

February 2021

US Market Structure Monthly



US Market Microstructure Observations

- The average daily volume in US equities was 12.2B shares in February 2022, down 1.6% month over month (MoM) and down 20.3% year over year.
- Trade reporting facility (TRF) market share decreased for the fourth consecutive month, down 0.2% MoM to 39.7%.
- Excluding the first and last half hour of the day, median spreads widened 3.5% and 0.4% MoM for S&P 500 and RUS 2000 symbols, respectively, in February 2022.
- Consistent with the trends in spreads, excluding the first and last half hour of the day, intraday volatility increased 6.6% and 8.5% MoM for S&P 500 and RUS 2000 symbols, respectively.
- No significant MoM change in the proportion of volume traded in the closing auction.

Market Structure News

SEC Issues Proposal to Shorten the Securities Settlement Process

The SEC is proposing to reduce risks in the clearance and settlement of securities by shortening the standard securities settlement cycle for most broker-dealer transactions from two business days after the trade date (T+2) to one business day after the trade date (T+1). The change would reduce the margin counterparties would be required to post with a clearinghouse, as well as help mitigate market risk by reducing the time required to complete transactions.

<https://www.sec.gov/news/press-release/2022-21>

SEC Proposes Rules for More Disclosure From Short Sellers

In a bid to enhance its understanding of market events, the SEC has proposed that asset managers who hold either a \$10M short position or a 2.5% stake in a security be required to file a new form that would include the security name, gross end of month short position and daily trading activity that affected the position. The SEC would then aggregate these reports and publish data for each security keeping the identity of individual asset managers confidential. Additionally, brokerages would be required to inform regulators twice a month about how many shares their clients have sold short in aggregate without having to reveal the identities of the underlying clients.

<https://www.wsj.com/articles/sec-proposes-rules-for-more-disclosure-from-short-sellers-11645804875>

<https://www.sec.gov/news/press-release/2022-32>

MEMX Announces New Market Data Pricing

Pending filing with the SEC, MEMX announced a new fee structure for its real-time equities market data. After rapidly growing to over 4% market share in its first 16 months of operation, MEMX is now a meaningful source of price discovery for US equities and will be the first stock exchange to make real-time market data that consists of top of the book and last sale data available to both professional and non-professional customers at the same low price of \$.01. Virtu Financial is an investor in MEMX.

<https://www.businesswire.com/news/home/20220209005305/en/MEMX-the-Fastest-Growing-U.S.-Stock-Exchange-Unveils-Market-Data-Pricing>

