

# Apr 2024

## U.S. Market Structure Monthly

### MICROSTRUCTURE OBSERVATIONS

- The average daily volume in US equities was 11.0B shares in April 2024, down 9% month over month (MoM) and up 6% year over year (YoY).
- Trade reporting facility (TRF) share volume as a percent of total consolidated share volume was 44.4% in March 2024, similar to levels observed over the prior few months.
- Quoted spreads in both S&P 500 and Russell 2000 stocks increased in April 2024 compared to the prior month. Excluding the first and last half hour of the trading day, the median S&P 500 stock's spread increased 14% to 5.0bps in April 2024 from 4.4bps in March 2024, while the median Russell 2000 stock's spread increased 6% to 18.9bps in April 2024 from 17.9bps the prior month.

### U.S. MARKET STRUCTURE NEWS<sup>1</sup>

#### **Nasdaq Proposes Fee Increases for Connectivity and Co-Location**

The Nasdaq Stock Market and its family of U.S. stock exchanges filed with the SEC to increase fees for connectivity and co-location services by 5.5%. In response, Virtu Financial submitted a comment letter to the SEC opposing these fee increases on the grounds that Nasdaq failed to meet its obligation under the Exchanges Act of 1934 to provide sufficiently detailed information to determine whether the proposed fees are "fair and reasonable" and not "unfairly discriminatory".

<https://www.sec.gov/rules/sro/sr-nasdaq-2024-008>

[Virtu Nasdaq Comment Letter \(04102024\) \(sec.gov\)](#)

#### **Cryptocurrency Industry Groups Sue SEC Over New Dealer Rule**

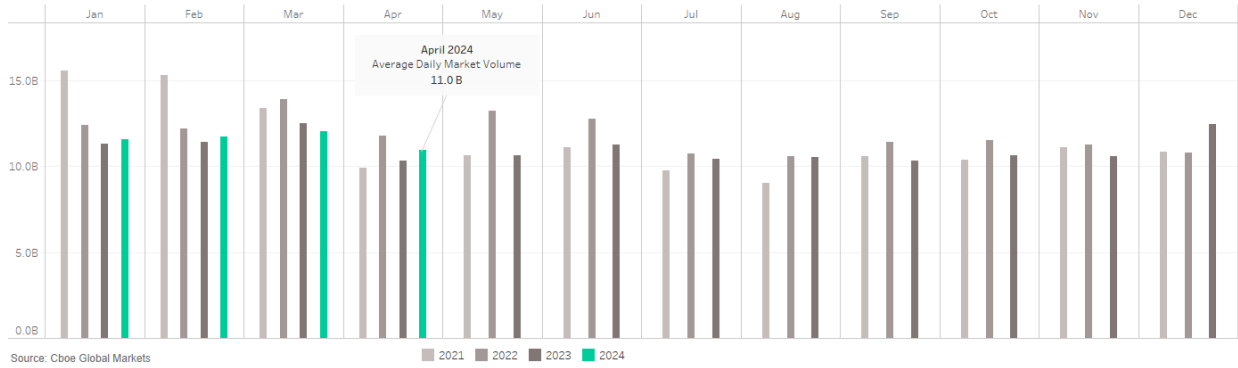
The Blockchain Association and the Crypto Freedom Alliance of Texas filed a lawsuit against the SEC on the Commission's new rules requiring firms that deal frequently in U.S. Treasury securities to register as broker-dealers. Adopted in February 2024, the SEC's new rules would require firms to register with the SEC as broker-dealers if they either routinely express interest in trading at the best bid or offer or derive revenue by trading on the bid or offer in U.S. Treasury securities. Despite the new rule's focus on Treasury securities, the crypto industry groups in their lawsuit said that the SEC's new standards of who is considered a dealer could potentially encompass crypto industry participants. The lawsuit seeks a declaration that the new rule is arbitrary and capricious and asks the court to vacate it entirely pursuant to the Administrative Procedure Act.

