



David Lauer  
Market Structure and Technology Architecture Consultant  
dlauer@gmail.com

September 27, 2013

Market Regulation Branch  
Ontario Securities Commission  
20 Queen St. West, 22nd Floor  
Toronto, Ontario  
M5H 3S8  
By e-mail: marketregulation@osc.gov.on.ca

Re: OSC STAFF NOTICE AND REQUEST FOR COMMENT REGARDING PROPOSED  
STRUCTURE OF TRADING FACILITIES FOR A NEW EXCHANGE PROPOSED TO BE  
ESTABLISHED BY AEQUITAS INNOVATIONS INC.

To whom it may concern:

I am happy to respond to the OSC's request for comments regarding the new exchange proposed by Aequitas Innovations, Inc. Aequitas has made a bold proposal to introduce a fundamentally different venue for trading equities in Canada, and I applaud the OSC in its approach to the important questions that this proposal has raised.

I am a Market Structure and Technology Architecture Consultant with experience helping to design and build the infrastructure that underpins many modern electronic trading systems as well as several years' experience as a quantitative analyst and trader on high-frequency trading desks. This experience included time spent studying Canadian market structure and designing / running trading strategies in Canada. My current work focuses both on highly scalable technology architecture design, building innovative analytics solutions to study and understand complex technology systems and helping organizations understand and navigate modern equity

markets. Some recent projects include public advocacy on market structure in the United States and helping design a new investor-owned and investor-focused equities exchange in the US. I have testified before the US Senate Banking Committee and appeared on an SEC Panel discussing high-frequency trading and the implications of technology on modern market microstructure.

The following are my thoughts on the questions that the OSC has asked in their Request For Comment. In several cases, I have provided a single response to multiple questions as they are interrelated and it seemed it would be redundant to respond individually.

**Question 1: Should OPR apply to all visible markets and to all orders displayed on those markets, or are there circumstances where the application of OPR should be limited?**

**Question 2: Should OPR apply to Hybrid? Should it continue to apply at least with respect to active non-SME orders that are not restricted from accessing the best-priced displayed orders on Hybrid?**

It makes sense to start with the criteria for evaluating any change of the Order Protection Rule (OPR) before attempting to decide whether or not it should be amended / limited in certain circumstances. The overriding criteria for any change to market structure is to ensure efficient price discovery, ample liquidity, to foster competition, innovation, market integrity and fairness. The OPR serves this purpose by prohibiting the trade through of any displayed prices. In addition, it is coupled with a fair access provision, which the OSC acknowledges has been limited by ATS's in the past, provided they do not provide pre-trade transparency.

The Hybrid proposal is interesting in this regard, as it can be viewed in either of two ways. On one hand it can be seen as an attempt to realize some of the advantages of dark pools while contributing to price discovery and pre-trade transparency. On the other, it can be seen as taking the standard lit model, and restricting access to displayed orders in an attempt to segment flow and reduce the success of predatory trading strategies. If viewed in the first way, then this can be seen as substantially enhancing price discovery by bridging the advantages of dark with those of lit. If seen in the second, it can be questionable as to how successful such a model will be in reducing predatory trading strategies.

I believe that the benefits when seen from the first perspective - providing the protection of dark in some form, while at the same time enhancing market-wide price discovery are self evident. The greater concern appears to be whether or not segmenting flow and restricting fair access will have the desired effects of limiting predatory activities without negative consequences that outweigh the benefits. The primary predatory activities Aequitas is seeking to address with the Hybrid model are Momentum Ignition and Exploratory Trading, along with other predatory strategies that compete with long-term investors for liquidity. The other predatory activities appear to be primarily addressed via fee structure and order rate throttling. These two activities, on the other hand, require active orders to be sent by those firms seeking to either manipulate/influence price behavior, or "ping" venues to discover demand imbalances that are

not visible.

It is with that backdrop that we must analyze whether waiving OPR requirements for Hybrid makes sense, and I believe unfortunately it is difficult to say without any proof either way. Both Aequitas and the OSC make compelling arguments for both sides of the issue - that predatory strategies are eroding confidence in markets and negatively impacting market quality, and that preventing trade throughs is an essential component to instilling confidence in markets and enticing displayed liquidity. OSC's example is reasonable - we can take another example of a non-predatory SME who is trading an inter-listed arbitrage strategy. Let's say that they have a bid in the US that is hit, and they want to hedge that exposure in Canada by selling an offsetting position. A bid posted in the Hybrid market would have to be bypassed in this scenario, and someone else would get the fill. If the bid in the Hybrid market is the only one at that price level, and all other bids in the market are inferior, then both parties are worse off - the SME has to hedge at an inferior price and the participant with a superior price is bypassed. That is not to say that there are not many examples on the other side - where posted bids are being disenfranchised or otherwise being taken advantage of.

