

April 22, 2016

VIA E-MAIL

Re: Treasury Market Request for Information (Docket No. TREAS-DO-2015-0013)

Dear Mr. Pearl:

The industry association dedicated to education and advocacy in support of the benefits of high frequency trading (HFT), appreciates the opportunity to provide written comments to the Treasury Market Request for Information (RFI) on the evolution of the U.S. Treasury market.

In July of last year the Joint Staff Report from the U.S. Treasury, SEC, Federal Reserve, CFTC, and the Federal Reserve of New York on the events in the Treasury market on October 15, 2014 called the market for U.S. Treasuries “the deepest and most liquid government securities market in the world. It plays a critical and unique role in the global economy, serving as the primary means of financing the U.S. federal government, a significant investment instrument and hedging vehicle for global investors, a risk-free benchmark for other financial instruments, and an important market for the Federal Reserve’s implementation of monetary policy”<sup>1</sup>

It is also a market going through tremendous change driven by technology. The TABB Group estimates that non-bank firms that traditionally employ technology driven trading strategies now account for 60% of the volume on the Interdealer Platforms, up from only 20% in 2006<sup>2</sup>. The trend is the same for the buy-side with the recent Greenwich Associates survey showing an all-time high of 84% of institutional investors reporting that they trade Government Bonds electronically<sup>3</sup>.

The mix of participants is also changing. Recent news reports have cited that 8 out of the 10 largest volume players on the BrokerTec inter-dealer platform are non-banks<sup>4</sup>. The traditional distinction that we could rely on between Dealer-to-Client and Inter-dealer markets are blurring with Greenwich commenting that their institutional buy-side survey “the presence of ICAP’s BTEC and Nasdaq’s eSpeed in our study results, shows the traditionally dealer-only platform has attracted some buy-side flow.”<sup>5</sup>

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<sup>1</sup> Joint Staff Report: The U.S. Treasury Market on October 15, 2014, page 7 [http://www.treasury.gov/press-center/press-releases/Documents/Joint\\_Staff\\_Report\\_Treasury\\_10-15-2015.pdf](http://www.treasury.gov/press-center/press-releases/Documents/Joint_Staff_Report_Treasury_10-15-2015.pdf)

<sup>2</sup> Bloomberg.com <http://www.bloomberg.com/news/articles/2015-10-12/treasuries-wilder-than-ever-as-ultra-fast-bond-traders-rise-up> and FT.com <http://www.ft.com/intl/cms/s/0/407c1fae-2974-11e5-8613-e7aedbb7bdb7.html#ixzz3nujsXKrj>

<sup>3</sup> U.S. Treasury Trading: The Intersection of Liquidity Makers and Takers, Greenwich Associates, Q4 2015 <https://www.greenwich.com/greenwich-research/research-documents/greenwich-reports/2015/oct/ust-flashcrash-2015-gr>

<sup>4</sup> Risk.net <http://www.risk.net/risk-magazine/news/2426923/client-list-reveals-hft-dominance-on-brokertec>

<sup>5</sup> U.S. Treasury Trading: The Intersection of Liquidity Makers and Takers, Greenwich Associates, Q4 2015

The ability to successfully negotiate stock or bond prices very efficiently in a continuous market with a lot of shifting variables, is characteristic of automated trading tools. They are used by a wide variety of market participants including banks, mutual funds, discount brokerages, and proprietary trading firms, among others. In essence, almost everyone is an automated trader and efforts to properly regulate market actors and activities are properly viewed in that light. And regardless of who uses these tools, the benefits are clear.

Much has been written on the changing market structure by regulators and industry bodies. In addition to the Joint Staff Report, the Treasury Market Practices Group (TMPG) released their report on “Automated Trading in Treasury Markets” in June<sup>6</sup> and the Federal Reserve of NY’s Liberty Street Blog series on fixed income market liquidity<sup>7</sup>.

They confirm that electronic trading is a part of the fabric and the changes occurring will only likely accelerate as the world drives for greater efficiency. As stated in the TPMG report “Electronic trading in the Treasury markets has arguably improved overall liquidity through enhanced order flow and competition, thus reducing trading costs and allowing market participants to more effectively manage risk.”<sup>8</sup> They also note that changes in market structure come with the need to change how we think about how that market should operate, “increased adoption of automated trading has also led market participants and regulators to articulate concerns about the potential for greater operation risk, disruptive market practices and trading strategies, and the risk of sharp, short-term disruptions”<sup>9</sup>.