<https://www.reuters.com/legal/transactional/crypto-industry-groups-sue-texas-challenge-secs-dealer-rule-2024-04-23/>

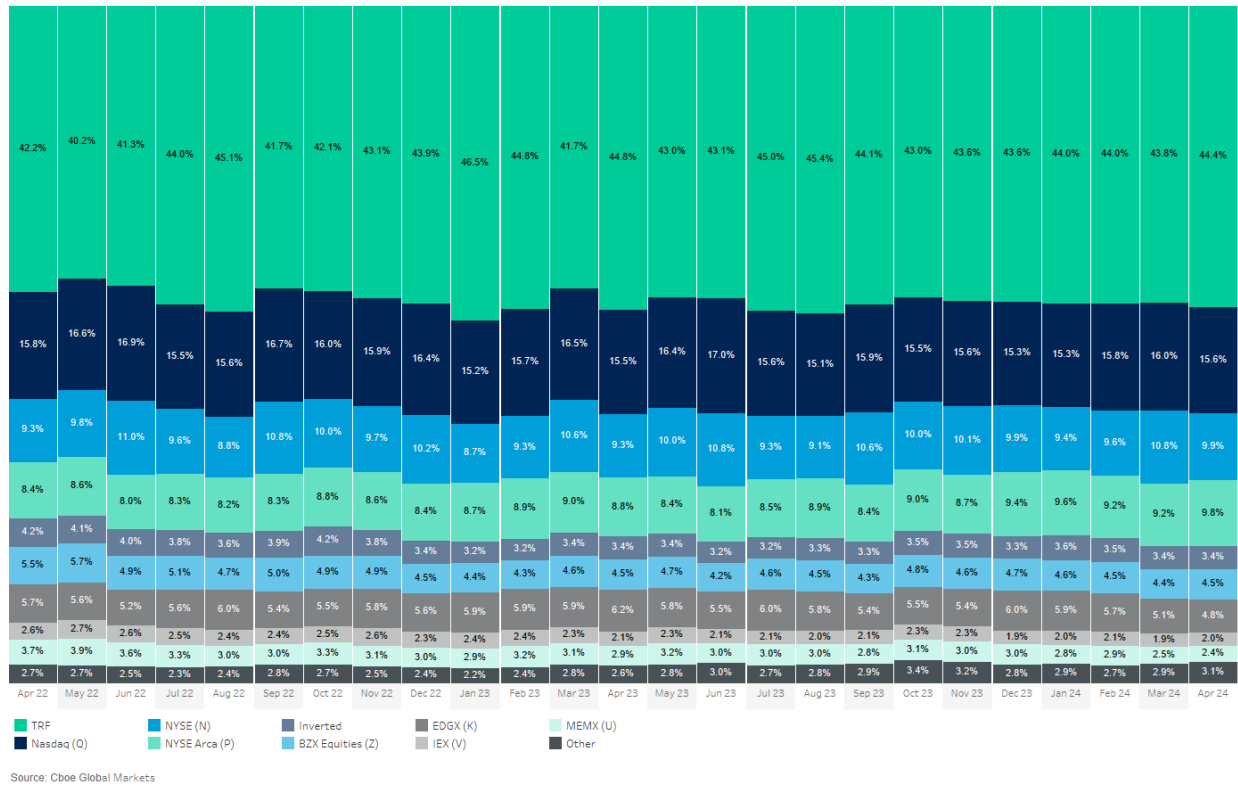
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<sup>1</sup> The summaries set forth herein are qualified in their entirety by the underlying rules, filings and referenced materials.

