

September 2022

US Market Structure Monthly



US Market Microstructure Observations

- The average daily volume in US equities was 11.3B shares in September 2022, up 7% month over month (MoM) and up 7% year over year (YoY).
- Trade reporting facility (TRF) market share declined 3.4% MoM to 41.7% in September 2022.
- Spreads continued to narrow for Russell 2000 names in September 2022, while increasing slightly for S&P 500 names. Excluding the first and last half hour of the trading day, the median Russell 2000 name had a spread of 18.7bps, a level not seen since October 2021. The median S&P 500 stock's spread increased to 4.9bps in September, from 4.7bps the prior month.

Market Structure News

SEC Plans to Not Ban Payment for Order Flow

SEC officials have begun to signal, via industry meetings, that they will no longer seek to ban payment for order flow arrangements between retail brokers and retail wholesalers. However, the SEC still plans to pursue other areas of equity market structure, as noted by Chair Gary Gensler in prior comments, which include a focus on minimum pricing increments, exchange access fees, and enhanced Rule 605 disclosures. The SEC plans to issue rule proposals over the next several months.

<https://finance.yahoo.com/news/sec-set-let-wall-street-113345996.html>

SEC Proposes to Push More US Treasury Trades Into Settling with Clearinghouses

The SEC published a proposal that would mandate more market participants to settle US Treasury trades via clearinghouses. Specifically, the proposal would require trades executed by interdealer brokers and hedge funds to be centrally cleared. Advocates for central clearing say a central clearing model would make the market more resilient in times of stress by minimizing the number of bilateral arrangements that exist between market participants today, as well as reducing the amount of collateral required across the entire system. Opponents of central clearing argue that clearinghouses raise costs, which discourages smaller participants from entering the market.

<https://www.wsj.com/articles/sec-considers-proposal-to-push-more-treasury-trades-into-clearinghouses-11663164001>

SEC Signals Supports for CFTC Oversight of Crypto

In remarks during an industry conference in September, SEC Chair Gensler advocated for Congress to give the Commodity Futures Trading Commission (CFTC) greater authority to regulate non-security tokens. Chair Gensler's comments come after months of debate over which government agency should have primary jurisdiction in regulating the cryptocurrency market. Earlier in the year, CFTC Chair Rostin Behman asked Congress to pass a law that would allow the CFTC to regulate the cash market for certain types of cryptocurrencies. The crypto industry has advocated for the CFTC to oversee the crypto market instead of the SEC, citing that the SEC's rules for stocks and bonds do not lend themselves to the crypto market.

<https://www.wsj.com/articles/secs-gensler-supports-commodities-regulator-having-bitcoin-oversight-11662641115>

