Insights

Instinet
A Nomura Company

MARKET COMMENTARY: Q3 2017

Canada Market Structure Trends Q3 2017

Another year of market structure happenings has come and gone, and it has been anything but quiet. A new exchange on the horizon, venues within venues, and the never-ending jostling for market share should give market structure aficionados plenty to ponder over the holiday season.

SALES & MARKET COMMENTARY

Osman Awan
Vice President
Instinet Canada Limited
100 Wellington Street West
Suite 2202
Osman.Awan@instinet.com
Toronto, ON M5K 1H1
+1 416-304-6362

Andrew Hill
Executive Director
Instinet Canada Limited
100 Wellington Street West
Suite 2202
Andrew.Hill@instinet.com
Toronto, ON M5K 1H1
+1 416-304-6357

Instinet Canada
Sales & Trading
Instinet Canada Limited
100 Wellington Street West
Suite 2202
tradecanada@instinet.com
Toronto, ON M5K 1H1
+1 416-304-2224

Introduction

2018 is almost upon us, and before we move into our recap and predictions issue, we look at some of the more noteworthy market structure developments over the past several months. In particular, we zoom into:

- Nasdaq the Exchange: the one we've been expecting for some time. We look at Nasdaq's Exchange application and try to understand what its plans will be for the Canadian market.
- Bazaar Trends[1]: in our quarterly segment on marketplace trends, we look at venue market share and interlisted trading.
- Two for the Price of One: order types within lit markets that look and feel like dark pools and algos. Both the TSX and CSE bolster their offerings.

[1] A Middle Eastern word for a marketplace where goods and services are bought and sold. Pun possibly intended.

Nasdaq the Exchange

With multiple equities and derivatives exchanges around the globe, Nasdaq is arguably the most well-known exchange operator in the world today. Beginning with its namesake exchange in 1971, Nasdaq has grown substantially over the years, through such acquisitions as those in the Nordics and, closer to home, of the old Boston & Philadelphia exchanges. When Nasdaq purchased the Chi-X Canada ATS (Chi-X and CX2) in late 2015, it was its second foray into the Canadian markets, having previously established an offering in 2000, which allowed Canadian investors an opportunity to directly access U.S. securities (some of which were Canadian names listed exclusively on Nasdaq).

The Chi-X purchase was met with much discussion on the Street about Nasdaq's plans in Canada, and that dialogue has never truly dissipated. Given its pedigree, it was widely perceived that a conversion of its ATS to a full-fledged exchange was inevitable. And now, some two years on, the exchange application has been filed[2], and we're once again left wondering what this might mean for our Canadian markets. As far as the application itself goes, there is little to discern what exactly those plans will be, but we can speculate at what we might expect to see from Nasdaq *the Exchange*.

Note: The Exchange application is currently out for comment, and has not yet been approved (or otherwise) by the regulators. Any mention of Nasdaq Canada's plans as an Exchange are merely hypothetical in the event its application is approved.

NASDAQ CANADA At-a-Glance[3]

- CXC: Make-take lit venue with a price/time priority. Market share 11.22%.
- CX2: Inverted lit venue with a price/broker/time priority. Market share 4.33%.
- CXD: Dark pool with a price/broker/time priority. Market share 0.51%.
- NFI: Fixed income facility for US treasuries.

MARKET MAKING PROGRAM

Being an exchange, as opposed to an ATS, Nasdaq Canada may launch a formal market making program on its CXC and CX2 trading books. This seems to be indicated by looking through the various trading and functionality guides[4] that Nasdaq Canada has made available.

All the other exchanges in Canada (the TSX, CSE, Aequitas NEO) have long had their own iterations of a market making program in place, and the associated benefits that come with them (such as an exemption from the % of Market Regulation Fees). Market makers of course perform a vital service in our Canadian markets, and as far as regulations go, are mandated to provide a two sided market, execute odd-lots, and serve as "gatekeepers" in their symbols of responsibility.

