It wasn't such a grim picture everywhere else in the world, however. In fact, the number of futures and options contracts that traded on Asian exchanges actually rose by 24%. That's an impressive number even without taking into account the effects of the credit crisis.

The strange thing is that these two big trends just about cancelled each other out. The total volume at all the exchanges that the FIA tracks was 17.7 billion futures and options in 2009, a mere one tenth of a percentage point higher than 2008's total.

From a long-range perspective, the overall numbers look reassuring, not much more than a momentary standstill in a long-term and very positive upward trend. Over the last five years, the global volume of futures and options trading has basically doubled, and there's every reason to believe that the engines that drive our industry will be firing on all cylinders again very soon.

In the next part of this article, we will look at the remarkable growth of the Asian exchanges, especially in China and India. Then we will turn to the other half of the story and take a close look at the volume and open interest conditions in the interest rate sector in the developed markets, which over the course of 2009 began to recover some of their liquidity.

Surge in the East

It has been obvious for some time that the derivatives exchanges in India and China have enormous potential for growth. 2009 was the year when those two countries really showed the rest of us just how explosive that growth could be.

Let's start with currency futures in India. In late 2008, two Indian exchanges—MCX-SX, the stock exchange subsidiary of Multi Commodity Exchange, and National Stock Exchange of India—listed U.S. dollar/India rupee futures. Last year, the total number of U.S. dollar/India rupee contracts that traded on those two exchanges reached 450.3 million contracts, split almost equally between MCX-SX and NSE.

Those two contracts are now the most heavily traded currency futures in the world. And there's more to come. Both exchanges listed three additional currency pairs in February 2010 and they have been an immediate success.

Another big success story was in India's equity derivatives market. Options on the S&P CNX Nifty, one of the main benchmarks for Indian equities, have been listed on the NSE for several years, but they really took off in 2009, with volume more than doubling to 321.3 million contracts. The Nifty options are now the third most actively traded equity index options in the world.

Global Listed Derivatives Volume

	Jan-Dec 2008	Jan-Dec 2009	% Change
Futures	8,317,699,090	8,179,106,145	-1.7%
Options	9,361,078,113	9,520,925,954	1.7%
Total Volume	**17,678,777,203**	**17,700,032,099**	**0.1%**

Note: *Based on the number of futures and options traded and/or cleared by 70 exchanges worldwide.*

Global Listed Derivatives Volume by Category

Category	Jan-Dec 2008	Jan-Dec 2009	% Change
Equity Index	6,488,621,284	6,381,989,182	-1.6%
Individual Equity	5,511,194,380	5,554,015,554	0.8%
Interest Rate	3,204,838,617	2,467,763,942	-23.0%
Currency	597,481,714	984,484,525	64.8%
Agricultural	894,633,132	927,609,111	3.7%
Energy	580,952,996	655,931,442	12.9%
Non-Precious Metals	198,715,383	462,541,406	132.8%
Precious Metals	157,443,026	151,260,666	-3.9%
Other	44,896,671	114,436,271	154.9%
Total	**17,678,777,203**	**17,700,032,099**	**0.1%**

Note: *Based on the number of futures and options traded and/or cleared by 69 exchanges worldwide. Energy includes contracts based on carbon emissions. Other includes contracts based on commodity indices, credit, fertilizer, housing, inflation, lumber, plastics and weather.*

Global Listed Derivatives Volume by Region

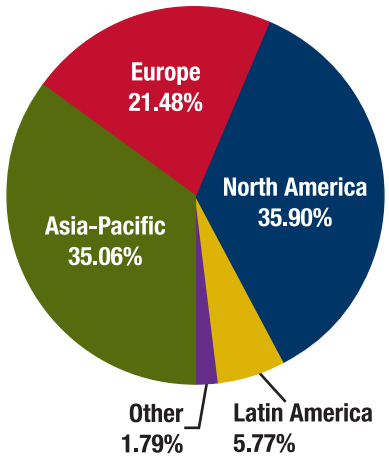
	Jan-Dec 2008	Jan-Dec 2009	% Change
Asia Pacific	5,000,857,132	6,206,052,917	24.10%
Europe	4,167,116,664	3,802,208,645	-8.76%
North America	6,995,436,928	6,353,455,998	-9.18%
Latin America	854,405,219	1,020,822,690	19.48%
Other*	660,961,260	317,491,849	-51.97%
Global Total	**17,678,777,203**	**17,700,032,099**	**0.1%**

** Other consists of exchanges in South Africa, Turkey, Israel and Dubai.*

Note: *Location of exchanges is determined by country of registration. Volume based on the number of futures and options contracts traded and/or cleared.*

Breakdown by Region

Jan-Dec 2009



In China the growth was driven by commodity futures markets. The Shanghai Futures Exchange, which mostly trades futures based on industrial metals, tripled in volume, reaching 434.9 million contracts. The Dalian Commodity Exchange grew by a more modest 30% to 416.8 million contracts, while the Zhengzhou Commodity Exchange rose a mere 2% to 227.1 million contracts.

It's important to note that some of these contracts are effectively mini-sized versions of what we trade in the West. For example, looking strictly at the number of contracts traded in the copper futures market, SHFE looks a lot bigger than the London Metal Exchange. But when contract size is factored in, it's another story. SHFE copper futures are based on five metric tons, making it five times smaller than the LME contract. So if you multiply the number of contracts by the amount of metal that they represent, the LME market turns out to be 53% larger than SHFE.

It's the same with the corn and wheat contracts traded at the Dalian and Zhengzhou exchanges. Both contracts are about 13 times smaller than the comparable contracts traded on the Chicago Board of Trade.

That is not always the case, however. The sugar futures contract traded at Zhengzhou is about five times smaller than the sugar futures contract traded on ICE Futures U.S., but the volume is so much greater in Zhengzhou that in physical terms the Chinese exchange is slightly ahead.

One obvious reason why these commodity futures contracts are growing is that they serve the classic functions of the futures market—price discovery and risk hedging—for the Chinese companies that are consuming huge amounts of raw materials. In fact, the Chinese futures industry is now developing contracts based on common modern materials such as steel and plastics, and they are proving far more successful at this than any Western exchange.