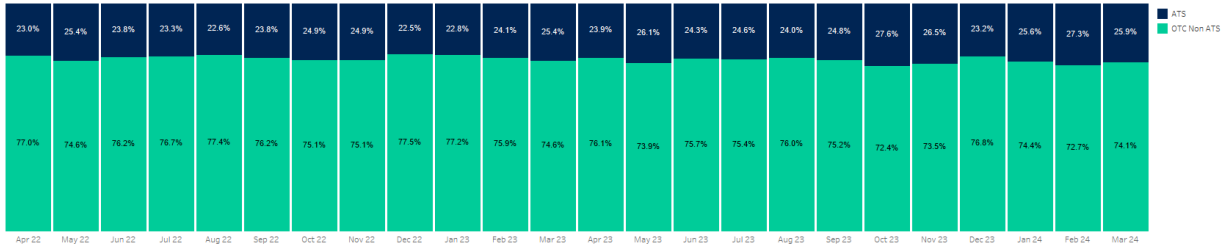
### Average Daily Market Volume



### Venue Market Share

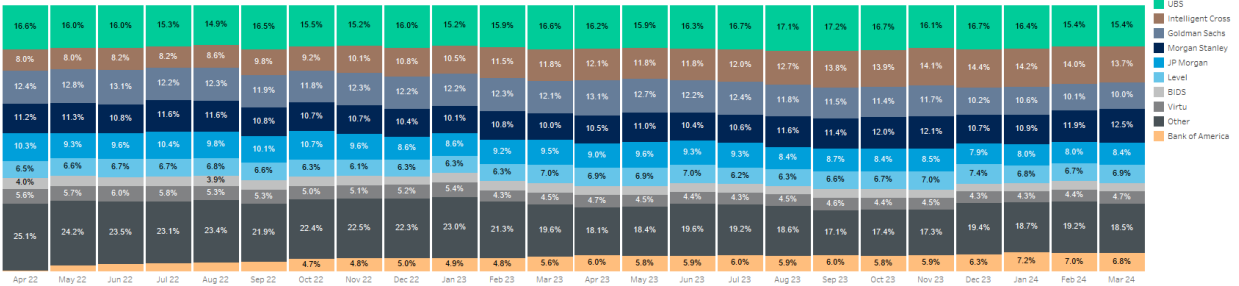


### TRF Volume Breakdown



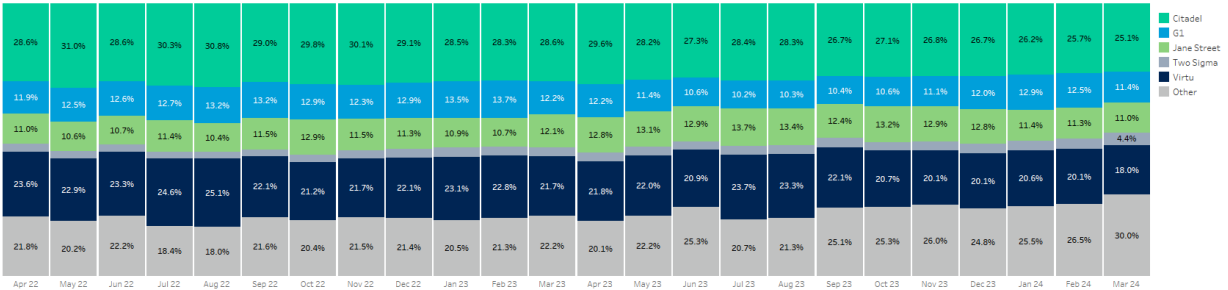
NMS Tier 1 & 2 Securities, excluding Dealerweb  
Source: FINRA

### ATS Market Share



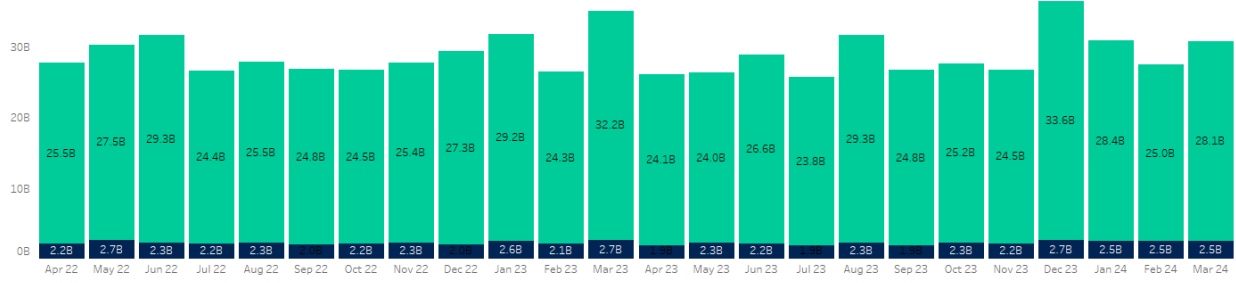
Excludes Dealerweb, OTC. Venues rolled up to firm level  
Source: FINRA

### OTC Non-ATS Market Share



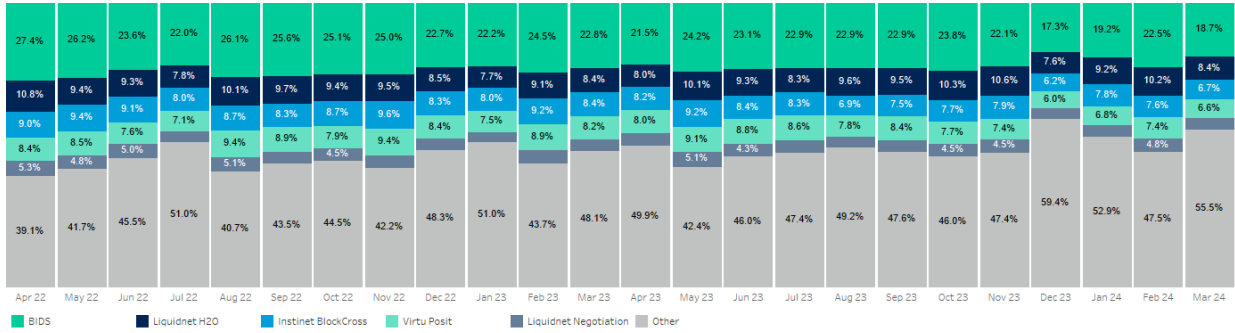
NMS Tier 1 & 2 Securities  
Source: FINRA

