



SIFMA Insights

September Market Metrics and Trends

A Look at Monthly Volatility and Equity and Listed Options Volumes

October 2021

Monthly Metrics

- Volatility (VIX): Monthly average 19.82; +13.4% M/M, -28.3% Y/Y
- S&P 500 (Price): Monthly average 4,445.54; -0.2% M/M, +32.1% Y/Y
- Equity ADV (billion shares): Monthly average 10.6; +17.6% M/M, +5.5% Y/Y
- Options ADV (million contracts): Monthly average 38.1; +5.9% M/M, +21.9% Y/Y

Monthly Highlight

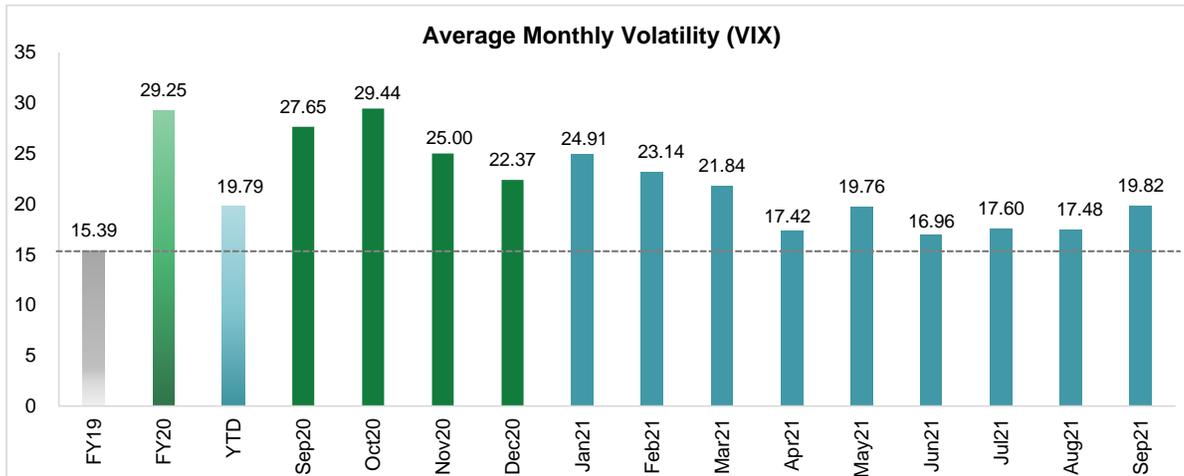
- Looking at market shares by exchange from 2019 to YTD, for the most part the “older” exchanges seem to be yielding share to the “younger” ones (ex: MIAX Emerald opened in 2019 and has gained 3.2 pps; Cboe opened in 1973 and has lost 8.2 pps). While it is unclear if this trend will continue, we look forward to watching the continued dog fight for market share in the options world.

Monthly Market Metrics

In this section, we highlight the monthly market trends for volatility, price, and volumes.¹

Volatility (VIX)

- Monthly average 19.82
 - +13.4% M/M
 - -28.3% Y/Y
 - -20.4% from the start of the year (January monthly average)
- Monthly peak on the 20th at 25.71, troughed on the 1st at 16.11

