



Volume and Open Interest Trends in the Global Futures and Options Markets: Half-Year Update

Webinar Presentation

27 July 2021



Presenters

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- **Julian O’Leary**, Chief Operating Officer, G.H. Financials



Agenda

Overview

- Quarterly volume since 2010, First half 2021 compared to first half of 2020, Exchange ranking

Equities

- Equity index ranking, Tracking single stock options
- Focus on ESG futures

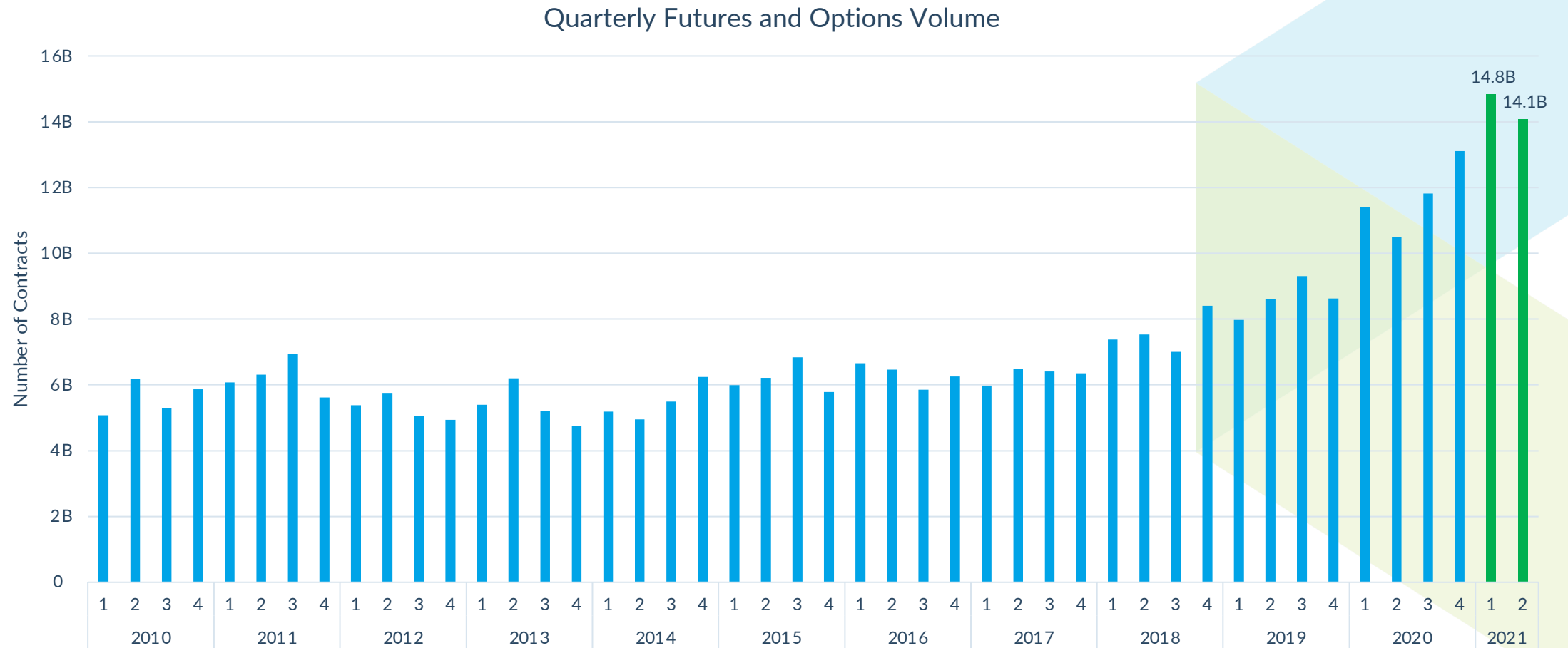
Interest Rates

- Quarterly volume since 2010, Monthly volume since 2019
- Top contracts ranking – STIRS and Bonds
- Focus on SONIA futures

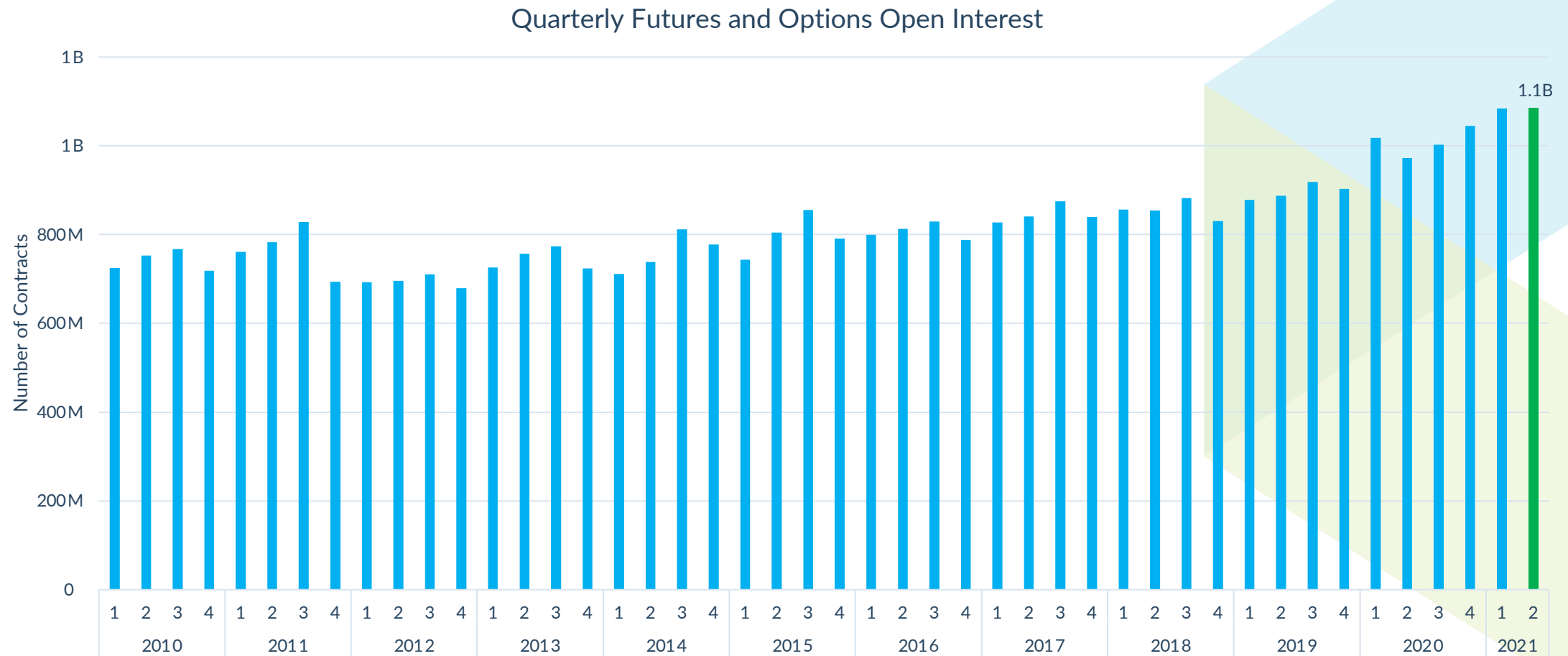
Commodities

- Energy contracts ranking
- Focus on agricultural futures – size-adjusted volume and open interest for soy, canola and wheat

Overview: Record Trading Volume in First Half



Overview: Steady Growth in Open Interest



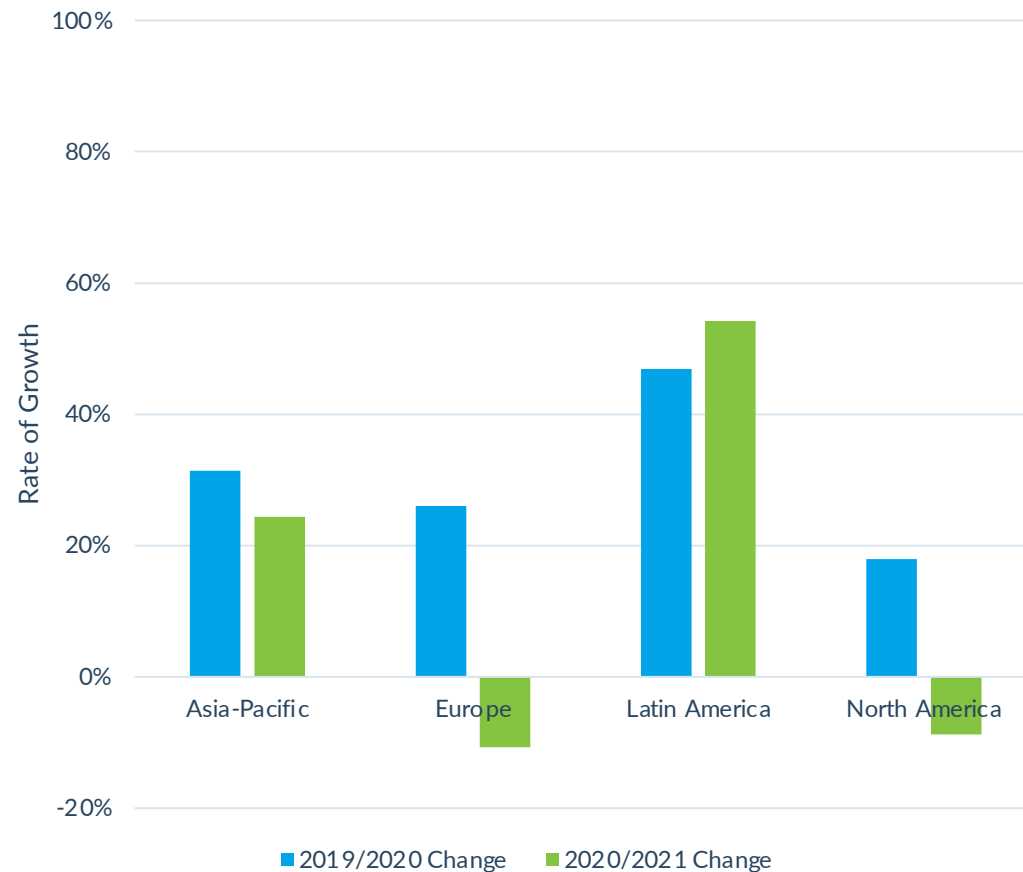
First Half of 2021: Comparison to a Year ago

