

WFE Derivatives Report 2020



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While every effort has been made to ensure that the information in this survey is accurate at the time of printing, the WFE Office accepts no responsibility for errors or omissions.

I THE WFE DERIVATIVES SURVEY 2020

The World Federation of Exchanges conducts an annual survey of the derivatives markets operated by its members, affiliates, and other exchanges that voluntarily submit data, with the aim of providing an update about the derivatives market for the past calendar year. This report is based on data collected from 49 derivatives exchanges that responded to this year's survey (the full list can be found in Annex 2).

Key findings

- *In 2020 we saw a 40.4% increase in derivatives trading volumes, an increase more than three times larger than last years' (11.4%). Undoubtedly, the need to manage risk under the heightened levels of uncertainty and volatility produced by the Covid-19 pandemic can help explain this increase.¹*

While it is true that trading volumes already had a positive trend during the previous three years, the 40.4% year-on-year increase is by far the largest seen at least in the last 15 years, including during the Great Financial Crisis of 2007-2008 when the largest annual increase was of 31.2%.² The increase in volumes was shared across all regions: the Americas (42.0%), APAC (43.4%) and the EMEA region (29.7%). To set this in context, last year the Americas grew by 5.9%, APAC by 33.2%, and EMEA experienced a decline of 4.4%.
- *The large increase in volumes was observed both in options and in futures contracts.*

The total volume of options increased by 44.1% to 21 billion, while that of futures by 37.5% to 25.20 billion. This compares to respective increases of 15.3% and 11.6% in 2019.
- *Per underlying asset class, however, interest rates contracts appear as an outlier: while equity, commodity and currency derivatives all saw significant positive increases in volumes, interest rate derivatives volumes decreased by 11.9% (compared to an increase of 2.8% in 2019) and the decrease was more pronounced in short term contracts (STIRs).*

STIR contract volumes declined by 59.7%, compared to a decline of 14.9% in long term interest rates (LTIR) contracts, but it was broadly similar across futures and options. On the other hand, the share of interest rate derivatives decreased from 13.6% in 2019 to 8.6% in 2020. There may be different explanations behind these numbers, but the prospect of low interest rates for a longer period of time (as a consequence of central banks' efforts to stimulate the economy) could have been one of them, as it may have diminished the need of hedging interest rate risk, especially in the short term.
- *On aggregate, equity derivative contracts increased by 56.5% (compared to 18.4% in 2019), and this was the common trend across all classes of equity derivatives.*

¹ It is worth noting that, in addition to the peak in trading activity in March 2020 across most derivatives product lines, there was also a sustained increase through the rest of the year. For a detailed monthly analysis, we invite the reader to refer to the [WFE FY 2020 Market Highlights report](#).

² [WFE IOMA Derivatives Report 2015](#).

At the end of 2020 volumes amounted to just under 25.98 billion contracts. Single stock options volumes increased by 56.0% (compared to -3.7% in 2019), single stock futures by 99.6% (compared to 16.2% in 2019), stock index options by 42.7% (compared to 41.8% in 2019) and stock index futures by 60.4% (compared to 18.6% in 2019).

- *Commodity derivatives saw an increase of 34.1% (compared to 17.2% in 2019), but the increase was not uniform across commodity types: energy saw a 11.5 decrease and the increase in non-precious metals was just of 1.1%.*
Options and futures volumes were both up, (by 26.2% and by 34.4%, respectively), in contrast to the previous year when commodity options decreased by 6.3% and commodity futures increased by 18.4%. Agriculture and precious metals volumes increased by 46.3% and 84.5% respectively. The entering of Multi Commodity Exchange of India in the segment of index commodity derivatives led to a 706.5% increase in volume in this segment of the market.
- *Currency derivatives experienced a 30.9% increase (compared to just 1.8% in 2019). We notice a significant decrease in market share for APAC from 63.2% in 2019 to 43.3%, while the Americas and the EMEA gained market share from 19.5% to 29.7%, and from 17.2% to 26.9%, respectively.*
Both options and futures experienced increases of 16.6% (compared to 15.4% in 2019) and 35.7% respectively (compared to -4.5% in 2019).
- *ETF derivatives went up by 65.1%, (compared to -8.8% in 2019)*
The increase was essentially due to the uptrend in ETF options (65.1%) as ETF futures market share is close to 0%. As in previous years, the Americas is by far the region where almost all ETF derivatives trade takes place, with a 99.9% share of the global ETF derivatives volume.

All the above are year-on-year figures. For a detailed monthly analysis for each derivative product line, we invite the reader to refer to the [WFE FY 2020 Market Highlights report](#).

2 METHODOLOGY

This report focuses on derivatives trading activity in 2020, and covers data collected from 49 exchanges/exchange groups (some of whom represent more than one trading venue).³ Individual contract rankings were provided by 40 of these exchanges (see Annex 2).⁴

The figures presented in this report cover a full set of indicators:

- the number of contracts traded (also referred to as volume traded or volumes)
- the notional value traded
- the open interest as at year end

These indicators are presented across sixteen main product lines:

- Single Stock Options and Futures
- Stock Index Options and Futures
- Exchange Traded Funds (ETFs) Options and Futures
- Short-Term Interest Rate (STIR) Options and Futures
- Long-Term Interest Rate (LTIR) Options and Futures
- Currency Options and Futures
- Commodity Options and Futures, distinguishing between:
 - Agriculture
 - Energy
 - Non-precious metals
 - Precious metals
 - Index commodity derivatives, and
 - Other
- Other Options and Futures

Units: Unless otherwise indicated, the volume of contracts traded, and the open interest are reported in full numbers. The notional value of the contracts traded is reported in millions of US dollars. Where we did not receive data from the exchanges and were not able to supplement the missing data from other sources, this is mentioned under the relevant tables or reflected as “NA” for “not available.”

Rankings: Rankings have been presented using volume traded as this is the most widely available data-point. However, as contract sizes vary dramatically across markets, these figures should always be read with reference to the notional value traded (where available) as the largest markets by volume traded are not always the largest by notional value traded.

³ The report includes for the first time Matba Rofex, India International Exchange, Indian Commodity Exchange, Tehran Stock Exchange and The Saint-Petersburg International Mercantile Exchange (SPIMEX).

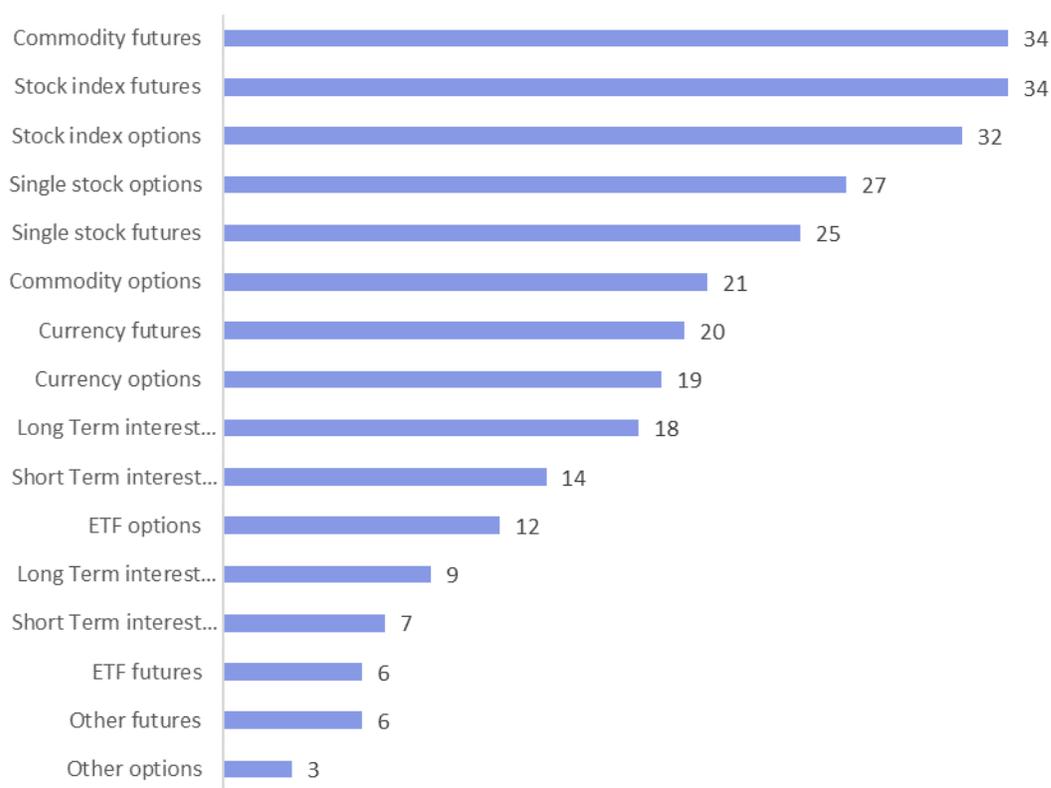
⁴ Bolsa y Mercados Argentinos, ICE Futures Europe, Indian Commodity Exchange, Indonesia Commodity and Derivatives Exchange, International Securities Exchange, Johannesburg Stock Exchange, Shanghai Futures Exchange did not provide individual contract information, which might have affected the contract rankings.

3 EXCHANGE-TRADED DERIVATIVE PRODUCTS

Some of the exchanges taking part in this survey provide a wide range of derivatives contracts, while others specialise in a single area of the market. The average number of product lines offered by responding exchanges is six and the median is five. As **Figure 1** shows, stock index futures and commodity futures are the derivatives offered by the largest number of trading venues.

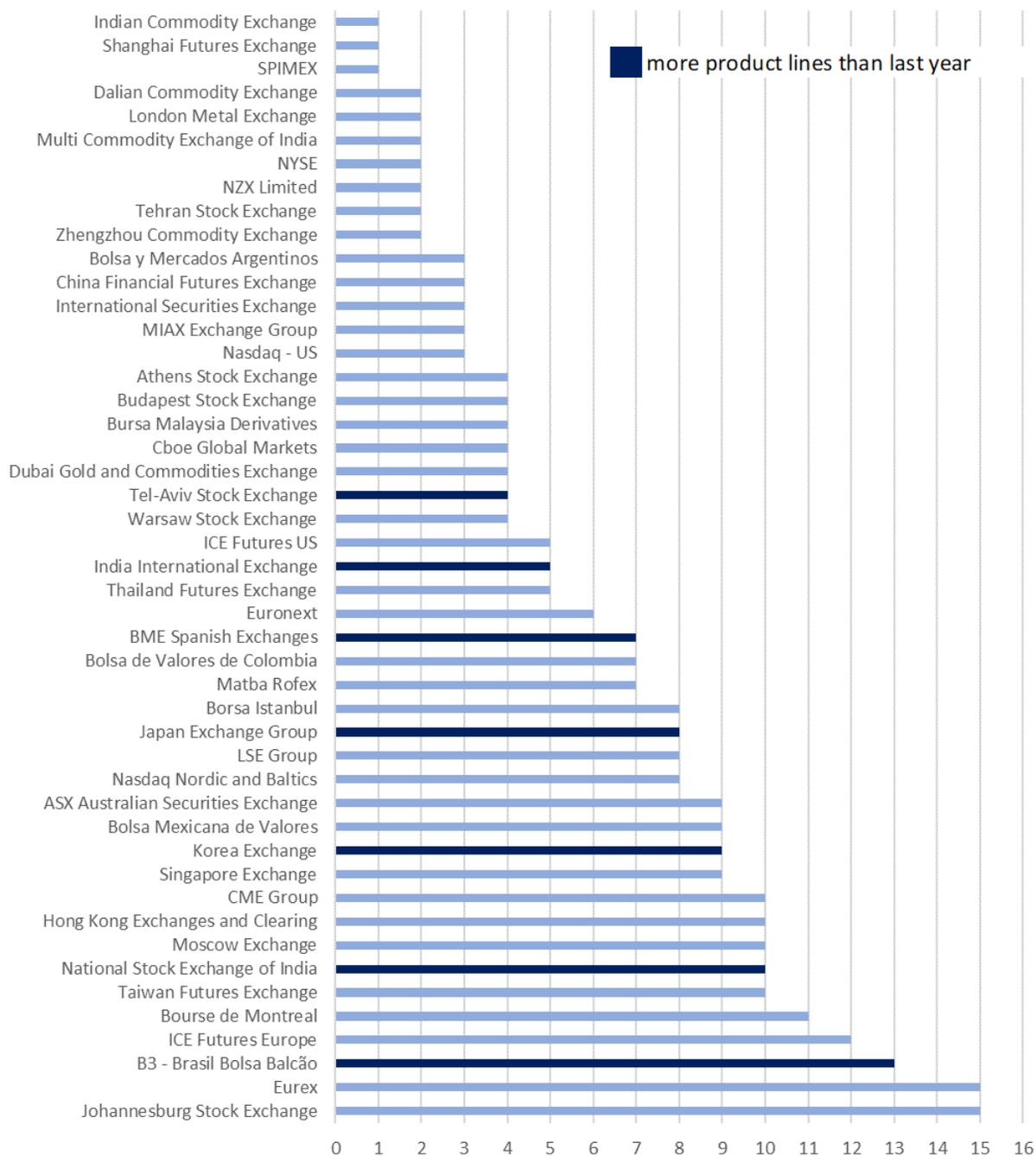
When looking at the number of products offered by exchange (**Figure 2**), Eurex and Johannesburg Stock Exchange have the largest number of product lines, at 15, and there are three exchanges with one product line only.⁵

Figure 1: Number of trading venues by product line in 2020



⁵ Cboe Global Markets also includes Cboe Futures Exchange

Figure 2: Number of product lines per exchange in 2020⁶



⁶ Cboe Global Markets includes Cboe Futures Exchange

4 MARKET OVERVIEW

Amongst the respondent universe of 49 exchanges, there was a 40.4% increase in the volumes traded compared with 2019, with a record number of 46.19 billion derivatives contracts traded in a year (21 billion options and 25.2 billion futures). This represents an increase of 126.8% over the last 10 years, with an average annualised growth rate of 9.4%. The year-on-year increase in 2020 is 3.5 times higher than the increase observed the previous year (**Figure 3**). While this is largely due to the impact of the pandemic, it is worth noting that in addition to the peak in trading activity in March 2020 across most derivatives product lines, there was also a sustained increase through the rest of the year. For a detailed monthly analysis, we invite the reader to refer to the [WFE FY 2020 Market Highlights report](#).

4.1 Trading activity: regional trends

With regards to regional trends in trading activity, all regions recorded increases in trading volumes.

The volumes in the Americas were up 42.0% due to equity (71.0%), ETF (65.3%), currency (27.4%) and commodity derivatives (0.6%), while the interest rate derivatives declined by 14.0%. Volumes traded in the Americas region accounted for 42.8% of global volumes traded (compared to 42.3% in 2019). In absolute terms, volumes in the Americas increased by 5.84 billion contracts traded with respect to 2019. Exchanges with an exceptional growth in volumes were B3 - Brasil Bolsa Balcão (89.9%), Nasdaq – US (97.4%), Cboe Global Markets (38.6%), NYSE (61.5%) and MIAX Exchange Group (88.0%).

The volumes in the APAC region increased by 43.4%, due to an increase in volumes traded in equity (47.5%), currency (19.7%), commodity (46.9%), and other derivatives (21.1%), while ETF and interest rate derivatives volumes fell by 16.4% and 9.1%, respectively.. Volumes in the APAC region account for 41.5% of the total number of contracts traded , compared to 40.6% in 2019. In absolute terms, volumes increased by 5.79 billion contracts traded with respect to 2019. Exchanges with strongest results were National Stock Exchange of India (48.1%), Dalian Commodity Exchange (62.8%), Korea Exchange (41.5%), Shanghai Futures Exchange (48.9%) and Zhengzhou Commodity Exchange (55.7%).

The volumes in EMEA were up 29.7%, due to increases in equity (43.1%), currency (59.6%) and commodity (23.9%), while ETF derivatives volumes went down by 3.8% as well as interest rate (6.4%) and other derivatives (22.9%).. Volumes in the EMEA region (which accounted for the remaining 15.8% of total volumes, 1.3 percentage points less as compared to 2019). Exchanges with outstanding performance were the Moscow Exchange (45.7%), Borsa Istanbul (284.3%) and LSE Group (397.8%).

Figure 3: Volumes of exchange-traded derivatives

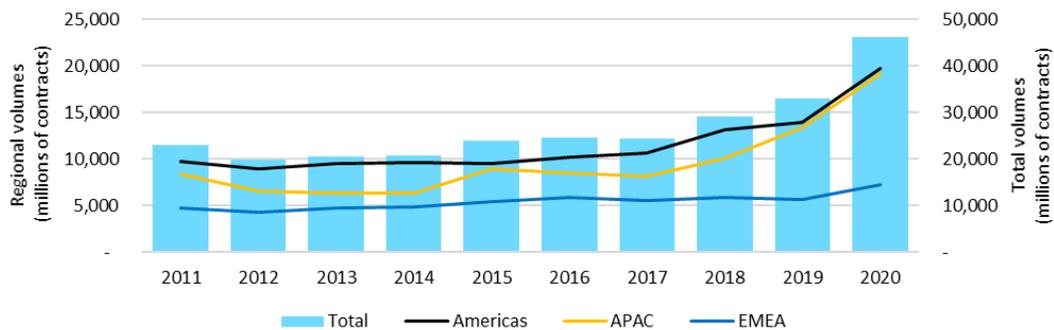
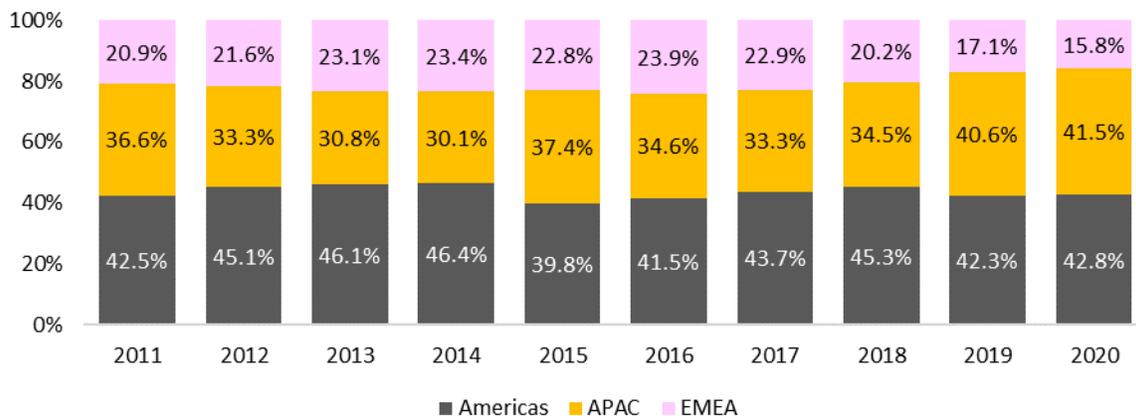


Figure 4: Share of total volumes: breakdown by regions



4.2 Trading activity by assets classes

Equity derivatives: Equity derivatives volumes were up 56.5% relative to 2019 thanks to significant increases in volumes across all classes and all regions. They accounted for 56.2% of overall derivatives contracts traded in 2020. In the ten-year period under review, 2020 saw the highest number of equity derivatives contracts traded in a year (25.98 billion). Stock index options were the most actively traded derivatives product in 2020, accounting for 19.5% of overall derivatives volumes.