In March 2009, SHFE began offering futures on steel rebar, which is most commonly used to reinforce concrete. China not surprisingly is one of the world's largest producers and consumers of steel rebar, giving this contract great potential value as a hedging instrument. By the end of the year, more than 161.5 million contracts had traded on SHFE, making it the most actively traded metals contract in the world.

Or take the trio of plastics futures contracts that trade in China. Obviously plastics are a huge part of the global economy and there's an enormous potential demand for a

Top Derivatives Exchanges Worldwide

Ranked by Number of Futures and Options Traded and/or Cleared in 2009*

Rank	Exchange	Jan-Dec 2008	Jan-Dec 2009	% Change
1	Korea Exchange	2,865,482,319	3,102,891,777	8.3%
2	Eurex (includes ISE)	3,172,704,773	2,647,406,849	-16.6%
3	CME Group (includes CBOT and Nymex)	3,277,630,030	2,589,551,487	-21.0%
4	NYSE Euronext (includes all EU and US markets)	1,675,791,242	1,729,965,293	3.2%
5	Chicago Board Options Exchange (includes CFE)	1,194,516,467	1,135,920,178	-4.9%
6	BM&FBovespa	741,889,113	920,377,678	24.1%
7	National Stock Exchange of India	601,599,920	918,507,122	52.7%
8	Nasdaq OMX Group (includes all EU and US markets)	722,107,905	814,639,771	12.8%
9	Russian Trading Systems Stock Exchange	238,220,708	474,440,043	99.2%
10	Shanghai Futures Exchange	140,263,185	434,864,068	210.0%
11	Dalian Commodity Exchange	319,159,693	416,782,261	30.6%
12	Multi Commodity Exchange of India (includes MCX-SX)	103,049,912	384,730,330	273.3%
13	IntercontinentalExchange (includes US, UK and Canada Markets)	234,414,538	257,118,644	9.7%
14	Zhengzhou Commodity Exchange	222,557,134	227,112,521	2.0%
15	JSE South Africa	513,584,004	166,592,373	-67.6%
16	Osaka Securities Exchange	163,689,348	166,085,409	1.5%
17	Boston Options Exchange	178,650,541	137,784,626	-22.9%
18	Taiwan Futures Exchange	136,719,777	135,125,695	-1.2%
19	London Metal Exchange	113,215,299	111,930,828	-1.1%
20	Hong Kong Exchanges & Clearing	105,006,736	98,538,258	-6.2%
21	Mercado Español de Opciones y Futuros Financieros	83,416,762	93,057,252	11.6%
22	Tokyo Financial Exchange	66,927,067	83,678,044	25.0%
23	Australian Securities Exchange (includes SFE)	94,775,920	82,200,578	-13.3%
24	Turkish Derivatives Exchange	54,472,835	79,431,343	45.8%
25	Tel-Aviv Stock Exchange	92,574,042	70,914,245	-23.4%
26	Singapore Exchange	61,841,268	53,111,183	-14.1%
27	Mercado a Termino de Rosario	42,216,661	51,483,429	22.0%

hedging mechanism. Futures trading on PTA, which is the main ingredient for the polyester used in clothing and plastic bottles, started December 2006 on the Zhengzhou exchange. Last year volume in PTA futures reached 45.9 million contracts, up 161% on the previous year. Futures on LLDPE, which is the stuff used for making plastic wrap, were launched by the Dalian exchange in July 2007. Last year's volume was 44.75 million contracts, up 237.7% over the previous year. The most recent entrant is futures on polyvinyl chloride, more commonly known as PVC. That contract was launched on the Dalian exchange in May 2009 and by year-end total volume was just over 18 million contracts.

Russia and Brazil—the other two components of the so-called "BRICs" group of countries—also did well in 2009. Russia's RTS now ranks as the ninth largest derivatives exchange in the world. Its volume last year was 474.8 million contracts, almost double the previous year. BM&FBovespa is now the sixth largest derivatives exchange in the world, with volume up 24.1% to 920.4 million contracts.

Let's not forget our old friend, the Kospi 200 stock index options, still the most actively traded derivatives contract in the world. Last year 2.92 billion of these options traded on the Korea Exchange, up from 2.77 billion in 2008. In percentage terms that was an increase of only 5.6%, but in absolute terms that added 154.5 million contracts to Asia's total, which is more volume than most exchanges have overall.

Kospi futures also did well, with volume up 28.2% to 83.1 million contracts. Kospi futures are now more heavily traded than the E-mini Nasdaq 100 futures, the second most actively traded equity index futures contract at CME Group. KRX also has developed thriving markets for U.S. dollar futures, three-year Treasury bond futures, and a whole set of futures on individual stocks. Maybe we should be spelling BRICs with a K.

Decline in the West

It's no secret that the core interest rate products took a beating last year, but it's worth taking a look at the numbers to see just how far down the volume fell. Almost everywhere you look in the interest rate category, the year-over-year percent changes were negative. Eurodollar futures, down 26.7%. Euribor futures, down 15.6%. 10-year Treasury futures, down 26.1%. Bund futures, down 29.9%.

