

April 2023

US Market Structure Monthly



US Market Microstructure Observations

- The average daily share volume in US equities was 10.3B shares in April 2023, which was down 18% month over month (MoM) and down 12% year over year (YoY).
- Trade reporting facility (TRF) share volume as a percent of total consolidated share volume increased 3.1% MoM to 44.8% in April 2023.
- Spreads in S&P 500 and Russell 2000 stocks narrowed to their lowest levels of the year in April 2023. Excluding the first and last half hour of the day, the median S&P 500 stock's spread narrowed 14% to 4.4bps in April 2023, from 5.1bps in March 2023, while the median Russell 2000 stock's spread narrowed 8% to 18.0bps in April 2023, from 19.6bps the prior month.

Market Structure News

SEC Reopens Comment Period on Exchange Definition Proposal Referencing Crypto Firms

In mid-April, the Securities and Exchange Commission (SEC) reopened the comment period and provided supplemental information on proposed amendments to the definition of “exchange” under Exchange Act Rule 3b-16. The SEC initially proposed the amendments in January 2022 and is reproposing these amendments following comments it received around, among other matters, whether crypto platforms were within scope of the rule proposal. In addition to attempting to clarify confusion about its new term “communication protocol systems,” the revised proposal adds language specific to digital assets and digital asset firms, stating that if a firm meets the definition of an exchange with respect to digital assets that are securities, then that firm must register as a national securities exchange or alternative trading system (ATS). The reopened comment period will end 30 days after publication in the Federal Register or June 13, 2023, whichever is later. This brings the total number of rulemaking proposals published by the SEC in last 2 years to 53.

Virtu submitted a comment letter on the original proposal in April 2022. Virtu opposed the rule proposal, noting that the SEC did not identify a problem or market failure to be addressed nor did the SEC quantify benefits to the market from its proposal. Virtu's letter also cited that the SEC appeared to have exceeded its statutory authority by not conducting a sufficient economic analysis in connection with the proposal and that the SEC failed to define a key term in the proposal, “communication protocol system”, leaving it open for enforcement interpretation. This same concern was highlighted in Commissioner Peirce's statement in response to the release in which she stated “[a]sking commenters to resolve the ambiguity in a novel term of our own creation is inappropriate, particularly given that many commenters have no idea what we are trying to achieve with the proposal. Perhaps the Commission finds value in keeping the term ambiguously broad. This flexibility comes at the cost of unnecessary increased regulatory risk, particularly for new and small firms which may not even realize they have tripped over the hazy communications protocol system threshold.”

<https://www.lexology.com/library/detail.aspx?g=b0094f58-c09b-412c-b62d-b3ac3651bff0>

<https://www.sec.gov/news/press-release/2023-77>

<https://www.sec.gov/news/statement/peirce-rendering-inovation-2023-04-12>

<https://virtu-www.s3.amazonaws.com/uploads/documents/Virtu-Financial-Regulation-ATS-Comment-Letter-20220418.pdf>



DOJ Issues Comment Letter on SEC Market Structure Proposals

The U.S. Department of Justice's (DOJ) antitrust unit, in a public letter to the SEC, noted that the SEC's possible plan to implement all four of their market structure proposals (proposed in December 2022) at once raised concerns on how the four proposals could interfere with each other. For example, the letter highlighted how the SEC's proposal for tick size reductions could potentially shift order flow from wholesalers to exchanges. Yet, this shift in flow from wholesalers to exchanges would undermine the Order Competition (Auction) Proposal, as only orders bound for wholesalers would be obligated to route to auctions first. The DOJ letter also urged the SEC to make sure the four proposals in unison would promote increased competition and to consider how the implementation of the Market Data Infrastructure Rule (once it is finalized and implemented) would also change competition in the market.

<https://www.ai-cio.com/news/doj-comments-on-sec-market-structure-proposals/>

<https://www.sec.gov/comments/s7-29-22/s72922-20164065-334011.pdf>

SEC Adopts New Rules for Share Buyback and Private Fund Disclosures

During an open meeting on May 3rd, the SEC voted to adopt new disclosure rules for public companies on their share repurchase programs, beginning in the fourth quarter of 2023. Under the new rules, most companies will be required to provide daily totals of share repurchases over the prior quarter, rather than monthly aggregates under current rules. Additionally, companies will be required to explain the rationale for their share repurchase, disclose policies related to insider transactions during share repurchases, and disclose if officers and directors bought or sold shares in their company's stock within four days of announcing a share repurchase program. The final rule is a step back from the original rule proposal, which would have required companies to make daily public disclosures on their share repurchases.

