



SIFMA Insights

The NYSE Trading Floor Reopened – Revisiting Market Share Data
Including a Look at On vs. Off Exchange Trading

July 2020

Key Takeaways

- While markets remained opening and functioning, all has not been perfect
- Off-exchange trading market share remains elevated, ~42% from April to June vs. 37.3% in 2019
- As the only exchange group with a hybrid model, the NYSE floor closure did appear to have an impact – market share declined temporarily, reversed trend in June
- COVID-19 volatility impacting market quality: avg. daily dollars at NBBO -26% vs. avg. spread +53%



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Setting the Scene

Background

The emergence of the global pandemic COVID-19 in the first quarter of 2020 caused severe economic and capital markets shocks, as evidenced by sharp price declines, yet spikes in volumes, in equities markets. The ultimate symbol of these unprecedented times was the closing of the floor of the New York Stock Exchange (NYSE, a subsidiary of Intercontinental Exchange/ICE) on March 23. As a reminder, NYSE is the only U.S. cash equities exchange that runs a hybrid model – electronic and human interaction, mainly at the open and close – on two of its exchanges (NYSE and American). Its competitors are all electronic.

In May, we published a [note](#) analyzing a question on the minds of market participants – was the floor closing causing NYSE to lose market share in equity trading? In that note, we analyzed market share movements from January 2 through April 29. While we discovered NYSE's numbers had worsened in April, it was not to a significant degree: overall January 2 to April 29 share was down 1.6 pps, but the numbers fluctuated weekly throughout the time period and other exchanges also saw periods of declines (and swings) throughout the analysis period. We concluded that we must wait and see if there will be long-term impacts on NYSE's market share.

NYSE partially reopened its trading floor on May 26, bringing back ~80 floor brokers, or 25% of the total, but not bringing back designated market makers initially (a subset returned on June 17). With over a month of trading now in the books, we analyze any changes since our last analysis and overall trends for the first half of the year, looking at the time period from January 2 to June 30. For this analysis, we note the following about dates chosen:

- March 16 = Monday of the last week the floor was opened and prior to the public announcement of the closing (March 18), to avoid any noise from the announcement
- March 20 = last day prior to the close
- March 23 = first day of the closure
- April 29 = last trading day from our prior analysis
- May 26 = partial reopening day
- June 30 = last trading day of this analysis

Executive Summary

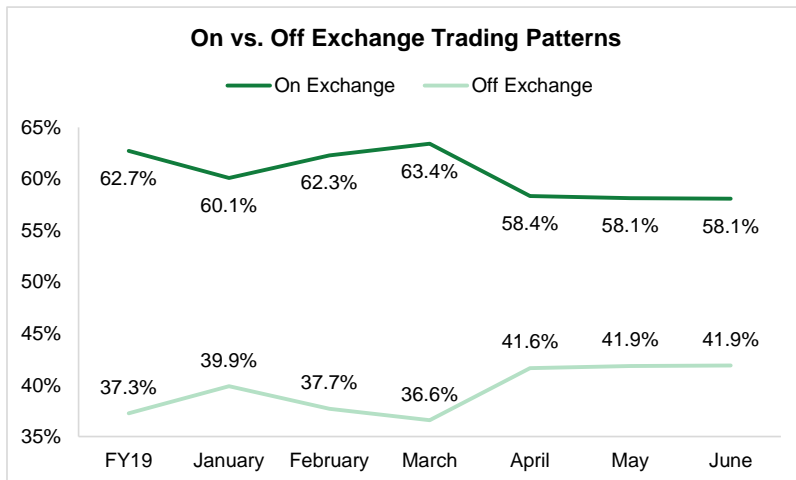
As we have been writing in our COVID-19 impact research, while markets remained opening and functioning, all has not been perfect. As the only exchange group with a hybrid model (on two of its exchanges), the floor closure did appear to have an impact, as its market share did decline at least temporarily. NYSE was not the only exchange group to lose share, as some share shifted across exchanges while other volumes moved off exchange. NYSE's market share decline reversed in June, once the floor reopened.

