

February 21, 2023

Ontario Securities Commission

20 Queen Street West
Toronto, Ontario M5H 3S8
comments@osc.gov.on.ca

Re: CSA Consultation Paper 21-403 – Access to Real-Time Market Data

Dear Sir/Madam:

Virtu Canada Corp. applauds the Canadian Security Administrators (CSA) for engaging the industry on this important issue that affects all market participants. Modernizing the Canadian market data regime is a crucial undertaking. We appreciate the detailed and thoughtful approach the CSA is taking regarding the costs and access to real-time market data, a critical component to ensure fair access to Canada's capital markets.

Virtu Canada Corp. is the Canadian investment dealer arm of Virtu Financial ("Virtu"), a leading global provider of financial services and products that leverage cutting-edge technology to deliver liquidity to the global markets and innovative, transparent trading solutions to its clients. 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 commodities. In addition, Virtu's integrated, multi-asset analytics platform provides a range of pre-, real-time, and post-trade services, reporting and data products and compliance tools that clients rely upon to invest, trade, and manage risk across global markets.

Virtu is an advocate for marketplace innovations that increase investors' choices and allow participants to interact in new, transparent, efficient, and novel ways while ensuring a robust and competitive market. Virtu is uniquely positioned as an agency broker, execution management system vendor, and market maker to assess and comment on access to real-time market data. Virtu and our institutional clients are predominantly professional data fee subscribers.

Summary:

We believe the current market data regime is one sided, opaque, and overpriced. We find that real-time market data fees are not tied to the costs of production, lack downward pressure from competition, and reflect inelastic pricing. This is especially acute for professional subscribers of real-time market data who pay higher fees than non-professionals. Our views can be summarized as follows:

- Market data fees are inelastic and therefore should be regulated as a public utility. We recommend that the Data Fee Methodology (DFM) benchmark/reference rate be set to the cost of market data production, plus a reasonable profit margin.
- The fair distribution of market data is essential to the functioning of capital markets. All marketplace participants – both professional and non-professional – are entitled to fair and equal access to market-data and, as such, fees must be reasonable and affordable.
- There is a need to require Exchanges and ATSS to be transparent by publicizing their cost to produce real-time market data. This will allow the CSA to set the DFM benchmark/reference rate and enable consumers of real-time market data to gauge the fairness of market data costs.



Discussion:

Inelastic Pricing

Under a free market system, pricing is based on supply and demand relationships within the marketplace without regulation. Free market competition is subverted in the case of Canadian market data where marketplaces control the dissemination and sale of all equity market data due to the lack of substitutes or competing products (i.e., there is only one supplier for the data from each venue). Despite this, brokerage and institutional trading firms must remain competitive which requires purchasing market data from each marketplace. While regulations do not explicitly require the consumption of market data from all marketplaces, an incomplete view of the market impedes the ability to trade in manner compliant with regulations and achieve best execution demanded by regulators and clients. In an environment with captive consumers of a vital product, it is incumbent on regulators to determine and set a fair price to ensure the protection of investors. We believe this price should be set at a level that allows a reasonable profit to the provider, without creating undue harm and inhibiting fair access to Canadian capital markets.

The Order Protection Rule¹ (OPR) effectively forced market participants to access every protected venue and contributed in part to the proliferation of multiple exchanges/ATS. While the increased number of marketplaces has increased competition between venues, it has also led to increased opportunities for marketplace operators to charge market data, and connectivity fees.

We agree with the CSA's conclusion that even if OPR was repealed, the structure of investing and trading creates an inelastic pricing environment for market data given investors' demand to receive the best price available across all marketplaces. Achieving the best price under the prevailing market conditions is also an important factor in meeting best execution obligations².

Canadian regulators have previously acknowledged their role in ensuring fair and equal access to Canadian markets. In order to partially offset this pricing environment, a control on the marketplaces' ability to impose unrestrained access fees was provided in Amendments to the Trading Rules³, which capped the amount an exchange could charge for executions (or "access fee") to \$0.0030 per share for interlisted securities, or \$0.0017 for non-interlisted securities (simplified for only securities >\$1.00, less than \$1.00 fees are capped at \$0.0004). The CSA also implemented some control over Canadian market data costs by implementing the DFM in 2016. However, when setting the benchmark rate of the DFM, it was not based on the cost to produce; instead, the benchmark rate simply codified the then current elevated fees as of the specified date.