Separately, during the same open meeting, the SEC voted to adopt new disclosure requirements on Form PF for private equity and hedge funds. The new requirements in the privately filed Form PF include requiring large hedge funds to report to the SEC on certain trigger events, such as investment losses and significant withdrawals, within 72 hours, requiring private equity firms to disclose compensation clawbacks, and mandating private equity funds to disclose more information on their strategies and use of leverage.

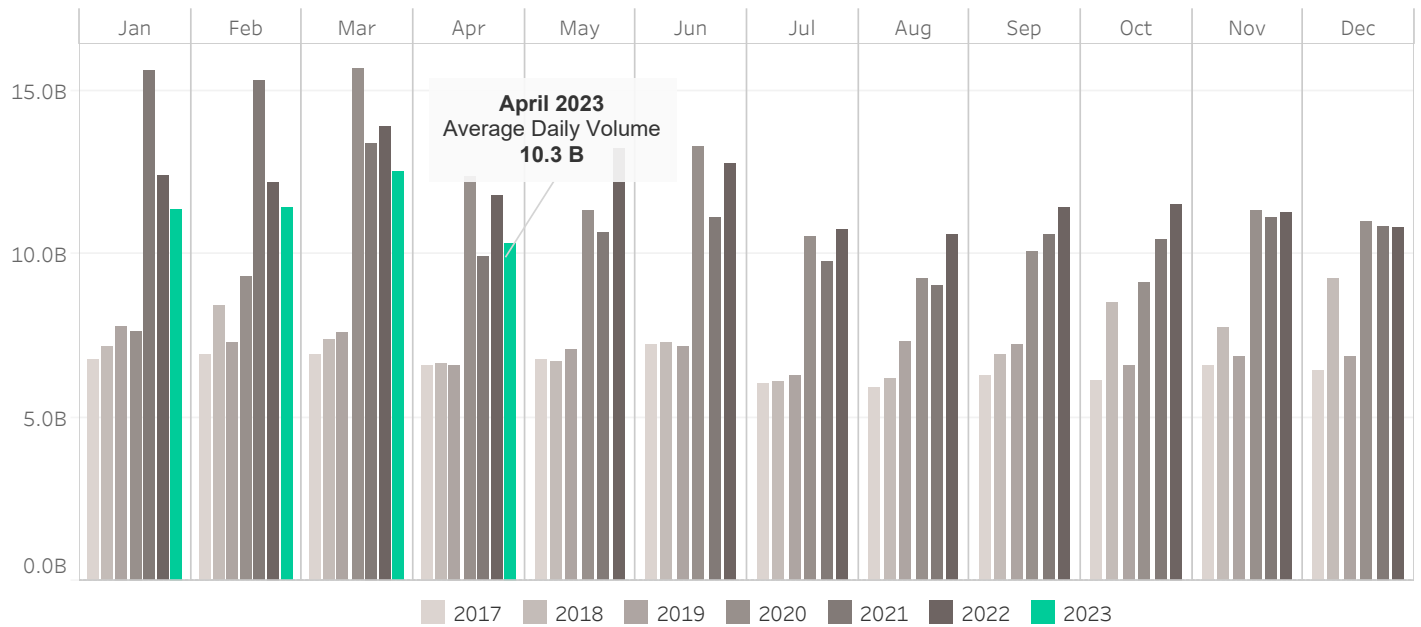
<https://www.wsj.com/articles/sec-plans-to-demand-more-information-about-companies-stock-buybacks-42518aa1>