Type	Jan-Jun 2021 Volume	YoY Change	% Change	2021 Jun Open Interest	YoY Change	% Change
Options	14,485,332,826	4,843,859,612	50.2%	817,336,193	82,814,346	11.3%
Futures	14,422,867,801	2,177,768,431	17.8%	267,471,915	29,847,619	12.6%
Total	28,908,200,627	7,021,628,043	32.1%	1,084,808,108	112,661,965	11.6%

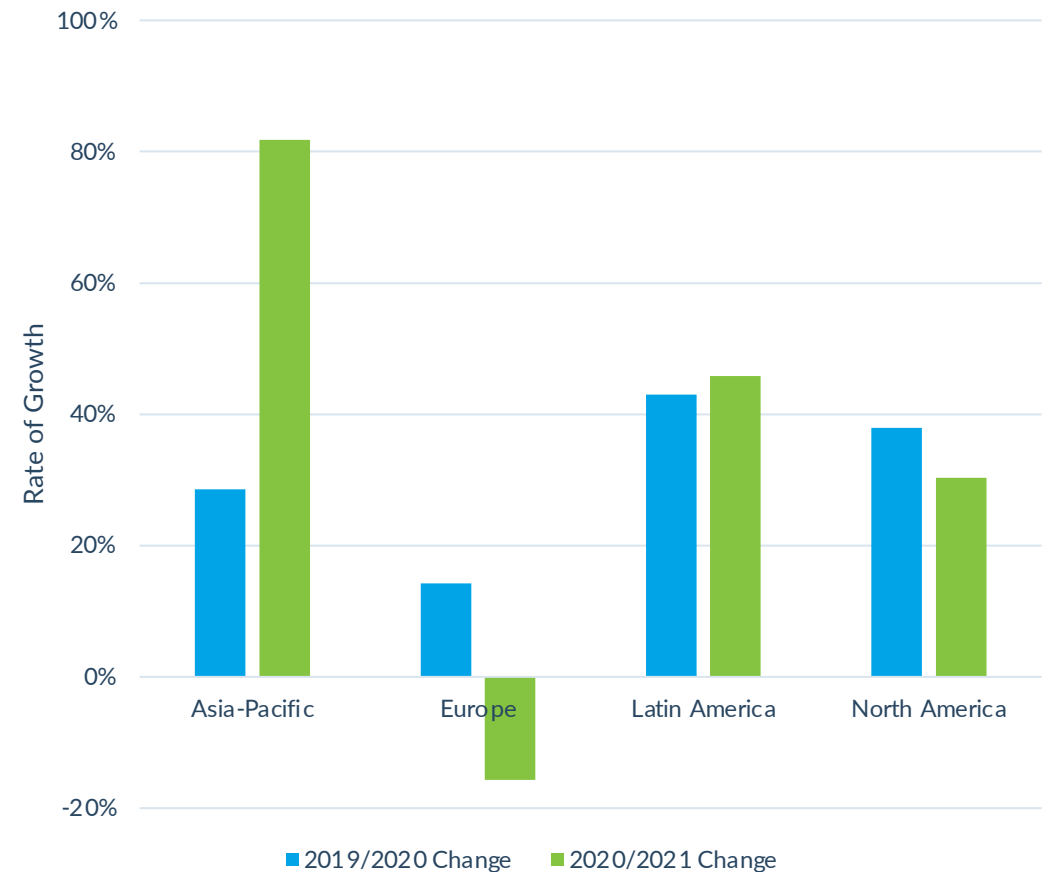
Region	Jan-Jun 2021 Volume	YoY Change	% Change	2021 Jun Open Interest	YoY Change	% Change
Asia-Pacific	13,268,082,970	4,466,274,024	50.7%	91,595,296	12,585,685	15.9%
North America	7,628,509,381	1,015,868,918	15.4%	566,855,693	107,318,076	23.4%
Latin America	4,218,856,425	1,437,097,092	51.7%	151,001,786	-22,017,040	-12.7%
Europe	2,742,180,510	-363,134,903	-11.7%	248,498,021	9,103,221	3.8%
Other	1,050,571,341	465,522,912	79.6%	26,857,312	5,672,023	26.8%
Total	28,908,200,627	7,021,628,043	32.1%	1,084,808,108	112,661,965	11.6%

