



2021 Annual ETD Volume Review

—
26 January 2022

Presenters



Will Acworth

MODERATOR

*Senior Vice President,
Publications, Data, and
Research, FIA*



Mike Du Plessis

*Senior Managing Director,
Agency Execution,
TP ICAP Group*



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Agenda for Today's Presentation

Overview:

- Volume and open interest by region
- Volume and open interest by category
- 10-year lookback

Equities: Index volume by region

- US – rise of retail
- EU – exchange competition
- APAC – focus on futures
- ESG futures – the new kid on the block

Rates: Quarterly and monthly overview

- STIRS - Eurodollar and SOFR
- Bonds – US and EU

Commodities: Quarterly and monthly trends

- Focus on China

New Themes: Crypto and carbon

Q&A

Overview – Volume and Open Interest by Region

Contract Type	2021 Volume	2020 Volume	YoY % Change	Year-End 2021 OI	Year-End 2020 OI	YoY % Change
Options	33,309,394,225	21,265,962,084	56.6%	810,522,968	798,791,004	1.5%
Futures	29,275,289,895	25,549,388,053	14.6%	265,234,141	249,235,907	6.4%
Total	62,584,684,120	46,815,350,137	33.7%	1,075,757,109	1,048,026,911	2.6%

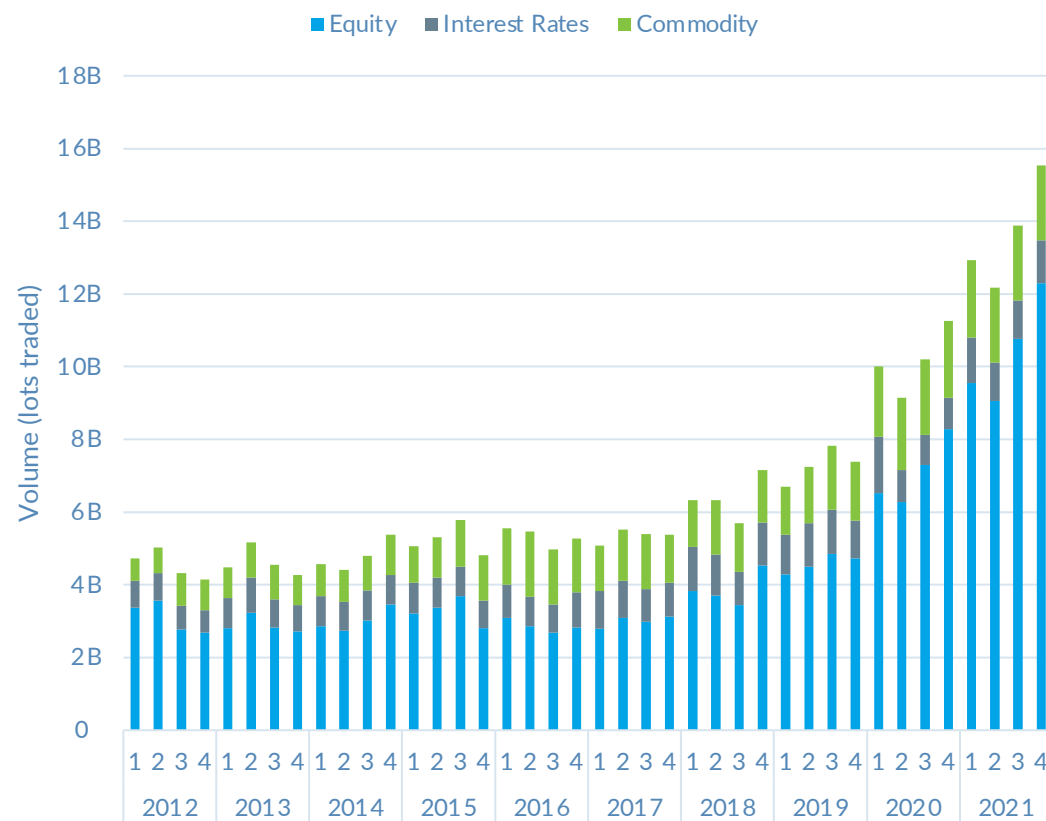
Region	2021 Volume	2020 Volume	YoY % Change	Year-End 2021 OI	Year-End 2020 OI	YoY % Change
Asia-Pacific	30,549,801,646	20,147,190,374	51.6%	91,996,948	86,238,547	6.7%
North America	15,381,696,837	12,852,019,653	19.7%	594,696,496	518,929,834	14.6%
Latin America	8,893,935,540	6,467,912,726	37.5%	145,298,675	202,929,076	-28.4%
Europe	5,451,896,778	5,608,640,531	-2.8%	218,549,905	212,363,863	2.9%
Other	2,307,353,319	1,739,586,853	32.6%	25,215,085	27,565,591	-8.5%
Total	62,584,684,120	46,815,350,137	33.7%	1,075,757,109	1,048,026,911	2.6%

Overview – Volume and Open Interest by Category

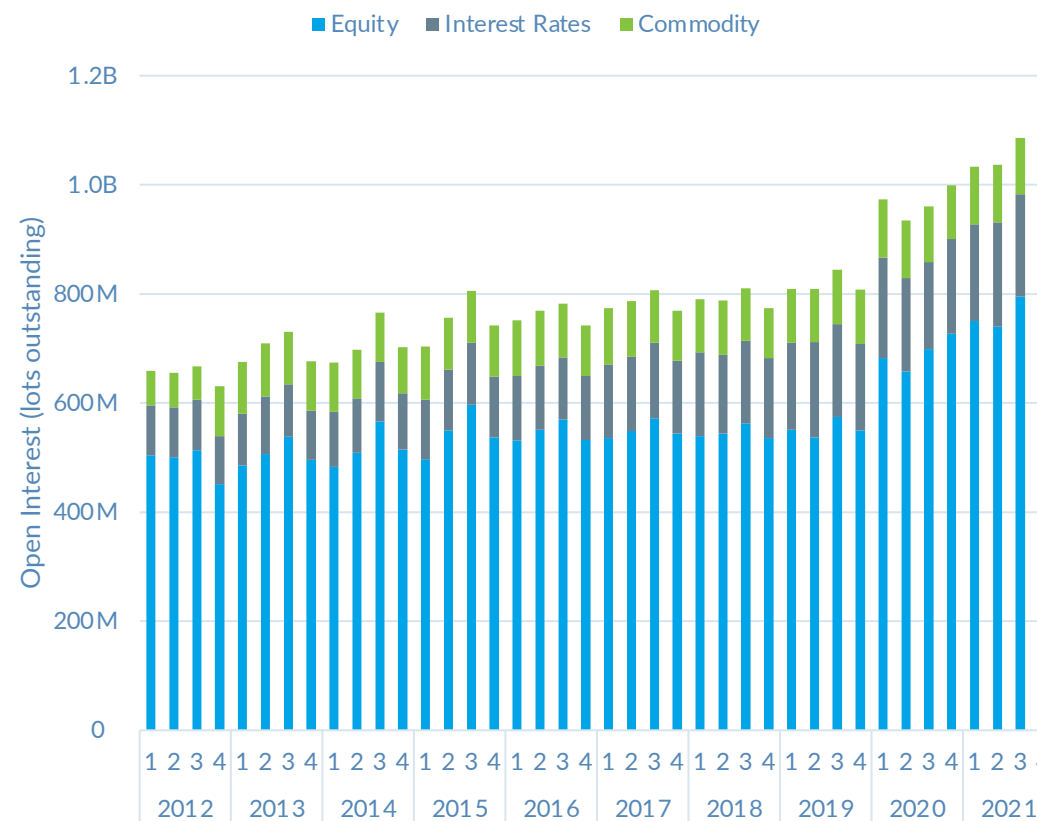
Region	2021 Volume	2020 Volume	YoY % Change	Year-End 2021 OI	Year-End 2020 OI	YoY % Change
Equity	41,643,207,304	28,379,423,779	46.7%	749,095,409	726,627,637	3.1%
Currencies	5,542,070,172	4,512,602,976	22.8%	35,616,555	32,726,530	8.8%
Interest Rates	4,577,345,777	4,115,441,972	11.2%	172,810,694	173,541,011	-0.4%
Agriculture	2,820,109,552	2,570,657,307	9.7%	23,622,214	22,988,649	2.8%
Metals	2,765,534,503	2,398,531,605	15.3%	15,227,172	14,268,665	6.7%
Energy	2,710,751,767	3,151,107,672	-14.0%	61,400,612	61,463,956	-0.1%
Other	2,525,665,045	1,687,584,826	49.7%	17,984,453	16,410,463	9.6%
Total	62,584,684,120	46,815,350,137	33.7%	1,075,757,109	1,048,026,911	2.6%

10-Year Lookback

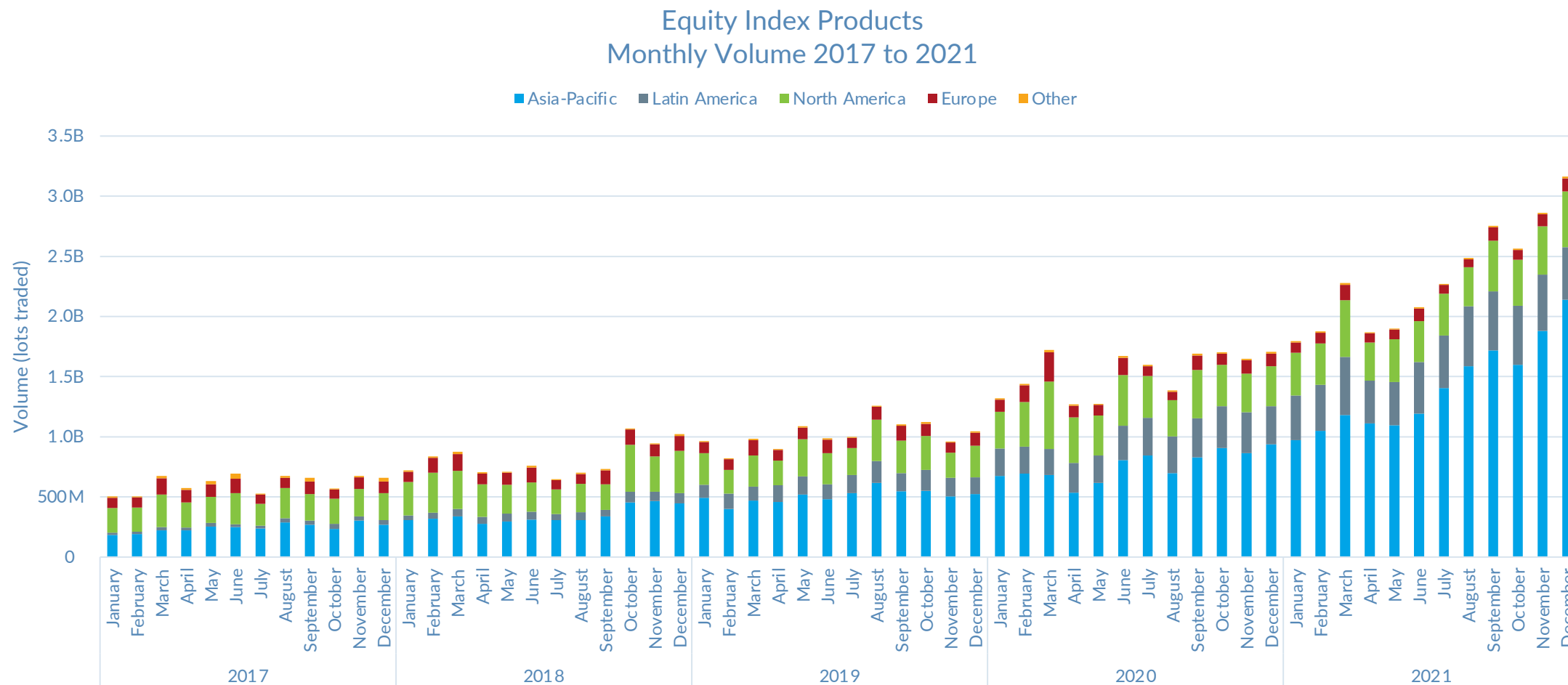
Quarterly Futures and Options Volume
2012 to 2021