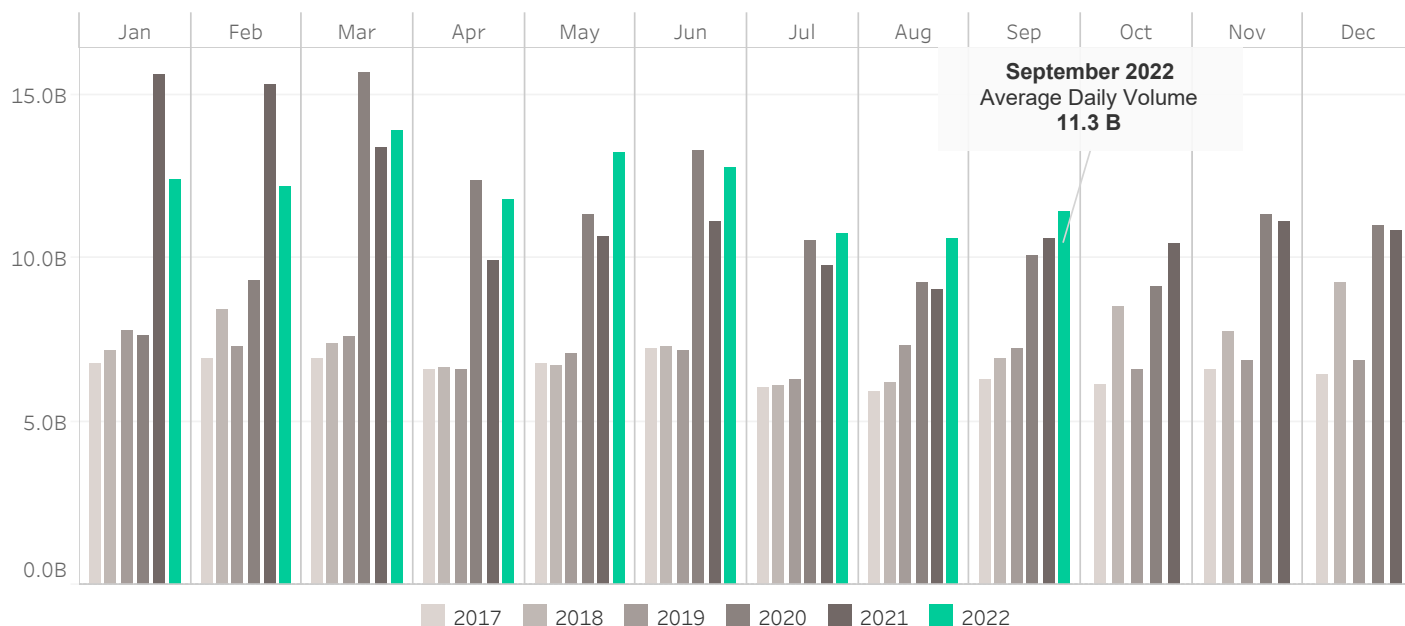
Digital Asset Exchange Launches with Backers including Virtu Financial and Charles Schwab

A consortium of market makers, broker dealers, and private equity funds announced the launch of EDX Markets, a marketplace for trading digital assets. EDX Markets plans to offer a highly liquid cryptocurrency ecosystem by aggregating liquidity from multiple market makers to reduce spreads and improve transparency. Backers of the new exchange include Virtu Financial, Charles Schwab, Citadel Securities, Fidelity Digital Assets, Sequoia Capital and Paradigm. EDX Markets will leverage trading technology from MEMX.

<https://www.businesswire.com/news/home/20220913005367/en/Digital-Asset-Exchange-EDX-Markets-Launches-with-Backing-from-Leading-Broker-Dealers-Global-Market-Makers-and-Venture-Capital-Firms>

