Americas Market Microstructure Update

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Recent News and Headlines

- Chair Gensler's Comments on Market Structure Reform
- Citadel Securities Loses Court Bid to Block IEX Order Type
- Cboe announces completion of NEO Acquisition
- TMX Group announces Providing Dark Liquidity (PDL) order type to enhance passive dark liquidity capture and dark market quality
- TMX Group announces collaboration with IEX to bring D-Limit and D-Peg order types to the Canadian market (No available source other than what was announced at the TMX conference)
- TMX Group proposes changes to order priority which would allow price setting orders to have priority over Long Life orders.
- NASDAQ Canada announces partnership with PureStream to provide unique order matching functionality to CXD, NASDAQ Canada's Dark pool
- Canadian Securities Exchange announces the launch of CSE2
- Bovespa launches new Mid-Point dark order matching, RFQ and Block Trading

Commentary

Chair Gensler's Comments on Market Structure Reform

SEC Chair Gensler has big plans to overhaul US equity markets, who will benefit and who will pay the price, we shall see. What is certain, however, is that change is coming.

The uneasy relationship between wholesalers and retail brokers has been under review for over a year now. Since the meme stock revolution in 2021, the relationship between Citadel and Robinhood has been under increasing scrutiny, specifically around the industry-wide practice of payment-for-order-flow or PFOF. This relationship raises valid questions about potential conflicts of interest as they relate to order routing practices and what is considered best execution for the retail costumer.

In addition, with the explosion of retail trading volumes over the past two years[1], concerns have been raised that price discovery is being adversely impacted by the market segmentation caused by PFOF and the consolidation of most of US retail order flow to only a select few wholesale dealers. Arguably this market segmentation is creating unintended consequences which undermine overall market efficiencies.

The relationship between wholesalers like Citadel and Virtu and retail brokers like Robinhood and Charles Swab raises concerns over potential conflicts of interest. The idea is that retail brokers, who offer their clients "free" trading must find other ways to monetize their order flow to generate revenue. As it turns out retail order flow is quite valuable. It is often described as a two-sided, nondirectional or uninformed order flow. This flow is sizeable and tends to be aggressively priced with many retail clients choosing to experience the instant gratification of trading immediately by sending spread crossing market orders.

The nature of this flow creates a very profitable opportunity for wholesalers who run sophisticated market-making operations as well as their own dark pools that allow them to internalize their order flow, preventing it from hitting public lit marketplaces. Through these advanced trading systems, they are able to purchase retail order flow, provide a rebate back to the retail broker-dealer, while at the same time providing minor price improvement to the retail customer by filling their order at prices slightly better than the mid-point. Sounds good right? Well not so fast. Trading is a zero-sum game, meaning for every winner there must be a loser, so who is the loser in this case?

It could be argued that the losers are the lit marketplaces as well as institutional investors. A dirty little secret of the PFOF scheme is that almost all US retail order flow is heavily concentrated to only three wholesalers, and all this order flow is traded internally, within their own dealer platforms, never to interact with order flow on the major marketplaces.[2]

This concentration creates segmentation in the market preventing retail order flow from interacting with order flow on the broader markets, potentially missing out on better opportunities for price discovery and price improvement. If you are only seeing a part of the picture, how can prices in the market be accurately determined? This is the key question Chair Gensler is attempting to address. He has outlined six areas for investigation which are expected to lead to significant market reforms.

1. Minimum Pricing Increment

- potentially lowering the minimum tick size to 1/10th of a penny
- harmonizing tick sizes across markets places

2. National Best Bid and Offer

[1] Retail Investors Comprise 25% of Stock Market Post-COVID, Citadel Securities Says (businessinsider.com)
[2] SEC.gov | "Market Structure and the Retail Investor:" Remarks Before the Piper Sandler Global Exchange Conference

- Expedite implementation of the new round lot definition
- Including odd lot pricing as a component of the NBBO

3. Best Execution

- SEC is considering implementing its own best execution policy in addition to policies already in place with FINRA and MSRB

4. Disclosure of Order Execution Quality

- update rule 605, potentially mandating broker-dealers and exchanges to file disclosures monthly
- requirement that all reporters provide summary statistics of execution quality like price improvement as a percentage of the spread.

5. Order-by-Order Competition

- Provide a mechanism for competitive price improvement of retail orders through an auction-type service allowing wholesalers to compete for retail order flow in a more transparent way.

6. Payment for Order Flow, Exchange Rebate and Related Access Fees

- Potentially banning PFOF as was done in other jurisdictions like Canada, UK and Australia
- Review and reduction of access fees considering minimum pricing increment proposal

Chair Gensler's comments appear to be focused on bringing retail order flow back onto exchanges which would better harmonize the marketplaces allowing all participants to interact with all order flow on an equal basis.

