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PERSPECTIVE

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Comment Letter to IOSCO: Cost Benefits of Technology

By Adam Sussman, Partner & Director of Research

First, we would to thank IOSCO for producing the consultation report on Regulatory Issues Raised by the Technological Changes on Market Integrity and Efficiency. Transparency is an important characteristic of our financial markets, including the view of regulators and this document sheds a lot of light on current thinking in regulatory circles.

Our comments below represent the view of TABB Group and based on data and insights formed through the hundreds of conversations we have each year with market participants each year around the globe, including asset managers, hedge funds, broker/dealers, exchanges, alternative trading systems and multi-lateral trading facilities, regulators, clearinghouses, lawyers, custodians, and technology vendors.

The structure of this letter is twofold: An overall opinion regarding the role of technology on market integrity and efficiency that follows the issues covered in Chapter 2 of the IOSCO document, followed by responses to several of the questions posed in the Conclusion.

Overview

Investors measure the perceived opportunity of the market alongside the integrity of the market. As long as the opportunity of a market is greater than the potential losses incurred by certain structural flaws, investors will continue to invest. The most important components of a market are related to a participant's ability to gauge the opportunity, i.e. corporate fundamentals. For example, the recent scandal regarding certain Chinese reverse-merger entities is among the most damaging to a market's integrity because it brings into the question the reliability of the data used to gauge opportunity.

While market integrity is critical to creating a well-functioning capital market, investors are likely to forgive excessive barriers or flaws in a market in proportion to the perceived opportunities. A simple example of this is that lots of investment firms take on significant counterparty risk to access exposure to equity markets that do not allow foreign direct ownership, impose hefty taxes, or other barriers to investment. The financial risk associated with these transactions is less than the opportunities.

This line of reasoning does not diminish the importance of technology and its role in market integrity but rather aims to put the role of market microstructure and technology in the broader context of global capital allocation. Simply, put we do not believe that fundamental investors are allocating funds away from the US because they believe that

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technological change has altered market integrity.

Indeed, TABB Group believes that the degree to which technological advancements have taken place in certain markets reflects the overall integrity of that market. If the intellectual value-add of two investors is equivalent then the means of competition must come from other ways, e.g., management fees, expense ratios and transaction costs. In other words, two firms that highly similar performance characteristics will compete on the basis of who can generate and implement the investment decision faster and cheaper. Thus, the technological advancement present in financial markets is actually emblematic of fairness in other regards.

However, TABB Group believes that the international community is correct in asking whether the certain technological advancements have conferred an unfair advantage to a certain class of investors. In this context, we define unfairness as the presence of privileged relationships that create a protected class of firms.

Market Fragmentation and Dark Liquidity

Technology is a necessary but insufficient cause of fragmentation. Without regulatory changes, most markets would still be devoid of competition. Conversely, there are plenty of current examples of fully automated markets without any competition. Thus, we believe the issues of technological advancement and market fragmentation, while clearly related, ought to be measured and regulated separately. Indeed, many of the academic papers cited in the IOSCO paper, at least implicitly or for practical matters have taken this approach.

As far as dark liquidity is concerned, dark environments are important because they offer stepping stones away from the darkest, unseen space on the buy-side trader's desktop in a way that offers variety and choice. When there is choice, the buy side has a greater chance of finding a strategy that closely matches the intent, and therefore there is a greater chance of order flow joining the executable liquidity in the marketplace. But dark liquidity is only worth paying for if it provides the level of execution quality and integrity expected.

Furthermore, one of the reasons we will continue to see innovation in dark liquidity (and more broadly, exchange order types) is because some of the basic means of competition are limited. The technologies used to more efficiently provide liquidity to the market are also used to implement abusive trading strategies. A market that is designed to promote competition is inherently subject to more abuse. Conversely, a closed market will be safer but more expensive. The nice thing about the markets that have been created over the last ten years is that end users can choose between a more open market (lit) and closed market (dark) that are brought together through varying degrees of post-trade transparency.

Direct Electronic Access

It is TABB Group's opinion that many regulators around the world have or are in the process of proposing and implementing reasonable controls to guard markets from potential glitches in algorithmic trading systems and malicious attacks. However, we do

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not believe that technology has inherently increased the risks facing the market and therefore do not believe that any exchange-based controls specifically designed to reduce technology's impact on the risk of trading ought to be considered, such as throttling incoming orders into the market or imposing Pigovian taxes on cancellations, etc. The onus ought to remain on the sponsoring broker.

Co-location

TABB Group believes that as long as co-location is not priced or distributed in such a way as to create privileged access that it is a natural and fair means of competition for exchanges. However, we believe that co-location must not be granted through privileged means, and that the service must not be priced in such a way that it creates an exclusive advantage. While this could be somewhat subjective criteria, we believe that because speed has become a more valuable asset, it needs to be more widely available.

Tick Sizes

Tick size is perhaps the most complex question raised in the paper. Academic papers cited in the IOSCO report and elsewhere demonstrate that the reduction of tick sizes have dramatically reduced effective spreads and led to significant savings for investors. On the other hand, executing block trades has become more difficult and institutional investors claim that this difficulty often translates into higher overall transaction costs in the form of market impact and/or opportunity costs.

