Feb 2024

CA Market Structure Monthly

MICROSTRUCTURE OBSERVATIONS

- In TSX-listed securities, the average daily volume was 621 million shares in February 2024, up 7% compared to January 2024 and down 12% compared to February 2023. While volatility conditions deteriorated, average quote sizes and spread conditions were flat compared to January 2024.
- In non TSX-listed securities, the average daily volume was 302 million shares in February 2024, down 7% compared to December 2023 and down 15% compared to February 2023. While non TSX-listed securities saw improved spread conditions, average quote size and volatility conditions deteriorated compared to January 2024.

CA MARKET STRUCTURE NEWS

Nasdaq Canada Notice: Broker Preferencing for Anonymous Hidden Orders on CXC and CX2
On February 1st, 2024, Nasdaq Canada received regulatory approval to introduce broker preferencing for anonymous hidden orders on the CXC and CX2 order books. Currently, hidden orders are only eligible for broker preferencing if they are attributed orders on CXC and CXC2.

The changes became effective on March 5th, 2024, for CXC and March 6th, 2024, for CX2.

Please consult the link below for further details:
https://www.osc.ca/en/industry/market-regulation/marketplaces/exchanges/recognized-exchanges/nasdaq-cxc-limited-rule-review-notices/notice-proposed-changes-and-request-11

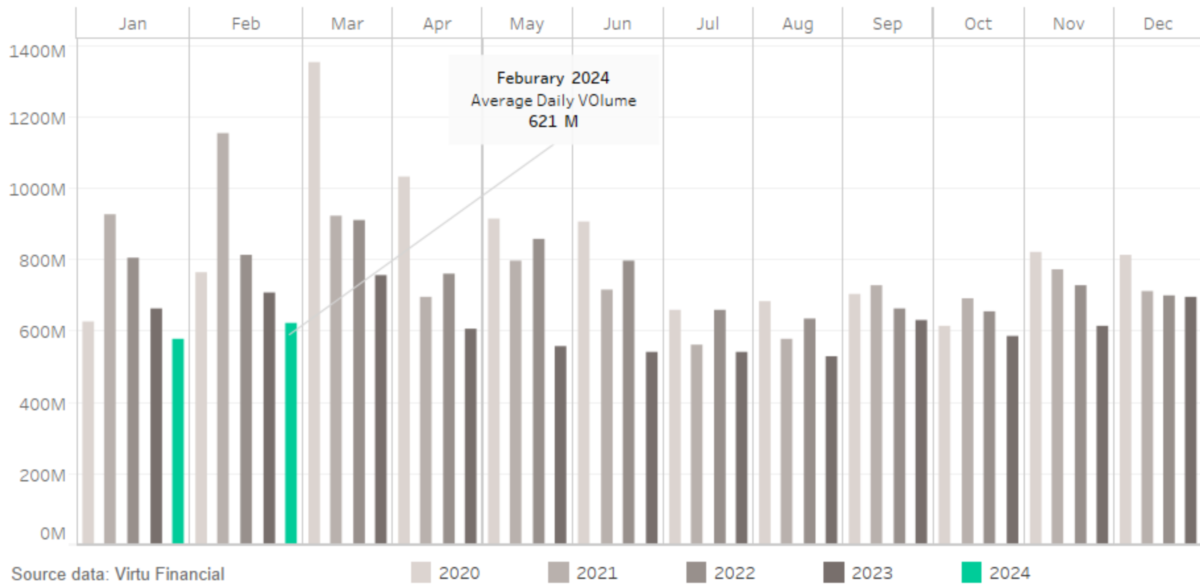
Proposed Amendments Respecting the Reasonable Expectation to Settle a Short Sale
On November 16, 2023, the CSA/CIRO published a Summary of Comments and Responses to a request for feedback on Canada's short selling regulatory framework. CIRO is working on ways to support the current short selling framework, in part by reinforcing the obligation to have a reasonable expectation to settle a short sale on settlement date.

On January 11, 2024, CIRO and the CSA published their Proposed Amendments and Proposed Guidance for a 90-day public comment period. Comments on the Proposed Amendments should be in writing and delivered by April 12, 2024, to both the CIRO and the OSC.