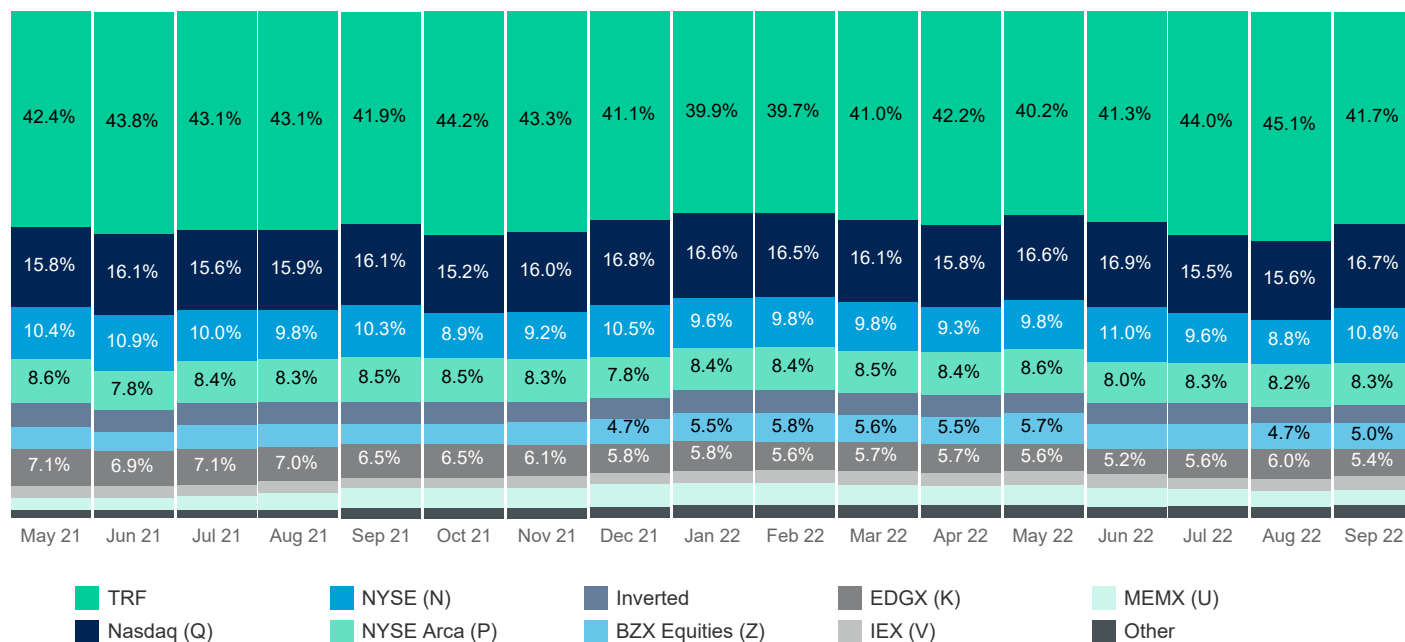


Average Daily Market Volume



Source data: Cboe Global Markets

Venue Market Share

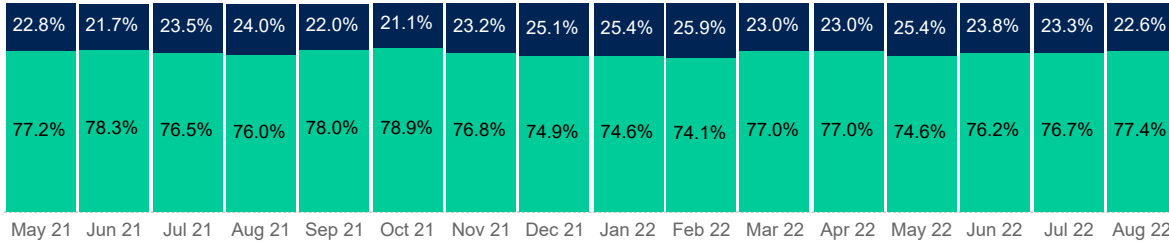


Source data: Cboe Global Markets



TRF Volume Breakdown

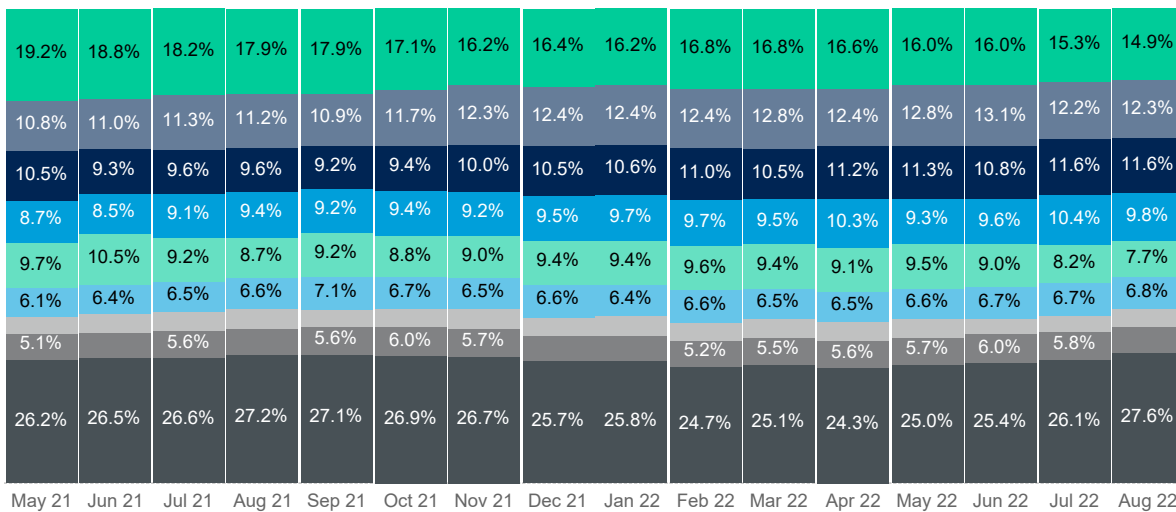
■ ATS
■ OTC Non ATS



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