A well-functioning and efficient market built for the future is in everyone’s interest. For cash U.S. Treasuries, Espeed and Brokertec are registered ATs that are subject to SEC Rule 15c3-5 requiring risk management controls. We believe these are transparent, open trading platforms subject to the kind of competition and oversight that has helped reduce investor costs in other asset classes. But there are large parts of the U.S. Treasuries market that have limited participation to bank-dealers only. In our experience, this leads to segmentation of the order flow and adverse selection opportunities that aren’t as efficient or cost-effective for investors as an all-to-all market.

The time is appropriate to consider such a model. The recent rise of single dealer platforms and algorithmic execution offerings by bank-dealers, in addition to new independent all-to-all trading platforms portend to an increase in the diversification of trading methods available to the end-user. If the FX market is a guide for the evolution of bank-dealer dominated OTC market to electronic then we would expect a proliferation of platforms and protocols as the diverse group of end-client users find different ones that best fit their execution methods.

We see two points of action that the regulators have cited in their studies as places of consensus where change is both warranted and in the common good of the market and deserves to be acted on now: information transparency and availability, and regulatory clarity for all market participants.

The Joint Staff report cited “public transparency surrounding trading activity in the U.S. Treasury market is critical to investor confidence and the liquidity of these markets.”<sup>10</sup> We agree that the information around

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<sup>6</sup> Automated Trading in Treasury Markets, Treasury Market Practices Group (TMPG), June 2015  
[http://www.newyorkfed.org/tmpg/TPMG\\_June%202015\\_automated%20trading\\_white%20paper.pdf](http://www.newyorkfed.org/tmpg/TPMG_June%202015_automated%20trading_white%20paper.pdf)

<sup>7</sup> [http://libertystreeteconomics.newyorkfed.org/2015/08/introduction-to-a-series-on-market-liquidity.html#.Vh1d3\\_IVhBc](http://libertystreeteconomics.newyorkfed.org/2015/08/introduction-to-a-series-on-market-liquidity.html#.Vh1d3_IVhBc)

<sup>8</sup> TPMG p. 1

<sup>9</sup> TPMG p. 1

<sup>10</sup> Joint Staff Report: The U.S. Treasury Market on October 15, 2014 p. 47

trading activity on all venues for U.S. Treasuries should be transparent and available to regulators and the investing public. The inter-linked nature of the cash and futures markets for U.S. Treasuries<sup>11</sup> means that there should be consistency between how the information is reported for cash securities and futures so that regulators can have a comprehensive understanding of the market activity.

This RFI follows the Joint Staff Report suggesting the “studying the implications of a registration requirement for firms conducting certain types of automated trading in the U.S. Treasury market.”<sup>12</sup> We agree that active participants in the U.S. Treasury market or those that employ automated strategies should be properly registered and regulated. As more and more of the liquidity in the benchmark fixed income market is provided by automated firms, the rest of the market deserves to know that they are being held to the highest of standard.

Further, we believe all trading venues for cash U.S. Treasuries should be properly registered and regulated.

Acting on these changes will ensure that the U.S. Treasury market remains the deepest and most liquid market in the world. Given the detailed nature of the questions and responses, we believe it is important for the Department of the Treasury ensure that any changes are implemented incrementally and in a manner designed to minimize any disruption to a highly functional and liquid markets. We believe the most critical issues to be addressed are transparency both to the public and to the private sector and ensuring sound regulation of markets and market participants.

## **I. Further Study of the Evolution of the U.S. Treasury Market and the Implications for Market Structure and Liquidity**

**1.1** *Have there been changes in the nature of liquidity provision, or demand for liquidity, in the U.S. Treasury market? If so, are these trends different in the futures, dealer-to-customer, or interdealer broker (“IDB”) market, or in the “on-the-run” and “off-the-run” sectors, or across different types of Treasury securities (e.g. bills, nominal fixed rate coupon securities, nominal floating rate securities, and inflation-indexed securities)? Which factors have been responsible for any observed trends in liquidity provision and/or demand? In addressing those questions, please consider the dealer-to-customer market, trading on IDB platforms, and in the futures market, as applicable, and please provide or refer to data and/or analysis that support your conclusion. In addition, please consider the following questions, as applicable:*

Liquidity provision in the U.S. Treasury market has been evolving over the last several years and has done so at different rates in the different parts of the U.S. Treasury market, driven mainly by the nature of the trading platforms and protocols available. The futures markets are by design a level playing field available to all market participants which has fostered the greatest innovation in the use of technology for liquidity provision. The on-the-run sector on IDBs has traditionally allowed participation by bank-dealers and PTFs and as a result has also resulted in the application of technology driven methods for liquidity provision.