Please consult the link below to read more on the proposed amendments:

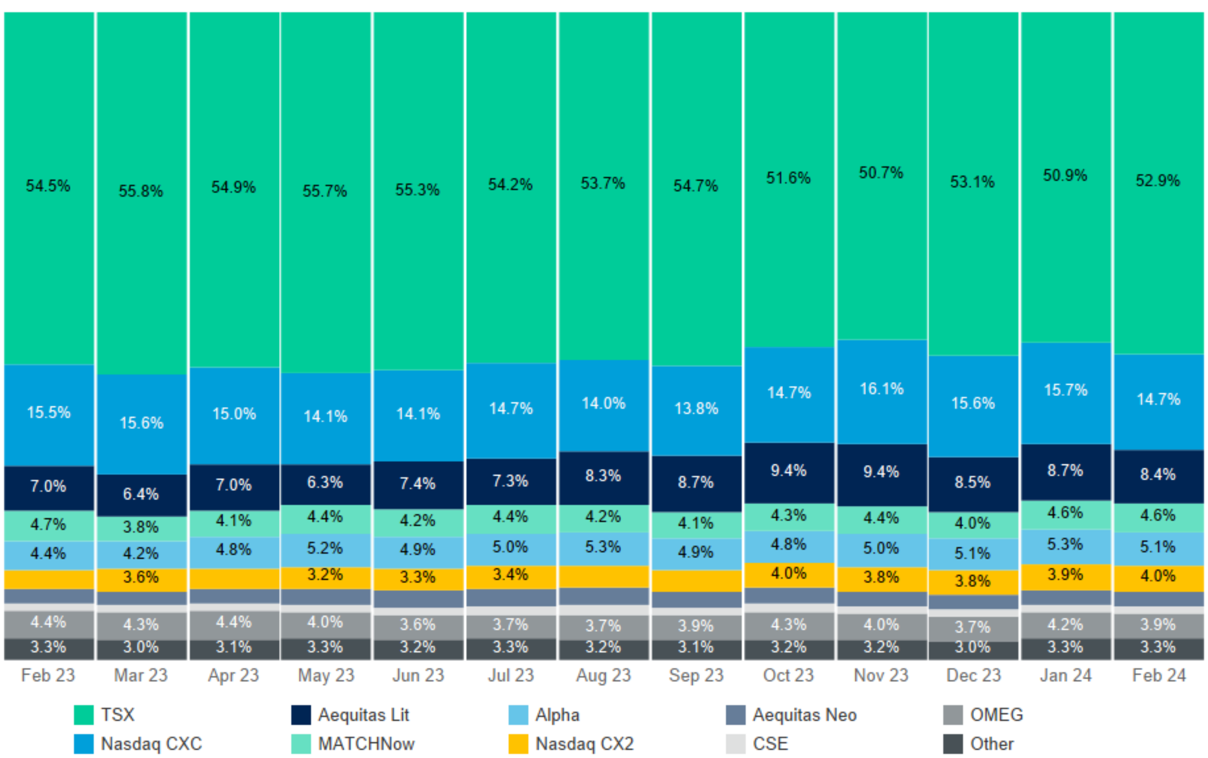
https://www.ciro.ca/news-room/publications/proposed-amendments-respecting-reasonable-expectation-settle-short-sale

Average Daily Market Volume (Shares, TSX Listed)