ETF derivatives: In 2020, 3.07 billion ETF derivatives contracts were traded. Volumes were up 65.1% year-on-year due to a 65.3% increase in the Americas region, where 99.9% of the trading takes place.

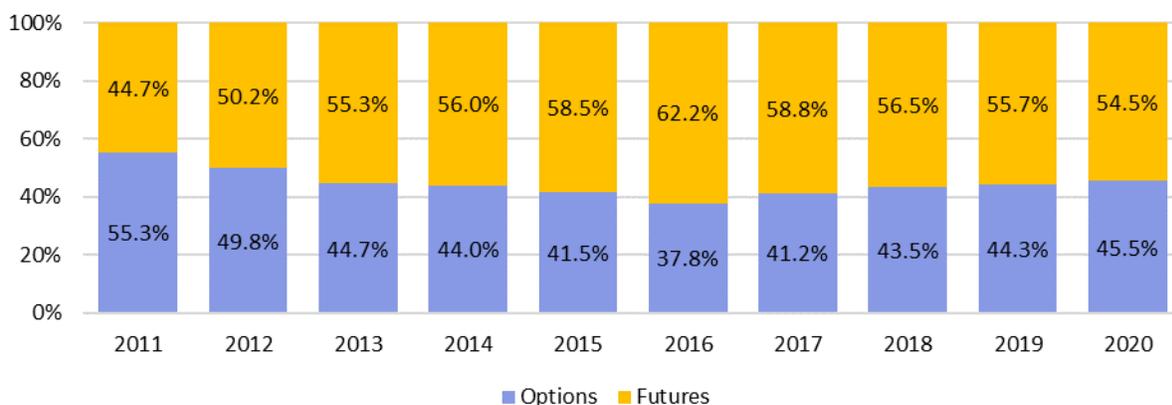
Interest rate derivatives: Interest rate derivatives volumes were down 11.9% on 2019 adding up to 3.98 billion. The fall was driven by decreasing volumes across STIR options (47.4%), STIR futures (63.4%), LTIR options (29.9%) and LTIR futures (12.3%). The Americas region, where a

bulk of the volumes are traded (68.2%), saw a sharp decrease in volumes by 14.0%. APAC also registered a 9.1% decrease (its share of the global interest rate derivatives being 5.6%), while EMEA (which accounts for 26.2% share) saw a 6.4% fall in volumes. Unlike equity derivatives, the volumes of interest rate derivatives were much lower during the second half of 2020 when compared to pre-pandemic times.

Currency derivatives: Currency derivatives volumes were up 30.9% on 2019. Volumes of currency derivatives were nearly 3.82 billion contracts traded in 2020. In the Americas region, where 29.7% of contracts were traded, volumes were up 27.4%. In APAC, the region with 43.3% share of contracts traded, volumes increased by 19.7%. EMEA region which accounts for 26.9% share, the volumes went up by 59.6%. While currency options volumes were slightly higher than pre-pandemic levels, currency futures levels were noticeably higher.

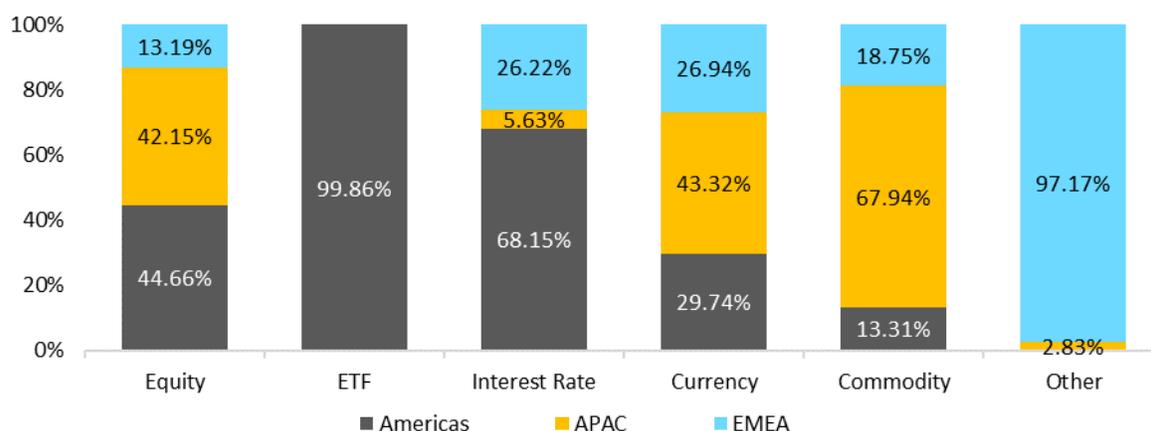
Commodity derivatives: Volumes traded of commodity derivatives increased by 34.1% with a total of 9.30 billion contracts traded in 2020. All regions experienced an uptrend: the volumes in the Americas region (which accounts for 13.3% share of volumes) increased by the 0.6%, in APAC, where the major share (67.9%) of global volumes are traded, volumes increased by 46.9% and in EMEA region the volumes were up by 23.9%, EMEA hosting 18.8% of the traded volume.

Figure 5: Share of total volumes: options vs futures



Other derivatives: The ‘other’ derivatives category comprises of a wide range of products, including index volatility options and futures, REIT derivatives, dividend index derivatives, CFDs, and inflation indexed futures and options. Volumes traded of other options and futures were down 22.1% on 2019 due to both other options and other futures volumes falling by 23.6% and 21.7% respectively. The largest share of other derivatives is traded in EMEA (97.2%), while APAC accounts for the rest of 2.8%.

Figure 6: Share of total volumes in 2020, by region and asset class



Over the last ten years, global derivatives trading volumes have increased by 40.4% with 46.19 billion contracts traded in 2020 as opposed to 22.90 billion contracts traded in 2011. However, the positive trend is largely driven by an increase in equity derivatives trading in the last three years, which passed from 13.64 billion contracts traded in 2018 to 25.98 billion contracts traded in 2020 (**Figure 7**).

Table I: Volumes by asset class (millions of contracts)

	2019	2020	% change	% within asset class	% of total
Equity					
Single Stock Options	4,513	7,039	56.00%	27.10%	15.20%
Single Stock Futures	1,697	3,388	99.60%	13.00%	7.30%
Stock Index Options	6,321	9,019	42.70%	34.70%	19.50%
Stock Index Futures	4,075	6,536	60.40%	25.20%	14.10%
Total Equity	16,607	25,982	56.50%		56.20%
ETF					
ETF Options	1,859	3,070	65.10%	100.00%	6.60%
ETF Futures	1.2	0.9	-22.50%	0.00%	0.00%
Total ETF	1,860	3,070	65.10%		6.60%
Currency					
Currency Options	736	859	16.60%	22.50%	1.90%
Currency Futures	2,181	2,959	35.70%	77.50%	6.40%
Total Currency	2,917	3,818	30.90%		8.30%
Commodity					
Commodity Options	263	331	26.20%	3.60%	0.70%
Commodity Futures	6,674	8,968	34.40%	96.40%	19.40%
Total Commodity	6,937	9,299	34.10%		20.10%
Interest rate*					
STIR Options	509	268	-47.40%	9.40%	0.60%
STIR Futures	1,721	630	-63.40%	22.00%	1.40%
LTIR Options	339	238	-29.90%	8.30%	0.50%
LTIR Futures	1,964	1,722	-12.30%	60.30%	3.70%
Total Interest Rates	4,520	3,982	-11.90%		8.60%
Other Derivatives					
Other Options	12	9	-23.60%	23.70%	0.00%
Other Futures	39	31	-21.70%	76.30%	0.10%
Total 'other'	51	40	-22.10%		0.10%
Grand Total	32,892	46,192	40.40%		

* Does not include granular data from B3 - Brasil Bolsa Balcão, ICE Futures Europe and Johannesburg Stock Exchange

Figure 7: Volumes by asset class (billions of contracts)

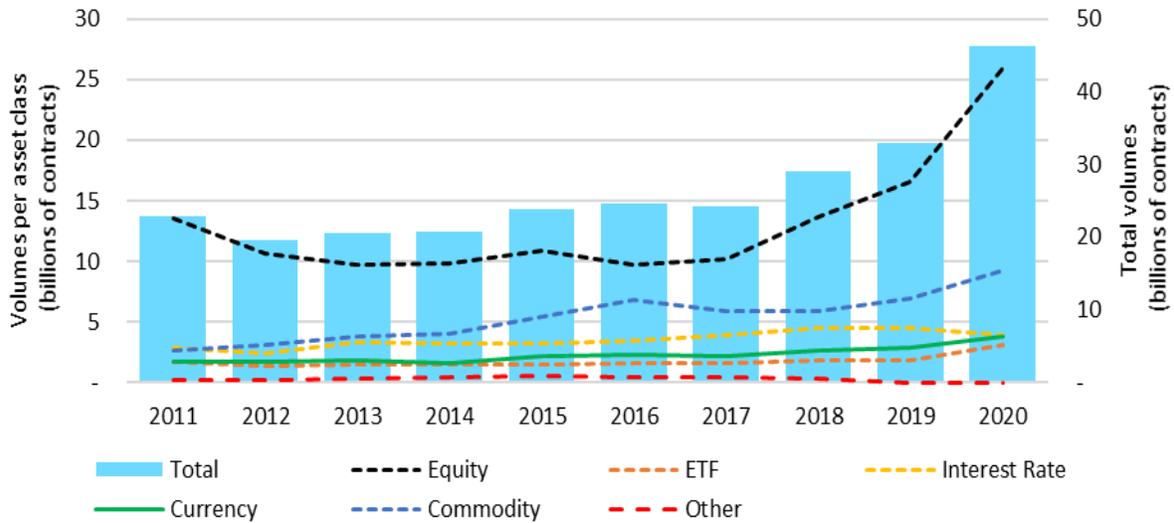
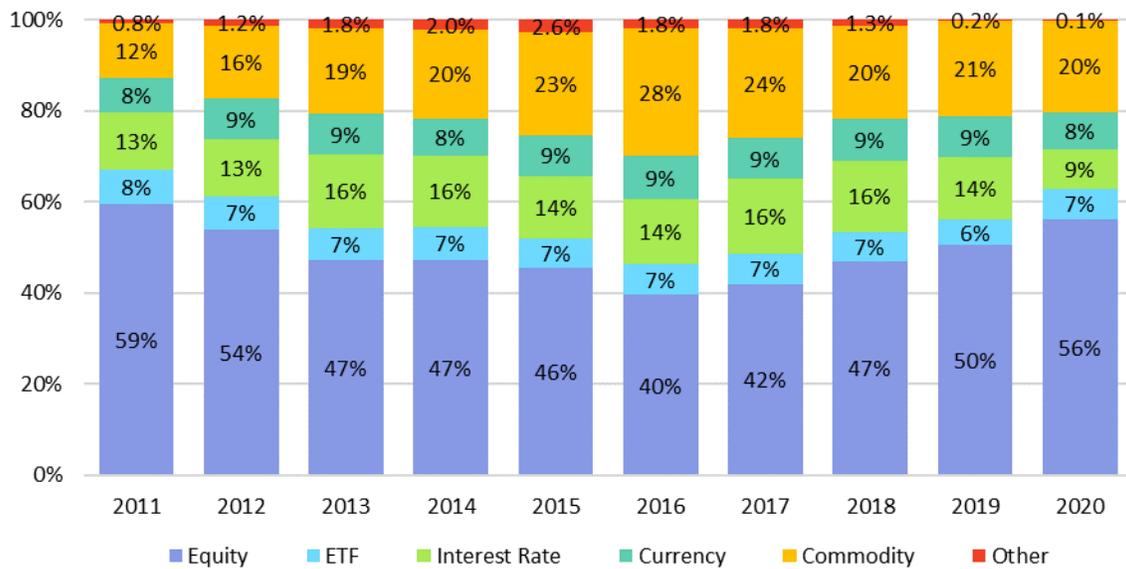


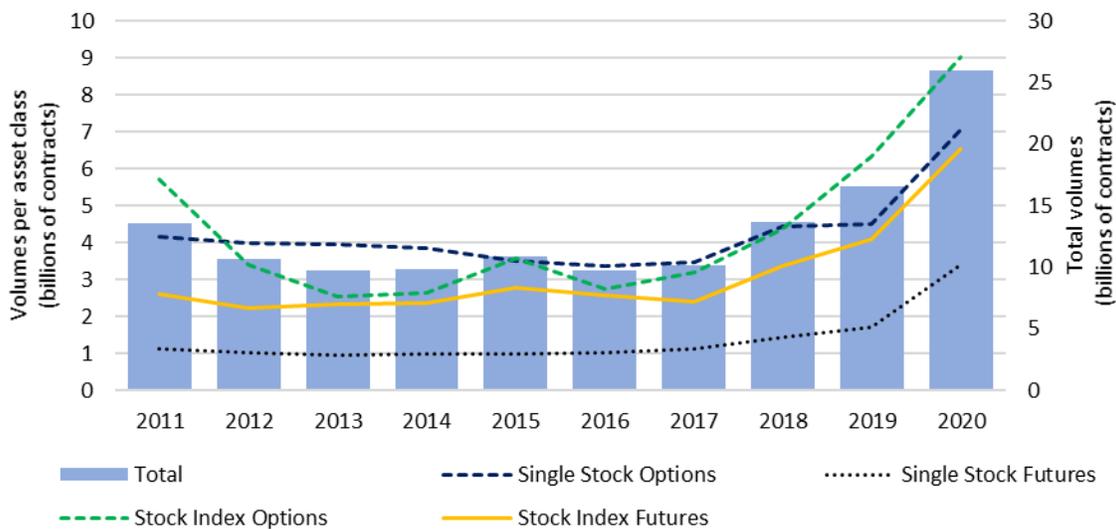
Figure 8: Product composition over time by share of total volume



5 EQUITY DERIVATIVES

- Overall, equity derivatives volumes increased by 56.5% compared to 2019 due to all categories having a positive trend: single stock options (56.0%), single stock futures (99.6%), stock index options (42.7%) and stock index futures (60.4%).
- Volumes increased in the Americas by 71.0%, the APAC was up 47.5% and the EMEA region grew by 43.1% on 2019. 44.7% of the volume traded takes place in the Americas, 42.1% in APAC and 13.2% in EMEA.

Figure 9: Volumes of equity derivatives (billions of contracts)

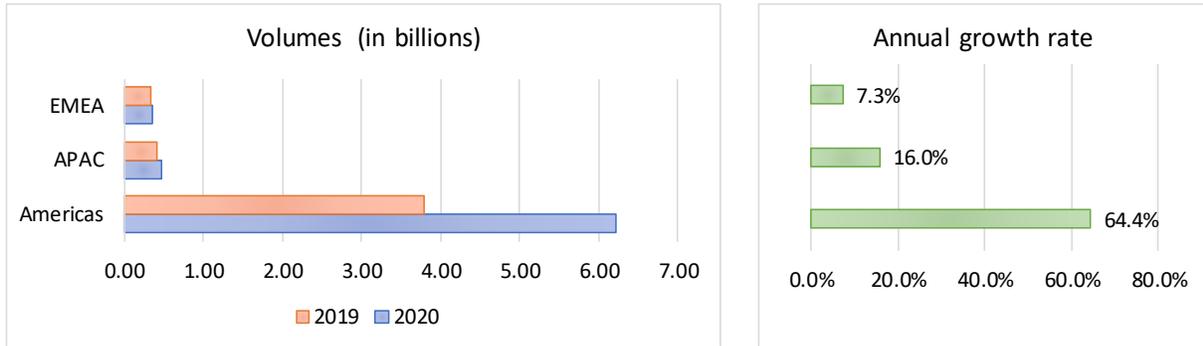


5.1 Single Stock Options

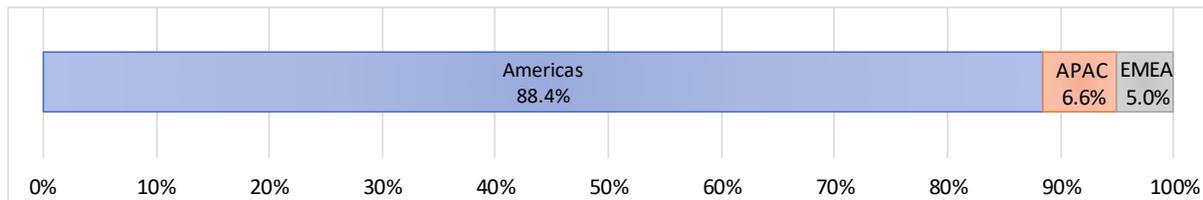
- Volumes of single stock options registered a 56.0% increase on 2019, with volumes of 7.04 billion.
- All regions experienced an increase in volumes on 2019: the Americas of 64.4%, APAC of 16.0% and EMEA region of 7.3%. It's worth noting that the bulk of single stock options is traded in the Americas (88.4%), APAC accounts for 6.6% and EMEA for 5.0%.
- Just as last year, three exchanges from the Americas region – B3 - Brasil Bolsa Balcao, Cboe Global Markets and Nasdaq - US accounted for over half of the global volumes.