The other sectors of the market, off-the-runs, bills, TIPS, etc. generally trade on IDB platforms that by design or protocol have limited participation to bank-dealers only. As a result there has been less application of technology.

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<sup>11</sup> “High-Frequency Cross-Market Trading in U.S. Treasury Markets”, Liberty Street Economics blog of the Federal Reserve of NY [http://libertystreeteconomics.newyorkfed.org/2015/08/high-frequency-cross-market-trading-in-us-treasury-markets.html#.Vh1j6\\_lVhBc](http://libertystreeteconomics.newyorkfed.org/2015/08/high-frequency-cross-market-trading-in-us-treasury-markets.html#.Vh1j6_lVhBc)

<sup>12</sup> Joint Staff Report p. 47

Finally the Dealer-To-Customer space is still primarily phone based trading (62% according to the Liberty Street Economics blog “Primary Dealer Participation in the Secondary U.S. Treasury Market”, Feb 12, 2016). Where electronic D2C platforms have existed they are primarily the RFQ protocol. The recent rise of single dealer platforms and algorithmic execution offerings by bank-dealers, in addition to new independent all-to-all trading platforms portend to an increase in the diversification of trading methods available to the end-user. If the FX market is a guide for the evolution of bank-dealer dominated OTC market to electronic trading then we would expect a proliferation of platforms and protocols as the diverse group of end-client users find different ones that best fit their execution methods.

**a.** *How do you define liquidity? How do you define liquidity provision?*

Liquidity is the availability of actionable firm prices throughout the trading day from a diversified group of market participants that creates in aggregate two-sided prices at multiple price levels, such that the price for a given size transaction is known in advance to other market participants without requiring those participants to disclose their trading intention. A measure of liquidity is how close the actual trade price for a given size and direction compares to what the posted markets were prior to the trade.

Liquidity is not:

- The same price for small and large transaction sizes
- A one-sided quote that is only available on request and only available to select market participants
- A market that requires disclosing trading intention prior to receiving a firm actionable price
- The assumption that the market prices should not respond to trades that occur

Liquidity provision is the act of providing continuous, actionable quotes throughout the majority of the trading day where quotes and orders are replenished consistently after transacting. In essence, liquidity provision is contributing to the elements of liquidity defined above.

**b.** *Which measures are most indicative of the degree of liquidity? How might these measures be refined or expanded, if you were not limited by the availability of data?*

The availability of firm and actionable prices prior to trading and the actual trade price as compared to the order book or quotes prior to trading. Currently this information is only available for the futures and on-the-run IDB markets. If actionable price data and actual trade prices were available for the other areas of the markets then these measures of liquidity could be calculated consistently across market sectors and provide a valuable reference point for absolute and relative liquidity.

**d.** *Which measures best represent the resilience of liquidity, or the relationships between liquidity and volatility?*

A resilient market is one where actual transactions occur and where new information is quickly incorporated into market prices as those prices move. If a market has a large move in price where trades occur along the price path then that represents greater liquidity resilience than a market where the same price change occurs and only the quotes or indicative pricing changes but no actual trades occur. The amount of volume that is executed as the price is changing is a measure of the level of the liquidity that was available on that path.

Often in times of general market volatility, sectors or securities that do not have actionable prices provide the illusion of less volatility because the actual prices of true transactions occur away from the indicative

prices. So the information of the true price level is not in the generally disseminated market data but only in the private transactions based on specific trade requests. In the presentation “A Preliminary Look at Dealer-to-Customer Markets on October 15, 2014” it showed that during the period of market stress a peak of 30-35% of all RFQ trade inquiry received no response from liquidity providers. These market participants unknowingly attempted to trade on indicative prices but once the RFQ was initiated, realized that the indicative prices bore no real resemblance to the actionable RFQ prices.

There is ultimately a trade-off in making the true clearing price of an asset public knowledge with actionable firm two-way prices versus providing the illusion of less price volatility through one-sided or indicative pricing. This is the same dilemma faced in valuing a financial firm using book-price versus market to market accounting.