One thing is certain, technology has been a major disrupter in the financial markets and it is imperative that regulation keep pace with innovations ensuring that no one participant has an unfair advantage over another. Already feedback is pouring in from the community on Gensler's comments. Many are supportive of them, like those from STA CEO Jim Toes[3] and SIFMA CEO Kenneth Bentsen, Jr.[4]. While there are the obvious detractors who think that the system is fine just the way it is and that the retail investor has never had it so good. We must be wary of their intentions given the incredible revenues which are on the line for the wholesalers who would stand to lose the most under any new regulations such as those proposed by Chair Gensler. Virtu's CEO Doug Cifu was one of the first to come out with a strong rebuttal saying that "all you have is innuendos and hearsay. The burden is on the regulator to provide data that proves there is a problem for investors, and factually they can't"[5] Followed by comments from the head

[3] STA Comments on SEC Chair Gary Gensler's Remarks on Equity Market Structure Reform (yahoo.com)
[4] SIFMA Statement On Equity Market Structure Reform - Traders Magazine
[5] SEC chief launches review of 'uneven' US equities market | Financial Times (ft.com)

of Citadel Securities execution services, Joe Mecane says that "small changes can have very big impacts on the market that are difficult to anticipate".[6]

Certainly, one must be wary of the unintended consequences of these purposed changes. This industry is under tremendous pressure to innovate under very challenging conditions. The time and costs involved in both implementing and adhering to these purposed changes could be onerous and create more issues where there were none before. However, just because something is hard, doesn't mean we shouldn't try to make it better and fairer for all participants in the financial system ecosystem. Every participant has a role to play in ensuring the markets remain fair and orderly.

Citadel Loses Court Battle with SEC to Block IEX Order Type

In a story that has similarities to David versus Goliath, Citadel has lost its court case with the SEC to block IEX's unique D-Limit and D-Peg order types. This is a blow to Citadel's market-making business which leverages latency arbitrage as a method of making markets while at the same time not being adversely selected by posting a quote that is about to go stale.

IEX's D-Limit and D-Peg order types attempt to level the playing field across a diverse set of market participants. IEX has always been focused on providing value for natural investors. These order types remove any advantage a market maker may have using their latency arbitrage tactics.

Discretionary Limit (D-Limit) behaves like a regular limit order, except when the IEX Signal (i.e., the Crumbling Quote Indicator or CQI) predicts the price is about to change. This triggers D-Limit orders to automatically reprice to 1 MPV (minimum price variant, $0.01 for most stocks) outside that level.

Discretionary Peg (D-Peg) is a non-displayed order type that is priced at the less aggressive of one (1) Minimum Price Variant (MPV, $0.01 for most stocks) lower (higher) than the NBB (NBO) for buy (sell) orders or the order's limit price.

D-Peg orders passively rest on the IEX Exchange order book while seeking to access liquidity at a more aggressive price up to the midpoint of the National Best Bid or Offer (NBBO), except when the Signal determines that the quote is unstable or "crumbling."

One thing is certain, decisions like this will only bolster Chair Gensler's position on market reform with the overall view to encourage more liquidity to return to protected lit markets like IEX.

[6] SEC chief launches review of 'uneven' US equities market | Financial Times (ft.com)

Canadian Market Structure Update

CBOE and Tradelogiq

Canadian market structure is also experiencing significant change. Not the least of which are major ownership changes with further market consolidations occurring. CBOE is continuing its buying spree with the closure of its most recent acquisition, NEO. Following closely on the heels of their previous acquisition of Canada's largest dark pool MatchNOW as well as the introduction of BIDS technology to the Canadian marketplace.

Other ownership changes have also been announced by Tradelogiq, with a new consortium of owners preceded by significant changes to management. RBC, K2 Associates and XTX Markets have all taken a share of this company and it will be interesting to see what innovations emerge from this colorful mix of collaborators.

TMX PDL, Long Life and IEX Order Types

Not to be outshone by its competitors, the TMX group has made several major announcements around proposed changes to their order books. Changes are being made to order priority using the Long-Life order type as well as a new dark order, Provide Dark Liquidity (PDL) and perhaps the most significant and yet the least understood announcement has to do with their collaboration with IEX to introduce D-Limit and D-Peg order types to Alpha and perhaps one day, TSX and TSX-V.

The TMX introduced its Long-Life order type in 2015 which impacted execution priority in the order book for a given security. Long Life orders reward traders who are willing to expose their orders to the book for one second or more. Quite often this liquidity is referred to as natural liquidity because there is a real investor behind the order. The same cannot be said for the HFTs and market makers, whose proprietary orders are latency sensitive and do not represent natural liquidity. All things being equal, orders marked Long Life were given execution priority over the same priced orders in the book, excluding broker preferencing. The idea behind the order type was to reward natural liquidity providers with a higher certainty of execution, thereby encouraging more natural liquidity to the exchange and improving overall market quality.

