Jul 2024

CA Market Structure Monthly

MICROSTRUCTURE OBSERVATIONS

- In TSX-listed securities, the average daily volume was 561 million shares in July 2024, down 19% compared to June 2024 and up 4% compared to July 2023. While average quote sizes improved, spread and volatility conditions deteriorated compared to June 2024.

- In non TSX-listed securities, the average daily volume was 252 million shares in July 2024, down 14% compared to June 2024 and up 3% compared to July 2023. While spread conditions improved, average quote size and volatility conditions deteriorated compared to June 2024.

- Dark venue market share increased in July 2024 to 7.2% after hitting a 12-month low in the month of June 2024. While all dark venues experienced a growth in market share in July 2024, CBOE recovered the 0.5% market share lost previously in June 2024.

CA MARKET STRUCTURE NEWS

TSX Inc. - Notice of Approval – Contingent Option Trades

On July 4th, 2024, the Toronto Stock Exchange (TSX) received regulatory approval from the Ontario Securities Commission for amendments to Contingent Options Trades. These changes will allow for automatic execution of securities on TSX when the option portion of the contingent option is executed on the Montreal Exchange (MX). This will allow trades to occur outside the National Best Bid and Offer but within the daily high and low prices. The amendments will continue to use the "MS" trade marker, which does not affect daily price metrics. Implementation is expected later in Q3 2024, with a specific date to be announced.

Consult the link below for further details:

https://www.osc.ca/en/industry/market-regulation/marketplaces/exchanges/recognized-exchanges/tmx-group-inc-and-tsx-inc-rule-review-notices/notice-approval-contingent

CIRO - Request for Comment – Proposed Proficiency Model Changes for Approved Persons

On July 4th, 2024, CIRO published for comment proposed amendments to proficiency rules for investment dealer Approved Persons. This initiative aims to enhance proficiency standards by 2026, emphasizing investor protection and market integrity.

Consult the link below for further details:

https://www.osc.ca/en/industry/market-regulation/self-regulatory-organizations-sro/canadian-investment-regulatory-organization-ciro/ciro-rule-review/request-comment-5

CIRO - Proposed Amendments Respecting Net Asset Value Orders and Intentional Crosses

On July 18th, 2024, CIRO published proposed amendments to the Universal Market Integrity Rules (UMIR) to increase transparency around the execution of certain orders related to exempt ETFs where the execution price references the NAV of the ETF as published by the issuer. Additionally, a change was proposed to an outdated provision in the definition of "intentional cross" that prohibits an intentional cross where one side of the trade is jitney and to clarify its application.

Comments should be submitted in writing by October 18th, 2024.

Consult the link below for further details:

https://www.ciro.ca/news-room/publications/proposed-amendments-respecting-net-asset-value-orders-and-intentional-crosses?

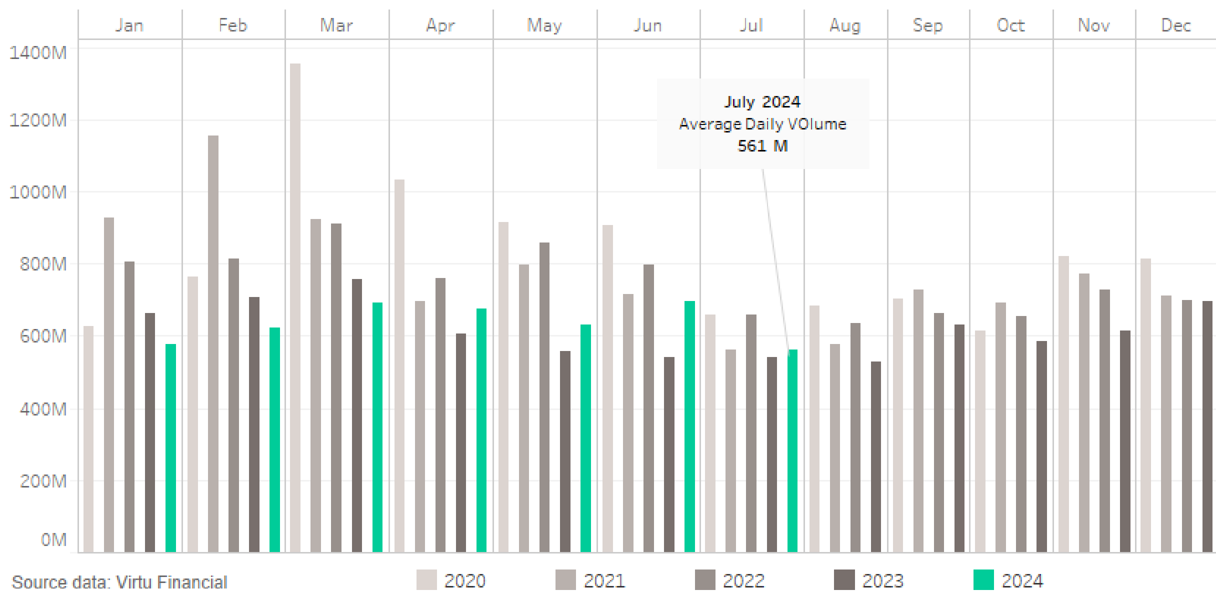
TSX Inc. - Notice of Approval – Self Trade Management Amendments