*e. To what extent are these measures of liquidity and the resilience of liquidity different from measures used in other markets that have witnessed similar market structure changes? What are the idiosyncratic factors unique to Treasury cash markets that may cause these measures to differ?*

The aspects of the Treasury cash market that make the calculation of liquidity resilience different from other markets are (1) the prominent use of indicative pricing outside of the on-the-run IDBs (2) the lack of trade data outside of the on-the-run IDBs and (3) the multi-tier segmentation of platforms so that not all market participants can have access to all trading platforms. The result is that the measures of liquidity and liquidity resilience are different for different market participants for the same security.

*f. What changes, if any, have you observed in these measures over recent years? Over recent months?*

Over a longer historical context the increase in transactions in the most liquid parts of the U.S. Treasury market has reduced the incidents of large price moves on no volume.

**1.2** *What changes, if any, have you made or observed in investment, hedging, and trading practices in response to shifts in Treasury market structure?*

First, many market participants are increasingly using execution algorithms to complete simple and multi-leg trades more efficiently than can be done by hand. This causes larger trades to be pieced into smaller orders and executions.

Second, the use of futures has increased. A recent development worth noting is the initial success of the CME Ultra 10 Year futures contract. While we do not know the intention of the participants in this market we can assume that some are replacing their trading of the cash on-the-run 10 year market with this new futures contract. This could be driven by the difference in the market structure for end-user participants between futures (an anonymous order driven market where all participants can provide or take liquidity) and cash (quote driven RFQ model where the end-client is a price taker only). It could also be driven by the difference between a financed position in cash versus a position in futures and the cost and availability of that financing.

We believe that a market-wide repo clearing offering could address the issues of cost and availability of financing if it were operated as a utility with equal terms and governance for all registered participants.

**1.3** *How does the way in which you transact in or provide liquidity to the U.S. Treasury market change during periods of stress?*

Many PTFs are committed providers of liquidity in the U.S. Treasury market. And has been documented<sup>13</sup>, they continue to provide liquidity in times of stress.

**1.4** *Looking forward, do you anticipate significant changes in the structure of the U.S. Treasury market absent further regulatory changes? What would be the key benefits and/or risks of these changes in market structure? What key factors are likely to drive these changes? What changes are you planning to your firm's investment and trading policies, strategies, and practices?*

We expect changes in the structure of the U.S. Treasury market to be driven by the desires of market participants for more choices in how they execute their trades. This will be coupled with increased investment from platform providers to offer a greater variety of trading methods and protocols. We feel that the cash Treasury market will evolve much like FX, another market that transformed from a phone based OTC trading to electronic based on the desires of the market participants and not due to regulatory mandates.

We expect a greater use of streaming price-based markets to replace on-demand RFQ and an increase in the use of algorithmic execution strategies driven by a desire and need to fulfil best execution obligations beyond just choosing the best price out of three on an RFQ. While most of the evolution of the U.S. Treasury market in the last several years has been in the on-the-run sector we expect innovation to begin to penetrate the off-the-run sector.

Most PTFs are continuing to invest in the technology and human capital to provide liquidity in this evolving marketplace.

**1.5** *What changes to the U.S. Treasury market structure, whether through public or private sector initiatives, might be advisable given the recent and expected future evolution? What role should the public sector play in driving or facilitating these changes?*

We believe that now is the time for all participants and trading venues in the cash U.S. Treasuries market to be registered and regulated to enhance market quality and investor confidence.

The private sector operators of trading platforms should require that any participant who would like to access those platforms should be required to be a regulated entity or to do so through a regulated entity. Further, these firms should be subject to appropriate oversight, risk controls and capital requirements.

Proper registration and regulation are in the best interest of the entire marketplace and the public sector plays an important role in ensuring such beneficial actions are implemented system wide.

**1.6** *What are the benefits and risks from the increased speed with which secondary market transactions take place? Do these benefits and risks differ across individual products (e.g. on-the-run versus off-the-run securities)? How have market participants and trading venues responded to, or facilitated, improvements in speed, and how, if at all, should policy makers respond?*

An increase in automation has had the same benefits that we have seen in other markets: faster transmission of new information into the market price and a lowering of transaction costs for the end-user. Market participants have responded by generally increasing their activity on market venues that allow for application of technology. A recent Greenwich Associates survey showed an all-time high of 84% of institutional investors

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<sup>13</sup> Joint Staff Report: The U.S. Treasury Market on October 15, 2014 p. 5

reporting that they trade Government Bonds electronically<sup>14</sup>. In the same research Greenwich points to “the presence of ICAP’s BTEC and Nasdaq’s eSpeed in our study results, shows the traditionally dealer-only platform has attracted some buy-side flow.” We can assume that the attractions of anonymity and speed are some of the features that have attracted these buy-side firms to explore the IDB platforms in place of traditional RFQ.