ATS Market Share

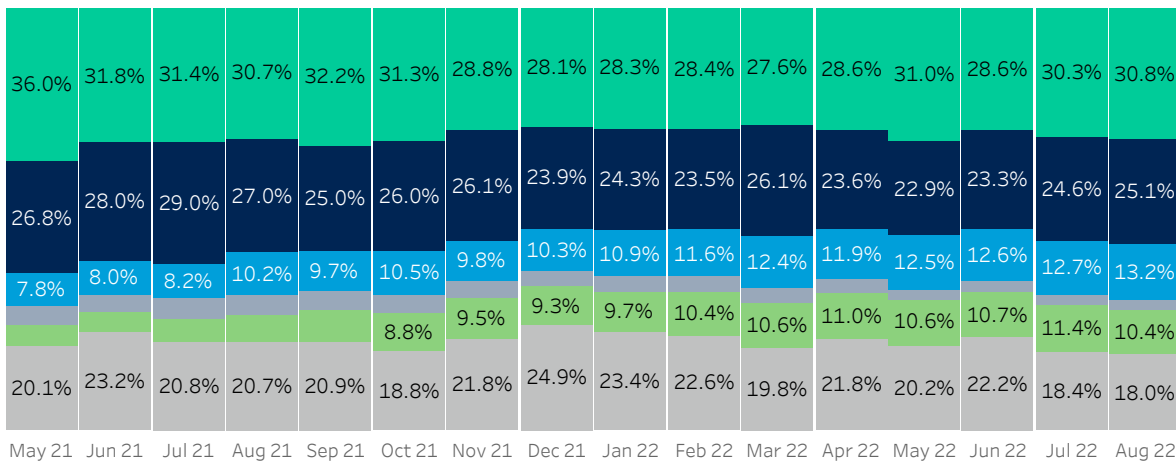
■ UBS
■ Goldman Sachs
■ Morgan Stanley
■ JP Morgan
■ Credit Suisse
■ Level
■ BIDS
■ Virtu
■ Other



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

OTC Non-ATS Market Share

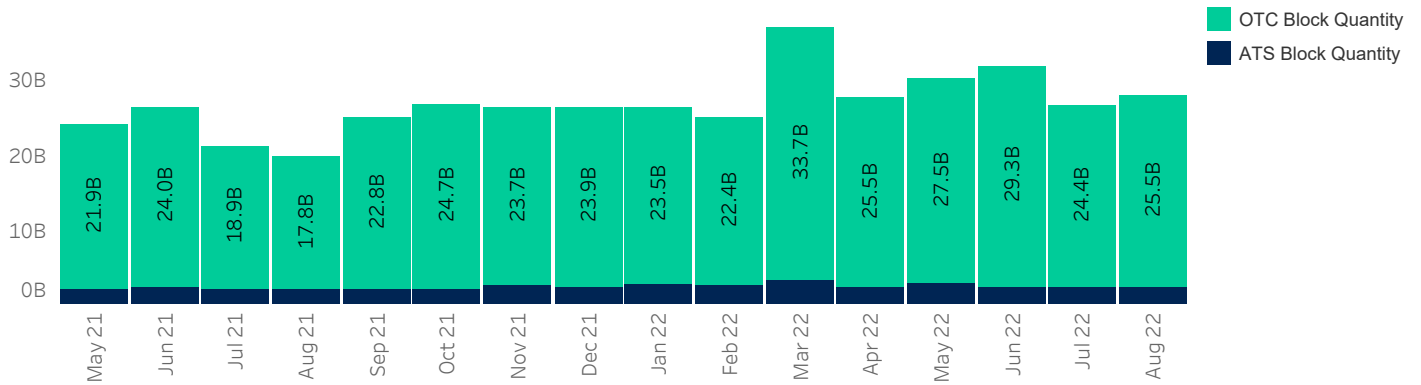
■ Citadel
■ Virtu
■ G1
■ Two Sigma
■ Jane Street
■ Other