Quarter-End Open Interest
2012 to 2021



Equity Index Derivatives: Volume by Region



Top Equity Index Futures and Options by Volume

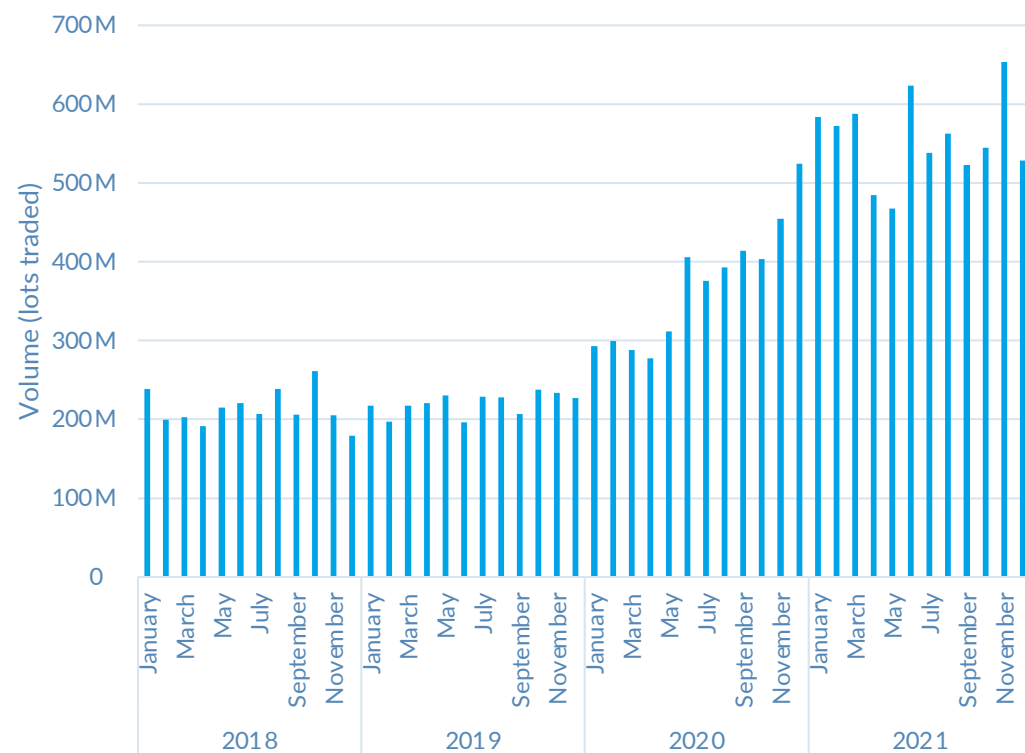
Rank	Contract	Jan-Dec 2021 Vol	Vol % Change	2021 December OI	OI % Change
1	Bank Nifty Index Options, National Stock Exchange of India	8,536,738,069	98.8%	1,451,958	8.4%
2	CNX Nifty Index Options, National Stock Exchange of India	5,497,680,235	131.7%	2,871,404	16.1%
3	Mini Ibovespa Index (WIN) Futures, B3	4,622,466,696	58.3%	689,794	67.3%
4	SPDR S&P 500 ETF Options *	1,146,563,856	1.6%	16,578,125	-11.0%
5	S&P Sensex Index (BSX) Options, BSE	614,527,737	1686.7%	470	n/a
6	Kospi 200 Options, Korea Exchange	535,325,603	-12.3%	2,047,408	-2.3%
7	E-mini S&P 500 Futures, Chicago Mercantile Exchange	403,640,014	-19.6%	2,300,981	-9.3%
8	Powershares QQQ ETF Options *	349,161,303	39.2%	8,207,688	-0.1%
9	S&P 500 Index (SPX) Options, Cboe Options Exchange	344,700,599	10.1%	14,638,009	16.6%
10	Micro E-mini Nasdaq 100 Index Futures, Chicago Mercantile Exchange	239,115,577	33.9%	57,375	13.0%
11	Euro Stoxx 50 Index Options, Eurex	227,211,474	-23.0%	29,206,474	-4.1%
12	Nikkei 225 Mini Futures, Osaka Exchange	224,009,276	-30.4%	331,413	-9.4%
13	Euro Stoxx 50 Index Futures, Eurex	223,870,918	-36.4%	2,677,946	-8.2%
14	Micro E-mini S&P 500 Index Futures, Chicago Mercantile Exchange	218,602,634	-3.6%	95,952	50.8%
15	Taiaex (TXO) Options, Taiwan Futures Exchange	197,333,257	-2.2%	364,907	-9.7%
16	Kospi 200 Weekly Options, Korea Exchange	187,965,562	56.6%	46,259	225.1%
17	iShares Russell 2000 ETF Options *	173,036,065	18.1%	6,704,009	-5.8%
18	India 50 Index Options, India International Exchange	166,689,177	145.1%	565	743.3%
19	RTS Index Futures, Moscow Exchange	151,785,767	-2.7%	548,572	39.8%
20	E-mini Nasdaq 100 Futures, Chicago Mercantile Exchange	140,406,331	-4.3%	208,988	-5.4%

Top Equity Index Futures and Options by OI

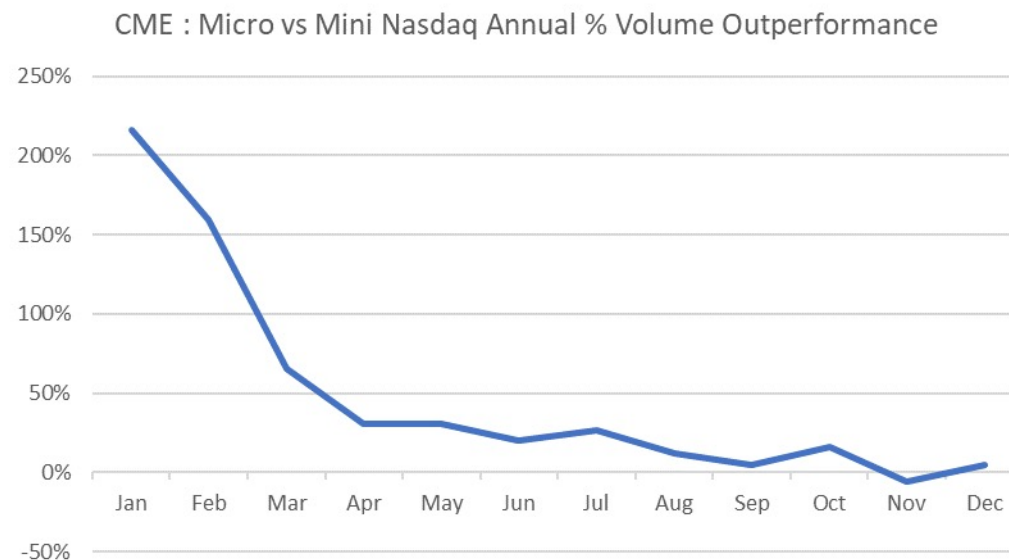
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2	SPDR S&P 500 ETF Options *	1,146,563,856	1.6%	16,578,125	-11.0%
3	S&P 500 Index (SPX) Options, Cboe Options Exchange	344,700,599	10.1%	14,638,009	16.6%
4	Euro Stoxx Banks Options, Eurex	56,297,053	-5.1%	9,051,116	-8.6%
5	Powershares QQQ ETF Options *	349,161,303	39.2%	8,207,688	-0.1%
6	iShares Russell 2000 ETF Options *	173,036,065	18.1%	6,704,009	-5.8%
7	iShares MSCI Emerging Markets ETF Options *	58,892,445	-18.2%	6,190,468	-15.0%
8	Financial Select Sector SPDR ETF Options *	61,953,540	3.8%	4,232,243	-8.0%
9	CNX Nifty Index Options, National Stock Exchange of India	5,497,680,235	131.7%	2,871,404	16.1%
10	Euro Stoxx 50 Index Futures, Eurex	223,870,918	-36.4%	2,677,946	-8.2%
11	VanEck Vectors Gold Miners ETF Options *	32,723,783	-21.7%	2,608,022	-7.3%
12	SPDR Energy Select Sector ETF Options *	48,701,833	90.5%	2,435,578	-9.1%
13	iShares MSCI Brazil ETF Options *	44,922,825	27.4%	2,401,981	1.5%
14	E-mini S&P 500 Futures, Chicago Mercantile Exchange	403,640,014	-19.6%	2,300,981	-9.3%
15	Kospi 200 Options, Korea Exchange	535,325,603	-12.3%	2,047,408	-2.3%
16	E-mini S&P 500 Options, Chicago Mercantile Exchange	83,666,476	-1.3%	1,553,218	42.1%
17	Euro Stoxx Banks Futures, Eurex	67,050,486	-27.5%	1,525,499	-6.6%
18	Bank Nifty Index Options, National Stock Exchange of India	8,536,738,069	98.8%	1,451,958	8.4%
19	MSCI Emerging Markets Futures, ICE Futures U.S.	37,935,284	-17.6%	1,086,156	-10.9%
20	FTSE China A50 Index Futures, Singapore Exchange	97,564,749	1.0%	785,694	9.3%

US Equity Derivatives – Rise of Retail

Monthly volume of single stock options hits record 653.7 million contracts in November 2021