The vast majority of the innovation has occurred exclusively in the on-the-run sector of the market. It is likely that these innovations will spread to the off-the-run sector as the cost of balance sheet in the financial markets for leveraged institutions is leading to a need to increase the velocity of turnover of positions. Automated platforms that increase the speed in which risk transfer occurs allows financial intermediaries that have limited balance sheet to facilitate the end-users demand for liquidity without requiring a commensurate increase in positions held because those positions that are acquired to facilitate the end-users trading needs can be more rapidly transferred to the ultimate end-user that wants the other side of that risk.

Policy markets should respond to the increased use of automation (as mentioned in 1.5). The regulators should require the registration of firms and individuals regulate them in a manner consistent with how these activities are regulated in the other securities markets.

## **II. Continued Monitoring of Trading and Risk Management Practices Across the U.S. Treasury Market and a Review of the Current Regulatory Requirements Applicable to the Government Securities Market and Its Participants**

**2.1** *Are the risk management controls currently in place at U.S. Treasury cash and futures trading venues, as well as firms transacting in those venues, properly calibrated to support the health of the U.S. Treasury market? Why or why not? Please list the types of controls that are employed, as well as planned changes or improvements. In addressing these questions, please consider the dealer-to- customer market, trading on IDB platforms, and the futures market, as applicable. In addition, please consider the following questions:*

All participants in the US Treasury markets have a vested interest in the use of proper risk management controls. For cash U.S. Treasuries, Espeed and Brokertec are registered ATs that are subject to SEC Rule 15c3-5 requiring risk management controls. Otherwise, due to the lack of mandatory registration and regulation it is not possible to know if those risk management controls are being otherwise implemented properly, consistently or at all. For futures trading, the same policies and procedures for U.S. Treasury futures are consistent with all other CFTC regulated contracts and this consistency allows for the sharing of best practices.

**a.** *What policies and risk management practices at U.S. Treasury cash and futures trading venues, as well as at firms transacting in those venues, could be improved or developed to mitigate potential risks associated with increased automation, speed, and order complexity? Please consider the risks posed by trading, risk transfer, and clearing and settlement.*

There are many excellent best practices for the cash U.S. Treasury market risk management, including the “Automated Trading in Treasury Markets” report by the Treasury Market Practices Group<sup>15</sup>. The only way to ensure that these best practices are put into action is through requiring direct market participants and trading

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<sup>14</sup> U.S. Treasury Trading: The Intersection of Liquidity Makers and Takers, Greenwich Associates, Q4 2015 <https://www.greenwich.com/greenwich-research/research-documents/greenwich-reports/2015/oct/ust-flashcrash-2015-gr>

<sup>15</sup> [http://www.newyorkfed.org/tmpg/TPMG\\_June%202015\\_automated%20trading\\_white%20paper.pdf](http://www.newyorkfed.org/tmpg/TPMG_June%202015_automated%20trading_white%20paper.pdf)

venues for cash U.S. Treasuries to be properly registered and regulated in order to enhance market quality and increase investor confidence.

**b.** *To what extent should venue-level risk management practices be uniform across Treasury cash and futures trading venues? For example, should there be trading halts in the Treasury cash market and should they be coordinated between Treasury cash and futures markets, and if so, how? Should Treasury cash, futures, options, and/or swaps venues coordinate intraday risk monitoring, and if so, at what frequency? If there were trading halts, how should they be implemented for bilateral trading activity in the Treasury cash market? What would be the primary challenges in implementing such trading halts, particularly given that trading in the U.S. Treasury cash market is over-the-counter, global in nature, and conducted on a 24-hour basis?<sup>16</sup>*

Not allowing continuous trading through the use of trading halts would have the effect of freezing all other fixed income markets that rely on the U.S. Treasury market as a reference risk free rate, including the IRS, Corporate Credit, and MBS markets.

**c.** *To what extent should U.S. Treasury cash market platforms be responsible for monitoring, identifying, and/or reporting suspicious trading activity?*

This should be a requirement for the firms operating within this marketplace. Reporting such activity is critical to maintaining market integrity.