On July 25th, 2024, after receiving no comment letters, the OSC approved amendments relating to how Self-Trade Management interacts with Self-Trade Prevention on TSX Inc. marketplaces. The amendments will be effective in Q4 2024.

Consult the link below for further details:

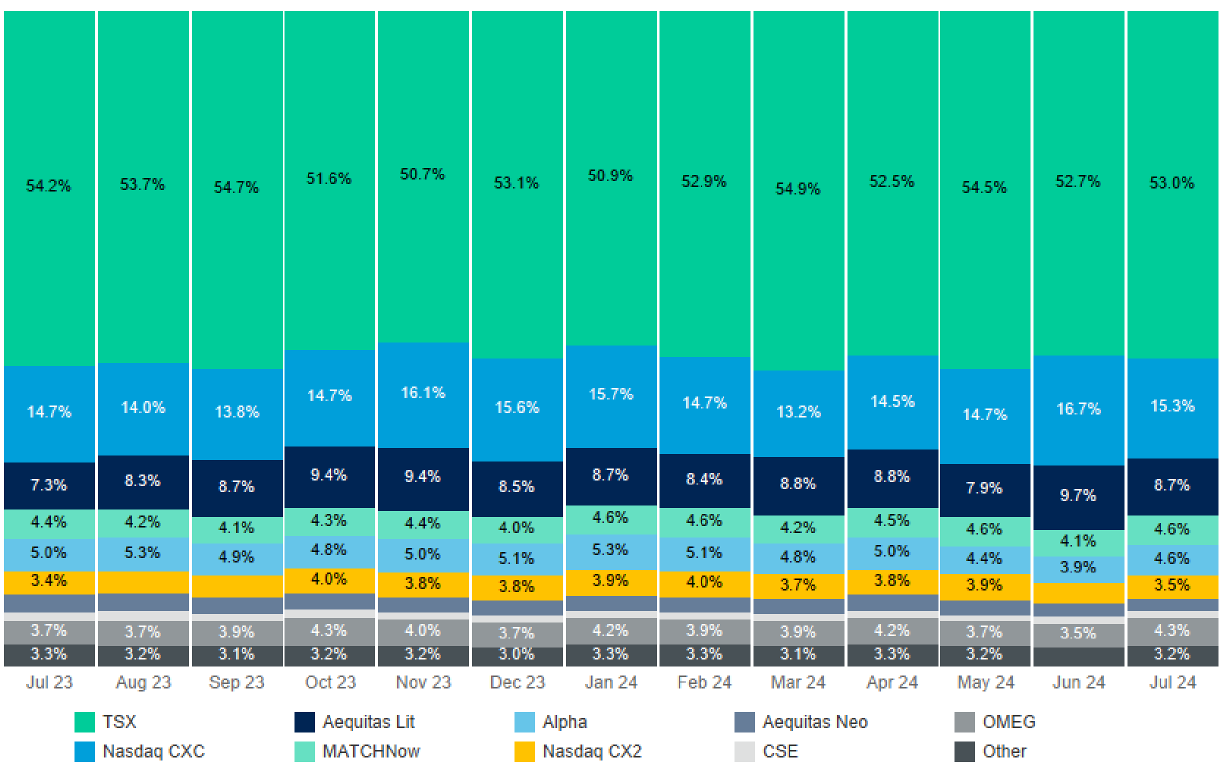
https://www.osc.ca/en/industry/market-regulation/marketplaces/exchanges/recognized-exchanges/tmx-group-inc-and-tsx-inc-rule-review-notices/notice-approval-self-trade