[2] *http://www.osc.gov.on.ca/en/Marketplaces_ats_20171012_rfc_limited-ensoleillement.htm*
[3] *Source: TMX Analytics. Market share (TSX/TSXV) by volume on September 29, 2017*
[4] *http://www.osc.gov.on.ca/en/Marketplaces_ats_chi-x_index.htm*

The aforementioned exchanges all have unique ways of incentivizing and compensating market makers for the services they provide, including differentiated fee schedules, bonus pools, and queue priority mechanisms (such as participation and market maker volume allocations). Another benefit, one that has been subject to much debate of late, is that of the guaranteed fill facilities that each exchange touts (namely the MGF, GMF, and the now-withdrawn AEF). We wrote at length about these facilities in our piece on 'The Segmentation Sagas', but we offer a quick recap here:

These guaranteed fill facilities offer retail (or retail-like) orders a guaranteed execution by a market maker as long as the incoming order is less than a certain size, not part of a larger parent, and not part of an automated/continuous strategy. In effect, it allows the market makers to fill retail orders "in the dark", with other participants not privy to participate. We have commented on the retail segmentation these facilities create, which is a worrying trend for the Canadian markets.

Nasdaq Canada, in its exchange application, has proposed its own iteration, the Guaranteed Execution Facility (GEF)[5]. Based on their description, it seems intended to work like those we mention above. In our view, this could further exacerbate the segmentation headache. Clearly, Nasdaq Canada is well within its right to propose such a facility, as several precedents already exist, but our segmentation concerns persist. A constant fixture in comment letters on such facilities, and a notion we agree with, is the importance of ensuring market makers have sufficient obligations to balance the benefits of these facilities. Simply put: If they exist and are allowed to segment our markets further, then they must not be participant-specific "freebies" with limited risk. Nasdaq Canada's market making program, from what limited information is available, looks to be a guaranteed fill facility first and foremost, with little information provided in the way of actual trading obligations. Here are the obligations, copy-pasted from the proposal[5]:

1. Commit to at least trading the size of the GMV on both sides of the market for all Assigned Securities.

2. Maintain a one or two sided quote of at least one Board Lot at the NBBO for at least 25% of primary market trading hours per month through one or more UMIR IDs.

3. Trade at least a minimum percentage of Total Consolidated Trading Volume per listing exchange across all Trading Books per calendar month.

The first obligation is really the benefit of such a facility. Trading with contra "benign" flow with no visible order risk is indeed a benefit. Market makers have to commit to at least the GMV, but as we've seen from the other marketplaces, this is often 100 shares. The second obligation features a very competitive spread requirement (to be at the NBBO), but in our opinion is not an onerous obligation as it is only required in 100 shares, one-sided, and for only 25% of the trading day. The third obligation ensures that the market maker is trading a certain percent (1% for TSX listed securities), but allows for this to be done across CXC, CX2, and CXD.

[5] *http://www.osc.gov.on.ca/en/Marketplaces_ats_20171025_rfc_exchanged-established-nasdaq.htm*

Finally, it must be noted that this facility is only being offered on CX2, which is Nasdaq Canada's inverted book. We spoke about the compounded issues with having these facilities on inverted venues in our last quarterly note, as inverted venues are typically prioritized at a higher level in retail desk's routing tables. This would ensure that facilities like the GEF on CX2 will see fills before visible quotes on other venues. This was a big point of debate when Aequitas NEO Exchange proposed its AEF on its inverted book, and CX2's GEF should be held to the same standard. Our view would be that regulators should take a holistic look at retail-oriented facilities, and at the very least ensure that sufficiently balancing obligations are in place.

LISTINGS

Although Nasdaq Canada's application states no current plans for a listings business, we believe it may be in the cards in the near to mid-term future. Nasdaq is home to thousands of listings in the US, ETFs and single stocks alike, and we believe that pedigree could serve them well in Canada.

If and when Nasdaq Canada decides to pursue corporate listings, it will be faced with the well-known S&P index conundrum. Any corporate that is in or aspires to be in a S&P index in Canada must be listed on the Toronto Stock Exchange without exception according to the agreement in place between S&P and the TMX. As there are obvious advantages for a corporation to be in a composite, cap, or sector index, this serves as a major roadblock for an exchange not named the TSX to win listings or migrations. It should be noted that the Aequitas NEO Exchange, also vying for senior listings, faces the same challenge. We anticipate that unlocking the S&P index puzzle will become a bigger topic of discussion going forward if and when Nasdaq joins the conversation. And although it certainly won't lag behind the TSX when it comes to sheer brand power, we would expect Nasdaq Canada to have to offer a unique and compelling listings proposition in order to be successful.

