Volume Surges Again

Global Futures and Options Trading Rises 28% in 2007

By Galen Burghardt

The global volume numbers are once again astonishing. More than 15 billion futures and options contracts changed hands during 2007 on the 54 exchanges that report to the FIA, an increase of 28% from the previous year. That is a remarkable increase for any year, and what's even more impressive is that the growth rate is actually accelerating.

Looking back at the last three years, the growth rates were 19% in 2006, 12% in 2005, and 9% in 2004. In fact, the last time we saw this much growth was in 2003, when volume jumped 30% from 6.2 billion to 8.1 billion. Given that most of the top contracts have been around for years, if not decades, it is remarkable that we are still finding so much room to grow.

There is no guarantee, of course, that this trend will continue. Trading volume tends to ebb and flow in unpredictable ways, and the current wave of growth may well subside. The good news is that volume levels are rising almost everywhere we look, and that speaks well to the long-term health of our industry.

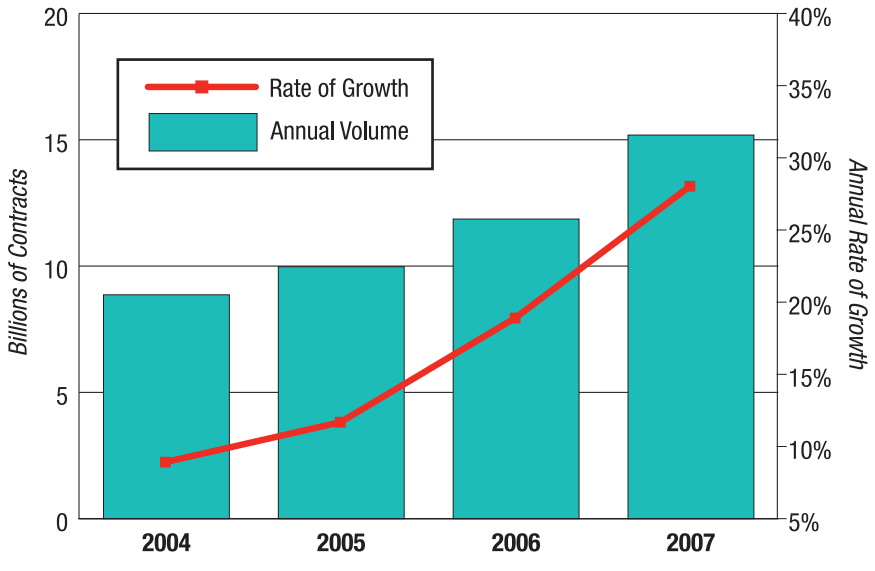
First, the upward trends we are seeing are taking place across all segments of the exchange-traded marketplace. Equity futures and options, both index and single stock, are unquestionably the most powerful drivers of growth. On a combined basis, equity products accounted for a whopping 64% of the total volume last year, and more than 71% of the total increase in volume. One big factor was the sharp increase in volatility in the second half of the year, a subject that I will return to later in this article.

Interest rate futures and options trading grew by 17%, a very healthy rate in historical terms, but somewhat behind this year's overall average of 28%. Commodity products, on the other hand, had a burst of growth in 2007, helped by the greater adoption of electronic trading, the boom in biofuels, and stronger interest among institutional investors. Agricultural futures and options trading grew by 32%, energy by 28.6%, and industrial metals by 29.7%. The only real laggard was the precious metals segment, where higher volume in New York was partially offset by declining volume in Tokyo.

Second, growth is taking place across all regions of the exchange-traded marketplace. As the global brokers well know, this business is no longer concentrated in the major European and North American centers. China, though still largely closed to foreign participants, is a huge force in agricultural and metals futures trading. The National Stock Exchange of India continues to move up the top exchange list, and Hong Kong Exchanges and Clearing more than doubled its volume last year.

Shooting Upward

Growth in Global Futures and Options Trading Over the Last Four Years



Elsewhere in Asia, the Korea Exchange had one of its best years in recent memory. Total volume grew by 9.5%, below the global average, but quite an improvement from last year's 4.6% decline and the previous year's 11.2% decline. Given the enormous amount of trading in the Korean market, even a low rate of growth in percentage terms has a big effect on the overall volume trend.

The Chinese exchanges saw some especially pronounced swings in volume. The Dalian Commodity Exchange's corn futures contract, which tripled in volume last year and became the second most actively traded agricultural futures contract in the world, reversed direction and lost some ground in 2007, with volume falling 12% to 59.4 million contracts. A similar situation emerged in the aluminum futures market, with the Shanghai Futures Exchange's contract crashing by 65% to 4.8 million. On the other hand, the SHFE's new zinc futures contract, which began trading at the end of March, immediately caught fire, with total volume reaching 10.2 million contracts by the end of the year.

Perhaps the most surprising story of 2007, at least from a geographical perspective, was the astonishing burst of volume at JSE, the South African futures and options exchange. Volume on that exchange skyrocketed 214% to 329.6 million contracts, driven mainly by an explosion of trading in its single stock futures contracts. Another up-and-coming market is the Turkish Derivatives Exchange, which saw volume rise by an extraordinary rate of 263% to almost 24.9 million. We also saw tremendous growth in Brazil. BM&F jumped 50% to 426.4 million contracts, while Bovespa rose 28% to 367.7 million contracts. And a little farther south, the Rosario exchange in Argentina rose 40% to 25.4 million contracts.