Rank	Exchange	Jan-Dec 2008	Jan-Dec 2009	% Change
28	Mexican Derivatives Exchange	70,143,690	48,780,699	-30.5%
29	Italian Derivatives Exchange	38,928,785	42,582,725	9.4%
30	Bourse de Montreal	38,064,902	34,753,081	-8.7%
31	National Commodity & Derivatives Exchange	24,639,710	29,965,383	21.6%
32	Tokyo Commodity Exchange	41,026,955	28,881,948	-29.6%
33	Tokyo Stock Exchange	32,500,438	26,201,383	-19.4%
34	Moscow Interbank Currency Exchange	131,905,458	19,308,241	-85.4%
35	Warsaw Stock Exchange	12,560,518	13,820,801	10.0%
36	Oslo Stock Exchange	16,048,430	13,511,246	-15.8%
37	Budapest Stock Exchange	13,369,425	11,795,006	-11.8%
38	Athens Derivatives Exchange	7,172,120	7,859,952	9.6%
39	Bursa Malaysia	6,120,032	6,137,827	0.3%
40	European Climate Exchange	2,811,586	5,091,661	81.1%
41	ELX	0	5,003,983	NA
42	Tokyo Grain Exchange	8,433,346	4,829,183	-42.7%
43	Kansas City Board of Trade	3,965,924	3,768,660	-5.0%
44	Thailand Futures Exchange	2,148,620	3,072,397	43.0%
45	OneChicago	4,012,281	2,983,148	-25.6%
46	Central Japan Commodity Exchange	3,272,665	1,773,603	-45.8%
47	New Zealand Futures Exchange	1,459,088	1,494,047	2.4%
48	Chicago Climate Exchange	484,322	1,372,579	183.4%
49	Minneapolis Grain Exchange	1,409,002	1,231,961	-12.6%
50	Wiener Boerse	1,129,619	766,628	-32.1%
51	Dubai Mercantile Exchange	330,379	553,888	67.7%
52	Mercado a Termino de Buenos Aires	155,755	180,884	16.1%
53	Kansai Commodities Exchange	183,999	69,900	-62.0%

** See the exchange groups table for a breakdown of volume among affiliated exchanges.*
***Note:** Ranking does not include exchanges that do not report their volume to the FIA.*

Top 20 Interest Rate Futures and Options Worldwide

Ranked by Number of Contracts Traded in 2009

Rank	Contract	Jan-Dec 2008	Jan-Dec 2009	% Change
1	Eurodollar Futures, CME	596,974,081	437,585,193	-26.7%
2	Euribor Futures, Liffe	228,487,462	192,859,090	-15.6%
3	10 Year Treasury Note Futures, CME	256,770,689	189,852,019	-26.1%
4	Euro-Bund Futures, Eurex	257,827,619	180,755,004	-29.9%
5	One Day Inter-Bank Deposit Futures, BM&F	166,983,583	151,958,184	-9.0%
6	Euro-Schatz Futures, Eurex	174,226,719	125,607,110	-27.9%
7	Euribor Options on Futures, Liffe	106,730,522	121,612,383	13.9%
8	Eurodollar Options on Futures, CME	187,341,383	117,553,569	-37.3%
9	Euro-Bobl Futures, Eurex	155,090,861	105,820,542	-31.8%
10	Short Sterling Futures, Liffe	104,572,875	104,073,092	-0.5%
11	5 Year Treasury Note Futures, CME	168,127,469	98,391,120	-41.5%
12	30 Year Treasury Bond Futures, CME	89,464,546	62,232,671	-30.4%
13	2 Year Treasury Note Futures, CME	79,311,002	48,158,948	-39.3%
14	Eurodollar Mid-Curve Options on Futures, CME	40,883,014	43,369,605	6.1%
15	10 Year Treasury Note Options on Futures, CME	56,753,688	40,206,023	-29.2%
16	IDI Options on Futures, BM&F	13,915,878	40,174,869	188.7%
17	Short Sterling Options on Futures, Liffe	59,079,440	37,876,416	-35.9%
18	TIIE 28 Futures, Mexder	57,881,101	37,545,841	-35.1%
19	Euro-Bund Options on Futures, Eurex	33,317,879	28,392,790	-14.8%
20	3 Year Treasury Bond Futures, SFE	26,116,381	24,197,537	-7.3%

Top 20 Equity Index Futures and Options Worldwide

Ranked by Number of Contracts Traded and/or Cleared in 2009

Rank	Contract	Jan-Dec 2008	Jan-Dec 2009	% Change
1	Kospi 200 Options, KRX	2,766,474,404	2,920,990,655	5.6%
2	E-mini S&P 500 Futures, CME	633,889,466	556,314,143	-12.2%
3	SPDR S&P 500 ETF Options *	321,454,795	347,697,659	8.2%
4	DJ Euro Stoxx 50 Futures, Eurex	432,298,342	333,407,299	-22.9%
5	S&P CNX Nifty Options, NSE India	150,916,778	321,265,217	112.9%
6	DJ Euro Stoxx 50 Options, Eurex	400,931,635	300,208,574	-25.1%
7	S&P CNX Nifty Futures, NSE India	202,390,223	195,759,414	-3.3%
8	S&P 500 Options, CBOE	179,019,155	154,869,646	-13.5%
9	RTS Index Futures, RTS	87,469,405	150,019,917	71.5%
10	Powershares QQQ ETF Options *	221,801,005	147,839,060	-33.3%
11	Nikkei 225 Mini Futures, OSE	95,446,729	104,738,309	9.7%
12	Dax Options, Eurex	104,939,881	95,926,938	-8.6%
13	Financial Select Sector SPDR ETF Options *	119,671,026	87,979,993	-26.5%
14	Kospi 200 Futures, KRX	64,835,148	83,117,030	28.2%
15	E-mini Nasdaq 100 Futures, CME	108,734,456	77,972,143	-28.3%
16	iShares Russell 2000 ETF Options *	151,900,495	73,375,256	-51.7%
17	Taiex Options, Taifex	92,757,254	72,082,548	-22.3%
18	ISE-30 Futures, Turkdex	40,332,007	65,393,094	62.1%
19	TA-25 Options, TASE	81,483,701	62,271,157	-23.6%
20	iShares MSCI Emerging Markets ETF Options *	34,695,444	43,624,689	25.7%