- January avg off-exchange share 39.9% vs. 37.3% in 2019 (+2.6 pps); normalized into March, then moved off exchange stayed there (1Q20 37.6% vs. 2Q20 41.8%, ~42% in April-June)
 - Some attribute this to retail traders, as <\$5 stock volumes + 282% vs. S&P 500 stocks >\$5 +94% (Oct '19-Jun '20); off-exchange share in low-priced stocks historically greater than overall market
- NYSE 2Q20 market share 21.8%, -2.2 pps to 2019 & -2.5 pps Q/Q; Nasdaq -1.3 pps & -0.3 pps, Cboe -0.3 pps & -0.7 pps, IEX -0.7 pps for both; vs. on-exchange trading -4.5 pps & -4.2 pps
- NYSE 1H20 market share 22.9%, -1.9 pps from the start of the year; Nasdaq -2.2 pps, Cboe -0.3 pps, IEX -0.2 pps; vs. on-exchange trading -4.7 pps
- NYSE June average market share -1.7 pps from January average; Nasdaq +1.4 pps, Cboe -1.0 pps, IEX -0.7 pps; vs. on-exchange trading -2.0 pps
- NYSE May average to June average market share +0.2 pps M/M; Nasdaq +1.5 pps, Cboe -1.6 pps, IEX -0.2 pps; vs. on-exchange trading flat
- The reversing trend (date vs. start of the year)
 - April 29: -4.1 pps (Nasdaq -2.3 pps, Cboe -0.6 pps, IEX, -0.5 pps; on-exchange -7.5 pps)
 - May 26: -2.8 pps (Nasdaq -3.1 pps, Cboe -0.1 pps, IEX, -0.5 pps; on-exchange -6.5 pps)
 - June 30: -1.7 pps (Nasdaq -0.4 pps, Cboe -2.0 pps, IEX, -0.7 pps; on-exchange -4.8 pps)
 - June 30 to May 26: +1.1 pps (Nasdaq +2.8 pps, Cboe -1.9 pps, IEX -0.2 pps; on-exchange +1.7 pps)
- On May 26, D orders 19.1% of NYSE closing auction (not available under the close); down from 32.9% avg. but >50% of this level despite having 1/4 floor brokers on the floor (& no DMMs); opening auction saw 5% less price dislocation (opening price vs. next 5-minutes volume weighted avg. price/VWAP) vs. prior week
- COVID-19 volatility worsened displayed market quality indicators, despite the increase in volumes: volumes in <\$5 stocks +180% vs +75% for S&P 500 stocks >\$5.; avg. daily dollars at NBBO -26% vs. avg. spread +53% (wider spreads increase trade cost)

A Look at On vs. Off Exchange Trading

While some people like to look at aggregate volumes, including both on- and off-exchange trading, as an indicator of liquidity, total consolidated volumes may not always represent real liquidity.¹ Off-exchange volumes can come in many forms, and the delineations are not always black and white, with execution path determined by type and objective of client. Within off-exchange trading, you have trading on alternative trading systems (ATS) and the remainder in over-the counter (OTC, or bilateral) trading, including (almost all of these forms can be termed internalization): agency crossing, upstairs trading (blocks) and wholesaling.²

Equities markets are experiencing an interesting trend in on- versus off-exchange trading. Historically, during periods of high volatility more volumes move onto exchange trading to participate in price discovery, i.e. to improve transparency. In low volatility times, more volumes move off exchange. 2020 started the year off with January average off-exchange volumes elevated to 2019 levels, 39.9% versus 37.3% (+2.6 pps). Off-exchange share then normalized into March. Once COVID-19 related volatility hit markets, volumes moved off exchange and have remained there, as shown in quarterly averages: 1Q20 37.6% versus 2Q20 41.8%. Off-exchange trading continues to hover around 42% (April through June), even as volatility came down from its peaks (yet remains elevated).



Source: Cboe Global Markets, SIFMA estimates

¹ All equity trading, both on- and off-exchange, is reported to the tape

² Please see SIFMA Insights US Equity Market Structure [Primer](#)

Some market participants have attributed the increase in off-exchange trading to retail traders (individuals). While overall market volumes have remained elevated this year – 11.0 and 12.4 billion shares on average in 1Q20 and 2Q20 respectively, versus 7.0 billion shares on average in 2019 (+56% and +76%), there has been a greater divergence in volumes of under \$5 stocks and S&P 500 stocks over \$5. Statistics from NYSE Data [Insights](#) show that from October 2019 to June 2020, volumes in under \$5 stocks are up 282%, while S&P 500 stocks over \$5 are up 94%. From January to June, volumes in under \$5 stocks are up 180% versus +75% for S&P 500 stocks over \$5. NYSE indicated this trend accelerated in June. This is contributing to the uptick in off-exchange trading, as off-exchange share in low-priced stocks is typically higher than the overall market average.