Stepping back from the individual exchange level, it is interesting to look at a

Global Exchange-Traded Derivatives Volume

	2007	2006	% Change
Futures	6,970,033,370	5,282,818,430	31.94%
Options	8,216,637,460	6,579,394,595	24.88%
Total Volume	**15,186,670,830**	**11,862,213,025**	**28.03%**

Note: Based on the number of futures and options traded and/or cleared by 54 exchanges worldwide.

Global Exchange-Traded Derivatives Volume By Category

Category	2007	2006	% Change
Equity Index	5,616,816,347	4,454,222,902	26.10%
Individual Equity	4,091,923,113	2,876,486,897	42.25%
Interest Rate	3,740,876,650	3,193,410,504	17.14%
Agriculture	645,643,564	489,031,853	32.02%
Energy	496,408,289	385,965,150	28.61%
Foreign Currency	334,707,898	240,053,180	39.43%
Precious Metals	105,092,237	102,298,908	2.73%
Industrial Metals	150,976,113	116,383,437	29.72%
Other	4,226,619	4,360,194	-3.06%
Total	**15,186,670,830**	**11,862,213,025**	**28.03%**

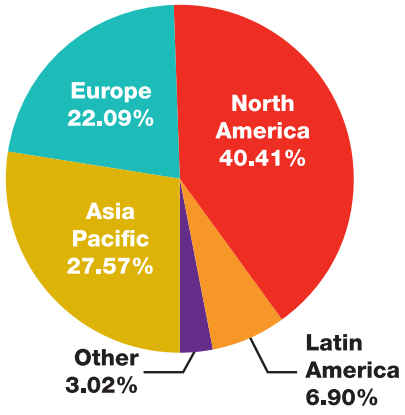
Note: Based on the number of futures and options traded and/or cleared by 54 exchanges worldwide.

Global Exchange-Traded Derivatives Volume By Region

Region	2007	2006	% Change
Asia Pacific	4,186,511,897	3,511,548,425	19.22%
Europe	3,355,222,878	2,674,329,578	25.46%
North America	6,137,204,364	4,616,725,727	32.93%
Latin America	1,048,627,318	864,665,702	21.28%
Other	459,104,373	194,943,593	135.51%
Global Total	**15,186,670,830**	**11,862,213,025**	**28.03%**

Note: Based on the number of futures and options traded and/or cleared by 54 exchanges worldwide.

Percent of Global Exchange-Traded Derivatives Volume By Region



Note: Based on the number of futures and options traded and/or cleared by 54 exchanges worldwide.

The Top Derivatives Exchanges Worldwide

*Ranked by 2007 Futures and Options Volume**

Rank	Exchange	2007	2006	% Change
1	CME Group	2,804,998,291	2,209,148,447	26.97%
2	Korea Exchange	2,709,140,423	2,474,593,261	9.48%
3	Eurex	1,899,861,926	1,526,751,902	24.44%
4	Liffe	949,025,452	730,303,126	29.95%
5	Chicago Board Options Exchange	945,608,219	675,213,772	40.05%
6	International Securities Exchange	804,347,677	591,961,518	35.88%
7	Bolsa de Mercadorias & Futuros	426,363,492	283,570,241	50.36%
8	Philadelphia Stock Exchange	407,972,525	273,093,003	49.39%
9	National Stock Exchange of India	379,874,850	194,488,403	95.32%
10	Bolsa de Valores de Sâo Paulo	367,690,283	287,518,574	27.88%
11	New York Mercantile Exchange	353,385,412	276,152,326	27.97%
12	NYSE Arca Options	335,838,547	196,586,356	70.84%
13	JSE (South Africa)	329,642,403	105,047,524	213.80%
14	American Stock Exchange	240,383,466	197,045,745	21.99%
15	Mexican Derivatives Exchange	228,972,029	275,217,670	-16.80%
16	IntercontinentalExchange	195,706,040	140,284,755	39.51%
17	Dalian Commodity Exchange	185,614,913	120,349,998	54.23%
18	OMX Group	142,510,375	123,167,736	15.70%
19	Boston Options Exchange	129,797,339	94,390,602	37.51%
20	Australian Securities Exchange	116,090,973	100,572,434	15.43%
21	Taiwan Futures Exchange	115,150,624	114,603,379	0.48%
22	Osaka Securities Exchange	108,916,811	60,646,437	79.59%2
23	Tel-Aviv Stock Exchange	104,371,763	83,047,982	25.68%
24	Zhengzhou Commodity Exchange	93,052,714	46,298,117	100.99%
25	London Metal Exchange	92,914,728	86,940,189	6.87%
26	Hong Kong Exchanges & Clearing	87,985,686	42,905,915	105.07%
27	Shanghai Futures Exchange	85,563,833	58,106,001	47.25%
28	Multi Commodity Exchange of India	68,945,925	45,635,538	51.08%
29	Mercado Español de Opciones y Futuros Financieros	51,859,591	46,973,675	10.40%
30	Tokyo Commodity Exchange	47,070,169	63,686,701	-26.09%
31	Singapore Exchange	44,206,826	36,597,743	20.79%
32	Bourse de Montreal	42,742,210	40,540,837	5.43%
33	Tokyo Financial Exchange	42,613,726	35,485,461	20.09%
34	Italian Derivatives Exchange	37,124,922	31,606,263	17.46%
35	National Commodity & Derivatives Exchange	34,947,872	53,266,249	-34.39%
36	Tokyo Stock Exchange	33,093,785	29,227,556	13.23%
37	Mercado a Termino de Rosario	25,423,950	18,212,072	39.60%
38	Turkish Derivatives Exchange	24,867,033	6,848,087	263.12%
39	Tokyo Grain Exchange	19,674,883	19,144,010	2.77%
40	Budapest Stock Exchange	18,828,228	14,682,929	28.23%
41	Oslo Stock Exchange	13,967,847	13,156,960	6.16%
42	Warsaw Stock Exchange	9,341,958	6,714,205	39.14%
43	OneChicago	8,105,963	7,922,465	2.32%
44	Central Japan Commodity Exchange	6,549,417	9,635,688	-32.03%
45	Malaysia Derivatives Exchange Berhad	6,202,686	4,161,024	49.07%
46	Kansas City Board of Trade	4,670,955	5,287,190	-11.66%
47	Minneapolis Grain Exchange	1,826,807	1,655,034	10.38%
48	New Zealand Futures Exchange	1,651,038	1,826,027	-9.58%
49	Wiener Boerse	1,316,895	1,311,543	0.41%
50	Chicago Climate Exchange	283,758	28,924	881.05%
51	Dubai Mercantile Exchange	223,174	N/A	N/A
52	Mercado a Termino de Buenos Aires	177,564	147,145	20.67%
53	Kansai Commodities Exchange	164,743	318,483	-48.27%
54	US Futures Exchange	8,111	135,803	-94.03%

