

December 2022

US Market Structure Monthly



US Market Microstructure Observations

- The average daily share volume in US equities was 10.8B shares in December 2022, down 4% month over month (MoM) and flat year over year (YoY). For full year 2022, the average daily share volume was 11.8B shares, up 5% compared to full year 2021.
- Trade reporting facility (TRF) share volume as a percent of total consolidated share volume increased 0.8% MoM to 43.9% in December 2022.
- Spreads in S&P 500 and Russell 2000 stocks narrowed in December 2022 compared to the prior month. Excluding the first and last half hour of the day, the median S&P 500 stock's spread declined 7.3% to 5.1bps in December, from 5.5bps in November 2022, while the median Russell 2000 stock's spread narrowed 12.3% to 18.6bps in December 2022, from 21.2bps the prior month.
- The % of the day's volume executed on the close for the median S&P500 stock in December 2022 was 14.7%, the highest monthly figure in 2022. The higher close volumes were driven by the quad witch futures and options expiration on December 16, as well quarter end/year end.

Market Structure News

Exchanges to Ease Rules on Direct Listings

The Securities and Exchange Commission (SEC) approved Nasdaq's proposal to expand the limits on capital raises in direct listings, with the expectation that the Commission will also soon approve a similar proposal from the NYSE. Current rules allow an issuer to raise money in a direct listing on both exchanges, provided that the shares are sold within a range that is stated on the company's registration statement. The new Nasdaq rule will allow an issuer to sell shares in an open auction on an exchange at a price that is up to 20% below and 80% above the range specified on the registration statement. The new rule could make direct listings more appealing to certain companies relative to traditional initial public offerings.

<https://www.bloomberg.com/news/articles/2022-12-09/nasdaq-nyse-set-to-ease-rules-on-direct-listing-capital-raises>

Congresswoman Introduces SEC Regulatory Accountability Act

Congresswoman Ann Wagner from Missouri, the newly appointed Chair of the House Financial Services Subcommittee on Capital Markets, introduced legislation called the SEC Regulatory Accountability Act, which would statutorily require the SEC to identify the problem which any proposed SEC rulemaking is seeking to address, and conduct a cost-benefit analysis of the rulemaking. Congresswoman Wagner said the legislation is intended to make sure '... the SEC doesn't arbitrarily implement unnecessary and complex rules...' and the '....SEC only issues regulations that are absolutely necessary, to avoid burdening everyday investors....'.

<https://wagner.house.gov/media-center/press-releases/wagner-introduces-sec-regulatory-accountability-act-protect-retail>