ETFs, however, are a different story altogether. With no index issues, and Canada being home to some 600+ ETFs[6] across 26 providers, we certainly expect Nasdaq to begin here once its listings operation is underway. Aequitas NEO Exchange have had success on this front, and have quickly managed to list 40+ unique ETF tickers, some of which have been migrations from the TSX. With Nasdaq's prowess in the US, we expect them to have no trouble attracting new/existing ETFs. We would expect part of their pitch to include bundled cost efficiencies for ETF providers across both the US & Canada. If this were to be the case, we can be certain that our domestic exchanges would cry foul, as the exchange application states that Nasdaq Canada may not unfairly bundle its product/service offerings cross border (see footnote 2 above).

[6] *http://www.cetfa.ca/infocentre/stats.html*

OPTIONS EXCHANGE

Nasdaq is no stranger to running options exchanges, and we wonder whether a possible avenue might be the Options space. The Montreal Exchange (MX), currently faces no competition in financial derivatives. The derivatives world could be improved upon with regard to fees- which are higher on the MX in relative terms compared to US venues. Could Nasdaq Canada potentially be a lower cost alternative and drive down costs in this space, in much the same way that venue competition did that for the equities markets? Fees are but one factor for a new entrant, as MX is unique in two other areas in Canada: regulation and clearing.

MX, unlike the equities exchanges, does not contract out to an external SRO (IIROC), but instead performs these tasks itself. Secondly, derivatives clearing in Canada is done by the Canadian Derivatives Clearing Corporation (CDCC), which is a wholly owned subsidiary of the MX. If Nasdaq Canada were to begin operating a derivatives exchange of its own in Canada, then regulation and clearing issues must also be addressed. Whether that would mean the creation of a derivatives SRO, or a stand-alone clearing house, it is apparent that there would be costs involved for both Nasdaq Canada and the industry as a whole.

BLOCKCHAIN TECHNOLOGY

It seems every few months Nasdaq appears in the news with an investment, purchase, or launch of blockchain related technology. In 2017, this has ramped up, as we have seen them launch Nasdaq Ventures, which invests in and partners with fintech companies, some of which are based on blockchain (Chain, for instance, which is a blockchain infrastructure company). Other initiatives have included partnering with Swedish group SEB to collaborate on a blockchain-based ledger for mutual fund transactions. Similarly, Nasdaq has entered into a partnership with SIX Swiss Exchange to integrate blockchain into its OTC structured products business.

Although this is not a near-term prediction, we would nonetheless like to keep an eye on this space, and what the evolution of this technology could mean for our financial markets -- particularly in the ledger, settlements, and clearing space. T+2 settlement, whilst an improvement over the long standing T+3, still remains a relative eternity.

ORDER TYPES

According to the exchange application, Nasdaq Canada has no immediate plans to alter its existing trading books apart from its market making program on CX2. However, we anticipate seeing offerings in this space that incentivise market makers to join the program. Similar to the participation benefits employed at the TSX and CSE, or the market maker volume allocation benefit at Aequitas, we might start to see potential benefits such as a queue priority mechanism and/or order types for Nasdaq's new breed of market makers.

Along a similar queue priority vein, it is possible that Nasdaq may bring its Extended Life Order or Midpoint Extended Life Order types (ELO and MELO) to Canada as well. These work in a very similar fashion to the TSX's Long Life Order, whereby any order that chooses to remain in the book for at least a given period of time (1 second) is afforded queue priority over other orders at the same price that don't utilize the order type.