Comparing Growth Rates by Region

Futures volume by region H1 2019-2021



Options volume by region H1 2019-2021

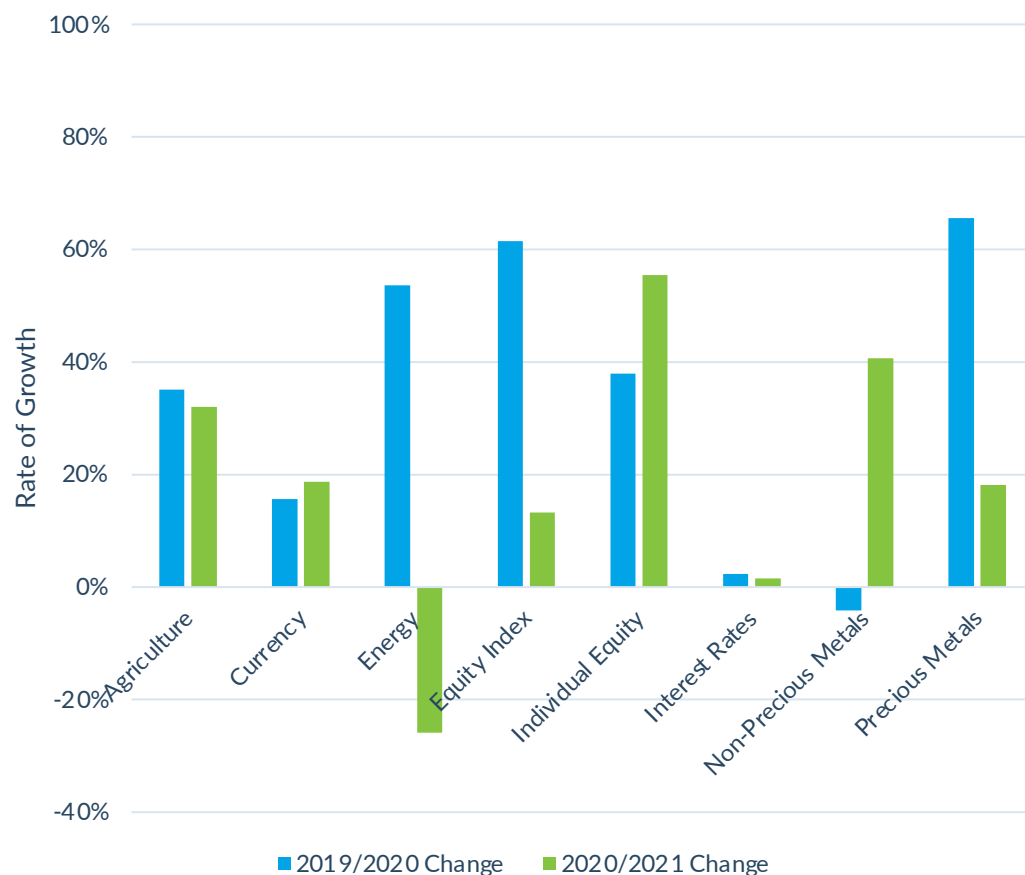


First Half of 2021: Change by Category

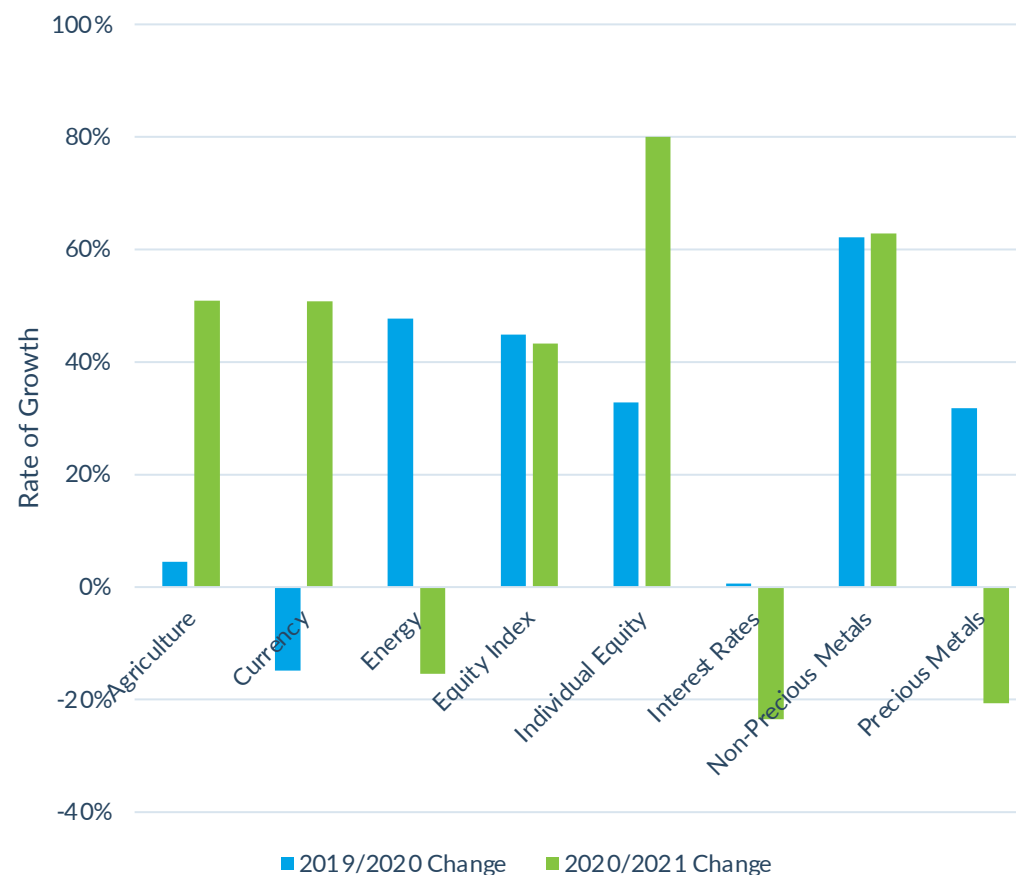
Category	Jan-Jun 2021 Volume	YoY Change	% Change	2021 Jun Open Interest	YoY Change	% Change
Equity Index	11,646,966,516	2,823,105,420	32.0%	239,977,145	-50,925,007	-17.5%
Individual Equity	7,057,232,358	2,966,669,141	72.5%	509,893,803	135,657,515	36.2%
Currency	2,625,622,281	562,648,928	27.3%	30,606,059	4,245,449	16.1%
Interest Rates	2,328,397,464	-102,046,673	-4.2%	190,247,400	18,613,360	10.8%
Agriculture	1,442,813,676	358,208,388	33.0%	23,549,486	1,864,920	8.6%
Energy	1,372,802,888	-467,008,458	-25.4%	65,471,984	-721,005	-1.1%
Other	1,065,799,301	543,125,699	103.9%	9,832,894	3,472,313	54.6%
Non-Precious Metals	946,709,899	275,750,881	41.1%	9,714,310	16,171	0.2%
Precious Metals	421,856,244	61,174,717	17.0%	5,515,027	438,249	8.6%
Total	28,908,200,627	7,021,628,043	32.1%	1,084,808,108	112,661,965	11.6%

Comparing Growth Rates by Category

Futures volume by asset class H1 2019-2021



Options volume by asset class H1 2019-2021



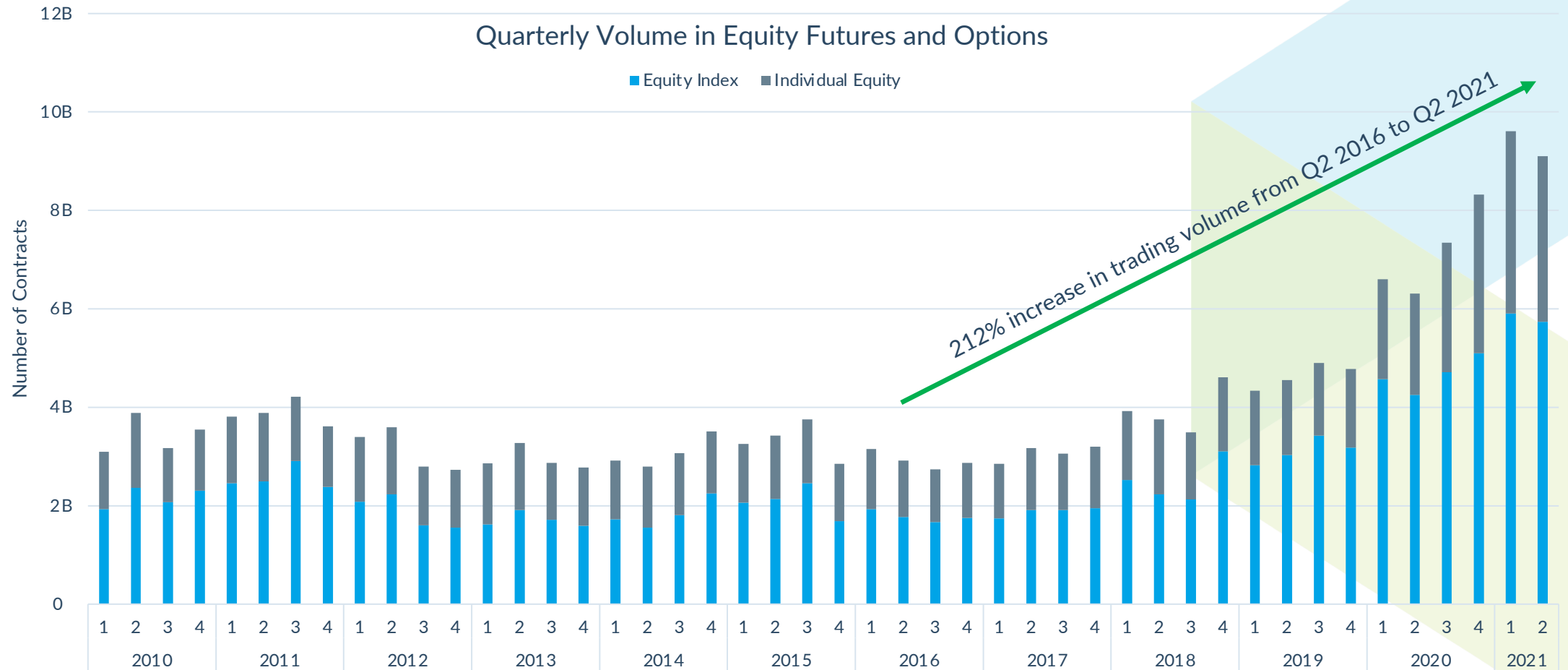
Top Exchanges by Volume

Rank	Exchange	Jan-Jun 2021 Vol	YoY Change	% Change	2021 Jun OI	YoY Change	% Change
1	National Stock Exchange of India	6,600,371,610	2,867,412,528	76.8%	14,619,082	5,566,850	61.5%
2	B3	4,161,727,063	1,427,970,552	52.2%	147,946,451	-20,673,695	-12.3%
3	CME Group	2,493,046,524	-290,527,305	-10.4%	102,783,152	1,933,509	1.9%
4	Nasdaq	1,710,038,561	484,905,010	39.6%	6,784,310	1,511,327	28.7%
	Nasdaq PHLX ¹	593,142,797	198,917,420	50.5%	n/a	n/a	n/a
	Nasdaq Options Market ¹	376,380,706	37,102,931	10.9%	n/a	n/a	n/a
	Nasdaq GEMX ¹	324,163,307	52,211,293	19.2%	n/a	n/a	n/a
	Nasdaq ISE ¹	275,865,044	121,981,676	79.3%	n/a	n/a	n/a
	Nasdaq MRX ¹	65,888,715	51,250,432	350.1%	n/a	n/a	n/a
	Nasdaq BX Options ¹	41,288,929	34,548,966	512.6%	n/a	n/a	n/a
	Nasdaq Exchanges Nordic Markets	32,997,063	-11,071,220	-25.1%	6,628,706	1,530,998	30.0%
	Nasdaq Commodities	312,000	-36,488	-10.5%	155,604	-19,671	-11.2%
5	Intercontinental Exchange	1,620,784,480	180,558,879	12.5%	83,873,135	7,260,478	9.5%
	ICE Futures Europe	597,287,565	-58,773,152	-9.0%	51,697,374	6,407,289	14.1%
	NYSE Arca ¹	457,908,619	129,895,025	39.6%	n/a	n/a	n/a
	NYSE Amex ¹	398,899,685	149,039,531	59.6%	n/a	n/a	n/a
	ICE Futures U.S.	165,206,834	-40,072,503	-19.5%	32,126,837	804,412	2.6%
	ICE Futures Singapore	1,011,387	-412	0.0%	2,099	1,952	1327.9%
	ICE Futures Abu Dhabi ²	470,390	n/a	n/a	46,825	n/a	n/a