**Traded on multiple U.S. options exchanges*

Top 20 Agricultural Futures and Options Worldwide

Ranked by Number of Contracts Traded and/or Cleared in 2009

Rank	Contract	Jan-Dec 2008	Jan-Dec 2009	% Change
1	Soy Meal Futures, DCE	81,265,439	155,404,029	91.2%
2	White Sugar Futures, ZCE	165,485,978	146,063,344	-11.7%
3	Soy Oil Futures, DCE	44,695,993	94,836,881	112.2%
4	Rubber Futures, SHFE	46,461,103	89,035,959	91.6%
5	Corn Futures, CME	59,957,118	50,948,804	-15.0%
6	Palm Oil Futures, DCE	6,302,478	44,426,498	604.9%
7	No. 1 Soybeans Futures, DCE	113,681,550	42,507,076	-62.6%
8	Soybean Futures, CME	36,373,096	35,758,855	-1.7%
9	Sugar #11 Futures, ICE Futures U.S.	27,019,704	27,300,259	1.0%
10	Wheat Futures, CME	19,011,928	17,677,547	-7.0%
11	Soybean Oil Futures, CME	16,928,361	17,132,082	1.2%
12	Corn Futures, DCE	59,918,460	16,744,088	-72.1%
13	Corn Options on Futures, CME	20,992,582	14,435,687	-31.2%
14	Strong Gluten Wheat Futures, ZCE	27,509,312	13,735,956	-50.1%
15	Soybean Meal Futures, CME	13,354,174	12,880,767	-3.5%
16	Rapeseed Oil Futures, ZCE	6,429,404	10,956,863	70.4%
17	Soybean Options on Futures, CME	9,806,935	9,555,840	-2.6%
18	Guar Seeds Futures, NCDEX	5,614,604	9,029,772	60.8%
19	Live Cattle Futures, CME	9,801,360	8,797,033	-10.2%
20	Cotton No. 1 Futures, ZCE	5,400,835	8,534,688	58.0%

Top 20 Energy Futures and Options Worldwide

Ranked by Number of Contracts Traded and/or Cleared in 2009

Rank	Contract	Jan-Dec 2008	Jan-Dec 2009	% Change
1	Light, Sweet Crude Oil Futures, CME	134,674,264	137,428,494	2.0%
2	Brent Crude Oil Futures, ICE Futures Europe	68,368,145	74,137,750	8.4%
3	Natural Gas Futures, CME	38,730,519	47,951,353	23.8%
4	WTI Crude Oil Futures, ICE Futures Europe	51,091,712	46,393,671	-9.2%
5	Fuel Oil Futures, SHFE	30,810,540	45,753,969	48.5%
6	Crude Oil Futures, MCX	20,507,001	40,926,484	99.6%
7	Gas Oil Futures, ICE Futures Europe	28,805,192	36,038,870	25.1%
8	Crude Oil Options on Futures, CME	35,255,326	28,551,730	-19.0%
9	Henry Hub Natural Gas Swap Futures, CME	31,401,575	25,670,240	-18.3%
10	European Style Natural Gas Options, CME	31,158,326	25,309,214	-18.8%
11	No. 2 Heating Oil Futures, CME	19,583,052	21,426,015	9.4%
12	U.S. Natural Gas Fund ETF Options *	2,784,103	21,341,282	666.5%
13	NY Harbor RBOB Gasoline Futures, CME	20,522,571	21,159,516	3.1%
14	U.S. Oil Fund ETF Options *	12,489,595	15,932,407	27.6%
15	Natural Gas Futures, MCX	747,506	11,107,297	1385.9%
16	Henry Hub Penultimate Swap Futures, CME	12,352,928	11,038,692	-10.6%
17	Brent Oil Futures, RTS	153,438	7,471,665	4769.5%
18	PJM WH Off-Peak Day Ahead Swap Futures, CME	231,232	6,810,613	2845.4%
19	ECX EUA Futures, European Climate Exchange	1,991,276	3,775,621	89.6%
20	miNY Crude Oil Futures, CME	5,641,145	3,368,983	-40.3%

** Traded on multiple U.S. options exchanges*

ONLINE BONUS MATERIAL EDITION

Top 20 Foreign Exchange Futures and Options Worldwide

Ranked by Number of Contracts Traded and/or Cleared in 2009

Rank	Contract	Jan-Dec 2008	Jan-Dec 2009	% Change
1	U.S. Dollar/India Rupee Futures, NSE India *	11,448,632	226,362,368	1877.2%
2	U.S. Dollar/India Rupee Futures, MCX **	8,876,100	224,273,548	2426.7%
3	U.S. Dollar Futures, BM&F	87,442,346	66,776,180	-23.6%
4	Euro FX Futures, CME	53,652,590	54,393,644	1.4%
5	U.S. Dollar Futures, Rofex	41,796,793	51,107,696	22.3%
6	U.S. Dollar Futures, KRX	6,672,438	41,161,819	516.9%
7	British Pound Futures, CME	20,497,378	24,853,787	21.3%
8	Japanese Yen Futures, CME	32,844,404	22,749,569	-30.7%
9	U.S. Dollar Futures, RTS	13,656,896	21,940,982	60.7%
10	U.S. Dollar Options on Futures, BM&F	30,588,575	21,631,255	-29.3%
11	U.S. Dollar/Japanese Yen Futures, TFX	13,177,698	20,198,781	53.3%
12	Australian Dollar/Japanese Yen Futures, TFX	9,246,469	17,793,787	92.4%
13	U.S. Dollar Futures, Micex	131,699,407	17,752,959	-86.5%
14	Australian Dollar Futures, CME	11,212,985	16,732,682	49.2%
15	British Pound/Japanese Yen Futures, TFX	7,634,056	16,266,521	113.1%
16	Canadian Dollar Futures, CME	11,378,024	15,481,166	36.1%
17	U.S. Dollar Rollover Futures, BM&F	7,179,600	15,280,530	112.8%
18	U.S. Dollar Futures, Turkdex	13,979,082	13,687,292	-2.1%
19	EUR/USD Futures, RTS ***	0	13,658,237	NA
20	Swiss Franc Futures, CME	14,814,153	10,618,630	-28.3%