Bazaar Trends

Overall volumes remained sluggish over Q3, down 16% from Q2, and down 13% from Q3 2016. The summer months explain some of the downtrend, but the worrying numbers are comparisons to Q3 from a year ago. Volatility has remained low over the quarter, the markets have been trending higher, and so opportunities and volumes have remained scarcer than normal. The following table from IIROC[7] shows the trend across all three measures:

Total All Marketplaces	Q3 2017	Q2 2017	% Change from Q2 2017	Q3 2016	% Change from Q3 2016
Value	572,548,056,940	731,992,373,667	-21.78%	578,736,783,419	-1.07%
Volume	47,752,909,104	57,049,796,132	-16.30%	54,741,465,318	-12.77%
Trades	91,126,900	109,656,854	-16.90%	102,103,106	-10.75%

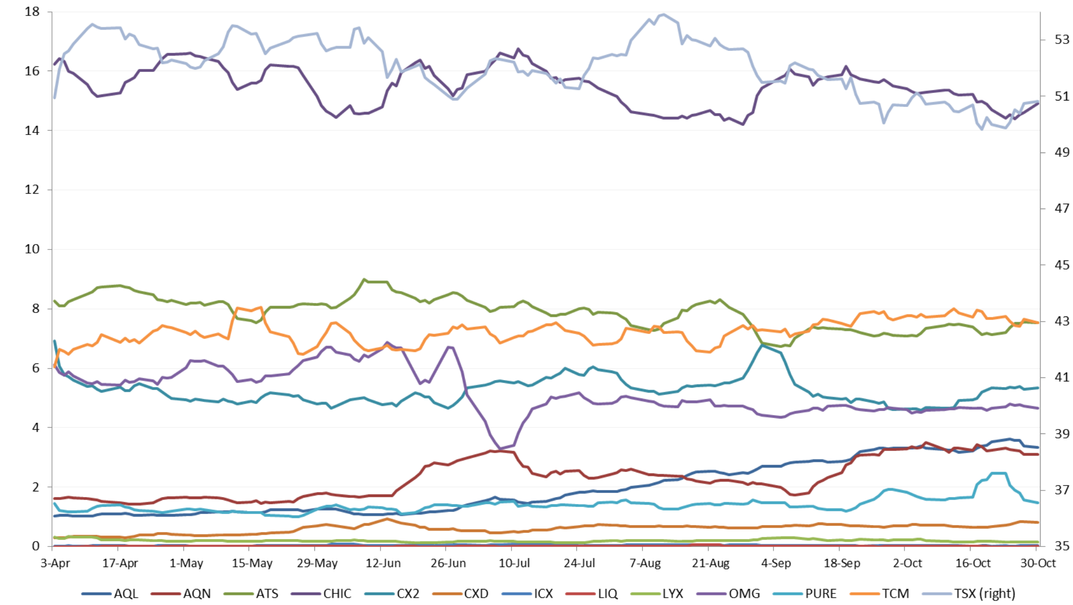
Source: IIROC

MARKET SHARE

Looking at the venues' market share over the last two quarters, there are a few interesting trends developing. Perhaps the most apparent changes have been at the Aequitas NEO Exchange, where both their venues have consistently gained market share over the last quarter. NEO and Lit, from 1.62% and 1.03% at the start of Q3, are now sitting at 3.11% and 3.33%, respectively. This is a more than three-fold increase on the Aequitas Lit Book in a span of six months. In the case of the NEO Book, it appears there has been a shift of flow from Omega, another inverted venue, one which does not seem to have rebounded after its technical issues from the summer. The inverted venues' market share continues to converge, as it would appear participants are trying a combination of these venues in the hopes of securing a quicker fill when resting order flow.

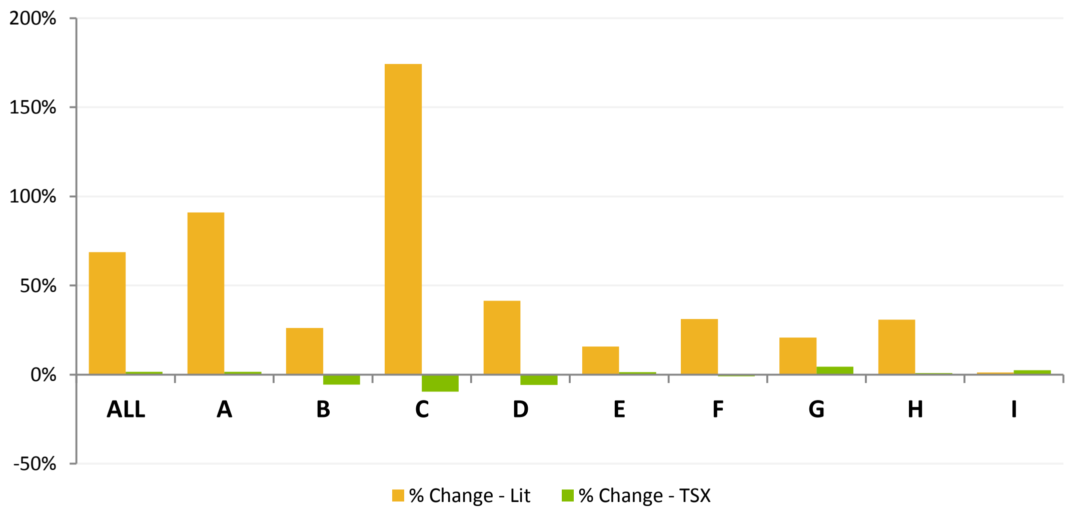
We cannot say with certainty what has led to the change on the Aequitas venues, but we believe it to be a combination of factors -- part of which is their unique value proposition, an increase in execution quality, and an increase in participation by some of their larger participants. We zoom into the data with the following charts:

[7] *http://www.iiroc.ca/industry/marketmonitoringanalysis/Pages/StatisticsInformation.aspx*



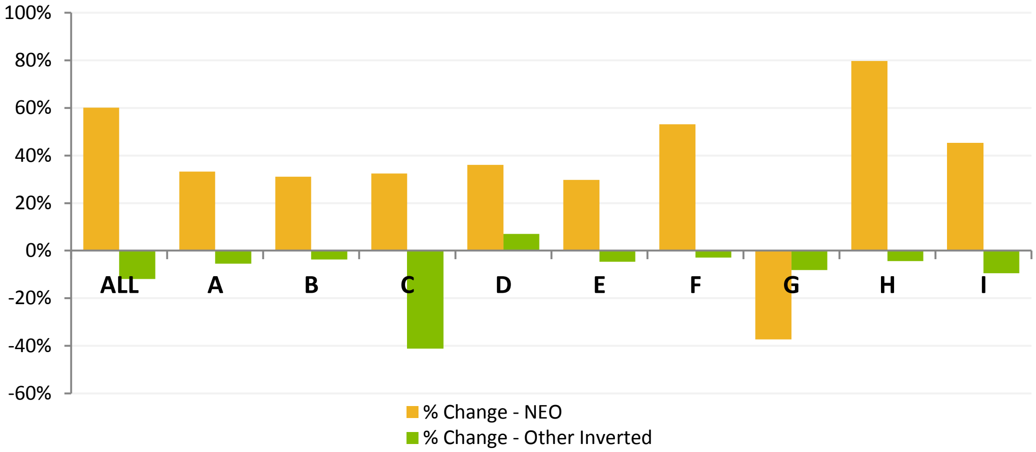
Source: TMX Analytics
TSX-listed market share by volume (5D Moving Avg)

By looking at the change in brokers' percentage of attributed flow traded on the Aequitas venues (Q3 vs Q2), and by comparing these changes to similar venue types, we notice a definite shift in brokers' flow to the Aequitas venues. For the Lit Book, the most active dealers have all increased their participation, but only a handful have shifted part of that flow from the dominant make-take venue in the TSX (keep in mind that a small change on the TSX is potentially significant in absolute terms given its overall market share).



Source: IRESS
Quarter-over-quarter % change in most active brokers' participation on Aequitas Lit vs TSX by trades
Most active brokers' include the Canadian banks, larger independents, and US big-bulge bracket brokers