Average Daily Market Volume (Shares, TSX Listed)



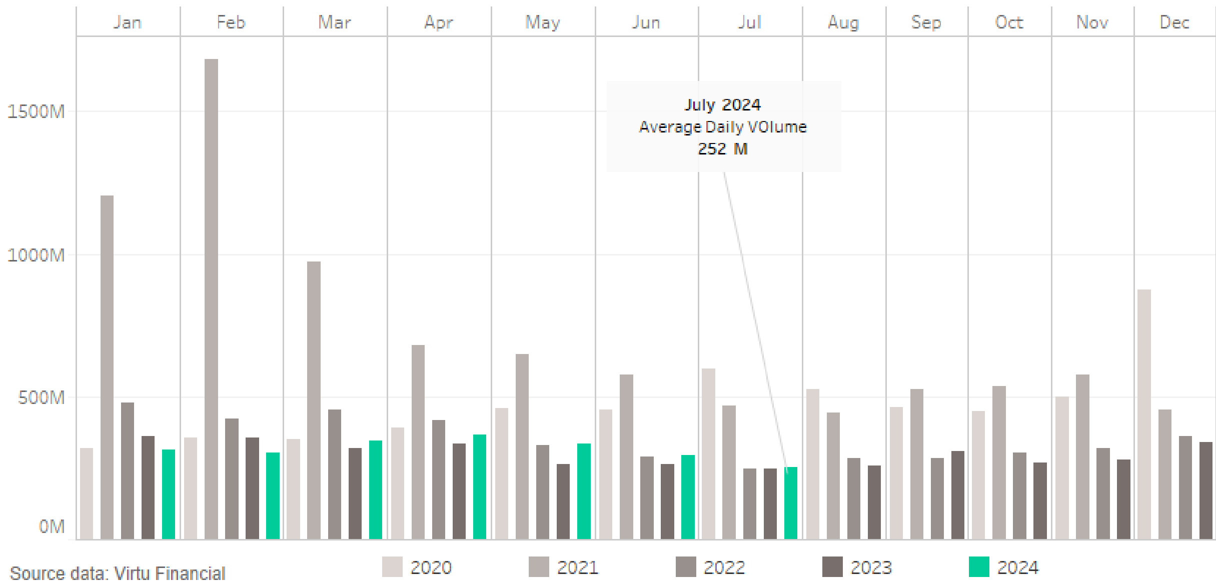
Source data: Virtu Financial

Venue Market Share (TSX Listed)