Figure 10: Single Stock Options

A. Volumes and yearly change



B. Share of volume by region



C. Share of volume by exchange

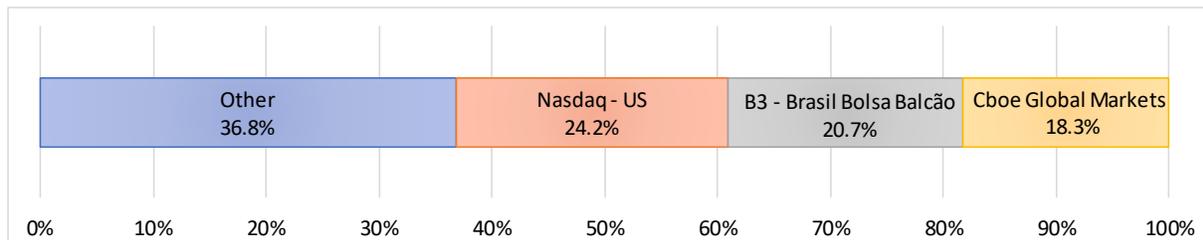


Table 2: Top 10 exchanges by number of single stock options contracts traded in 2020

	Volume		Notional Value		Open interest	
	2020	YoY change	2020	YoY change	2020	YoY change
Nasdaq - US	1,702,761,434	106%	NA	NA	NA	NA
B3 - Brasil Bolsa Balcão	1,459,181,587	48%	699,884	-19%	46,530,971	68%
Cboe Global Markets	1,287,889,878	57%	NA	NA	265,226,043	46%
NYSE	782,351,153	77%	362,895	175%	NA	NA
MIAX Exchange Group	507,985,576	95%	9,573,574	160%	NA	NA
International Securities Exchange	417,128,811	72%	NA	NA	NA	NA
National Stock Exchange of India	272,134,027	35%	2,719,053	60%	914,728	177%
Eurex	189,106,929	2%	929,810	4%	49,863,675	-2%
Hong Kong Exchanges and Clearing	129,601,933	22%	551,546	54%	8,860,221	34%
Euronext	69,478,712	2%	289,668	3%	12,519,273	12%
Others	221,570,604	-11%	557,880	35%	27,573,238	-5%
Grand Total	7,039,190,644	60.5%	15,684,310	89%	411,488,149	34%

Table 3: Top 10 single stock options contracts traded in 2020

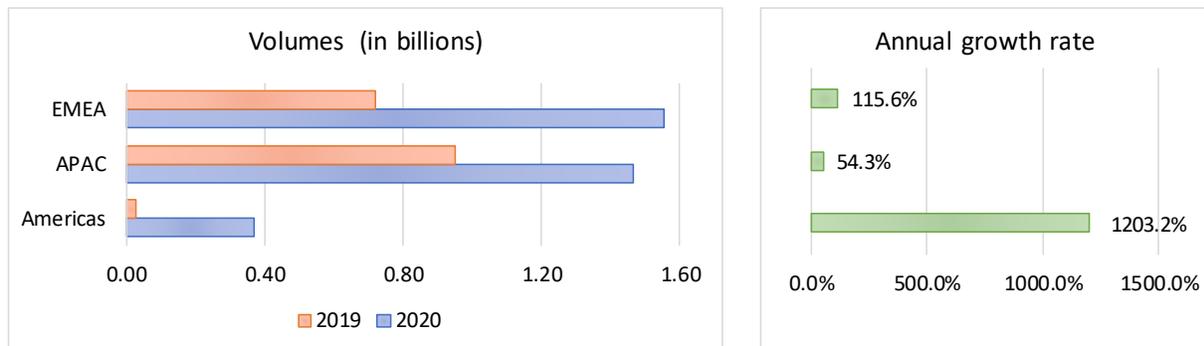
Contract Name	Contract size	Exchange name	Volume 2020	Notional value 2020	Open interest 2020
Apple Computer (AAPL)	100 shares	Nasdaq - US	110,218,243	2,103,343.33	1,641,066,308
Apple Computer (AAPL)	100 shares	Cboe Global Markets	105,260,501	2,092,428.05	11,740,838
Tesla (TSLA)	100 shares	Nasdaq - US	76,163,557	4,219,333.17	1,012,713,092
Tesla (TSLA)	100 shares	Cboe Global Markets	55,839,731	3,629,907.36	7,449,108
Apple Computer (AAPL)	100 shares	MIAX Exchange Group	46,722,719	NA	NA
AMD Options	100 shares	Nasdaq - US	39,301,649	232,925.57	577,899,818
MSFT Options	100 shares	Nasdaq - US	37,974,475	640,665.62	670,754,872
NIO Ltd (NIO)	100 shares	Nasdaq - US	36,072,972	83,088.54	644,069,254
NIO Ltd (NIO)	100 shares	Cboe Global Markets	35,075,977	78,075.84	3,576,145
Advanced Micro Devices (AMD)	100 shares	Cboe Global Markets	32,146,381	202,388.94	2,574,012

5.2 Single Stock Futures

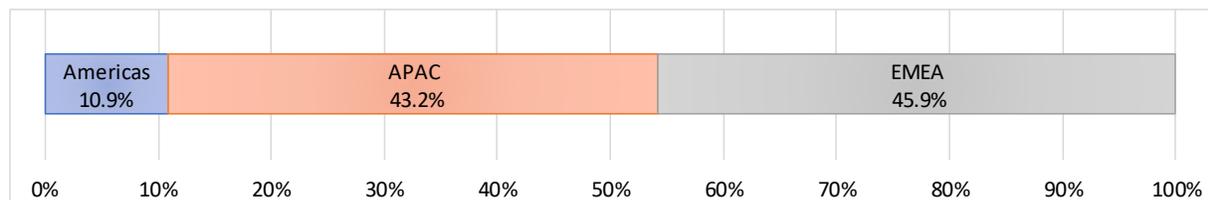
- Single stock futures volumes were up 99.6% on 2019, with 3.39 billion contracts traded in 2020.
- They remained the least actively traded equity derivatives product type accounting for 7.3% of equity derivatives volumes.
- The APAC and EMEA regions, which together accounted for most of the global volumes (43.2% and 45.9% respectively) saw volumes increase by 54.3% and 115.6% respectively. In the Americas region the increase is mostly due to B3 – Brasil Bolsa Balcão who introduced this product line in 2019.
- Three exchanges, B3 – Brasil Bolsa Balcão, Korea Exchange and Borsa Istanbul, account for the majority (79.1%) of total volumes traded.

Figure 11: Single Stock Futures

A. Volumes and yearly change



B. Share of volume by region



C. Share of volume by exchange

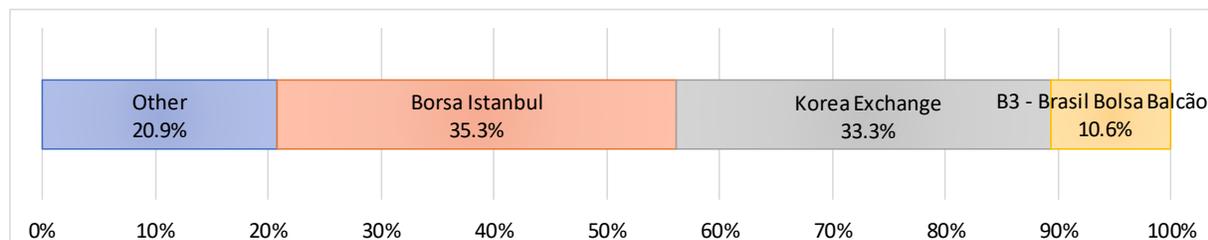


Table 4: Top 10 exchanges by number of single stock futures contracts traded in 2020

	Volume		Notional Value		Open interest	
	2020	YoY change	2020	YoY change	2020	YoY change
Borsa Istanbul	1,196,068,823	508%	104,381	269%	8,211,995	190%
Korea Exchange	1,127,006,372	83%	732,324	147%	6,859,116	33%
B3 - Brasil Bolsa Balcão	358,034,705	1414%	1,693	755%	22,146,700	912%
National Stock Exchange of India	256,437,505	1%	2,270,043	11%	1,568,297	-15%
Moscow Exchange	197,848,300	-4%	53,457	-24%	1,160,880	-27%
Eurex	77,212,511	-67%	368,916	-51%	5,217,610	-38%
Thailand Futures Exchange	47,386,674	-9%	NA	NA	1,783,284	-39%
Euronext	27,341,284	522%	118,048	466%	646,826	-53%
Taiwan Futures Exchange	25,837,101	31%	242,706	40%	373,047	128%
Johannesburg Stock Exchange	17,152,630	88%	10,800	84%	1,813,745	60%
Others	57,210,369	-30%	1,243,802	-61%	2,747,727	-22%
Grand Total	3,387,536,274	99.7%	5,146,168	-21%	52,529,227	68%

Table 5: Top 10 single stock futures contracts traded in 2020

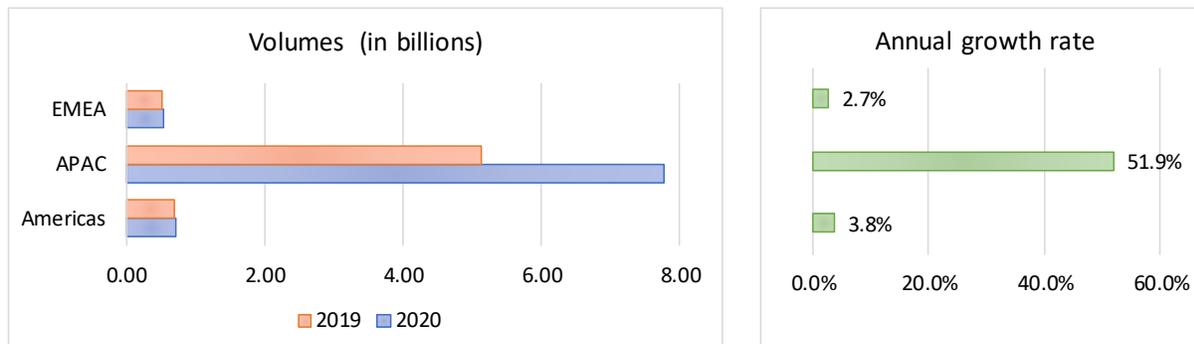
Contract Name	Contract size	Exchange name	Volume 2020	Notional value 2020	Open interest 2020
DRV Futures SamsungElec	10 shares	Korea Exchange	415,770,696	219,506.46	1,472,750
EKGYO	100 shares	Borsa Istanbul	161,055,138	4,249.59	1,176,338
TSKB	100 shares	Borsa Istanbul	147,254,652	3,591.13	637,543
GARAN	100 shares	Borsa Istanbul	125,915,285	14,345.50	441,285
PETROBRÁS	NA	B3 - Brasil Bolsa Balcão	124,302,100	545.12	678000
KRDMD	100 shares	Borsa Istanbul	117,539,782	5,579.36	412,945
PETKM	100 shares	Borsa Istanbul	94,733,647	5,938.04	601,649
Futures on Sberbank ordinary shares	100 shares	Moscow Exchange	91,977,692	27,648.86	353,394
DRV Futures SK hynix	10 shares	Korea Exchange	72,162,755	58,533.71	345,459
VALE	NA	B3 - Brasil Bolsa Balcão	56,464,700	720.59	2,736,200

5.3 Stock Index Options

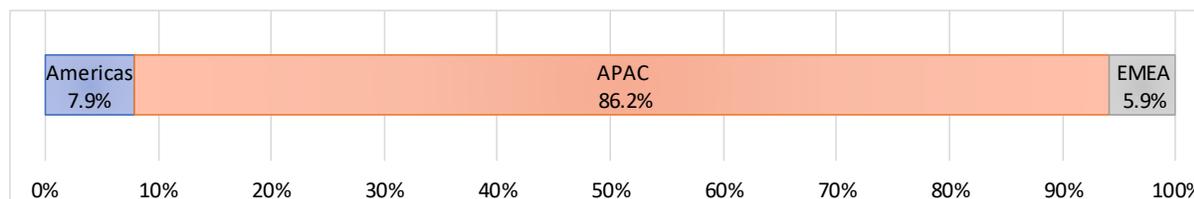
- Stock index options volumes were up 42.7% on 2019, with 9.02 billion contracts traded.
- Stock index options were the most actively traded equity derivatives product type in 2020 with a 34.7% share of equity derivatives volumes and the most actively traded derivative, with 19.5% volume share of all product lines.
- Volumes were up in the Americas by 3.8%, APAC by 51.9% and EMEA by 2.7% due to the exceptional performance of the National Stock Exchange of India. The APAC region remained the key driver of the overall trend, accounting for 86.2% of global volumes.
- The market for this product was highly concentrated. Three exchanges accounted for 87.2% of the total volume traded, two of which in the APAC region (the National Stock Exchange of India and the Korea Exchange, which together accounted for 82.1% of the global volume). Cboe Global Markets accounted for the remaining 5.1%.
- National Stock Exchange of India's Bank Nifty Index options, Korea Exchange's DRV KOSPI 200 options were among the most actively traded contracts in 2020.

Figure 12: Stock Index Options

A. Volumes and yearly change



B. Share of volume by region



C. Share of volume by exchange

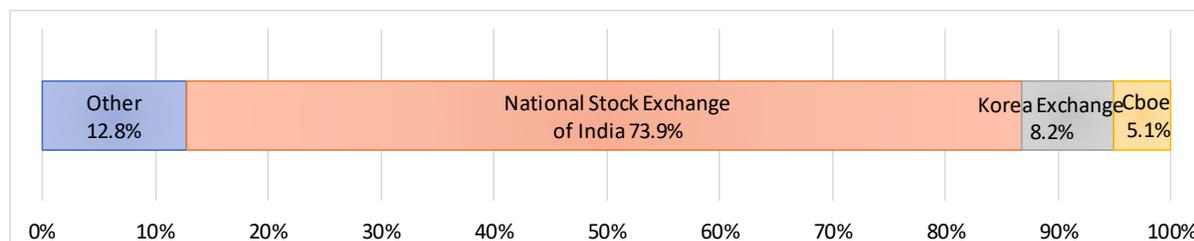


Table 6: Top 10 exchanges by number of stock index options contracts traded in 2020

	Volume		Notional Value		Open interest	
	2020	YoY change	2020	YoY change	2020	YoY change
National Stock Exchange of India	6,667,958,460	60%	61,001,669	57%	3,835,527	98%
Korea Exchange	737,930,851	10%	50,044,301	29%	2,222,084	-18%
Cboe Global Markets	459,030,881	-3%	NA	NA	19,753,530	-15%
Eurex	441,396,354	2%	16,702,642	5%	44,347,413	2%
Taiwan Futures Exchange	201,912,292	19%	4,317,894	41%	408,338	-33%
CME Group	180,014,245	11%	31,234,752	10%	2,422,117	-30%
India International Exchange	67,999,137	111%	NA	NA	67	-95%
B3 - Brasil Bolsa Balcão	65,319,689	56%	403,216	-9%	499,493	-6%
Hong Kong Exchanges and Clearing	36,048,593	-6%	2,425,829	-37%	1,697,059	-27%
Japan Exchange Group	29,608,298	-4%	NA	NA	1,332,791	-19%
Others	132,118,672	15%	4,216,974	45%	6,143,469	-17%
Grand Total	9,019,337,472	42.7%	170,347,276	29%	82,661,888	-5%

Table 7: Top 10 stock index options contracts traded in 2020

Contract Name	Contract size	Exchange name	Volume 2020	Notional value 2020	Open interest 2020
BANKNIFTY	25 points*	National Stock Exchange of India	4,295,092,542	33,391,328.46	1,352,585
NIFTY	75 points*	National Stock Exchange of India	2,372,865,911	27,610,340.54	2,482,942
DRV Option KOSPI 200	KRW 250,000	Korea Exchange	610,510,383	169,896.41	2,096,064
S&P 500 Options (SPX)	100 shares of the underlying index	Cboe Global Markets	312,949,642	100,707,194.80	12,554,171
OPT ON EURO STOXX 50	EUR 10 x index pts	Eurex	295,157,618	11167249.08	30447850
TAIEX Options	TWD 50 x index pts	Taiwan Futures Exchange	201,733,160	4,315,185.89	404,301
E-MINI S&P500	US\$ 50 x S&P 500 Index	CME Group	170,418,771	26,902,891.84	2,257,596
VIX Index Options (VIX)	US\$ 100 x index value	Cboe Global Markets	124,518,765	361,104.42	6,234,304
DRV Option KOSPI 200 Weekly	KRW 250,000	Korea Exchange	120,039,385	14,478.37	14,228
INDIA50	1 S&P BSE SENSEX 50	India International Exchange	67,999,137	11,621.97	67

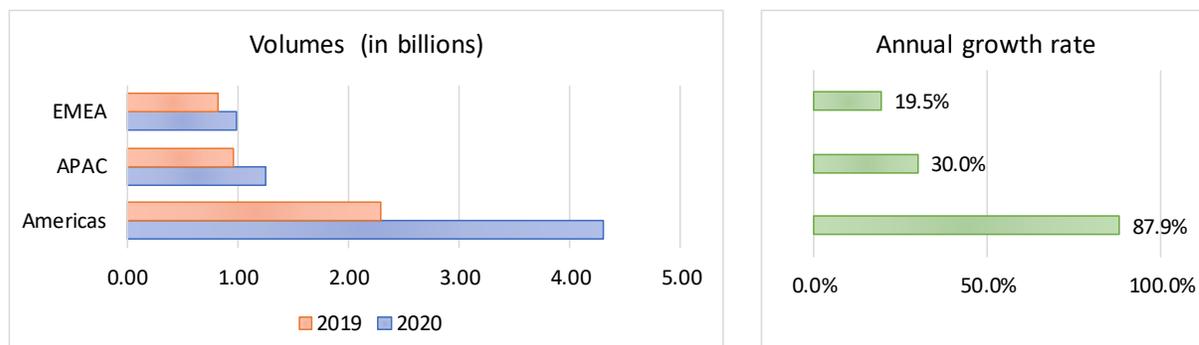
* Most recent information (2019). Note that contract size is periodically revised based on SEBI guidelines, as reported by NSE India.