Growth of trading in micro equity index futures faded as 2021 progressed



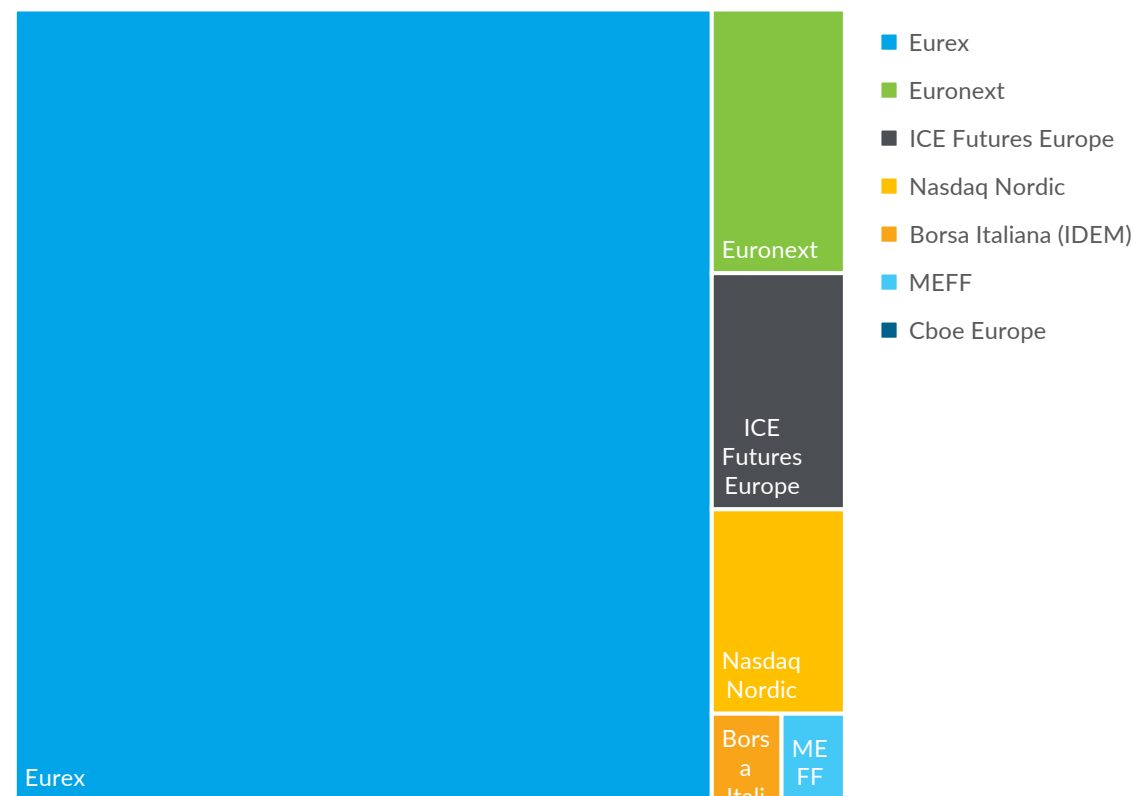
Source: Bloomberg, TP ICAP

European Equity Index Derivatives: More Competition *

Volume and Open Interest by Exchange

Exchange	Jan-Dec 2021 Vol	End-Dec 2021 OI
Eurex	761,902,866	50,529,427
Euronext	48,725,167	879,068
ICE Futures Europe	43,497,773	2,446,607
Nasdaq Nordic	37,634,691	770,667
Borsa Italiana (IDEM)	8,500,975	253,015
MEFF	7,676,373	468,525
Cboe Europe	1,324	241

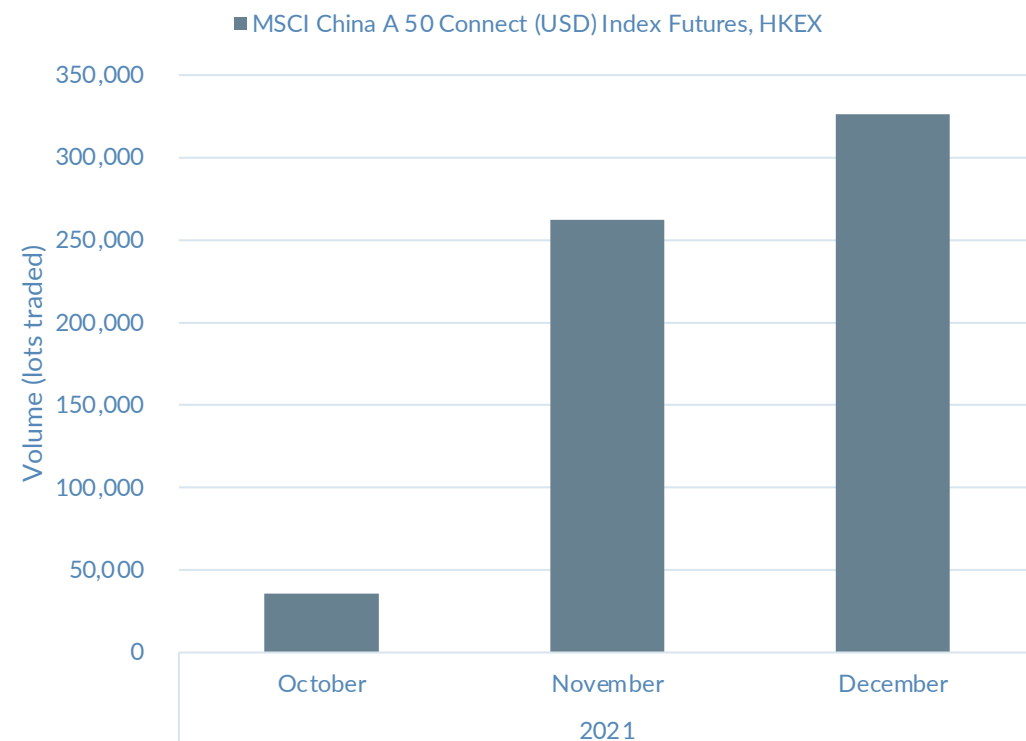
Share of Trading Volume



APAC Equity Derivatives – Focus on Futures

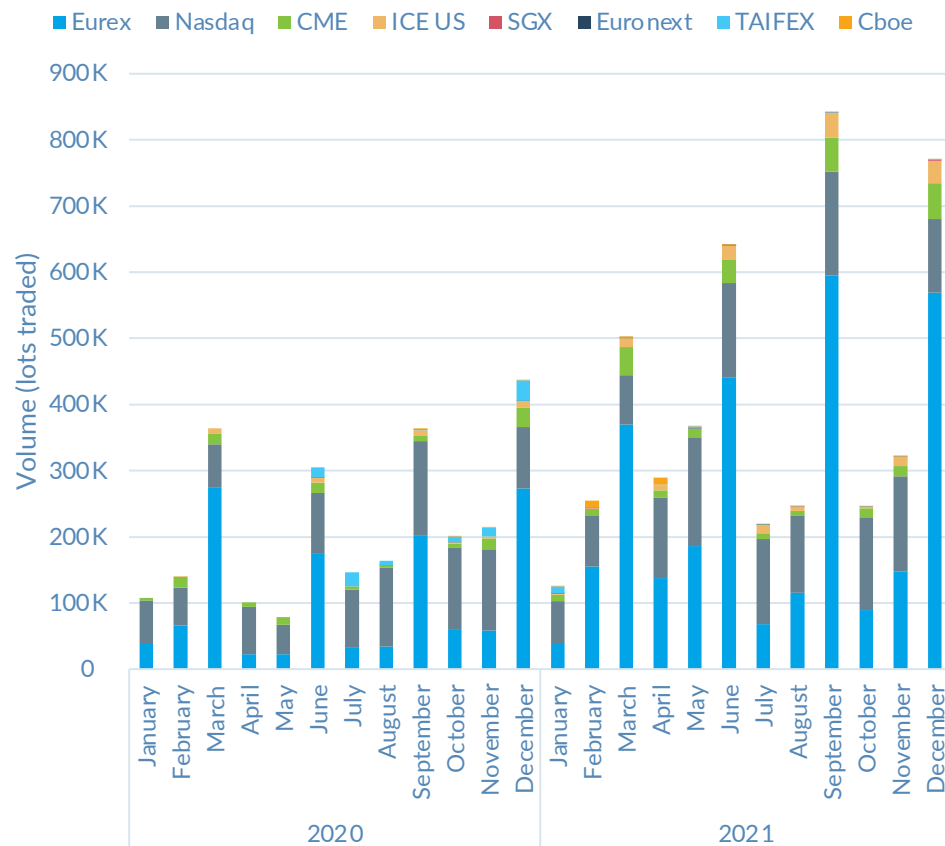
Contract	2021 Vol	YoY Chg	2021 Dec OI	YoY Chg
Nikkei 225 Mini Futures, Osaka Exchange	224,009,276	-30.4%	331,413	-9.4%
FTSE China A50 Index Futures, SGX	97,564,749	1.0%	785,694	9.3%
Mini Taiex (MTX) Futures, Taifex	71,789,417	19.5%	56,745	6.7%
Kospi 200 Futures, KRX	68,781,869	-24.0%	271,348	-1.1%
SET50 Futures, Thailand Futures Exchange	47,620,961	-17.1%	365,177	19.0%
Bank Nifty Index Futures, NSE India	46,019,655	-39.6%	98,482	31.7%
CNX Nifty Index Futures, NSE India	43,579,373	-20.4%	223,347	0.1%
Taifex (TX) Futures, Taifex	43,081,239	-7.0%	90,805	-19.6%
Hang Seng Index Futures, HKEX	34,368,377	-17.5%	119,777	-7.7%
Mini Kospi 200 Futures, KRX	34,356,952	-12.7%	74,803	-50.1%
H-Shares Index Futures, HKEX	31,656,879	-12.7%	355,489	22.4%
CSI 300 Index Futures, CFFEX	29,680,502	-1.1%	193,556	-4.8%
DJIA Margin (¥10) Futures, TFX (Japan)	28,078,153	1468.8%	150,407	185.4%
CNX Nifty Index Futures, SGX	24,979,606	-2.6%	213,275	5.8%
Mini Hang Seng Index Futures, HKEX	24,653,591	-11.6%	16,345	-5.9%