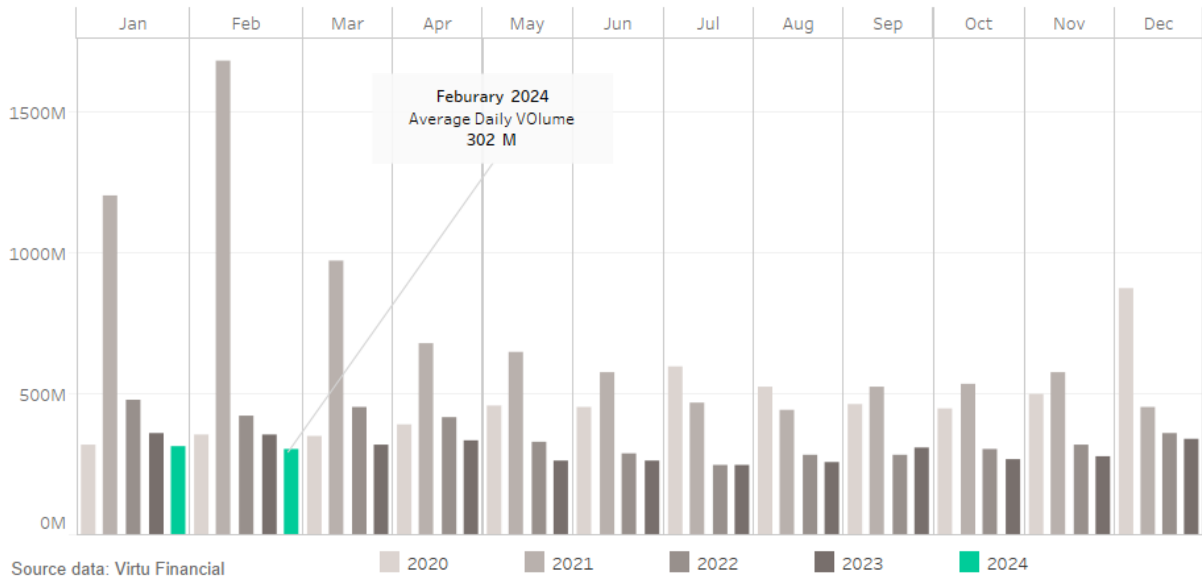
Source data: Virtu Financial

Venue Market Share (TSX Listed)