### TRF Block Volume Breakdown (Shares)



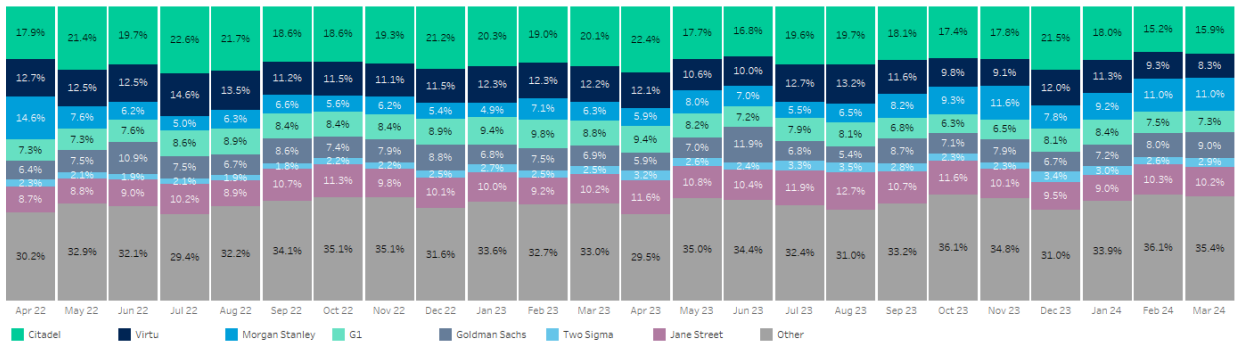
OTC Block Quanti. ATS Block Quanti.

### ATS Block Volume Market Share



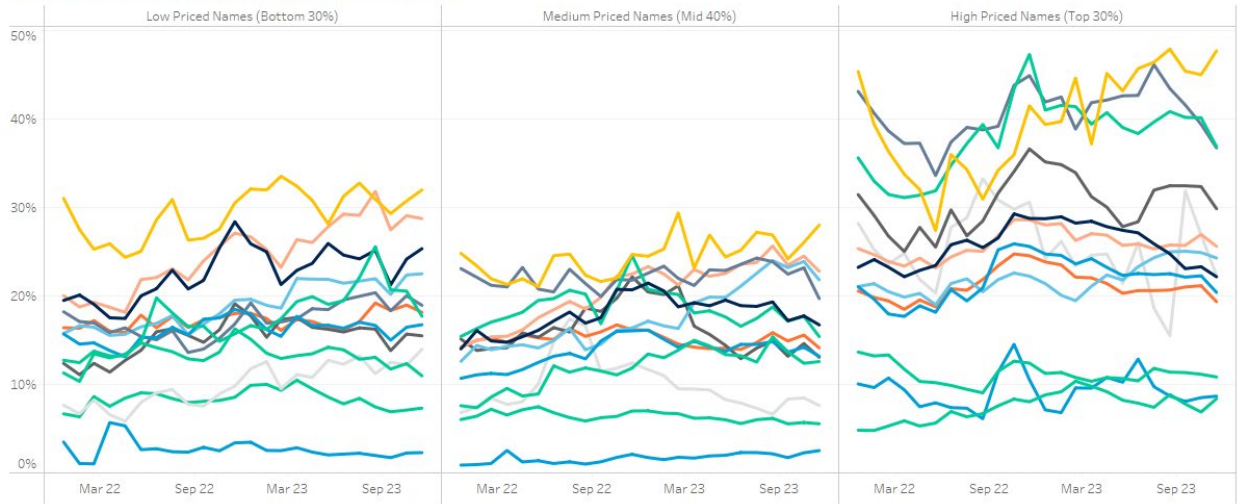
Excludes Dealerweb; Blocks defined as >10K shares  
Source: FINRA