Based on these factors, we believe that the inelastic demand for market data has allowed marketplaces to charge inflated prices and market data costs have become synthetic trading fees, but unlike trading fees, these fees for market data are unrestrained by real competition due to the lack of alternatives available. To illustrate this, we can review the largest markets' revenue and profit from the segment that includes market data. The Toronto Stock Exchange ("TSX"), which is the largest Canadian publicly traded marketplace that publishes its financial information, is an example of the issue at hand.

The TSX reports market data in its publicly filled financial reports in the segment titled: "Global Solutions, Insights and Analytics". The disclosure for this segment includes data feeds, co-location, benchmarks and indices, and Trayport.

¹ See *National Instrument 23-101, Part 6 and Companion Policy 23-101 Part 6*

² See *The Corporation Investment Dealer and Partially Consolidated Rules, Rule 3120*

³ See *National Instrument 23-101, Part 6*



Excerpts from the TMX Q3 2022⁴ report to shareholders (the “Report”):

Global Solutions Insights and Analytics

	Nine Months ending Q3 2022	Nine Months ending Q3 2021
Income	171.8	165
Revenue	266.5	255.5
Profit Margin	64.5%	64.6%

Global Solutions, Insights and Analytics

(in millions of dollars)	FNM/22	FNM/21
Trayport	\$116.6	\$111.7
TMX Datalinx including Co-location	149.9	143.8
	\$266.5	\$255.5

Unfortunately, even in the TSX disclosures we cannot refine the analysis to isolate only market data revenue and costs. The lack of transparency is why we strongly encourage the CSA to require all Canadian marketplaces to publicly disclose revenue and costs in detail to allow an analysis and evaluation of market data costs.

Notwithstanding this challenge, we can highlight some additional observations regarding the TMX Report. The Report shows almost \$150mm in revenue derived from market data and connectivity, reported as TMX Datalinx including Co-location. When examining profit margin for the segment, market data and connectivity is a profitable business with **64.5% margins**, calculated from the Revenue and Income reported as Global Solutions, Insights and Analytics.

We also compared the cost of market data and connectivity on a per-share basis. Using 2022 data for TSX, TSX-V, and Alpha volumes, provided by the New Self-Regulatory Organization of Canada (“New SRO”), we observe 148.84bln non-crossed shares traded.⁵ Therefore, on a per-traded share basis, the market is paying 13.44mils per share for market data and connectivity. **When comparing this market data rate with the spread to trade on the TSX (computed as the Removal rate minus the Providing rate) we see it is significantly higher by 3.36 times.**⁶ Normalizing market data costs on a per share basis allows us to compare costs in two different environments. Due to competition between marketplaces, the spread the exchange can charge for trading access fees is only 4mils. We believe that the 13.44mils charged for market data is free from competition and therefore should be priced fairly. We further believe it would be beneficial for the CSA to require all marketplaces to report market data and connectivity fees, revenue, and costs on a per share basis to allow for standardized comparison.

The CSA should also consider the analysis compiled by IEX on the cost to produce market data, in the article “*Shakedown in New Jersey: The Hidden Cost of Exchange Connectivity*”, September 26, 2018, where IEX approximated the infrastructure cost needed to produce market data at approximately \$630,000

⁴ See TMX Group Limited’s Q3 2022 Report to Shareholders

⁵ <https://www.iiroc.ca/sections/markets/reports-statistics-and-other-information/reports-market-share-marketplace>

⁶ <https://www.tsx.com/trading/toronto-stock-exchange/fee-schedule>



USD annually.⁷ We are concerned that moving to a cost-plus model could provide an incentive to layer in redundant costs and fees which would artificially raise the cost of market data above the true costs of production and distribution.

Over the last 10 years, the markets have become more efficient – both in their ability to provide liquidity and the costs required to operate: bid-ask spreads are narrower than ever before as technological advances have made executions faster and more reliable. Institutional trading commissions as measured in BPS have decreased 60% since 2009⁸. Clearing costs have also declined as internal processes have become more efficient. The facts demonstrate the costs associated with equity trading have declined substantially; however, real-time market data fees, which demonstrate inelastic pricing, have remained static.