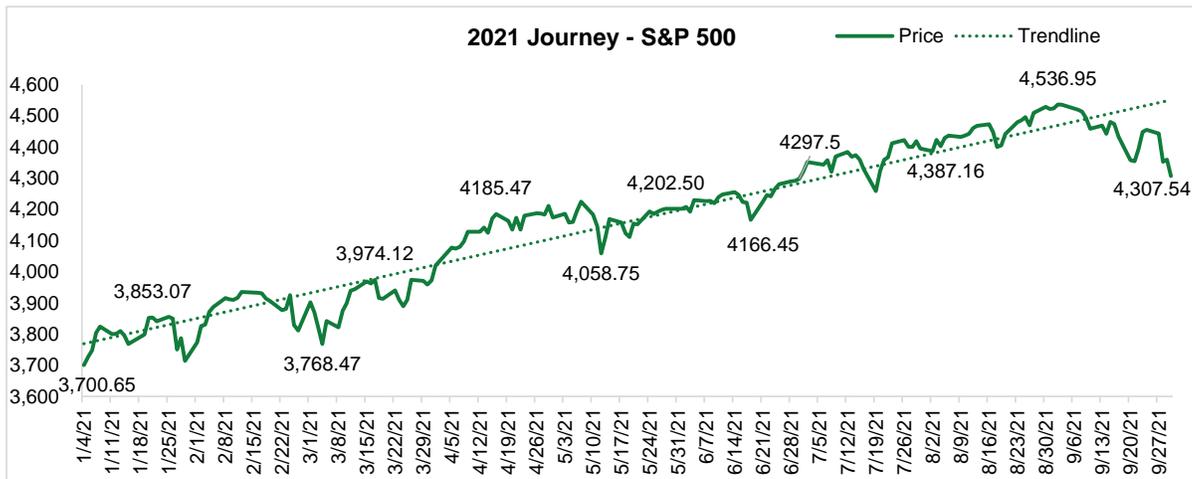
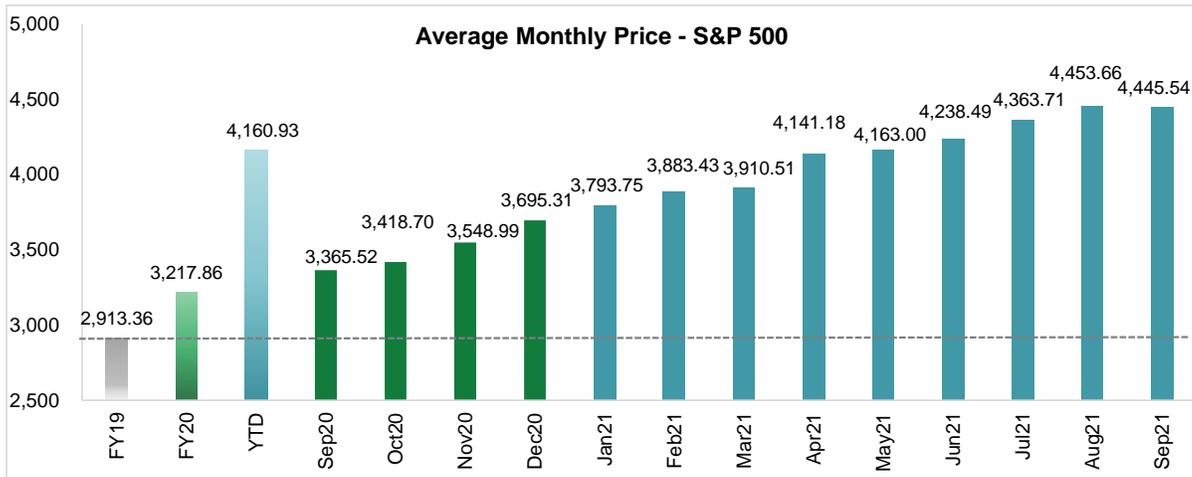


Source: Bloomberg, SIFMA estimates

¹ Please see SIFMA [Insights: A Look Back at 2020 Market Structure Themes](#) for a deep dive on last year's market metrics

Index Price (S&P 500)