5.4 Stock Index Futures

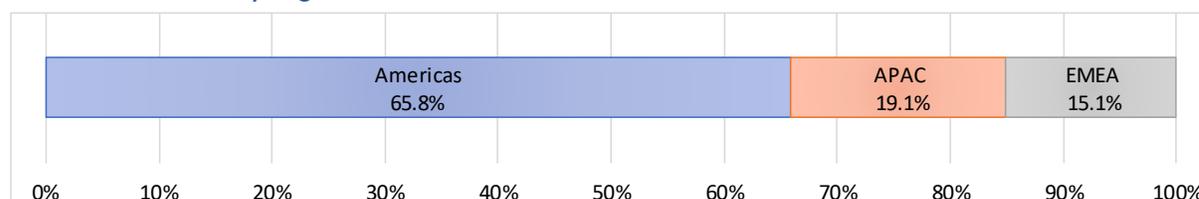
- Stock index futures volumes were up 60.4% on 2019 with volumes of 6.54 billion.
- They are the fourth most actively traded derivatives product type and the third equity derivative, accounting for 14.1% of overall derivatives volumes and 25.2% of equity derivatives volumes.
- Volumes were up in all regions: in APAC by 30.0% and in EMEA by 19.5% and in Americas by a significant 87.9% due to B3 – Brasil Bolsa Balcao and CME Group.
- The top 3 exchanges (in terms of volumes traded) – two from the Americas region and one from the EMEA region - accounted for 72.8% of total volume traded.

Figure 13: Stock Index Futures

A. Volumes and yearly change



B. Share of volume by region



C. Share of volume by exchange

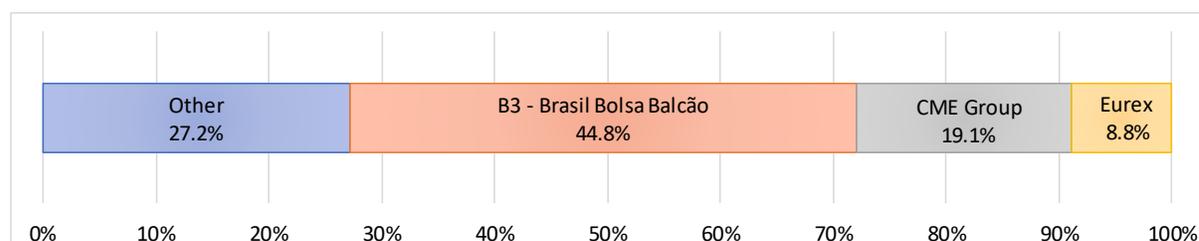


Table 8: Top 10 exchanges by number of stock index futures contracts traded in 2020

	Volume		Notional Value		Open interest	
	2020	YoY change	2020	YoY change	2020	YoY change
B3 - Brasil Bolsa Balcão	2,929,801,044	101%	12,992,454	63%	919,804	-1%
CME Group	1,249,348,285	76%	132,277,903	49%	4,194,048	-3%
Eurex	577,663,382	15%	28,439,249	14%	9,461,979	-7%
Japan Exchange Group	394,062,023	31%	17,136,463	29%	1,452,884	-15%
Singapore Exchange	185,255,365	3%	NA	NA	1,378,504	-34%
Moscow Exchange	171,817,651	67%	402,714	51%	464,474	-5%
Korea Exchange	152,981,643	56%	6,822,667	68%	658,409	-17%
National Stock Exchange of India	131,006,553	57%	1,162,849	39%	298,620	22%
Taiwan Futures Exchange	111,724,998	64%	5,300,665	71%	177,537	19%
Hong Kong Exchanges and Clearing	111,708,581	0%	10,004,539	-19%	566,431	-6%
Others	520,648,497	13%	30,399,411	45%	6,250,467	-12%
Grand Total	6,536,018,022	60.5%	244,938,914	39%	25,823,157	-10%

Table 9: Top 10 stock index futures contracts traded in 2020

Contract Name	Contract size	Exchange name	Volume 2020	Notional value 2020	Open interest 2020
E-MINI S&P500	US\$ 50 x S&P 500 Index	CME Group	502,226,732	78,919,486.82	2,541,940
FUT ON EURO STOXX 50	10 EUR x index pts	Eurex	352,195,151	13,639,283.27	2,917,794
Nikkei 225 mini	JPY 100	Japan Exchange Group	321,718,519	6,840,434.92	365,751
MICRO E-MINI S&P500	US\$ 5 x S&P 500 Index	CME Group	226,808,530	3,595,433.02	63,107
MICRO E-MINI NASDAQ 100	US\$ 2 x Nasdaq-100 Index	CME Group	178,531,164	3731962.18	50521
RTS Index Futures	1 x index pts	Moscow Exchange	156,014,870	374,496.46	480,963
E-MINI NASDAQ 100	US\$ 20 x Nasdaq-100 Index	CME Group	146,717,097	29,840,564.79	219,842
BIST30	10 x BIST 30 Index futures	Borsa Istanbul	101,844,357	177,523.34	497,827
FTSE China A50 Index Futures	US\$ 1 x SGX FTSE China A50 Index Futures Price	Singapore Exchange	96,578,641	NA	718,884
FUT ON EURO STOXX BANKS	EUR 50 x index pts	Eurex	92,545,411	378,328.45	1,633,783

6 ETF DERIVATIVES

- ETF derivatives volumes were up 65.1% on 2019 to 3.07 billion.
- ETF options continued to account for most (99.9%) of the ETF derivatives trading with 3.07 billion contracts traded in 2020 while ETF futures recorded 0.9 million contracts traded in 2020.
- ETF derivatives are primarily traded in the Americas region, housing the nine largest exchanges by volumes traded, Nasdaq - US, Cboe Global Markets and NYSE accounting for 71.7% of the global ETF derivatives trading. As we can see in Figure 14, compared with ETF option volumes, ETF futures volumes are negligible.

Figure 14: Number of ETF derivatives contracts

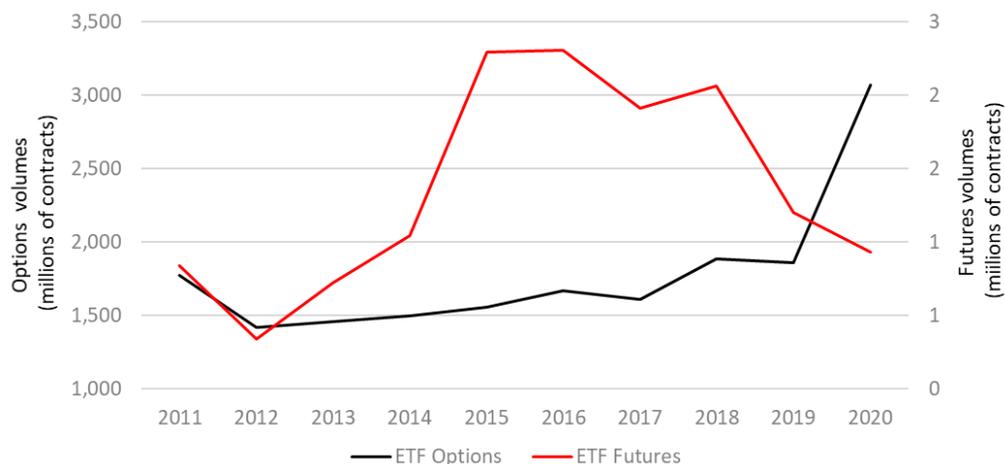


Figure 15: ETF Derivatives – share of total volumes by exchanges

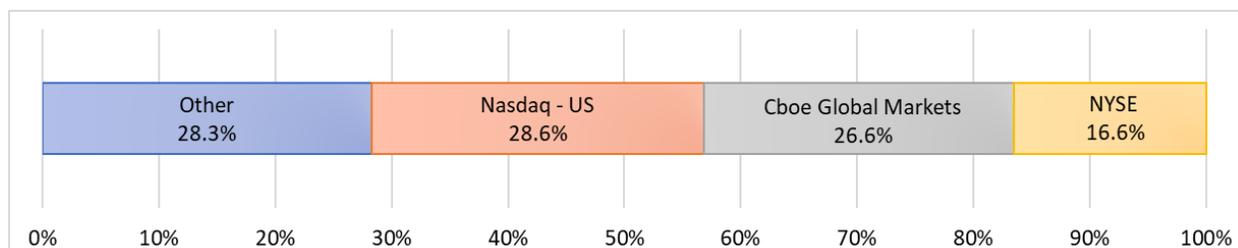


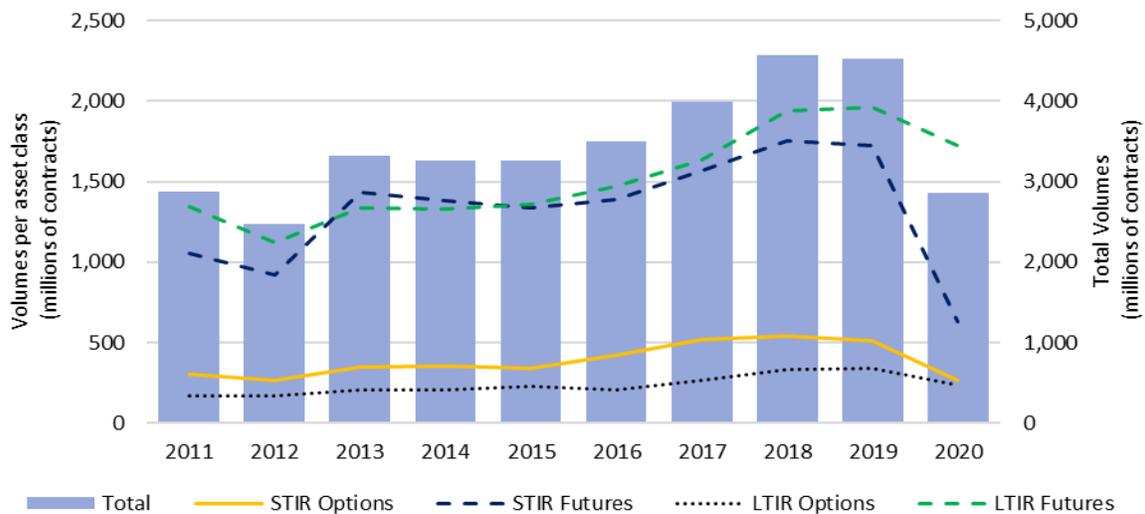
Table 10: Top 10 exchanges by number of ETF options and futures contracts traded in 2020

	Volume		Notional Value		Open interest	
	2020	YoY change	2020	YoY change	2020	YoY change
Nasdaq - US	877,234,171	83%	NA	NA	NA	NA
Cboe Global Markets	816,439,054	47%	NA	NA	104,455,213	20%
NYSE	508,267,613	42%	150,712	164%	NA	NA
B3 - Brasil Bolsa Balcão	379,833,133	927%	64,190,117	603%	1,669,113	796%
MIAX Exchange Group	319,202,020	78%	7,204,816	97%	NA	NA
International Securities Exchange	155,898,433	-4%	NA	NA	NA	NA
Bourse de Montreal	9,359,748	17%	17,817	NA	1,373,685	41%
Hong Kong Exchanges and Clearing	1,437,492	-41%	14,647	-39%	82,686	6%
Japan Exchange Group	1,255,777	49%	NA	NA	43,779	227%
Taiwan Futures Exchange	1,051,505	-14%	21,277	42%	19,082	46%
Others	470,433	22%	3,911	42%	132,998	84%
Grand Total	3,070,449,379	72.1%	71,603,298	456%	107,776,556	22%

7 INTEREST RATE DERIVATIVES

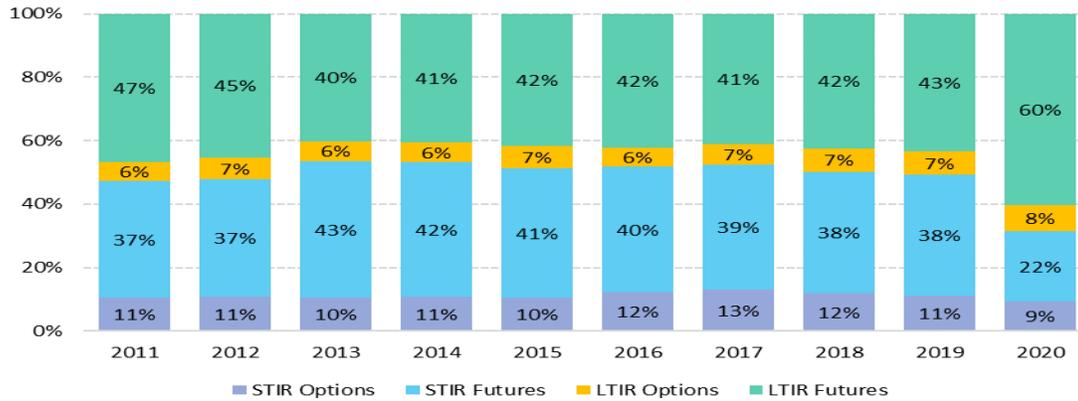
- Interest rate derivatives volumes declined in 2020 compared to the previous year by 11.9% reaching only 3.98 billion contracts.
- Volumes were down across all interest rate derivatives⁷: short term interest rate (STIR) options and futures by 47.4% and 63.4% respectively, LTIR options and futures by 29.9% and 12.3% respectively.
- All three regions had a negative trend: the Americas, where the bulk of the volumes are traded (68.2%), volumes decreased by 14.0%, in APAC by 9.1% and in EMEA region by 6.4%. APAC accounts for 5.6% share of the interest rate derivatives volumes, while EMEA for 26.2%.

Figure 16: Volumes of interest rate exchange traded derivatives (millions of contracts)



⁷ Charts and tables in Section 7 do not include data from B3 - Brasil Bolsa Balcão, ICE Futures Europe and Johannesburg Stock Exchange.

Figure 17: Product composition over time by share of total volume

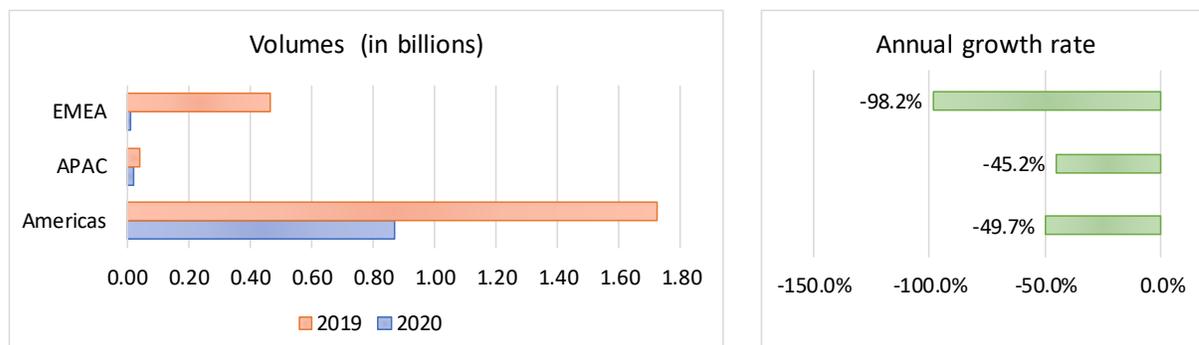


7.1 STIR Options and Futures

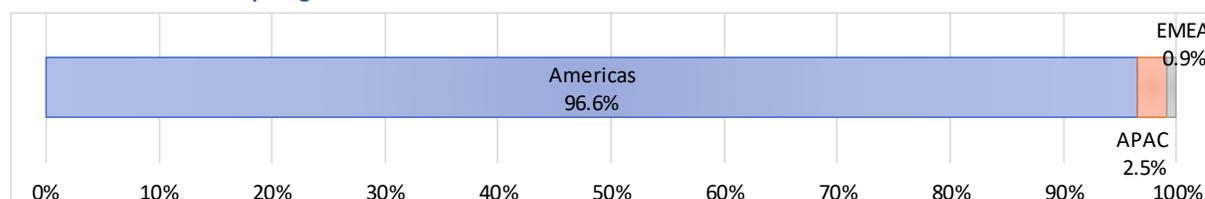
- STIR options volumes (which accounted for 0.6% of the total derivatives volumes) decreased by 47.4% on 2019, as well as STIR futures (with a 1.4% share) by 63.4%.
- The Americas region, where 96.6% of global STIR derivatives are traded, saw volumes decrease by 49.7%. Same trend was observed in APAC and EMEA by 45.2% and 98.2%, respectively.
- As Figure 18C shows 94.0% of the trading activity took place on CME Group, reflecting the highly concentrated market for STIR derivatives.
- One of the most actively traded contract was CME Group’s Eurodollar futures.