** Began trading in September 2008* *** Began trading in October 2008* **** Began trading in February* 2009

Top 20 Metals Futures and Options Worldwide

Ranked by Number of Contracts Traded and/or Cleared in 2009

Rank	Contract	Jan-Dec 2008	Jan-Dec 2009	% Change
1	Steel Rebar Futures, SHFE *	0	161,574,521	NA
2	Copper Futures, SHFE	20,773,258	81,217,436	291.0%
3	High Grade Primary Aluminum Futures, LME	48,307,389	46,988,069	-2.7%
4	Gold Futures, Nymex	38,377,367	35,139,541	-8.4%
5	SPDR Gold Shares ETF Options **	8,602,428	34,346,029	299.3%
6	Zinc Futures, SHFE	23,538,897	32,253,386	37.0%
7	Copper Futures, MCX	14,277,796	29,396,504	105.9%
8	Copper Futures, LME	26,507,242	24,922,949	-6.0%
9	Aluminum Futures, SHFE	14,788,920	20,530,548	38.8%
10	Silver M Futures, MCX	12,913,443	16,892,824	30.8%
11	Special High Grade Zinc Futures, LME	16,120,770	15,901,774	-1.4%
12	Gold M Futures, MCX	10,027,147	14,679,476	46.4%
13	Gold Futures, MCX	14,024,217	12,096,667	-13.7%
14	Gold Futures, Tocom	15,163,975	11,913,502	-21.4%
15	Silver Futures, MCX	10,972,676	11,511,083	4.9%
16	Nickel Futures, MCX	2,022,276	9,756,882	382.5%
17	Silver Futures, Nymex	8,917,183	7,990,528	-10.4%
18	iShares Silver Trust ETF Options **	33,917	7,157,042	21,001.6%
19	Primary Nickel Futures, LME	5,202,609	6,717,299	29.1%
20	Copper Futures, Nymex	4,618,068	6,398,967	38.6%

** Began trading in March 2009* *** Traded on multiple U.S. options exchanges*

Exchange Groups

Futures and Options Volume Broken Down by Subsidiary Exchanges

	Jan-Dec 2008	Jan-Dec 2009	% Change
Sydney Futures Exchange	74,605,556	63,074,143	-15.5%
Australian Stock Exchange	20,170,364	19,126,435	-5.2%
Australian Securities Exchange	**94,775,920**	**82,200,578**	**-13.3%**
Bolsa de Valores de São Paulo	350,274,498	546,989,560	56.2%
Bolsa de Mercadorias & Futuros	391,614,615	373,388,118	-4.7%
BM&FBovespa	**741,889,113**	**920,377,678**	**24.1%**
Chicago Board Options Exchange	1,193,355,070	1,134,764,209	-4.9%
CBOE Futures Exchange	1,161,397	1,155,969	-0.5%
CBOE Holdings	**1,194,516,467**	**1,135,920,178**	**-4.9%**
Chicago Mercantile Exchange	1,893,402,536	1,476,083,383	-22.0%
Chicago Board of Trade	960,777,756	680,825,901	-29.1%
New York Mercantile Exchange	423,449,738	432,642,203	2.2%
CME Group	**3,277,630,030**	**2,589,551,487**	**-21.0%**
Eurex	2,165,043,183	1,687,159,298	-22.1%
International Securities Exchange	1,007,661,590	960,247,551	-4.7%
Eurex	**3,172,704,773**	**2,647,406,849**	**-16.6%**
ICE Futures Europe	150,138,547	160,601,873	7.0%
ICE Futures U.S.	80,954,781	93,025,024	14.9%
ICE Futures Canada	3,321,210	3,491,747	5.1%
IntercontinentalExchange *	**234,414,538**	**257,118,644**	**9.7%**
** does not include OTC transactions or ECX products*			
Nasdaq OMX PHLX	547,456,114	606,456,252	10.8%
Nasdaq OMX Group (Nordic markets)	143,426,572	104,270,995	-27.3%
Nasdaq Options Market (U.S.)	31,225,219	103,912,524	232.8%
Nasdaq OMX Group	**722,107,905**	**814,639,771**	**12.8%**
Liffe U.K.	638,848,536	598,103,720	-6.4%
NYSE Arca Options	416,938,764	421,349,395	1.1%
Liffe (single stock derivatives)	308,574,216	369,915,322	19.9%
NYSE Amex Options	207,285,283	248,119,861	19.7%
Liffe Paris	61,131,541	51,997,947	-14.9%
Liffe Amsterdam	40,468,963	35,627,147	-12.0%
NYSE Liffe U.S.	1,837,543	4,483,941	144.0%
Liffe Brussels	630,492	306,735	-51.3%
Liffe Lisbon	75,904	61,225	-19.3%
NYSE Euronext	**1,675,791,242**	**1,729,965,293**	**3.2%**

Note: *Volume based on the number of futures and options contracts traded and/or cleared.*

For some of these contracts, last year was the second year in a row of double digit declines. In fact for some contracts we seem to have regressed to the early part of the decade. The 10-year Treasury futures contract, for example, peaked at almost 350 million contracts in 2007. Last year's volume was 189.9 million contracts, the lowest since 2003. Bund futures peaked at 338 million contracts in 2007. Last year's volume was 180.8 million, the lowest since 2001.

2009 was also the year that the benchmark equity index products lost ground. The E-mini S&P 500 futures volume fell 12.2% and the Euro Stoxx 50 futures slid 22.9%. Same with their cousins in the options market. The S&P 500 options at the Chicago Board Options Exchange were down 13.5% and the Euro Stoxx 50 options at Eurex were down 25.1%.