The question is therefore whether there is enough of a net benefit with respect to discouraging and preventing predatory strategies to offset the negative impact of scenarios similar to what I have described. Not only do we not know this - we don't even have an idea of how often these scenarios would occur. Does predatory trading happen all the time, and are quote scenarios such as the one described relatively rare? Is it the opposite? Without hard data, it's impossible to say either way. Conjecture can only get you so far. With that in mind, what would be the harm of allowing Aequitas to proceed with their plan? That seems to be the overriding question, and generally with respect to OPR and Hybrid it seems that it will become readily apparent upon activation of the Hybrid market if there is harm being done, and active SME participants are forced to "trade through" posted prices in Hybrid.

**Question 3: If Hybrid is implemented as proposed, how should the best-priced displayed orders on Hybrid be treated for the purposes of consolidated display requirements, and why?**

**Question 4: What should the appropriate reference price be for determining whether a dark order on any other market has provided minimum price improvement as required under the Dark Rules – the Away NBBO or the NBBO that includes a Hybrid best bid and/or Hybrid best offer? Does the answer to this question depend on whether or not OPR applies to Hybrid?**

It seems that these 2 questions are intertwined - if Hybrid is considered as part of the best-priced displayed order in the market, then it would necessarily be a reference price for determining minimum price improvement in dark markets. Generally, the philosophy behind reference prices is that those prices are protected and fully accessible by all participants. Therefore, the OSC is correct that the answer must necessarily depend on whether or not OPR applies to Hybrid. If

Hybrid is not subjected to OPR, then it would be nonsensical for the Hybrid price to be considered the best price in the market. This is the nature of the Hybrid model - it provides more pre-trade transparency than dark, but not to the full extent of the lit. If Hybrid is subjected to OPR, then assuming Aequitas still believes it is a model worth pursuing, as a protected quote it should be included in the NBBO.

**Question 5: How should fair access requirements be applied with respect to access to visible marketplaces?**

**Question 6: Should visible markets be fully accessible or, like dark pools, should access restrictions be permitted? Why? What are the criteria that should be used to determine if the differences in access are reasonable? What impact, if any, could restricting access to the best displayed price have on confidence and market integrity?**

Once again, the OSC is correct in their concern over the tradeoffs being considered here. As the OSC states, “the application of these restrictions might be considered to be fair if it shields them from negative behaviours”. Once again we find ourselves without much data. It is obvious that there are benefits and drawbacks to segmentation and restricting fair access. In the United States, the overwhelming trend has been towards greater segmentation, both in dark markets and as part of new order types and order matching facilities (for example those geared towards retail investors). While it makes sense in the context of a dark market, where there is no pre-trade transparency or OPR, the issue of fair access (as the OSC understands and makes clear in the request for comments) is inextricably linked with OPR. Once again, as in my response to questions 3 and 4, the question of whether a quote is protected is the fundamental question. If the quote is protected and subject to OPR, it is very difficult to make the argument that access restrictions are fair or beneficial. While I agree with many of Aequitas’ arguments about predatory trading strategies and the need for a “safe haven,” and believe that their ideas could be a significant deterrent, that is only under the assumption that the only protected quote is on the Lit venue.

Restricting access to a protected quote could have significant unforeseen consequences. I can’t think of another example of this occurring in the US or Canada. It would impose a burden on those firms who are being restricted, enough that they may decide to not support the effort at all in the hopes that it will fail.

If Aequitas is successful, and a substantial amount of liquidity starts to be posted on Hybrid, the inability for SME’s to access that liquidity could mean an increase in spreads on other markets, as they are increasingly unable to take liquidity and hedge inventory when making markets. It could increase adverse selection of any active flow on other venues, perhaps to such an extent (if Aequitas captures a large amount of market share) that it dramatically reduces the incentive of SME’s to post liquidity on other venues within tight spreads. Therefore, the most likely effect, if Hybrid is a successful model, is to reduce liquidity on other venues, increase adverse selection on those venues for any participants that are providing liquidity, and as a result increase spreads

on other venues.

That being said, my opinion is that such an effect is more indicative of the shortcomings of the business models of other exchanges than it is a reason to be concerned over the Aequitas model. When maker-taker came along, it quickly enveloped the exchange industry, and became the only viable model for gaining market share. If we are now in an environment in which participants are sophisticated enough to recognize the shortcomings and conflicts-of-interest inherent in the maker-taker model, and migrate to Aequitas as a more “fair” and “level” business model, that is the natural evolution of this marketplace. If they get better execution, lower access fees and lower effective spreads when trading on Aequitas, and this means an increase in spreads elsewhere as liquidity migrates to Aequitas, that should be seen as a tremendous success for the Canadian markets.