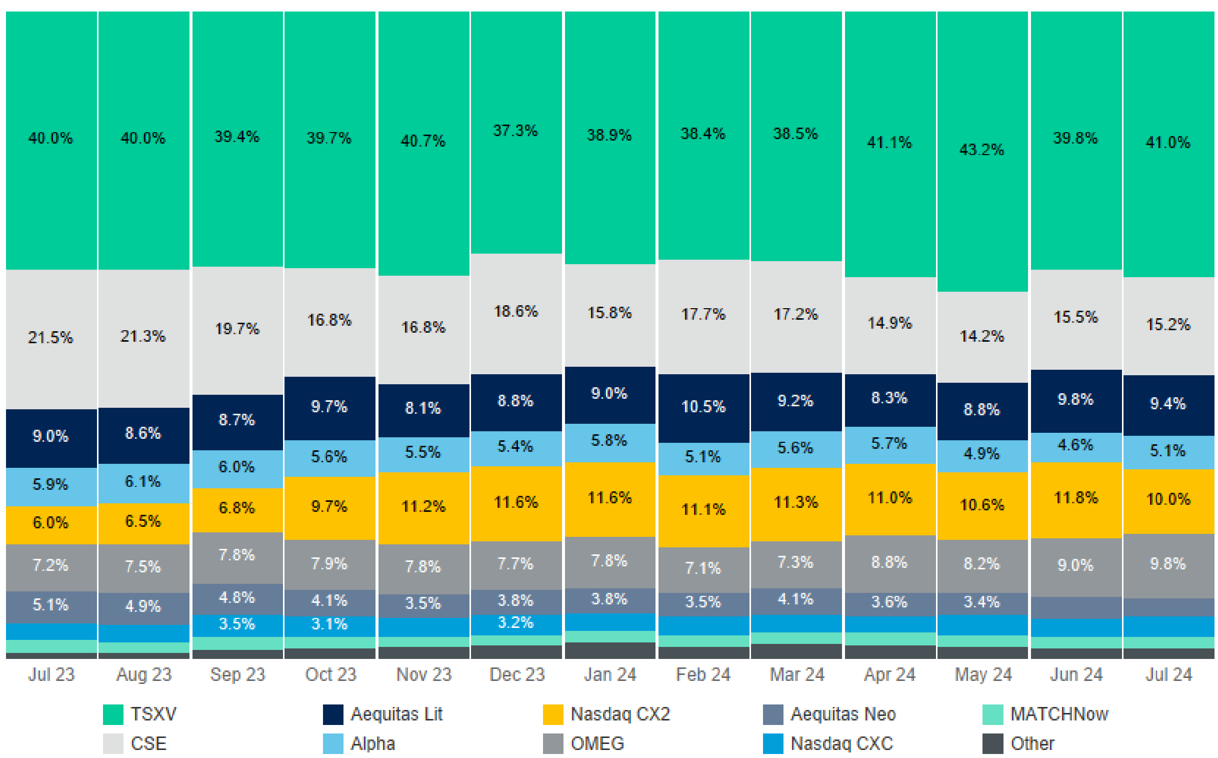
Source data: Virtu Financial

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



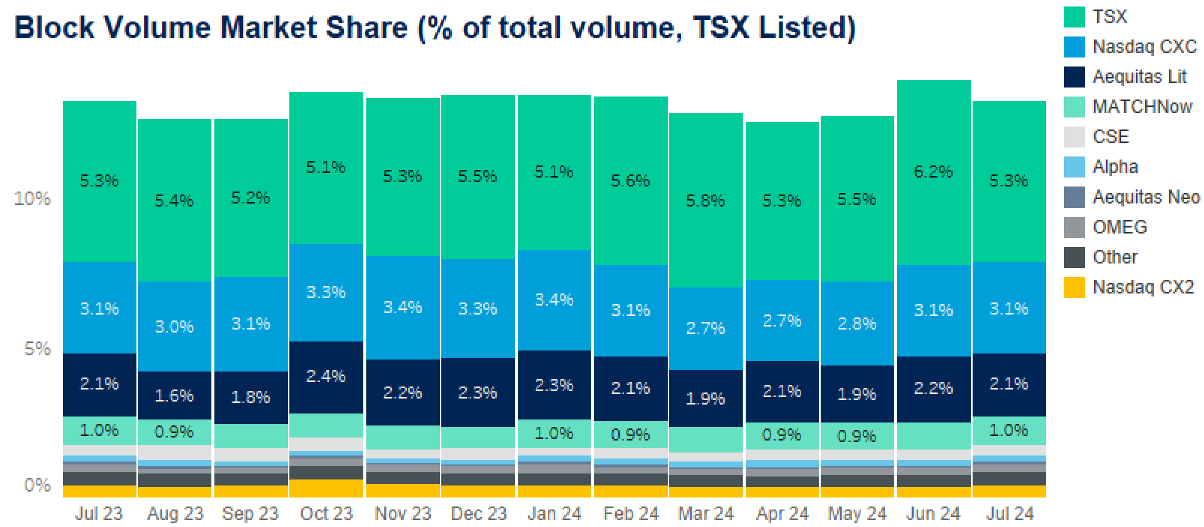
Source data: Virtu Financial

Venue Market Share (Non-TSX Listed)