### OTC (Non-ATS) Block Volume Market Share

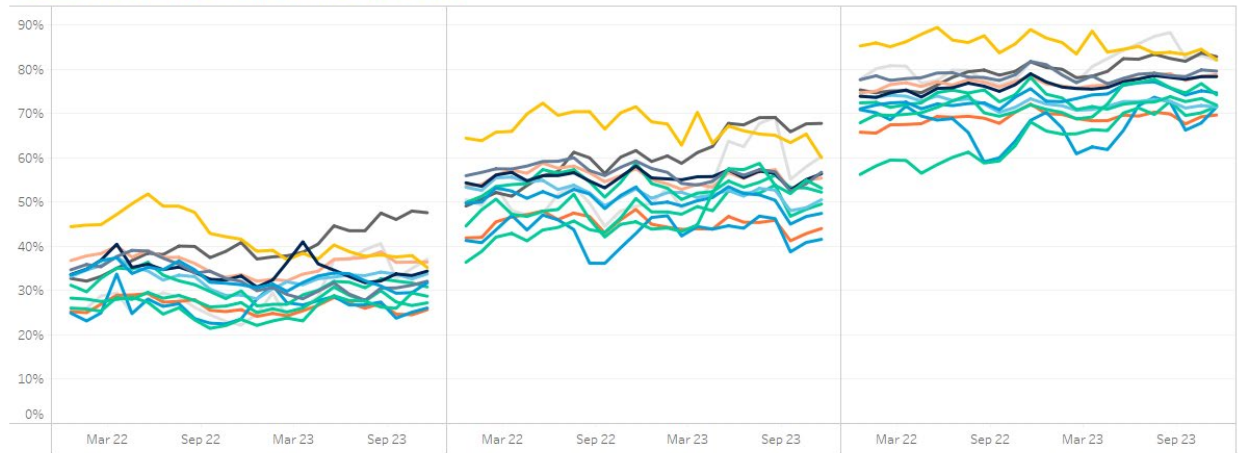


Blocks defined as >10K shares  
Source: FINRA

### Hidden Trades Proportion by Price and Venue



### Oddlot Trades Proportion by Price and Venue



■ Amex    ■ Bats-Y    ■ Boston    ■ Edge-X    ■ MIAX    ■ NSX    ■ Phlx  
■ Arca    ■ Bats-Z    ■ Edge-A    ■ MEMX    ■ Nasdaq    ■ NYSE

Source: SEC

### Quotesize in Shares

		2Q 22				3Q 22			4Q 22			1Q 23			2Q 23			3Q 23			4Q 23			1Q 24			2Q 24
		Jun 22	Jul 22	Aug 22	Sep 22	Oct 22	Nov 22	Dec 22	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23	Jul 23	Aug 23	Sep 23	Oct 23	Nov 23	Dec 23	Jan 24	Feb 24	Mar 24	Apr 24			
First 30 Min	SP500	195	188	185	183	187	186	189	194	218	235	229	227	226	222	224	222	230	236	243	247	240	240	239			
	RUS2000	243	232	228	225	232	226	231	250	271	300	300	298	290	278	288	288	300	301	307	306	300	295	293			
Mid Day	SP500	190	181	179	184	189	192	194	199	214	228	224	217	216	213	212	211	211	220	224	221	218	220	219			
	RUS2000	246	237	234	235	245	248	250	257	262	279	283	280	275	270	275	283	286	300	300	294	283	288	287			
Last 30 Min	SP500	198	197	201	201	212	210	210	216	222	230	231	222	226	222	212	217	212	226	227	222	221	221	217			
	RUS2000	276	267	265	263	274	279	291	289	283	300	309	300	304	289	288	303	316	331	318	314	304	302	306			

### Spread Bps

First 30 Min	SP500	13.5	13.2	11.8	10.7	12.5	12.9	12.3	11.7	11.4	10.7	9.6	10.7	10.9	10.1	10.8	10.3	12.4	11.7	10.8	11.6	11.6	11.4	11.8
	RUS2000	50.4	48.1	45.3	43.2	49.2	51.1	49.8	47.8	47.1	48.9	44.7	47.7	45.4	40.3	40.8	39.4	45.6	48.1	44.8	43.6	43.9	43.4	42.9
Mid Day	SP500	5.7	5.2	4.7	4.9	5.4	5.5	5.1	4.9	5.0	5.1	4.4	5.0	4.6	4.2	4.8	4.6	5.4	5.0	4.4	4.2	4.4	4.4	5.0
	RUS2000	21.6	20.4	19.1	18.7	19.9	21.2	18.6	18.1	18.3	19.6	18.0	19.6	17.8	16.3	17.2	17.4	20.4	20.6	19.2	18.1	18.7	17.9	18.9
Last 30 Min	SP500	3.5	3.2	2.9	3.2	3.4	3.2	3.2	3.1	3.2	3.2	3.0	3.3	3.0	2.8	3.1	3.1	3.3	3.1	2.9	2.8	2.9	3.0	3.2
	RUS2000	16.2	15.4	14.1	14.1	14.7	15.5	14.2	13.6	14.1	14.7	14.2	15.2	13.8	13.0	13.3	13.2	14.4	14.7	13.9	13.0	13.5	13.3	14.5