	Oct '19	Jan '20	Jun '20	Jun/Oct	Jun/Jan
Volumes (B shares)					
<\$5 Stocks	1.1	1.5	4.2	282%	180%
>\$5 S&P 500 Stocks	1.8	2.0	3.5	94%	75%
% Off-Exchange					
<\$5 Stocks	45.4%	48.7%	54.8%	9.4%	6.1%
>\$5 S&P 500 Stocks	34.4%	36.4%	39.9%	5.5%	3.5%

Source: NYSE Data Insights, SIFMA estimates

Additionally, the growth in off-exchange market share has been driven by non-ATS volumes, for the market as a whole and for the most widely held securities. Market share in non-ATS volumes grew 7.3 pps from October 2019 to May 2020, with a 4.6 pps increase from January 2020 to May 2020. Conversely, ATS share is down: 2.7% from October 2019 to May 2020 and 1.9% January 2020 to May 2020. Further evidence of an increase in retail trading is the decline in average trade size: OTC -12.3% and ATS -3.1% from January to May 2020. The decline in OTC average trade size indicates an increase in retail flow versus blocks, which have a larger trade size by nature.

	Oct '19	Jan '20	May '20	May/Oct	May/Jan
Market Share					
Non ATS	20.5%	23.2%	27.8%	7.3%	4.6%
ATS	14.2%	13.4%	11.5%	-2.7%	-1.9%
Avg. Trade Size					
OTC	314	293	257	-18.2%	-12.3%
ATS	165	161	156	-5.5%	-3.1%

Source: NYSE Data Insights, SIFMA estimates

While an increase in off-exchange trading does not always bring a decline in liquidity accessibility or market quality, the COVID-19 volatility has worsened displayed market quality indicators, despite the increase in total consolidated volumes. From January to June 2020, the average daily total dollars at the NBBO³ (quoted liquidity) has declined 26% to \$70.3 million (from \$95.6 million), while the average spread⁴ increased 53% to 7.2 bps (from 4.7 bps; wider spreads increase the cost of a trade). Looking at volume by fill price relative to the quote, NYSE Data Insights shows material price improvement (trades with price improvement greater than 10% of the spread and at the midpoint) has declined 8.1% since January.

As we have been writing in our COVID-19 impact research, while markets remained opening and functioning, all has not been perfect.

³ National Best Bid & Offer = quote disseminated market wide to investors consisting of the highest displayed buy (bid) & lowest sell (ask) prices across trading venues; liquidity providers can route orders to the exchange with the best NBBO quote or improve prices executing on their own trading venue

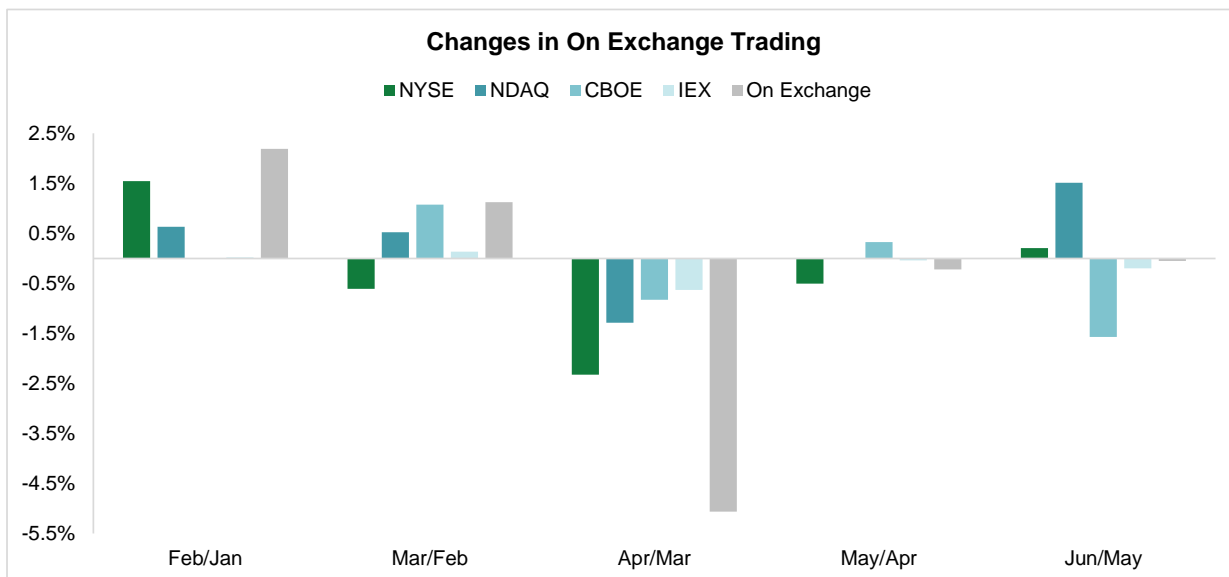
⁴ Difference between the bid and ask price prices for a security, an indicator of supply (ask) and demand (bid); wider spreads increase the cost of a trade