Source: FINRA, NMS Tier 1 & 2 Securities

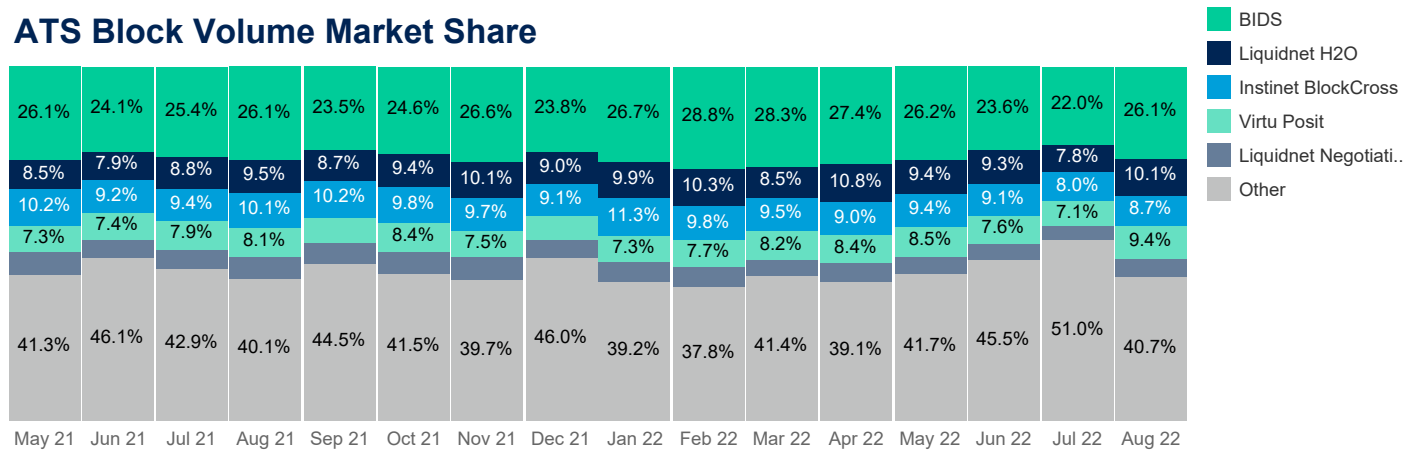


TRF Block Volume Breakdown (Shares)