China Exposure: HKEX launches MSCI China A50 Connect futures



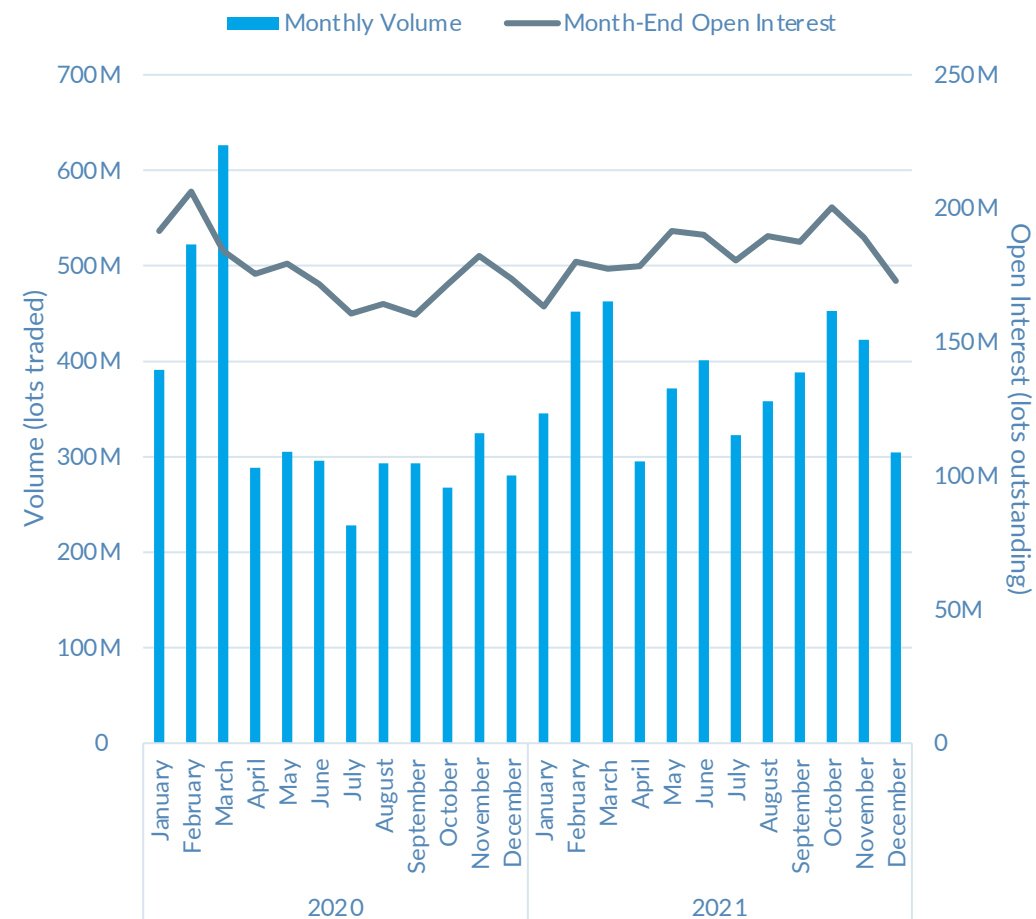
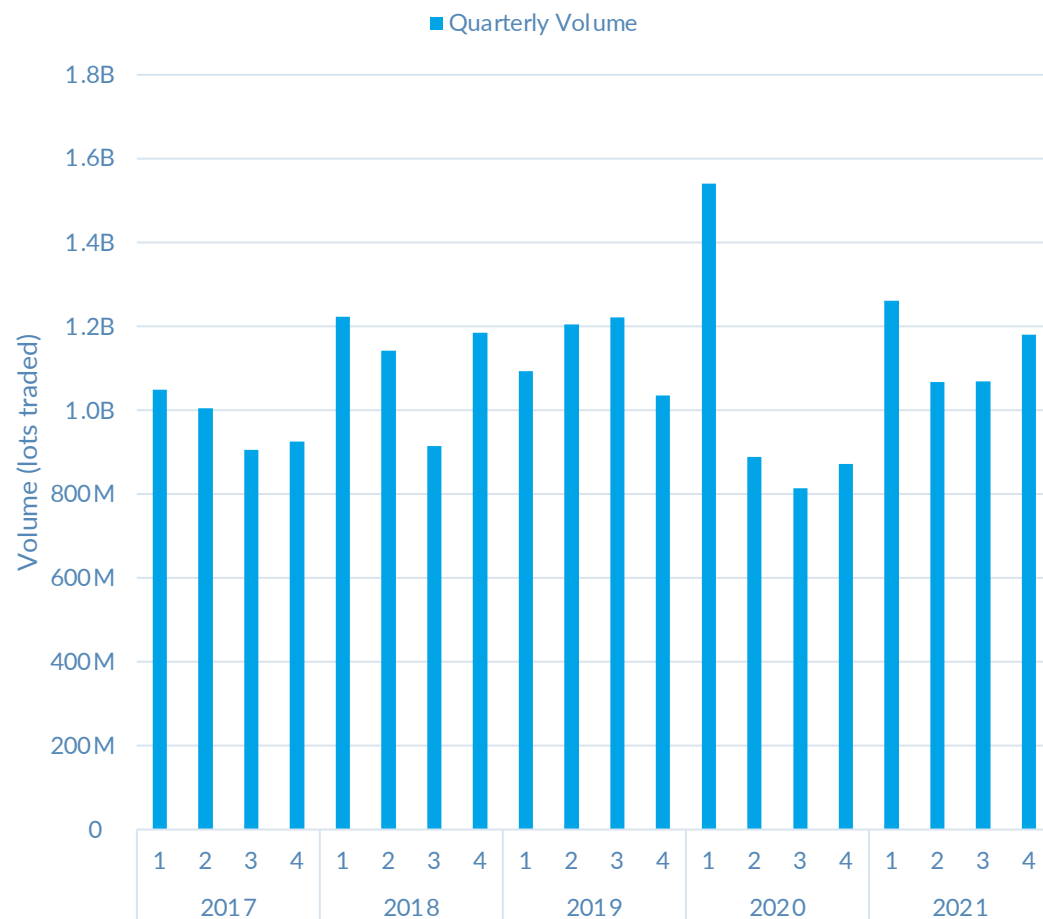
ESG Futures and Options

Monthly Volume at Leading Exchanges



	Contract	Volume	Open Interest
1	Stoxx Europe 600 ESG-X Index Futures, Eurex	2,042,598	128,578
2	OMXS30 ESG Responsible Index Futures, Nasdaq	1,432,620	32,686
3	Stoxx Europe 600 ESG-X Index Options, Eurex	384,250	66,707
4	E-mini S&P 500 ESG Index Futures, CME	264,928	12,410
5	Euro Stoxx 50 ESG Index Futures, Eurex	202,248	10,984
6	MSCI EM ESG Screened Futures, Eurex	126,243	19,922
7	MSCI World ESG Leaders NTR Index Futures, ICE Futures U.S.	79,736	8,029
8	MSCI Emerging Markets ESG Leaders NTR Index Futures, ICE Futures U.S.	73,469	4,876
9	MSCI USA ESG Screened Index Futures, Eurex	44,194	8,639
10	Euro Stoxx 50 ESG Index Options, Eurex	37,312	7,045

Rates: Quarterly and Monthly overview

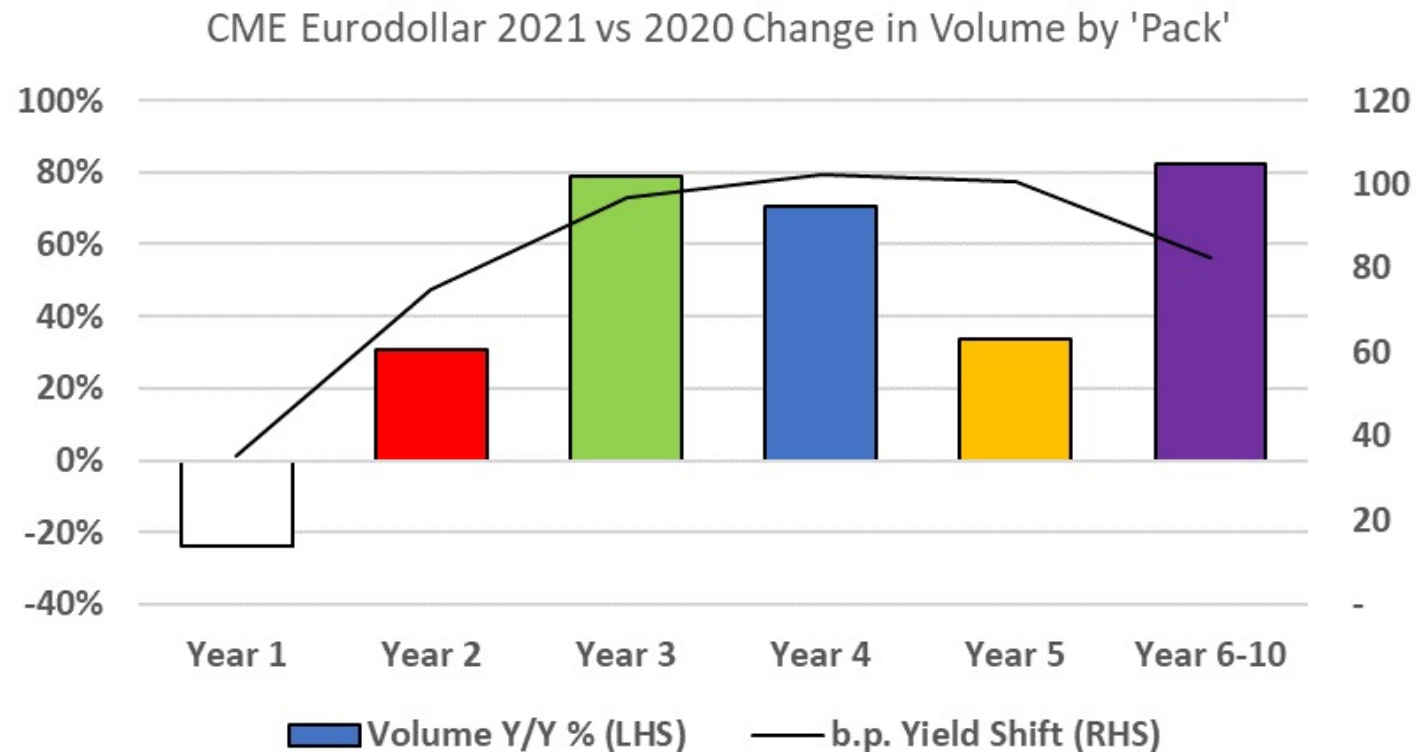


Top Rates Contracts

Rank	Contract	Jan-Dec 2021 Vol	Vol % Change	2021 December OI	OI % Change
1	One-Day Interbank Deposit (DI1) Futures, B3	654,265,238	26.9%	28,014,813	2.4%
2	Eurodollar Futures, Chicago Mercantile Exchange	610,431,078	19.7%	11,253,242	23.0%
3	10 Year Treasury Note Futures, Chicago Board of Trade	469,746,624	15.7%	3,893,704	20.6%
4	5 Year Treasury Note Futures, Chicago Board of Trade	281,860,840	15.1%	3,762,255	14.3%
5	Eurodollar Mid-Curve Options, Chicago Mercantile Exchange	202,913,484	145.3%	10,900,377	69.6%
6	Euro-Bund Futures, Eurex	202,679,077	16.2%	1,243,915	11.5%
7	3 Month Euribor Futures, ICE Futures Europe	186,747,304	7.1%	4,014,580	28.8%
8	10 Year Treasury Note Options, Chicago Board of Trade	159,684,869	25.6%	2,103,306	-2.5%
9	Average One-Day Interbank Deposit Rate Index (IDI) Options, B3	142,423,687	-39.8%	43,590,071	-21.1%
10	3 Month Sterling Futures, ICE Futures Europe ¹	134,249,188	-16.6%	0	-100.0%
11	Euro-Bobl Futures, Eurex	124,722,358	17.0%	1,364,835	42.2%
12	2 Year Treasury Note Futures, Chicago Board of Trade	115,497,784	-10.4%	1,960,430	2.0%
13	30 Year Treasury Bond Futures, Chicago Board of Trade	113,446,877	18.6%	1,199,037	3.2%
14	Ultra 10 Year Treasury Note Futures, Chicago Board of Trade	93,791,008	45.2%	1,368,765	36.3%
15	Euro-Schatz Futures, Eurex	85,564,863	-9.6%	1,254,972	2.3%
16	Long Gilt Futures, ICE Futures Europe	73,796,205	20.8%	781,592	67.2%
17	Eurodollar Options, Chicago Mercantile Exchange	64,034,656	-65.4%	18,616,814	10.5%
18	Iboxx High Yield Corporate Bond ETF Options *	62,365,461	-5.8%	5,531,607	19.1%
19	10 Year Treasury Bond Futures, ASX 24	60,125,766	-2.2%	1,098,383	-21.6%
20	Ultra Treasury Bond Futures, Chicago Board of Trade	57,759,797	10.2%	1,244,576	19.2%