Next 10 Top Exchanges by Volume

Rank	Exchange	Jan-Jun 2021 Vol	YoY Change	% Change	2021 Jun OI	YoY Change	% Change
6	CBOE Holdings	1,501,410,834	180,046,743	13.6%	336,172	78,579	30.5%
	Cboe Options Exchange ¹	736,540,509	25,323,820	3.6%	n/a	n/a	n/a
	Cboe BZX Options Exchange ¹	399,025,006	56,708,384	16.6%	n/a	n/a	n/a
	Cboe C2 Options Exchange ¹	169,657,010	65,365,741	62.7%	n/a	n/a	n/a
	Cboe EDGX Options Exchange ¹	167,067,563	33,100,172	24.7%	n/a	n/a	n/a
	Cboe Futures Exchange	29,120,746	-451,374	-1.5%	336,172	78,579	30.5%
7	Zhengzhou Commodity Exchange	1,291,320,530	683,094,656	112.3%	9,998,749	2,909,967	41.1%
8	Shanghai Futures Exchange	1,263,231,077	332,413,838	35.7%	6,351,927	-359,247	-5.4%
	Shanghai Futures Exchange	1,226,342,904	317,784,739	35.0%	6,147,167	-354,565	-5.5%
	Shanghai International Energy Exchange	36,888,173	14,629,099	65.7%	204,760	-4,682	-2.2%
9	Korea Exchange	1,216,205,857	133,355,607	12.3%	12,164,264	2,841,967	30.5%
10	Dalian Commodity Exchange	1,101,380,251	168,617,495	18.1%	10,666,393	1,403,099	15.1%
11	Moscow Exchange	1,014,133,199	-88,582,699	-8.0%	10,759,684	2,561,120	31.2%
12	Borsa Istanbul	932,068,953	457,231,822	96.3%	15,155,905	4,598,835	43.6%
13	Eurex	891,344,829	-176,073,453	-16.5%	139,947,967	-1,802,010	-1.3%
14	BSE	768,619,077	406,802,004	112.4%	902,695	161,588	21.8%
15	Miami International Holdings ¹	646,062,125	264,516,922	69.3%	n/a	n/a	n/a

Equity-Related Volume Triples over Five Years

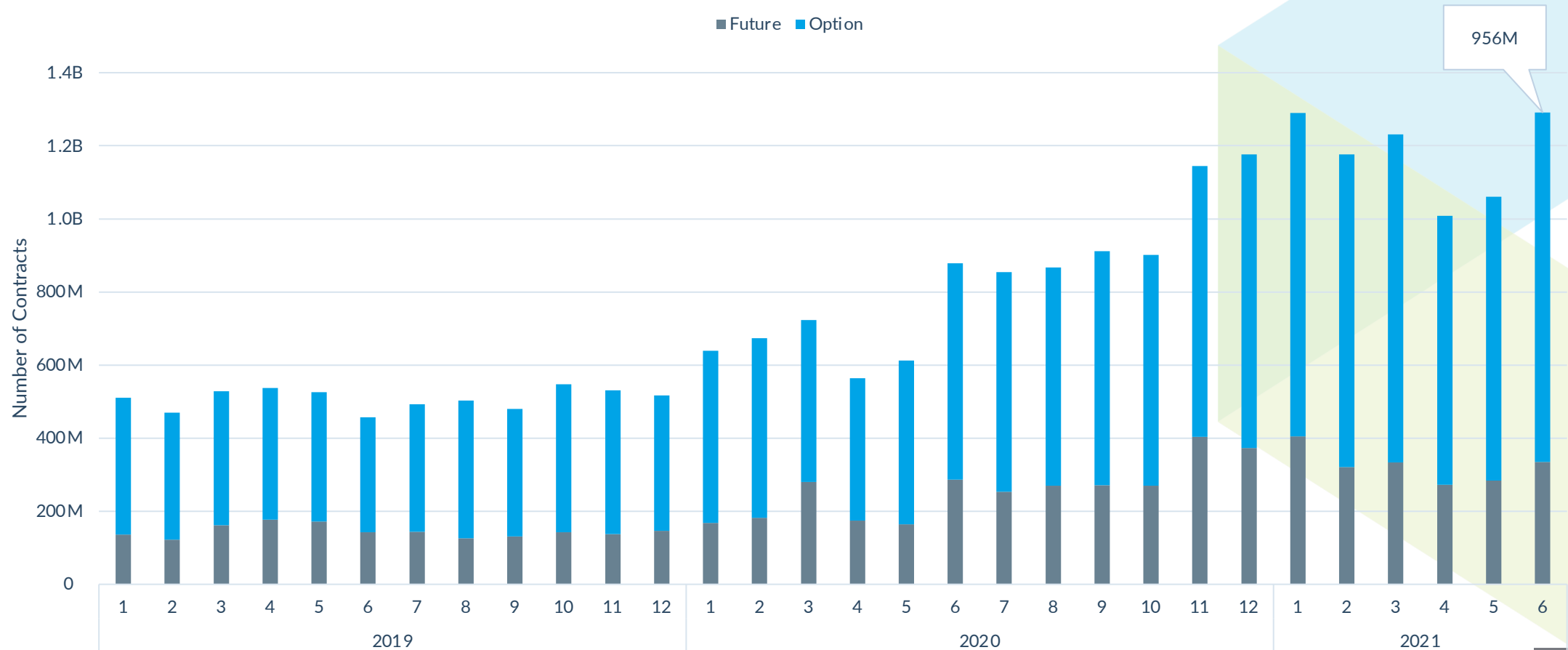


Top 15 Equity Index Contracts by First Half Volume

Rank	Contract	Jan-Jun 2021 Volume	% Change	2021 Jun Open Interest	% Change
1	Bank Nifty Index Options, NSE India	3,318,771,898	86.2%	1,808,941	158.2%
2	Mini Ibovespa Index (WIN) Futures, B3	2,115,318,204	67.3%	625,963	43.8%
3	CNX Nifty Index Options, NSE India	1,861,931,309	97.9%	2,571,398	76.4%
4	SPDR S&P 500 ETF Options *	525,541,381	-16.1%	18,193,022	-16.9%
5	Kospi 200 Options, KRX	266,396,900	-21.9%	1,865,003	-7.1%
6	E-mini S&P 500 Futures, CME	204,739,136	-29.0%	2,581,871	-2.5%
7	S&P 500 Index (SPX) Options, Cboe	153,501,409	-14.5%	14,064,670	-5.1%
8	Powershares QQQ ETF Options *	153,433,003	38.4%	8,688,271	16.4%
9	Micro E-mini Nasdaq 100 Index Futures, CME	120,818,235	66.8%	41,092	19.9%
10	Euro Stoxx 50 Index Futures, Eurex	118,076,958	-46.4%	2,831,158	-28.0%
11	Euro Stoxx 50 Index Options, Eurex	116,769,740	-34.6%	33,598,607	-10.6%
12	Micro E-mini S&P 500 Index Futures, CME	113,305,641	6.4%	71,959	-7.7%
13	Nikkei 225 Mini Futures, Osaka Exchange	111,158,141	-45.6%	255,290	-45.8%
14	India 50 Index Options, INX India	107,601,491	403.6%	484	-8.9%
15	Taiex (TXO) Options, TAIEX	105,363,017	3.3%	264,835	-44.8%

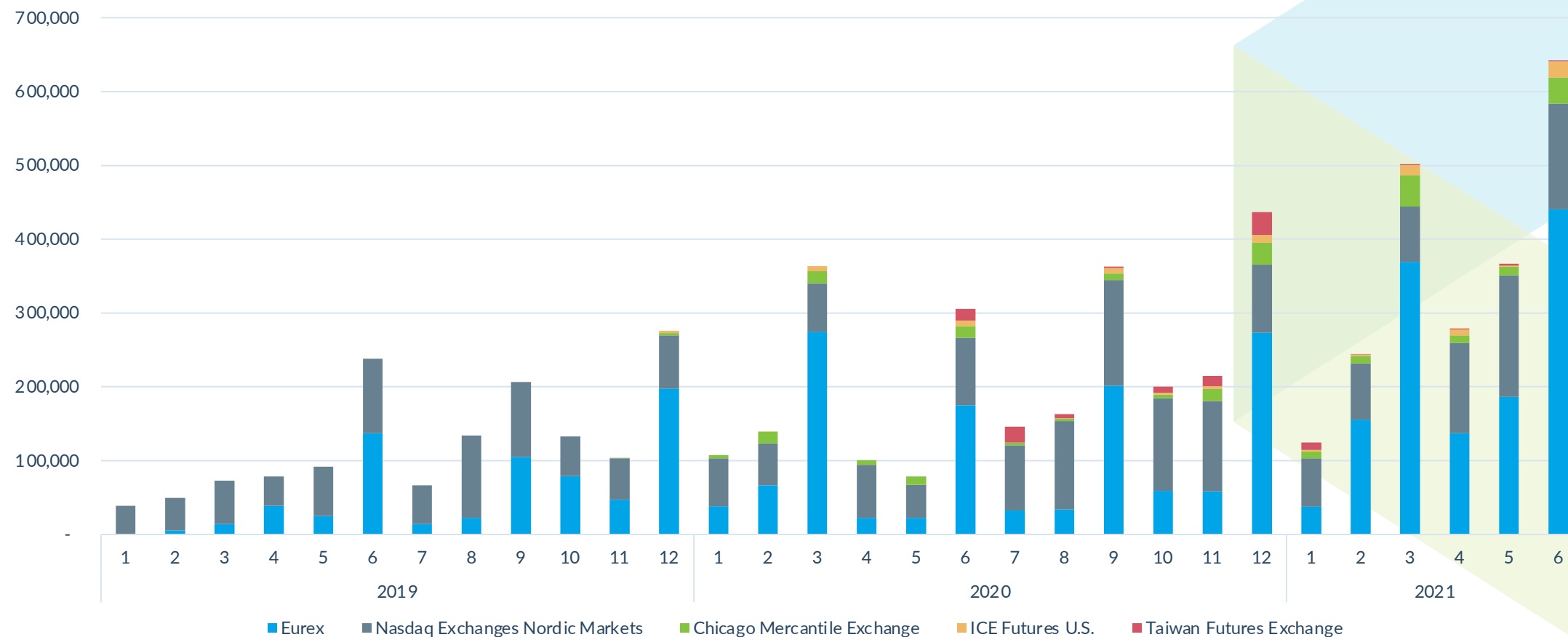
Stock Options Trading Hits Another Record in June