Assessing Market Shares

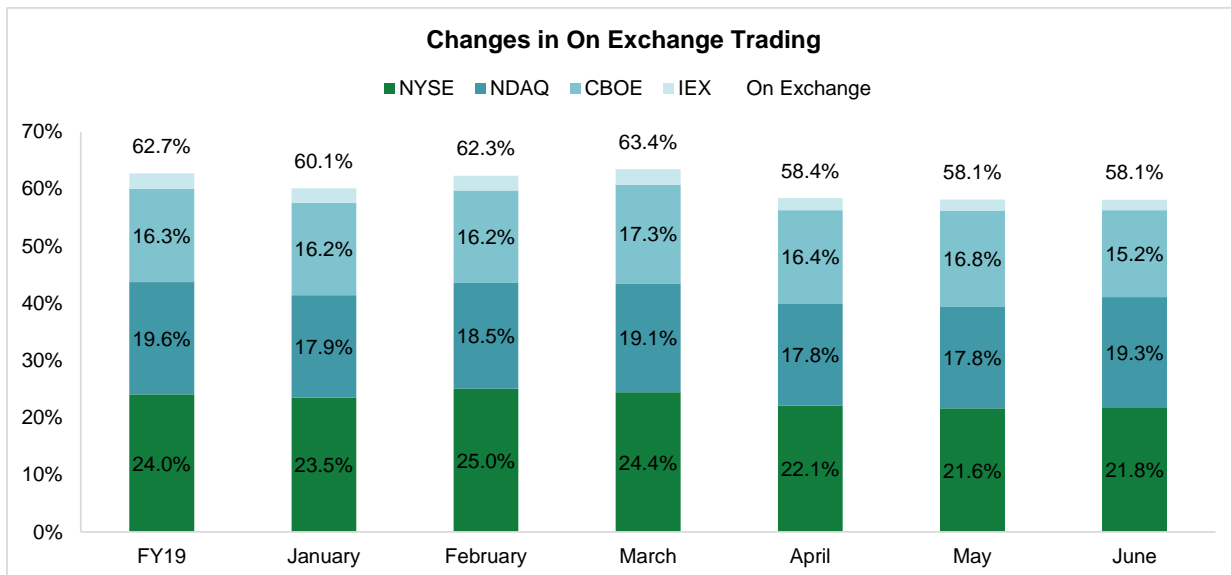
NYSE and Other Exchanges vs. On-Exchange Totals

As the only exchange group with a hybrid model (on two of its exchanges), the numbers do show NYSE exchanges (aggregate of all exchanges) market share declining during the floor closing. We note that, from 1Q20 to 2Q20, total on-exchange trading market share decreased, and all exchanges saw declines in market share. NYSE's market share decline reversed in June, once the floor reopened. We highlight the following trends from January 2 to June 30 (we note that market shares can fluctuate based on day, month or time period chosen):

- NYSE exchanges market share closed 2Q20 at 21.8%, -2.2 pps to 2019 and -2.5 pps Q/Q; this was less than the decline in total on-exchange trading, -4.5 pps and -4.2 pps respectively
 - The decline came predominately from the individual NYSE exchange (-2.8 pps to 2019, -1.9 pps Q/Q); the Arca gained steam versus 2019 (+0.6 pps) but fell Q/Q 0.3 pps
 - Nasdaq exchanges aggregate share fell 1.3 pps to 2019 and 0.3 pps Q/Q; Cboe exchanges fell 0.3 pps to 2019 and 0.7 pps Q/Q; IEX fell 0.7 pps on both counts
 - The floor closure did appear to have an impact, as NYSE's share decline represented around half of the decline in total on-exchange trading (albeit all exchanges showed declines)



- NYSE exchanges share from the average in January to June average is down 1.7 pps; this compares to:
 - Nasdaq exchanges +1.4 pps, after having a slow start to the year (January avg. share 17.9% vs. 19.6% in 2019); Cboe exchanges -1.0 pps and IEX -0.7 pps; vs. on-exchange trading -2.0 pps
 - NYSE was not the only exchange group to lose share, as some share shifted across exchanges while other volumes moved off exchange
- The May to June trend seems to have reversed somewhat for NYSE, +0.2 pps M/M
 - Nasdaq continues to gain at +1.5 pps, while Cboe and IEX fell (-1.6 pps and -0.2 pps respectively)
 - On-exchange trading was flat M/M; meaning the June to May trend appears to be back to the typical share shifting across exchanges rather than floor closure related