**2.2** *What internal risk controls are commonly employed by firms using automated, including algorithmic, trading strategies in the Treasury cash market? Are these different or similar to those used in the Treasury futures markets, and what are the reasons for any differences? How are such controls designed and triggered? How frequently are they triggered? What internal process controls commonly govern the implementation and modifications of trading algorithms?*

Firms that employ best practices should have controls that are consistent across cash and futures markets for all asset classes. While there are nuances to the calculations of risk for individual securities and some assets may require additional risk measures, the base controls should be consistent to provide for uniformity in measurement and application.

Firms that employ best practices should have a rigorous and auditable process for code modification and implementation with the appropriate separation of duties.

**2.4** *How are best practices used in evaluating, and updating, risk management systems at a given firm? How does your firm make use of TMPG's best practices (referenced above) for operations in the Treasury cash market? How can best practice recommendations be utilized in order to reinforce market integrity? What are the benefits and limitations of best practice recommendations?*

Best practices should be married with proper registration so that there can be assurance that the procedures are being followed. If best practices are merely recommended with no follow up actions then their effectiveness can be limited. Given the inter-linked nature of an automated marketplace, it is imperative that that all participants are held to the same standard, so there is no weak link in the chain.

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<sup>16</sup> Currently, under the GSA, Treasury does not have the statutory authority to suspend trading or establish limit up/limit down thresholds for Treasury securities.



**2.6** *Many of the standards applicable to U.S. securities, commodities, and derivatives markets are not applicable to the U.S. Treasury cash market. Which differences, if any, should be addressed and how should standards be aligned? How will these affect the cost of accessing or participating in these markets, as well as of transacting in these markets? Would there be any implications to U.S. federal government borrowing costs? In addressing these questions, please consider the dealer-to- customer market, trading on IDB platforms, and the futures market, as applicable. In addition, please consider the following:*

Most participants that are active in the cash U.S. Treasury market are also active in the other securities markets and the application of a consistent standard across all securities would provide the maximum benefit to the marketplace at the lowest cost to the participants.

As more of the liquidity in the benchmark fixed income market is provided by automated means, the rest of the market deserves to know that the firms employing automated strategies are being held to the highest standards like they are in other securities markets.

Consistently applied regulation that draws the best practices from other markets that have gone through similar market structure transformations will create a marketplace where participants know the rules and who sets them. This will enhance confidence, increase the value of holding U.S. Treasuries and lower the interest rate set at the new issue auction and thusly lower the cost to the taxpayer.

**a.** *What implications would a registration requirement for firms conducting certain types of automated trading, or certain volume of trading, in the U.S. Treasury market have on market structure and efficiency, investor protection, and oversight?*

Consistent regulation is a vital consideration. Similar to the recent SEC requirement that all firms that participate in off exchange trading in dark pools for equities must be FINRA registered broker dealers, we believe that all market participants should be properly registered and regulated or be subject to equivalent registration and regulation by a proper banking authority. Those that are not registered and regulated themselves should be required to access the markets through a regulated entity.

**b.** *Should firms that conduct certain types of automated trading, or certain volume of trading, in the U.S. Treasury market be subject to capital requirements, examinations and supervision, conduct rules, and/or other standards? What would be the implications of each?*

Any market participant that uses automated strategies or is a meaningful participant in the market should be registered.

Subjecting direct and major participants in the U.S. Treasury market to proper regulation and standards will increase investor confidence in the market.

Subjective measures, such as attempting to differentiate between strategies is likely to prove counterproductive. Objective criteria, such as a firm's role in the market and if it connects directly to market centers are more clear.

### **III. An Assessment of the Data Available to the Official Sector on U.S. Treasury Cash Securities Markets**

**3.1** *To what extent can trading practices in U.S. Treasury cash and futures markets be effectively monitored using only transaction and/or order data from one, not both, of those markets? Is it necessary for regulators to*

*have visibility across all U.S. Treasury cash and derivative markets in order to more effectively monitor and oversee trading behavior in any one market? What aspects of U.S. Treasury market monitoring require data collection across cash and derivatives markets?*

For regulators to have a proper understanding of the markets to effectively monitor and oversee trading they must have a complete picture of order, indicative pricing, RFQ responses and trade data across all instruments (cash and futures) all sectors (on-the-run and off-the-run) all methods (electronic and voice) and all platforms (IDBs, D2C Venues, etc.).