Monthly Volume in Individual Equity Futures and Options

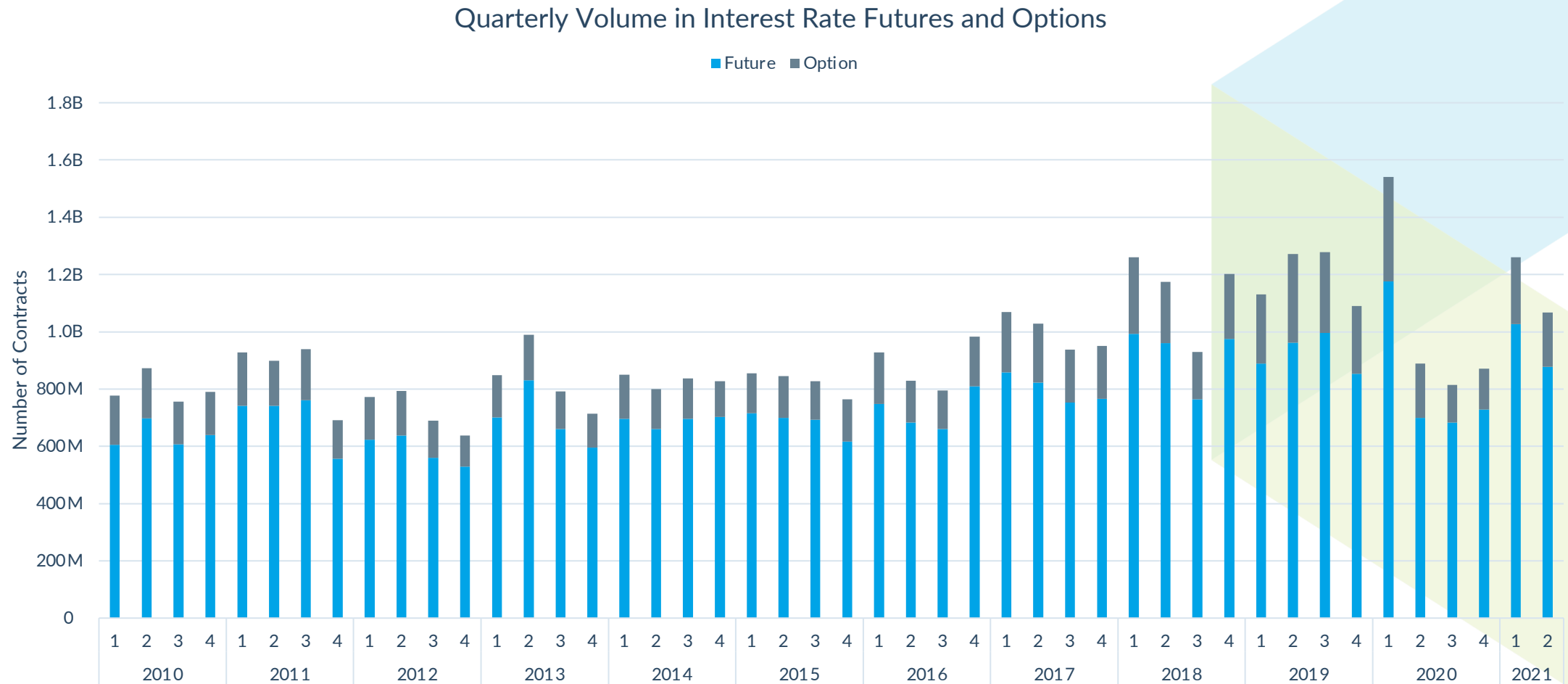


ESG Futures Gaining Traction

Monthly Volume on the Five Exchanges with the Most Actively Traded ESG Futures

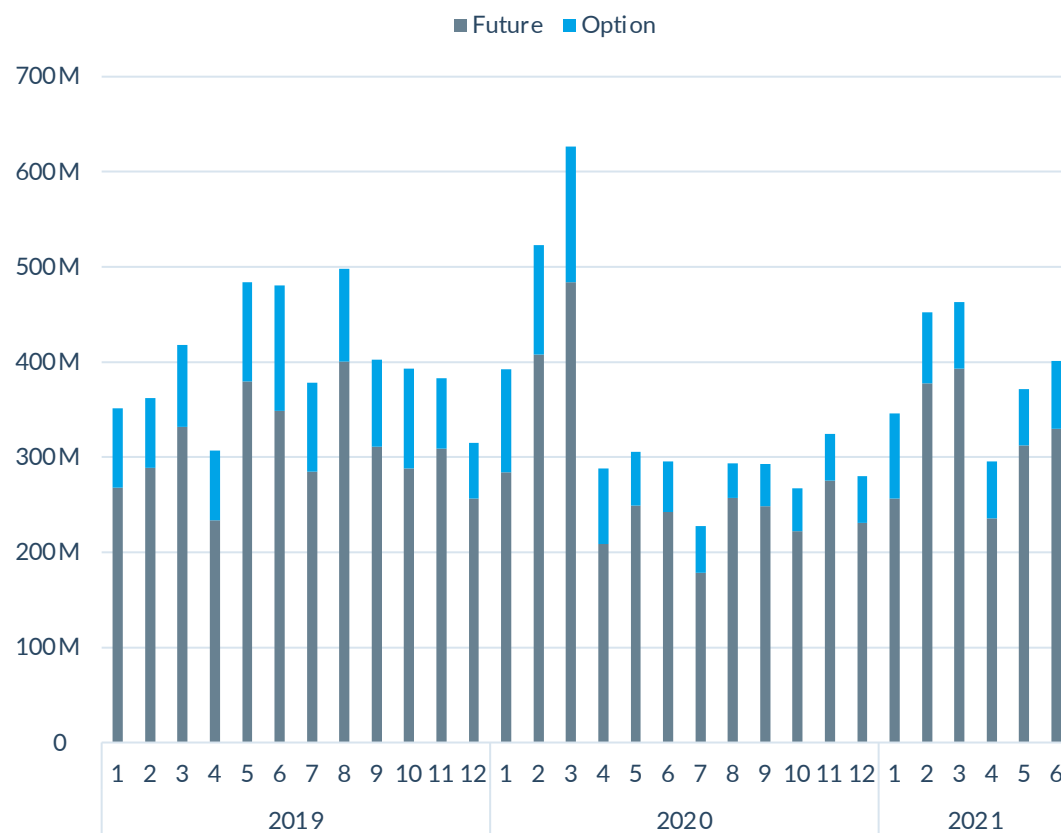


Another Reversal for Interest Rate Volume

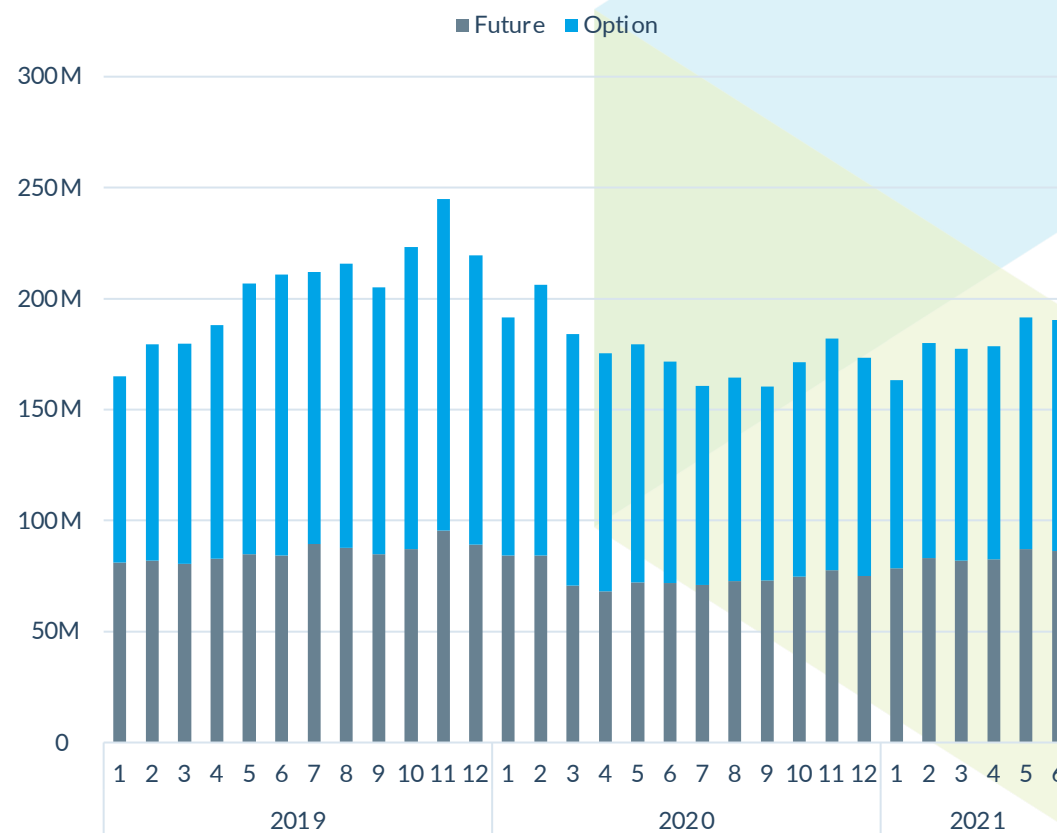


Interest Rate Open Interest Starting to Recover

Monthly Volume in Interest Rate Futures and Options



Month-End Open Interest in Interest Rate Futures and Options



Interest Rate Focus: Top Bond Contracts by Volume

Rank	Contract	Jan-Jun 2021 Volume	% Change	2021 Jun Open Interest	% Change
1	10 Year Treasury Note Futures, CBOT	247,219,033	4.7%	4,288,334	24.6%
2	5 Year Treasury Note Futures, CBOT	144,699,637	-0.1%	3,524,371	-0.9%
3	Euro-Bund Futures, Eurex	107,205,095	14.2%	1,371,755	28.9%
4	10 Year Treasury Note Options, CBOT	85,330,227	9.5%	2,749,780	23.8%
5	Euro-Bobl Futures, Eurex	62,187,887	10.4%	1,191,827	25.4%
6	30 Year Treasury Bond Futures, CBOT	59,402,077	22.8%	1,171,925	15.6%
7	2 Year Treasury Note Futures, CBOT	57,425,019	-33.2%	2,079,475	-1.8%
8	Ultra 10 Year Treasury Note Futures, CBOT	47,145,512	37.7%	1,551,633	59.9%
9	Euro-Schatz Futures, Eurex	43,087,765	-7.8%	1,176,947	-12.9%
10	Long Gilt Futures, ICE Futures Europe	36,060,239	17.1%	698,020	42.9%