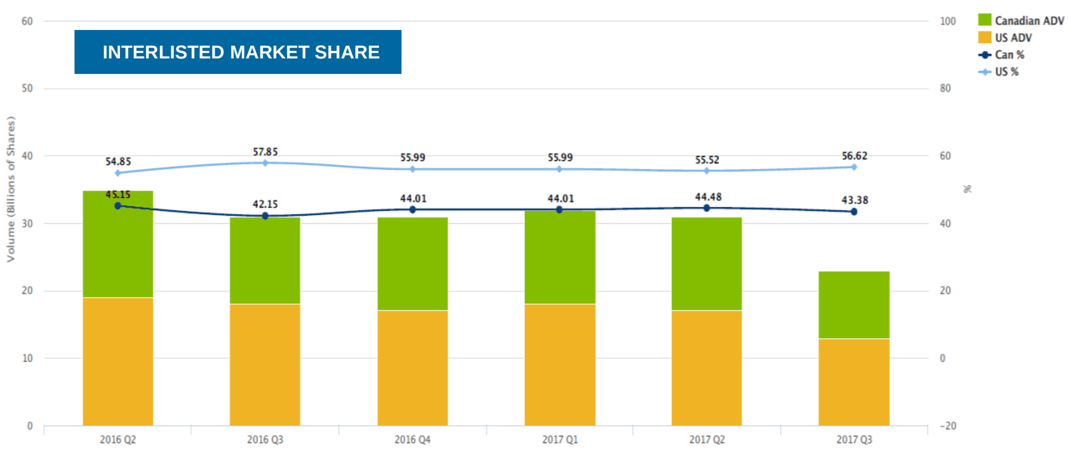
In the world of inverted venues, the NEO Book shows a similar increase across most brokers. We also see the shift of flow from the other inverted venues combined.



Source: IRESS
Quarter-over-quarter % change in most active brokers' participation on Aequitas NEO vs other inverted venues (Alpha, Omega, CX2, PURE)

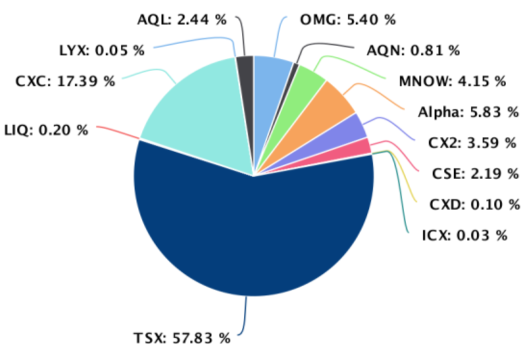
INTERLISTED

The Canadian share of trading in interlisted names fell to its lowest level this year[8] (to 43.38% in terms of volume), but has largely remained flat for the last couple of quarters. In keeping with the overall volume trend, the interlisted volume is significantly lower both quarter-over-quarter and compared to Q3 in 2016. Canadian fragmentation in interlisted names continues to resemble that of the overall market, with Aequitas not quite seeing the same increase it has enjoyed overall. Thisbegs the question and calls for analysis diving into our "bazaar" trends by type of securities in future editions.

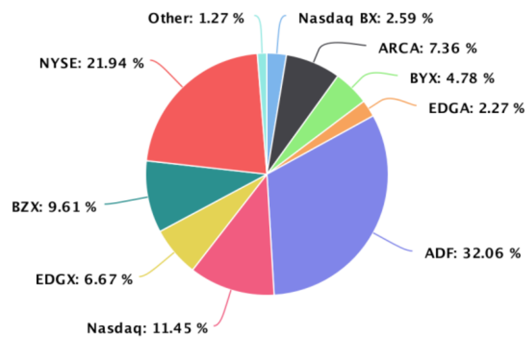


[8] *Source: TMX Analytics*

CANADIAN FRAGMENTATION



U.S. FRAGMENTATION



Source: TMX Analytics
Fragmentation charts shown for Q3

Two for the Price of One

The last few months have certainly been an anomaly in terms of the sheer number of new order types seen from the various marketplaces. Typically, once a venue is established, its changes tend to be fee related in nature, whether for trading or data. New order types are usually few and far between, and major structural changes even fewer still. Both the TSX and CSE have gone against that normality by introducing several new order types in a short span of time.

In the case of the TSX, the proposed order types are now approved and implemented, and range from several types of pegs (with aggressive/passive offsets), minimum quantity variations, and a new dark sweep order, the “Seek Dark Liquidity” (SDL) order- which is an IOC/FOK that only interacts with dark resting orders. The obvious rationale for these changes is to bolster the TSX’s dark offering, and offer functionality similar to the leading dark pool MatchNow, thus making the TSX a viable option in routers’ dark settings, be it on the ping or the post.