In the Liberty Street Economics report “Primary Dealer Participation in Seconds U.S. Treasury Market” (Feb 12, 2016) it showed that during the control dates of April 2-17, 2014 only 45% of trading occurred on IDBs, implying that 55% was direct dealer to customer. Both types of trading should be reported or a significant portion of the market will be missing.

Additionally in the same report it shows that 62% of the Dealer-to-Customer volume takes place over the phone. For the information on the market to be of practical use to the official sector this data should be reported as well.

The U.S. Treasury market is a dynamic one where the places and methods of execution are spread out and constantly changing. The requirements for data collection should cast an all-encompassing net so that the official sector has a complete picture.

**3.2** *What frequency and type of additional data reporting to the official sector is necessary for it to effectively monitor functioning of the U.S. Treasury markets, including cash, futures, and financing markets? What level of data granularity is necessary for sufficient monitoring to be performed (e.g., transaction data, inventories or positions, order book data, and other additional data) across venues?*

Order books aide liquidity measures, therefore the official sector should also receive the number and nature of participants on various platforms. For OTC and phone based trades, the number and nature of the counterparties and legal entity type (mutual fund, hedge fund, etc.) should be reported. This will help the official sector analyze the activity and liquidity available to different participants types in the marketplace based on the venues that they are permitted to transact on.

**a.** *Should all transactions in securities issued by Treasury be subject to reporting or should reporting be limited to secondary market transactions, on- the-run benchmark issues, or some other subset of securities?*

All secondary market transactions are required for regulators to get a complete picture of the market.

**3.4** *Should transaction reporting include identifiers for categories of end investors? What are the costs and benefits of this approach? What alternatives should be considered to permit monitoring of positions and market activity?*

We do not believe that objective categorization can be done because the nature of most categorization methods (broker-dealer, commercial bank, mutual fund, etc.) do not represent styles and methods of trading. Firms across categories utilize a variety of execution and trading methods. We believe that a more direct way to monitor activity is to have firms that utilize specific trading methods register with the regulators.

**3.5** For those instruments subject to official sector reporting requirements:

**a.** *Should all transactions be subject to the same reporting time requirement? Are the answers different for different types of transactions or instruments?*

Yes. If the reporting is for official sector use only then there is no information leakage that could cause harm through the reporting of trade information on a real-time basis across the spectrum. This information could be required by the official sector for rapid understanding of the activity in the market under times of sudden market stress.

**f.** *Should settlement date and/or other settlement terms be reportable?*

Yes, this is a material part of the transaction that effects and explains the price.

**h.** *Should transactions executed on an ATS and/or in response to an electronic RFQ be identified as such? Should the specific ATS and/or RFQ platform be identified as part of the transaction report? Are there unique characteristics of such transactions that should be identified? Should the order type giving rise to a particular execution be captured? Are there any other unique methods of transacting in the Treasury market that should be identified?*

The method of execution should be identified. The methods should include at a minimum: over the phone, response to an RFQ, on a stream or RFS, on an ATS anonymous order book, or a single dealer platform. For the official sector the specific platform name should be disclosed, but not for public reporting.

**k.** *Should the identification of registered market participants be “normalized” across U.S. Treasury cash and futures transactions such that there is a consistent and unique moniker used to identify each individually registered entity?*

Yes.

**3.6** For those securities subject to official sector reporting requirements:

**a.** *Should quotes and/or orders be reported? If so, should special consideration be made for certain types of quotes and/or orders (e.g., electronically submitted orders versus voice orders versus RFQ)? Are there any special considerations when defining an order and/or quote? How will these special considerations affect the ability of the official sector to analyze activity in the Treasury cash markets?*

Consistent with other securities markets, platforms should report quotes and orders in addition to transactions. For platforms that provide indicative pricing, like RFQ platforms, that indicative pricing should also be reported. This will allow the official sector to understand the variance between the pricing indications and the actual transaction prices in a market.

**b.** *Should transactions, quotes, and/or orders be reported on a real time basis? If not, what should be the reporting standard? How should orders that are executed over multiple days be handled? Are there other special considerations when defining the time of an order?*

Information reporting should be consistent with the TRACE reporting standards for other fixed income markets.