11	10 Year Treasury Bond Futures, ASX 24	32,576,947	13.6%	1,220,440	-0.9%
12	Ultra Treasury Bond Futures, CBOT	29,649,556	5.8%	1,188,091	14.1%

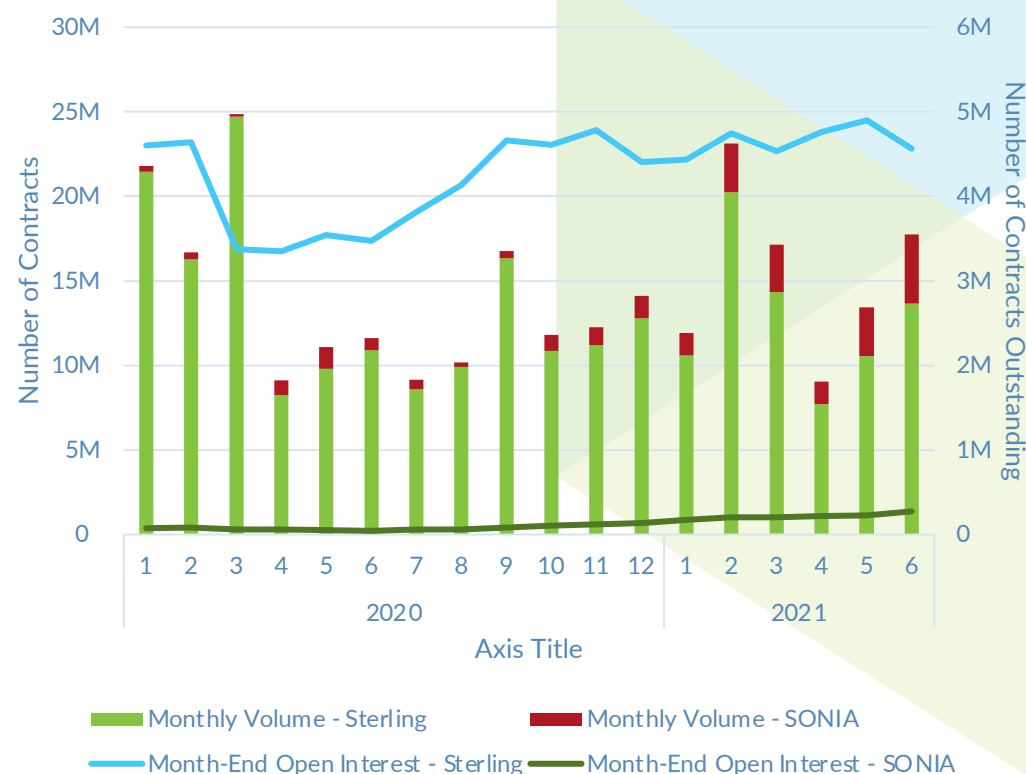
Interest Rate Focus: Top STIRs by Volume

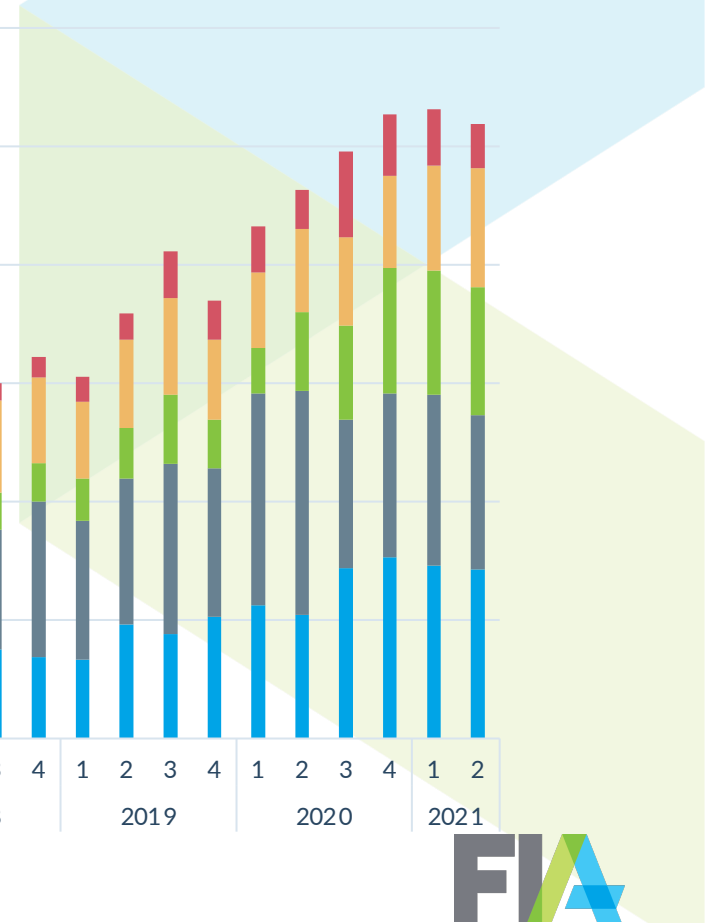
Rank	Contract	Jan-Jun 2021 Volume	% Change	2021 Jun Open Interest	% Change
1	One-Day Interbank Deposit (DI1) Futures, B3	309,631,721	16.3%	30,067,449	24.5%
2	Eurodollar Futures, CME	305,828,162	-8.2%	12,273,127	25.8%
3	Eurodollar Mid-Curve Options, CME	102,073,348	104.1%	19,155,614	119.4%
4	Average One-Day Interbank Deposit Rate Index (IDI) Options, B3	100,538,592	-29.2%	44,450,785	4.9%
5	3 Month Euribor Futures, ICE Futures Europe	93,225,424	-6.5%	4,132,347	24.9%
6	3 Month Sterling Futures, ICE Futures Europe	77,095,402	-15.6%	4,561,066	31.2%
7	Eurodollar Options, CME	26,348,313	-83.5%	16,449,332	-43.8%
8	3 Month Sterling Overnight Index Average Futures, ICE Futures Europe	15,227,637	313.1%	265,048	558.5%
9	3 Month Canadian Bankers Acceptance (BAX) Futures, TMX	13,786,600	-5.7%	1,346,180	49.6%
10	3 Month Sterling Mid Curve Options, ICE Futures Europe	12,148,795	363.7%	4,202,031	491.4%
11	Federal Funds Futures, CBOT	11,449,966	-73.2%	1,089,124	-39.3%
12	3 Month Secured Overnight Financing Rate (SOFR) Futures, CME	11,002,902	335.1%	619,703	309.8%