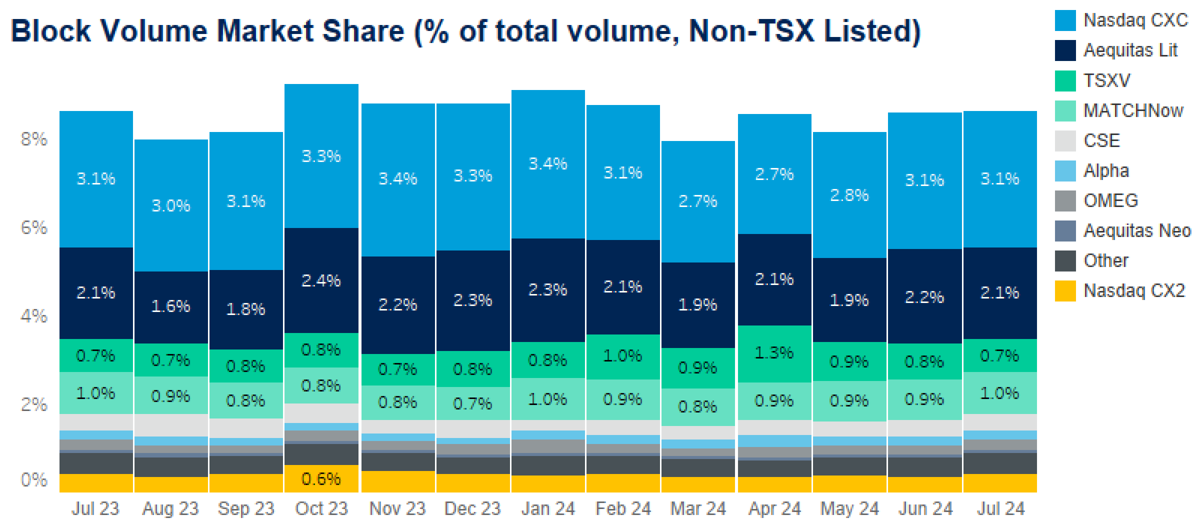


Source data: Virtu Financial

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

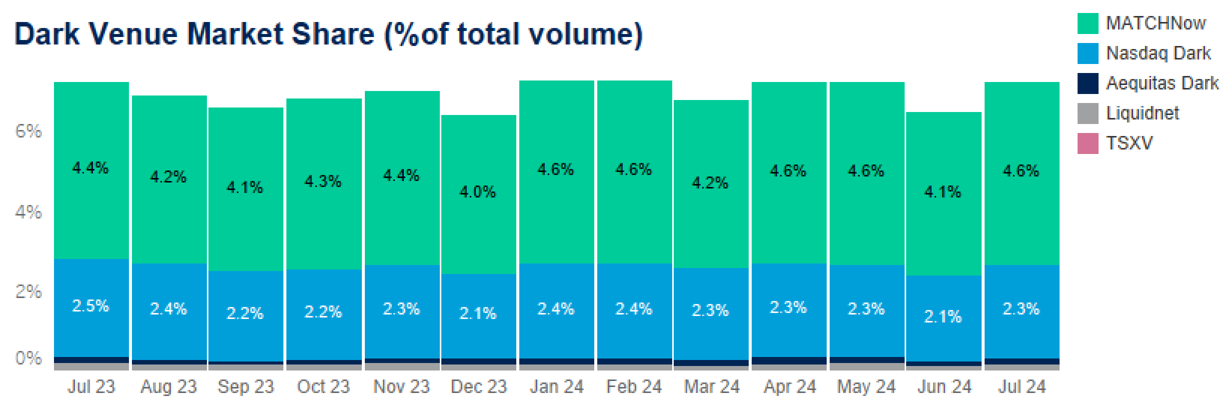


Block Volume Market Share (% of total volume, Non-TSX Listed)



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

		3Q 23			4Q 23			1Q 24			2Q 24			3Q 24
		Jul 23	Aug 23	Sep 23	Oct 23	Nov 23	Dec 23	Jan 24	Feb 24	Mar 24	Apr 24	May 24	Jun 24	Jul 24
First 30 Min	S&P/TSX 60	897	895	911	865	875	932	938	917	908	844	675	700	748
	S&P/TSX Composite	1,053	1,029	1,040	1,025	1,036	1,091	1,079	1,088	1,071	1,026	843	847	864
	Non-TSX-Listed	5,021	5,261	6,182	5,950	5,650	6,074	6,193	5,722	5,906	5,500	5,551	5,250	5,062
Mid Day	S&P/TSX 60	1,114	1,100	1,115	1,094	1,082	1,138	1,129	1,134	1,089	1,031	827	818	852
	S&P/TSX Composite	1,345	1,273	1,294	1,252	1,239	1,310	1,276	1,294	1,285	1,195	1,013	982	994
	Non-TSX-Listed	4,583	4,875	5,498	5,281	5,258	5,736	5,518	5,500	5,743	5,390	5,496	5,202	5,000
Last 30 Min	S&P/TSX 60	1,280	1,245	1,268	1,215	1,219	1,301	1,242	1,183	1,136	1,066	982	971	1,012
	S&P/TSX Composite	1,610	1,543	1,550	1,530	1,537	1,664	1,542	1,555	1,526	1,411	1,290	1,234	1,231
	Non-TSX-Listed	4,456	4,781	5,494	5,308	5,661	6,413	6,251	5,652	5,912	5,725	5,900	5,729	5,256