<https://www.sec.gov/news/press-release/2023-85>

<https://www.sec.gov/news/press-release/2023-86>

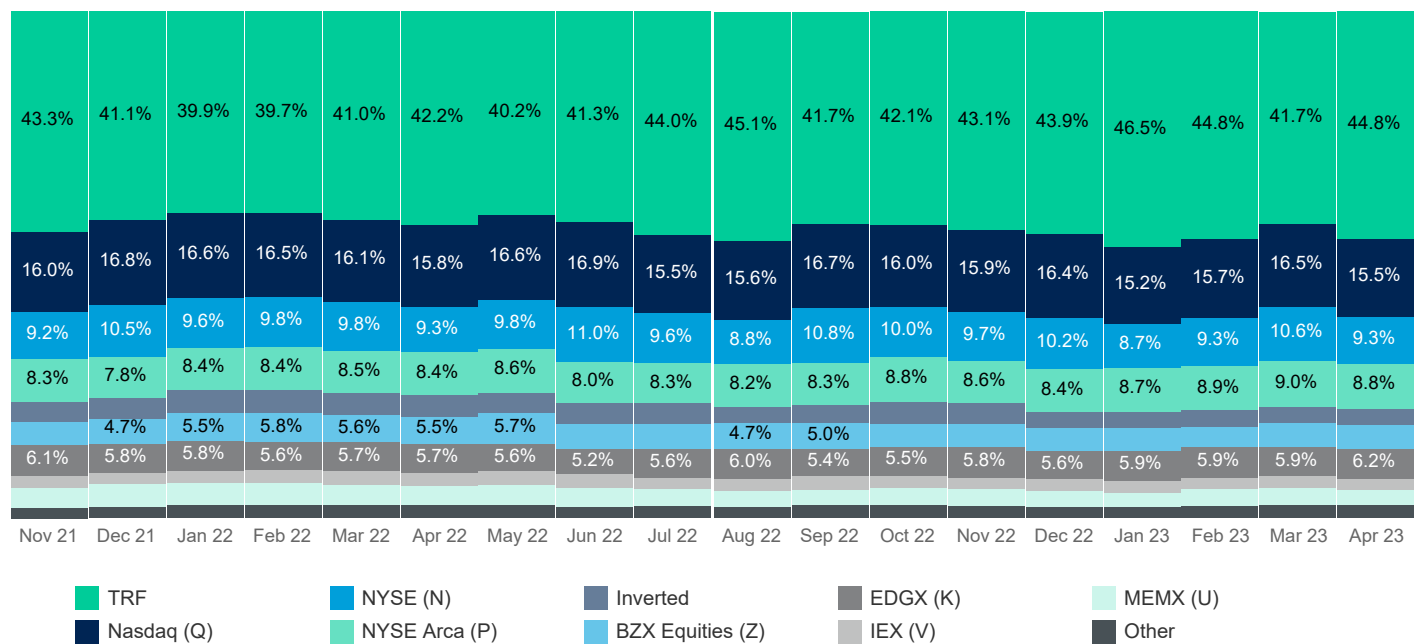


Average Daily Market Volume



Source data: Cboe Global Markets

Venue Market Share

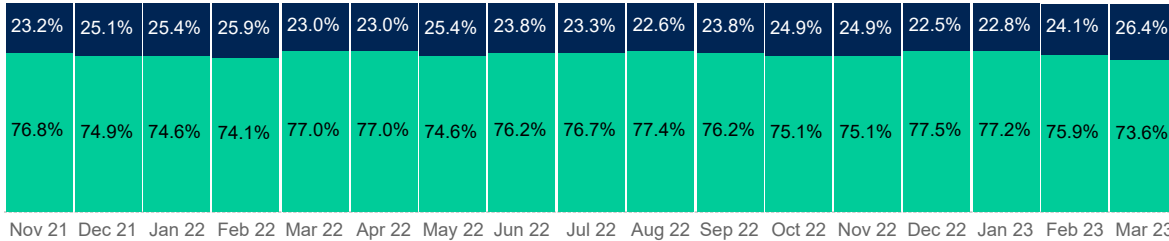


Source data: Cboe Global Markets