Assessing Market Shares

ADVs	Market		NYSE									On	Off
	(B shares)	VIX	NYSE	Arca	National	American	Chicago	Group	NDAQ	CBOE	IEX	Exchange	Exchange
FY19	7.0	15.39	13.5%	8.4%	1.4%	0.3%	0.4%	24.0%	19.6%	16.3%	2.7%	62.7%	37.3%
1Q20	11.0	31.22	12.7%	9.2%	1.7%	0.4%	0.3%	24.3%	18.6%	16.7%	2.6%	62.4%	37.6%
2Q20	12.4	34.52	10.7%	8.9%	1.5%	0.4%	0.2%	21.8%	18.3%	16.1%	2.0%	58.2%	41.8%
1Q20/FY19	56.1%	102.9%	-0.8%	0.9%	0.3%	0.1%	-0.1%	0.3%	-1.0%	0.4%	-0.1%	-0.4%	0.4%
2Q20/FY19	75.7%	124.3%	-2.8%	0.6%	0.1%	0.1%	-0.2%	-2.2%	-1.3%	-0.3%	-0.7%	-4.5%	4.5%
Q/Q	12.6%	10.5%	-1.9%	-0.3%	-0.2%	0.0%	-0.1%	-2.5%	-0.3%	-0.7%	-0.7%	-4.2%	4.2%
January	7.6	13.94	13.0%	7.8%	1.9%	0.4%	0.4%	23.5%	17.9%	16.2%	2.5%	60.1%	39.9%
February	9.3	19.63	13.0%	9.3%	1.8%	0.5%	0.4%	25.0%	18.5%	16.2%	2.6%	62.3%	37.7%
March	15.6	57.74	12.3%	9.9%	1.5%	0.4%	0.3%	24.4%	19.1%	17.3%	2.7%	63.4%	36.6%
April	12.3	41.45	10.8%	9.1%	1.5%	0.4%	0.2%	22.1%	17.8%	16.4%	2.1%	58.4%	41.6%
May	11.3	30.90	10.4%	9.0%	1.5%	0.4%	0.2%	21.6%	17.8%	16.8%	2.0%	58.1%	41.9%
June	13.3	31.18	11.0%	8.7%	1.5%	0.5%	0.2%	21.8%	19.3%	15.2%	1.8%	58.1%	41.9%
Feb/Jan	21.4%	40.8%	0.0%	1.4%	0.0%	0.1%	0.0%	1.5%	0.6%	0.0%	0.0%	2.2%	-2.2%
Mar/Jan	105.3%	314.2%	-0.7%	2.0%	-0.3%	0.1%	-0.1%	0.9%	1.2%	1.1%	0.2%	3.3%	-3.3%
Apr/Jan	62.0%	197.4%	-2.2%	1.3%	-0.3%	0.0%	-0.2%	-1.4%	-0.1%	0.2%	-0.5%	-1.7%	1.7%
May/Jan	48.4%	121.6%	-2.6%	1.2%	-0.3%	0.0%	-0.2%	-1.9%	-0.1%	0.6%	-0.5%	-2.0%	2.0%
Jun/Jan	74.4%	123.7%	-2.1%	0.9%	-0.4%	0.1%	-0.2%	-1.7%	1.4%	-1.0%	-0.7%	-2.0%	2.0%
Jun/May	17.5%	0.9%	0.5%	-0.3%	-0.1%	0.0%	0.0%	0.2%	1.5%	-1.6%	-0.2%	0.0%	0.0%

Source: CBOE Global Markets, SIFMA estimates

Note: Market Shares as % of total market; VIX = averages

Recovery from the Close

NYSE's market share does appear to be recovering since the reopening. We highlight the following trends since the March 23 close (we note that market shares can fluctuate based on day, month or time period chosen):

- NYSE's average market share for 2020 (YTD through June) was 22.9%, -1.9 pps from the start of the year
 - On-exchange trading was down -4.7 pps; all other exchanges' share averages were down as well (Nasdaq -2.2 pps, Cboe -0.3 pps, IEX -0.2 pps), albeit to varying degrees and all less than NYSE
 - The floor closure did appear to have an impact on market share, at least temporarily
- The trend appears to be reversing, looking at a few dates as compared to the start of the year
 - April 29: -4.1 pps (Nasdaq -2.3 pps, Cboe -0.6 pps, IEX, -0.5 pps; on-exchange -7.5 pps)
 - May 26: -2.8 pps (Nasdaq -3.1 pps, Cboe -0.1 pps, IEX, -0.5 pps; on-exchange -6.5 pps)
 - June 30: -1.7 pps (Nasdaq -0.4 pps, Cboe -2.0 pps, IEX, -0.7 pps; on-exchange -4.8 pps)
 - June 30 to May 26: +1.1 pps (Nasdaq +2.8 pps, Cboe -1.9 pps, IEX, -0.2 pps; on-exchange +1.7 pps)