*** Note:** *Ranking does not include exchanges that do not report their volume to the FIA. Exchanges under common ownership are grouped together. See separate exchange group table for breakdown of volume by affiliated exchanges.*

breakdown of the global volume total by region. The Asia-Pacific region accounted for 28% of all futures and options traded on exchanges worldwide in 2007, versus just 22% for Europe. It is important to remember that much of the trading in Asia is conducted in contracts with relatively small notional values, such as the Kospi 200 index options. Nevertheless, it is obvious from this simple comparison why so many people in our industry are looking east. Many of those markets are still finding their legs, and the growth of trading, as the exchanges continue to list new contracts, and risk management becomes more common, is likely to be one of the biggest volume drivers for many years to come.

Exchange Consolidation

Amid all the attention to what we used to call the Third World, it is easy to lose sight of what happened in the birthplace of the modern futures industry. North America in general, and Chicago in particular, had an extraordinary year in 2007. More than 6.1 billion futures and options changed hands in North America in 2007, an increase of 33% over the previous year. In other words, North America is not only the largest region in the world in terms of trading activity, it is also growing the most rapidly.

2007 is also the year when consolidation really had an impact on our volume tables. The Chicago Mercantile Exchange and the Chicago Board of Trade, now combined into a single company, grew by 27%, a remarkable achievement for an exchange whose principal products have been around for so many years. Even more remarkable, CME Group has now pulled ahead of the Korea Exchange as the world's largest derivatives exchange, with combined volume of 2.8 billion contracts versus Korea's 2.7 billion contracts. A few years ago Korea had such a huge lead it seemed like no one would ever catch up. The fact that CME managed to do just that reflects the continuing appeal of its core products as well as the wave of mergers and acquisitions that is transforming the exchange landscape worldwide.

To show the effect that this consolidation trend is having, we have created a table showing the volume totals for several large exchange groups and the various subsidiary exchanges within the group. This includes not only the CME Group but also IntercontinentalExchange, which now owns three exchanges in three separate countries;

Exchange Groups

The wave of mergers and acquisitions in recent years has created several companies that own as many as seven subsidiary derivatives exchanges. In addition, several exchanges have formed subsidiaries to enter new market segments. The following table shows a breakdown of group futures and options volume by subsidiary exchange.

	2007	2006	% Change
Australian Stock Exchange	24,969,811	22,452,328	11.21%
Sydney Futures Exchange	91,121,162	78,120,106	16.64%
Australian Securities Exchange Total	**116,090,973**	**100,572,434**	**15.43%**
Chicago Board Options Exchange	944,471,924	674,735,348	39.98%
CBOE Futures Exchange	1,136,295	478,424	137.51%
CBOE Total	**945,608,219**	**675,213,772**	**40.05%**
Chicago Board of Trade	1,029,568,853	805,884,413	27.76%
Chicago Mercantile Exchange	1,775,429,438	1,403,264,034	26.52%
CME Group Total	**2,804,998,291**	**2,209,148,447**	**26.97%**
Eurex	1,899,861,926	1,526,751,902	24.44%
International Securities Exchange	804,347,677	591,961,518	35.88%
Eurex Total	**2,704,209,603**	**2,118,713,420**	**27.63%**
ICE Futures Europe	138,470,956	92,721,050	49.34%
ICE Futures U.S.	53,782,919	44,667,169	20.41%
ICE Futures Canada	3,452,165	2,896,536	19.18%
IntercontinentalExchange Total *	**195,706,040**	**140,284,755**	**39.51%**
Liffe - UK	695,974,929	515,478,934	35.02%
Liffe - Amsterdam	159,827,511	126,833,753	26.01%
Liffe - Paris	90,868,890	86,016,916	5.64%
Liffe - Brussels	1,348,884	1,300,009	3.76%
Liffe - Lisbon	1,005,238	673,514	49.25%
NYSE Arca Options	335,838,547	196,586,356	70.84%
NYSE Euronext Total	**1,284,863,999**	**926,889,482**	**38.62%**
New York Mercantile Exchange	304,994,104	233,397,571	30.68%
Comex	40,468,298	30,072,043	34.57%
Clearport	7,923,010	12,682,712	-37.53%
Dubai Mercantile Exchange **	223,174		
Nymex Total	**353,608,586**	**276,152,326**	**28.05%**

