

May 2020

US Market Structure Monthly



US Market Microstructure Observations

- The average daily volume in US equities decreased by 8% month over month to 11.3b shares in May 2020. Despite the decline, volumes in May 2020 were still 59% higher versus May 2019.
- Trade reporting facilities (TRF) market share saw a modest increase of 0.3% month over month to 41.9%, reaching a new high. Versus last year, NYSE saw the largest drop in market share, decreasing by 2.7% to 10.4%.
- The median size at the NBBO increased by 11% and 6% month over month for S&P 500 and RUS 2000 symbols respectively in May 2020.
- Median spreads decreased by 32% and 28% month over month for S&P 500 and RUS 2000 symbols. Spreads for S&P 500 and RUS 2000 symbols are currently 56% and 41% below the peak in March, but still 39% and 52% higher versus February 2020 prior to the impact from Covid-19.
- Consistent with trends in spreads, intraday volatility decreased for another month in May 2020. In particular, S&P 500 symbols saw volatility during the final half hour of trading decrease by 33% month over month.
- Proportion of volume traded in the close auction volume for S&P 500 symbols decreased further in May 2020 vs the prior month to 9%.

Market Structure News

The New York Stock Exchange Trading Floor Reopens

The NYSE reopened its trading floor on May 26th after a temporary closure due to the Covid-19 health concerns. Certain floor broker activities and order types, such as the d-quote orders, returned with the floor's reopening.

<https://www.wsj.com/articles/nyses-floor-to-reopen-with-masks-coronavirus-waivers-and-handshake-ban-11590404400?mod=searchresults&page=1&pos=8>

The Members Exchange (MEMX) Set to Launch in September

MEMX, a new venue backed by several major Wall Street firms, including Virtu Financial, is confirmed to launch on September 4th. Earlier in the month, MEMX received approval from the US Securities and Exchange Commission to operate.

<https://www.thetradenews.com/new-us-stock-exchange-memx-will-go-live-in-september/>

The SEC Adopts Amendments to the Consolidated Audit Trail (CAT NMS Plan)

In an effort to improve transparency, the SEC is requiring FINRA and the exchanges to publish and file a complete implementation plan for the Consolidated Audit Trail (CAT), along with a quarterly update. The CAT provides order details to enable regulators to more efficiently track market activities.

<https://www.sec.gov/news/press-release/2020-114>

Fund giants request ETF labeling system

Several large money managers are requesting exchanges to enforce a narrower definition for ETFs. The proposal seeks changes such as excluding leveraged and inverse funds from the definition of an ETF, and distinguishing ETFs from debt notes and funds that rely on leverage and commodity bets.

<https://www.wsj.com/articles/investment-giants-want-exchanges-to-enforce-labeling-system-for-etfs-11589400300>

Nasdaq changes listing rules

Nasdaq is set to unveil new restrictions on initial public offerings, driven by concerns about the lack of accounting transparency in some small Chinese companies seeking U.S. IPOs. The new rule will require a minimum value on the size of IPOs for companies from some countries, as well as auditing firms to ensure the companies comply with global standards.

<https://www.reuters.com/article/us-nasdaq-china-listings-exclusive/exclusive-nasdaq-to-tighten-listing-rules-restricting-chinese-ipos-sources-idUSKBN22V01Q>