**Question 7: Are the access restrictions proposed for Hybrid consistent with the application of the fair access requirements?**

**Question 8: Is the SME marker an appropriate proxy to identify the behaviours Aequitas seeks to restrict?**

The SME marker seems like a reasonable proxy, but is clearly a blunt instrument. I am surprised that Aequitas is not attempting to use a more nuanced technique. One idea would be for them to start with the SME marker, but allow SME participants to “graduate” to another level by demonstrating substantial liquidity provision and “good behavior” as measured via a score-carding system and performance tracking of the SME’s. In addition, anybody who is being given market maker prioritization based on Aequitas’ market maker requirements should be able to bypass the SME restriction for taking liquidity in those names in which they are making markets.

**Question 9: What, if any, is the impact on market quality and market integrity if market makers are provided matching priority (after broker preferencing)?**

This depends substantially on whether Aequitas is successful in attracting substantial order flow. If the active order flow on Aequitas’ Dark and Hybrid venues is a meaningful percentage of the market, then this matching priority will provide a substantial incentive for liquidity provision in the Lit market, in order to gain priority against active flow in Dark and Hybrid. If Aequitas is not successful, markets are left in the same state as they are in today. This seems like a clear win for Canadian markets without any downside risk.

**Question 10: In light of the details of Aequitas’ proposed market maker program, is it reasonable to provide the benefit of priority to a market maker in the Dark and Hybrid books when the market maker’s corresponding obligation is limited to the Lit book? If not, should there be market making obligations in Aequitas’ Dark or Hybrid books?**

As previously discussed in my response to Question 9, this seems like a reasonable model. It is

up to Aequitas to attract enough flow to its Dark and Hybrid markets that gaining priority is worth the requirements of liquidity provision in the Lit market. If they manage to accomplish that, it will be a validation of the entire model.

**Question 11: Should market making benefits accrue with respect to obligations for market making in non-Aequitas listed securities? If so, why and if not, why not?**

Considering the monopoly on listings in Canada at the current time, it would not make sense to approve the Aequitas model but restrict it to Aequitas listed securities. Approval of this model means recognition of the benefits of competition - in this case, dramatically different competition than has been standard in the exchange space domestically or internationally. Such diversity could provide great benefits to participants, but it must be given a reasonable opportunity to do so. If the OSC feels that market making benefits should not be accruing to any participants, then that decision should be made. If the OSC feels that this model has merit and is worth trying, then such a model can only succeed if done in the context of a diverse set of symbols.

**Question 12: Should DEA clients that are not subject to the direct regulatory authority of the securities regulatory authorities, IIROC and/or the exchange be permitted to act as market makers? Why or why not? How would the following facts affect your response: (i) the DEA client market maker must be sponsored by an IIROC member and (ii) the DEA client market maker must be a member of a self-regulatory organization such as FINRA or otherwise subject to appropriate regulatory oversight?**

Generally, it will help attract flow to Aequitas to allow this, similar to the other exchanges in Canada who offer benefits such as rebates to these same firms. It is necessary to have the trading firm sponsored by an IIROC member and a member of a self-regulatory organization with sufficient stature. To that end, the OSC should specify which self-regulatory organizations are valid for consideration of appropriate oversight. To begin with, restricting to FINRA / SEC would make sense, and would most likely cover the majority of interested participants. This would address the OSC's concern of insufficient oversight, which is the only concern that seems reasonable with this question. Assuming, of course, that the OSC considers FINRA and SEC oversight to be sufficient.

**Question 13: Will an un-level playing field be created between DEA client market makers and registered investment dealers that also seek to become market makers on Aequitas' proposed exchange? If so, what are the potential implications in terms of fairness or market integrity?**

This is a good question and a reasonable concern if Aequitas is successful. There are two potential advantages that DEA client market makers may enjoy over registered investment dealers: a lower cost of business due to insufficient regulatory oversight / controls, and priority preference resulting from the ability to rest liquidity under multiple broker ID's. Both of these

could provide unfair advantages to DEA client market makers, allowing them to potentially quote tighter spreads and crowd out registered investment dealers. To address insufficient regulatory oversight / controls, the OSC can specify those regulatory organizations that they consider to be sufficient, as specified in my response to Question 12. In addition, the OSC can enhance the mandate and controls required for sponsored access.

To address the broker ID issue, the OSC and Aequitas could declare that for market making activities, DEA client market makers are only eligible to accrue benefits under a single broker ID. Given IIROC's surveillance capabilities and the sophistication of the technology team building Aequitas, this should be a practical rule that is easily enforced. This seems to be a reasonable restriction to prevent unfair advantages that will crowd out registered investment dealers.

**Question 14: How might Hybrid impact the quality and integrity of the visible market as a whole?**

As I read it, the OSC's concern here is that, if successful, Hybrid may increase adverse selection on other lit venues and reduce incentives to display liquidity. As previously argued, if that happens then Aequitas will, in effect, be proven correct. Such an effect is more indicative of the toxicity of other marketplaces' fee structure and matching priority than an indictment of the Hybrid model.