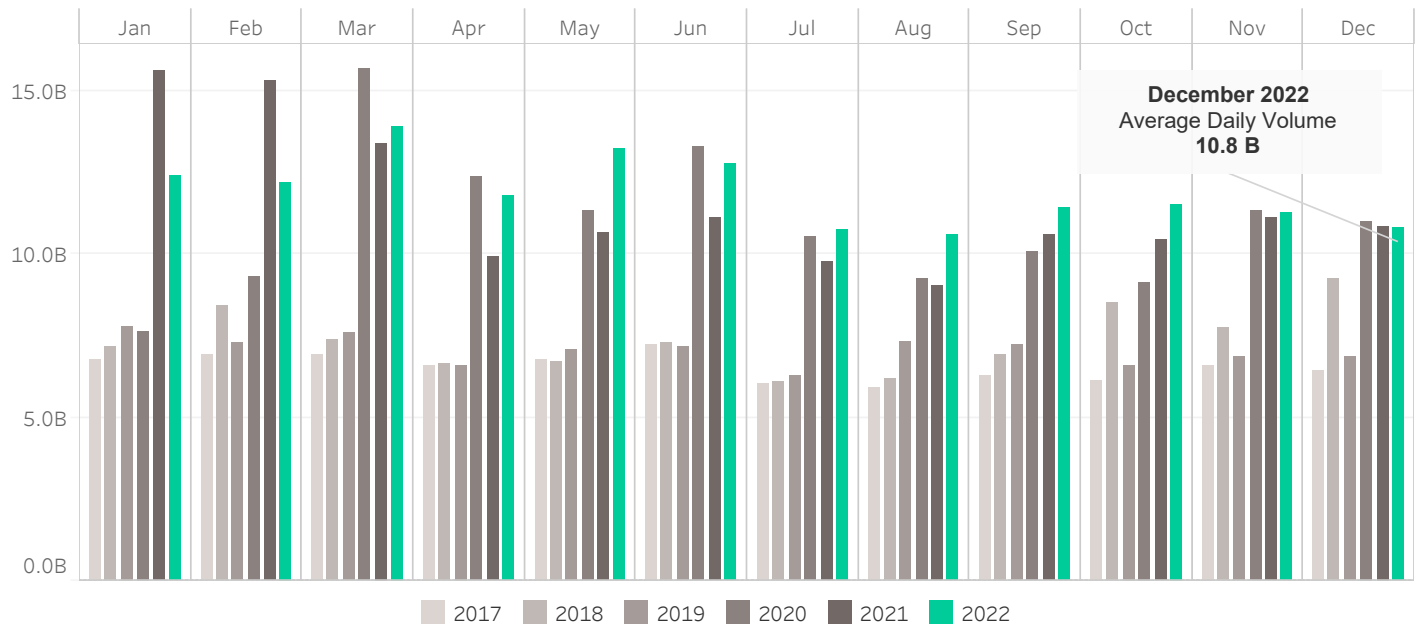
SEC Urged to Prevent Certain Single Stock Products from Being Called ETFs

Members of the SEC's Investor Advisory Committee, during a public meeting in early December, recommended that the Commission implement rules that would prevent single stock exchange traded funds from being called ETFs. Additionally, the Committee recommended that single stock exchange traded funds be required to disclose more information on their risks and uses relative to other ETFs.