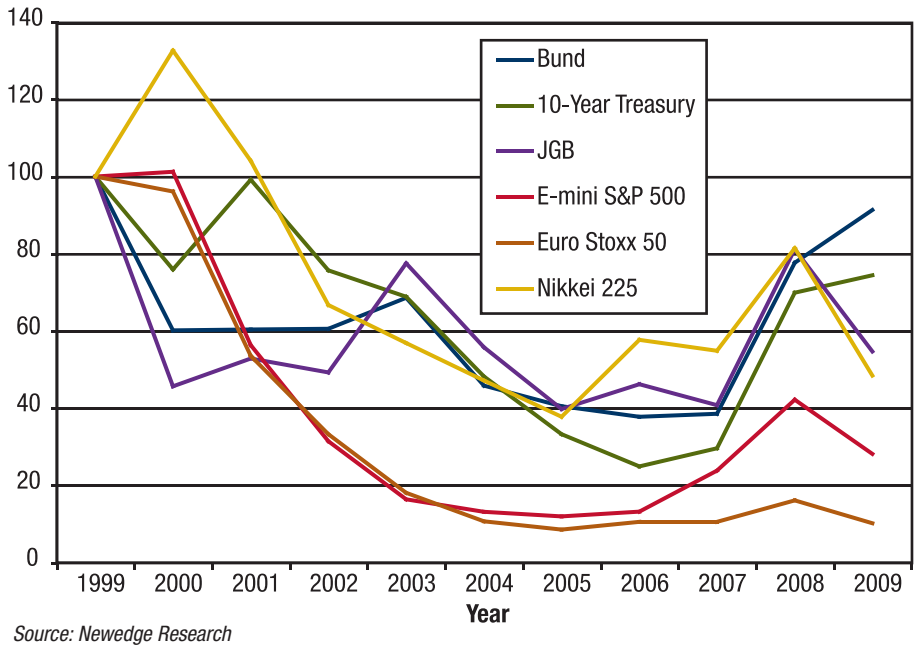
Amid all this gloom, it's important to note that there are a handful of successful new products at the major Western exchanges. Probably the best example is the volatility options introduced back in 2006 by the CBOE. Unlike a lot of new contracts that are essentially variants on existing contracts, this was a new departure for the world of derivatives exchanges. It took some time for these contracts to get traction, but last year more than 33 million VIX options were traded on the CBOE up 28.2% from the previous year. VIX options are now the second most actively traded index option at the exchange and just about the only one that grew last year.

Another example is the Euro Stoxx dividend index futures contract introduced in 2008 by Eurex. Volume in this contract, which represents the dividend return on the components of the Euro Stoxx index, reached 2.5 million, so it's still a sapling among the giants, but it seems to have opened up a whole new vein of innovation. NYSE Liffe joined in last year with a similar contract based on the dividend component of the FTSE 100, and this year the CBOE is going to test the waters in the U.S. with an option contract based on the dividend component of the S&P 500.

The third is the Ultra Treasury Bond contract at the CME. This is the newest of the three, having been introduced just this past February, but the initial signs are that it could become an important complement to the CME's Treasury futures complex. For one thing, the Ultra contract is a better maturity match for pension funds that struggle with the duration mismatch between their assets

and liabilities. At current yield levels, the conventional 30-Year Treasury bond contract tracks the 15-year part of the Treasury curve while the Ultra contract will track the 25 to 30-year part of the curve. For another, it could be a useful risk management tool for the primary dealer community given the massive and regular offerings of 30-year bonds by the Treasury. And lastly, the spread between 30-year and 15-year Treasury yields can vary quite widely. Since September 2008, when the credit crisis exploded on the scene, this spread has moved 75 basis points, which is huge in this market.

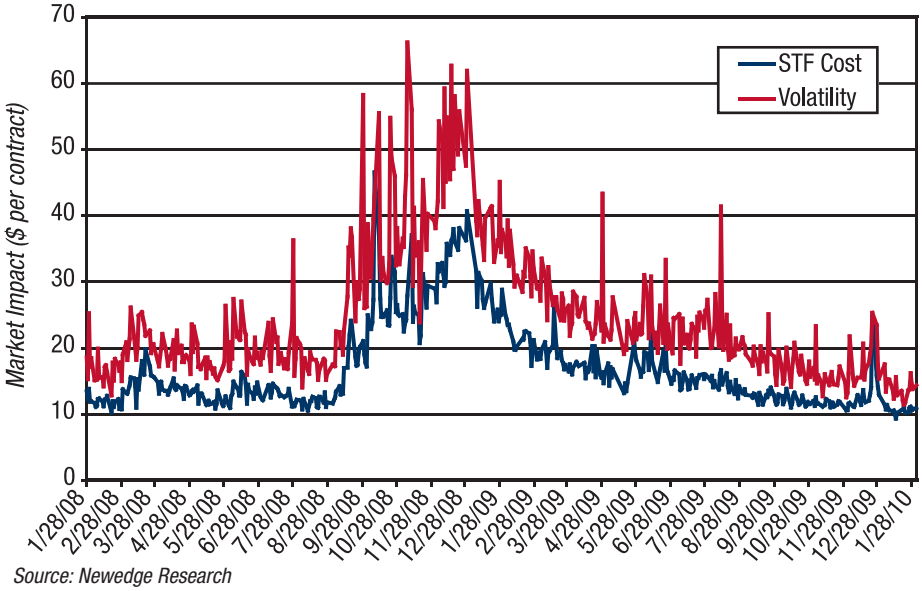
Index of Implied Bid/Ask Spreads



Source: Newedge Research

Liquidity of 10-Year Treasury Note Futures

Time series of sweep-to-fill cost versus ratio of volatility to square root of volume



Source: Newedge Research

Liquidity Recovery

The good news is that we're starting to see signs that the major contracts are beginning to recover. It took the better part of the year for volatility to die down, but it finally did, and liquidity has begun to return.

One way is to look at open interest. At the end of 2008, open interest in the 10-Year Treasury futures contract stood at 1.03 million contracts, the lowest level since December 2003. By the end of last year, open interest had recovered to 1.21 million contracts, a definite improvement over 2008 but still a long way down from the peak of 2.95 million contracts outstanding at the end of July 2007.

Two-year Treasury futures, to take another example, bottomed out at 464,551 contracts in open interest at the end of April 2009, the lowest level since April 2006. But open interest then rebounded sharply to 856,559 contracts by year-end, not too far off from the peak of 1.33 million contracts outstanding at the end of February 2008.

Another way to measure that is by looking at what happened with bid-ask spreads, an important indicator of a market's health. We took a look at implied bid-ask spreads for a handful of the benchmark contracts. As the "Implied Bid/Ask Spreads" chart shows, most of the contracts were tighter in 2009 than in 2008.

The two exceptions were the 10-Year Treasury note futures and Bund futures. The problem with those two contracts is that interest rate volatility, which exploded in September 2008, remained high through much of 2009. Because it took so long for interest rate volatility to die down, these two markets were in fact less liquid on average in 2009 than they were in 2008. But even these markets are definitely on the mend. A more granular look at the year shows that liquidity in bond markets had recovered almost completely by the end of 2009.