New Virtu Comment Letters on Market Structure Proposals

1. Proposed Rule on Market Data Infrastructure (February 14, 2020)

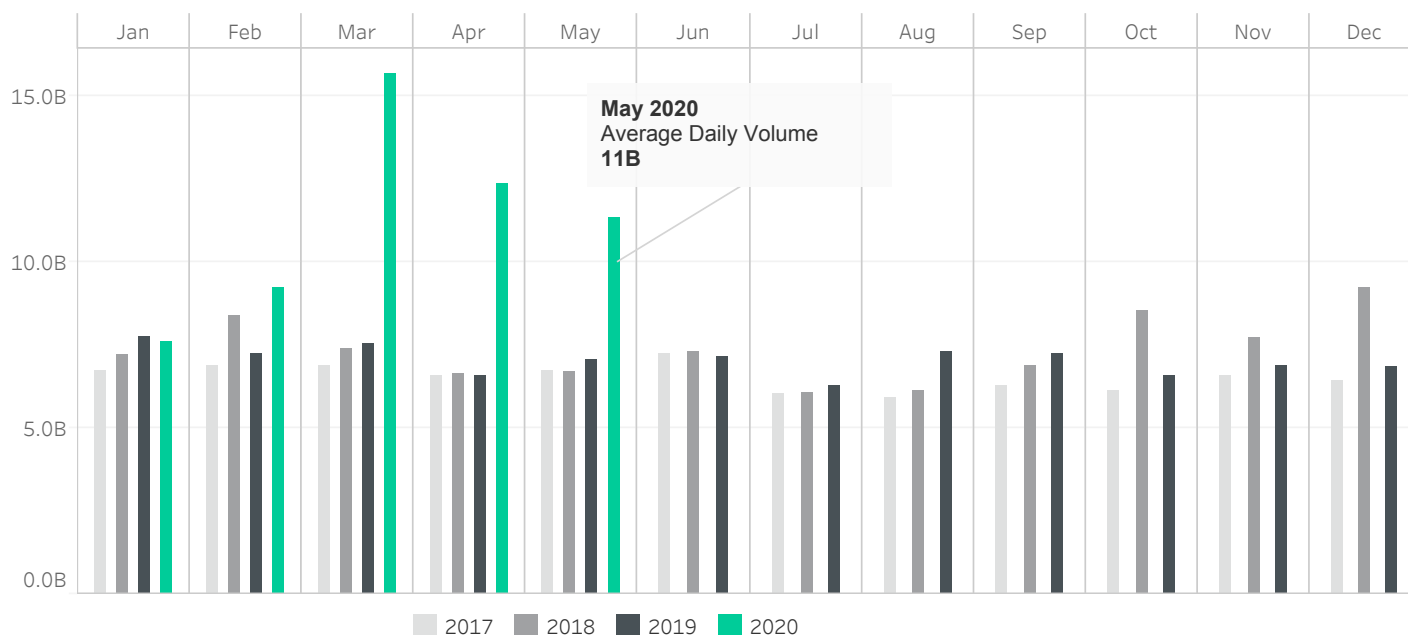
The proposed rule would expand the content of NMS information that is required to be collected, consolidated, and disseminated under Regulation NMS and amend the method by which such NMS information is collected, calculated, and disseminated by introducing a decentralized consolidation model with competing consolidators.

Virtu submitted a letter in support on May 26, 2020. The letter can be found here:

<https://www.sec.gov/comments/s7-03-20/s70320-7229972-217068.pdf>

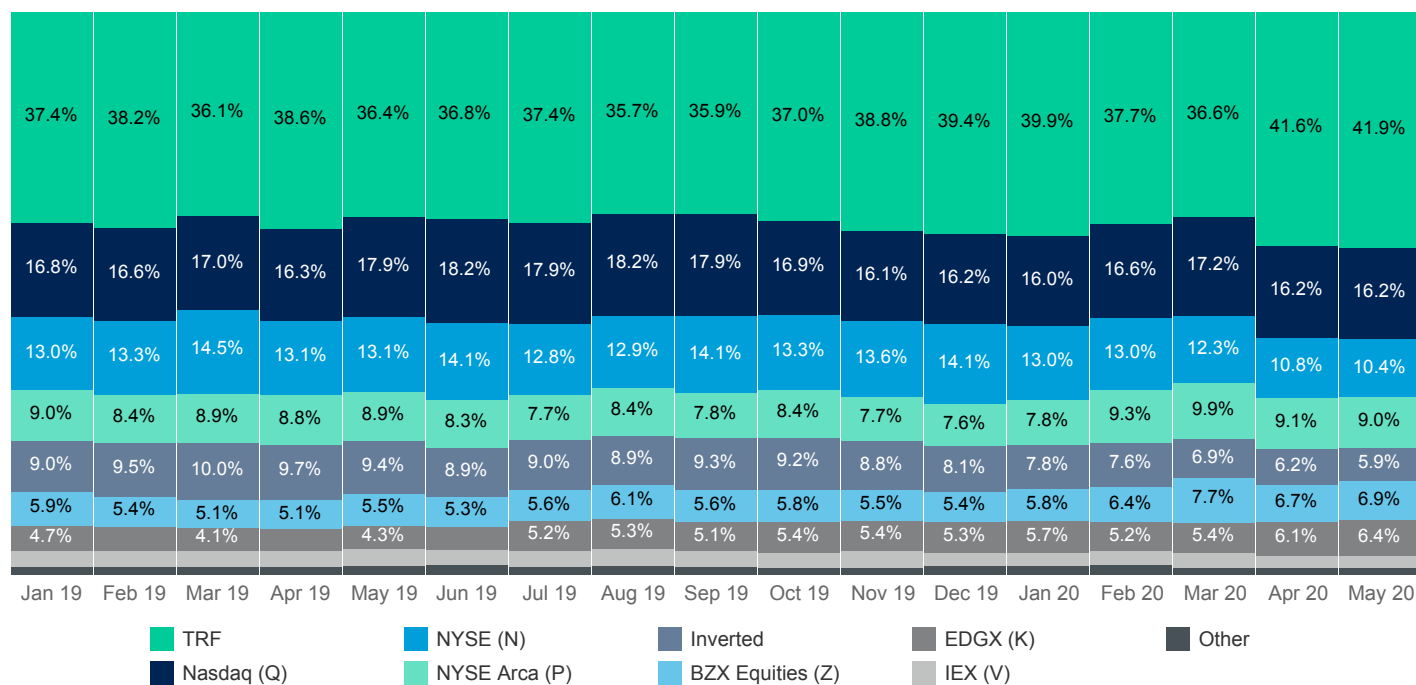


Average Daily Market Volume



Source data: Cboe Global Markets

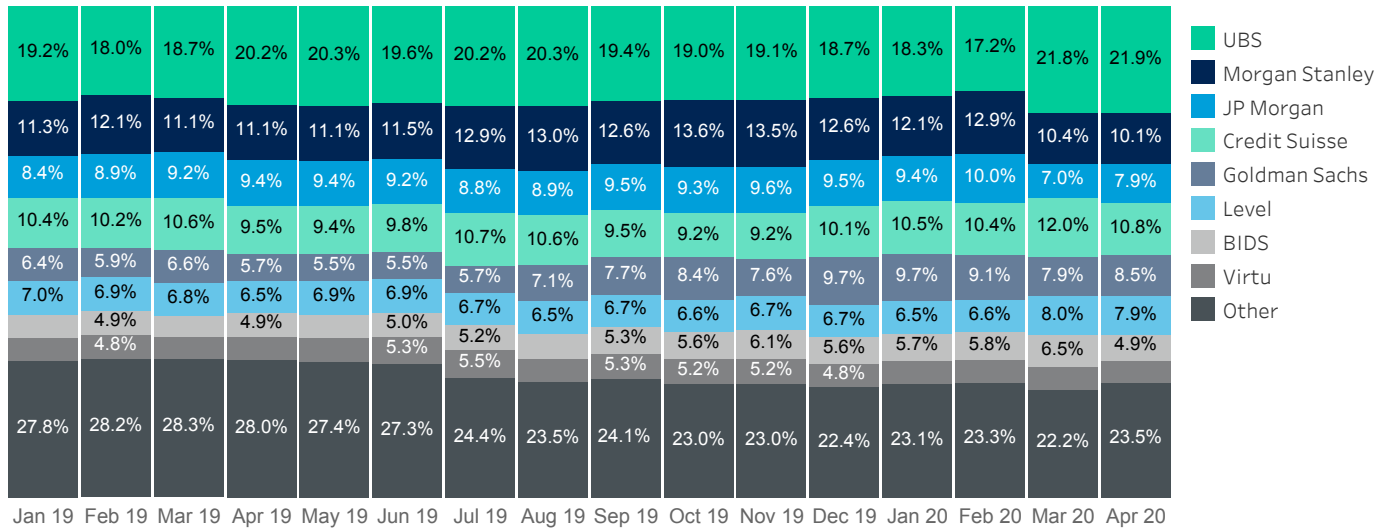