SEC Proposes Shortening the Reporting Window for Form 13D

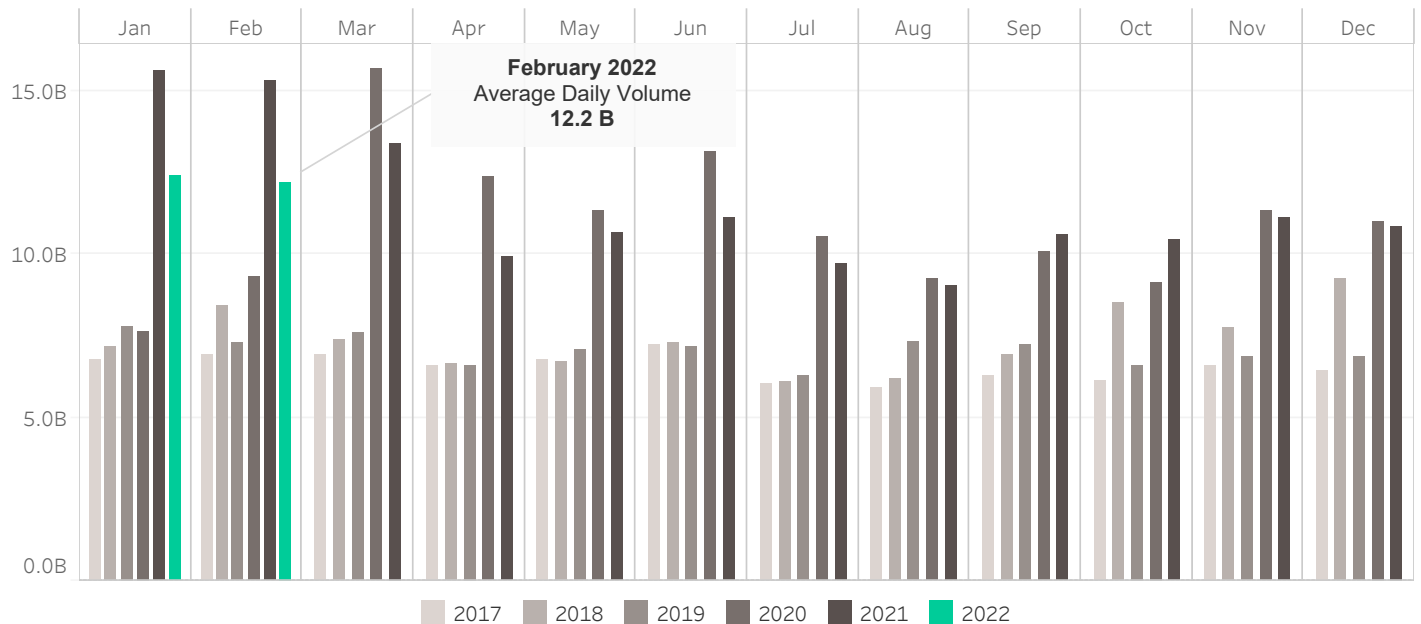
The SEC has proposed shortening the reporting window to five days (was ten) for shareholders to alert the market through SEC form 13D when building an ownership stake of more than 5% of a company's stock. Proponents of the proposal include publicly traded companies and their executives, while activist investors have argued that this rule change could make it more costly for them to build their positions.

<https://www.wsj.com/articles/sec-floats-giving-activist-investors-less-time-to-report-positions-11644516069>