2020 Stats	Market (B shares)	VIX	NYSE	Arca	National	American	Chicago	NYSE Group	NDAQ	CBOE	IEX	On Exchange	Off Exchange
FY19	7.0	15.39	13.5%	8.4%	1.4%	0.3%	0.4%	24.0%	19.6%	16.3%	2.7%	62.7%	37.3%
Jan 2	7.9	12.47	13.4%	9.9%	0.9%	0.3%	0.5%	24.9%	20.6%	16.6%	2.5%	64.6%	35.4%
Average	11.7	32.88	11.7%	8.9%	1.6%	0.4%	0.3%	22.9%	18.3%	16.3%	2.3%	59.9%	40.1%
Peak	19.4	82.69	21.9%	11.2%	2.1%	1.0%	0.6%	31.3%	22.6%	18.7%	3.4%	69.3%	45.9%
Peak Date	2/28	3/16	6/19	3/3	1/30	6/26	1/10	6/19	6/19	3/3	3/16	3/3	6/8
Trough	6.7	12.10	8.6%	6.8%	1.2%	0.3%	0.1%	19.1%	16.5%	11.5%	1.5%	54.1%	30.7%
Trough Date	2/14	1/17	6/4	6/26	6/8	1/15	6/26	6/4	4/20	6/26	6/19	6/8	3/3
Avg/Jan2	47.7%	163.7%	-1.7%	-1.0%	0.7%	0.2%	-0.2%	-1.9%	-2.2%	-0.3%	-0.2%	-4.7%	4.7%
Mar 16	16.5	82.69	12.3%	10.3%	1.3%	0.4%	0.2%	24.6%	19.0%	16.9%	3.4%	63.8%	36.2%
Mar 20	18.7	66.04	15.4%	9.1%	1.4%	0.6%	0.2%	26.7%	20.1%	16.4%	2.5%	65.7%	34.3%
Mar 23	16.0	61.59	10.9%	9.8%	1.4%	0.3%	0.2%	22.6%	19.3%	18.0%	2.6%	62.5%	37.5%
Mar20/Mar16	13.7%	-20.1%	3.0%	-1.2%	0.1%	0.1%	0.0%	2.1%	1.1%	-0.5%	-0.9%	1.9%	-1.9%
Mar23/Mar20	-14.6%	-6.7%	-4.5%	0.7%	0.0%	-0.2%	0.0%	-4.0%	-0.8%	1.5%	0.1%	-3.3%	3.3%
Apr 29	13.1	31.23	10.1%	8.7%	1.3%	0.4%	0.2%	20.7%	18.3%	16.0%	2.1%	57.1%	42.9%
May 26	12.3	28.01	10.3%	9.5%	1.7%	0.4%	0.2%	22.1%	17.5%	16.5%	2.0%	58.1%	41.9%
Jun 30	11.1	31.78	12.0%	8.9%	1.7%	0.4%	0.2%	23.2%	20.2%	14.6%	1.8%	59.8%	40.2%
Apr29/Jan2	66.4%	150.4%	-3.3%	-1.2%	0.4%	0.1%	-0.3%	-4.1%	-2.3%	-0.6%	-0.5%	-7.5%	7.5%
May26/Jan2	55.3%	124.6%	-3.1%	-0.4%	0.8%	0.1%	-0.3%	-2.8%	-3.1%	-0.1%	-0.5%	-6.5%	6.5%
Jun30/Jan2	41.1%	154.9%	-1.4%	-1.0%	0.8%	0.1%	-0.3%	-1.7%	-0.4%	-2.0%	-0.7%	-4.8%	4.8%
Jun30/May26	-9.1%	13.5%	1.7%	-0.6%	0.0%	0.0%	0.0%	1.1%	2.8%	-1.9%	-0.2%	1.7%	-1.7%

Source: CBOE Global Markets, SIFMA estimates

Note: Market Shares as % of total market; VIX = averages

NYSE Statistics from the Reopen

NYSE executes volumes through electronic order flow (EOF), designated market makers (DMM) and floor brokers. The majority of the intraday trading is through EOF, and the majority of the open/close is done through the electronic books of DMMs, who offset liquidity imbalances manually. For the closing auction, where around 223 million shares are traded during the close (~7% of total NYSE-listed volume, NYSE blends technology and human judgment to set the closing price.