After further reflection and perhaps some complaints, the TMX has decided to modify the priority slightly to allow price setting orders, whether they are marked long life or not to take the highest priority in the orderbook. This seems like a step backward, however, the TMX is attempting to reward participants willing to set a price with a higher certainty of execution and prevent what they term "tail-gating" from occurring. This is where a non-Long-Life order sets the new price level and immediately after, a long-life order joins at that price level filling before the original price setting order. There was suspicion that long-life orders were being abused in such a way as to allow HFTs to tailgate off a price setter and then trade ahead using long-life priority. However, it's uncertain as to how often this occurred and whether a change like this was even necessary. This is likely a good thing for the market as price discovery is one of the primary functions of the exchange and giving priority to participants willing to take a risk and set a new price will only strengthen and encourage the price discovery process.

The TMX introduced a new dark order called Provide Dark Liquidity (PDL). This order type will rest passively as a dark order and only interact against other dark orders in the book at the midpoint. It will not trade against any lit order which could cause adverse selection on the dark order. This order type combined with the Seek Dark Liquidity (SDL) make the TSX DRK book function much more like a traditional dark pool encouraging more dark orders to be placed by participants without fear of being picked off at a suboptimal price.

Finally, the TMX announced at their annual conference they are joining forces with IEX to introduce IEX's unique discretionary order types to TMX Alpha. Details are scant on this as there has been no formal proposal, however, it's a fair bet that these order types will prove successful in the Canadian marketplace just as they are on IEX. Combined with the Alpha speed bump, these discretionary order types should even the playing field by removing any speed advantage a market maker or HFT may have over other market participants. We shall see once the details are released and certainly more will be said on this development.

Nasdaq Canada Announces collaboration with PureStream

Nasdaq Canada recently announced they are collaborating with PureStream to introduce their unique rate-based order stream matching technology to the Canadian market. They will go live with the new capability, available to participants on CXD, Nasdaq Canada's dark market, on October 3rd, 2022. This will be a very interesting innovation, one which requires systematic execution capabilities like those offered by Tethys, to take full advantage of the functionality. This will benefit participants who choose to use volume participation or VWAP algos to execute their trades.

Canadian Securities Exchange CSE2 Q3 2022

The Canadian Securities Exchange is adding a second order book to their trading venue, named CSE2. This second book will leverage an inverted pricing model like other Canadian markets similar to TSX Alpha, or Nasdaq CX2. The rationale for their expansion is to enable the CSE to remain competitive by improving price discovery capturing a greater share of trading of CSE listed securities, while also providing greater choice for investment dealers in reducing costs.

In addition to an inverted pricing model, the CSE2 will do away with broker preferencing with the expectation that it could attract more order flow from smaller broker/dealers and anonymous participants, improving overall price discovery. CSE2 will be a continuous trading venue with no opening or closing auctions. Trading hours will be from 8 am to 5 pm. As well, CSE2 will not support multi-day orders like GTC or GTD. Of particular interest, CSE2 will support limited market making. Current market makers operating on the primary book can also make markets on the secondary book, but there will be no restrictions or procedures for future assignments.

There is no shortage of interesting changes happening in both the US and Canadian market structure spaces. This is a good thing to see after several years of innovation stagnation. It is so nice to see marketplaces move away from the fee game or the introduction of a JAMO (Just another Mid Point Order) and introduce real innovation. We are looking forward to good things coming.

Dark Trading on B3 (Bovespa)

The B3 has announced that it is introducing dark trading to its marketplace. Like many other dark trading venues, orders will only interact with other dark orders in the book. To accommodate the many different requirements, three separate solutions are being delivered.

The first and likely most used will be the Midpoint order book which uses the average price between the best bid and offer in the central limit order book. Priority will be given to orders between the same broker and then execute against orders from other brokers in time priority.

Request for Quote (RFQ) is the second solution offered to enhance the pricing and execution of large orders. With limited pre-trade information pertaining to the security and size, this solution will likely prove more cumbersome and see less usage due to a more complicated pricing mechanism. There is also a greater potential for information leakage using this solution.

The third solution called Block Book is a separate order book allowing large-sized block orders to trade against each other at prices that may be outside the BBO but allow for the greatest volume to trade. There is no pre-trade information available and no broker identification is provided to the market data feed post execution ensuring anonymity through to trade settlement.

Tethys is planning to integrate solutions 1 and 3 as they are best suited to the systematic execution of orders.