SONIA First: Transition Still in Early Stages

Contract	Jan-Jun 2021 Vol	YoY % Change	2021 Jun OI	YoY % Change
3 Month Sterling Overnight Index Average Futures, ICE Futures Europe	15,227,637	313.1%	265,048	558.5%
3 Month SONIA Futures, CurveGlobal	1,649,999	1234.0%	29,656	6.9%
Quarterly IMM Sterling Overnight Index Average (SONIA) Futures, CME	679,219	-15.6%	13,459	-30.9%
3 Month SONIA (£1,000,000) Futures, CurveGlobal	658,145	n/a	17,470	n/a
3 Month Sterling Overnight Index Average Options, ICE Futures Europe	159,812	n/a	117,561	n/a
1 Month Sterling Overnight Index Average Futures, ICE Futures Europe	58,317	-65.9%	8,739	191.9%

Volume and OI for the Sterling and SONIA Futures Traded on ICE Futures Europe





Top Energy Contracts by Volume

Rank	Contract	Size	Jan-Jun 2021 Volume	% Change	2021 Jun Open Interest	% Change	Turnover Ratio (Vol/OI)
1	Brent Oil Futures, MOEX	10 Barrels	265,329,196	-45.9%	1,333,634	-29.3%	199
2	Fuel Oil Futures, SHFE	10 Metric Tons	158,406,858	-43.6%	402,554	-50.2%	394
3	WTI Light Sweet Crude Oil (CL) Futures, NYMEX	1,000 Barrels	125,227,794	-28.4%	2,390,245	19.0%	52
4	Brent Crude Oil Futures, ICE Futures Europe	1,000 Barrels	122,969,575	-10.8%	2,422,626	-10.1%	51
5	Thermal Coal (ZC) Futures, ZCE	100 Metric Tons	73,885,384	347.4%	164,791	-28.3%	448
6	Bitumen Futures, SHFE	10 Metric Tons	70,703,929	-32.7%	494,079	-7.3%	143
7	Henry Hub Natural Gas (NG) Futures, NYMEX	10,000 MMBTU	47,477,882	-28.2%	1,413,818	7.4%	34
8	Gas Oil Futures, ICE Futures Europe	100 Metric Tons	39,385,156	-18.2%	1,073,456	23.2%	37
9	Coke Futures, DCE	100 Metric Tons	36,652,725	101.6%	271,110	73.5%	135
10	Hard Coking Coal Futures, DCE	60 Metric Tons	30,162,526	256.7%	285,554	233.7%	106

Soy Contracts on China and US Exchanges

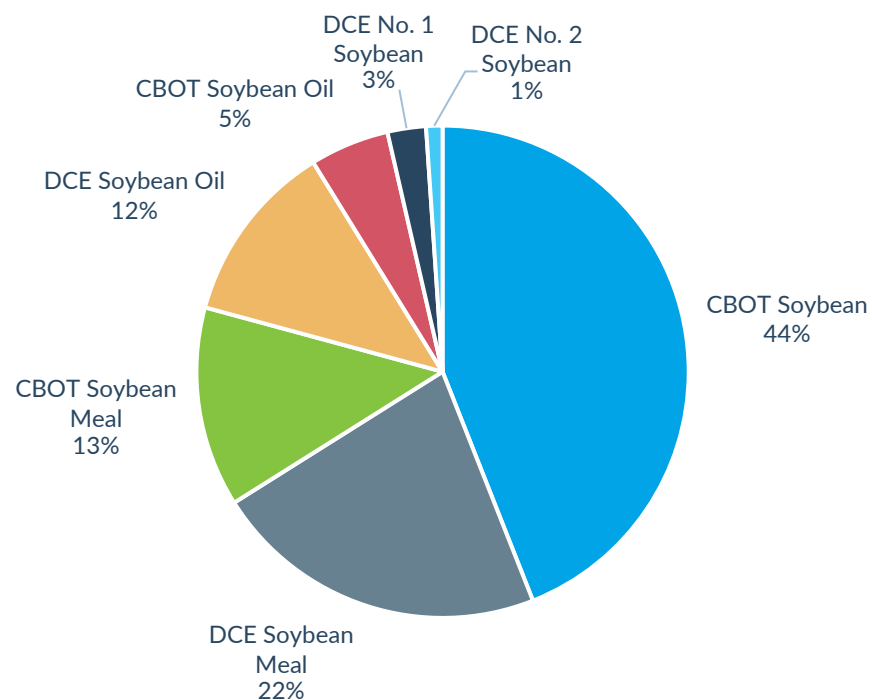
Exchange	Type	Contract	Metric Tons	Jan-Jun 2021 Volume	End Jun 2021 OI	Adjusted Volume	Adjusted OI
Chicago Board of Trade	Future	Soybean Oil	27.2	17,611,442	485,535	479,031,222	13,206,552
Dalian Commodity Exchange	Future	Soybean Oil	10.0	110,240,402	674,712	1,102,404,020	6,747,120
Chicago Board of Trade	Future	Soybean Meal	90.7	13,332,030	385,665	1,209,215,121	34,979,816
Dalian Commodity Exchange	Future	Soybean Meal	10.0	202,929,422	1,995,200	2,029,294,220	19,952,000
Chicago Board of Trade	Future	Soybean	136.0	29,776,823	687,752	4,049,647,928	93,534,272
Dalian Commodity Exchange	Future	No. 1 Soybean	10.0	23,241,433	230,784	232,414,330	2,307,840
Dalian Commodity Exchange	Future	No. 2 Soybean	10.0	9,879,432	54,590	98,794,320	545,900

Note: Adjusted volume and open interest were calculated by multiplying the number of contracts by the number of metric tons represented by each contract.

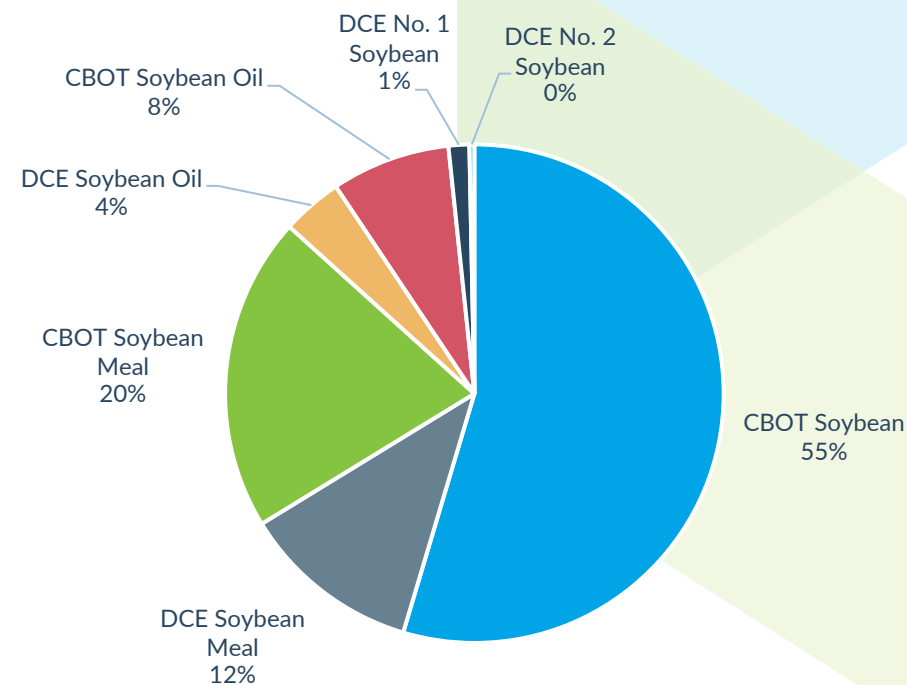
Soy Contracts – Comparing China and the US

