 contracts open, a substantial build-up from the 12,599 and 14,032 levels from in the last two quarters.

Exhibit 4

Estimated roll costs for E-mini MSCI EAFE and E-mini MSCI Emerging Market Index futures.

	E-mini MSCI EAFE			E-mini MSCI EM			Forward
	VWAP	Impl. Fin.	Volume	VWAP	Impl. Fin.	Volume	LIBOR
9/4/2009	n/a	n/a	0	n/a	n/a	0	0.342
9/8/2009	n/a	n/a	0	n/a	n/a	0	0.338
9/9/2009	-6.17	0.648	554	0.83	1.26	142	0.318
9/10/2009	-6.40	0.593	9540	1.09	1.40	2070	0.313
9/11/2009	-6.40	0.597	7008	1.15	1.42	3549	0.315
9/14/2009	-5.74	0.769	3082	1.50	1.59	4394	0.316
9/15/2009	-5.25	0.895	2056	2.23	1.90	3900	0.310
9/16/2009	-5.79	0.751	617	2.77	2.03	1338	0.307
9/17/2009	-6.22	0.641	190	2.43	1.89	650	0.304

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