We believe that the non-competitive pricing of real-time market data is harmful to encouraging participation in Canadian capital markets. The CSA has an opportunity to align the regulatory framework on pricing practices governing market data and connectivity with the efficiencies of today's electronic marketplace. The CSA should also consider any related fees – such as connectivity, access or redistribution fees – to ensure trading venues don't introduce new or modified fee structures in response to a requirement for more transparent utility-style pricing.

Data Fee Methodology (DFM)

In 2016 the Canadian regulators introduced the DFM, an attempt to limit the inelastic pricing of market data. However, when setting the reference benchmark for market data cost, the CSA used a current snapshot of market data fees as the domestic reference, allocating the combined cost based on a methodology of each market's share of quotes and trades.

We extracted the below chart from TD Securities February 7, 2013, comment letter for CSA Staff Consultation Paper: 21-401 - Real-Time Market Data Fees:



Source: TSX

⁷ *Shakedown in New Jersey: The Hidden Cost of Exchange Connectivity*, September 26, 2018, available at <https://medium.com/boxes-and-lines/shakedown-in-new-jersey-the-hidden-cost-of-exchange-connectivity-93ebb57187b0>.

⁸ Virtu's Peer Universe is a compilation of actual trade data from our TCA client base. On a rolling 4 quarter basis, the universe contains: Over 180 clients and 37 of the top 50 asset managers globally; \$16 trillion in principal.

⁹ https://www.osc.ca/sites/default/files/pdfs/irps/comments/SecuritiesLaw_com_20130207_21-401_haynesp.pdf



Since the market demutualization 2002, the industry observed an increase in cost from approximately \$50mm to \$160mm in 2011. Taking this rise in market data cost along with the inelastic pricing discussed above we believe the DFM benchmark/reference fees were already inflated when set in 2016. It is also important to note that over this same time period, the TSX's market share significantly dropped with the introduction of market competition.

If we are to fix the problem of market data fees and promote fair access to the Canadian capital markets a substantial reduction is necessary. As per the DFM notice, it was the intention to revisit the reference or benchmark aggregated fee level:

*"Initially, we are using a domestic reference that takes the data fees charged by each marketplace and aggregates them into a single pool, which is then re-allocated based on the ranking models described in the Appendix A. We intend to develop a process to determine the appropriate reference or benchmark to be used in the future to allocate the aggregate fees to each marketplace."*¹⁰

We submit that the CSA should consider resetting the reference fees to a utility pricing model. The regulatory Surveillance Technology Enhancement Platform (STEP) program is one area where the industry currently experiences a utility pricing model. The New SRO has a market data system which is connected to all Canadian venues that consolidates market data and monitors trading behavior. To finance this program, a cost recovery mechanism was structured so that the industry absorbs the cost in a pro-rata model based on fills and message counts.

This provides insight on a couple important measures:

- Regulators currently experience the cost involved in consolidating market data and therefore can have an enhanced view into what fair and reasonable market data pricing should look like.
- This model could be used by the individual exchanges as a basis to improve how market data is charged to the consumers.

Outside Canada Fees

We next examined the difference between market data fees for inside Canada vs. outside Canada.

For instance, TSX and Alpha charge different fees depending on where the data is being used: a higher fee if the data is used Outside Canada and lower fee if used Inside Canada.

	Inside Canada Subscriber (\$CAD)	Outside Canada Subscriber (\$USD)	Outside Canada Subscriber (\$CAD)	Difference (in-CAD vs out-CAD)
CEG/TL1/CL1	59.00	63.5	85.09	44.2%
TL2	80.50	47.5	63.65	-20.9%
CL2	50.00	24.0	32.16	-35.7%
Alp1 - TSX	8.30	12.2	16.348	97.0%
Alp1 - V	1.75	7.5	10.05	474.3%
Alp2 - TSX	19.80	43.2	57.888	192.4%
Alp2 - V	3.60	24.5	32.83	811.9%

Illustrative CAD/USD Exchange Rate: 1.34

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¹⁰ See CSA Staff Notice 21-319 Data Fees Methodology

¹¹ <https://www.tmxinfoservices.com/tmx-datalinx/products-and-services/real-time-data>



On the surface it appears that subscribers outside of Canada pay less for level 2 market data fees; however, in our experience many non-Canadian clients typically only consume level 1 data which is priced at a premium. In addition, we note that Outside Canada fees are charged in USD and after converting back to Canadian dollars there is an additional premium to what is charged Inside Canada in Canadian Dollars.