Spread Bps

		Jul 23	Aug 23	Sep 23	Oct 23	Nov 23	Dec 23	Jan 24	Feb 24	Mar 24	Apr 24	May 24	Jun 24	Jul 24
First 30 Min	S&P/TSX 60	5.8	6.3	6.3	6.9	6.7	6.2	6.3	6.3	6.0	6.1	6.2	6.4	6.4
	S&P/TSX Composite	12.2	12.7	12.7	14.1	14.2	13.3	13.4	13.7	13.1	12.8	13.1	13.4	13.0
	Non-TSX-Listed	182.5	180.4	186.6	190.4	188.4	188.7	164.0	152.9	149.3	156.4	153.8	146.3	126.6
Mid Day	S&P/TSX 60	3.5	3.9	3.9	4.2	4.0	3.8	3.9	4.1	3.8	3.9	3.9	3.9	3.8
	S&P/TSX Composite	7.8	8.2	8.4	9.5	9.3	8.9	9.0	9.0	8.6	8.6	8.7	8.8	8.6
	Non-TSX-Listed	124.2	124.9	120.5	124.5	126.8	128.1	113.7	104.9	108.9	116.3	109.3	93.5	76.5
Last 30 Min	S&P/TSX 60	2.6	2.7	2.8	3.0	2.8	2.7	2.8	2.8	2.7	2.8	2.8	2.8	2.8
	S&P/TSX Composite	7.2	7.4	7.7	8.2	7.7	7.6	7.9	7.7	7.6	7.6	7.6	7.7	7.7
	Non-TSX-Listed	123.6	121.2	119.7	126.6	125.0	126.6	116.3	107.5	114.9	118.5	113.1	104.2	87.7