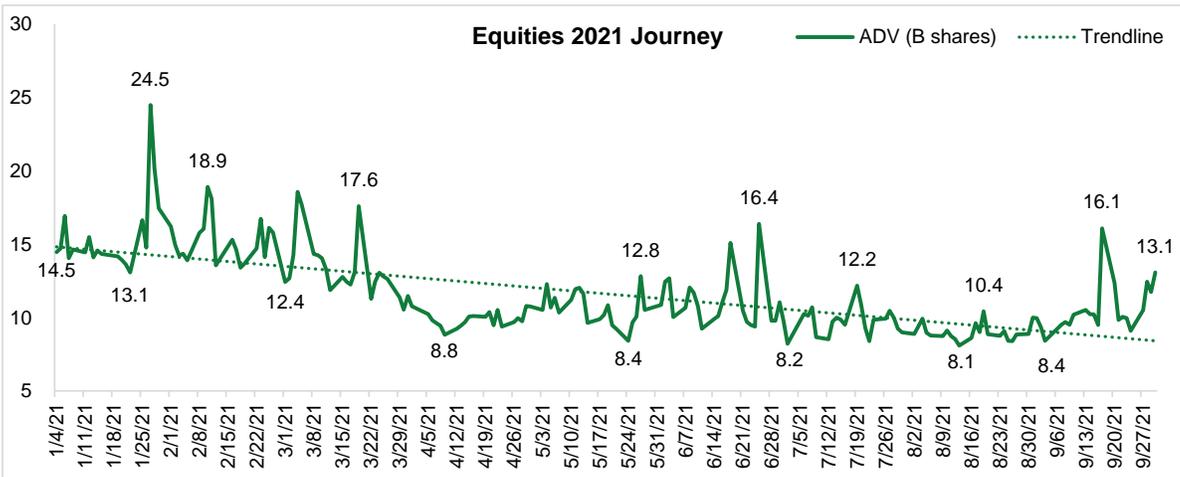
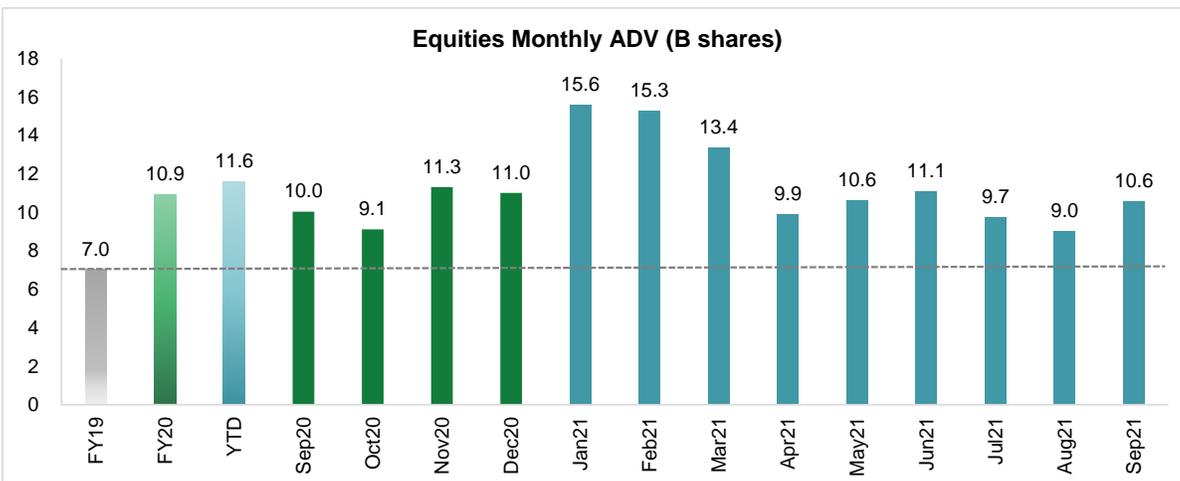
- Monthly average 4,445.54
 - -0.2% M/M
 - +32.1% Y/Y
 - +17.2% from the start of the year (January monthly average)
- Monthly peak on the 2nd at 4,536.95, troughed on the 30th at 4,307.54



Source: Bloomberg, SIFMA estimates

Equity Volumes (ADV)