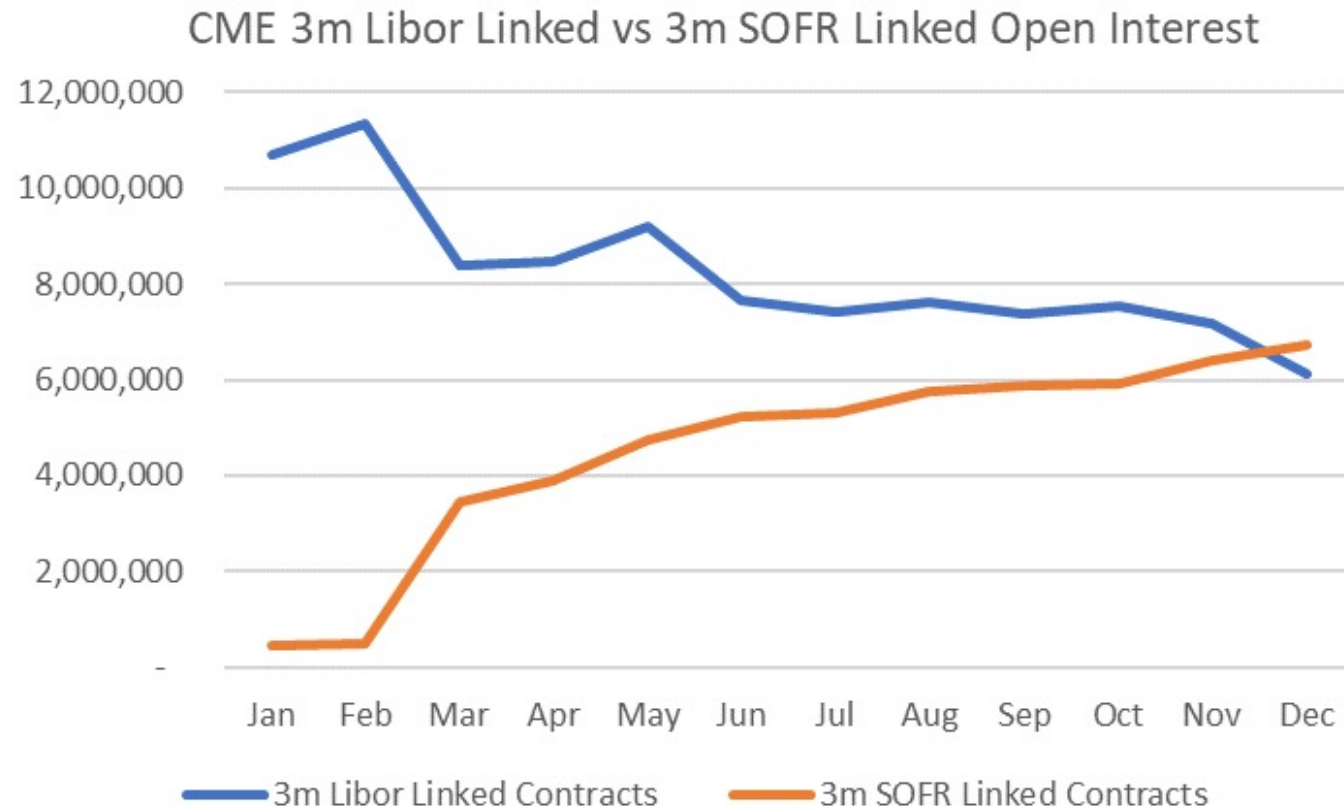
* Traded on multiple U.S. options exchanges. 1 Sterling Libor-based contracts were deactivated in December 2021

CME Eurodollars : Activity shifted along the curve as inflation data gathered pace



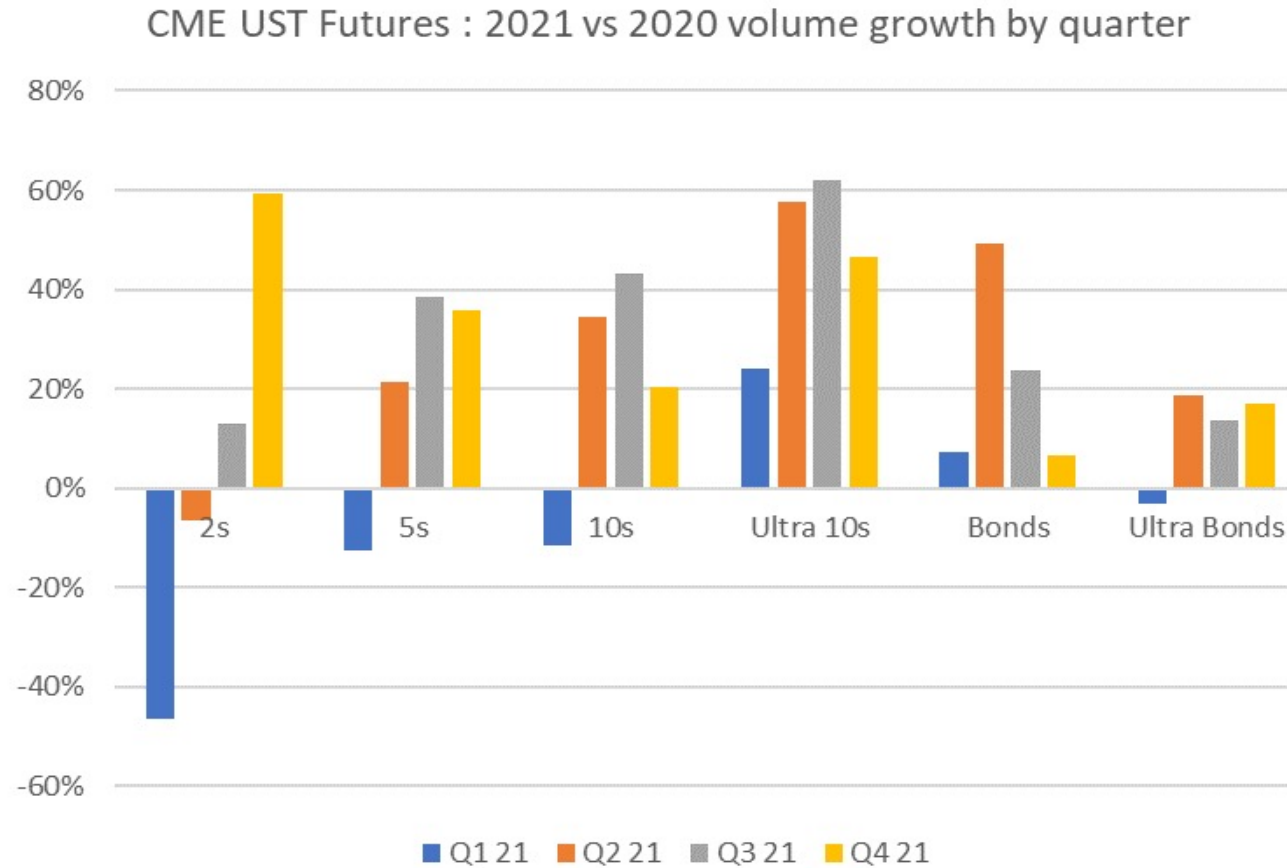
Source: Bloomberg, TP ICAP

CME 3m SOFR-linked open interest eclipsed 3m Libor-linked open interest by year end