One Minute Volatility Bps

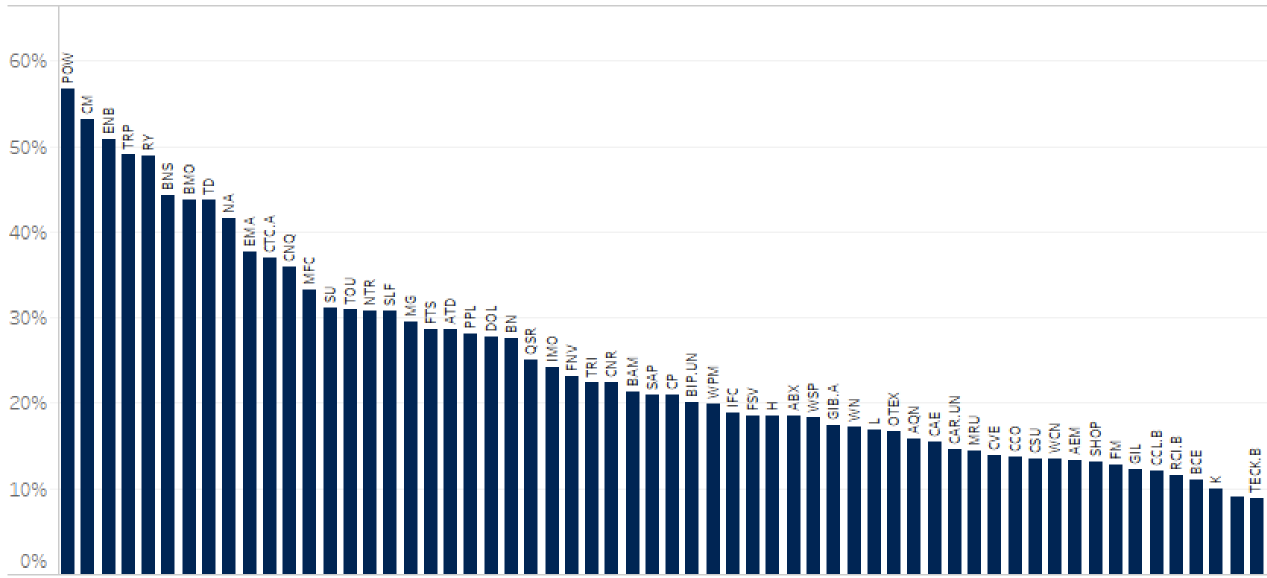
		Jul 23	Aug 23	Sep 23	Oct 23	Nov 23	Dec 23	Jan 24	Feb 24	Mar 24	Apr 24	May 24	Jun 24	Jul 24
First 30 Min	S&P/TSX 60	9.9	10.9	10.7	14.0	12.3	11.2	10.8	12.2	10.6	11.5	10.3	10.5	10.3
	S&P/TSX Composite	11.9	13.0	12.5	16.0	14.7	13.6	13.1	13.7	12.7	13.6	12.5	11.9	11.9
	Non-TSX-Listed	13.0	14.6	15.6	17.0	15.6	12.0	13.1	15.1	14.5	13.8	13.2	14.3	16.5
Mid Day	S&P/TSX 60	3.2	4.0	3.8	5.2	4.2	4.0	3.6	3.9	3.4	4.1	3.4	3.8	3.7
	S&P/TSX Composite	2.7	3.5	3.3	4.8	4.0	3.8	3.3	3.4	3.0	3.8	3.1	3.4	3.5
	Non-TSX-Listed	4.4	5.0	4.8	6.0	4.3	3.9	3.8	4.2	4.0	4.2	3.6	4.2	4.8
Last 30 Min	S&P/TSX 60	3.4	3.7	3.8	4.5	4.1	4.1	3.7	3.9	3.8	4.2	3.9	4.3	4.0
	S&P/TSX Composite	2.6	3.0	3.1	3.9	3.7	3.6	3.2	3.2	3.3	3.5	3.4	3.7	3.6
	Non-TSX-Listed	2.9	3.8	3.9	4.4	3.4	3.7	3.5	4.0	4.0	3.8	3.5	3.5	4.2

Percent MDV by Time of Day

		Jul 23	Aug 23	Sep 23	Oct 23	Nov 23	Dec 23	Jan 24	Feb 24	Mar 24	Apr 24	May 24	Jun 24	Jul 24
Open	S&P/TSX 60	0.5%	0.4%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.6%	0.5%	0.6%	0.6%	0.6%
	S&P/TSX Composite	0.4%	0.4%	0.5%	0.5%	0.4%	0.5%	0.5%	0.5%	0.5%	0.5%	0.6%	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	8.9%	8.9%	8.1%	8.8%	8.6%	8.5%	8.2%	9.3%	8.5%	8.4%	8.4%	8.7%	7.1%
	S&P/TSX Composite	9.9%	9.9%	8.9%	9.8%	9.7%	9.6%	9.4%	10.2%	9.9%	10.1%	9.9%	9.0%	8.8%
	Non-TSX-Listed	18.8%	19.2%	17.7%	16.8%	18.2%	16.9%	18.5%	18.9%	20.9%	20.0%	19.6%	18.6%	19.9%
Last 30 Min	S&P/TSX 60	14.1%	14.3%	14.4%	14.6%	14.7%	13.2%	14.0%	14.5%	13.8%	13.7%	15.0%	14.7%	15.8%
	S&P/TSX Composite	14.4%	14.7%	14.6%	15.1%	15.3%	14.8%	14.7%	15.3%	15.0%	14.8%	15.7%	15.9%	16.4%
	Non-TSX-Listed	12.1%	12.4%	12.4%	12.1%	11.8%	11.2%	11.3%	11.1%	10.4%	10.5%	11.0%	10.9%	10.5%
Close	S&P/TSX 60	19.9%	19.3%	21.5%	15.1%	15.3%	20.5%	17.9%	17.5%	22.2%	18.9%	22.2%	22.8%	22.4%
	S&P/TSX Composite	8.0%	7.3%	8.7%	6.6%	6.8%	8.4%	7.3%	8.2%	8.2%	7.8%	8.8%	10.2%	8.9%
	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

July 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