We believe charging different prices for market data based on geography negatively impacts fair and equal access for global participants. We find no basis for charging higher fees to non-Canadian participants and can only conclude that this has the potential to discourage global participation in the Canadian capital markets.

Multi Installation Single User (MISU)

Currently, many professional users pay two or three times for the same real-time market data (RTMD) if using multiple vendors and systems to access the market. For example, as a brokerage firm our trading desk pays for the same TSX market data across several platforms including Bloomberg, IRESS, and Triton.

One item not covered by the CSA access to real-time market data consultation paper is the concept of Multi Installation Single User (MISU). MISU is akin to subscription services like Netflix which allow members to pay once and view content on multiple devices. We can apply this analogy to market data and envision a model where subscribers pay once for market data and access it through multiple platforms.

Unlike Netflix, market data is distributed through third party applications. Through our discussions with the TSX in advance of this comment letter, we believe Canadian marketplaces may be in favor of MISU to reduce participants' requirement to pay for the same data multiple times; however, vendors must allow for an authentication process. The authentication process could be as simple as providing an email list of market data subscribers which could be matched against emails of subscribers on other platforms to reduce duplicative fees. We understand from our conversations that privacy concerns currently prevent vendors from sharing information (such as emails of subscribers) with the marketplaces.

We believe a MISU authentication process would deliver significant benefits for the industry; however, this may require regulatory assistance to be successful.

Transparency

Given the above inelastic pricing characteristics, the geographical pricing practices and multiple charges for the same data, we feel there is a need for transparency regarding cost and profitability of market data and connectivity. We ask the CSA to require public disclosure of marketplaces' "cost to produce" and profitability metrics to enable a more constructive dialogue about data pricing. Per above, we highlighted the importance of examining fees on a per-share basis so the CSA and industry can better observe the divergence between a competitive and non-competitive environment over time.



Specific Questions and Answers:

We have limited our question responses to those where we have constructive feedback.

QUESTION #1: *Please identify any potential unintended consequences at the industry, marketplace, or firm level if we pursue this option.*

Please refer to the sections on Transparency, Inelastic Pricing, and Outside Canada Fees (above) for factors and considerations applicable to this question.

QUESTION #2: *Would this approach satisfy the need for more transparency in relation to proposed fee changes and their review process? If yes, please indicate what benefits this approach would offer. If no, please explain why and whether other requirements should be considered.*

Please refer to the sections on Transparency, Inelastic Pricing, and Outside Canada Fees (above) for factors and considerations applicable to this question.

QUESTION #3: *What are your concerns, if any, with continuing to use the DFM? If the DFM were to continue to be used, what changes are necessary?*

Please refer to the sections Data Fee Methodology (DFM) and Inelastic Pricing (above) for factors and considerations applicable to this question.

QUESTION #4: *Is the application of the DFM appropriate for both senior and venture market data?*

Yes, enhancing the Data Fee Methodology using a cost recovery plus reasonable margin benchmark/reference rate and applying it to all Canadian venues across all listed securities, both senior and junior is appropriate if not critical to achieving fair access to the Canadian capital markets.

The CSA indicates it is considering retaining external assistance to review the Data Fee Methodology. Virtu would be glad to participate in any industry group or otherwise provide our expertise and feedback that the CSA would find valuable as it seeks to improve the Data Fee Methodology.

Please also refer to the sections Data Fee Methodology (DFM) and Inelastic Pricing (above) for factors and considerations applicable to this question.

QUESTION #5: *Should the application of the DFM be extended beyond subscriber fees? For example, should the DFM be applied to non-display and distribution fees (whether internal and/or external distribution fees) given the potential challenges noted above?*

Yes, the Data Fee Methodology should be expanded to apply to non-display, distribution fees, and connectivity fees to access the market data. Simply put, the DFM should apply to all products for which there are no substitutes available in the market.