What makes these changes a bit more interesting is the subsequent update to its fee schedule[9]. As of November 1st, the TSX charges a different fee for aggressive orders that remove dark liquidity depending on the order type used. Across the board (i.e., for any price or type of security), orders with the SDL marker are cheaper (or free sub $1) than orders without the marker. While we understand that this is a way to offer a cheaper alternative to the dark pools on the dark ping, charging different fees for orders that are trading against the

[9] *https://tsx.com/trading/toronto-stock-exchange/fee-schedule*

exact same type of order is a slippery slope. In effect, the TSX has created a venue within a venue: a dark pool that overlays its existing lit order book. Given the concerns about existing fragmentation, venues within venues are potentially even more complex, and open the door for further unforeseen and perhaps undesirable consequences. It should be noted that charging different fees to different participant/order types is something Aequitas attempted as well (a different fee for Latency Sensitive Traders), but was not allowed to do so.

Note: In another fee change, the TSX also amended their MOC fees, which is surely a welcome sight for the Street. Kudos to the TSX for taking the time to sit with its participants, discussing various options, and ultimately moving their fees in the right direction. Given the growth in closing participation, and based on the level of questions we've fielded lately from clients both here and abroad, we'd encourage further reviews of MOC fees, as they still remain relatively expensive compared to our Southern neighbours[10].

The CSE has also proposed several new order types[11], including an SDL order type that's virtually identical to the TSX's, as well as several peg variations. Amongst the pegged order types, the CSE has included a Fade to Dark (FTD) order, which becomes hidden (and pegged) after a second has elapsed. Another interesting order type is the Step Limit Order (SLO) which automatically adjusts its limit prices (passively) as partial fills take place. While we appreciate the innovative spirit, we should be wary of the vast permutations of order type combinations these changes will introduce. All the peg combinations can be primary, mid, or market, and in the cases of two of the more unique types mentioned above, are encroaching on algo behavior. The proposal is, in our view, not sufficiently detailed, as it contains no examples, and does not provide much by way of a rationale. In the absence of better information, our concern is that the proposed changes could be adding unnecessary complexity to our markets, and it is unclear to us which participants are being targeted with these changes.

Conclusion

As another year of significant market structure happenings draws to a close, our market has not shied away from introducing new features, order types, and pushing the envelope. Whilst most features are innovative and certainly provide a much-needed toolkit to participants, others perhaps err on the side of unnecessary complexity. Allowing for differing fee schedules for identical fills is a slippery slope and creates a worrying precedent. Nasdaq Canada, as it makes its evolution into a full-fledged exchange, will be a provider we'll be keeping a close eye on as it works evolving its offering. As always, your comments, questions, and feedback will be greatly appreciated, and we wish you a most joyous holiday season.

[10] Generally ranging from 7 to 11 mils. http://nasdaqtrader.com/Trader.aspx?id=PriceListTrading2, https://www.nyse.com/markets/nyse/trading-info/fees
[11] http://www.osc.gov.on.ca/en/Marketplaces_cnsx_20170921_rfc-amendments.htm

This communication has been prepared by individual sales and trading personnel of Instinet Canada Limited, member IIROC/CIPF ("Instinet"). It is provided for informational purposes only. This communication does not constitute an offer or solicitation for the purchase or sale of any security. The content of this communication, including market commentary, research summary or other information, is not a personal recommendation and does not purport to meet the particular objectives or needs of the addresses(s) or any individual or account. It does not take into account whether any securities transaction or investment strategy is suitable for any particular client. Any investment decision by you should be based on your specific investment objectives and financial situation and needs. This communication is approved for distribution to institutional clients only. The information and ideas presented herein are based on observations and views of the person(s) who prepared this communication, based on various market information, data and trends, including, but not limited to, trading volumes, oversold/undersold indicators and other technical information, market color, published news stories or research. The views expressed herein are as of the time of this transmission. They are subject to change without notice, and may differ from, or be inconsistent with, the views of other personnel within Instinet or other general market information, commentary or research. This communication is not a research report or a trading idea, and the person(s) who prepared it is not a research analyst. In this regard, it is not intended to be a complete analysis of all material facts regarding any security, issuer or industry, and does not provide information sufficient upon which to base an investment decision. This communication is provided on an "as is" basis. It contains material that is owned by Instinet Incorporated, its subsidiaries or their licensors, and may not, in whole or in part, be (i) copied, photocopied or duplicated in any form, by any means, or (ii) redistributed, posted, published, excerpted, or quoted without Instinet Incorporated's prior written consent. Affiliates of Instinet may receive this communication contemporaneously with Instinet clients. For important related information, including compensation information, please visit https://www.instinet.com/docs/legal/le_ca_disclosures.html. Securities products and services are provided by locally registered brokerage subsidiaries of Instinet Incorporated: Instinet, LLC, member SIPC; Instinet Canada Limited, member IIROC/CIPF; Instinet Europe Limited, authorized and regulated by the UK Financial Conduct Authority; Instinet Pacific Limit, authorized and regulated by the Securities and Futures Commission of Hong Kong; Instinet Australia Pty Limited (CAN: 131 253 686 AFSL No: 327834), regulated by the Australian Securities & Investments Commission; and Instinet Singapore Services Private Limited, regulated by the Monetary Authority of Singapore, trading member of The Singapore Exchange Securities Trading Private Limited and clearing member of The Central Depository (Pte) Limited.