<https://www.sec.gov/news/press-release/2022-22>

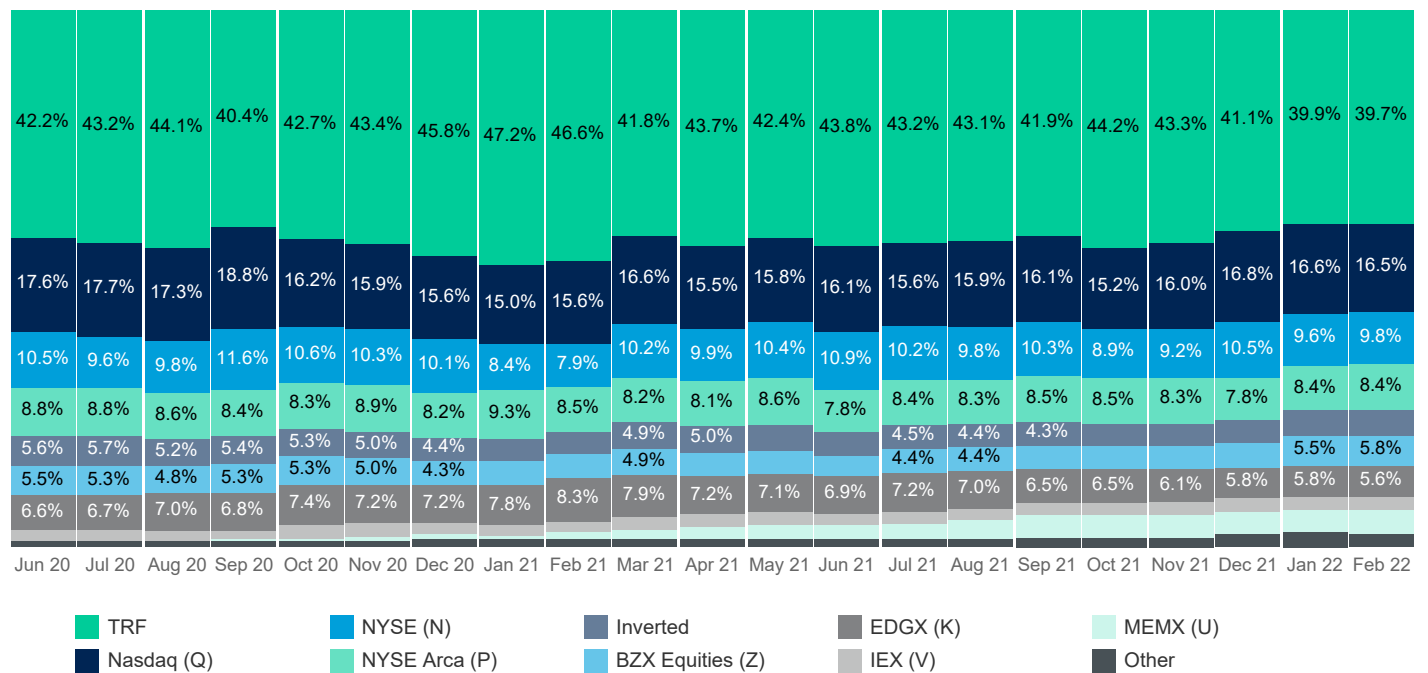


Average Daily Market Volume



Source data: Cboe Global Markets

Venue Market Share

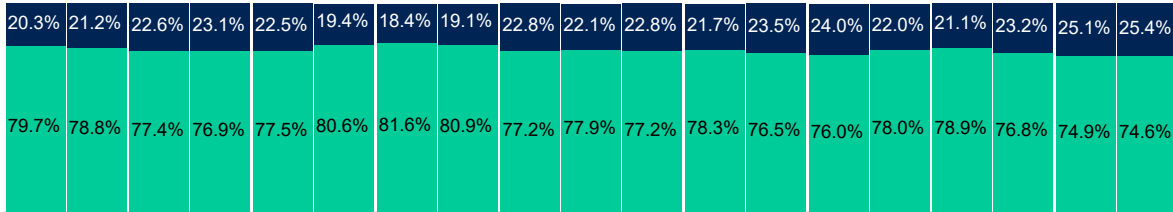


Source data: Cboe Global Markets



TRF Volume Breakdown

■ ATS
■ OTC Non ATS

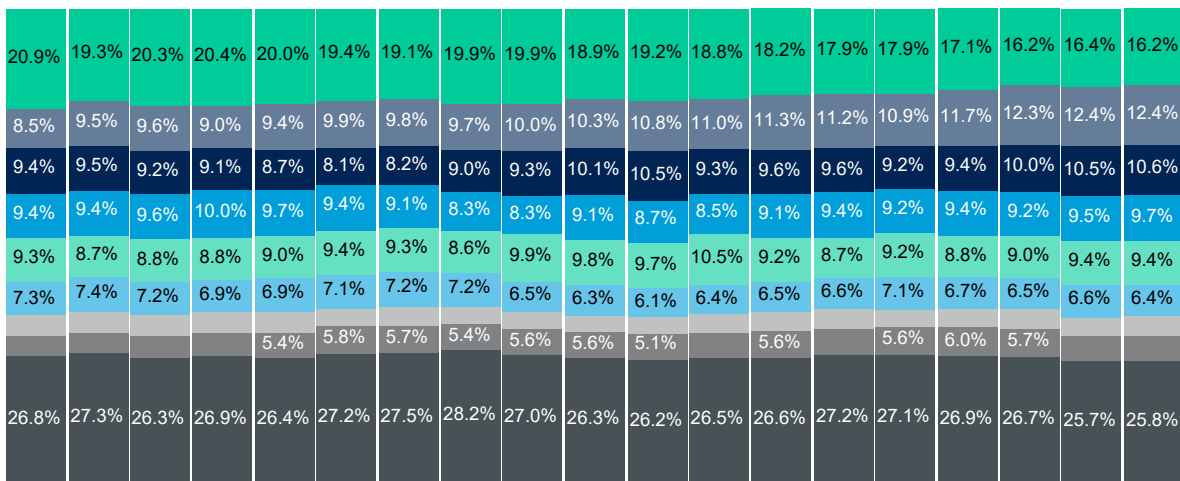


Jul 20 Aug 20 Sep 20 Oct 20 Nov 20 Dec 20 Jan 21 Feb 21 Mar 21 Apr 21 May 21 Jun 21 Jul 21 Aug 21 Sep 21 Oct 21 Nov 21 Dec 21 Jan 22