Figure 18: STIR Options and Futures

A. Volumes and yearly change



B. Share of volume by region



C. Share of volume by exchange

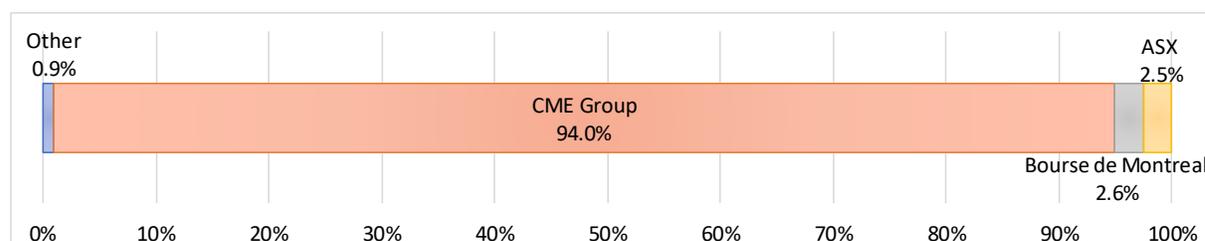


Table II: Top 10 exchanges by number of short-term interest rate derivatives contracts traded in 2020

	Volume		Notional Value		Open interest	
	2020	YoY change	2020	YoY change	2020	YoY change
CME Group	844,804,224	-30%	1,099,273,480	-31%	34,255,104	-41%
Bourse de Montreal	23,065,940	-25%	18,652,157	-21%	1,208,780	-6%
ASX Australian Securities Exchange	22,109,497	-45%	19,824,236	-45%	1,033,007	-34%
Nasdaq Nordic and Baltics	4,400,729	-46%	487,729	-95%	2,350,700	13%
LSE Group	3,801,150	-34%	3,484,969	-29%	361,291	-8%
Moscow Exchange	44,690	-59%	48	-64%	25,642	-50%
Eurex	36,577	-6%	11,035	3%	6,534	4%
Bolsa de Valores de Colombia	2,090	-37%	312	-40%	2,330	-25%
Hong Kong Exchanges and Clearing	314	16%	50	19%	15	-75%
Borsa Istanbul	147	24%	20	-1%	1	0%
Others	0	NA	0	NA	0	NA
Grand Total	898,265,358	-30.8%	1,141,734,037	-31%	39,243,404	-38%

Table 12: Top 10 STIR contracts traded in 2020

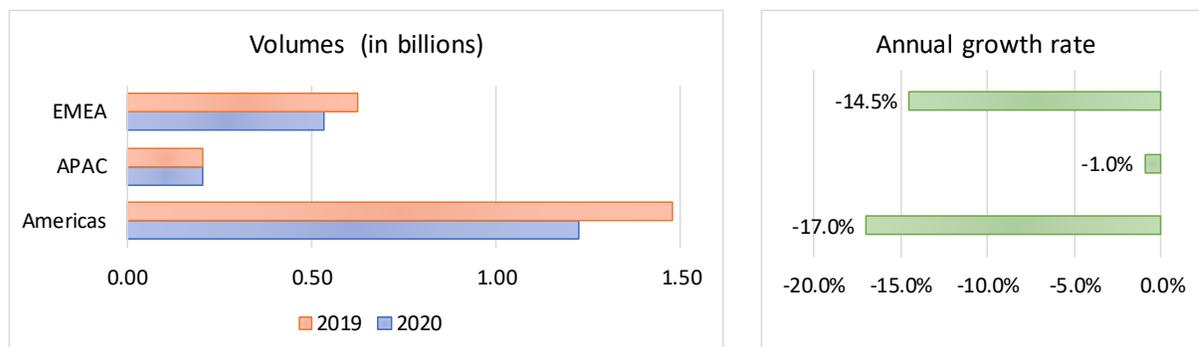
Contract Name	Contract size	Exchange name	Volume 2020	Notional value 2020	Open interest 2020
DI1 Futures	NA	B3 - Brasil Bolsa Balcão	512,021,690	9,112,895.92	27,347,609
Eurodollar Futures	US\$ 1,000,000	CME Group	509,912,503	509,912,503.00	9,145,987
Eurodollar Options	US\$ 1,000,000	CME Group	267,578,302	267,578,302.00	23,280,319
Fed Funds Futures	US\$ 5,000,000	CME Group	52,440,781	262,203,905.00	1,119,168
Three-Month Canadian Bankers' Acceptance Futures	CA\$ 1,000,000	Bourse de Montreal	23,026,123	18088077.77	1147439
90-Day Bank Bill (IR) Futures	Face value at maturity of A\$ 1,000,000	ASX Australian Securities Exchange	16,520,510	12,451,950.00	769,779
3-Month SOFR Futures	US\$ 1,000,000	CME Group	7,619,649	7,619,649.00	473,121
1-Month SOFR Futures	US\$ 5,000,000	CME Group	5,224,162	26,120,810.00	208,091
ID x IPCA spread futures	NA	B3 - Brasil Bolsa Balcão	3,813,135	93,344.28	633,356
30 Day Interbank Cash Rate (IB) Futures	Face value at maturity of A\$ 3,000,000	ASX Australian Securities Exchange	2,993,870	5,496,807.69	65,134

7.2 LTIR Options and Futures

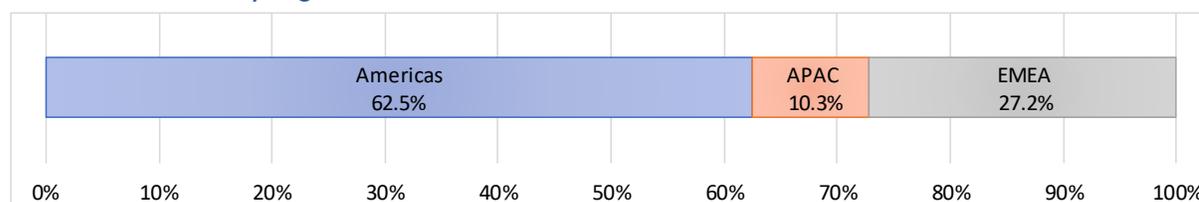
- Over 1.96 billion LTIR derivatives contracts were traded in 2020, down 14.9% on 2019. LTIR options accounted for 0.5% of total derivatives volumes in 2020 while LTIR futures for 3.7%.
- LTIR futures, which accounted for the major share (60.3%) of interest rates derivatives, saw volumes decrease by 12.3% while LTIR options by 29.9% on 2019.
- The Americas region where the majority (62.5%) of the LTIR derivatives are traded saw volume decrease by 17.0%. APAC and EMEA regions also saw falling volumes by 1.0% and 14.5%, respectively.
- The market remained fairly concentrated with over half of all volumes traded on a single exchange (CME Group) as the Figure 19C shows.
- The contracts with the highest volumes traded were the CME group's 5 year and 10-year Note futures.

Figure 19: LTIR Options and Futures

A. Volumes and yearly change



B. Share of volume by region



C. Share of volume by exchange

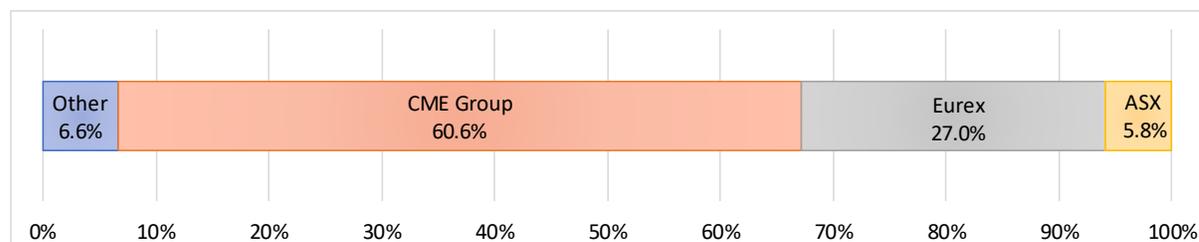


Table 13: Top 10 exchanges by number of long-term interest rate options and futures contracts traded in 2020

	Volume		Notional Value		Open interest	
	2020	YoY change	2020	YoY change	2020	YoY change
CME Group	1,187,272,495	-15%	131,788,324	-17%	15,166,949	-27%
Eurex	528,479,192	-6%	97,372,382	5%	6,509,881	-4%
ASX Australian Securities Exchange	113,953,164	-5%	8,465,307	4%	2,258,503	-6%
Korea Exchange	47,831,791	8%	5,252,860	15%	448,127	19%
Bourse de Montreal	37,664,019	5%	2,652,155	-4%	747,458	12%
China Financial Futures Exchange	24,035,059	84%	4,039,976	90%	201,548	54%
National Stock Exchange of India	8,561,379	-48%	23,771	-49%	48,219	-69%
Japan Exchange Group	7,472,929	-27%	NA	NA	72,508	-13%
Nasdaq Nordic and Baltics	3,619,470	2%	441,731	-89%	157,742	-24%
Singapore Exchange	404,381	-5%	NA	NA	13,786	6%
Others	436,529	-47%	11,149	-14%	35,262	-40%
Grand Total	1,959,730,408	-10.9%	250,047,654	-8%	25,659,983	-19%

Table 14: Top 10 LTIR contracts traded in 2020

Contract Name	Contract size	Exchange name	Volume 2020	Notional value 2020	Open interest 2020
10-YR NOTE Futures	Face value at maturity of US\$ 100,000	CME Group	405,990,223	40,599,022.30	3,229,165
5-YR NOTE Futures	Face value at maturity of US\$ 100,000	CME Group	244,842,677	24,484,267.70	3,292,445
Euro-Bund Futures	EUR 100000	Eurex	174,394,697	37,213,050.06	1,115,217
2-YR NOTE Futures	Face value at maturity of US\$ 200,000	CME Group	128,850,090	25,770,018.00	1,921,181
10-YR NOTE Options	Face value at maturity of US\$ 100,000	CME Group	127,185,745	12718574.5	2157105
Euro-Bobl Futures	EUR 100,000	Eurex	106,586,687	17,581,660.56	959,919
30-YR BOND Futures	Face value at maturity of US\$ 100,000	CME Group	95,684,575	9,568,457.50	1,161,577
Euro-Schatz Futures	EUR 100,000	Eurex	94,630,224	12,965,210.01	1,226,490
Ultra 10-Year Note Futures	Face value at maturity of US\$ 100,000	CME Group	64,579,927	6,457,992.70	1,003,994
10 Year Bonds (XT) Futures	Face value at maturity of A\$ 100,000	ASX Australian Securities Exchange	61,482,878	4,511,041.38	1,400,986

8 CURRENCY DERIVATIVES

- Currency derivatives saw a 30.9% increase in volumes traded on 2019.
- Volumes largely consist of currency futures contracts which were up 35.7% on 2019, while currency options volumes increased only by 16.6% on 2019.
- The APAC region, where the bulk of the volumes (43.3%) are traded, saw volumes increase by 19.7% on 2019. The Americas region, which accounts for 29.7% in terms of volumes traded, saw the same trend with volumes increasing by 27.4%. The EMEA region, which accounts for 26.9% of the currency trading, followed trend with volumes going up by 59.0% on 2019.
- In terms of volumes, three exchanges accounted for 82.9% of the currency derivatives trading: National Stock Exchange of India, B3 - Brasil Bolsa Balcão and Moscow Exchange.
- In terms of contracts traded, NSE India's USDINR Options were the most traded by volume.

Figure 20: Volumes of currency derivatives

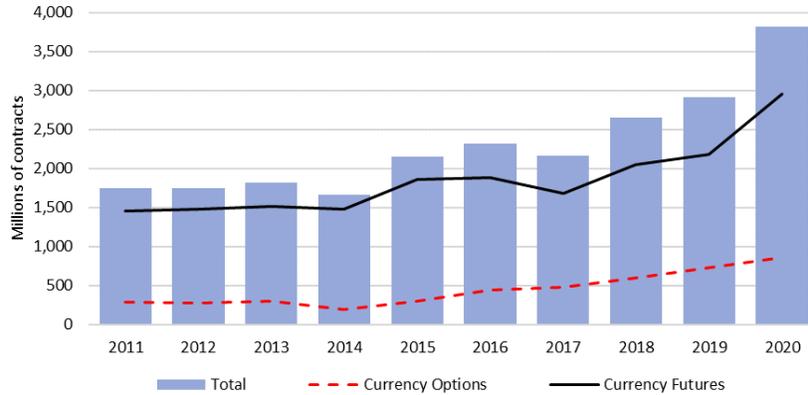
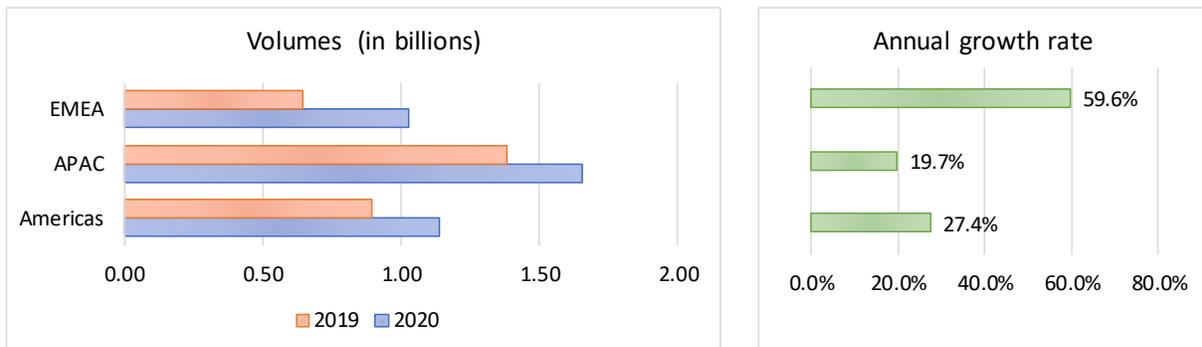
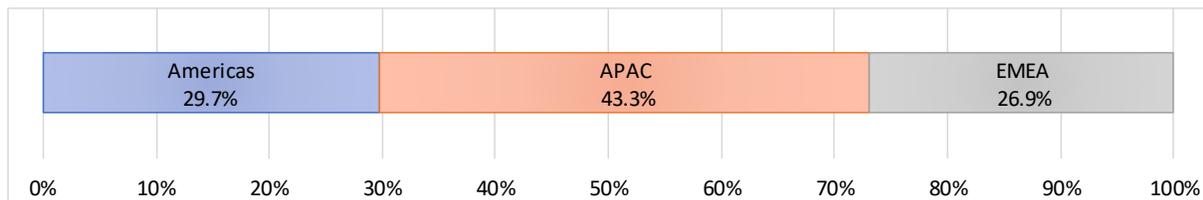


Figure 21: Currency Options and Futures

A. Volumes and yearly change



B. Share of volume by region



C. Share of volume by exchange

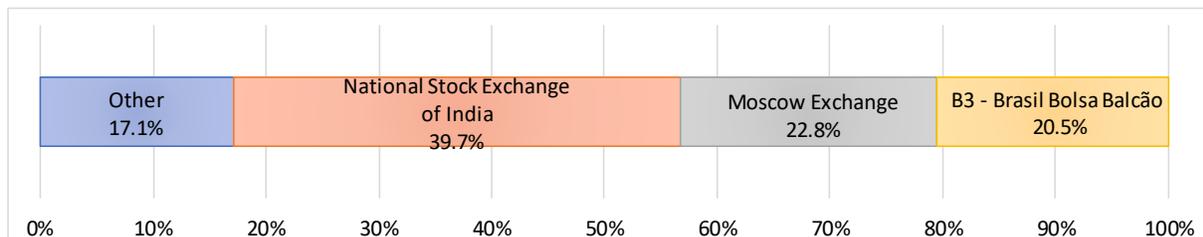


Table 15: Top 10 exchanges by number of currency options and futures contracts traded in 2020

	Volume		Notional Value		Open interest	
	2020	YoY change	2020	YoY change	2020	YoY change
National Stock Exchange of India	1,513,984,988	20%	1,566,292	24%	7,653,717	53%
Moscow Exchange	870,084,453	89%	878,394	79%	4,082,484	-10%
B3 - Brasil Bolsa Balcão	781,158,041	73%	11,005,750	35%	7,756,047	18%
CME Group	217,998,050	0%	20,547,840	-1%	2,273,611	-7%
Matba Rofex	112,849,439	-45%	105,564	-37%	3,901,705	410%
Korea Exchange	108,003,067	24%	1,286,585	46%	899,781	22%
Borsa Istanbul	63,684,723	-14%	63,762	-12%	3,058,920	195%
Johannesburg Stock Exchange	62,949,543	-12%	72,682	-67%	6,571,624	-46%
Singapore Exchange	25,469,959	6%	NA	NA	133,855	-7%
Tel-Aviv Stock Exchange	13,638,913	23%	147,266	28%	482,903	2%
Others	47,905,397	2%	1,465,216	66%	3,787,549	134%
Grand Total	3,817,726,573	30.9%	37,139,353	12%	40,602,196	15%

Table 16: Top 10 currency contracts traded in 2020

Contract Name	Contract size	Exchange name	Volume 2020	Notional value 2020	Open interest 2020
USDINR Options*	US\$ 1,000	National Stock Exchange of India	776,695,344	789,303.90	3,704,550
Futures on USD/RUB Exchange Rate	RUB 1,000	Moscow Exchange	755,425,507	751,594.95	2,638,021
USDINR Futures*	US\$ 1,000	National Stock Exchange of India	605,182,124	615,115.04	3,368,314
DLR Futures	US\$ 1,000	Matba Rofex	112,821,268	105,556.47	3,901,528
DRV Futures USD	US\$ 10,000	Korea Exchange	104,062,399	1131560.52	863682
U.S. Dollar futures	US\$ 50,000	B3 - Brasil Bolsa Balcão	79,354,580	3,905,068.00	1,383,528
GBPINR Futures*	GBP 1,000	National Stock Exchange of India	70,931,798	92,999.83	228,250
EURO FX Futures	EUR 125,000	CME Group	55,419,194	7,943,493.06	670,003
USDTRY Futures	US\$ 1,000	Borsa Istanbul	54,876,445	53,979.79	2,894,291
Futures on EUR/RUB Exchange Rate	RUB 1,000	Moscow Exchange	44,785,761	51,042.74	258,953

*Most recent information, when present (2019). Note that contract size is periodically revised based on SEBI guidelines, as reported by NSE India.

9 COMMODITY DERIVATIVES

- Commodity derivatives recorded an increase in volumes: 34.1% on 2019 to 9.30 billion in 2020.
- Commodity futures, which accounted for the second most traded derivative, with a share of 19.4%, saw volumes increase by 34.4%. Commodity options had the same trend, with volumes increasing by 26.2% on 2019.
- All regions experienced growth: the Americas by 0.6%, APAC region by 46.9% and EMEA region by 23.9%. The largest share of commodity derivatives trading takes place in APAC region (67.9%).

- Three exchanges - Shanghai Futures Exchange, Dalian Commodity Exchange and Zhengzhou Commodity Exchange - accounted for more than half of overall volumes.