<https://www.ft.com/content/1d57b241-15ea-4b1b-9576-ac1b6c453ec9>

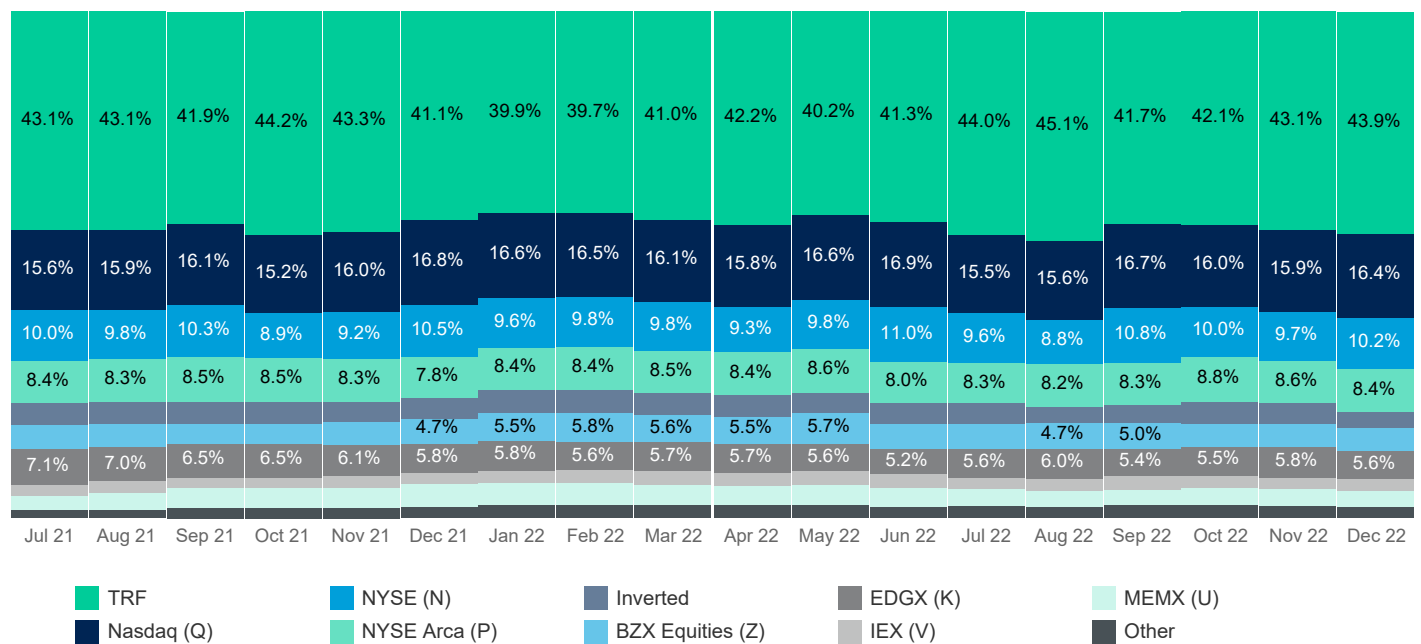


Average Daily Market Volume



Source data: Cboe Global Markets

Venue Market Share

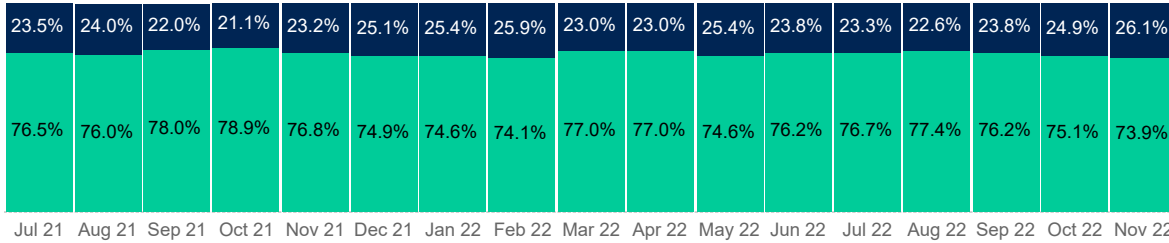


Source data: Cboe Global Markets



TRF Volume Breakdown

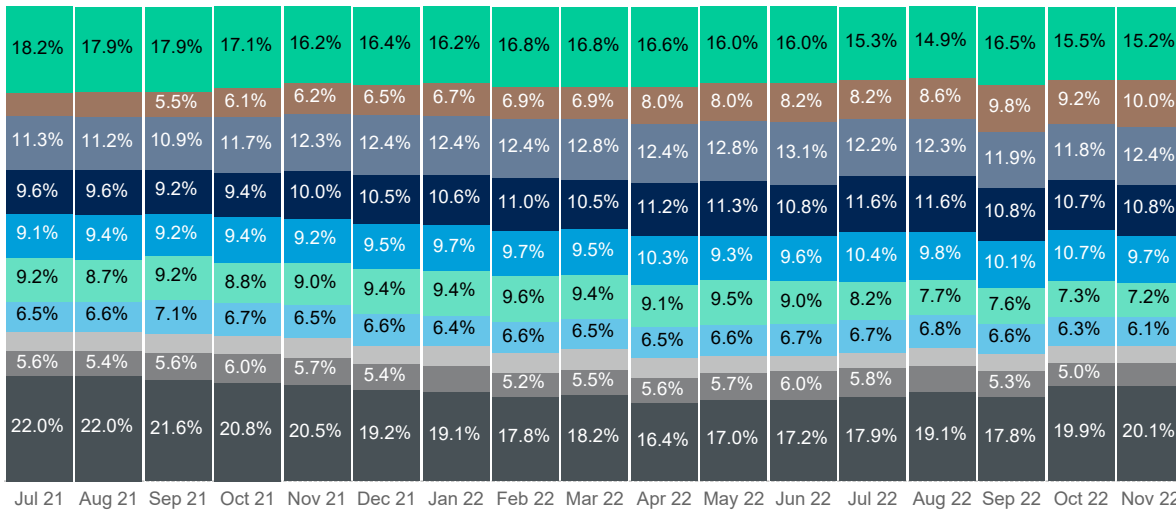
■ ATS
■ OTC Non ATS



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