At the heart of the issue is whether regulators ought to steer the market further in the direction of institutional orders, at the expense of the retail. For example, TABB Group estimates that widening the tick size in the US by three-quarters of a penny would increase implicit costs of liquidity takers attributable to effective spreads by $46B. This would need to be weighed against the potential savings institutional investors would gain from increased depth at the inside. But make no mistake, retail orders would suffer.

There are two considerations here: Should the tick size or increment be limited, and should it be regulated. Given the forces of competition, as IOSCO notes, that negated the gentleman's agreement in Europe after a 'tick war', we believe that the need for regulated uniformity outweighs the right to compete. The tick increment is regulated in the US without apparent or undue harm. Uniformity across market centres serves to ensure the quality of the quote, and this uniformity should be expressed in tick increments. A quote that is stretched to multiple decimal places with the sole purpose of displaying the best price in the market does not add value to the market and prevents liquidity forming at common price points. If this differs across markets, it adds to the onus on market data due to more price levels down the order books and requires further slicing of orders into the market to ensure participation at every price. This ultimately works against the investor.

High Frequency Trading

High Frequency Trading includes market making, automated directional (day trading), and statistical arbitrage. We believe that the importance of latency to those strategies follows the order listed above. However, none of these strategies exist solely because of technological advancements. Rather, technology has become a critical factor of success for those strategies. Speed is necessary but insufficient.

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It is also unlikely that technological advantages alone create the unfairness that drives some market participant into the dark. It is quite possible to have a completely automated consolidated limit order book with strict market making obligations and tightly controlled market access. In that environment, certain strategies would still compete on speed. Therefore, we do not see technology itself as a mechanism for unfairness. Rather technological advancement merely highlights the degrees to which particular strategies benefit from speed. Capacity is constrained by holding period; therefore duration and capacity are closely correlated. Therefore, much of the cost HFT strategies incur (and the increasing costs) are primarily borne by the HFT segment itself.

Abusive trading patterns have existed long before automated trading; indeed, the move toward more open, transparent markets occurred because of the abuses that occurred in pre-1987 US equity market structure. While nearly all research indicates that the markets are more efficient because of the move toward automation, it does not mean that abuse has been stamped out. A subset of abusive, or predatory, trading certainly occurs under the auspices of high frequency trading.

As IOSCO quoted in its paper, TABB Group estimates that HFT accounted for 56% of all US equity share volume in 2010. However, in order to address the concerns of some market participants, it is important to further segment HFT volume. First, we count all registered market making activity as HFT. Second, a significant portion of liquidity provisioning is conducting by the contemporary equivalent of market makers; capturing spread in single names and spread-equivalent opportunities across securities with highly similar exposure characteristics, e.g. ETFs, ETF options, single stock options and futures, and index options and futures. TABB Group estimates that these activities accounted for 75% of HFT activity. Third, TABB Group estimates that short-term statistical arbitrage opportunities or directional account for at least 15% of HFT activity. Therefore, we believe that the maximum potential of abusive or predatory trading strategies is less than 10% of HFT volume or 6% of total volume.

TABB Group estimates that profitability of all HFT strategies attributable to US equities in 2010 was $5.7B. However, we do not believe that the profits can be divided according to market share. Our hypothesis is that predatory and abusive trading practices have a much smaller per share profit, and therefore only capture 3% of the $5.7B, or $171mm. Our breakdown of HFT volume is based on interviews with dozens of firms who fall into these categories, however the types of strategies the firms engage in and the associated volumes are self-reported. Therefore, our estimate should be used as a starting point to engage in a dialogue on the cost-benefit analysis of High Frequency Trading and proposed market structure regulations.

Cost-Benefit Analysis

TABB Group estimates that US open-end investment funds generated $43B in management fees from US equity investments. And that doesn't even include ETFs, closed-end funds, separately managed accounts and hedge funds. It does not appear that the asset management industry lacks the economic means to protect itself against any alleged parasitic practices. In all likelihood, the industry implicitly acknowledges that