Figure 22: Volumes of commodity options and futures

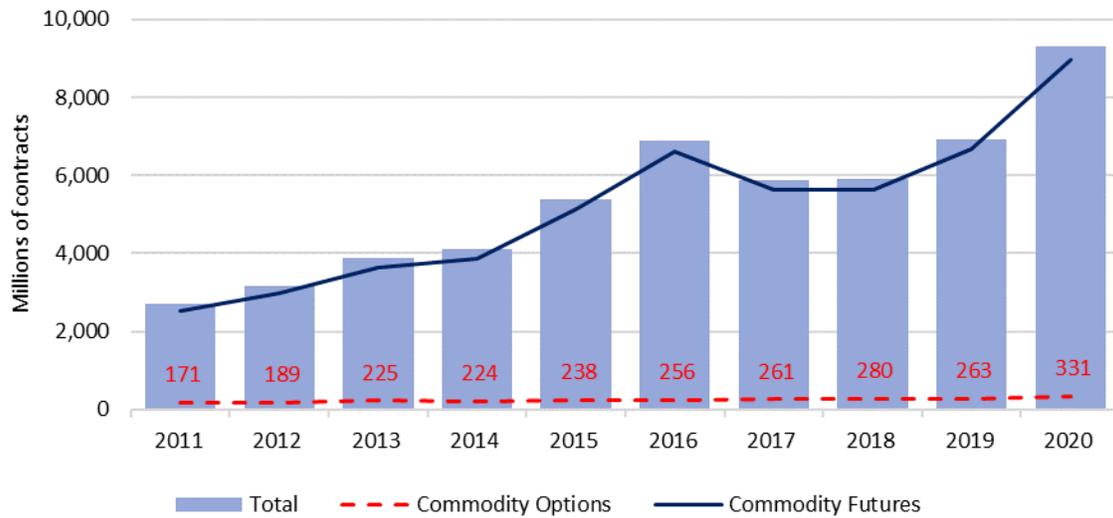
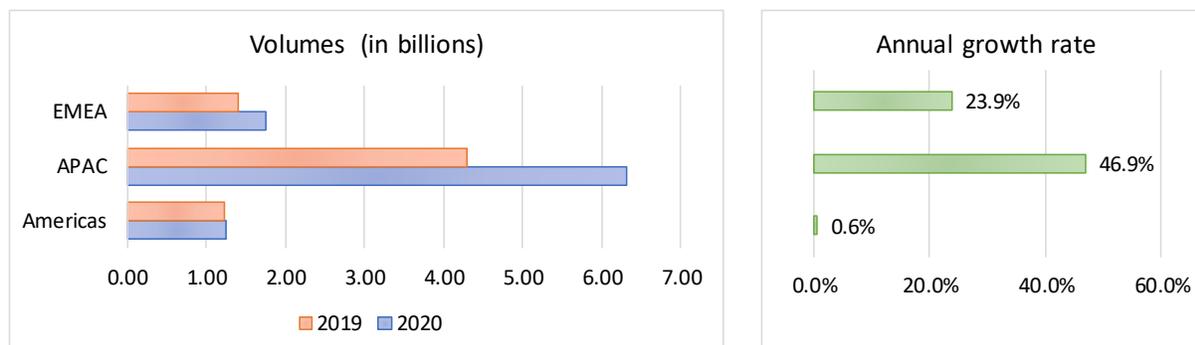
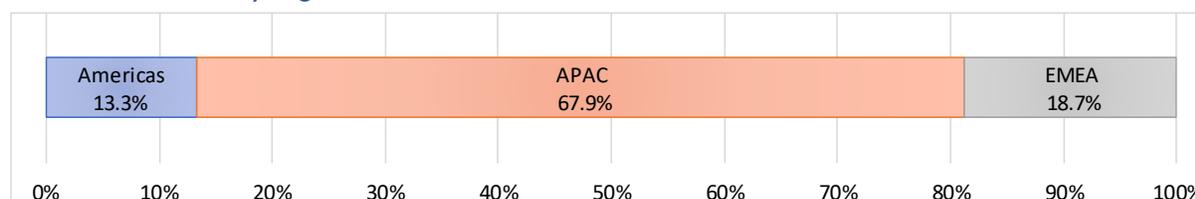


Figure 23: Commodity Options and Futures

A. Volumes and yearly change



B. Share of volume by region



C. Share of volume by exchange

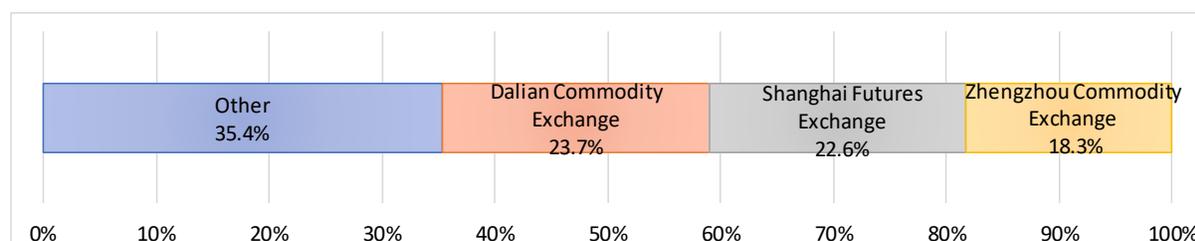


Table 17: Top 10 exchanges by number of commodity options and futures contracts traded in 2020

	Volume		Notional Value		Open interest	
	2020	YoY change	2020	YoY change	2020	YoY change
Dalian Commodity Exchange	2,207,327,866	63%	16,730,705	69%	8,868,897	-8%
Shanghai Futures Exchange	2,102,822,994	49%	22,681,386	63%	6,536,608	14%
Zhengzhou Commodity Exchange	1,701,403,050	56%	9,206,057	62%	8,486,582	92%
CME Group	1,140,983,247	1%	54,592,792	-10%	23,562,813	-4%
Moscow Exchange	859,627,211	30%	374,144	-17%	1,728,670	-47%
ICE Futures Europe	541,271,482	12%	19,633,390	-22%	12,769,113	-5%
Multi Commodity Exchange of India	221,016,837	-28%	1,194,493	8%	194,370	-13%
Borsa Istanbul	157,669,915	169%	40,747	247%	1,843,362	283%
London Metal Exchange	154,889,243	-12%	15,694,439	-13%	2,361,064	-3%
ICE Futures US	90,966,088	-2%	1,994,532	-1%	3,020,553	-2%
Others	121,048,513	-26%	944,722	80%	3,751,990	-2%
Grand Total	9,299,026,446	34.1%	143,087,406	4%	73,124,022	3%

Table 18: Top 10 commodity contracts traded in 2020*

Contract Name	Contract size	Exchange name	Volume 2020	Notional value 2020	Open interest 2020
Futures on Brent oil	US\$ 10 per 1 barrel	Moscow Exchange	742,813,393	21,706,172.39	1,579,197
Steel Rebar	10 t/lot	Shanghai Futures Exchange	366,043,400	NA	1,575,426
Soybean Meal Futures	10 metric tons	Dalian Commodity Exchange	359,464,679	1,627,221.85	2,304,861
Methanol Futures	10 metric tons	Zhengzhou Commodity Exchange	344,862,754	1,047,165.85	1,043,366
PTA Futures	5 metric tons	Zhengzhou Commodity Exchange	321,990,001	905859.28	3105291
RBD Palm Olein Futures	10 metric tons	Dalian Commodity Exchange	315,167,096	2,749,236.40	416,392
Iron Ore Futures	100 metric tons	Dalian Commodity Exchange	284,630,172	3,308,414.89	606,889
CRUDE OIL Futures	1,000 barrels	CME Group	274,180,352	10,706,087.45	2,150,888
Flat Glass Futures	20 metric tons	Zhengzhou Commodity Exchange	185,258,846	973,961.70	479,325
Nickel Futures	100 metric tons	Shanghai Futures Exchange	179,764,100	NA	311,876

9.1 Commodity derivatives by type of underlying⁸

This year, in addition to aggregate commodity derivatives trading statistics, more granular data on commodity derivatives by underlying commodity has also been collected. The categories of underlying by which commodity derivatives contracts have been classified are as follows:

- Agriculture
- Energy: this includes emissions contracts and ethanol and methanol contracts, to the extent that these are energy-related
- Non-precious metals
- Precious metals
- Index commodity derivatives: a commodity index tracks a basket of commodities. The commodities in the index may all reference a particular underlying category (e.g. agricultural commodities) or a cross-section of commodities
- Other: meant to capture all contracts that do not clearly fall into one of the above-mentioned categories. It includes instruments like freight, plastic-polypropylene, and glass contracts.

Key trends and highlights from this data are as follows:

- Agriculture and energy accounted for the bulk (35.8% and 30.5% respectively) of global commodity derivatives volumes.
- While volumes of energy based derivatives fell by 11.5%, the rest of the commodities had an uptick on 2019: agriculture based commodities by 46.3%, index commodity derivatives⁹ by 706.5%, non-precious metals by 1.1%, other commodities by 75.7% and precious metals by 84.5%.

⁸ While we received the data from 70% of the market, B3 - Brasil Bolsa Balcão, Bursa Malaysia Derivatives, ICE Futures Europe, India International Exchange, Indian Commodity Exchange, Indonesia Commodity and Derivatives Exchange, Johannesburg Stock Exchange, SPIMEX and Shanghai Futures Exchange did not submit commodities by type of underlying data

⁹ This result is due to Multi Commodity Exchange of India entering the market

- Volumes of agricultural commodity derivatives were up in the APAC region by 69.5% where the bulk (80.3%) of contracts trading takes place. In the Americas, where 19.0% of the contracts were traded, volumes were down 2.3%. EMEA also registered a fall in contracts traded by 52.1% on 2019.
- Energy derivatives volumes were down by 30.4% in EMEA, where 37.6% of contracts are traded, while in the Americas and APAC regions (where 30.1% and 32.3% of contracts are traded, respectively) the volumes had a positive trend of 1.2% and 10.8% respectively.
- The volumes of non-precious metals registered a fall in the EMEA region by 11.9%, while the Americas and APAC regions had upticks of 0.7% and 7.0% respectively. The bulk of the volumes is traded in APAC (69.6%), while the Americas and EMEA account for 4.3% and 26.1% respectively.
- 'Other' commodities, precious metals and index commodity derivatives accounted for the remaining share of commodity derivatives volumes.
- As with other products, there is a large variation in contract sizes across markets. Hence, the regional shares of volumes traded chart must be interpreted in this context.

Table 19: Breakdown of commodity by underlying

Category	2020 volume	2019 volume	YoY change
Agriculture	2,365,753,843	1,616,554,896	46%
Energy	2,015,714,431	2,277,138,224	-12%
Index commodity derivatives	395,678	49,061	707%
Non-precious metals	593,811,889	587,602,548	1%
Other commodities	1,089,075,646	619,834,437	76%
Precious metals	534,925,599	289,986,789	85%
Grand Total	6,599,677,086	5,391,165,955	22.40%

Table 20: Top five exchanges by volumes traded in 2020

Top five exchanges by volumes traded in 2020 and % change on 2019				
	Volume	YoY change	Notional Value	YoY change
Agriculture				
Dalian Commodity Exchange	1,310,384,148	91%	8,149,622	127%
Zhengzhou Commodity Exchange	584,528,822	36%	4,840,224	59%
CME Group	358,321,907	-2%	10,652,340	2%
ICE Futures US	90,505,541	-2%	1,930,071	-3%
Euronext	17,128,052	27%	229,975	42%
Energy				
Moscow Exchange	758,017,451	21%	298,653	-28%
CME Group	605,692,346	1%	21,921,083	-30%
Zhengzhou Commodity Exchange	419,752,826	43%	1,616,913	46%
Dalian Commodity Exchange	133,441,723	70%	2,720,242	47%
Multi Commodity Exchange of India	96,219,861	-55%	342,052	-30%
Non-precious metals				
Dalian Commodity Exchange	296,229,269	0%	3,311,958	16%
London Metal Exchange	154,906,344	-12%	15,872,426	-11%
Zhengzhou Commodity Exchange	76,619,394	274%	371,357	285%
CME Group	25,333,871	1%	1,735,758	2%
Singapore Exchange	22,331,263	12%	NA	NA
Precious metals				
Borsa Istanbul	157,593,274	169%	40,465	255%
CME Group	151,635,123	6%	20,283,611	17%
Multi Commodity Exchange of India	105,495,036	159%	637,471	80%
Moscow Exchange	101,604,623	170%	75,486	125%
Thailand Futures Exchange	10,821,720	43%	NA	NA
Index commodity derivatives				
Multi Commodity Exchange of India	363,417	NA	3,797	NA
Eurex	32,170	-30%	1,428	-44%
BME Spanish Exchanges	91	44%	311	9%
Other commodities				
Zhengzhou Commodity Exchange	620,502,008	77%	2,377,563	66%
Dalian Commodity Exchange	467,272,726	74%	2,548,884	60%
Singapore Exchange	1,097,043	17%	NA	NA
Nasdaq Nordic and Baltics	103,441	89%	720.26	4%
Euronext	100,428	NA	NA	NA

Figure 24: Share of total volume by type of underlying: 2020 compared to 2019

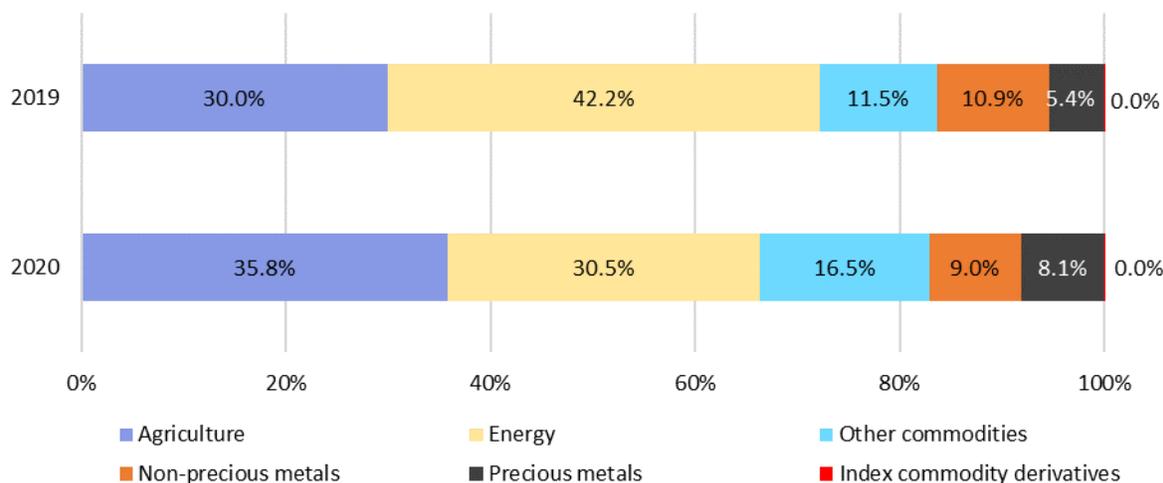
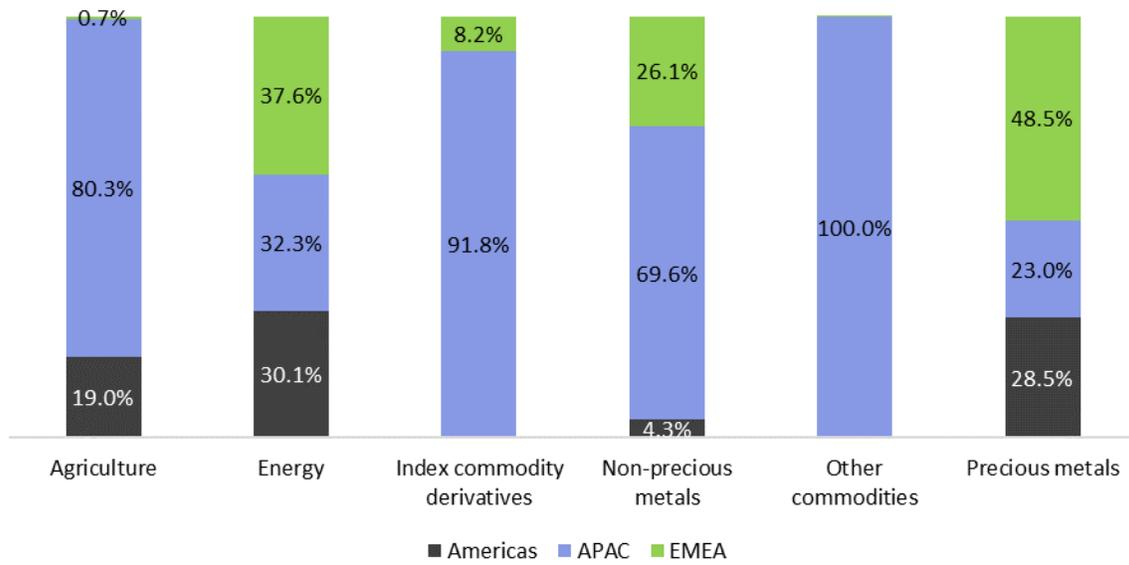


Figure 25: Share of total volume by commodity type and region in 2020



OTHER OPTIONS & FUTURES¹⁰

Other options and futures include products which do not fall into the categories that have been analyzed above such as index volatility options and futures, dividend options and futures, and inflation indexed derivatives.

Volumes traded of other options and other futures were down on 2019 by 23.6% and 21.7% respectively.

The volume of other options and futures fell in EMEA by 22.9%, while in APAC increased by 21.1%. The Americas don't have this product line.

The decline in the volumes of other futures and other options was due to falling volumes of Eurex and to a lesser extent of Singapore Exchange.

Table 21: Exchanges by number of 'other' options contracts traded in 2020

	Volume		Notional Value		Open interest	
	2020	YoY change	2020	YoY change	2020	YoY change
Eurex	9,490,193	-3%	56,105	18%	2,443,795	20%
Grand Total	9,490,193	-3.10%	56,105	18%	2,443,795	20%

Table 22: Exchanges by number of 'other' futures contracts traded in 2020

	Volume		Notional Value		Open interest	
	2020	YoY change	2020	YoY change	2020	YoY change
Eurex	29,183,315	-3%	139,581	15%	3,948,024	-8%
Japan Exchange Group	1,058,859	25%	NA	NA	94,383	-5%
LSE Group	184,282	173%	255	64%	102,989	260%
Singapore Exchange	74,067	-16%	NA	NA	15,014	-27%
Grand Total	30,500,523	-1.60%	139,836	15%	4,160,410	-6%

¹⁰ ICE Futures Europe did not submit Other options and Other futures

10 ANNEX 1 – LIST OF EXCHANGES THAT CONTRIBUTED TO THE REPORT

ASX Australian Securities Exchange	Japan Exchange Group
Athens Stock Exchange	Johannesburg Stock Exchange
B3 - Brasil Bolsa Balcão	Korea Exchange
BME Spanish Exchanges	London Metal Exchange
Bolsa de Valores de Colombia	LSE Group
Bolsa Mexicana de Valores	Matba Rofex
Bolsa y Mercados Argentinos	MIAX Exchange Group
Borsa Istanbul	Moscow Exchange
Bourse de Montreal	Multi Commodity Exchange of India
Budapest Stock Exchange	Nasdaq - US
Bursa Malaysia Derivatives	Nasdaq Nordic and Baltics
Cboe Futures Exchange	National Stock Exchange of India
Cboe Global Markets	NYSE
China Financial Futures Exchange	NZX Limited
CME Group	Shanghai Futures Exchange
Dalian Commodity Exchange	Shenzhen Stock Exchange
Deutsche Boerse AG	Singapore Exchange
Dubai Gold and Commodities Exchange	Taiwan Futures Exchange
Euronext	Tehran Stock Exchange
Hong Kong Exchanges and Clearing	Tel-Aviv Stock Exchange
ICE Futures Europe	Thailand Futures Exchange
ICE Futures US	The Saint-Petersburg International Mercantile Exchange
India International Exchange	Warsaw Stock Exchange
Indian Commodity Exchange	Zhengzhou Commodity Exchange
International Securities Exchange	

11 ANNEX 2 – LIST OF EXCHANGES THAT PROVIDED GRANULAR DATA

ASX Australian Securities Exchange	India International Exchange
Athens Stock Exchange	Japan Exchange Group
B3 - Brasil Bolsa Balcão	Korea Exchange
BME Spanish Exchanges	London Metal Exchange
Bolsa de Valores de Colombia	LSE Group
Bolsa Mexicana de Valores	Matba Rofex
Borsa Istanbul	MIAX Exchange Group
Bourse de Montreal	Moscow Exchange
Budapest Stock Exchange	Multi Commodity Exchange of India
Bursa Malaysia Derivatives	Nasdaq - US
Cboe Futures Exchange	Nasdaq Nordic and Baltics
Cboe Global Markets	National Stock Exchange of India
China Financial Futures Exchange	NZX Limited
CME Group	Shenzhen Stock Exchange
Dalian Commodity Exchange	Singapore Exchange
Deutsche Boerse AG	Taiwan Futures Exchange
Dubai Gold and Commodities Exchange	Tel-Aviv Stock Exchange
Euronext	Thailand Futures Exchange
Hong Kong Exchanges and Clearing	Warsaw Stock Exchange
ICE Futures US	Zhengzhou Commodity Exchange

12 ANNEX 3 – TRADING STATISTICS

The volume/number of contracts traded and the open interest are reported in full numbers. The notional value of the contracts traded is reported in millions of US dollars. Where we did not receive data from the exchanges and were not able to supplement the missing data from other sources, this is mentioned under the relevant tables or reflected as “NA” for “not available”

Volume (full number) is the number of contracts traded. A contract is a standard unit of trading denoted by the number of shares or the amount of capital that may vary from class to class, or from product to product, as defined by the exchange.