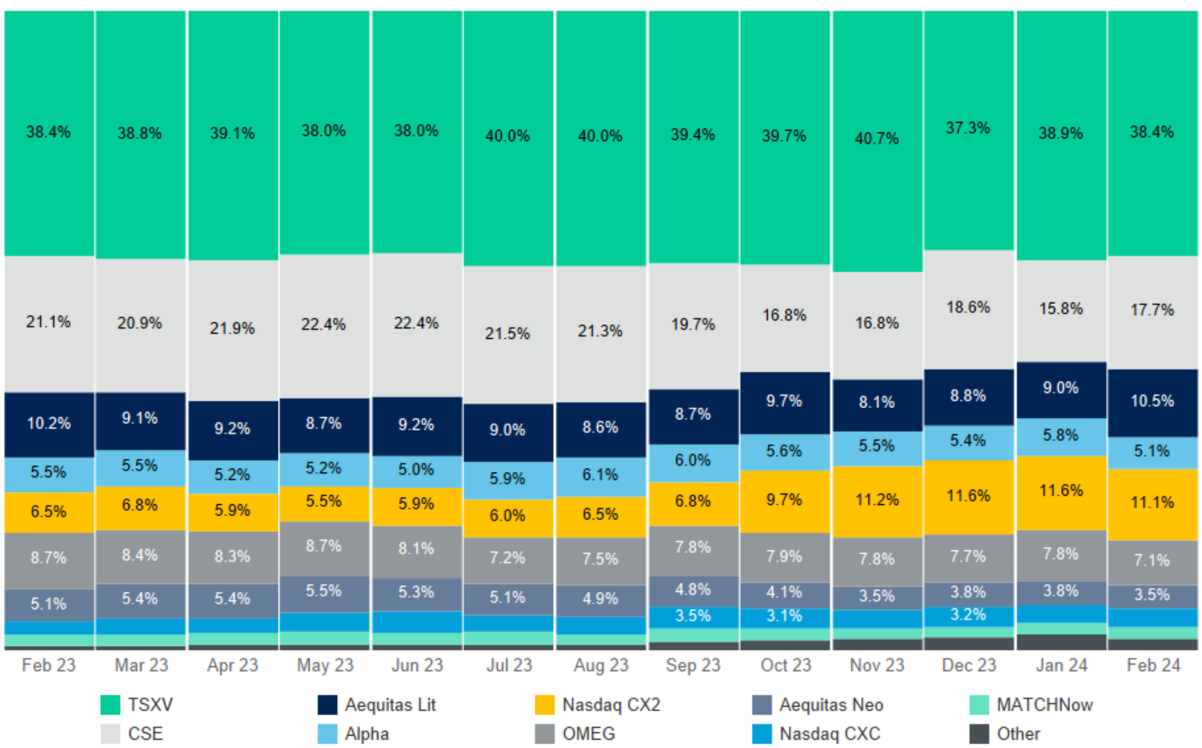
Source data: Virtu Financial

Average Daily Market Volume (Shares, Non-TSX Listed)



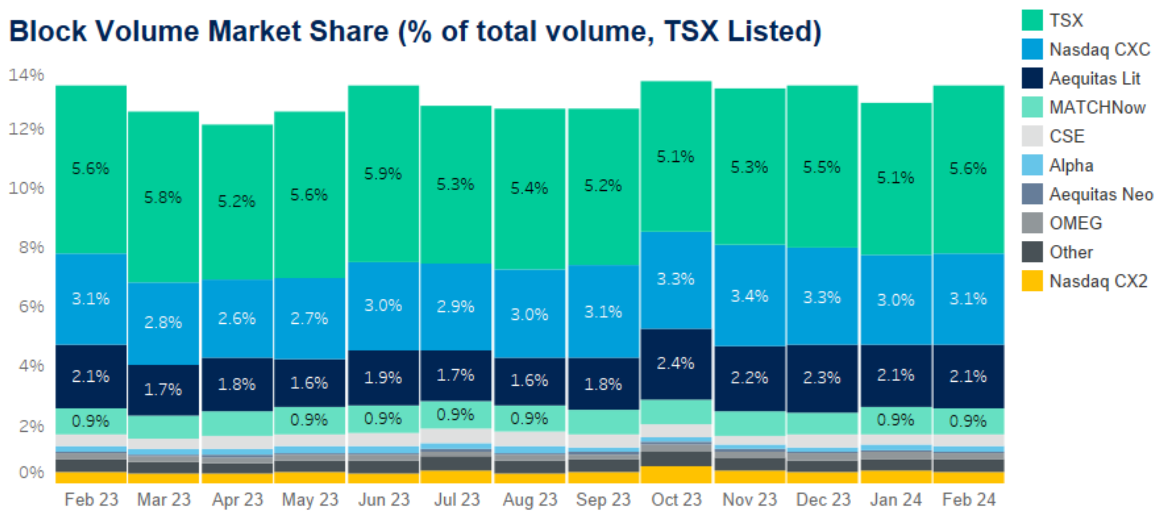
Source data: Virtu Financial

Venue Market Share (Non-TSX Listed)