**Question 15: Please comment on whether the potential benefits of Hybrid for the marketplace participants in Hybrid outweigh any potential risks to the market as a whole? Please identify the relevant benefits and risks**

Once again, it is important to preface this argument with the caveat that there is no data on which to base arguments about theoretical changes in market structure. There is no analog to the Hybrid market in other equity markets for comparison purposes. It is a dramatic departure when considered within the universe of dark and lit venues in Canada and elsewhere.

That being said, it is possible to recognize the potential benefits from such a model, both for the Hybrid and Dark models. The predatory trading strategies that Aequitas has identified are real concerns that are increasing the transaction cost and effective spreads for all buy-side firms, investor-focused broker/dealers and retail trading networks. This means that pension plans and retirement accounts are facing higher costs because of unnecessary intermediation than they otherwise would, which at the end of the day means unnecessary rent extraction, and less money when it comes to retirement. There is no piecemeal solution that will address these predatory trading strategies - substantial reform is required. There are 2 primary mechanisms for preventing these trading strategies that provide no value in terms of market efficiency and quality:

1. Elimination of maker-taker
2. Segmentation of order flow to prevent exploratory trading by SME's

While there are other features of Aequitas that address different problems, such as market making obligations and incentivizing market makers with more than just rebates, these mechanisms are critical to what Aequitas is trying to accomplish. Eliminating maker-taker in Dark and Hybrid, which is where the main market making benefits are realized, will address Quote Stuffing and Layering/Spoofing. The segmentation of order flow will address Momentum Ignition and Exploratory Trading. The final predatory trading strategy, Order Book Fade, is also addressed by Aequitas' enhanced SOR technology. This multi-pronged approach is critical to address the underlying structural issues that enable such trading strategies.

There are certainly risks involved in this model. As previously discussed, it could increase adverse selection and reduce the incentives to post liquidity on other venues (although as I have argued, this is more indicative of Aequitas' success than anything else). Most likely, the risks in this model are minimal. If participants find they get better executions on Aequitas, order flow will migrate. If they do not - Aequitas will never gain enough market share to be a substantial force in Canadian markets. I believe that the OSC should take a measured approach to implementing these ideas, but ultimately I believe it is the marketplace that will determine if they are good or not.

As an aside, it should be recognized how important it is that Aequitas is departing from maker-taker, at least in Dark and Hybrid, and why they most likely believe they cannot do so in the Lit. Exchanges face a prisoner's dilemma when it comes to rebates, and it is up to regulators to step in to remedy this. The OSC should use this opportunity to reexamine the incentive structure created by the maker-taker system, and consider either a substantial decrease in the rebate cap, or the elimination of rebates altogether. If either of these are too radical, then the OSC could at the least consider only allowing rebates to accrue to registered market makers that are domiciled in Canada, rather than any HFT firm with DEA. However, that should only be seen as an intermediary step towards the eliminate of rebates. This perverse market structure is distortive and has proven to be a disaster in the United States, creating an environment of fleeting liquidity in which there is no incentive to provide meaningful liquidity, and every incentive for the predatory trading strategies that Aequitas has identified.

**Question 16: How should the principles of the current regulatory framework and any potential for changes to that framework impact the OSC's consideration of Hybrid? For example, should Hybrid go forward on a pilot basis and be reevaluated based upon some criteria or threshold? What type of criteria or threshold might be appropriate to minimize potential negative impact?**

**Question 17: Alternatively, should Hybrid be required to be modified to fit clearly within the established regulatory framework for either visible or dark liquidity? If so, how?**

While the Lit and Dark models are much more standard, and easily approved, the Hybrid model is a substantial departure from any other model. While I do not see significant harm coming from the approval of Hybrid, I understand the OSC's hesitance given the historical context of Canada's current market structure.



If the OSC approves the Hybrid model, it would be difficult to do so on a pilot basis. I believe it would make more sense to approve it for a trial period, and during that period of time to closely monitor market quality metrics. If successful, it should be clear that effective spreads decrease and displayed liquidity at or better than the NBBO increases. The most substantial benefits from the Aequitas model will likely be found in small- and mid-cap names, those that are underserved by the current HFT-dominated maker-taker system. While I do not believe that the introduction of the Hybrid market will cause any harm to equity markets, it should be readily apparent through tracking of market quality metrics if it does.

Canada can maintain its leadership status with innovative solutions to market structure problems that continue to confound other markets, including the US, UK and Europe. I would urge the OSC to continue to encourage innovation, and to remain flexible with its regulatory framework to accommodate the Aequitas model. While it's not perfect, it's one of the most innovative proposals yet to address the inequities in market structure, and is well worth pursuing.

Respectfully submitted,  
Dave Lauer