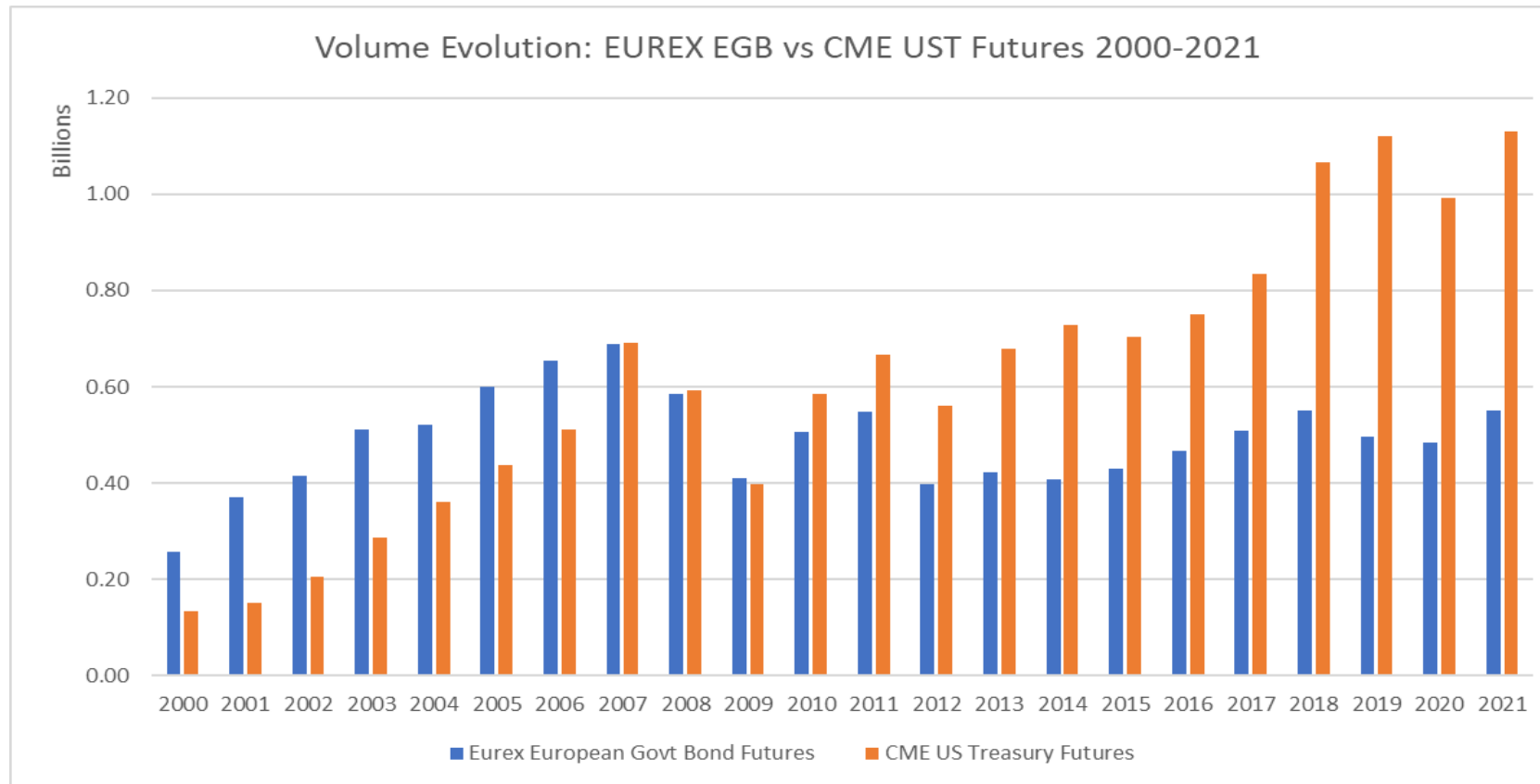
Source: Bloomberg, TP ICAP

CME Treasury futures – Significant base effects in 2021



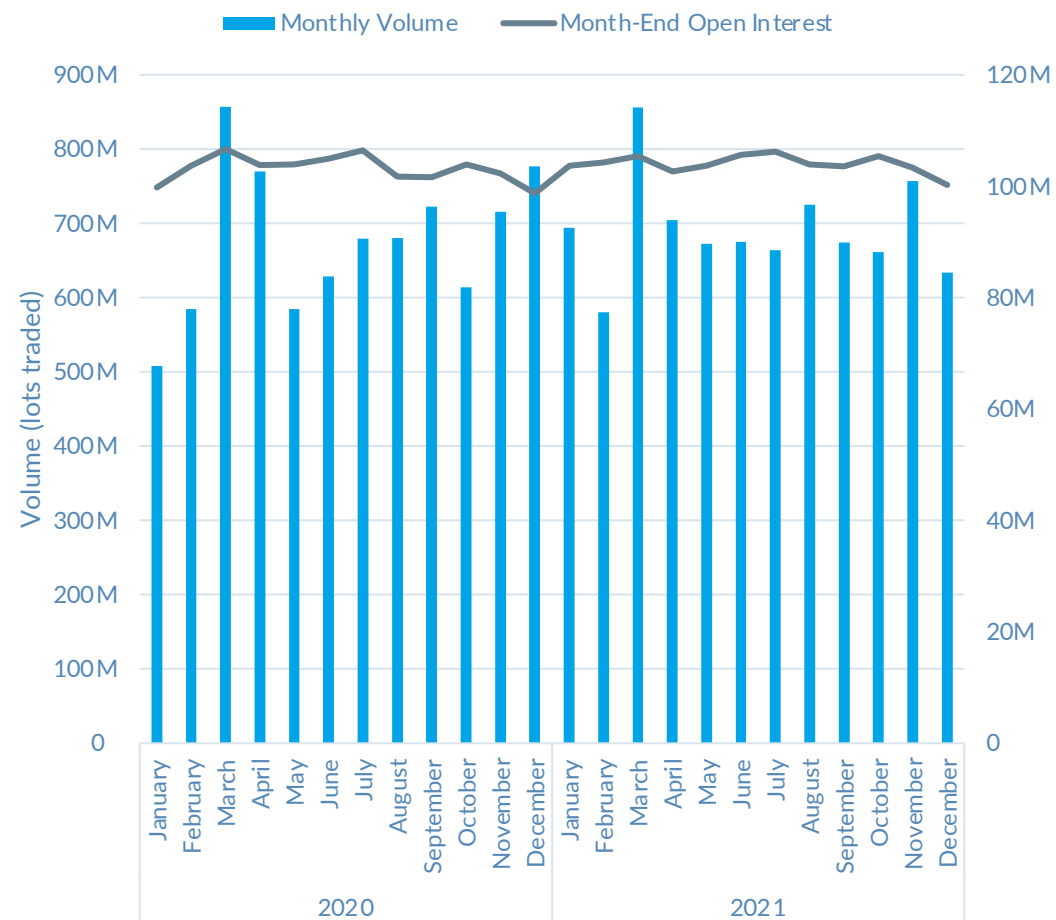
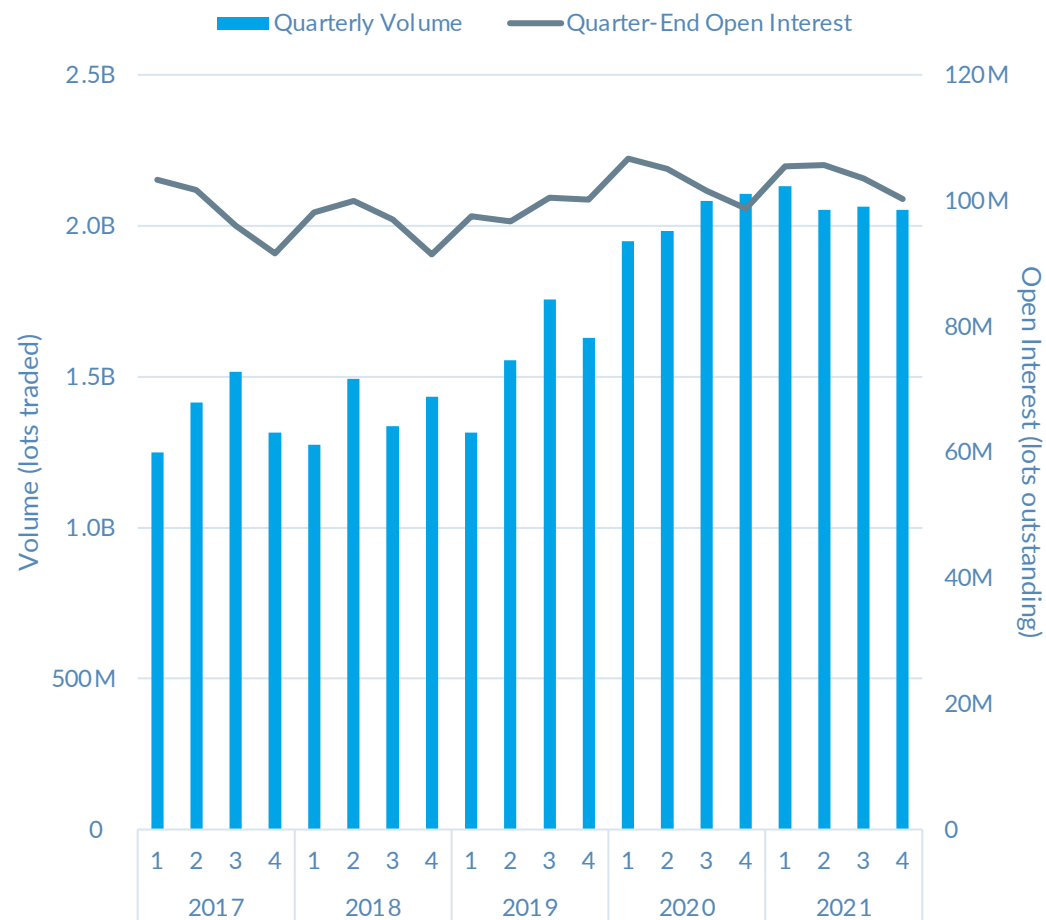
Source: Bloomberg, TP ICAP

A 13.6% pick up in the trading of Eurex bond futures – but too early to celebrate



Source: Bloomberg, TP ICAP

Commodities: Quarterly and Monthly Trends



Top Energy Futures and Options

Rank	Contract	Jan-Dec 2021 Vol	Vol % Change	2021 December OI	OI % Change
1	Brent Oil Futures, Moscow Exchange	579,590,791	-22.0%	929,796	-12.4%
2	Fuel Oil Futures, Shanghai Futures Exchange	276,993,809	-42.0%	493,517	11.8%
3	WTI Light Sweet Crude Oil (CL) Futures, New York Mercantile Exchange	248,314,481	-9.4%	1,866,914	-13.4%
4	Brent Crude Oil Futures, ICE Futures Europe	243,666,353	5.1%	2,113,433	-13.9%
5	Bitumen Futures, Shanghai Futures Exchange	140,463,222	-31.4%	678,755	2.6%
6	Henry Hub Natural Gas (NG) Futures, New York Mercantile Exchange	97,588,795	-19.2%	1,108,463	-5.2%
7	Thermal Coal (ZC) Futures, Zhengzhou Commodity Exchange	84,236,073	37.7%	33,534	-85.4%
8	Gas Oil Futures, ICE Futures Europe	82,713,016	-2.1%	634,545	-30.7%
9	Coke Futures, Dalian Commodity Exchange	59,132,978	2.9%	32,480	-84.6%
10	Hard Coking Coal Futures, Dalian Commodity Exchange	58,305,922	120.6%	48,363	-62.5%
11	WTI Light Sweet Crude Oil Futures, ICE Futures Europe	51,721,597	3.2%	428,582	-9.1%
12	RBOB Gasoline Physical (RB) Futures, New York Mercantile Exchange	47,837,998	2.9%	294,317	-29.0%
13	Medium Sour Crude Oil Futures, Shanghai International Energy Exchange	42,645,180	2.5%	67,512	-20.3%
14	Dutch TTF Gas Futures, ICE Endex	41,607,968	52.3%	1,713,918	-1.4%
15	Natural Gas Futures, Multi Commodity Exchange of India	40,032,148	-13.2%	13,482	57.3%
16	NY Harbor ULSD (HO) Futures, New York Mercantile Exchange	38,711,497	-12.0%	303,334	-16.4%
17	Heating Oil Futures, ICE Futures Europe	37,304,745	3.6%	31,617	2.0%
18	Liquefied Petroleum Gas Futures, Dalian Commodity Exchange	35,060,253	-27.3%	148,961	128.4%
19	Crude Oil (LO) Options, New York Mercantile Exchange	30,006,061	1.5%	1,977,544	39.3%
20	Brent Crude Oil Options, ICE Futures Europe	29,017,774	12.2%	2,211,240	33.4%