China's DCE has developed a large market for futures on soybean meal

Soy Complex Adjusted Volume Jan-Jun 2021



Soy Complex Adjusted Open Interest End June 2021



Note: DCE = Dalian Commodity Exchange, CBOT = Chicago Board of Trade

Canola/Rapeseed and Palm Contracts

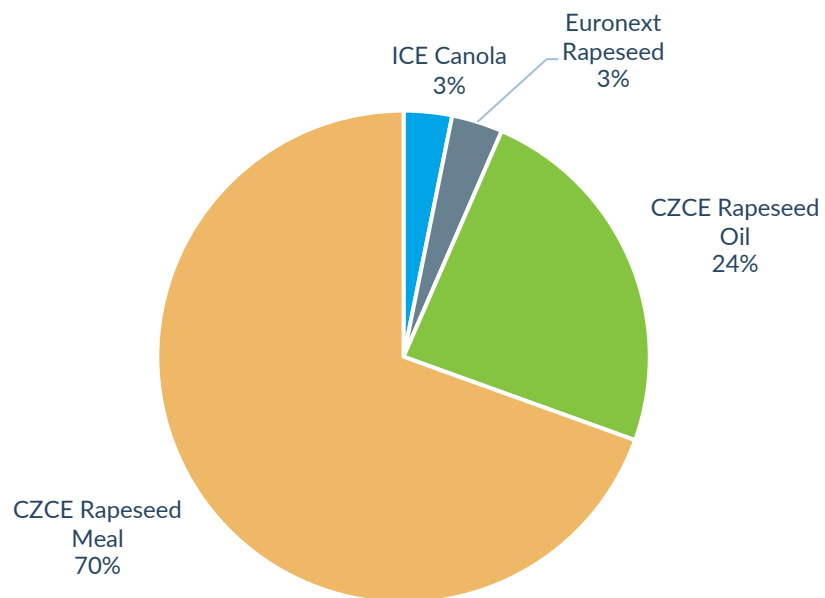
Exchange	Type	Contract	Metric Tons	Jan-Jun 2021 Volume	End June 2021 OI	Adjusted Volume	Adjusted OI
ICE Futures U.S.	Future	Canola	20.0	3,127,129	193,901	62,542,580	3,878,020
Euronext Derivatives Market	Future	Rapeseed	50.0	1,323,232	115,810	66,161,600	5,790,500
Zhengzhou Commodity Exchange	Future	Rapeseed (RS)	10.0	4,527	1	45,270	10
Zhengzhou Commodity Exchange	Future	Rapeseed Oil (OI)	10.0	47,250,284	205,604	472,502,840	2,056,040
Zhengzhou Commodity Exchange	Future	Rapeseed Meal (RM)	10.0	136,955,603	567,262	1,369,556,030	5,672,620
Dalian Commodity Exchange	Future	RBD Palm Olein	10.0	98,394,374	610,614	983,943,740	6,106,140
Asia Pacific Exchange	Future	Crude RBD Palm Olein	10.0	2,348,031	8,855	23,480,310	88,550
Malaysia Derivatives Exchange	Future	Crude Palm Oil (FCPO)	25.0	8,113,465	193,863	202,836,625	4,846,575

Note: Adjusted volume and open interest were calculated by multiplying the number of contracts by the number of metric tons represented by each contract.

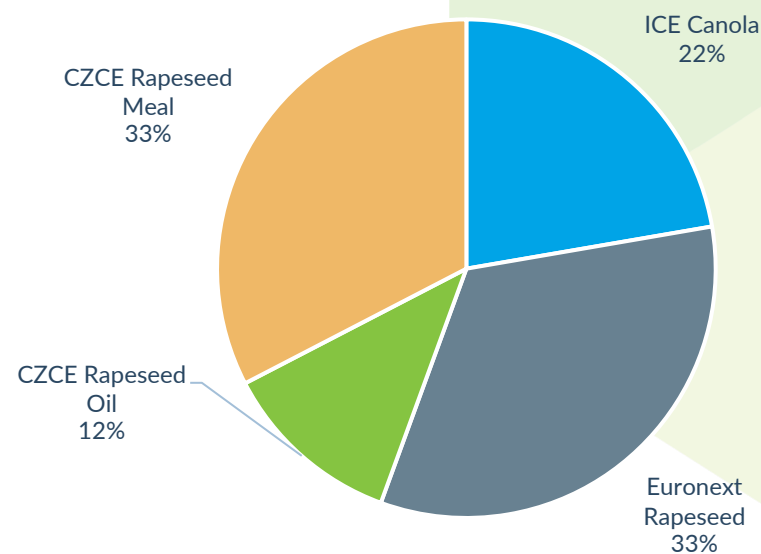
Rapeseed/Canola – Comparing China, EU and US

ICE and Euronext account for less than 10% of volume but more than half of open interest

Rapeseed Complex Adjusted Volume Jan-Jun 2021



Rapeseed Complex Adjusted Open Interest End Jun 2021



Note: CZCE = Zhengzhou Commodity Exchange, ICE = ICE Futures US

Wheat and Corn Contracts

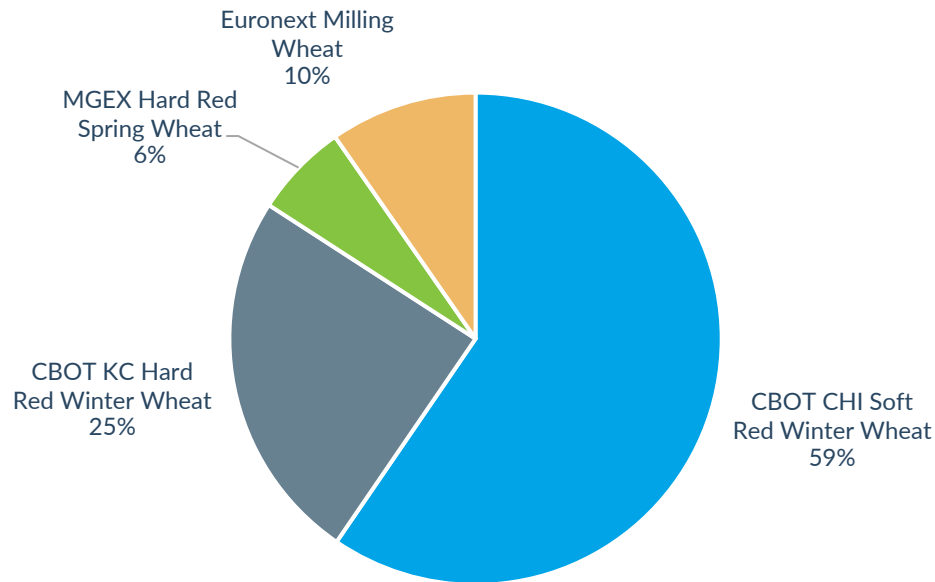
Exchange	Type	Contract	Metric Tons	Jan-Jun 2021 Volume	End June 2021 OI	Adjusted Volume	Adjusted OI
Chicago Board of Trade	Future	Chicago Soft Red Winter Wheat	136.0	16,578,381	347,573	2,254,659,816	47,269,928
Chicago Board of Trade	Future	KC Hard Red Winter Wheat	136.0	6,845,189	183,730	930,945,704	24,987,280
Minneapolis Grain Exchange	Future	Hard Red Spring Wheat	136.0	1,722,290	75,873	234,231,440	10,318,728
Euronext Derivatives Market	Future	Milling Wheat	50.0	7,325,649	480,290	366,282,450	24,014,500
Chicago Board of Trade	Future	Corn	127.0	51,543,283	1,495,750	6,545,996,941	189,960,250
Dalian Commodity Exchange	Future	Corn	10.0	95,669,165	1,052,995	956,691,650	10,529,950

Note: Adjusted volume and open interest were calculated by multiplying the number of contracts by the number of metric tons represented by each contract.

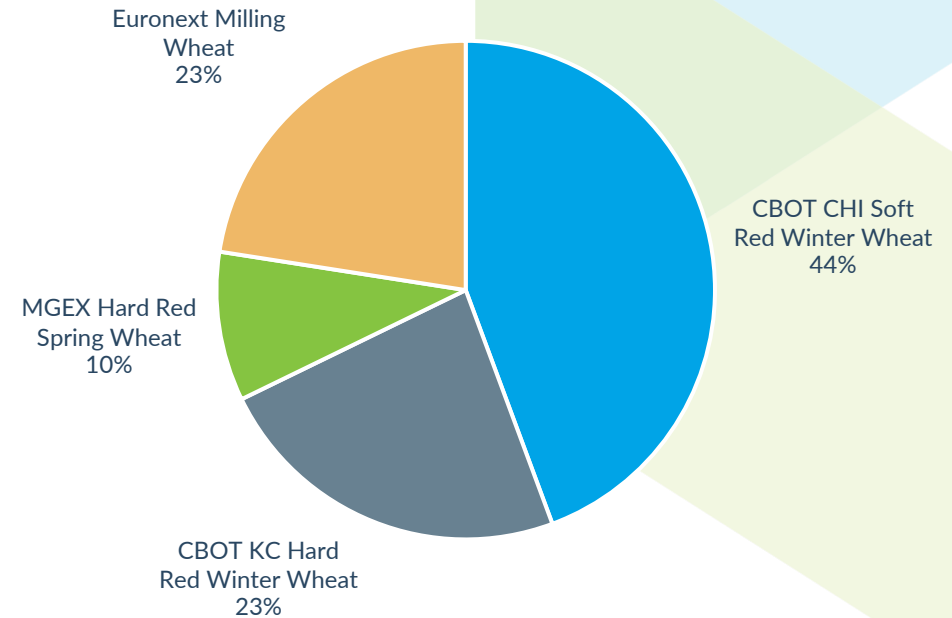
Wheat – Comparing EU and US Markets

The Paris wheat contract is the most heavily traded agricultural futures in Europe

Volume in Metric Ton Equivalents



Open Interest in Metric Ton Equivalents





Questions?

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FIA Data Resources

<https://www.fia.org/data-resources>

Monthly Exchange Volume and Open Interest Reports

<https://www.fia.org/exchange-volume-reports>

(FIA member login required)



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Enhancing the clearing ecosystem: Physical deliveries



Regulatory developments in the Asia-Pacific region

FIA

The image features the letters 'FIA' in a bold, sans-serif font. The 'F' is dark grey. The 'I' is dark grey with a green triangle on its right side. The 'A' is composed of two overlapping triangles: a light blue one in front and a darker blue one behind. The background is a white canvas with large, overlapping geometric shapes in light green, light blue, and yellow-green.