Venue Market Share



Source data: Cboe Global Markets

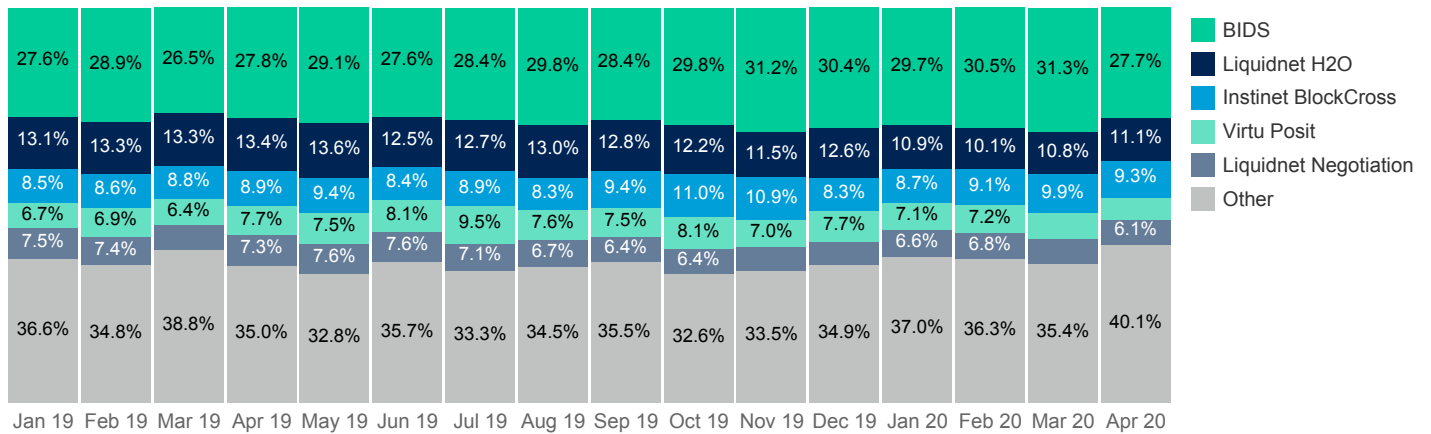


ATS Market Share



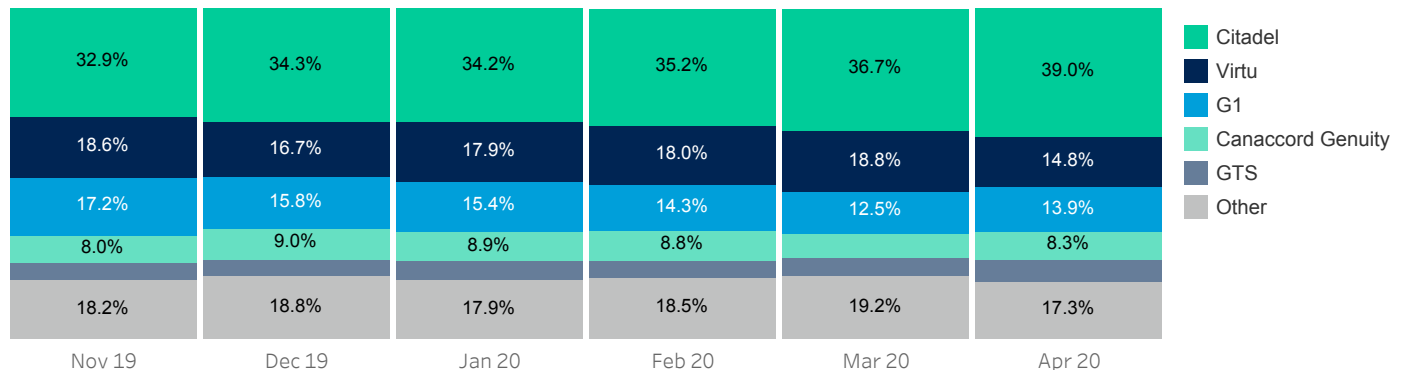
Excludes Dealerweb, OTC; Venues rolled up to firm level; Source data: FINRA