Top Agricultural Futures and Options

Rank	Contract	Jan-Dec 2021 Vol	Vol % Change	2021 December OI	OI % Change
1	Soybean Meal Futures, Dalian Commodity Exchange	360,388,172	0.3%	2,214,455	-3.9%
2	Rapeseed Meal (RM) Futures, Zhengzhou Commodity Exchange	268,927,210	68.2%	596,926	24.6%
3	Soybean Oil Futures, Dalian Commodity Exchange	229,383,502	32.5%	802,216	36.6%
4	RBD Palm Olein Futures, Dalian Commodity Exchange	226,614,036	-28.1%	608,154	46.1%
5	Corn Futures, Dalian Commodity Exchange	189,287,113	6.5%	1,464,172	-5.9%
6	Natural Rubber Futures, Shanghai Futures Exchange	121,600,877	20.5%	312,825	11.7%
7	Woodpulp Futures, Shanghai Futures Exchange	119,222,581	247.0%	383,529	32.7%
8	White Sugar (SR) Futures, Zhengzhou Commodity Exchange	116,457,963	-6.5%	538,771	-3.6%
9	Cotton No. 1 (CF) Futures, Zhengzhou Commodity Exchange	113,523,632	4.8%	573,599	-9.8%
10	Rapeseed Oil (OI) Futures, Zhengzhou Commodity Exchange	112,755,176	6.9%	258,119	59.9%
11	Apple (AP) Futures, Zhengzhou Commodity Exchange	105,492,739	67.4%	232,728	-29.3%
12	Corn Futures, Chicago Board of Trade	86,901,950	-3.2%	1,512,771	-13.6%
13	Egg Futures, Dalian Commodity Exchange	59,397,983	-55.0%	238,767	-28.4%
14	Corn Starch Futures, Dalian Commodity Exchange	56,625,060	100.1%	244,394	40.1%
15	Soybean Futures, Chicago Board of Trade	53,324,458	-12.8%	631,627	-29.0%
16	No. 1 Soybean Futures, Dalian Commodity Exchange	49,558,416	-16.6%	247,683	130.4%
17	Soybean Meal Options, Dalian Commodity Exchange	37,992,814	26.1%	452,713	17.5%
18	Soybean Oil Futures, Chicago Board of Trade	32,675,376	-0.9%	372,571	-20.6%
19	Corn Options, Chicago Board of Trade	31,648,268	29.7%	1,045,629	-23.3%
20	Sugar #11 Futures, ICE Futures U.S.	31,002,757	-22.4%	867,292	-18.7%

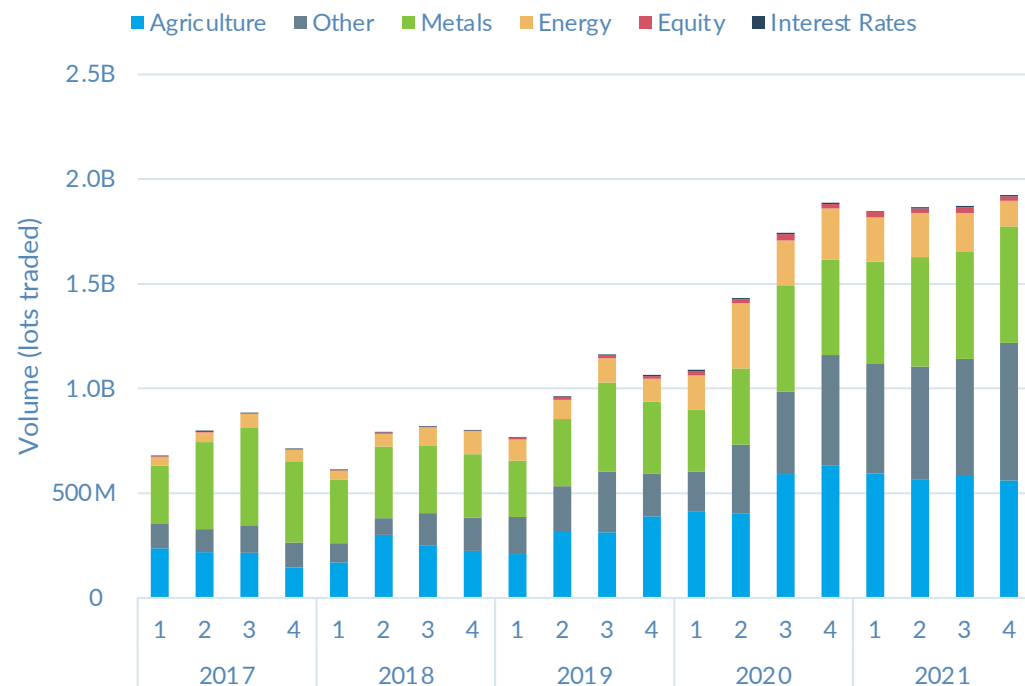
Top Metals Futures and Options

Rank	Contract	Jan-Dec 2021 Vol	Vol % Change	2021 December OI	OI % Change
1	Steel Rebar Futures, Shanghai Futures Exchange	655,986,710	79.2%	2,553,290	62.1%
2	Silver Futures, Shanghai Futures Exchange	231,457,606	-35.2%	666,393	-7.8%
3	Hot Rolled Coil Futures, Shanghai Futures Exchange	220,715,917	168.0%	1,015,803	52.6%
4	Iron Ore Futures, Dalian Commodity Exchange	174,412,025	-38.7%	1,074,078	77.0%
5	Nickel Futures, Shanghai Futures Exchange	172,165,580	-4.2%	296,290	-5.0%
6	Aluminum Futures, Shanghai Futures Exchange	131,457,870	148.7%	498,116	54.8%
7	Ferrosilicon (SF) Futures, Zhengzhou Commodity Exchange	95,241,196	203.9%	128,426	27.6%
8	Gold Futures, Borsa Istanbul	93,557,193	-32.0%	656,618	-62.1%
9	Silicon Manganese (SM) Futures, Zhengzhou Commodity Exchange	80,496,126	77.7%	161,937	7.7%
10	Zinc Futures, Shanghai Futures Exchange	69,341,255	14.9%	210,293	13.8%
11	Refined Silver Futures, Moscow Exchange	67,378,342	0.5%	390,936	-0.9%
12	Copper Futures, Shanghai Futures Exchange	64,107,155	12.1%	332,180	5.5%
13	Gold (GC) Futures, Commodity Exchange (COMEX)	58,464,997	-25.2%	512,591	-8.5%
14	Aluminium Futures, London Metal Exchange	57,670,339	-7.0%	730,421	-21.3%
15	Gold Futures, Moscow Exchange	48,466,085	47.6%	195,852	21.0%
16	Silver Micro Futures, Multi Commodity Exchange of India	47,357,929	-1.3%	115,451	180.5%
17	Gold Futures, Shanghai Futures Exchange	45,412,161	-13.3%	177,528	-5.5%
18	Stainless Steel Futures, Shanghai Futures Exchange	40,468,072	273.6%	113,441	-33.9%
19	Copper Grade A Futures, London Metal Exchange	29,691,402	-8.9%	296,274	-21.9%
20	Tin Futures, Shanghai Futures Exchange	27,012,409	102.9%	77,180	47.0%

Focus on China

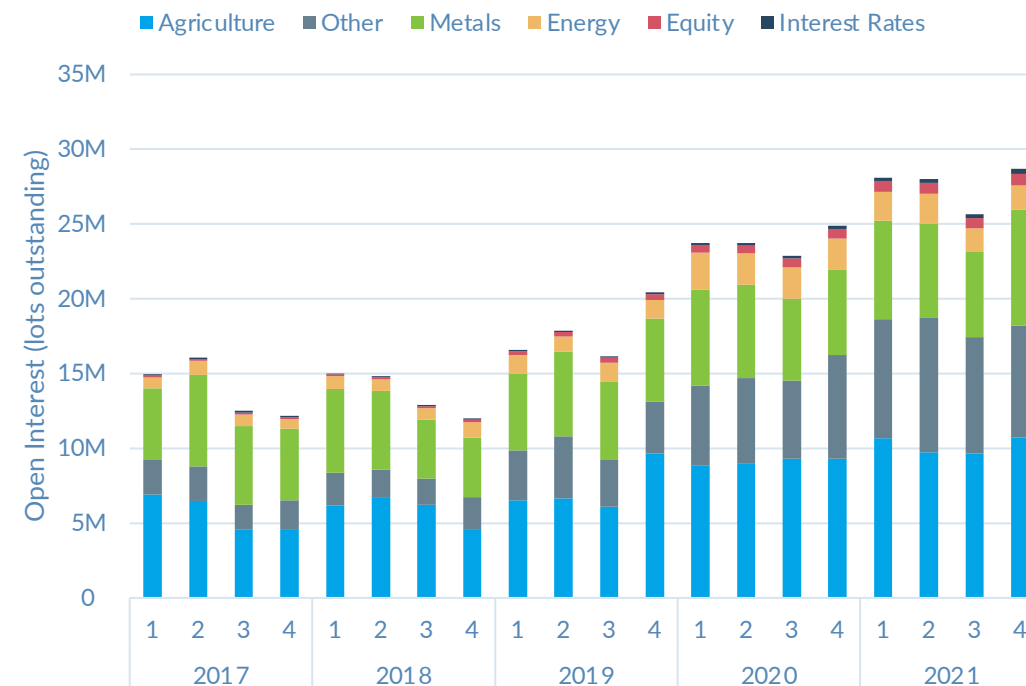
Trading volume has more than tripled over the last five years