Please refer to the sections Data Fee Methodology (DFM) and Inelastic Pricing (above) for factors and considerations applicable to this question.

QUESTION #6: *What are the potential benefits or risks of making the fee ranges calculated under the DFM transparent? Should there be greater transparency of other inputs to the DFM (e.g., reference points or key input metrics)? If so, please comment on the potential benefits and risks.*



We support transparency in the DFM. We believe there are many benefits to making the fee range calculation transparent and little risk. The CSA is currently publishing metrics to understand how the fees are being allocated to each venue, this should be expanded further.

Please refer to the sections on Transparency, Inelastic Pricing, Data Fee Methodology (DFM), and Outside Canada Fees (above) for factors and considerations applicable to this question.

QUESTION #8: *Should standardized key terms and definitions, such as professional and non-professional users, be developed for the access to, receipt, distribution, and use of RTMD products? If yes, please explain what the benefits of such an approach would be. If not, please explain why not.*

Yes, we believe standardization would be a good practice. We also believe a standardized market data contract that covers all Canadian marketplaces will have benefits to the overall market by simplifying the need to negotiate several contracts for market data. We believe MISU should be standardized in all market data contracts.

Please refer to the sections on Multi Installation Single User (MISU) and Outside Canada Fees (above) for factors and considerations applicable to this question.

QUESTION #9: *What other key terms and definitions should be standardized? What factors or industry legacy issues should be considered in standardizing such terms?*

Multi Installation Single User (MISU), or the ability for a market data consumer to pay once for market data and consume the data on multiple applications/devices. This should be standardized across the industry and included in standardized contracts across exchanges and vendors.

Please refer to the section on Multi Installation Single User (MISU) (above) for factors and considerations applicable to this question.

QUESTION #10: *Would this approach help address market participants' concerns with respect to the administrative burden related to the access to and use of consolidated RTMD? Please explain your answer.*

Please see answer to question #8 (above).

QUESTION #12: *Would caps on fees charged by marketplaces for their RTMD consumed through the consolidated TIP products affect the consumption and use of consolidated RTMD? If so, how? If not, why not, and are there alternatives that should be considered?*

The fundamental problem is the inelastic pricing for real-time market data. If the CSA is successful in implementing fair and reasonable pricing, based on the cost to produce plus a reasonable margin, the input costs of all market data will be more affordable, and the related issues experienced today should resolve themselves.

Please refer to the sections on Transparency, Inelastic Pricing, Data Fee Methodology (DFM), Outside Canada Fees, and Multi Installation Single User (MISU) (above) for factors and considerations applicable to this question.

QUESTION #14: *What means of establishing caps and what factors for establishing cap levels should be considered?*

Please see answer to Question #12 (above).

QUESTION #22: *With respect to Staff Consideration 1, do you think that our review of RTMD costs and accessibility should consider the impact of regulatory requirements, such as OPR and best execution?*



What could drive changes in consumer behaviour (such as disconnecting from marketplaces that offer little benefit to the market compared with the costs or unprotected marketplaces)? What changes could impact the competition among data producers? What could incrementally increase consumer bargaining power? And ultimately, could any of these suggestions impact fees? Please explain your answer.

Please refer to the sections on Transparency, Inelastic Pricing, Data Fee Methodology (DFM), Outside Canada Fees, and Multi Installation Single User (MISU) (above) for factors and considerations applicable to this question.

QUESTION #24: *Are there any other options to address industry's concerns about the access to and cost of RTMD that we have not considered? Please explain your answer.*

Please refer to the section on Multi Installation Single User (MISU) (above) for factors and considerations applicable to this question.

Conclusion:

Virtu respectfully submits this letter to encourage constructive, data-driven discussions in order to improve transparency and competition in the Canadian marketplace with respect to the costs and fees charged for real-time market data – including connectivity costs or other costs required to receive real-time market data.

We thank you for the opportunity to provide our comments and views in this submission and commend the CSA for putting together this industry consultation. We would be pleased to discuss our submission in greater detail should you have any questions or requests for clarification.

Sincerely,

Ian Williams
CEO Virtu Canada Corp.