ATS Block Volume Market Share



Excludes Dealerweb; Blocks defined as >10K shares; Source data: FINRA

OTC Non-ATS Market Share



Source data: FINRA



Quote Size in Shares

	2Q 19		3Q 19			4Q 19			1Q 20			2Q 20		
	May 19	Jun 19	Jul 19	Aug 19	Sep 19	Oct 19	Nov 19	Dec 19	Jan 20	Feb 20	Mar 20	Apr 20	May 20	
First 30 Min	SP500	170	178	179	174	173	175	178	178	176	185	185	184	196
	RUS2000	194	192	200	200	192	200	200	195	193	204	200	194	200
Mid Day	SP500	208	215	219	201	202	201	210	212	199	194	174	177	197
	RUS2000	213	213	224	227	219	219	224	219	210	216	200	198	209
Last 30 Min	SP500	313	329	331	266	296	277	302	290	254	240	193	200	229
	RUS2000	264	273	285	281	272	268	279	266	250	264	233	228	239

Spread Bps

First 30 Min	SP500	7.9	8.2	7.4	9.5	8.6	8.9	8.2	7.5	7.7	9.8	28.1	19.4	11.8
	RUS2000	43.2	42.8	39.5	48.3	45.7	44.3	41.0	36.4	36.3	43.7	108.1	87.0	65.2
Mid Day	SP500	3.7	3.5	3.0	4.1	3.7	3.7	3.2	3.1	3.4	4.1	13.1	8.4	5.7
	RUS2000	16.9	16.0	14.3	17.3	17.2	16.5	15.3	14.0	14.5	16.4	42.5	34.8	25.0
Last 30 Min	SP500	2.4	2.3	2.0	2.6	2.2	2.4	2.1	2.1	2.3	2.5	9.7	5.8	4.2
	RUS2000	11.5	11.6	10.4	12.5	12.0	11.7	11.1	10.8	10.9	11.2	33.2	25.1	19.3

One Minute Volatility Bps

First 30 Min	SP500	14.0	13.2	11.8	15.7	13.3	12.5	11.6	10.6	11.2	14.6	53.4	32.8	24.5
	RUS2000	14.8	14.8	13.6	17.5	16.6	15.2	16.1	14.8	15.4	16.9	45.1	40.8	33.2
Mid Day	SP500	5.6	4.7	4.1	6.0	4.8	4.6	3.9	3.4	4.3	5.6	27.7	14.4	9.6
	RUS2000	5.5	4.9	4.2	5.2	5.3	4.8	4.2	3.8	4.7	5.7	21.8	16.4	11.9
Last 30 Min	SP500	6.1	5.3	4.6	6.7	4.7	5.1	4.1	4.0	5.1	6.1	36.1	17.0	11.5
	RUS2000	6.1	5.3	4.5	5.8	5.0	5.1	4.3	4.4	5.3	5.8	28.0	20.1	15.0