In the "Time Series" chart showing the liquidity of 10-Year Treasury futures, we have traced the cost of filling a 500-lot order through 2008 and 2009. Overlaid on

this history is the (normalized) ratio of Treasury volatility to the square root of traded volume in this contract. In both cases, you can see that it took a full year for liquidity to return to where it had been before the blow up in September 2008.

The differences in trading costs between what they were during the crisis and what they are now help to put the magnitude of the recovery in perspective. By the end of 2009, the sweep-to-fill cost (that is, the difference between mid-market and average price paid or received if trading 500 10-Year Treasury note contracts) was just over $10 per contract. During the crisis, this cost was between $30 and $40 per contract, and reached a high of $46.45 per contract on Oct. 8, 2008.

It also seems that trading costs have returned to normal for roll trades. These trades are done for the sole purpose of moving long or short positions from an expiring contract into the next active contract month, and it's critically important for the many institutions that use Treasury futures as a hedging mechanism. In the "Treasury Roll" chart, we show the bid-ask spreads for the three most active days of the roll. The chart shows that the spread for the most recent roll—December 2009 into March 2010—was just about the same as it was for the last roll before September 2008. In fact, from a pure sweep to fill cost perspective, liquidity returned to normal in the roll market more quickly than it did in the outright market.

On the other hand, quoted market depth during the rolls has not returned to pre-crisis levels. Before the crisis, it was common to find tens of thousands of contracts at the inside bid or offer. During the crisis, that collapsed to just a few hundred contracts, as we described in last year's volume trends survey. In the post-crisis recovery rolls, the quoted size for the inside market has been closer to 5,000 contracts. Not bad, but nothing like what we were accustomed to seeing before the crisis.

To be sure, the failure of quoted market depth to rebound fully may be due partly to the use of automated execution tools that allow traders to avoid displaying their full willingness to buy or sell. This would make sense if traders see the roll as a potentially more volatile market than it used to be. It may also be an indication that the recovery in liquidity is not as complete as it appears to be. The trading world was pretty badly burned in the fall of 2008.

Changes in Realized Risk Bearing in Futures Markets

This annual review article has always been about trading volume. This kind of focus is perfectly understandable for a trade magazine since it is from volume that we derive our living. At the same time, the industry's reason for being is not trading but risk transference—generally from people who want to take less risk to those who want to take more. So this year, we would like to open the subject of open interest and the industry's contribution to risk bearing.

In the "Risk Bearing" charts, we track the history of open interest and market risk for 10-Year Treasury notes and Bund futures from 2000 through 2009. In the upper panel of each, we show two series: open interest and the standard deviation of daily gains and losses expressed in dollars. In the lower panel, we show the product of the two, which represents the total amount of realized risk borne.

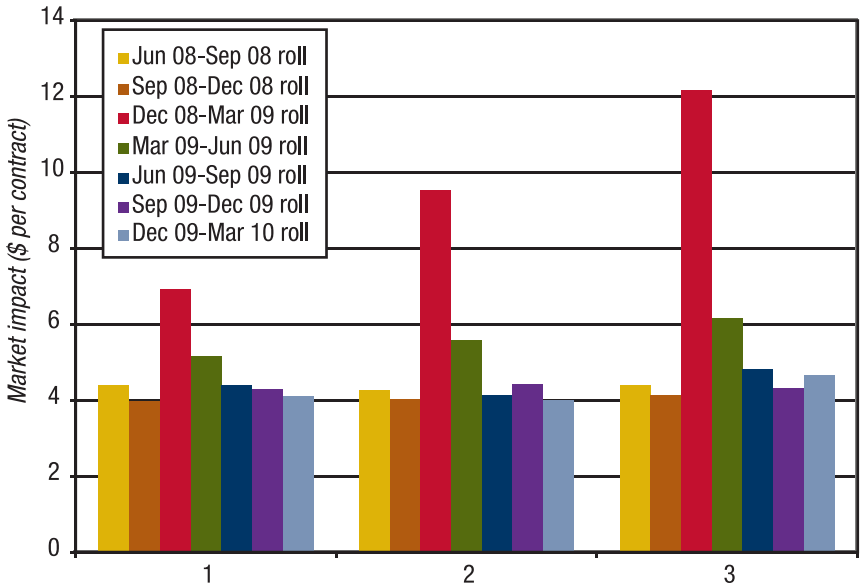
Two things stand out. First, open interest declined sharply in the face of increased market volatility in late 2008, but overall, the amount of risk actually borne by these two markets increased dramatically during the financial crisis. More so, perhaps in the 10-Year Treasury futures market than in the Bund futures market, but very substantially in both. Without any real strain on the system, the standard deviation of total gains and losses in the 10-year note market increased from around $600 million, where it had been for a number of years, to as much as $1.8 billion.

Second, there is a puzzling difference between the U.S. and Europe in trends. In the 10-Year Treasury futures market, it seems as if realized risk bearing has settled back to a level close to where it had stabilized for the years leading up to the 2008 financial crisis. In the Bund futures market, on the other hand, while realized risk bearing fell as 2009 progressed, one sees evidence of an upward trend that the eye does not reveal in the Treasury note futures market. We don't know why this should be the case, but think the difference is worth noting and the question worth considering. Also, we should note that the difference is not confined to these two interest rate contracts. One sees the same difference when comparing the histories of E-mini S&P 500 and Euro Stoxx 50 futures. ■

Galen Burghardt is head of research at Newedge. **Will Acworth** is editor of *Futures Industry*. The authors thank **Lauren Lei**, a quantitative research analyst at Newedge, for her assistance on this article.