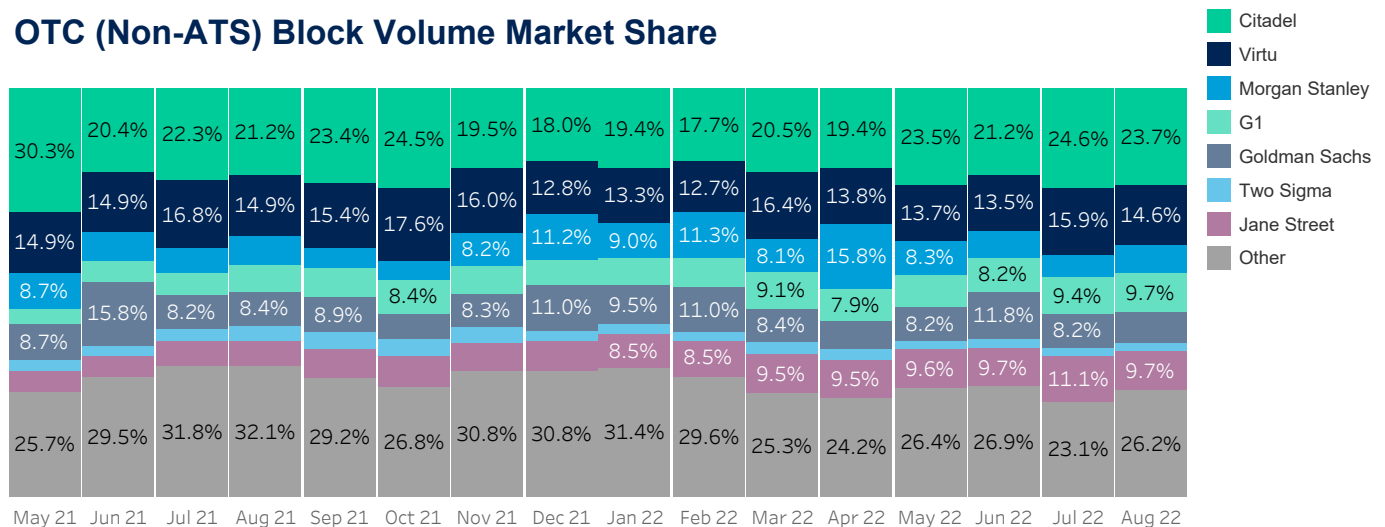
Source: FINRA

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

		3Q 21	4Q 21			1Q 22			2Q 22			3Q 22		
		Sep 21	Oct 21	Nov 21	Dec 21	Jan 22	Feb 22	Mar 22	Apr 22	May 22	Jun 22	Jul 22	Aug 22	Sep 22
First 30 Min	SP500	171	170	172	187	184	187	186	180	196	195	188	185	183
	RUS2000	214	207	201	220	224	225	230	236	250	243	232	228	225
Mid Day	SP500	184	181	183	192	188	193	185	176	186	190	181	179	184
	RUS2000	208	205	209	219	225	230	234	232	234	246	237	234	235
Last 30 Min	SP500	219	210	213	208	200	199	195	190	190	198	197	201	201
	RUS2000	236	232	238	242	244	246	254	255	259	276	267	265	263

Spread Bps

First 30 Min	SP500	9.3	11.1	12.3	13.9	14.2	13.6	13.9	13.4	15.1	13.5	13.2	11.8	10.7
	RUS2000	45.7	47.3	50.2	58.4	57.4	56.9	53.8	51.3	57.0	50.4	48.1	45.3	43.2
Mid Day	SP500	4.1	4.3	4.7	5.6	5.7	5.9	6.1	5.5	6.5	5.7	5.2	4.7	4.9
	RUS2000	18.2	18.7	21.0	24.2	24.9	25.0	23.2	22.5	25.0	21.6	20.4	19.1	18.7
Last 30 Min	SP500	2.8	3.0	3.1	3.7	3.8	4.1	3.9	3.6	3.9	3.5	3.2	2.9	3.2
	RUS2000	14.3	14.8	15.6	18.0	18.6	19.1	17.1	16.6	18.1	16.2	15.4	14.1	14.1

One Minute Volatility Bps

First 30 Min	SP500	14.8	15.3	15.9	17.3	20.0	19.6	20.0	20.2	24.0	21.4	20.7	15.6	17.5
	RUS2000	18.6	17.7	18.9	22.2	23.2	23.6	22.6	21.7	26.9	24.1	26.6	21.0	20.8
Mid Day	SP500	5.4	5.2	5.0	6.1	7.6	8.1	8.4	8.2	9.9	8.3	7.5	6.2	8.6
	RUS2000	5.7	5.2	5.2	5.9	7.1	7.7	7.1	6.8	9.0	6.8	6.1	5.5	7.4
Last 30 Min	SP500	6.2	6.1	5.5	7.2	9.0	10.1	9.0	9.1	10.8	9.0	7.9	6.2	9.3
	RUS2000	7.7	7.2	7.3	9.1	10.0	10.8	8.6	8.8	9.8	8.1	6.9	6.2	8.9