ATS Market Share

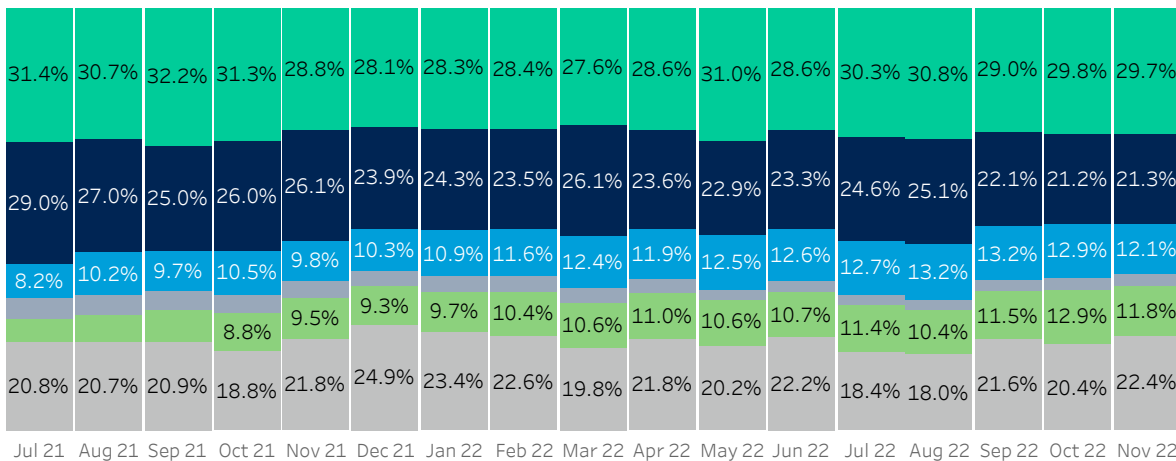
■ UBS
■ Intelligent Cross
■ Goldman Sachs
■ Morgan Stanley
■ JP Morgan
■ Credit Suisse
■ Level
■ BIDS
■ Virtu
■ Other



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

OTC Non-ATS Market Share

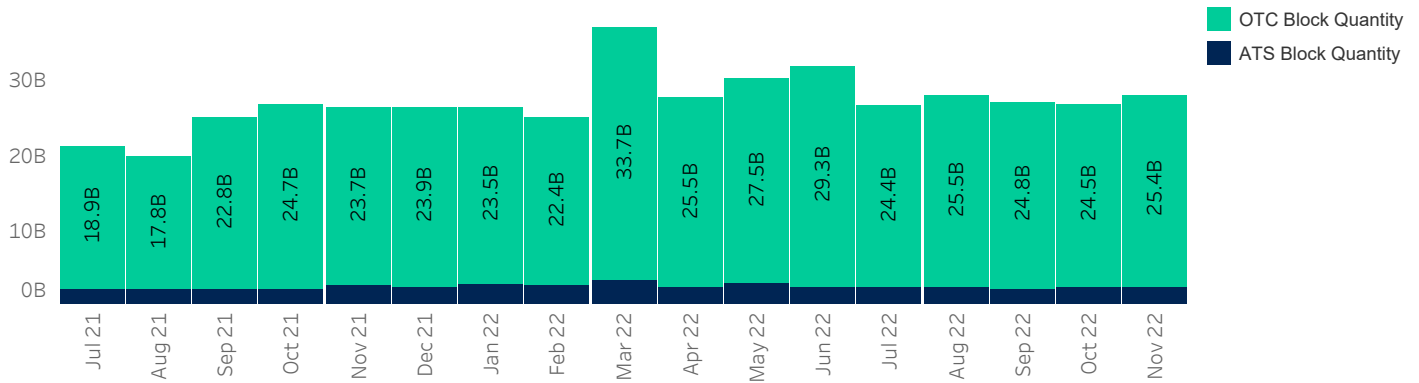
■ Citadel
■ Virtu
■ G1
■ Two Sigma
■ Jane Street
■ Other