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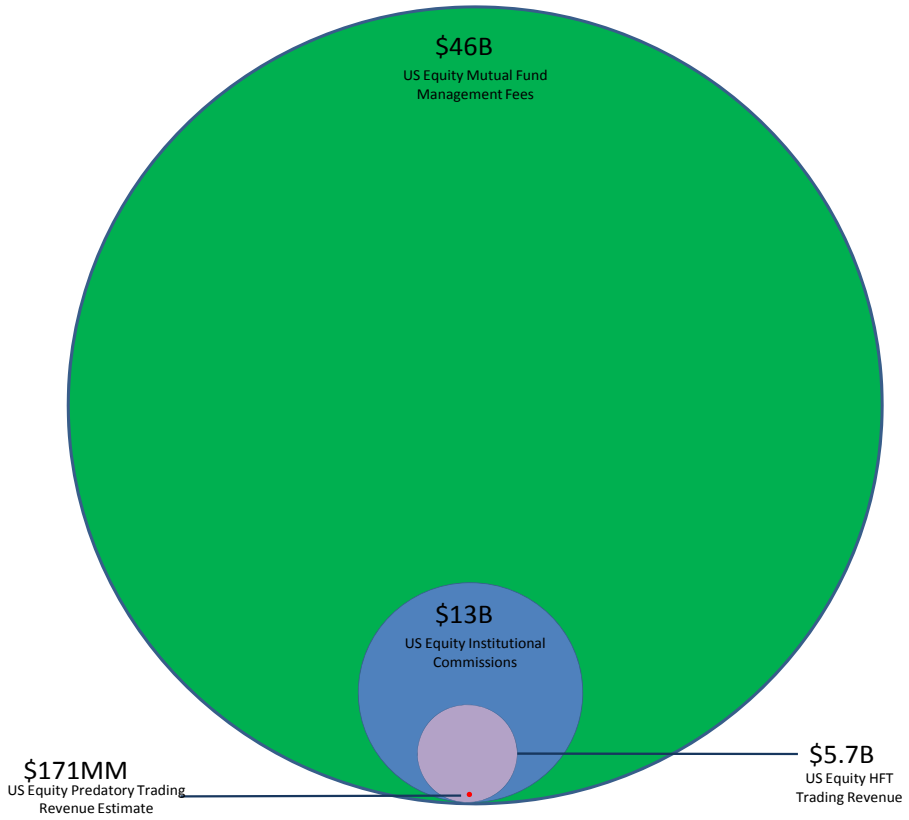
the cost of the threat is negligible and its resources are better spent on other projects that can deliver greater value to its clients and investors.

Similarly, the asset management industry paid an estimated $15B in commission dollars for US equity trading (figures for other regions available upon request) to broker/dealers. It does not seem unfair to wonder why the broker/dealers could not protect clients against abusive trading patterns through minor investments in trading intelligence and/or technology. In fact, many broker/dealers have being doing this for years. Thus, it is our conclusion that the buy side and their brokerage partners recognizes that abusive trading patterns are a negligible part of the market and rationally conclude that the costs necessary to eliminate 100% of all trading abuses would greatly exceed the benefit.
Indeed, among the latest developments in algorithmic trading include brokerage firms incorporating some of the same alpha-generating techniques present in legitimate HFT strategies (see TABB Group's report, "High Frequency for Long Only") into the execution strategies available to clients. The potential benefit to end users is much higher. Indeed, we are now witnessing firms who once only executed HFT strategies on their own behalf offer those services out on an agency basis. This further demonstrates that technology and technology-enabled services become commoditized and thus more widely available over time.

Exhibit 1
Relative Size of US Institutional Cost Components



Source: TABB Group

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Furthermore, we believe that many of the legislative solutions necessary to reduce transaction costs due to perceived bias in the current market structure would cost more than the benefits that could be delivered.

If regulators believe that the industry does not have the necessary incentives to further reduce transaction costs, then additional legislation may be warranted. But a proper cost-benefit analysis ought to be performed before recommending specific guidelines. Furthermore, the guidelines need to be set in conjunction with the different needs of varying market centers. Below are our preliminary thoughts on the cost-benefit of various solutions.

- The SEC real-time audit trail. This was initially proposed to cost $4b to develop and $2b a year to manage. Even at the lower end of the estimated costs, a real-time audit trail would constitute 13% of the institutional equity trading revenues.

- Wider spread/tick size: If the minimum tick size was expanded by one tick or 1c, that would equal a maximum of $17.5b per year (a maximum assumes that all stocks are quoted at the minimum). Given the fact that almost all academic research shows that transaction costs have fallen since the introduction of smaller tick sizes, we find it hard to believe that raising tick sizes would pass any reasonable cost-benefit analysis.

- If we taxed cancelations, it would have the same effect of increasing the tick size. However it would not be as great as to increase the tick size one full increment, but a fraction of that. Even if the taxing cancellations increased the effective spread by 1/100 of a cent, or one mil, it would cost investors (at the current volumes), a maximum of $175MM. This would be about equal to the maximum full amount of our market abuse estimate. Most likely the cost of implementing a cancelation tax would be at least equal to the amount of the tax, plus or minus a liquidity factor that would be dependent if the tax either increased or reduced liquidity.

Conclusion

TABB Group believes that well-functioning equity market structures are critical to the success of the global economy. Markets around the world have taken positive steps toward easing access, increasing automation and lowering explicit and implicit trading costs. Variations in how these goals are achieved are acceptable as the role of an equity market is different depending on the overall economic status of the country.

Technology is not in and of itself a primary causal factor of change in the evolution of equity market structures, but rather an enabler of the changes regulators legislate. However, regulations do need to consider the role of technology, the US-passed Market-Access rule being exemplary of this need. TABB Group believes that if framed appropriately, technology will continue to deliver benefits to the industry. Viewing technology as a threat, or as an enabler of abusive trading practices, is at odds with the overwhelming majority of academic and independent research.

TABB Group believes that the next step ought to be the creation of an industry working

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group to address what regulations and/or market-based solutions can be implemented to deliver increased market stability, lower trading costs and systemic risk measurement and controls.

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