TRF Volume Breakdown

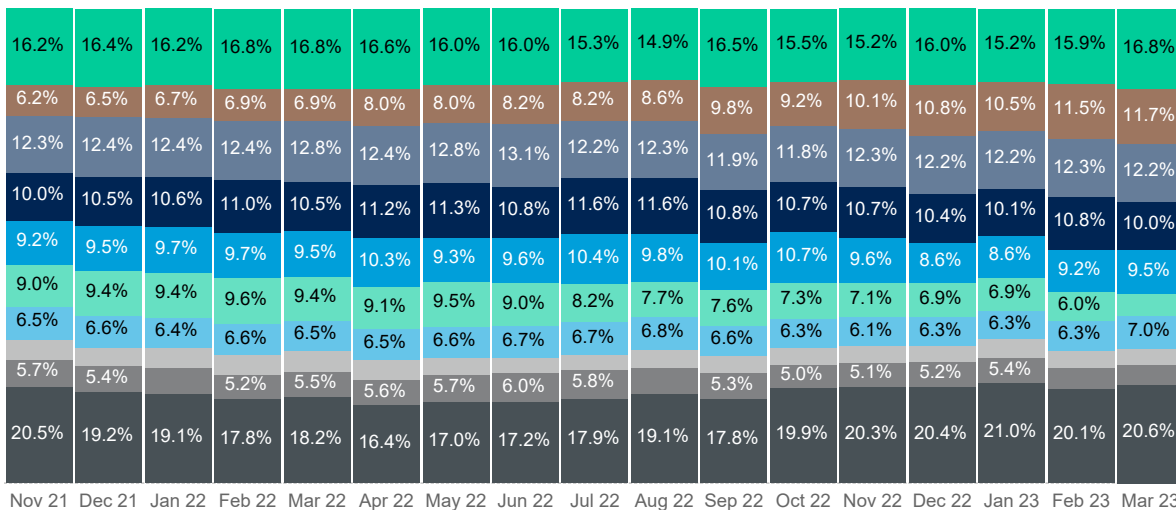
■ ATS
■ OTC Non ATS



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

ATS Market Share

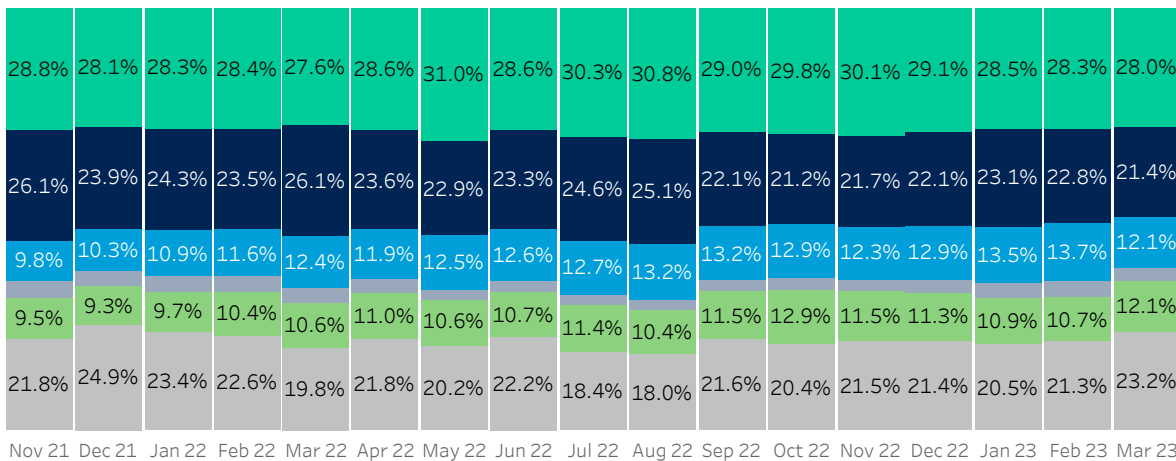
■ UBS
■ Intelligent Cross
■ Goldman Sachs
■ Morgan Stanley
■ JP Morgan
■ Credit Suisse
■ Level
■ BIDS
■ Virtu
■ Other
■ OTC