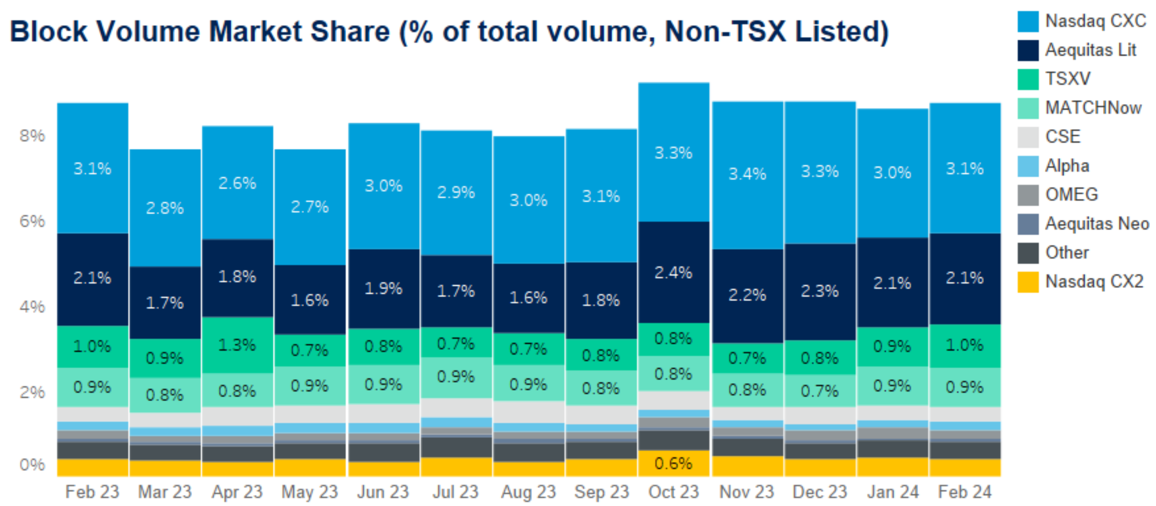


Source data: Virtu Financial

Block Volume Market Share (% of total volume, TSX Listed)

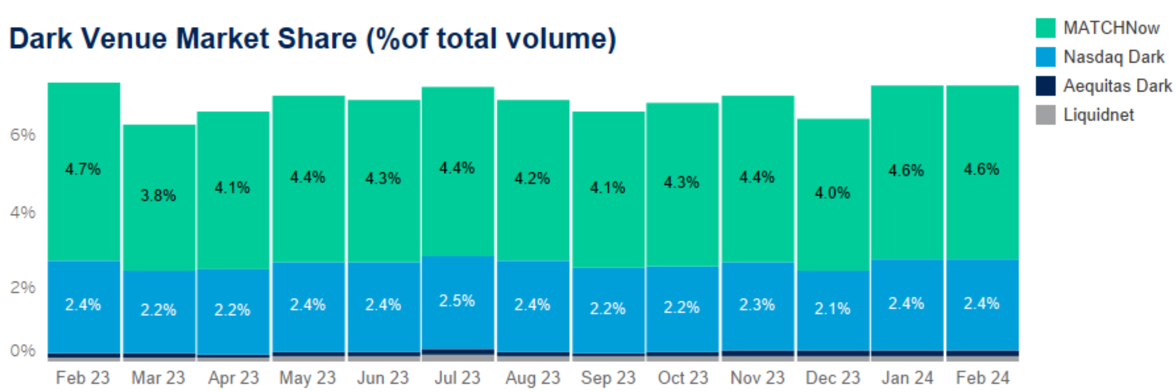


Block Volume Market Share (% of total volume, Non-TSX Listed)



Blocks defined as >5100 shares and > $30,000 CAD or >=$100K CAD; Source data: Virtu Financial

Dark Venue Market Share (%of total volume)



TSX listed securities only; Source data: Virtu Financial

Quotesize in Shares

		1Q 23		2Q 23			3Q 23			4Q 23			1Q 24	
		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
First 30 Min	S&P/TSX 60	798	840	892	877	889	897	895	911	865	875	932	938	917
	S&P/TSX Composite	1,012	1,074	1,127	1,090	1,096	1,047	1,021	1,030	1,020	1,032	1,085	1,076	1,085
	Non-TSX-Listed	4,969	4,763	6,191	5,930	5,259	5,021	5,261	6,182	5,950	5,650	6,074	6,193	5,722
Mid Day	S&P/TSX 60	953	1,017	1,104	1,106	1,112	1,114	1,100	1,115	1,094	1,082	1,138	1,129	1,134
	S&P/TSX Composite	1,235	1,305	1,441	1,372	1,374	1,336	1,264	1,290	1,251	1,238	1,305	1,275	1,292
	Non-TSX-Listed	4,477	4,464	5,650	5,631	5,000	4,583	4,875	5,498	5,281	5,258	5,736	5,518	5,500
Last 30 Min	S&P/TSX 60	1,084	1,150	1,222	1,191	1,209	1,280	1,245	1,268	1,215	1,219	1,301	1,242	1,183
	S&P/TSX Composite	1,443	1,519	1,627	1,557	1,556	1,602	1,528	1,547	1,521	1,530	1,658	1,538	1,543
	Non-TSX-Listed	4,634	4,803	5,988	5,747	5,000	4,456	4,781	5,494	5,308	5,661	6,413	6,251	5,652