* does not include OTC transactions

** DME began operating in 2007. Nymex owns a minority stake in DME.

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

Top 50 Exchange-Traded Derivatives Contracts Worldwide

Ranked by Number of Contracts Traded in 2007

Rank	Contract	2007	2006	% Change
1	Kospi 200 Options, KRX	2,642,675,246	2,414,422,952	9.45%
2	Eurodollar Futures, CME	621,470,328	502,077,391	23.78%
3	E-mini S&P 500 Futures, CME	415,348,228	257,926,673	61.03%
4	10 Year Treasury Note Futures, CME	349,229,371	255,571,869	36.65%
5	Euro-Bund Futures, Eurex	338,319,416	319,889,369	5.76%
6	DJ Euro Stoxx 50 Futures, Eurex	327,034,149	213,514,918	53.17%
7	Eurodollar Options on Futures, CME	313,032,284	268,957,052	16.39%
8	DJ Euro Stoxx 50 Options, Eurex	251,438,870	150,049,918	67.57%
9	One Day Inter-Bank Deposit Futures, BM&F	221,627,417	161,654,736	37.10%
10	3 Month Euribor Futures, Liffe	221,411,485	202,091,612	9.56%
11	TIIE 28 Futures, Mexder	220,608,024	264,160,131	-16.49%
12	Powershares QQQ ETF Options *	185,807,535	112,071,290	65.79%
13	Euro-Schatz Futures, Eurex	181,101,310	165,318,779	9.55%
14	Euro-Bobl Futures, Eurex	170,909,055	167,312,119	2.15%
15	5 Year Treasury Note Futures, CME	166,207,391	124,870,313	33.10%
16	S&P 500 Options, CBOE	158,084,691	104,312,673	51.55%
17	iShares Russell 2000 ETF Options *	154,059,054	80,948,245	90.32%
18	SPDR S&P 500 ETF Options *	141,614,736	64,908,764	118.18%
19	S&P CNX Nifty Futures, NSE India	138,794,235	70,286,227	97.47%
20	Light Sweet Crude Oil Futures, Nymex	121,525,967	71,053,203	71.04%
21	3 Month Sterling Futures, Liffe	119,675,947	83,003,622	44.18%
22	30 Year Treasury Bond Futures, CME	107,630,211	93,754,895	14.80%
23	E-mini Nasdaq 100 Futures, CME	95,309,053	79,940,222	19.23%
24	TA-25 Options, TASE	94,520,236	75,486,658	25.21%
25	Taiex Options, Taifex	92,585,637	96,929,940	-4.48%
26	Dax Options, Eurex	91,850,835	61,411,659	49.57%
27	U.S. Dollar Futures, BM&F	84,774,568	52,350,517	61.94%
28	3 Month Euribor Options on Futures, Liffe	74,276,297	48,176,163	54.18%
29	2 Year Treasury Note Futures, CME	68,610,392	37,966,797	80.71%
30	Soy Meal Futures, DCE	64,719,466	31,549,669	105.14%
31	10 Year Treasury Note Options on Futures, CME	61,528,219	61,888,144	-0.58%
32	E-mini Russell 2000 Futures, CME	60,731,902	41,748,538	45.47%
33	Brent Crude Oil Futures, ICE Futures Europe	59,728,941	44,345,927	34.69%
34	Corn Futures, DCE	59,436,742	67,645,036	-12.13%
35	Corn Futures, CME	54,520,152	47,239,893	15.41%
36	S&P CNX Nifty Options, NSE India	52,707,150	18,702,248	181.82%
37	WTI Crude Oil Futures, ICE Futures Europe	51,388,362	28,672,639	79.22%
38	3 Month Sterling Options on Futures, Liffe	50,747,710	34,231,229	48.25%
39	Dax Futures, Eurex	50,413,122	40,425,513	24.71%
40	Nikkei 225 Mini Futures, OSE	49,107,059	6,348,382	673.54%
41	Kospi 200 Futures, KRX	47,758,294	46,611,008	2.46%
42	No. 1 Soybean Futures, DCE	47,432,721	8,897,061	433.13%
43	White Sugar Futures, ZCE	45,468,481	29,342,066	54.96%
44	CAC 40 Futures, Liffe	44,668,975	33,405,804	33.72%
45	Euro-Bund Options on Futures, Eurex	44,441,961	41,764,550	6.41%
46	Euro FX Futures, CME	43,063,060	40,790,379	5.57%
47	Rubber Futures, SHFE	42,191,727	26,047,061	61.98%
48	High Grade Primary Aluminum Futures, LME	40,229,693	36,418,131	10.47%
49	Mini-sized $5 Dow Jones Industrial Index Futures, CME	40,098,882	26,792,373	49.67%
50	Financial Sector SPDR ETF Options *	39,130,620	6,768,391	478.14%