Source: FINRA, NMS Tier 1 & 2 Securities

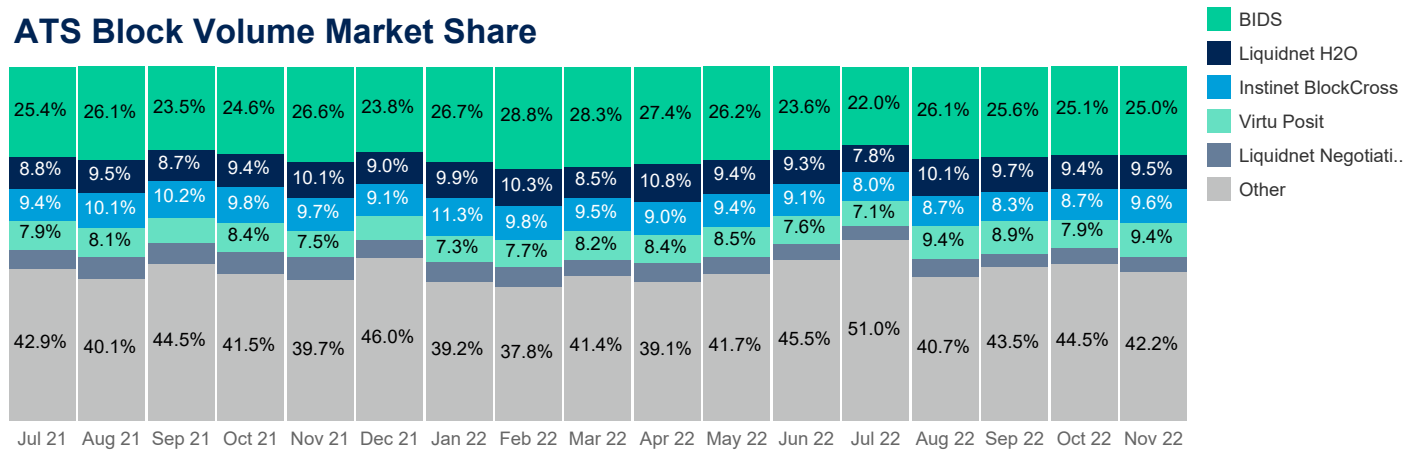


TRF Block Volume Breakdown (Shares)