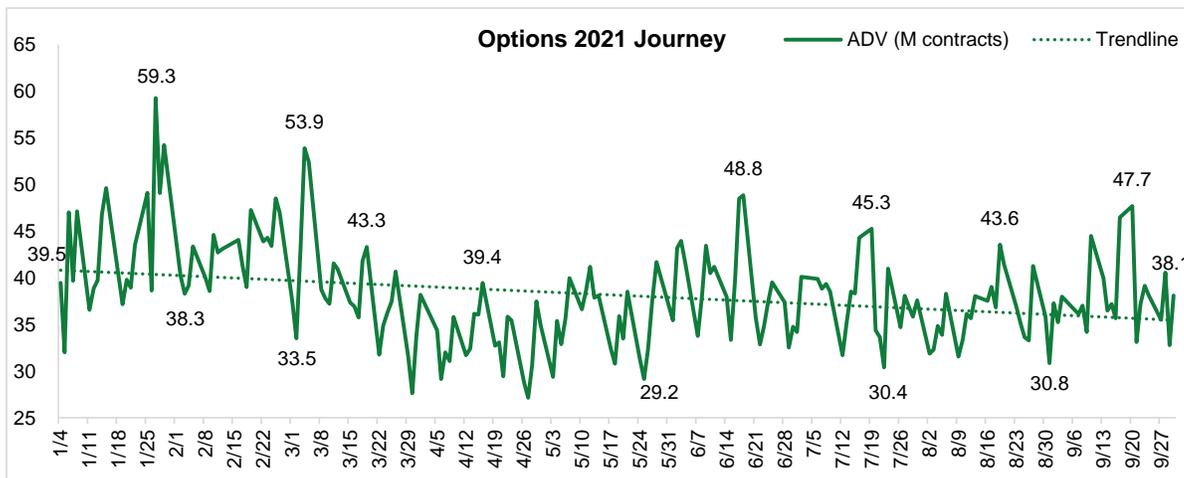
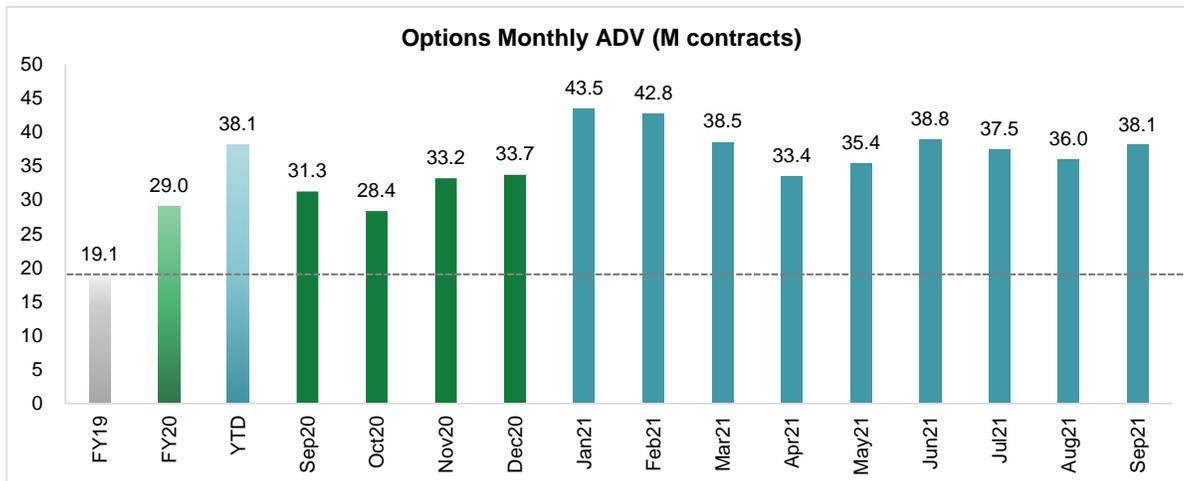
- Monthly average 10.6 billion shares
 - +17.6% M/M
 - +5.5% Y/Y
 - -32.1% from the start of the year (January monthly average)
- Monthly peak on the 17th at 16.1 billion shares, troughed on the 3rd at 8.4 billion shares
- Monthly average off exchange trading 41.9%; -1.1 pps M/M, +1.5 pps Y/Y, -5.3 pps from January



Source: Cboe Global Markets, SIFMA estimates

Multi-Listed Options Volumes (ADV)

- Monthly average 38.1 million contracts
 - +5.9% M/M
 - +21.9% Y/Y
 - -12.4% from the start of the year (January monthly average)
- Monthly peak on the 20th at 47.7 million contracts, troughed on the 29th at 32.8 million contracts
- Monthly equity options 35.9 million contracts (+5.0% M/M, +20.9% Y/Y, -13.6% to January), index options 2.2 million contracts (+24.9% M/M, +39.7% Y/Y, +12.9% to January)



Source: Cboe Global Markets, SIFMA estimates

Monthly Highlight

In this section we drill down into an interesting trend that market participants are following.

Multi-Listed Options Market Share

U.S. multi-listed options market participants have noticed some interesting shifts in exchange market shares since 2019. Before turning to the data on this, we recap the history of M&A activity in the exchange space over the past few decades. While some exchanges date back to the 1700s/1800s on their stock exchange side, the 1970s/1980s saw the boom for launching an options trading platform alongside the firm's stock exchange (American, Philadelphia/PHLX) or standalone options exchanges (Cboe). On the "younger" side, ISE (now owned by Nasdaq) and BOX launched in the early 2000s, followed by BATS (now owned by Cboe) and MIAX in the early 2010s.