Notice to U.S. investors: This communication has been prepared by Instinet Canada Limited ("ICL"), a financial services company authorized to engage in securities activities in Canada. ICL is not a registered broker-dealer in the United States. This communication is provided for distribution to U.S. Institutional Investors and to U.S.-registered broker-dealers in reliance on the exemption from registration provided by Rule 15a-6 of the U.S. Securities Exchange Act of 1934. Any U.S. investor receiving this communication who wishes to effect transactions in any security mentioned herein or any related derivative instrument should do so through Instinet, LLC ("ILLC") and not through ICL.

This communication is provided for general informational purposes only, and is not intended as a specific recommendation or an offer or solicitation for the purchase or sale of any security or other financial instrument. This communication is not intended to be an analysis of any particular issuer or security; nor is it intended to provide information sufficient upon which to base an investment decision in any particular instance. Any investment decision by you should be based on your specific investment objectives and financial situation. THIS COMMUNICATION IS NOT A PRODUCT OF ILLC'S RESEARCH DEPARTMENT AND IS NOT A RESEARCH REPORT. The author of this communication is not a research analyst and is not licensed or registered as such with any U.S. or non-U.S regulatory authority. This communication is not subject to Regulation AC under the Exchange Act or other rules that provide for the independence of research analysts or investment research. Conflicts of interest may exist as a result of the author's interaction with the sales and trading personnel of ICL or its affiliates, including ILLC. Among other things, the author may receive compensation based on commissions or profits earned by ICL on transactions performed in securities mentioned in this communication. ICL or its affiliates, including ILLC, may engage in securities transactions that are not consistent with the information and or positions expressed in this communication. ICL or its affiliates, including ILLC, may trade in the securities (or in related derivatives) referred to in this communication. ICL affiliates, including ILLC, may have provided investment banking or other services to the issuers mentioned herein and may solicit such services in the future. Other potential conflicts may exist with regard to this communication and the other businesses or activities of ICL or its affiliates, including ILLC.

The views expressed herein may differ from the information, views or analysis expressed by ICL's affiliates, including ILLC. The information contained herein should not be construed as an indication or prediction of future results. Investing in any non-U.S. securities or related financial instruments mentioned in this communication may present certain risks. The securities of non-U.S. issuers may not be registered with, or be subject to the regulations of, the SEC in the United States. Information on such non-U.S. securities or related financial instruments may be limited. Non-U.S. companies may not subject to audit and reporting standards and regulatory requirements comparable to those in effect in the United States. The value of any investment or income from any securities or related derivative instruments denominated in a currency other than U.S. dollars is subject to exchange rate fluctuations that may have a positive or adverse effect on the value of or income from such securities or related derivative instruments.

The information contained herein has been obtained from or is based upon sources believed to be reliable, but none of ICL, the author or ILLC makes any representation or warranty as to its accuracy, adequacy or completeness. The recipient is directed to the original source of any material referenced herein for additional information. The information contained in this communication is as of the date specified herein. None of ICL, the author or ILLC undertakes any obligation to monitor or update the information. All disclaimers set out above with respect to ICL apply equally to ILLC. Without limiting the foregoing, neither ILLC nor any of its directors, officers, employees or agents shall have any liability for any loss that may arise (whether direct or consequential) for any error, inaccuracy or incompleteness of fact or opinion in this communication or lack of care in its preparation or publication.