Percent ADV by Time of Day

Open	SP500	0.9%	0.9%	1.0%	1.0%	0.9%	1.0%	1.0%	1.1%	1.1%	1.1%	1.0%	1.1%	1.0%
	RUS2000	0.7%	0.7%	0.7%	0.8%	0.8%	0.8%	0.8%	0.8%	0.9%	0.9%	0.8%	0.8%	0.9%
First 30 Min	SP500	8.7%	8.2%	8.4%	8.0%	8.0%	7.6%	8.0%	7.7%	7.9%	8.6%	8.2%	8.7%	9.4%
	RUS2000	7.0%	6.7%	6.7%	6.9%	6.8%	6.6%	7.2%	7.1%	7.3%	7.2%	6.3%	7.0%	7.9%
Last 30 Min	SP500	18.8%	18.8%	18.9%	18.4%	18.3%	18.7%	18.8%	18.4%	18.0%	17.9%	18.3%	17.7%	17.7%
	RUS2000	20.2%	19.6%	19.7%	19.4%	18.9%	19.5%	19.5%	19.3%	18.8%	18.6%	19.9%	18.9%	18.7%
Close	SP500	9.7%	11.0%	9.9%	11.4%	11.6%	10.4%	11.4%	13.5%	13.8%	12.0%	9.9%	9.8%	9.0%
	RUS2000	7.3%	8.1%	7.8%	8.8%	9.0%	8.0%	7.8%	10.0%	9.4%	8.1%	9.0%	8.9%	8.3%

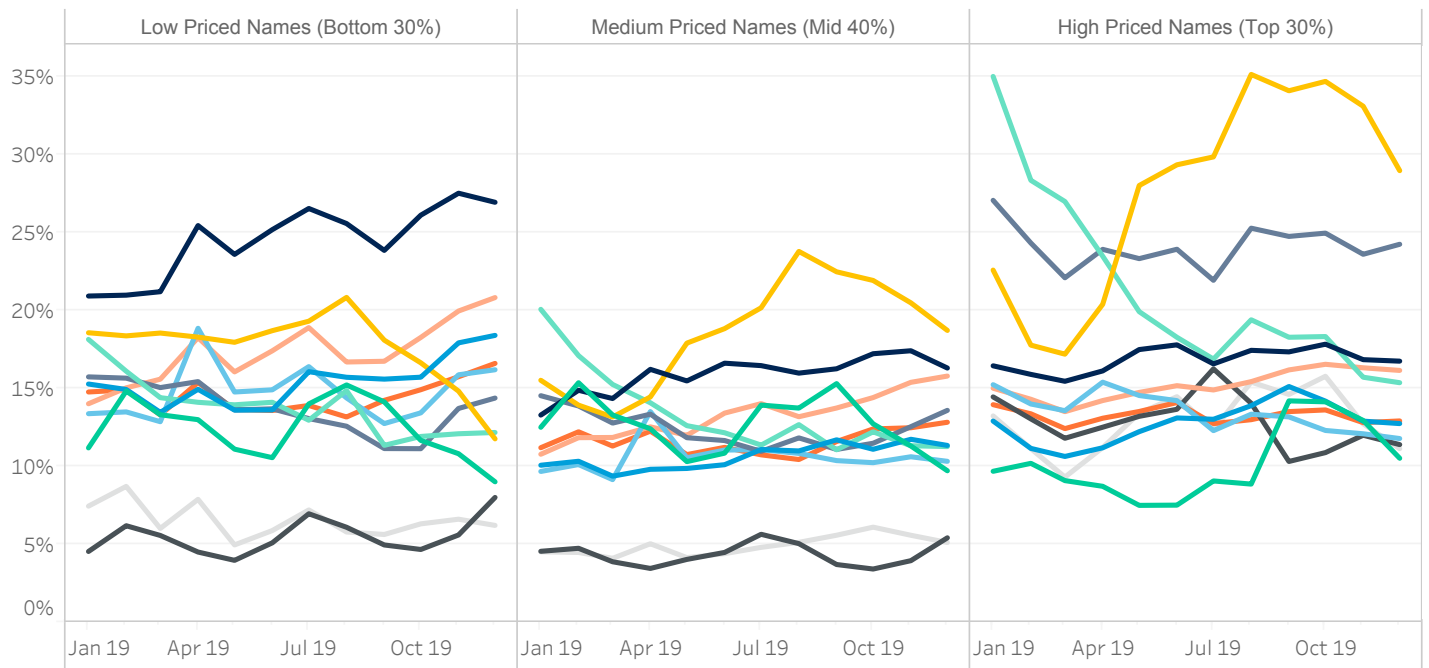
Median used for all metrics

One minute volatility is calculated using the difference between the high and low price within a one minute time bin, divided by that bin's VWAP