Options Exchange	Current Name	Options Trading	Cash Equities Trading	M&A Notes
Chicago Board Options Exchange	Cboe	1973	2000s/2017	CBOE Stock Exchange (CBSX) traded in the 2000s/2010s, acquired National Stock Exchange in 2011 which ceased trading in 2014; re-entered cash equities when bought BATS in 2017
Philadelphia Stock Exchange	Nasdaq PHLX	1975	1790	Bought by Nasdaq in 2007
American Stock Exchange	NYSE American	1975	1890s	Bought by NYSE in 2008
Pacific Exchange	NYSE	1976	1882	Bought by Archipelago in 2005, which merged with NYSE in 2006
National Association of Securities Dealers	Nasdaq	1985	1971	FINRA (formerly NASD) sold its stake in NASDAQ Stock Market in 2000
New York Stock Exchange	NYSE	1985	1792	
Archipelago	NYSE Arca	1996	1996	Merged with NYSE in 2006
International Securities Exchange	Nasdaq ISE	2000	2006	ISE Stock Exchange partnership with Direct Edge in 2008; bought by Nasdaq in 2016
Boston Options Exchange	BOX	2004	n/a	Originally a partnership between Montreal Exchange, Boston Stock Exchange & Interactive Brokers
NASDAQ Options Market	Nasdaq	2008	1971	
BATS Options	Cboe BZX	2010	2005	Bought by Cboe in 2017
C2 Options Exchange	Cboe C2	2010	n/a	
NASDAQ OMX BX	Nasdaq BX	2012	1834	Boston Stock Exchange (BX) bought by Nasdaq in 2007
MIAX Options	MIAX	2012	n/a	
ISE Gemini	Nasdaq GEMX	2013	n/a	Bought by Nasdaq in 2016
EDGX Options	Cboe EDGX	2015	1998	Direct Edge (EDGX), originally an ECN, bought by BATS in 2014; Cboe bought BATS in 2017
ISE Mercury	Nasdaq MRX	2016	n/a	Bought by Nasdaq in 2016
MIAX Pearl	MIAX Pearl	2017	2020	
MIAX Emerald	MIAX Emerald	2019	n/a	

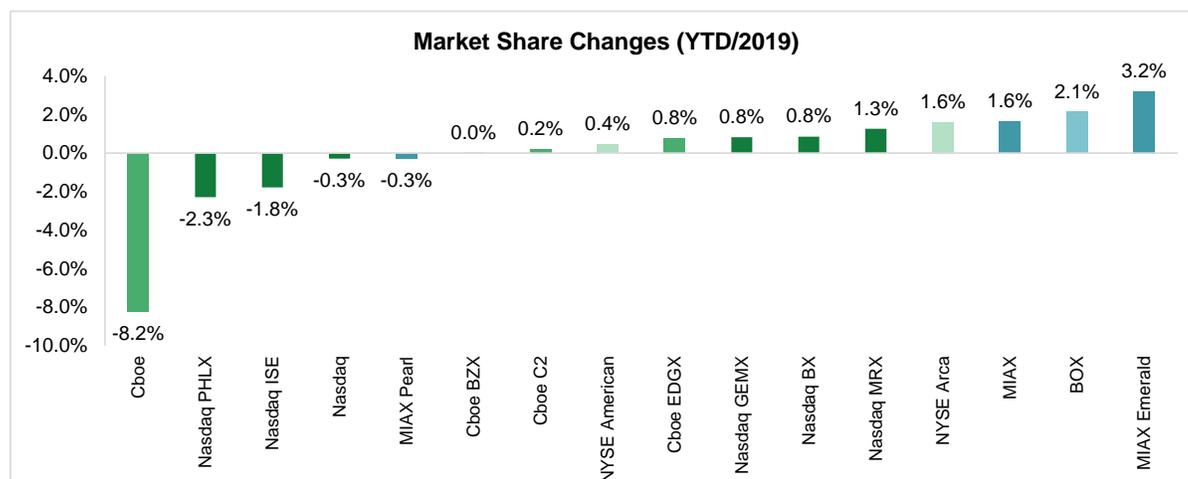
Source: OCC, SIFMA estimates

Note: Some dates are estimated; BATS began as an ECN, exchange license in 2008; NYSE American date goes back to the Curb Exchange; Pacific Exchange formed by a merger of San Francisco Stock & Bond Exchange (1882) and Los Angeles Oil Exchange (1899). NYSE bought National Stock Exchange in 2017 (cash equities)

What is interesting is that, when looking at market shares by exchange from 2019 to YTD (as of September 30), for the most part the “older” exchanges seem to be yielding share to the “younger” ones. While it is unclear if this trend will continue, we look forward to watching the continued dog fight for market share in the options world.