Spread Bps

First 30 Min	S&P/TSX 60	6.1	6.1	5.3	6.2	6.3	5.8	6.3	6.3	6.9	6.7	6.2	6.3	6.3
	S&P/TSX Composite	13.3	13.5	11.8	12.8	12.5	12.0	12.5	12.5	13.9	14.0	13.2	13.2	13.5
	Non-TSX-Listed	203.5	212.6	198.5	184.3	192.3	182.5	180.4	186.6	190.4	188.4	188.7	164.0	152.9
Mid Day	S&P/TSX 60	3.7	3.7	3.3	3.8	3.8	3.5	3.9	3.9	4.2	4.0	3.8	3.9	4.1
	S&P/TSX Composite	8.4	8.3	7.6	8.2	8.1	7.7	8.1	8.2	9.4	9.2	8.8	8.8	8.8
	Non-TSX-Listed	137.1	149.3	138.9	126.0	130.7	124.2	124.9	120.5	124.5	126.8	128.1	113.7	104.9
Last 30 Min	S&P/TSX 60	2.9	2.8	2.5	2.8	2.8	2.6	2.7	2.8	3.0	2.8	2.7	2.8	2.8
	S&P/TSX Composite	7.4	7.3	6.9	7.2	7.4	7.0	7.3	7.5	8.1	7.6	7.5	7.7	7.6
	Non-TSX-Listed	135.0	140.4	133.3	122.8	127.5	123.6	121.2	119.7	126.6	125.0	126.6	116.3	107.5

One Minute Volatility Bps

First 30 Min	S&P/TSX 60	12.1	13.6	11.0	11.8	10.6	9.9	10.9	10.7	14.0	12.3	11.2	10.8	12.2
	S&P/TSX Composite	15.4	17.4	13.5	14.2	12.4	11.9	13.0	12.5	16.2	14.8	13.6	13.2	13.8
	Non-TSX-Listed	17.9	21.4	15.7	15.1	13.6	13.0	14.6	15.6	17.0	15.6	12.0	13.1	15.1
Mid Day	S&P/TSX 60	4.4	5.5	3.7	4.2	3.5	3.2	4.0	3.8	5.2	4.2	4.0	3.6	3.9
	S&P/TSX Composite	4.3	5.7	3.4	3.9	2.9	2.7	3.5	3.3	4.8	4.0	3.8	3.4	3.4
	Non-TSX-Listed	5.3	7.3	5.0	4.8	4.4	4.4	5.0	4.8	6.0	4.3	3.9	3.8	4.2
Last 30 Min	S&P/TSX 60	4.7	5.1	3.8	4.2	3.7	3.4	3.7	3.8	4.5	4.1	4.1	3.7	3.9
	S&P/TSX Composite	4.3	4.7	3.1	3.6	3.0	2.6	3.0	3.1	4.0	3.8	3.6	3.2	3.2
	Non-TSX-Listed	4.7	6.2	4.0	4.0	3.5	2.9	3.8	3.9	4.4	3.4	3.7	3.5	4.0