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

Top 20 Interest Rate Futures and Options Worldwide

Ranked by Number of Contracts Traded in 2007

Rank	Contract	2007	2006	% Change
1	Eurodollar Futures, CME	621,470,328	502,077,391	23.78%
2	10 Year Treasury Note Futures, CME	349,229,371	255,571,869	36.65%
3	Euro-Bund Futures, Eurex	338,319,416	319,889,369	5.76%
4	Eurodollar Options on Futures, CME	313,032,284	268,957,052	16.39%
5	One Day Inter-Bank Deposit Futures, BM&F	221,627,417	161,654,736	37.10%
6	3 Month Euribor Futures, Liffe	221,411,485	202,091,612	9.56%
7	TIIE 28 Futures, Mexder	220,608,024	264,160,131	-16.49%
8	Euro-Schatz Futures, Eurex	181,101,310	165,318,779	9.55%
9	Euro-Bobl Futures, Eurex	170,909,055	167,312,119	2.15%
10	5 Year Treasury Note Futures, CME	166,207,391	124,870,313	33.10%
11	3 Month Sterling Futures, Liffe	119,675,947	83,003,622	44.18%
12	30 Year Treasury Bond Futures, CME	107,630,211	93,754,895	14.80%
13	3 Month Euribor Options on Futures, Liffe	74,276,297	48,176,163	54.18%
14	2 Year Treasury Note Futures, CME	68,610,392	37,966,797	80.71%
15	10 Year Treasury Note Options on Futures, CME	61,528,219	61,888,144	-0.58%
16	3 Month Sterling Options on Futures, Liffe	50,747,710	34,231,229	48.25%
17	Options on Euro-Bund Options on Futures, Eurex	44,441,961	41,764,550	6.41%
18	3 Month Euroyen Futures, TFX	38,952,553	31,495,084	23.68%
19	3 Year Treasury Bond Futures, ASX	33,585,015	31,017,644	8.28%
20	Long Gilt Futures, Liffe	27,367,489	22,009,284	24.35%

Top 20 Equity Index Futures and Options Worldwide

Ranked by Number of Contracts Traded in 2007

Rank	Contract	2007	2006	% Change
1	Kospi 200 Options, KRX	2,642,675,246	2,414,422,952	9.45%
2	E-mini S&P 500 Futures, CME	415,348,228	257,926,673	61.03%
3	DJ Euro Stoxx 50 Futures, Eurex	327,034,149	213,514,918	53.17%
4	DJ Euro Stoxx 50 Options, Eurex	251,438,870	150,049,918	67.57%
5	Powershares QQQ ETF Options *	185,807,535	112,071,290	65.79%
6	S&P 500 Options, CBOE	158,084,691	104,312,673	51.55%
7	iShares Russell 2000 ETF Options *	154,059,054	80,948,245	90.32%
8	SPDR S&P 500 ETF Options *	141,614,736	64,908,764	118.18%
9	S&P CNX Nifty Futures, NSE India	138,794,235	70,286,227	97.47%
10	E-mini Nasdaq 100 Futures, CME	95,309,053	79,940,222	19.23%
11	TA-25 Options, TASE	94,520,236	75,486,658	25.21%
12	Taiex Options, Taifex	92,585,637	96,929,940	-4.48%
13	Dax Options, Eurex	91,850,835	61,411,659	49.57%
14	E-mini Russell 2000 Futures, CME	60,731,902	41,748,538	45.47%
15	S&P CNX Nifty Options, NSE India	52,707,150	18,702,248	181.82%
16	Dax Futures, Eurex	50,413,122	40,425,513	24.71%
17	Nikkei 225 Mini Futures, OSE	49,107,059	6,348,382	673.54%
18	Kospi 200 Futures, KRX	47,758,294	46,611,008	2.46%
19	CAC 40 Futures, Liffe	44,668,975	33,405,804	33.72%
20	Mini-sized $5 DJIA Futures, CME	40,098,882	26,792,373	49.67%

* Traded on multiple U.S. options exchanges.

Top 20 Energy Futures and Options Worldwide

Ranked by Number of Contracts Traded and/or cleared in 2007

Rank	Contract	2007	2006	% Change
1	Light Sweet Crude Oil Futures, Nymex	121,525,967	71,053,203	71.04%
2	Brent Crude Oil Futures, ICE Futures Europe	59,728,941	44,345,927	34.69%
3	WTI Crude Oil Futures, ICE Futures Europe	51,388,362	28,672,639	79.22%
4	European Style Natural Gas Options, Nymex Clearport *	29,921,068	19,515,968	53.32%
5	Natural Gas Futures, Nymex	29,786,318	23,029,988	29.34%
6	Light Sweet Crude Oil Options on Futures, Nymex	28,398,793	21,016,562	35.13%
7	Gas Oil Futures, ICE Futures Europe	24,509,884	18,289,877	34.01%
8	NY Harbor RBOB Gasoline Futures, Nymex	19,791,439	3,883,261	409.66%
9	No. 2 Heating Oil Futures, Nymex	18,078,976	13,990,589	29.22%
10	Henry Hub Swap Futures, Nymex Clearport *	16,207,044	24,157,726	-32.91%
11	Crude Oil Futures, MCX	13,938,813	4,466,538	212.07%
12	Fuel Oil Futures, SHFE	12,005,094	12,734,045	-5.72%
13	Henry Hub Penultimate Swap Futures, Nymex Clearport *	10,117,889	7,973,290	26.90%
14	Gasoline Futures, Tocom	7,529,706	12,932,848	-41.78%
15	miNY Crude Oil Futures, Nymex	5,185,214	9,323,467	-44.39%
16	Natural Gas Options on Futures, Nymex	5,051,879	9,581,663	-47.28%
17	Gasoline Futures, C-Com	3,635,329	4,953,168	-26.61%
18	Kerosene Futures, C-Com	2,685,345	4,027,192	-33.32%
19	Kerosene Futures, Tocom	2,350,819	4,492,904	-47.68%
20	European Style Crude Oil Options, Nymex Clearport *	1,879,999	379,250	395.71%