Tier1 and Tier2 only; Excludes Dealerweb, Source data: FINRA

ATS Market Share

■ UBS
■ Goldman Sachs
■ Morgan Stanley
■ JP Morgan
■ Credit Suisse
■ Level
■ BIDS
■ Virtu
■ Other

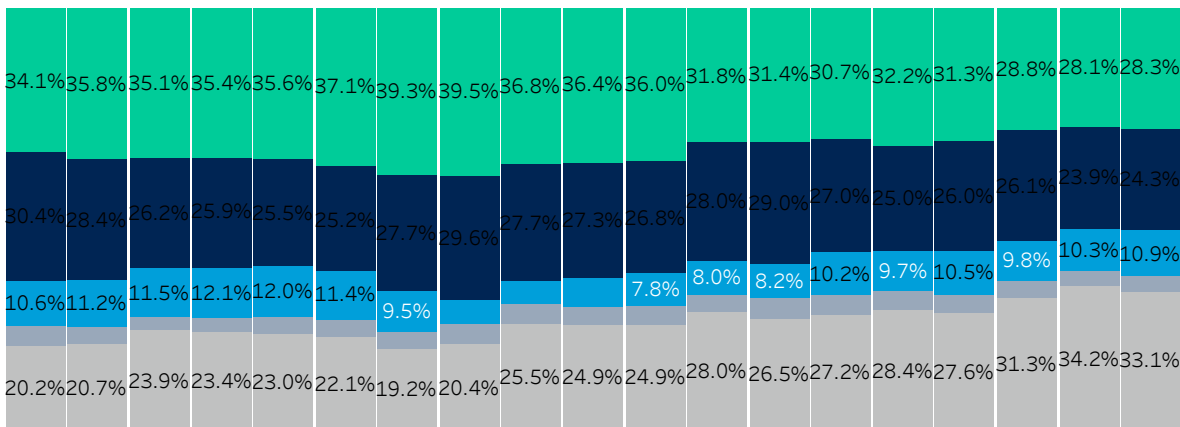


Jul 20 Aug 20 Sep 20 Oct 20 Nov 20 Dec 20 Jan 21 Feb 21 Mar 21 Apr 21 May 21 Jun 21 Jul 21 Aug 21 Sep 21 Oct 21 Nov 21 Dec 21 Jan 22

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

OTC Non-ATS Market Share

■ Citadel
■ Virtu
■ G1
■ Two Sigma
■ Other

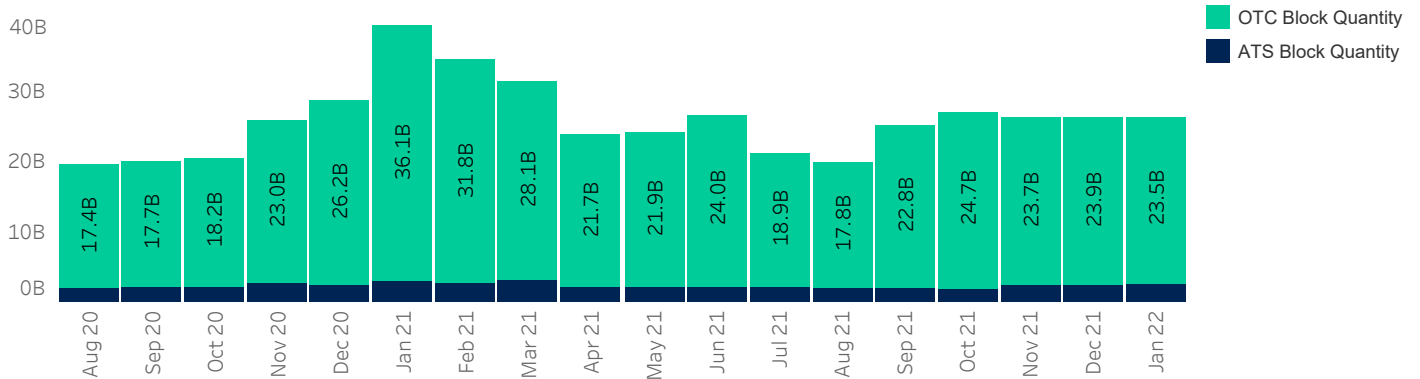


Jul 20 Aug 20 Sep 20 Oct 20 Nov 20 Dec 20 Jan 21 Feb 21 Mar 21 Apr 21 May 21 Jun 21 Jul 21 Aug 21 Sep 21 Oct 21 Nov 21 Dec 21 Jan 22