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

OTC Non-ATS Market Share

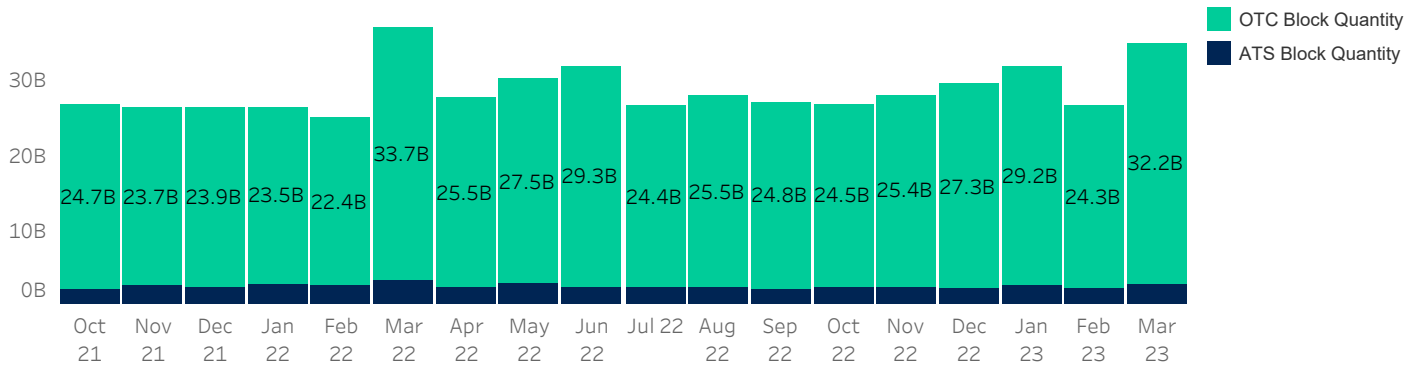
■ Citadel
■ Virtu
■ G1
■ Two Sigma
■ Jane Street
■ Other



Source: FINRA, NMS Tier 1 & 2 Securities

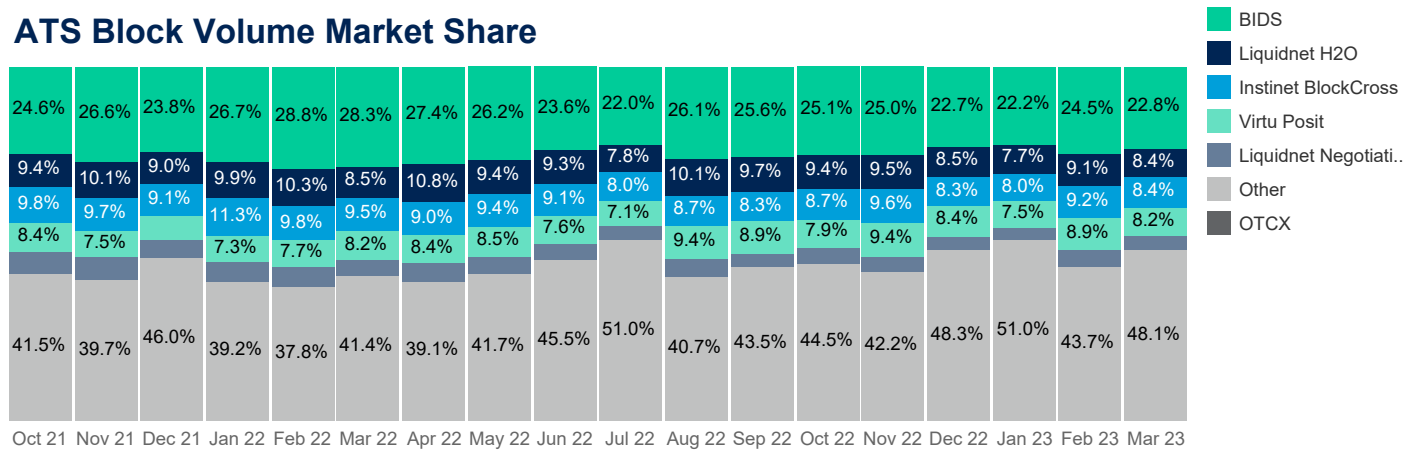


TRF Block Volume Breakdown (Shares)