** Traded primarily off-exchange.*

Top 20 Agricultural Futures and Options Worldwide

Ranked by Number of Contracts Traded in 2007

Rank	Contract	2007	2006	% Change
1	Soy Meal Futures, DCE	64,719,466	31,549,669	105.14%
2	Corn Futures, DCE	59,436,742	67,645,036	-12.13%
3	Corn Futures, CME	54,520,152	47,239,893	15.41%
4	No. 1 Soybean Futures, DCE	47,432,721	8,897,061	433.13%
5	White Sugar Futures, ZCE	45,468,481	29,342,066	54.96%
6	Rubber Futures, SHFE	42,191,727	26,047,061	61.98%
7	Strong Gluten Wheat Futures, ZCE	38,982,788	14,676,238	165.62%
8	Soybean Futures, CME	31,726,316	22,647,784	40.09%
9	Sugar #11 Futures, ICE Futures U.S.	21,263,799	15,100,721	40.81%
10	Wheat Futures, CME	19,582,706	16,224,871	20.70%
11	Corn Futures, CME	14,691,277	11,317,388	29.81%
12	Soy Oil Futures, DCE	13,283,866	10,333,006	28.56%
13	Soybean Oil Futures, CME	13,170,914	9,488,524	38.81%
14	Non-GMO Soybean Futures, TGE	12,280,932	9,885,557	24.23%
15	Soybean Meal Futures, CME	12,213,315	9,350,043	30.62%
16	Live Cattle Futures, CME	8,587,973	8,209,698	4.61%
17	Soybean Options on Futures, CME	8,215,582	6,042,797	35.96%
18	Pepper Futures, NCDEX	7,488,534	4,535,589	65.11%
19	Lean Hog Futures, CME	7,264,832	6,481,001	12.09%
20	Rubber Futures, Tocom	7,062,252	9,661,388	-26.90%

Eurex, which now owns one of the biggest equity options marketplaces in the U.S.; OMX, which operates a whole raft of derivatives markets across Northern Europe; and NYSE Euronext, which has five European derivatives markets under its Liffe umbrella in addition to NYSE Arca Options, the most rapidly growing equity options exchange. In some cases, these subsidiary exchanges are still run as separate enterprises, but over time we are likely to see greater and greater integration as the parent companies take advantage of the obvious synergies in technology and market access.

The other amazing story in North America was the extraordinary growth of options trading. Total volume on the six U.S. options exchanges rose by 41% to 2.86 billion. To put that into perspective, the difference in volume for these six exchanges between 2007 and 2006 was 835 million contracts, which was almost the same amount as all of the trading in China and India combined. Nowhere else among the mature markets of Europe and North America did we see such strong growth. In comparison, volume on the U.S. futures exchanges grew by 27% to 3.2 billion contracts, and volume on the European derivatives exchanges grew by 25% to 3.35 billion contracts. Those are both tremendous numbers, but they don't come close to matching the 41% growth rate in equity options, which appears to be driven by a transformation in the way institutional investors view these products as well as the sharp increase in volatility alluded to earlier.

Volume Isn't Everything

While the overall rate of growth was remarkably high, it is worth noting that there were a handful of big contracts that did not do so well in 2007. The TIIE 28, the short-term interest rate futures traded at the Mexican Derivatives Exchange, has been a huge success for a number of years, but last year volume slipped 16% to 220.6 million contracts. One reason may have been that market participants shifted some of their activity to a newly introduced 10-year interest rate swap futures contract that offers better hedging of long-term risk exposures. The new swap futures contract is 10 times the size of the TIIE 28 contract, making it more suitable for the institutional players active in the peso swap market. And it allows hedgers to use just one instrument rather than a whole strip of one-month contracts. So while the exchange may undergo a decline in volume as users trade fewer packs and bundles of the TIIE 28 contract, Mexder's value as a marketplace for hedging interest-rate risk can only be enhanced if the new swap futures contract proves to be a hit.

One of the best examples of a successful introduction of a new contract was the Chicago Board Options Exchange's determined efforts to promote its Vix options, which are based on the exchange's well-known equity volatility index. This contract was launched in February 2006 and achieved only modest volume in its first year, but the hard work paid off in 2007. Volume reached 23.4 million contracts, up by 363% from the previous year. That may not sound like a lot compared to the benchmark equity index