NYSE's hybrid process provides investors several order types for use in the closing auction: (a) market-on-close (MOC), an unpriced order to buy or sell a security at the closing price which is guaranteed execution in the closing auction; limit-on-close (LOC), sets the maximum/minimum price an investor is willing to buy/sell in the closing auction which is guaranteed execution if priced better than the closing price; and (c) discretionary order (D Order⁵), floor brokers can exercise discretion at what price they will buy/sell in reaction to contra-side orders at a range of prices (entering orders verbally to DMMs or via an electronic order), offering flexibility to MOC and LOC orders in the electronic order book.

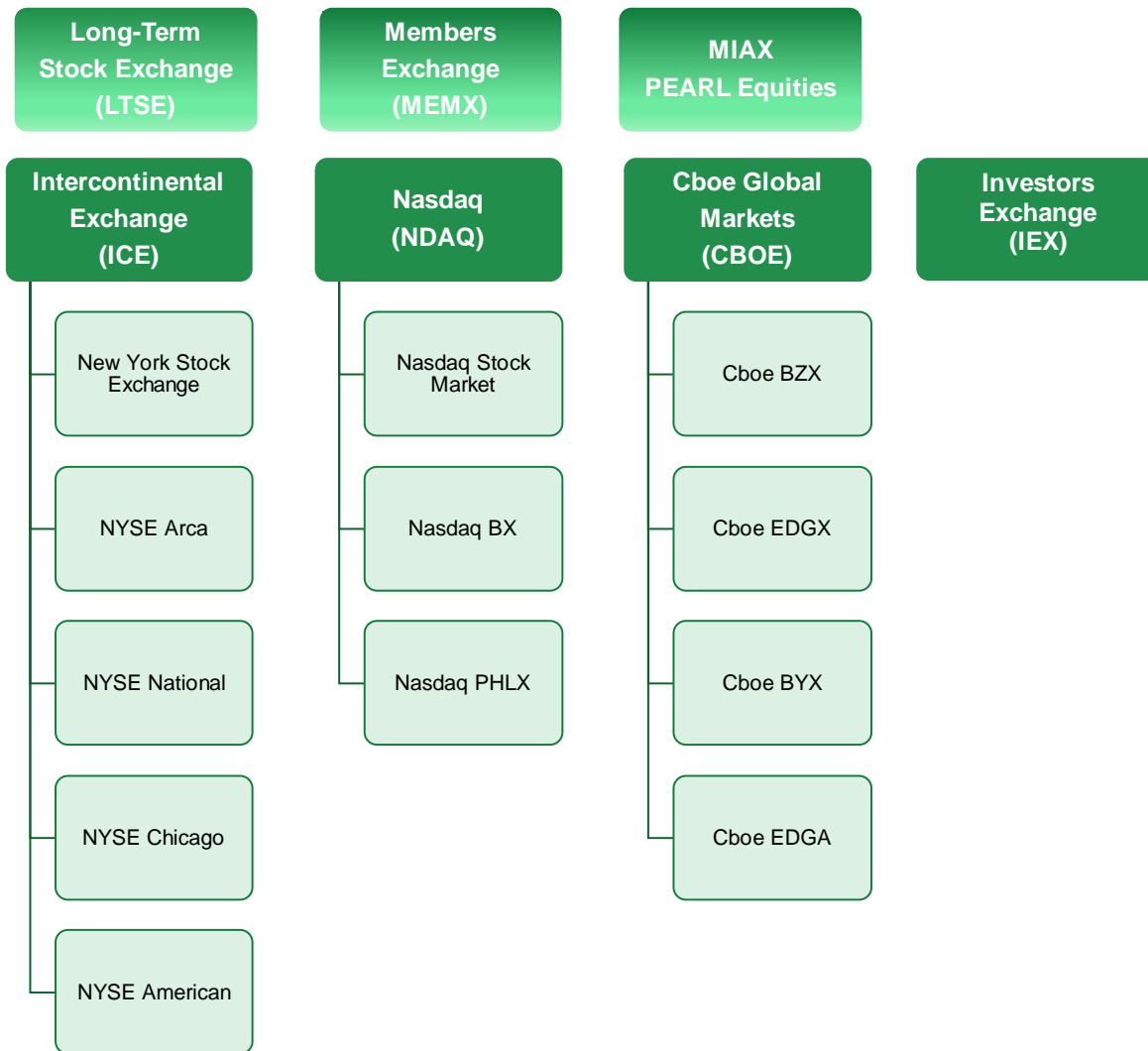
With the floor closure, no manual DMM or floor broker processes were available, including D Orders. Investors instead had to use electronic MOCs/LOCs, which were offset with electronic imbalance orders. Whereas typically all imbalance orders are filled, more MOC and LOC orders were left unfilled during the floor closure.