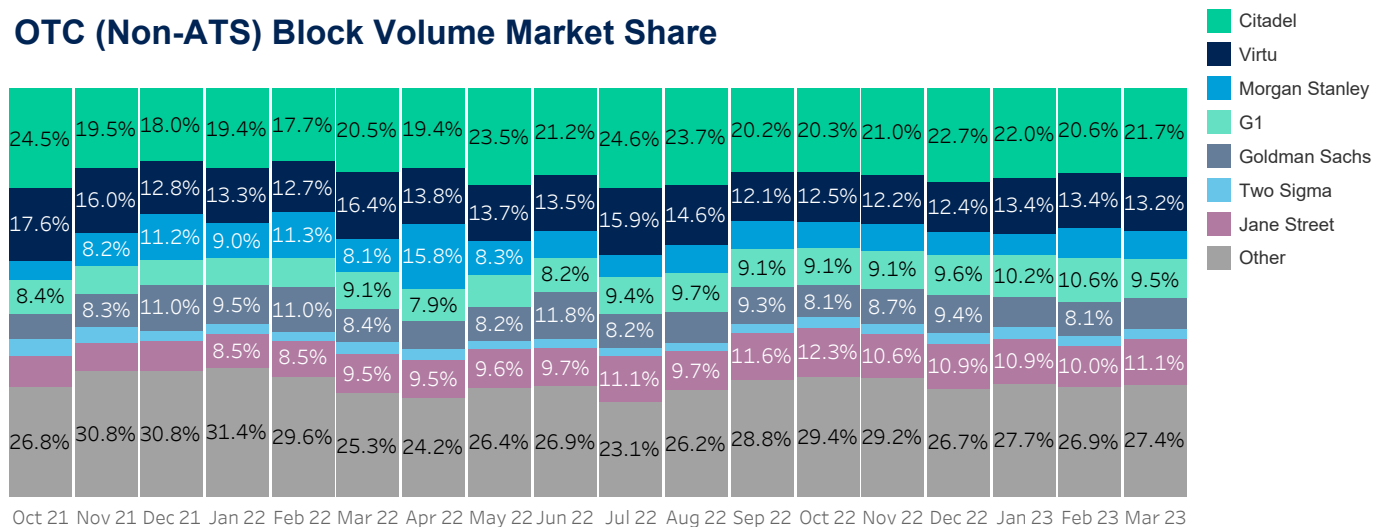
Source: FINRA

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

		2Q 22			3Q 22			4Q 22			1Q 23			2Q 23
		Apr 22	May 22	Jun 22	Jul 22	Aug 22	Sep 22	Oct 22	Nov 22	Dec 22	Jan 23	Feb 23	Mar 23	Apr 23
First 30 Min	SP500	180	196	195	188	185	183	187	186	189	194	218	235	229
	RUS2000	236	250	243	232	228	225	232	226	231	250	271	300	300
Mid Day	SP500	176	186	190	181	179	184	189	192	194	199	214	228	224
	RUS2000	232	234	246	237	234	235	245	248	250	257	262	279	283
Last 30 Min	SP500	190	190	198	197	201	201	212	210	210	216	222	230	231
	RUS2000	255	259	276	267	265	263	274	279	291	289	283	300	309

Spread Bps

First 30 Min	SP500	13.4	15.1	13.5	13.2	11.8	10.7	12.5	12.9	12.3	11.7	11.4	10.7	9.6
	RUS2000	51.3	57.0	50.4	48.1	45.3	43.2	49.2	51.1	49.8	47.8	47.1	48.9	44.7
Mid Day	SP500	5.5	6.5	5.7	5.2	4.7	4.9	5.4	5.5	5.1	4.9	5.0	5.1	4.4
	RUS2000	22.5	25.0	21.6	20.4	19.1	18.7	19.9	21.2	18.6	18.1	18.3	19.6	18.0
Last 30 Min	SP500	3.6	3.9	3.5	3.2	2.9	3.2	3.4	3.2	3.2	3.1	3.2	3.2	3.0
	RUS2000	16.6	18.1	16.2	15.4	14.1	14.1	14.7	15.5	14.2	13.6	14.1	14.7	14.2

One Minute Volatility Bps

First 30 Min	SP500	20.2	24.0	21.4	20.7	15.6	17.5	20.4	17.7	14.4	14.5	13.9	14.9	12.9
	RUS2000	21.7	26.9	24.1	26.6	21.0	20.8	23.1	21.4	16.2	16.2	17.0	17.2	14.6
Mid Day	SP500	8.2	9.9	8.3	7.5	6.2	8.6	8.1	6.8	5.8	5.7	5.9	6.7	4.9
	RUS2000	6.8	9.0	6.8	6.1	5.5	7.4	6.7	5.4	4.1	3.8	4.5	5.5	2.9
Last 30 Min	SP500	9.1	10.8	9.0	7.9	6.2	9.3	8.8	7.1	6.5	6.3	6.9	7.4	5.9
	RUS2000	8.8	9.8	8.1	6.9	6.2	8.9	7.2	6.8	5.7	5.4	6.9	7.9	5.4