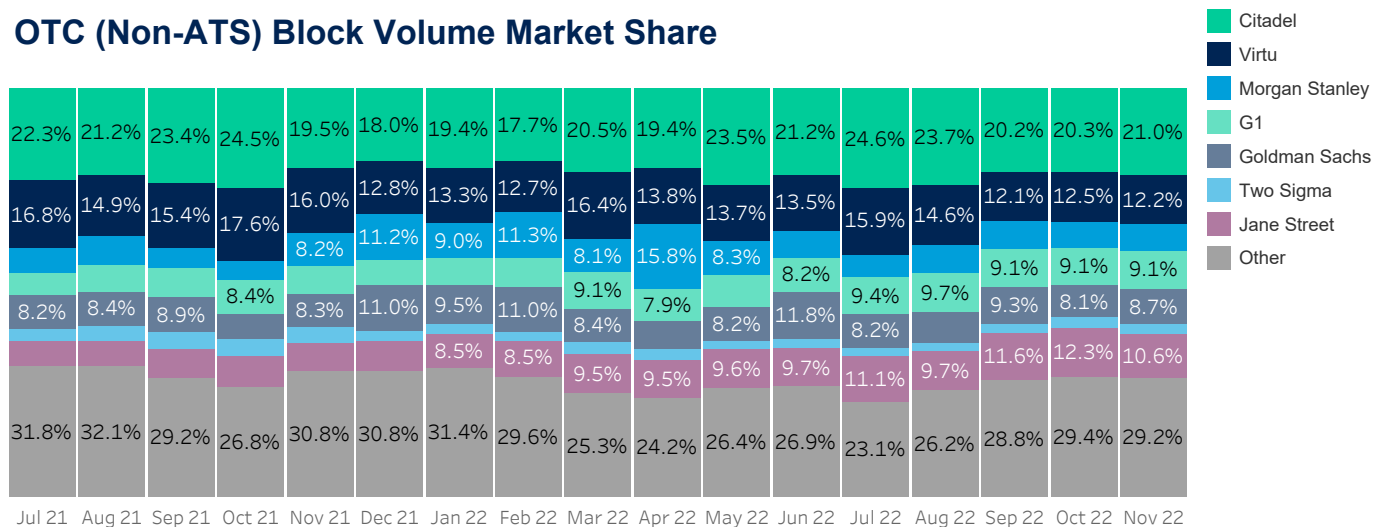
Source: FINRA

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

		4Q 21	1Q 22			2Q 22			3Q 22			4Q 22		
		Dec 21	Jan 22	Feb 22	Mar 22	Apr 22	May 22	Jun 22	Jul 22	Aug 22	Sep 22	Oct 22	Nov 22	Dec 22
First 30 Min	SP500	187	184	187	186	180	196	195	188	185	183	187	186	189
	RUS2000	220	224	225	230	236	250	243	232	228	225	232	226	231
Mid Day	SP500	192	188	193	185	176	186	190	181	179	184	189	192	194
	RUS2000	219	225	230	234	232	234	246	237	234	235	245	248	250
Last 30 Min	SP500	208	200	199	195	190	190	198	197	201	201	212	210	210
	RUS2000	242	244	246	254	255	259	276	267	265	263	274	279	291

Spread Bps

First 30 Min	SP500	13.9	14.2	13.6	13.9	13.4	15.1	13.5	13.2	11.8	10.7	12.5	12.9	12.3
	RUS2000	58.4	57.4	56.9	53.8	51.3	57.0	50.4	48.1	45.3	43.2	49.2	51.1	49.8
Mid Day	SP500	5.6	5.7	5.9	6.1	5.5	6.5	5.7	5.2	4.7	4.9	5.4	5.5	5.1
	RUS2000	24.2	24.9	25.0	23.2	22.5	25.0	21.6	20.4	19.1	18.7	19.9	21.2	18.6
Last 30 Min	SP500	3.7	3.8	4.1	3.9	3.6	3.9	3.5	3.2	2.9	3.2	3.4	3.2	3.2
	RUS2000	18.0	18.6	19.1	17.1	16.6	18.1	16.2	15.4	14.1	14.1	14.7	15.5	14.2

One Minute Volatility Bps

First 30 Min	SP500	17.3	20.0	19.6	20.0	20.2	24.0	21.4	20.7	15.6	17.5	20.4	17.7	14.4
	RUS2000	22.2	23.2	23.6	22.6	21.7	26.9	24.1	26.6	21.0	20.8	23.1	21.4	16.2
Mid Day	SP500	6.1	7.6	8.1	8.4	8.2	9.9	8.3	7.5	6.2	8.6	8.1	6.8	5.8
	RUS2000	5.9	7.1	7.7	7.1	6.8	9.0	6.8	6.1	5.5	7.4	6.7	5.4	4.1
Last 30 Min	SP500	7.2	9.0	10.1	9.0	9.1	10.8	9.0	7.9	6.2	9.3	8.8	7.1	6.5
	RUS2000	9.1	10.0	10.8	8.6	8.8	9.8	8.1	6.9	6.2	8.9	7.2	6.8	5.7