**3.7** *Is it appropriate to have transactions, orders, and quotes time stamped at a certain clock precision (e.g., microsecond) level? Are the answers to these questions different for different types of transactions (e.g., electronic or voice) or different products (e.g., Treasury bills, notes, bonds, on-the-runs, off-the-runs, cash, or futures)? Would the answer be different for trade reporting, quote reporting, or order reporting? Would the answer be different for different categories of market participants?*

Any standard for time stamping should apply to all market participants so that the official sector has a consistent view of the market and the data.

**3.8** *Do commercial bank dealers and broker-dealers have technology infrastructures and order/execution handling in place to report trades on a continuous basis?*

Most bank and broker-dealers that are active in the U.S. Treasury market are also active participants in other securities, futures and derivative markets that already require trade reporting. It is reasonable to assume that these participants have the technology infrastructure to facilitate trade reporting on a continuous basis for U.S. Treasury securities as well.

**3.9** *As the official sector begins to collect additional data on the cash U.S. Treasury market, what operational or market factors should be assessed? Are there particular negative consequences from the implementation of data collection? If so, what are they and why do they arise?*

**a.** *The official sector may consider different methods for receiving transaction data from Treasury markets. For instance, it may rely on existing reporting regimes, or it may seek to build an alternative reporting system. If the latter, what alternative reporting system should be used? What are the costs and benefits with these different approaches? Would one approach impose fewer burdens on reporters than others? If so, why and by how much?*

Leveraging existing reporting regimes would be the best option. The OATS reporting regime for equity securities is well suited for the reporting of order and transaction information for a highly automated marketplace.

**3.11** *Will the requirement to report transactions in the Treasury markets affect competition in this market? Who would be affected and how? What data or empirical evidence support this position?*

We do not believe that reporting transactions in the U.S. Treasury market solely to the official sector and not for public dissemination would materially affect competition in the market.

#### **IV. An Assessment of the Data Available to the Public on U.S. Treasury Cash Securities Markets**

**4.1** *Is the publicly available information for U.S. Treasury market trading activity sufficiently transparent to foster an efficient, healthy, and liquid market? What changes to public reporting would be most advisable, if any, including the use of data standards and identifiers?*

We do not believe that the current amount of publicly available information on the U.S. Treasury market is sufficient to provide the investing public with the transparency it needs to make informed decisions. We believe that trade level information should be made publicly available in a manner consistent with the other securities markets. For example in the corporate bond market TRACE provides publicly available information

in a manner that has been believed to have increased transparency and lowered transaction costs in that market. Using this as a template for proven best practices could bring many of the same benefits to the U.S. Treasury market and ultimately enhance market quality and increase investor confidence.

**4.2** *What additional information should be made available to the public in order to better assess liquidity conditions in the U.S. Treasury market, and at what frequency? For instance, should there be readily available transaction cost data that accounts for price movements that occur from the initiation of a trade request on RFQ platforms?*

Market participants' ability to measure and quantify their transaction costs is a commonplace and beneficial practice in other security markets. This is generally lacking within the U.S. Treasury market due to insufficient data to perform such an analysis. The market also lacks a means to truly determine whether a fiduciary is fulfilling their best execution obligations. The current norm in the U.S. Treasury market is to send an RFQ to at least three providers and choose the best, which is a coarse measure but one that is currently feasible given the limited availability of data. We believe that the information needed to perform transaction cost analysis should be made publicly available so that market participants can adequately and appropriately ensure that they are fulfilling best execution and can measure their costs. The private sector has the means to do this in a variety of other markets. The proper role of the public sector is to make the underlying input data available.

**4.4** *Is there an existing public reporting model that would be appropriate, in whole or in part, for the U.S. Treasury market (e.g., swap data repositories for swaps, or FINRA's Trade Reporting and Compliance Engine (TRACE) for corporate bonds and agency mortgage-backed securities), or would the Treasury market benefit from a new model?*

For platforms that are order or stream driven the OATS system provides an excellent template. For phone or RFQ based trading the TRACE model is appropriate.

**4.5** *What additional information should be available to the public about the operation of trading platforms or trade execution algorithms on trading platforms (for inter-dealer as well as dealer-to-customer platforms)? For example: Should information about order types, agreed upon fee arrangements, user agreements, and/or brokerage agreements be disclosed?*

**b.** *Should the degree and extent to which the sponsor of a platform trades on the platform be disclosed?*

Consistent with other securities markets, we believe that platforms should disclose the degree and extent to which the sponsor of a platform trades on the platform.

We appreciate the opportunity to comment and are available for further elaboration of our points at your convenience.

Very truly yours,