Source: FINRA, NMS Tier 1 & 2 Securities

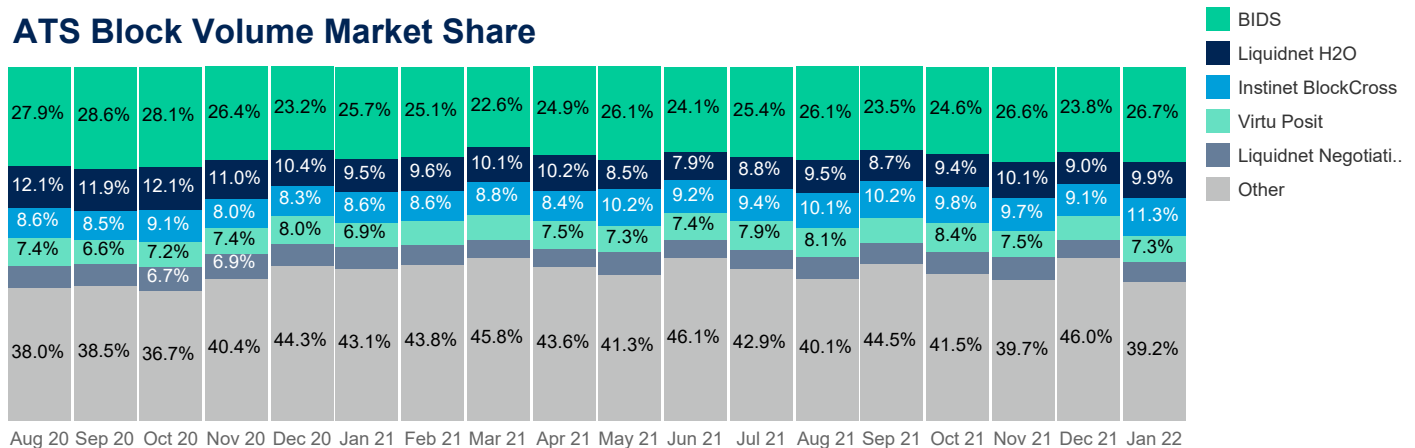


TRF Block Volume Breakdown (Shares)