Percent ADV by Time of Day

Open	SP500	1.0%	1.0%	1.0%	0.9%	1.1%	1.0%	1.0%	1.1%	1.0%	0.9%	0.9%	0.9%	1.1%
	RUS2000	0.8%	0.7%	0.8%	0.8%	0.7%	0.7%	0.7%	0.7%	0.8%	0.7%	0.7%	0.7%	0.7%
First 30 Min	SP500	9.2%	9.2%	9.3%	9.1%	9.3%	9.3%	9.4%	9.8%	9.6%	9.0%	9.0%	9.2%	8.6%
	RUS2000	8.2%	7.5%	8.1%	8.0%	7.6%	8.2%	7.6%	8.1%	8.2%	7.4%	7.6%	7.5%	7.2%
Last 30 Min	SP500	18.4%	18.7%	19.1%	19.0%	19.0%	18.6%	19.2%	18.6%	18.8%	18.7%	18.8%	18.7%	19.0%
	RUS2000	19.8%	20.3%	21.0%	20.1%	19.6%	19.7%	19.8%	20.3%	20.4%	20.1%	20.0%	21.0%	20.0%
Close	SP500	13.9%	11.5%	11.1%	12.6%	11.8%	10.9%	13.1%	12.5%	11.9%	12.3%	11.9%	11.6%	14.7%
	RUS2000	10.7%	8.9%	9.7%	10.2%	10.6%	9.1%	10.8%	11.8%	10.4%	11.4%	11.6%	10.4%	11.9%