Top 20 Metals Futures and Options Worldwide

Ranked by Number of Contracts Traded in 2007

Rank	Contract	2007	2006	% Change
1	High Grade Primary Aluminum Futures, LME	40,229,693	36,418,131	10.47%
2	Gold Futures, Nymex	25,060,440	15,917,584	57.44%
3	Copper Futures, LME	21,420,450	18,864,246	13.55%
4	Gold Futures, Tocom	18,203,194	22,228,198	-18.11%
5	Copper Futures, SHFE	16,328,011	5,393,419	202.74%
6	Copper Futures, MCX	15,375,506	5,293,964	190.43%
7	Special High Grade Zinc Futures, LME	12,556,285	11,706,008	7.26%
8	Zinc Futures, SHFE	10,215,449	*	
9	Silver Futures, MCX	9,183,273	9,498,544	-3.32%
10	Platinum Futures, Tocom	9,169,890	11,018,069	-16.77%
11	100 oz. Gold Futures, CME	7,898,027	8,452,484	-6.56%
12	Gold Futures, MCX	7,604,891	9,957,351	-23.63%
13	Silver Futures, Nymex	6,817,137	5,433,063	25.48%
14	Silver M Futures, MCX	6,258,376	2,982,222	109.86%
15	Aluminum Futures, SHFE	4,823,552	13,931,476	-65.38%
16	Standard Lead Futures, LME	4,697,862	4,568,140	2.84%
17	Primary Nickel Futures, LME	3,792,788	4,177,557	-9.21%
18	Copper Futures, Nymex	3,753,168	3,281,312	14.38%
19	Gold Options on Futures, Nymex	3,554,858	3,708,573	-4.14%
20	Zinc Futures, MCX	3,551,909	562,647	531.29%

** Not listed for trading in 2006.*

contracts, which trade in the hundreds of millions of contracts, but it's pretty good for something this novel. This often seems to be the pattern with the really innovative contracts: a period of obscurity while market participants become accustomed to the new contract and its uses, and then slowly momentum starts to build.

A note on the sources of all these data. This year's volume statistics were gathered from 63 exchanges that voluntarily provided data to the FIA. In most cases, such as ASX, CBOE, CME Group, Liffe, ICE and OMX, the FIA consolidates the data from affiliated exchanges and publishes one set of numbers for the group as a whole. As a result, the number of exchanges listed in the volume rankings was reduced from 63 to 54.

There were two exceptions, however, where the FIA did not consolidate data from affiliated exchanges. In the case of NYSE Arca and Liffe, both of which are now part of the NYSE Euronext group, the FIA's view was that these two exchanges have been operating in such different environments that it makes more sense to treat them separately, at least for the purposes of this report. In the case of the International Securities Exchange and Eurex, the merger of those two exchanges was not completed until the end of 2007, so they are still treated as separate entities for the two years covered by this report.

Volatility Comparison

Market	Annualized Volatility 2006	Annualized Volatility 2007	Annualized Volatility (bp) 2006	Annualized Volatility (bp) 2007
Interest Rates (Money Market)				
Eurodollar	10.3%	17.1%	54.5	80.2
Euribor	10.7%	9.5%	35.8	41.5
Euroyen	56.6%	26.2%	28.8	21.8
Interest Rates (Government Bonds)				
10-year Treasury Note	3.8%	5.2%		
Bund	3.8%	4.1%		
JGB	3.6%	3.4%		
Equity				
S&P 500	9.7%	15.9%		
Euro Stoxx 50	14.4%	15.5%		
Topix	18.9%	20.6%		
Foreign currencies				
British pound	7.6%	6.9%		
Euro	7.2%	6.1%		
Japanese yen	8.0%	9.3%		
Commodities				
Crude oil	26.4%	29.7%		
Natural gas	62.2%	47.2%		
Wheat	29.5%	33.7%		
Corn	28.3%	32.3%		
Copper	38.5%	32.9%		
Aluminum	32.2%	22.1%		

Source: Newedge Group

Volatility Patterns and the Impact on Trading Costs

It is tempting for someone writing from my perspective in the U.S. to think that the second half of 2007 was exceptionally volatile. It was in fact more volatile in U.S. equity and bond markets, but two things are worth noting. First, other markets did not experience the same increase in volatility. S&P 500 volatility increased from 9.7% in 2006 to 15.9% in 2007, but Euro Stoxx 50 volatility only increased from 14.4% to 15.5%, and Topix volatility from 18.9% to 20.6%. Ten-year Treasury note volatility increased from 3.8% in 2006 to 5.2% in 2007, but Bund volatility only increased from 3.8% to 4.1%, while Japan Government Bond volatility actually fell.

Second, the increase in volatility in the U.S. was from levels that were lower than any we had seen for 10 years or more. We used to think that 15% volatility for S&P 500 products was normal. So in some sense, what happened in 2007 was not much more than a reversion to levels that we used to see all the time.

In other markets the volatility picture was mixed. The volatility of the Euro and the British pound both fell, while yen volatility increased slightly. Crude oil volatility was up, but natural gas volatility fell. Wheat and corn volatilities rose, while copper and aluminum volatilities fell.

While some may welcome the increase in volatility as a driver of volume, we need to be aware of the effect that this volatility has on execution costs. All of the research we have done on market impact suggests that a doubling of price volatility requires a quadrupling of trading volume to compensate in terms of keeping the trading cost per contract at the same level. What we find instead is that trading volumes tend to increase relatively less than price volatility. In equity index futures, for example, our rule of thumb is that a 100% increase in price volatility is accompanied by only a 50% increase in trading volume. As a result, periods of higher price volatility tend to be periods of higher market impact or, what means the same thing, lower market liquidity.

This is exactly what happened in 2007. One measure of the cost of trading is the implied bid/ask spread. In those markets where volatility increased significantly, such as E-mini S&P 500 futures and 10-year Treasury note futures, we saw an increase in the implied bid/ask spreads. And in those

markets where volatility increased only moderately or not at all, such as Euros, Bunds and the Euro Stoxx 50, we saw that the spreads stayed roughly constant (see chart below, "Index of Implied Bid/Ask Spreads").