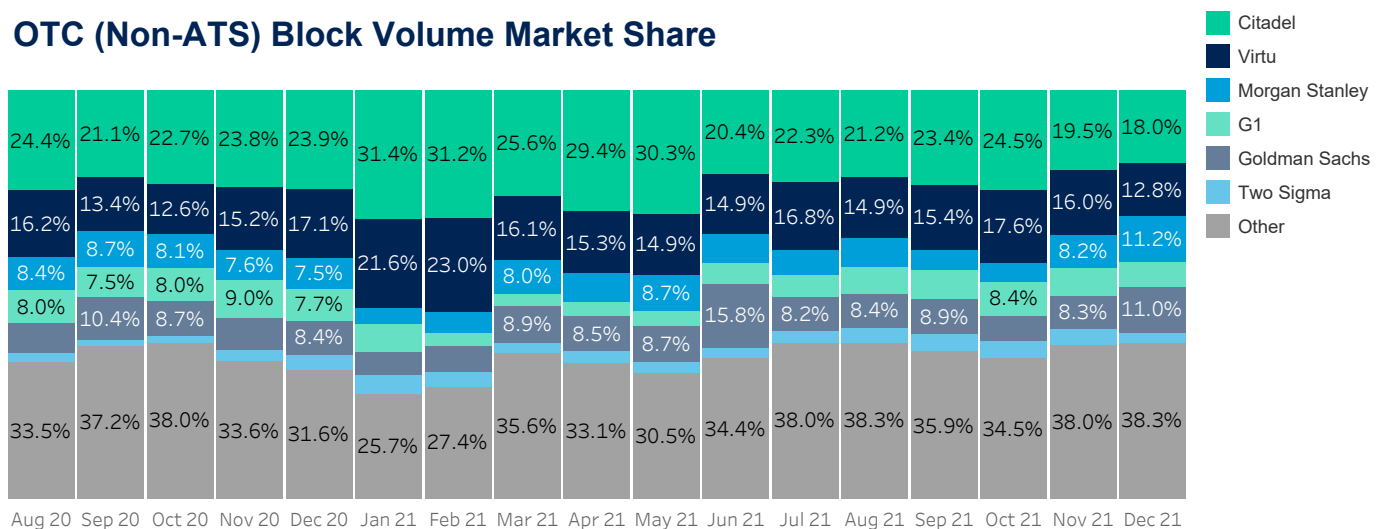
Source: FINRA

ATS Block Volume Market Share



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

OTC (Non-ATS) Block Volume Market Share



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



Quotesize in Shares

	1Q 21		2Q 21			3Q 21			4Q 21			1Q 22	
	Feb 21	Mar 21	Apr 21	May 21	Jun 21	Jul 21	Aug 21	Sep 21	Oct 21	Nov 21	Dec 21	Jan 22	Feb 22
First 30 Min SP500	193	191	188	184	178	177	176	171	170	172	187	184	187
RUS2000	217	222	231	225	217	222	221	214	207	201	220	224	225
Mid Day SP500	204	195	198	193	197	190	193	184	181	183	192	188	193
RUS2000	220	207	216	211	213	210	215	208	205	209	219	225	230
Last 30 Min SP500	238	217	225	224	239	232	238	219	210	213	208	200	199
RUS2000	255	225	238	235	243	240	249	236	232	238	242	244	246

Spread Bps

First 30 Min SP500	13.6	13.2	10.3	10.2	8.1	9.7	9.9	9.3	11.1	12.3	13.9	14.2	13.6
RUS2000	61.8	67.0	57.7	56.8	45.0	52.7	51.5	45.7	47.3	50.2	58.4	57.4	56.9
Mid Day SP500	5.3	5.6	4.4	4.3	3.5	4.1	4.0	4.1	4.3	4.7	5.6	5.7	5.9
RUS2000	25.5	27.7	23.1	22.6	18.0	19.9	18.8	18.2	18.7	21.0	24.2	24.9	25.0
Last 30 Min SP500	3.6	3.8	3.1	3.1	2.6	2.9	2.7	2.8	3.0	3.1	3.7	3.8	4.1
RUS2000	19.3	20.8	17.5	16.9	14.1	14.4	14.2	14.3	14.8	15.6	18.0	18.6	19.1

One Minute Volatility Bps

First 30 Min SP500	18.7	18.8	14.5	16.4	12.8	14.5	14.2	14.8	15.3	15.9	17.3	20.0	19.6
RUS2000	22.1	25.8	18.4	21.6	15.9	19.3	18.8	18.6	17.7	18.9	22.2	23.2	23.6
Mid Day SP500	6.7	7.9	5.4	6.1	4.5	5.3	4.8	5.4	5.2	5.0	6.1	7.6	8.1
RUS2000	6.9	9.3	5.9	6.5	4.9	6.2	5.3	5.7	5.2	5.2	5.9	7.1	7.7
Last 30 Min SP500	7.3	8.8	6.2	7.1	5.2	5.7	5.3	6.2	6.1	5.5	7.2	9.0	10.1
RUS2000	8.7	11.8	7.5	8.6	6.5	7.2	6.6	7.7	7.2	7.3	9.1	10.0	10.8