Percent ADV by Time of Day

Open	SP500	1.0%	1.1%	1.1%	1.0%	1.0%	1.0%	0.9%	1.1%	1.0%	1.0%	1.1%	1.0%	0.9%
	RUS2000	0.9%	0.9%	0.9%	0.8%	0.7%	0.8%	0.8%	0.7%	0.7%	0.7%	0.7%	0.8%	0.7%
First 30 Min	SP500	9.7%	9.5%	9.7%	9.2%	9.2%	9.3%	9.1%	9.3%	9.3%	9.4%	9.8%	9.6%	9.0%
	RUS2000	8.5%	8.3%	8.5%	8.2%	7.5%	8.1%	8.0%	7.6%	8.2%	7.6%	8.1%	8.2%	7.4%
Last 30 Min	SP500	18.2%	18.8%	18.3%	18.4%	18.7%	19.1%	19.0%	19.0%	18.6%	19.2%	18.6%	18.8%	18.7%
	RUS2000	19.6%	19.1%	19.4%	19.8%	20.3%	21.0%	20.1%	19.6%	19.7%	19.8%	20.3%	20.4%	20.1%
Close	SP500	11.7%	12.1%	11.5%	13.9%	11.5%	11.1%	12.6%	11.8%	10.9%	13.1%	12.5%	11.9%	12.3%
	RUS2000	9.7%	10.1%	8.8%	10.7%	8.9%	9.7%	10.2%	10.6%	9.1%	10.8%	11.8%	10.4%	11.4%