Percent ADV by Time of Day

Open	SP500	1.1%	1.0%	1.0%	1.1%	1.0%	0.9%	0.9%	0.9%	1.1%	0.9%	1.0%	0.9%	1.1%
	RUS2000	0.7%	0.7%	0.7%	0.7%	0.8%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.8%
First 30 Min	SP500	9.3%	9.3%	9.4%	9.8%	9.6%	9.0%	9.0%	9.2%	8.6%	8.7%	8.6%	8.5%	8.7%
	RUS2000	7.6%	8.2%	7.6%	8.1%	8.2%	7.4%	7.6%	7.5%	7.2%	7.5%	7.5%	7.2%	7.3%
Last 30 Min	SP500	19.0%	18.6%	19.2%	18.6%	18.8%	18.7%	18.8%	18.7%	19.0%	19.3%	19.3%	18.7%	19.4%
	RUS2000	19.6%	19.7%	19.8%	20.3%	20.4%	20.1%	20.0%	21.0%	20.0%	20.3%	20.6%	19.9%	20.4%
Close	SP500	11.8%	10.9%	13.1%	12.5%	11.9%	12.3%	11.9%	11.6%	14.7%	12.9%	12.2%	13.4%	13.6%
	RUS2000	10.6%	9.1%	10.8%	11.8%	10.4%	11.4%	11.6%	10.4%	11.9%	10.7%	11.0%	11.4%	11.8%