We highlight the following market share trends:

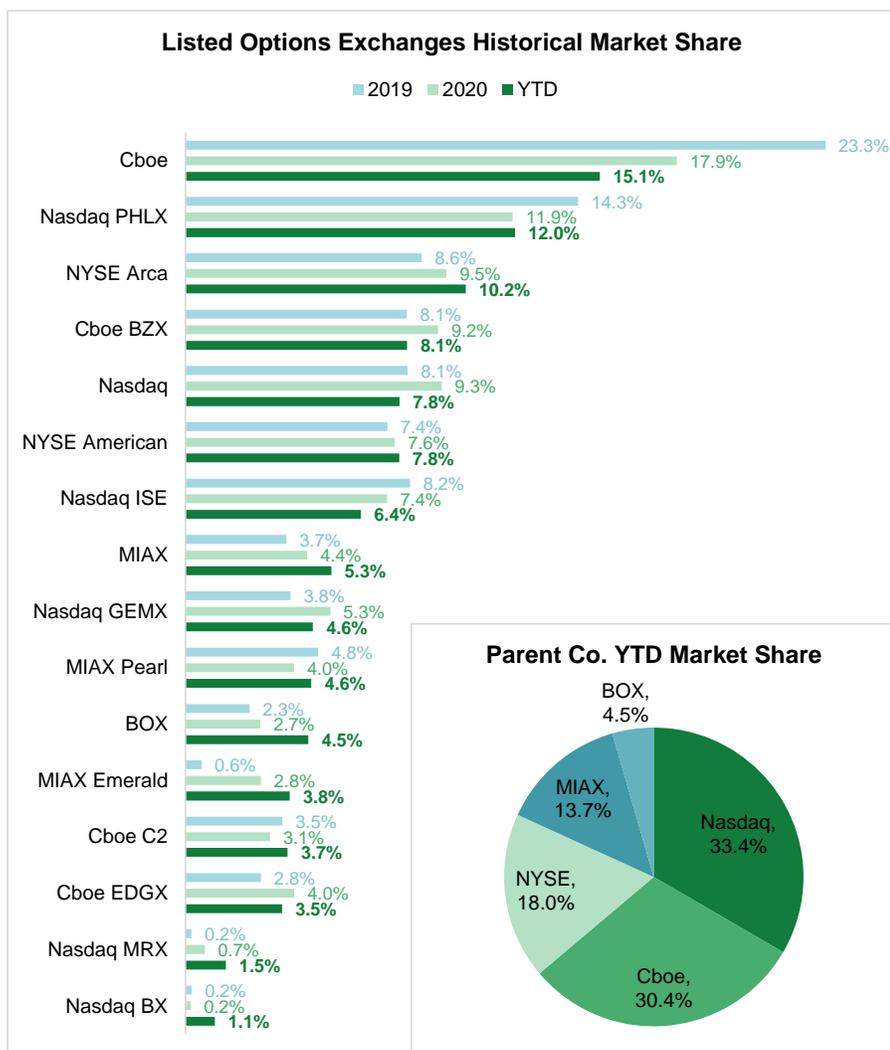
- 5 exchanges lost share; largest loss by Cboe, -8.2 pps (from 23.3% to 15.1%)
- 1 exchange saw no change
- 10 exchanges gained share; largest gain by MIAX Emerald, +3.2 pps (from 0.6% to 3.8%)
- Within the Nasdaq complex, MRX and GEMX gained while ISE lost share; BX gained, while Nasdaq and PHLX lost
- Within the NYSE complex, Arca gained more share than American
- Within the Cboe complex, C2 gained while Cboe lost share; EDGX gained while BZX was flat
- Within the MIAX complex, Emerald and MIAX gained while Pearl lost
- BOX gained share, most of which in 2021 (+1.8 pps since 2020, +2.2 pps since 2019)



Source: Cboe Global Markets, SIFMA estimates

Note: Includes equity and index options; Cboe traded 97.6% of index volumes YTD

On a parent company basis, while Nasdaq is still the leader, it has lost 1.5 pps of share since 2019. Cboe has lost 7.3 pps. On the market share gain side, NYSE is +2.0 pps, BOX +2.1 pps, and MIAX +4.6 pps.



Source: Cboe Global Markets, SIFMA estimates

Note: Includes equity and index options; Cboe traded 97.6% of index volumes YTD

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