Quarterly Volume on Chinese Exchanges
2017 to 2021



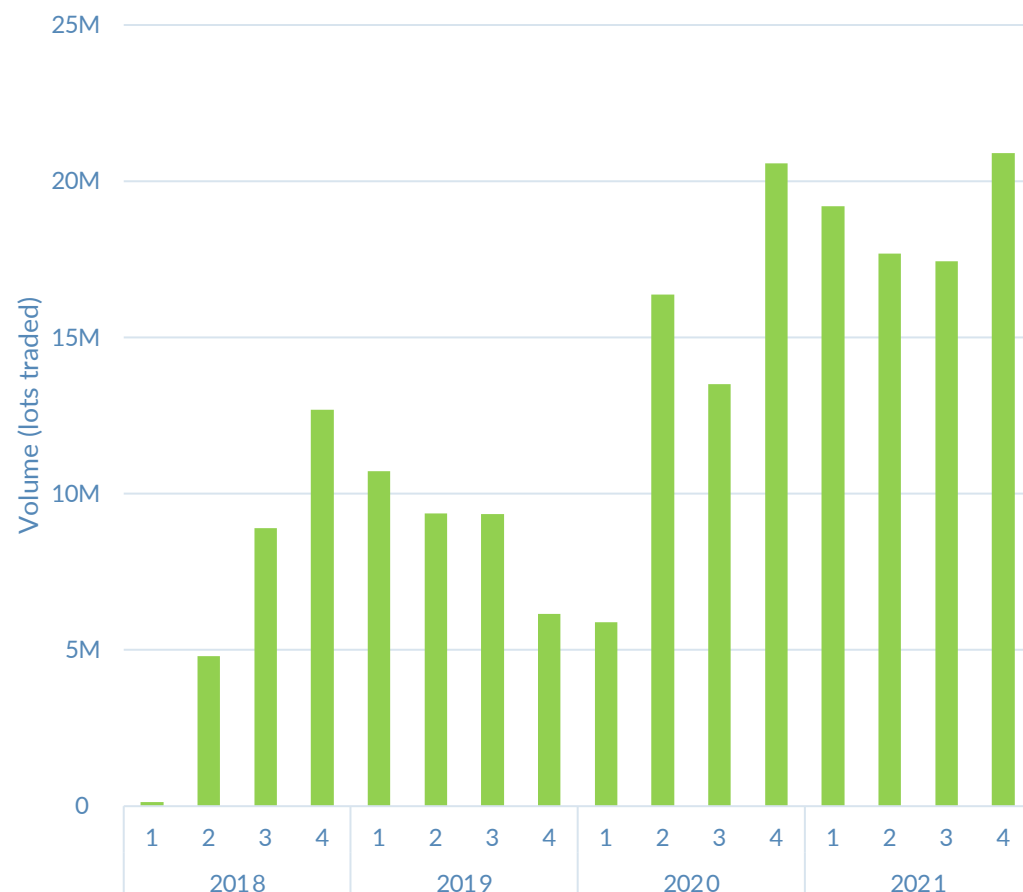
Open interest remains relatively low but has been rising

Quarter-End Open Interest
2017 to 2021



Focus on China

INE hits record 20 million contracts traded in fourth quarter



Commodity options add new dimension to China's futures markets

	2021 Volume	YoY Chg	End 2021 OI	YoY Chg
Soybean Meal Options, DCE	37,992,814	26.1%	452,713	17.5%
Corn Options, DCE	20,600,284	97.2%	510,158	123.1%
Iron Ore Options, DCE	18,078,974	55.9%	244,618	32.9%
White Sugar Options, ZCE	10,887,595	74.1%	141,933	32.5%
RBD Palm Olein Options, DCE *	9,460,967	n/a	194,562	n/a
Copper Options, SHFE	8,936,180	94.2%	31,410	20.4%
Cotton No. 1 Options, ZCE	8,182,287	64.2%	131,272	24.1%
Thermal Coal Options, ZCE	7,864,306	120.5%	11,766	-86.9%
Aluminium Options, SHFE	7,609,295	799.1%	30,387	111.6%
Rapeseed Meal Options, ZCE	4,794,639	41.7%	51,073	0.1%
Natural Rubber Options, SHFE	4,770,235	88.3%	35,638	-9.2%
Zinc Options, SHFE	4,395,159	271.2%	20,490	86.3%
Gold Options, SHFE	3,136,186	33.6%	26,935	-32.8%
LPG Options, DCE	2,628,466	103.0%	17,692	-16.7%
Crude Oil Options, INE *	1,562,511	n/a	20,206	n/a
Total	150,899,898	81.5%	1,920,853	47.3%

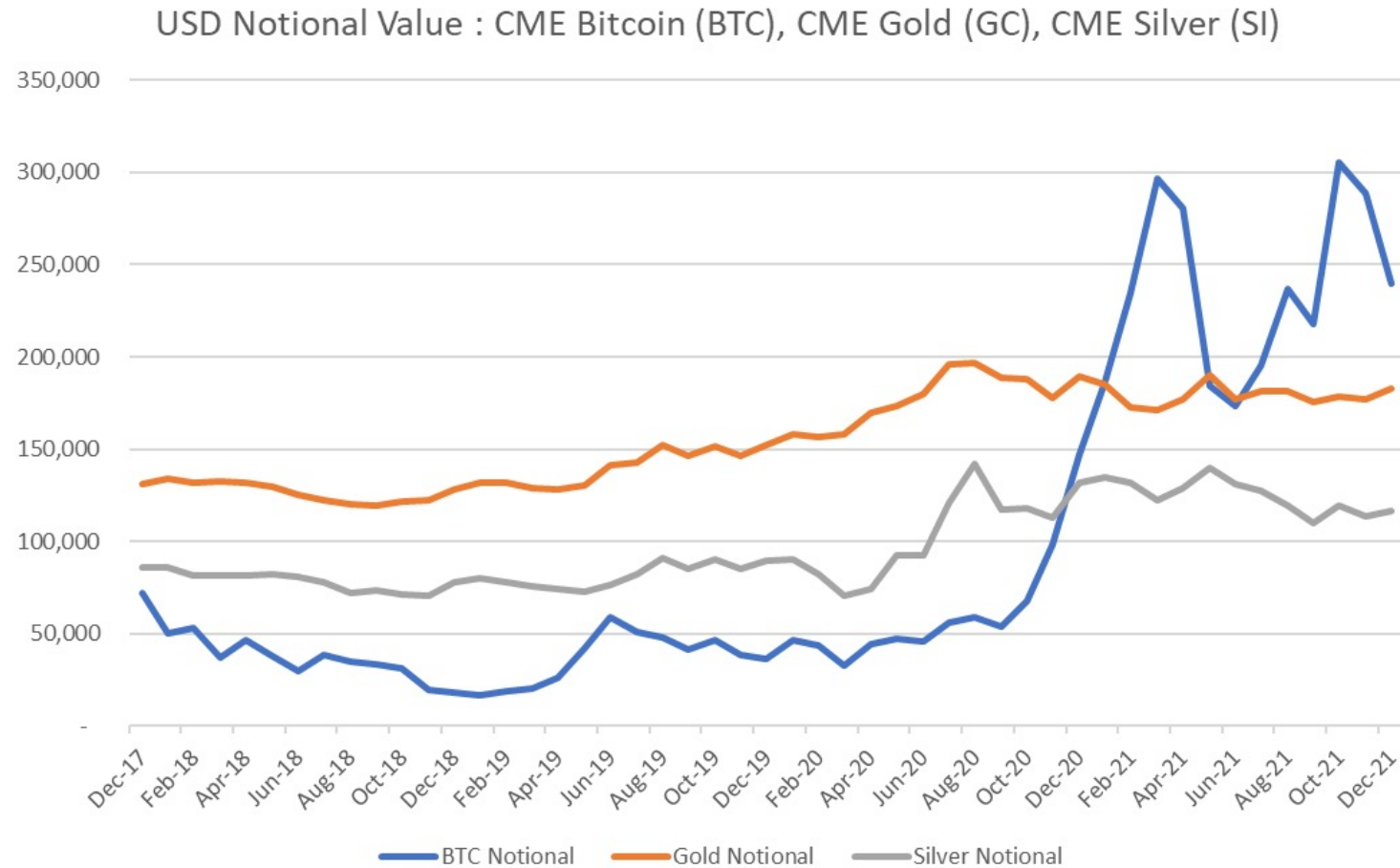
* Began trading in June 2021 and opened to foreign traders

Crypto Derivatives on Regulated Exchanges

Exchange	Instrument Name	Contract Size	Measured by Number of Contracts		Measured by Quantity of the Underlying	
			Jan-Dec 2021 Volume	End-Dec 2021 Open Interest	Jan-Dec 2021 Volume	End-Dec 2021 Open Interest
LedgerX	Bitcoin Mini Options	0.01 bitcoin	5,127,013	631,210	51,270	6,312
CME	Micro Bitcoin Futures	0.1 bitcoin	3,727,727	41,753	372,773	4,175
CME	Bitcoin Futures	5 bitcoin	2,528,772	12,050	12,643,860	60,250
CME	Ether Futures	50 ether	888,702	4,206	44,435,100	210,300
LedgerX	Bitcoin Mini Day Ahead Swaps	0.01 bitcoin	539,712	1,269	5,397	13
LedgerX	Ethereum Deci Options	0.1 ether	397,946	133,118	39,795	13,312
ICE Futures Singapore	Bakkt Bitcoin (USD) Monthly Futures	1 bitcoin	306,972	116	306,972	116
ICE Futures U.S.	Bakkt Bitcoin (USD) Monthly Futures	1 bitcoin	212,426	1,476	212,426	1,476
CME	Micro Ether Futures	0.1 ether	208,824	22,314	20,882	2,231
CME	Bitcoin Options	5 bitcoin	17,591	1,967	87,955	9,835

Note: Adjusted volume and open interest calculated by multiplying the number of contracts by contract size. The table does not include some contracts with relatively low volume. For more information, see <https://www.fia.org/marketvoice/articles/data-spotlight-growing-number-regulated-markets-crypto-derivatives>

Sizing a bitcoin futures contract is not that easy



Source: Bloomberg, TP ICAP

Emissions Trading on Futures Exchanges

	Volume		YoY Change	Open Interest		YoY Change
	2020	2021		2020	2021	
ICE (EU)	12,422,787	15,732,443	27%	1,179,745	1,106,026	-6%
ICE (US)	2,880,233	3,476,686	21%	330,803	395,322	20%
EEX	581,230	723,026	24%	246,942	294,908	19%
Nodal	18,194	83,091	357%	4,335	18,157	319%
CME		47,149			9,432	
Nasdaq	2,039	830	-59%	120	85	-29%
Total	15,904,483	20,063,225	26%	1,761,945	1,823,930	4%

Note: volume and open interest measured in number of contracts based on emission allowances or carbon credits. ICE (EU) combines ICE Futures Europe and ICE Endex

- Rapid growth in volume at leading exchanges in the EU and the US
- EU market primarily focused on EUA futures and options
- US market primarily focused on CCA and RGGI futures and options
- Impact of Brexit: ICE moved its EU allowance contracts to its EU exchange (Endex) and the UK stood up its own emission allowance scheme
- Growth of interest in voluntary reduction: CME launched two carbon offset contracts in 2021, ICE plans to launch similar contract in 2022



Key Contacts

Will Acworth, Senior Vice President, Publications, Data and Research, FIA

wacworth@fia.org

Mike Du Plessis, Senior Managing Director, Agency Execution, TP ICAP Group



Thank you for joining us today!

Upcoming Webinars:



Taking stock of European regulatory developments
2:00 PM GMT



Energy Markets: Overlap and distinctions between CFTC and FERC regulation and enforcement
10:00 AM ET

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 a green triangle on the left and a blue triangle on the right. The background is a white canvas with large, overlapping geometric shapes in light green, light blue, and yellow.