Treasury Roll Liquidity

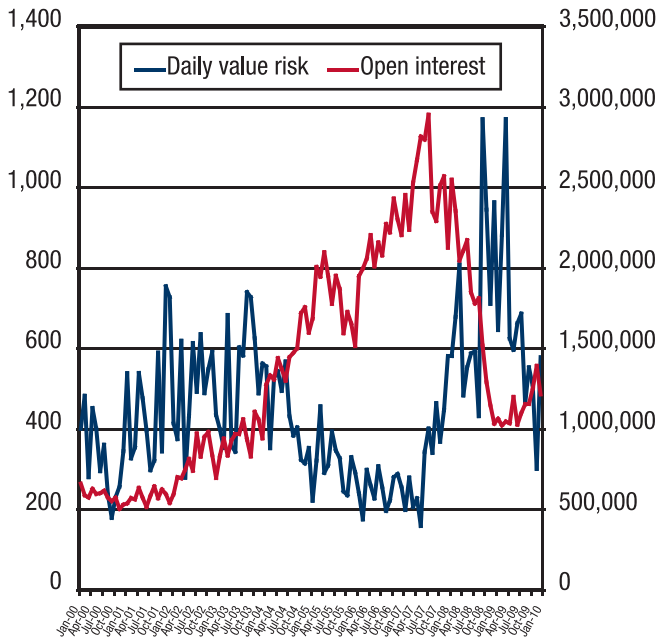
Average daily sweep-to-fill cost for 500 lot 10-Year Treasury Futures calendar roll during the three most active days of the roll



Source: Newedge Research

Risk Bearing Capacity

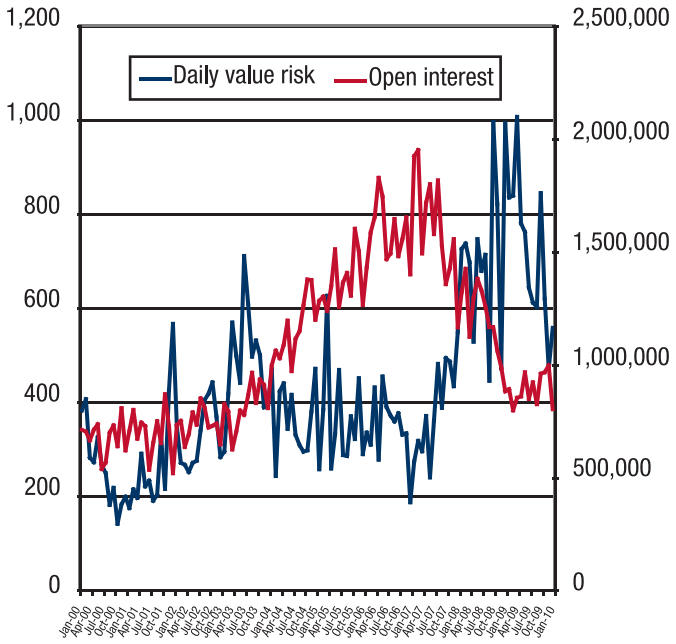
10-Year Treasury Futures



Source: Newedge Research

Risk Bearing Capacity

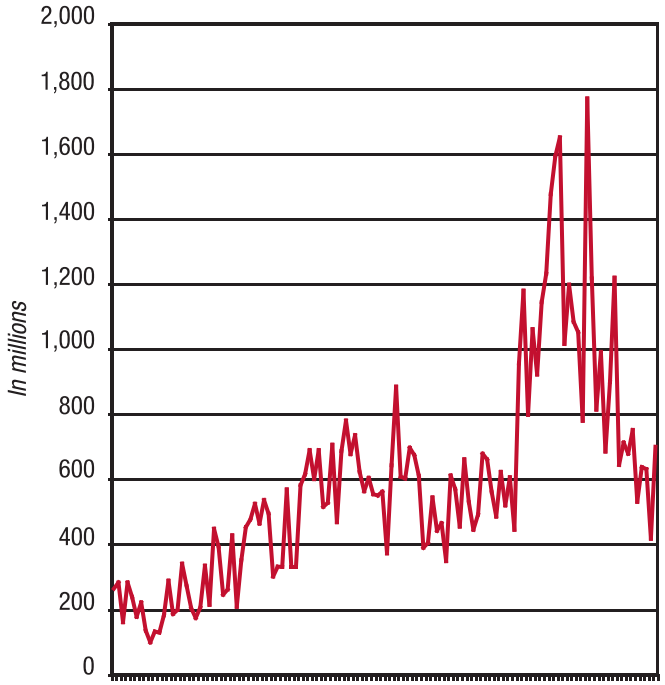
Bund Futures



Source: Newedge Research

Daily Value Risk x Open Interest

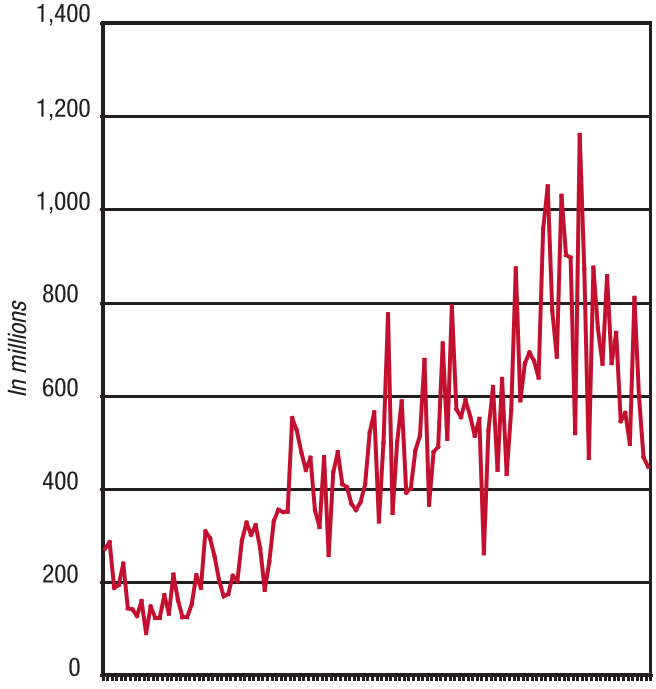
10-Year Treasury Futures (Jan. 2000-Jan. 2010)



Source: Newedge Research

Daily Value Risk x Open Interest

Bund Futures (Jan. 2000-Jan. 2010)



Source: Newedge Research