Percent ADV by Time of Day

Open SP500	1.2%	1.1%	1.3%	1.2%	1.1%	1.2%	1.1%	1.0%	1.1%	1.1%	1.0%	1.0%	1.0%
RUS2000	1.0%	0.9%	0.9%	0.9%	0.8%	1.0%	0.9%	0.9%	0.9%	0.9%	0.8%	0.7%	0.8%
First 30 Min SP500	10.1%	9.2%	9.6%	9.7%	9.5%	10.0%	9.7%	9.7%	9.5%	9.7%	9.2%	9.2%	9.3%
RUS2000	8.7%	8.4%	8.1%	8.4%	7.9%	8.9%	8.8%	8.5%	8.3%	8.5%	8.2%	7.5%	8.1%
Last 30 Min SP500	17.2%	17.6%	17.8%	18.4%	18.5%	18.3%	18.3%	18.2%	18.8%	18.3%	18.4%	18.7%	19.1%
RUS2000	18.6%	18.6%	19.3%	19.3%	19.4%	19.8%	19.5%	19.6%	19.1%	19.4%	19.8%	20.3%	21.0%
Close SP500	10.6%	11.9%	13.2%	11.1%	12.3%	12.5%	10.7%	11.7%	12.1%	11.5%	13.9%	11.5%	11.1%
RUS2000	8.3%	9.2%	9.5%	8.7%	10.0%	9.9%	8.9%	9.7%	10.1%	8.8%	10.7%	8.9%	9.7%