Notional Value (USD millions) is the number of contracts traded multiplied by the contracts’ underlying value. Contracts underlying value is calculated by multiplying the market price of the underlying asset for each contract times the contract’s multiplier. It is an approximate measure of the underlying value of the number of contracts traded.

Open Interest (full number) is defined as the number of contracts outstanding at a given time (close of trading at the last trading day of the year)

Where we did not receive data from the exchanges and were not able to supplement the missing data from other sources, this is mentioned under the relevant tables or reflected as “NA” for “not available”.

12.1 Product level data tables

Single Stock Options

	Volume 2020	2019	Notional Value USD 2020	USD 2019	Open interest 2020	2019
Americas						
B3 - Brasil Bolsa Balcão	1,459,181,587	983,518,149	699,884	859,817	46,530,971	27,733,479
Bolsa Mexicana de Valores	150,692	752,511	16	76	2,420	15,000
Bolsa y Mercados Argentinos	39,480,723	52,421,674	206	-	NA	-
Bourse de Montreal	25,059,590	29,142,959	109,361	NA	4,177,270	4,091,345
Cboe Global Markets	1,287,889,878	819,521,975	NA	NA	265,226,043	182,274,299
International Securities Exchange	417,128,811	242,941,209	NA	NA	NA	NA
MIAX Exchange Group	507,985,576	260,266,648	9,573,574	3,676,239	NA	NA
Nasdaq - US	1,702,761,434	826,435,818	NA	NA	NA	NA
NYSE	782,351,153	442,557,070	362,895	131,980	NA	NA
APAC						
ASX Australian Securities Exchange	58,196,424	67,999,671	124,084	135,318	5,507,751	6,299,500
Hong Kong Exchanges and Clearing	129,601,933	106,417,826	551,546	358,513	8,860,221	6,624,472
Japan Exchange Group	91,330	389,286	NA	NA	15,244	64,504
Korea Exchange	4,635,452	24,402,791	NA	NA	21,504	295,227
National Stock Exchange of India	272,134,027	201,388,733	2,719,053	1,701,075	914,728	330,203
Taiwan Futures Exchange	124,732	206,166	840	678	4,337	2,612
EMEA						
Athens Stock Exchange	15,538	20,813	10	8	606	903
BME Spanish Exchanges	19,393,317	17,492,103	20,670	16,990	6,257,121	5,950,233
Borsa Istanbul	5,328,340	5,024,915	482	498	639,613	758,065
Eurex	189,106,929	185,670,864	929,810	891,612	49,863,675	50,925,143
Euronext	69,478,712	68,118,036	289,668	281,651	12,519,273	11,168,760
ICE Futures Europe	9,327,100	12,686,408	213,628	207,485	2,235,484	2,825,166
Johannesburg Stock Exchange	10,693,928	6,864,671	7,449	14,135	2,044,047	1,954,404
LSE Group	12,130,416	NA	43,367	NA	3,581,628	3,824,034
Moscow Exchange	1,770,677	2,393,962	409	819	200,350	274,988
Nasdaq Nordic and Baltics	17,826,448	20,694,628	32,444	31,603	-	2,570,233
Tehran Stock Exchange	16,598,556	6,603,069	2,324	35	2,827,642	NA
Tel-Aviv Stock Exchange	747,341	764,265	2,591	4,554	58,221	55,147
Grand Total	7,039,190,644	4,384,696,220	15,684,310	8,313,088	411,488,149	308,037,717

Single Stock Futures

	Volume 2020	2019	Notional Value USD 2020	USD 2019	Open interest 2020	2019
Americas						
B3 - Brasil Bolsa Balcão	358,034,705	23,654,300	1,693	198	22,146,700	2,187,900
Bolsa de Valores de Colombia	161,653	244,663	191	391	11,659	13,357
Bolsa Mexicana de Valores	31,150	36,824	5	7	2,064	2,636
Bourse de Montreal	11,707,465	4,406,202	51,092	NA	297,160	182,061
Matba Rofex	820,444	108,310	124	22	3,637	70
APAC						
ASX Australian Securities Exchange	2,893,184	3,117,588	3,360	3,979	354,922	626,336
Hong Kong Exchanges and Clearing	1,123,460	894,900	6,295	3,768	22,564	26,986
Korea Exchange	1,127,006,372	616,946,569	732,324	296,031	6,859,116	5,165,115
National Stock Exchange of India	256,437,505	254,383,777	2,270,043	2,048,976	1,568,297	1,846,372
Singapore Exchange	2,661,357	1,100,756	NA	NA	46,208	104,728
Taiwan Futures Exchange	25,837,101	19,788,425	242,706	173,221	373,047	163,555
Thailand Futures Exchange	47,386,674	52,098,173	NA	NA	1,783,284	2,917,490
EMEA						
Athens Stock Exchange	9,500,346	9,656,078	1,829	2,281	352,787	340,861
BME Spanish Exchanges	11,106,218	16,056,727	3,752	8,327	1,329,543	1,394,130
Borsa Istanbul	1,196,068,823	196,631,519	104,381	28,271	8,211,995	2,830,090
Budapest Stock Exchange	135,067	142,978	844	915	4,356	7,772
Dubai Gold and Commodities Exchange	79,950	1,673,921	161	2,622	4,835	524
Eurex	77,212,511	232,226,570	368,916	746,928	5,217,610	8,469,519
Euronext	27,341,284	4,396,363	118,048	20,865	646,826	1,390,438
ICE Futures Europe	11,439,230	39,181,471	1,164,429	3,134,410	237,070	189,567
Johannesburg Stock Exchange	17,152,630	9,146,810	10,800	5,859	1,813,745	1,134,815
LSE Group	1,107,832	NA	3,356	NA	48,364	187,454
Moscow Exchange	197,848,300	205,898,967	53,457	70,154	1,160,880	1,586,442
Nasdaq Nordic and Baltics	1,976,852	3,434,770	3,916	4,205	NA	417,821
Warsaw Stock Exchange	2,466,161	1,444,397	4,450	2,615	32,558	26,407
Grand Total	3,387,536,274	1,696,671,058	5,146,168	6,554,046	52,529,227	31,212,446

Stock Index Options

	Volume		Notional Value		Open interest	
	2020	2019	USD 2020	USD 2019	2020	2019
Americas						
B3 - Brasil Bolsa Balcão	65,319,689	41,785,034	403,216	445,361	499,493	533,799
Bolsa Mexicana de Valores	7,650	10,263	152	233	168	328
Bourse de Montreal	30,816	71,760	238	NA	13,160	1,262
Cboe Global Markets	459,030,881	474,462,083	NA	NA	19,753,530	23,202,962
CME Group	180,014,245	162,279,982	31,234,752	28,353,445	2,422,117	3,468,387
Matba Rofex	9,039	37,007	0.31	1	NA	NA
MIAX Exchange Group	267,046	434,689	587	1,024	NA	NA
Nasdaq - US	3,388,337	2,806,343	NA	NA	NA	NA
APAC						
ASX Australian Securities Exchange	8,068,464	9,793,757	380,621	433,084	381,541	688,707
Bursa Malaysia Derivatives	8,873	13,833	1	1	212	-
China Financial Futures Exchange	16,742,777	126,969	20,921	187	143,125	27,167
Hong Kong Exchanges and Clearing	36,048,593	38,297,384	2,425,829	3,867,243	1,697,059	2,334,663
India International Exchange	67,999,137	32,210,163	NA	NA	67	1,298
Japan Exchange Group	29,608,298	30,699,470	NA	NA	1,332,791	1,646,864
Korea Exchange	737,930,851	668,775,772	50,044,301	38,914,957	2,222,084	2,726,479
National Stock Exchange of India	6,667,958,460	4,155,124,834	61,001,669	38,751,983	3,835,527	1,936,926
Singapore Exchange	8,426,794	11,048,739	NA	NA	1,375,430	1,735,457
Taiwan Futures Exchange	201,912,292	170,194,590	4,317,894	3,066,370	408,338	605,441
Thailand Futures Exchange	1,698,625	1,677,323	NA	NA	26,380	22,127
EMEA						
Athens Stock Exchange	36,545	62,994	155	289	1,542	1,752
BME Spanish Exchanges	2,436,534	3,806,355	23,714	38,747	378,385	532,290
Borsa Istanbul	352,822	271,800	640	585	27,202	39,201
Eurex	441,396,354	431,575,858	16,702,642	15,965,111	44,347,413	43,598,835
Euronext	19,970,890	18,072,937	1,276,447	1,112,637	509,702	665,761
ICE Futures Europe	10,205,474	12,272,721	26,162	15,164	1,804,234	1,507,751
Johannesburg Stock Exchange	3,790,277	4,069,365	40,630	30,601	810,679	845,105
LSE Group	2,317,553	NA	142,776	NA	215,710	269,585
Moscow Exchange	18,522,886	18,607,697	45,162	50,173	238,142	272,132
Nasdaq Nordic and Baltics	7,418,706	7,324,071	148,370	125,348	NA	612,564
Tel-Aviv Stock Exchange	28,044,073	23,749,755	2,108,614	1,092,303	198,880	170,329
Warsaw Stock Exchange	374,491	251,893	1,784	1,485	18,977	15,730
Grand Total	9,019,337,472	6,319,915,441	170,347,276	132,266,330	82,661,888	87,462,902

Stock Index Futures

	Volume		Notional Value		Open interest	
	2020	2019	USD 2020	USD 2019	2020	2019
Americas						
B3 - Brasil Bolsa Balcão	2,929,801,044	1,454,364,476	12,992,454	7,958,289	919,804	925,126
Bolsa de Valores de Colombia	85,787	23,106	78	75	3,935	3,415
Bolsa Mexicana de Valores	595,100	849,789	11,575	19,382	12,059	40,249
Bolsa y Mercados Argentinos	224,268	807,058	110	94,091	NA	NA
Bourse de Montreal	8,249,988	7,864,406	1,233,413	NA	307,939	314,221
Cboe Futures Exchange	50,748,304	62,732,457	NA	NA	299,570	405,027
CME Group	1,249,348,285	709,464,213	132,277,903	88,643,988	4,194,048	4,312,102
ICE Futures US	62,162,882	52,452,506	3,857,081	2,708,214	1,771,122	1,930,436
Matba Rofex	2,195,099	2,173,187	1,524	1,367	1,588	824
APAC						
ASX Australian Securities Exchange	18,655,322	16,627,549	2,100,243	1,843,182	277,267	385,157
Bursa Malaysia Derivatives	3,497,417	2,281,506	64,657	44,217	26,493	28,786
China Financial Futures Exchange	74,503,560	53,251,311	13,624,884	7,870,730	510,065	349,263
Hong Kong Exchanges and Clearing	111,708,581	112,193,367	10,004,539	12,319,179	566,431	604,384
India International Exchange	6,351,845	4,050,986	NA	NA	586	2,108
Japan Exchange Group	394,062,023	299,896,154	17,136,463	13,238,290	1,452,884	1,716,495
Korea Exchange	152,981,643	97,821,400	6,822,667	4,062,632	658,409	789,831
National Stock Exchange of India	131,006,553	83,184,889	1,162,849	839,200	298,620	244,548
Singapore Exchange	185,255,365	179,954,516	NA	NA	1,378,504	2,081,466
Taiwan Futures Exchange	111,724,998	68,026,954	5,300,665	3,096,680	177,537	148,862
Thailand Futures Exchange	57,465,829	42,450,171	NA	NA	306,796	280,520
EMEA						
Athens Stock Exchange	422,831	607,807	1,766	2,800	5,648	10,506
BME Spanish Exchanges	7,540,860	7,565,663	566,817	627,610	103,542	126,392
Borsa Istanbul	101,909,893	62,350,402	177,634	131,664	498,868	472,425
Budapest Stock Exchange	732,200	338,642	923	473	5,137	4,350
Eurex	577,663,382	504,431,237	28,439,249	24,894,993	9,461,979	10,228,038
Euronext	40,444,648	39,976,464	3,302,778	2,993,865	585,114	692,682
ICE Futures Europe	10,560,856	39,595,158	3,351,551	3,347,209	1,046,827	944,162
Johannesburg Stock Exchange	14,743,500	20,156,917	315,585	493,263	378,895	391,533
LSE Group	9,369,803	NA	874,476	NA	70,613	136,701
Moscow Exchange	171,817,651	102,759,520	402,714	266,472	464,474	490,498
Nasdaq Nordic and Baltics	43,981,624	40,401,831	856,131	687,012	NA	499,312
Tehran Stock Exchange	356	8,296	0.16	13	4	NA
Tel-Aviv Stock Exchange	2	NA	NA	NA	NA	NA
Warsaw Stock Exchange	6,206,525	3,950,420	58,187	46,596	38,399	46,915
Grand Total	6,536,018,024	4,072,612,358	244,938,914	176,231,487	25,823,157	28,606,334

ETF Options

	Volume		Notional Value		Open interest	
	2020	2019	USD 2020	USD 2019	2020	2019
Americas						
B3 - Brasil Bolsa Balcão	379,833,133	36,989,550	64,190,117	9,125,392	1,669,113	186,372
Bourse de Montreal	9,359,748	7,985,724	17,817	NA	1,373,685	962,364
Cboe Global Markets	816,439,054	555,389,302	NA	NA	104,455,213	86,829,976
International Securities Exchange	155,898,433	162,797,367	NA	NA	NA	NA
MIAX Exchange Group	319,202,020	179,347,794	7,204,816	3,662,577	NA	NA
Nasdaq - US	877,234,171	479,746,704	NA	NA	NA	NA
NYSE	508,267,613	356,721,904	150,712	57,122	NA	NA
APAC						
Hong Kong Exchanges and Clearing	1,419,223	2,396,068	14,442	23,889	82,285	78,066
Japan Exchange Group	1,255,777	842,360	NA	NA	43,779	13,405
Taiwan Futures Exchange	136,200	156,358	1,437	1,471	1,819	2,030
EMEA						
Eurex	470,433	385,112	3,911	2,762	132,998	72,323
Grand Total	3,069,515,805	1,782,758,243	71,583,253	12,873,214	107,758,892	88,144,536

ETF Futures

	Volume		Notional Value		Open interest	
	2020	2019	USD 2020	USD 2019	2020	2019
APAC						
Hong Kong Exchanges and Clearing	18,269	22,458	205	231	401	291
Taiwan Futures Exchange	915,305	1,064,343	19,839	13,526	17,263	11,063
Grand Total	933,574	1,086,801	20,044	13,757	17,664	11,354

Long Term Interest Rate Options

	Volume 2020	2019	Notional Value USD 2020	USD 2019	Open interest 2020	2019
Americas						
Bourse de Montreal	26,740	16,876	2,101	1,299	782	2,240
CME Group	191,967,690	271,617,343	19,401,710	27,766,311	3,167,864	5,730,880
APAC						
ASX Australian Securities Exchange	398,333	1,328,959	30,641	93,326	NA	49,878
Japan Exchange Group	323,210	631,807	NA	NA	3,710	4,411
National Stock Exchange of India	453,937	32,192	1,258	92	NA	5,680
EMEA						
Eurex	44,384,040	65,095,288	8,368,526	11,381,908	1,877,538	1,618,928
Grand Total	237,553,950	338,722,465	27,804,236	39,242,936	5,049,894	7,412,017

Long Term Interest Rate Futures

	Volume 2020	2019	Notional Value USD 2020	USD 2019	Open interest 2020	2019
Americas						
Bolsa de Valores de Colombia	134,631	131,746	10,720	10,893	8,009	5,940
Bolsa Mexicana de Valores	67,631	334,183	397	1,961	4,000	14,500
Bourse de Montreal	37,637,279	35,814,755	2,650,054	2,757,102	746,676	665,663
CME Group	995,304,805	1,123,369,748	112,386,614	130,599,371	11,999,085	14,969,117
APAC						
Eurex	484,095,152	495,640,753	89,003,855	81,775,478	4,632,343	5,188,912
Moscow Exchange	234,267	351,233	32	59	23,253	38,814
Nasdaq Nordic and Baltics	3,619,470	3,546,552	441,731	3,975,955	157,742	208,913
EMEA						
Eurex	484,095,152	495,640,753	89,003,855	81,775,478	4,632,343	5,188,912
LSE Group*	-	2,773	-	313	-	454
Moscow Exchange	234,267	351,233	32	59	23,253	38,814
Nasdaq Nordic and Baltics	3,619,470	3,546,552	441,731	3,975,955	157,742	208,913
Grand Total	2,009,042,124	2,158,730,281	293,939,021	304,872,625	22,384,446	26,528,952

*LSE Group did not trade LTIR futures in 2020

Short Term Interest Rate Options

	Volume 2020	2019	Notional Value USD 2020	USD 2019	Open interest 2020	2019
Americas						
Bourse de Montreal	26,740	1,034,240	561,517	796,182	55,763	288,136
CME Group	267,598,349	424,771,819	291,388,421	425,087,895	23,288,571	44,510,927
EMEA						
Eurex	1,260	439	381	121	950	487
Nasdaq Nordic and Baltics	470,000	604,500	54,746	677,691	280,000	20,000
Grand Total	268,096,349	426,410,998	292,005,064	426,561,888	23,625,284	44,819,550