On May 26, floor brokers returned to the floor (~25% of total floor brokers, with restrictions in place). DMMs continued to operate remotely (a subset of DMMs returned on June 17). With the return of floor brokers, D Orders became available again, even as the opening and closing auctions continued to operate electronically. According to NYSE, on reopening day:

- D orders represented 19.1% of closing auction order type usage. While this is down from its average, 32.9% in January 2020, it was at over half of its historical level despite having one-fourth of floor brokers on the floor (and no DMMs at that time)
- MOC orders made up the difference, 65.2% on this day; down from the 70%-75% levels seen during the floor closure but up from 52.3% in January
- The NYSE opening auction saw 5% less price dislocation (opening price versus next 5-minutes volume weighted average price/VWAP) on May 26 versus the prior week

⁵ Available throughout the trading day but utilized mostly in the closing auction; at 3:55 p.m. eligible Closing D Order interest is added to the order imbalance feed at their discretionary price range, with submission, cancelations and modifications taken up to 3:59:50 p.m., enabling liquidity to build upon itself for substantial size to trade in the closing auction.

Appendix: Market Landscape



Announced/Not Live (targeted to go live in 2020; targets set prior to COVID-19): LTSE, MEMX, MIAX

Appendix: Terms to Know

FINRA	Financial Industry Regulatory Authority
SEC	Securities and Exchange Commission
ADV	Average Daily Trading Volume
ATS	Alternative Trading System
Best Ex	Best Execution
CAT	Consolidated Audit Trail
Dark Pool	Private trading venues
EMS	Equity Market Structure
ETF	Exchange Traded Fund
ETD	Exchange Traded Derivative
ETP	Exchange Traded Product
MM	Market Maker
NMS	National Market System
OPR	Order Protection Rule
PFOF	Payment For Order Flow
Reg NMS	Regulation National Market System
SIP	Security Information Processor
SRO	Self Regulatory Organization
Tick Size	Minimum price movement of a security

Bid	An offer made to buy a security
Ask, Offer	The price a seller is willing to accept for a security
Spread	Difference between bid & ask price prices for a security, an indicator of supply (ask) & demand (bid)
NBBO	National Best Bid and Offer
Locked Market	A market is locked if the bid price equals the ask price
Crossed Market	A bid is entered higher than the offer or an offer is entered lower than the bid
Opening Cross	Determines the opening stock price, accumulating all buy & sell interest a few minutes before the market open
Closing Cross	Determines the closing stock price, accumulating all buy & sell interest a few minutes before the market close
Order Types	
AON	All or none; an order to buy or sell a stock that must be executed in its entirety, or not executed at all
Block	Trades with at least 10,000 shares in the order
Day	Order is good only for that trading day, else cancelled
FOK	Fill or kill; must be filled immediately and in its entirety or not at all
Limit	An order to buy or sell a security at a specific price or better
Market	An order to buy or sell a security immediately; guarantees execution but not the execution price
Stop	(stop-loss) Order to buy/sell a stock once the price of the stock reaches the specified price, the stop price

Appendix: SIFMA Insights Research Reports

SIFMA Insights Market Structure Primers: www.sifma.org/primers

- Global Capital Markets & Financial Institutions
- Electronic Trading
- US Capital Formation & Listings Exchanges
- US Equity
- US Multi-Listed Options
- US ETF
- US Fixed Income
- SOFR: The Transition from LIBOR

SIFMA Insights: www.sifma.org/insights

- COVID-19 Related Market Turmoil Recap: Part I (Equities, ETFs, Listed Options & Capital Formation)
- A Deeper Look at US Multi-Listed Options Volumes
- NYSE Goes All Electronic – What Does It Mean?
- Spotlight: The VIX's Wild Ride
- Spotlight: The 10th Anniversary of the Flash Crash
- The Evolution of the Fintech Narrative
- Spotlight: DTCC's Important Role in US Capital Markets

Author

SIFMA Insights

Katie Kolchin, CFA
Director of Research
kkolchin@sifma.org