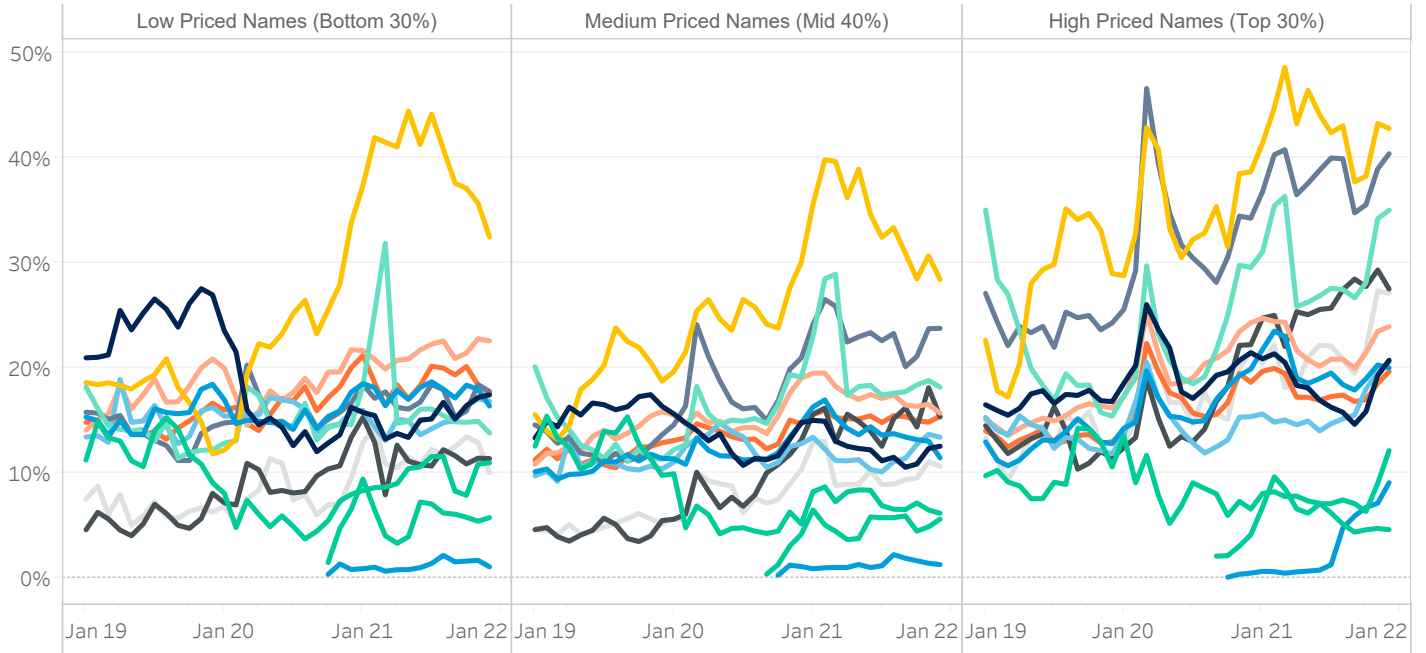
Median used for all metrics

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

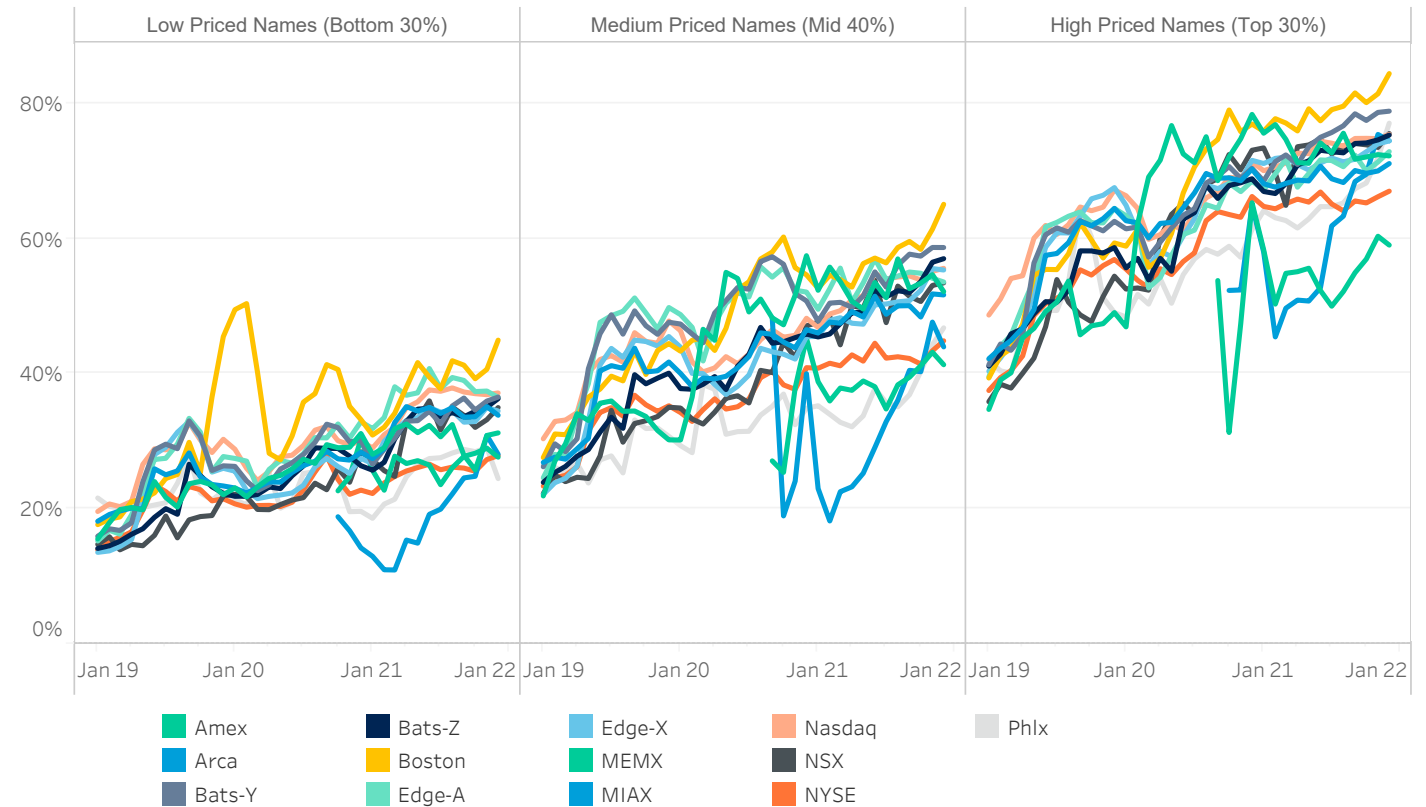
Source data: Virtu Financial



Hidden Trades Proportion by Price and Venue



Oddlot Trades Proportion by Price and Venue



Source data: SEC



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APAC+852.2846.3592 | **CAN**+1.416.874.0800 | **EMEA**+44.20.7670.4066 | **US**+1.646.682.6199
info@virtu.com | www.virtu.com

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