Short Term Interest Rate Futures

	Volume 2020	2019	Notional Value USD 2020	USD 2019	Open interest 2020	2019
Americas						
Bolsa de Valores de Colombia	2,090	3,314	312	524	2,330	3,117
Bourse de Montreal	23,039,200	29,816,722	18,090,640	22,953,597	1,153,017	997,790
CME Group	577,205,875	788,103,216	807,885,059	1,162,513,399	10,966,533	13,375,759
APAC						
ASX Australian Securities Exchange	22,109,497	40,318,343	19,824,236	36,367,753	1,033,007	1,564,438
Hong Kong Exchanges and Clearing	314	270	50	42	15	60
EMEA						
Borsa Istanbul	147	119	20	20	1	1
Eurex	35,317	38,473	10,655	10,638	5,584	5,819
LSE Group	3,801,150	5,736,916	3,484,969	4,938,130	361,291	394,245
Moscow Exchange	44,690	108,086	48	135	25,642	51,650
Nasdaq Nordic and Baltics	3,930,729	7,501,706	432,983	8,409,984	2,070,700	2,054,886
Grand Total	630,169,009	871,627,165	849,728,973	1,235,194,222	15,618,120	18,447,765

Currency Options

	Volume 2020	2019	Notional Value USD 2020	USD 2019	Open interest 2020	2019
Americas						
B3 - Brasil Bolsa Balcão	6,689,668	10,166,813	5,701	10,270	980,527	909,667
Bolsa de Valores de Colombia	518	1,833	1	1	1	224
Bolsa Mexicana de Valores	78,081	40,057	799	413	80	1,815
Bourse de Montreal	24,460	1,091	192	NA	2,869	532
CME Group	10,220,337	12,893,630	1,163,136	1,465,916	538,509	543,969
ICE Futures US	3,969	9,775	377	946	731	1,010
Matba Rofex	18,664	25,729	0	0	177	-
APAC						
Hong Kong Exchanges and Clearing	8,969	15,429	902	1,545	2,483	1,643
India International Exchange	206,585	NA	NA	NA	NA	NA
National Stock Exchange of India	777,300,762	649,002,064	790,103	643,520	3,717,061	2,404,889
Singapore Exchange	3,802	425,021	NA	NA	1,185	25
Taiwan Futures Exchange	25,723	121,944	778	3,634	662	2,167
EMEA						
BME Spanish Exchanges	21,793	NA	246	NA	1,126	NA
Borsa Istanbul	960,535	2,747,131	881	2,621	52,875	125,816
Budapest Stock Exchange	16,050	73,850	18	81	200	550
Dubai Gold and Commodities Exchange	893	28,326	0	1	1,011	199
Johannesburg Stock Exchange	26,978,918	27,199,540	31,258	171,672	3,285,812	6,033,839
Moscow Exchange	22,478,621	22,571,105	22,338	23,867	985,758	1,835,536
Tel-Aviv Stock Exchange	13,638,913	11,085,138	147,266	114,888	482,903	472,074
Grand Total	858,677,261	736,408,476	2,163,996	2,439,375	10,053,970	12,333,955

Currency Futures

	Volume 2020	2019	Notional Value USD 2020	USD 2019	Open interest 2020	2019
Americas						
B3 - Brasil Bolsa Balcão	774,468,373	441,198,777	11,000,050	8,119,069	6,775,520	5,646,987
Bolsa de Valores de Colombia	312,341	500,384	15,116	22,276	11,576	2,564
Bolsa Mexicana de Valores	5,917,106	4,753,874	63,330	48,999	473,752	533,976
Bolsa y Mercados Argentinos	10,727,211	5,562,292	7,590	4,342	NA	NA
CME Group	207,777,713	204,317,773	19,384,705	19,351,369	1,735,102	1,898,108
ICE Futures US	6,223,067	5,597,003	1,018,839	450,545	47,439	58,273
Matba Rofex	112,830,775	206,120,930	105,564	167,753	3,901,528	764,351
APAC						
Hong Kong Exchanges and Clearing	1,941,375	1,989,408	182,622	196,056	28,612	24,811
India International Exchange	923,357	NA	NA	NA	182	NA
Korea Exchange	108,003,067	87,012,521	1,286,585	879,950	899,781	740,395
National Stock Exchange of India	736,684,226	617,569,582	776,189	622,669	3,936,656	2,612,129
Singapore Exchange	25,466,157	23,507,532	NA	NA	132,670	143,921
Taiwan Futures Exchange	413,965	961,762	12,715	27,238	2,291	3,419
Thailand Futures Exchange	2,803,128	674,060	NA	NA	44,059	39,014
EMEA						
Borsa Istanbul	62,724,188	71,230,276	62,881	69,562	3,006,045	911,606
Budapest Stock Exchange	5,495,124	5,963,561	6,299	6,380	513,976	618,289
Dubai Gold and Commodities Exchange	12,147,872	20,767,147	80,545	107,670	2,617,524	312,391
Eurex	613,810	96,299	74,846	10,765	38,975	20,308
Johannesburg Stock Exchange	35,970,625	44,237,768	41,424	47,386	3,285,812	6,033,839
Moscow Exchange	847,605,832	438,672,037	856,057	468,183	3,096,726	2,703,284
Grand Total	2,959,049,312	2,180,732,986	34,975,357	30,600,210	30,548,226	23,067,665

Commodity Options

	Volume 2020	2019	Notional Value USD 2020	USD 2019	Open interest 2020	2019
Americas						
B3 - Brasil Bolsa Balcão	1,475,744	661,014	3,398	146	63,632	73,723
CME Group	148,936,954	145,913,322	6,826,950	6,971,773	9,748,660	9,192,815
ICE Futures US	12,678,268	12,681,619	317,564	315,127	1,023,077	1,123,750
Matba Rofex	114,581	137,873	104	560	22,314	26,002
APAC						
ASX Australian Securities Exchange	107,268	61,789	16,286	11,076	47,582	30,355
Bursa Malaysia Derivatives	63,626	53,100	NA	NA	14,503	24,850
Dalian Commodity Exchange	57,321,146	24,933,242	7,623	1,416	929,181	937,536
Multi Commodity Exchange of India	2,829,026	2,602,718	39,532	28,431	9,255	16,741
National Stock Exchange of India	356,543	NA	2,482	NA	2,169	NA
NZX Limited	79,087	64,537	273	231	15,450	10,625
Singapore Exchange	4,049,710	4,914,260	NA	NA	449,297	917,834
Taiwan Futures Exchange	42,522	44,076	475	384	246	635
Zhengzhou Commodity Exchange	40,138,091	10,601,385	3,620	1,372	804,432	274,880
EMEA						
Eurex	7,995,495	8,071,688	27,311	22,428	162,342	402,714
Euronext	1,411,927	867,691	18,431	10,045	244,407	159,646
ICE Futures Europe	37,343,889	36,204,302	57,277	50,386	3,377,701	3,898,058
Johannesburg Stock Exchange	276,216	304,220	194	337	48,256	43,126
London Metal Exchange	6,073,964	5,745,771	675,629	615,477	317,255	257,785
Moscow Exchange	10,202,469	8,756,076	4,335	5,776	52,500	217,254
Grand Total	331,496,526	262,618,683	8,001,483	8,034,966	17,332,259	17,608,329

Commodity Futures

	Volume 2020	2019	Notional Value USD 2020	USD 2019	Open interest 2020	2019
Americas						
B3 - Brasil Bolsa Balcão	2,615,894	1,611,906	20,648	13,299	77,643	67,672
Bolsa de Valores de Colombia	298	319	2	3	46	220
CME Group	992,046,293	987,210,733	47,765,842	53,625,837	13,814,153	15,293,843
ICE Futures US	78,287,820	79,931,938	1,676,968	1,705,295	1,997,476	1,970,998
Matba Rofex	1,480,053	1,574,212	9,325	6,699	53,898	54,064
APAC						
ASX Australian Securities Exchange	843,099	484,745	29,256	29,193	168,925	94,987
Bursa Malaysia Derivatives	14,606,684	10,704,273	240,170	147,214	165,594	228,997
Dalian Commodity Exchange	2,150,006,720	1,330,650,938	16,723,082	9,897,380	7,939,716	8,749,415
Hong Kong Exchanges and Clearing	353,979	658,688	8,502	27,441	1,374	3,175
India International Exchange	772,388	947,865	NA	NA	186	601
Indian Commodity Exchange	25,340,455	88,194,493	1,852	5,929	NA	6,788
Japan Exchange Group	6,653,187	NA	253,545	NA	170,561	NA
Multi Commodity Exchange of India	218,187,811	304,492,934	1,154,961	1,080,133	185,115	207,447
National Stock Exchange of India	34,368	174,488	327	1,034	43	57
NZX Limited	281,800	294,391	1,374	1,307	42,837	32,870
Shanghai Futures Exchange	2,102,822,994	1,411,969,733	22,681,386	13,923,058	6,536,608	5,748,273
Singapore Exchange	20,791,823	17,876,782	NA	NA	930,703	762,601
Taiwan Futures Exchange	260,508	200,864	5,085	3,328	1,479	1,313
Thailand Futures Exchange	10,839,317	7,623,264	NA	NA	34,475	71,079
Zhengzhou Commodity Exchange	1,661,264,959	1,081,884,660	9,202,437	5,677,061	7,682,150	4,154,431
EMEA						
BME Spanish Exchanges	202	63	1,375	285	NA	NA
Borsa Istanbul	157,669,915	58,571,990	40,747	11,751	1,843,362	481,607
Dubai Gold and Commodities Exchange	447,624	596,749	6,238	7,648	17,253	1,613
Euronext	15,818,263	12,649,666	211,545	152,436	651,780	488,458
ICE Futures Europe	503,927,593	446,403,874	19,576,112	25,218,890	9,391,412	9,593,693
Johannesburg Stock Exchange	3,219,382	3,206,466	62,095	50,548	125,413	114,681
London Metal Exchange	148,815,279	170,515,165	15,018,811	17,365,736	2,043,809	2,169,638
LSE Group	440	1,066	16	45	160	200
Moscow Exchange	849,424,742	654,931,145	369,809	444,334	1,676,170	3,067,866
Nasdaq Nordic and Baltics	672,056	542,557	24,072	32,865	215,914	195,551
The Saint-Petersburg International Mercantile Exchange	43,974	9,374	342	245	1,715	363
Grand Total	8,967,529,920	6,673,915,341	135,085,923	129,428,992	55,769,970	53,562,501

Other Options

	Volume 2020	2019	Notional Value USD 2020	USD 2019	Open interest 2020	2019
EMEA						
Eurex	9,490,193	9,792,620	56,105	47,688	2,443,795	2,032,219
Grand Total	9,490,193	9,792,620	56,105	47,688	2,443,795	2,032,219

Other Futures

	Volume 2020	2019	Notional Value USD 2020	USD 2019	Open interest 2020	2019
APAC						
Japan Exchange Group	1,058,859	847,681	NA	NA	94,383	99,249
Singapore Exchange	74,067	88,035	NA	NA	15,014	20,505
EMEA						
Eurex	29,183,315	30,005,182	139,581	120,960	3,948,024	4,271,293
LSE Group	184,282	67,486	255	156	102,989	28,592
Grand Total	30,500,523	31,008,384	139,836	121,116	4,160,410	4,419,639

12.2 Commodity derivatives by type of underlying commodity

Agriculture

	Volume 2020	2019	Notional Value USD 2020	USD 2019	Open interest 2020	2019
Americas						
CME Group	358,321,907	366,266,418	10,652,340	10,398,670	8,199,087	7,219,210
ICE Futures US	90,505,541	92,226,357	1,930,071	1,979,945	3,018,798	3,093,245
Matba Rofex	1,098,979	NA	9,137	NA	72,047	NA
APAC						
ASX Australian Securities Exchange	138,689	84,291	650	409	35,611	9,507
Dalian Commodity Exchange	1,310,384,148	686,558,247	8,149,622	3,597,144	6,192,806	6,446,557
Japan Exchange Group	18,649	NA	217	NA	1,516	NA
Multi Commodity Exchange of India	51,245,895	1,747,298	223,524	13,210	25,101	11,797
National Stock Exchange of India	13,462	NA	196	NA	31	NA
NZX Limited	328,599	358,928	1,470	1,538	58,287	43,495
Singapore Exchange	1,856,270	1,875,703	NA	NA	51,635	68,620
Thailand Futures Exchange	17,597	54,565	NA	NA	197	-
Zhengzhou Commodity Exchange	584,528,822	429,409,597	4,840,224	3,043,678	2,464,083	1,892,278
EMEA						
Borsa Istanbul	12	6	0	0	-	-
Euronext	17,128,052	13,517,321	229,975	162,481	830,431	648,081
Moscow Exchange	488	231	0	0	27	4
Grand Total	2,415,587,110	1,592,098,962	26,037,426	19,197,074	20,949,657	19,432,794

Energy

	Volume		Notional Value		Open interest	
	2020	2019	USD 2020	USD 2019	2020	2019
Americas						
Bolsa de Valores de Colombia	298	319	2	3	46	220
CME Group	605,692,346	598,439,661	21,921,083	31,202,602	13,154,703	14,277,579
Matba Rofex	362,475	542,144	111	249	2,392	2,772
APAC						
ASX Australian Securities Exchange	811,678	462,243	44,891	39,859	180,896	115,835
Dalian Commodity Exchange	133,441,723	78,554,734	2,720,242	1,854,592	426,483	273,772
Multi Commodity Exchange of India	50,112,963	215,356,526	211,347	486,435	3,185	78,129
National Stock Exchange of India	2,387	87,823	13	79	-	2
Singapore Exchange	687,876	290,942	NA	NA	92,754	61,701
Taiwan Futures Exchange	37,449	28,562	309	381	387	170
Zhengzhou Commodity Exchange	419,752,826	292,758,822	1,616,913	1,105,259	1,493,168	1,140,562
EMEA						
Borsa Istanbul	76,624	65,479	282	363	4,976	8,210
Dubai Gold and Commodities Exchange	42,382	96,380	426	1,426	208	404
LSE Group	440	1,066	16	44	160	200
Moscow Exchange	758,017,451	626,054,142	298,653	416,509	1,937,821	2,889,690
Nasdaq Nordic and Baltics	568,615	487,820	23,351	32,174	174,161	163,296
Grand Total	1,969,607,533	1,813,226,663	26,837,638	35,139,975	17,471,340	19,012,542

Precious Metals

	Volume		Notional Value		Open interest	
	2020	2019	USD 2020	USD 2019	2020	2019
Americas						
CME Group	151,635,123	143,259,557	20,283,611	17,301,588	1,834,228	2,600,012
ICE Futures US	460,547	387,200	64,461	40,477	1,755	1,503
Matba Rofex	133,180	134,277	181	157	1,773	1,884
APAC						
Hong Kong Exchanges and Clearing	69,964	573,173	4,210	31,413	285	1,137
Japan Exchange Group	6,060,038	NA	247,300	NA	154,779	NA
Multi Commodity Exchange of India	27,246,646	40,768,528	328,151	353,496	88,449	94,735
National Stock Exchange of India	375,062	86,665	2,600	955	2,181	55
Taiwan Futures Exchange	265,581	216,378	5,252	3,332	1,338	1,778
Thailand Futures Exchange	10,821,720	7,568,699	NA	NA	34,272	71,079
EMEA						
Borsa Istanbul	157,593,274	58,506,505	40,465	11,388	1,838,386	473,397
Dubai Gold and Commodities Exchange	402,580	493,527	5,791	6,171	1,190	1,415
London Metal Exchange	8,871	340,733	1,224	55,601	1,071	11,800
Moscow Exchange	101,604,623	37,631,623	75,486	33,599	554,303	395,418
Grand Total	456,677,209	289,966,865	21,058,731	17,838,177	4,514,010	3,654,213

Non-precious metals

	Volume		Notional Value		Open interest	
	2020	2019	USD 2020	USD 2019	2020	2019
Americas						
CME Group	25,333,871	25,158,952	1,735,758	1,694,787	374,795	389,857
APAC						
Dalian Commodity Exchange	296,229,269	296,901,876	3,311,958	2,854,233	791,007	794,350
Hong Kong Exchanges and Clearing	284,015	85,515	6,053	1,090	1,306	2,038
Japan Exchange Group	574,500	NA	6,027	NA	14,266	NA
Multi Commodity Exchange of India	92,047,916	49,223,300	427,675	255,423	76,772	39,527
Singapore Exchange	22,331,263	19,851,976	NA	NA	1,236,832	1,335,523
Zhengzhou Commodity Exchange	76,619,394	20,478,779	371,357	96,358	251,058	142,554
EMEA						
Borsa Istanbul	5	-	0	-	-	-
Dubai Gold and Commodities Exchange	2,662	5,736	21	47	38	81
London Metal Exchange	154,906,344	175,890,638	15,872,426	17,884,362	2,042,738	2,415,623
Moscow Exchange	4,671	1,225	4	1	246	8
Grand Total	668,333,910	587,597,997	21,731,279	22,786,301	4,789,058	5,119,561

Index Commodity Derivatives

	Volume		Notional Value		Open interest	
	2020	2019	USD 2020	USD 2019	2020	2019
APAC						
Multi Commodity Exchange of India	363,417	NA	3,797	NA	863	NA
EMEA						
BME Spanish Exchanges	91	63	311	285	NA	NA
Eurex	32,170	46,287	1,428	2,551	2,023	2,025
Grand Total	395,678	46,350	5,536	2,836	2,886	2,025

Other commodity derivatives

	Volume		Notional Value		Open interest	
	2020	2019	USD 2020	USD 2019	2020	2019
APAC						
Dalian Commodity Exchange	467,272,726	268,999,946	2,548,884	1,591,538	1,458,601	1,326,259
Singapore Exchange	1,097,043	940,871	NA	NA	210,323	214,591
Zhengzhou Commodity Exchange	620,502,008	349,838,847	2,377,563	1,433,136	4,278,273	1,253,917
EMEA						
Euronext	100,428	36	-	0	65,756	26
Nasdaq Nordic and Baltics	103,441	54,737	720	691	41,753	32,255
Grand Total	1,089,075,646	619,834,437	4,927,167	3,025,366	6,054,706	2,827,048