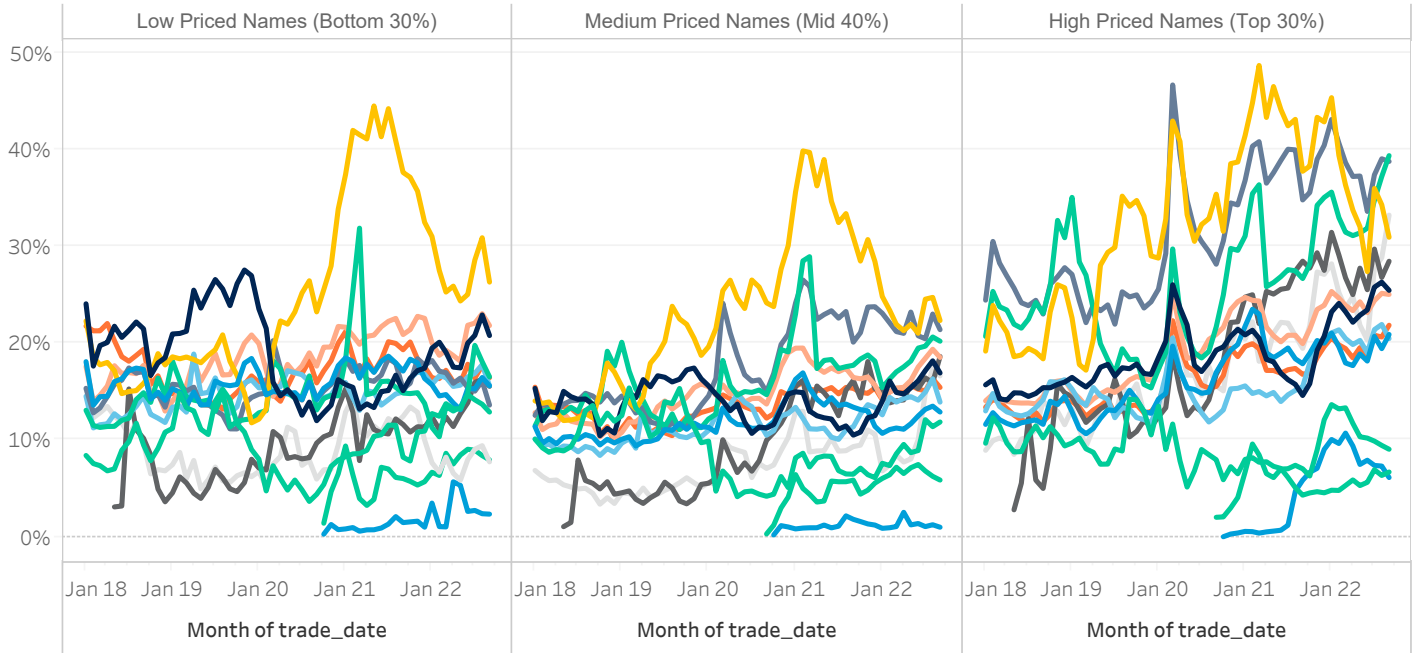
Median used for all metrics

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

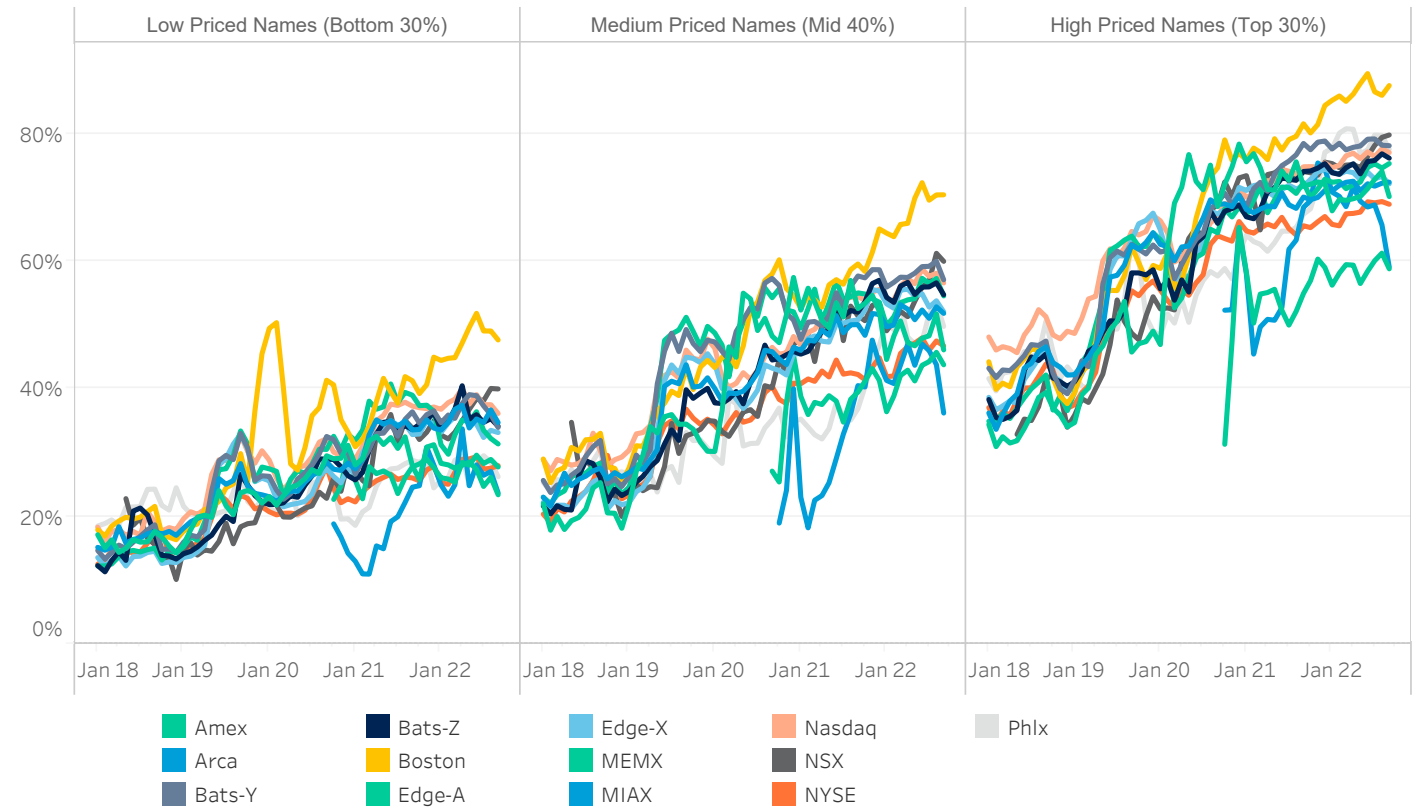
Source data: Virtu Financial



Hidden Trades Proportion by Price and Venue



Oddlot Trades Proportion by Price and Venue



Source data: SEC



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info@virtu.com | www.virtu.com

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