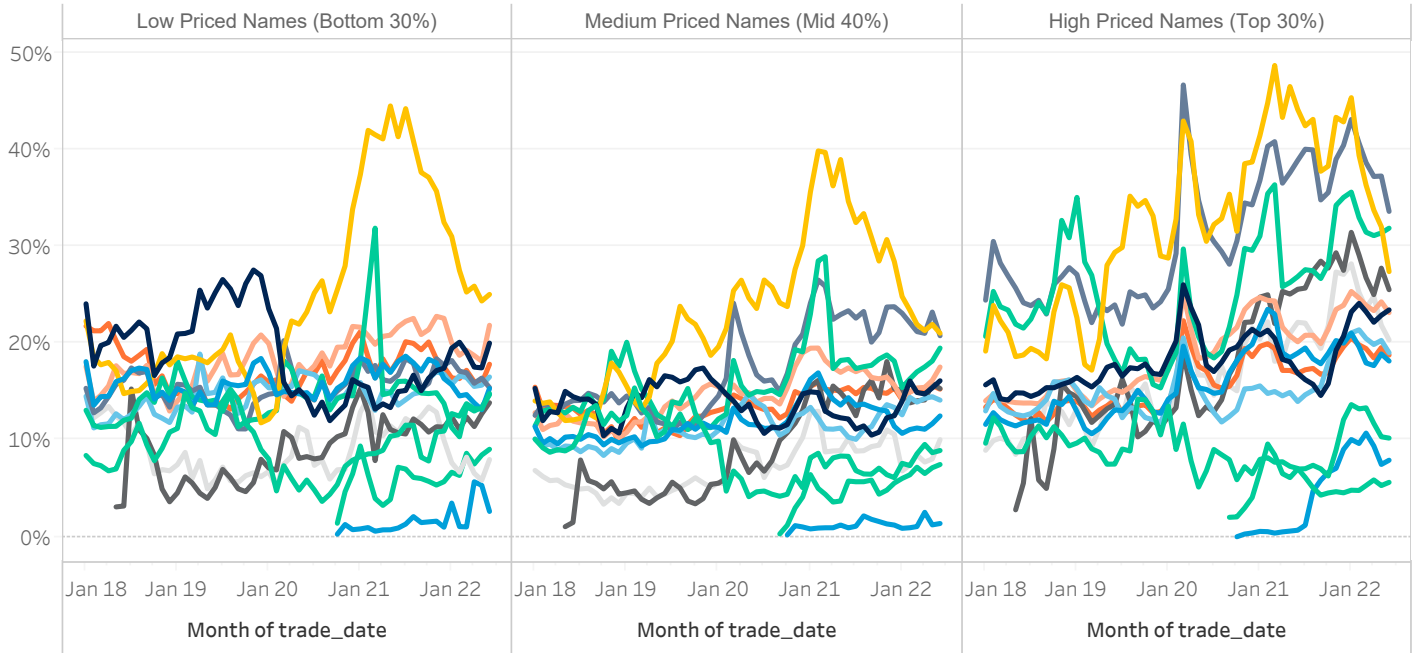
Median used for all metrics

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

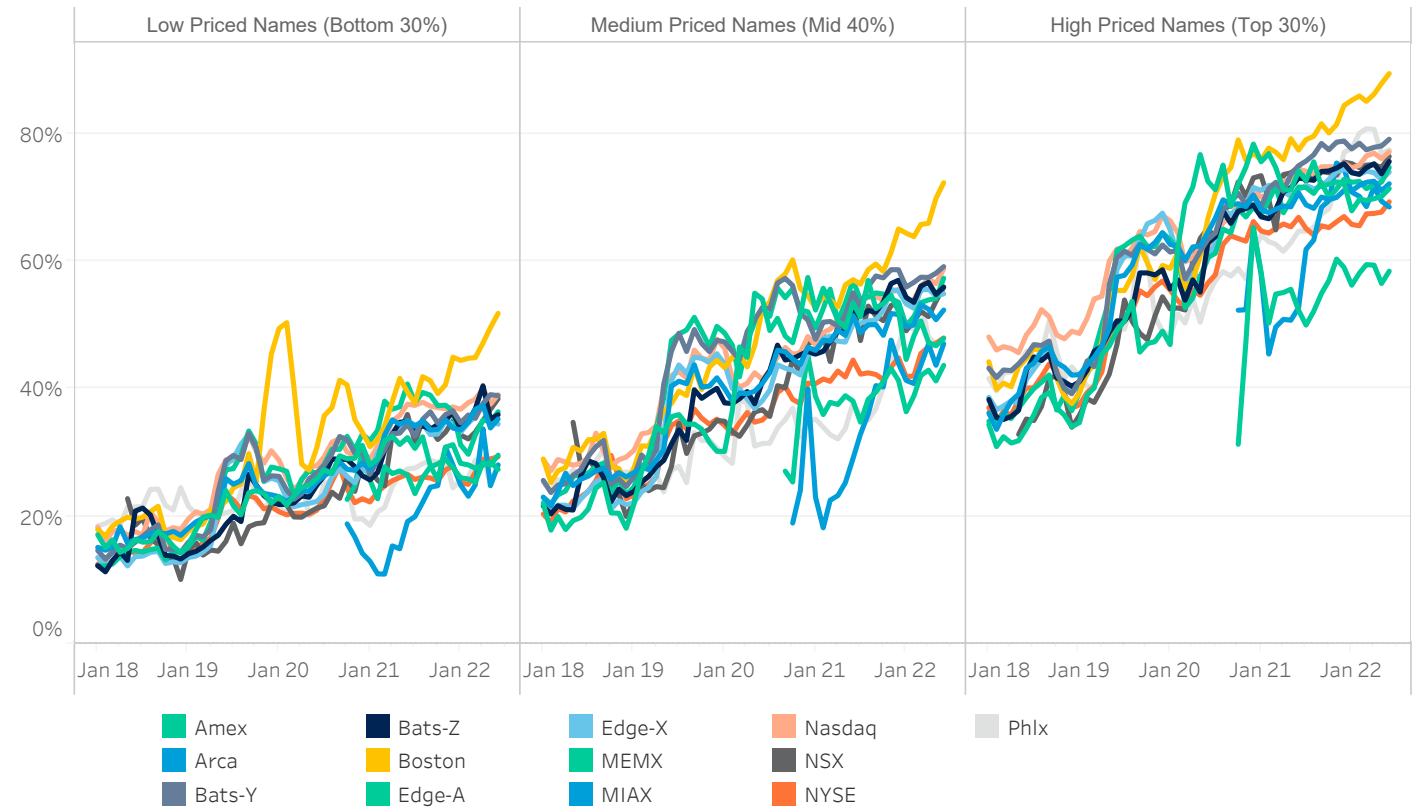
Source data: Virtu Financial



Hidden Trades Proportion by Price and Venue



Oddlot Trades Proportion by Price and Venue



Source data: SEC



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