The Particular Case of Equity Index Futures

"Liquidity is really poor now," is a complaint one hears in equity markets. The truth of the complaint depends in part on which market one is talking about and the standard of comparison.

Consider what happened to the sweep-to-fill cost of filling a 1,000-lot order in E-mini S&P futures. Over the first half of the year, the average impact when measured against true market price (a weighted average of the bid and ask prices) was in the neighborhood of 0.25 index points. During the second half of the year, the impact for much of the time was in the neighborhood of 0.35 index points, although there were times when the cost of filling such an order was much higher for short periods of time. In contrast, the sweep-to-fill cost of filling a 1,000-lot order in Euro Stoxx 50 futures was between 1 and 1.5 index points for most of the year.

For U.S. equity index traders, the statement rings true if their standard of comparison was the liquidity they had enjoyed before volatility rose in U.S. equity markets in the second half of 2007. For European equity index traders, if the costs of trading have risen, the rise has been very slight.

By another standard, however, the liquidity in these markets compares very favorably with what one would find in corresponding cash markets. A market impact of 0.35 index points for a 1,000-lot order in E-mini S&P futures represents an impact of 0.026%. A market impact of 1.25 index points for a 1,000-lot order in Euro Stoxx 50 futures represents an impact of 0.034%. When compared with the instantaneous cost of trading roughly $70 million in a basket of U.S. stocks, 0.026% would be relatively small. When compared with trading roughly $60 million in a basket of European stocks, 0.034% would be very small indeed.

We have argued that one can understand market liquidity and market impact using a very simple model that combines price volatility and trading volume. To show how well this insight works, we have overlaid two series in the chart (*left*) "Market Impact, Volume, and Volatility." One is the sweep-to-fill impact for a 1,000-lot order in E-mini S&P futures. The other is simply the ratio of relative price volatility to the square root of trading volume.

As the chart shows, the two series track each other very closely. In our view, this really drives home the point made above that volatility tends to increase the cost of trading and create the perception of declining liquidity even as volume is rising. ■

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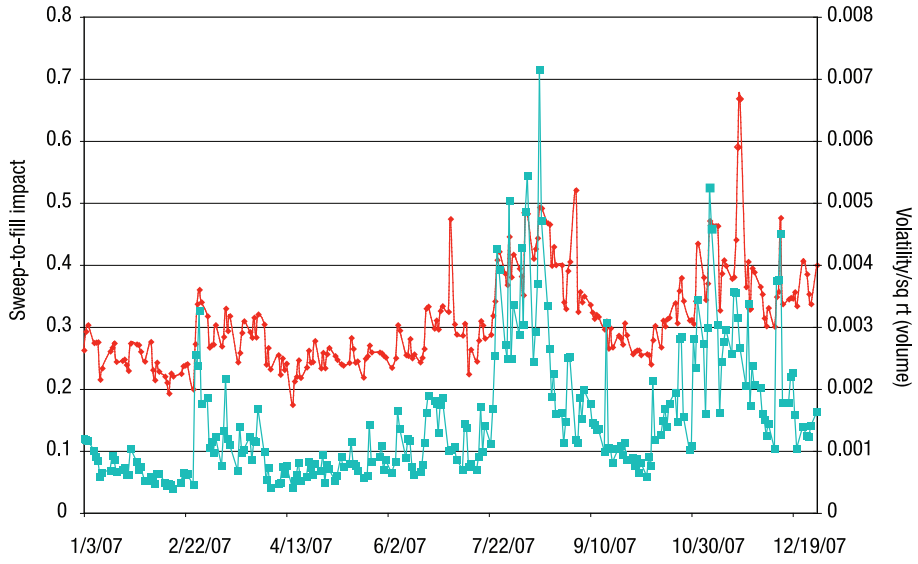
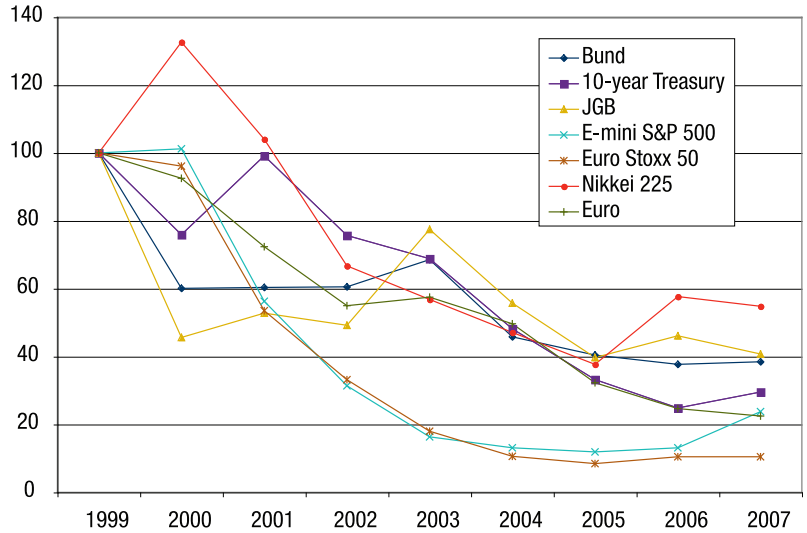
Market Impact, Volume, and Volatility



Source: Newedge Group

Index of Implied Bid/Ask Spreads



Source: Newedge Group