### One Minute Volatility Bps

First 30 Min	SP500	21.4	20.7	15.6	17.5	20.4	17.7	14.4	14.5	13.9	14.9	12.9	13.8	14.8	14.6	12.7	12.3	16.4	13.7	12.0	13.5	13.7	13.3	12.6
	RUS2000	24.1	26.6	21.0	20.8	23.1	21.4	16.2	16.2	17.0	17.2	14.6	15.9	16.5	16.2	15.1	14.0	17.6	17.6	16.3	16.1	15.4	14.8	11.8
Mid Day	SP500	8.3	7.5	6.2	8.6	8.1	6.8	5.8	5.7	5.9	6.7	4.9	5.4	4.8	4.6	4.9	4.1	6.2	4.9	4.3	4.6	4.8	4.6	4.9
	RUS2000	6.8	6.1	5.5	7.4	6.7	5.4	4.1	3.8	4.5	5.5	2.9	3.6	3.3	3.0	2.8	1.5	3.2	2.4	2.8	2.9	3.6	2.7	2.4
Last 30 Min	SP500	9.0	7.9	6.2	9.3	8.8	7.1	6.5	6.3	6.9	7.4	5.9	6.0	5.5	5.4	5.7	5.1	6.3	5.3	5.0	5.3	5.7	5.9	6.4
	RUS2000	8.1	6.9	6.2	8.9	7.2	6.8	5.7	5.4	6.9	7.9	5.4	5.9	5.2	4.9	5.0	3.8	4.5	4.5	5.6	5.0	5.8	6.1	5.8

### Percent ADV by Time of Day

Open	SP500	1.0%	1.1%	1.0%	0.9%	0.9%	0.9%	1.1%	0.9%	1.0%	0.9%	1.1%	1.0%	1.0%	1.0%	0.9%	0.9%	0.9%	0.9%	1.0%	1.0%	1.0%	1.0%	1.0%
	RUS2000	0.7%	0.7%	0.8%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.8%	0.7%	0.6%	0.7%	0.7%	0.6%	0.6%	0.7%	0.7%	0.9%	0.8%	0.8%	0.7%
First 30 Min	SP500	9.4%	9.8%	9.6%	9.0%	9.0%	9.2%	8.6%	8.7%	8.6%	8.5%	8.7%	8.8%	8.7%	9.1%	8.4%	8.1%	8.1%	8.5%	8.0%	8.3%	8.6%	8.8%	7.9%
	RUS2000	7.6%	8.1%	8.2%	7.4%	7.6%	7.5%	7.2%	7.5%	7.5%	7.2%	7.3%	7.5%	7.3%	7.5%	7.3%	6.9%	6.4%	7.0%	6.9%	7.7%	7.5%	7.4%	6.4%
Last 30 Min	SP500	19.2%	18.6%	18.8%	18.7%	18.8%	18.7%	19.0%	19.3%	19.3%	18.7%	19.4%	18.9%	18.8%	19.2%	20.3%	20.1%	19.5%	19.1%	19.2%	19.1%	19.0%	19.0%	19.9%
	RUS2000	19.8%	20.3%	20.4%	20.1%	20.0%	21.0%	20.0%	20.3%	20.6%	19.9%	20.4%	19.9%	20.1%	20.3%	20.8%	21.3%	20.9%	20.6%	20.1%	19.6%	20.3%	19.9%	20.7%
Close	SP500	13.1%	12.5%	11.9%	12.3%	11.9%	11.6%	14.7%	12.9%	12.2%	13.4%	13.6%	12.9%	14.1%	13.4%	13.8%	16.3%	13.7%	14.7%	16.2%	15.3%	14.2%	14.4%	15.1%
	RUS2000	10.8%	11.9%	10.4%	11.4%	11.6%	10.4%	11.9%	10.7%	11.0%	11.4%	11.8%	11.0%	11.7%	11.6%	11.7%	14.5%	14.5%	13.3%	14.2%	13.8%	13.8%	12.2%	15.0%

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: Virtu Financial

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