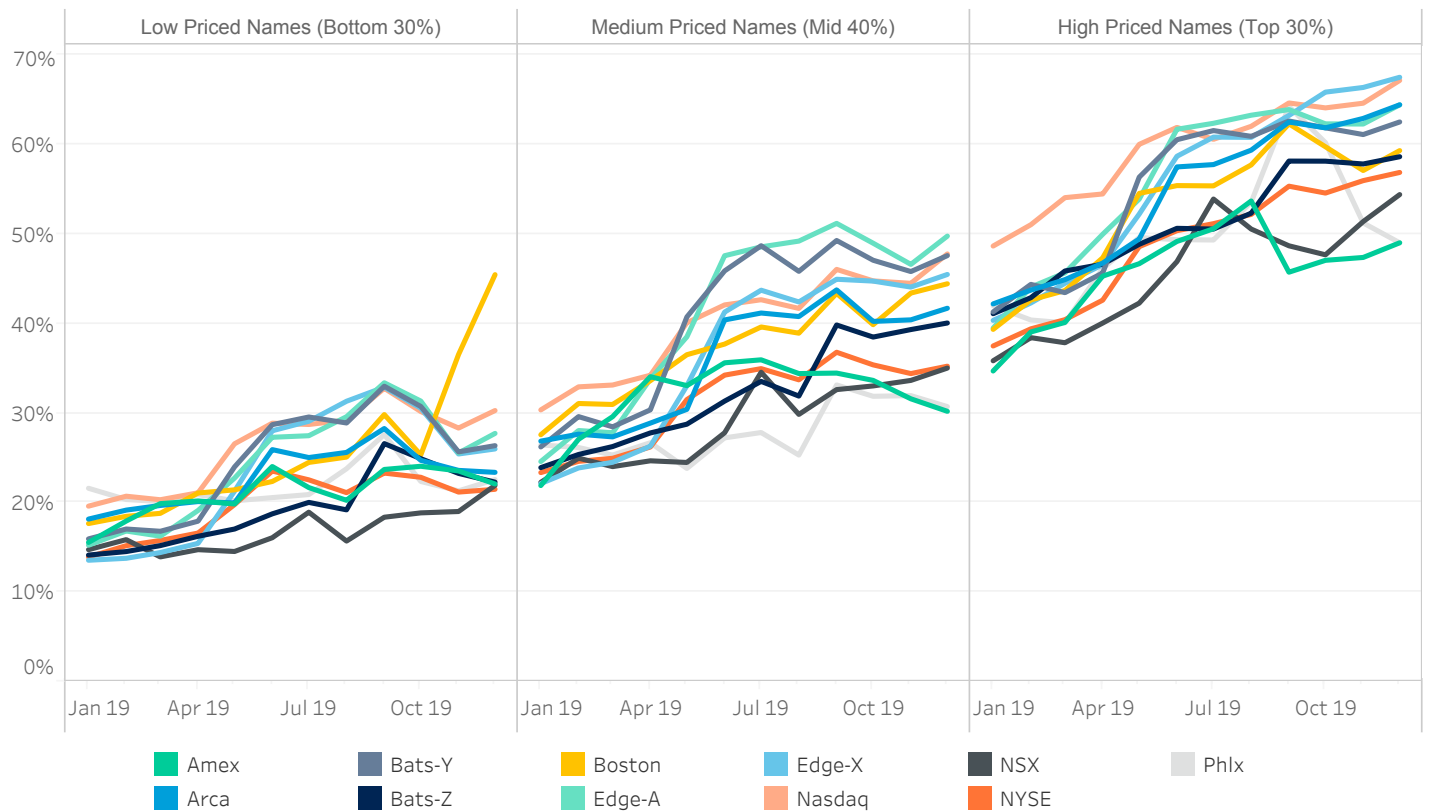
Source data: Virtu Financial



Hidden Trades Proportion by Price and Venue



Oddlot Trades Proportion by Price and Venue



Source data: SEC



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