Percent MDV by Time of Day

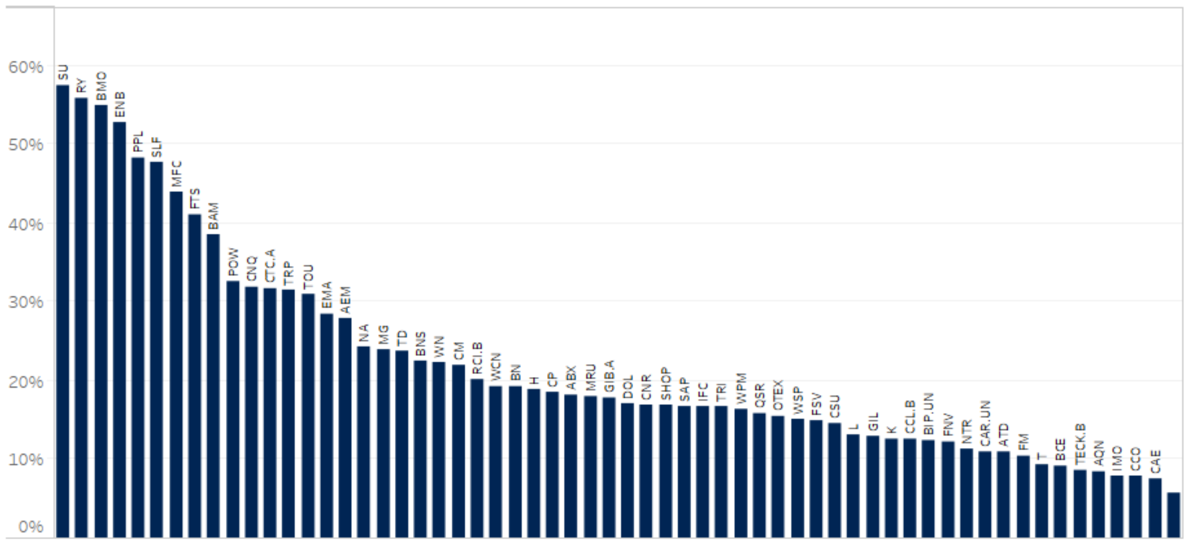
Open	S&P/TSX 60	0.5%	0.5%	0.5%	0.5%	0.4%	0.5%	0.4%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	S&P/TSX Composite	0.5%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.5%	0.5%	0.4%	0.5%	0.5%	0.5%
	Non-TSX-Listed	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

First 30 Min	S&P/TSX 60	9.7%	9.5%	9.4%	9.9%	8.9%	8.9%	8.9%	8.1%	8.8%	8.6%	8.5%	8.2%	9.3%
	S&P/TSX Composite	10.8%	10.2%	10.0%	10.6%	10.1%	9.9%	9.8%	9.0%	9.8%	9.7%	9.6%	9.4%	10.3%
	Non-TSX-Listed	17.0%	18.0%	18.0%	16.4%	17.4%	18.8%	19.2%	17.7%	16.8%	18.2%	16.9%	18.5%	18.9%
Last 30 Min	S&P/TSX 60	13.1%	13.5%	13.1%	15.0%	14.5%	14.1%	14.3%	14.4%	14.6%	14.7%	13.2%	14.0%	14.5%
	S&P/TSX Composite	13.7%	13.9%	13.4%	14.5%	14.6%	14.3%	14.7%	14.6%	15.0%	15.3%	14.8%	14.7%	15.4%
	Non-TSX-Listed	11.3%	10.8%	10.0%	10.7%	11.3%	12.1%	12.4%	12.4%	12.1%	11.8%	11.2%	11.3%	11.1%

Close	S&P/TSX 60	18.5%	18.1%	19.3%	13.8%	19.1%	19.9%	19.3%	21.5%	15.1%	15.3%	20.5%	17.9%	17.5%
	S&P/TSX Composite	8.1%	7.7%	9.1%	6.9%	8.7%	8.2%	7.5%	9.0%	6.7%	6.9%	8.4%	7.4%	8.3%
	Non-TSX-Listed	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

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 data: Virtu Financial

February 2024 Median MOC % of Daily Volume - S&P/TSX 60



Source data: Virtu Financial

ABOUT VIRTU

Virtu is a leading financial services firm that leverages cutting-edge technology to provide execution services and data, analytics and connectivity products to its clients and deliver liquidity to the global markets. Leveraging its global market making expertise and infrastructure, Virtu provides a robust product suite including offerings in execution, liquidity sourcing, analytics and broker-neutral, multi-dealer platforms in workflow technology. Virtu’s product offerings allow clients to trade on hundreds of venues across 50+ countries and in multiple asset classes, including global equities, ETFs, foreign exchange, futures, fixed income and myriad other commodities. In addition, Virtu’s integrated, multi-asset analytics platform provides a range of pre and post-trade services, data products and compliance tools that clients rely upon to invest, trade and manage risk across global markets.

To learn more, contact your sales representative or call our desk at:
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