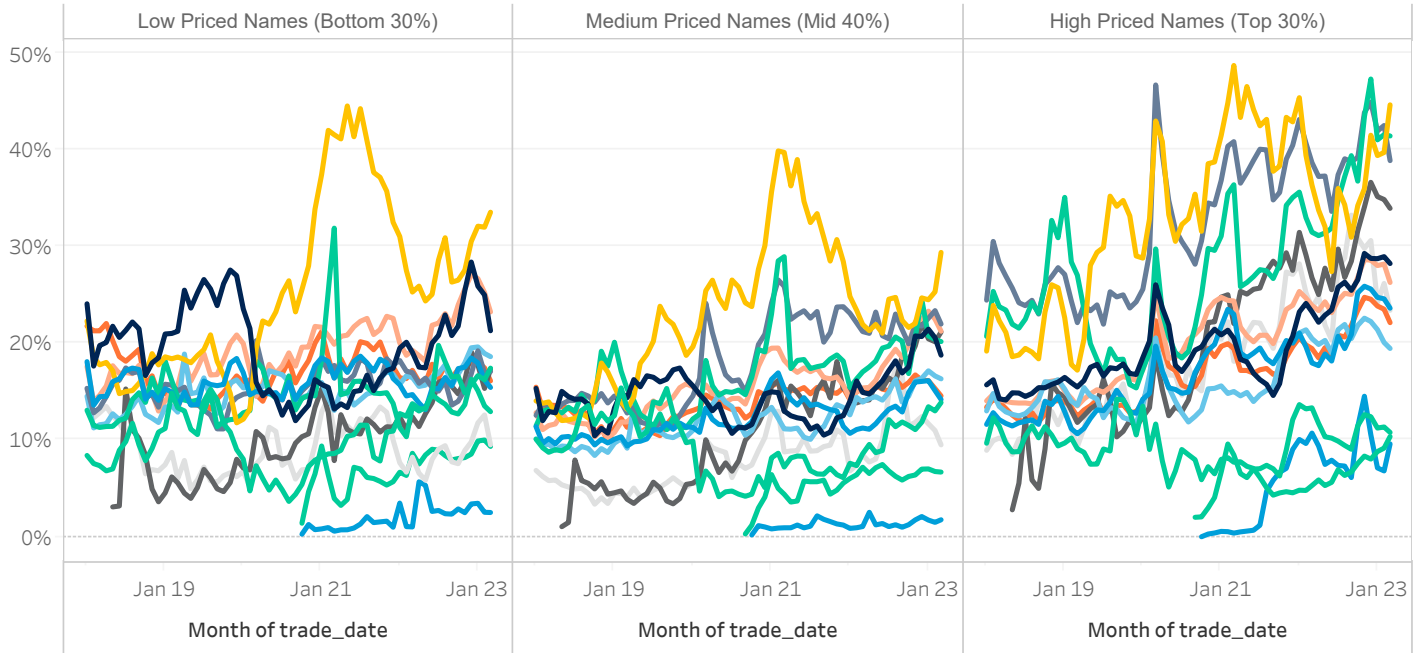
Median used for all metrics

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

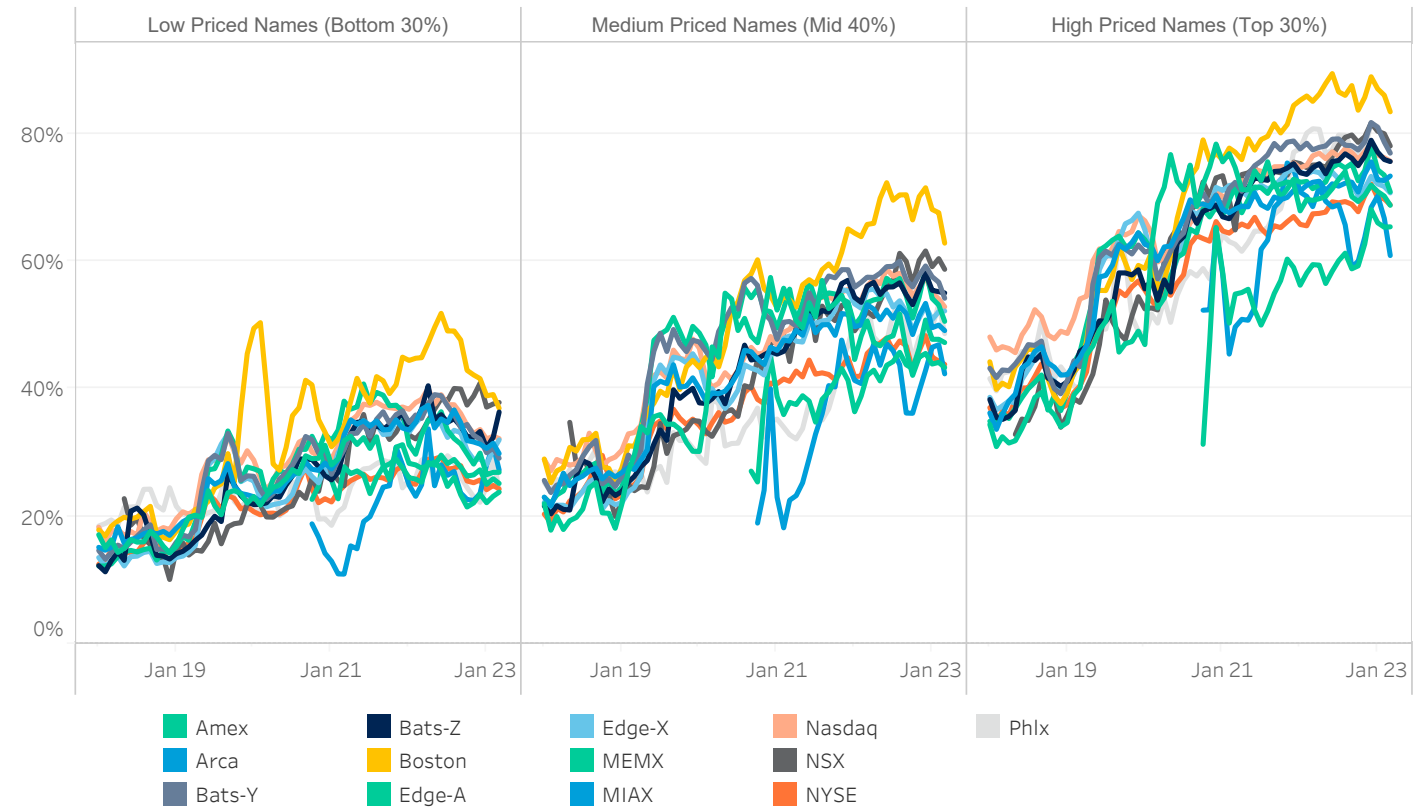
Source data: Virtu Financial



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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