



April 22, 2016

Submitted Electronically

David R. Pearl
Office of the Executive Secretary
U.S. Department of the Treasury
1500 Pennsylvania Avenue, NW
Washington, DC 20220

Re: Request for Information on Evolving Treasury Market Structure

Dear Mr. Pearl:

The Securities Industry and Financial Markets Association¹ (SIFMA) and the American Bankers Association² (ABA, together with SIFMA, the Associations) welcome the opportunity to respond to the U.S. Department of Treasury's (Treasury) request for information on the Evolution of the Treasury Market Structure (RFI).³ The U.S. Treasury market is the most important financial market in the world, and the RFI raises important questions which have significant and potentially far-reaching implications for understanding (1) the Treasury market's structure, function and liquidity profile; (2) informational needs of market participants, and the official sector and the public; and (3) the impact of risk management and regulatory requirements applicable to different Treasury market participants. There have been significant changes in these areas over the past ten years and we welcome the opportunity to assist Treasury in its ongoing review.

¹ SIFMA is the voice of the U.S. securities industry. We represent the broker-dealers, banks and asset managers whose nearly 1 million employees provide access to the capital markets, raising over \$2.5 trillion for businesses and municipalities in the U.S., serving clients with over \$20 trillion in assets and managing more than \$67 trillion in assets for individual and institutional clients including mutual funds and retirement plans. SIFMA, with offices in New York and Washington, D.C., is the U.S. regional member of the Global Financial Markets Association (GFMA). For more information, visit <http://www.sifma.org>.

² ABA represents the nation's \$16 trillion banking industry, which is composed of small, regional and large banks that together employ more than 2 million people, safeguard \$12 trillion in deposits and extend more than \$8 trillion in loans.

³ *Notice Seeking Public Comment on the Evolution of the Treasury Market Structure*, 81 Fed. Reg. 3927 (Jan. 22, 2016).

I. Executive Summary

The U.S. Treasury market facilitates U.S. monetary policy through a uniquely robust and active secondary market and a principal-driven auction process that has significant implications for the U.S. Dollar status as global reserve currency. Additionally, as a benchmark asset that carries the expectation that it can be readily converted to cash, the Treasury market underpins the safety and soundness framework of U.S. financial markets. It also serves as a global benchmark for risk pricing and hedging. We agree with the RFI that developments that could lead to disruptions to the proper and healthy functioning of the secondary market and negative impacts on the Treasury market auction process must be avoided. At the same time, and as Treasury no doubt appreciates, any proposed regulatory action with respect to the structure and operations of this market must be considered and undertaken with great care and caution, and must be based on clearly identified policy objectives that aim to preserve the robust and diverse features of the market.

We believe that Treasury's and our collective goal in this effort should be to maintain the liquidity and maximize the resiliency of the U.S. Treasury market while ensuring efficiency, orderly operation and fairness. This requires regulators and market participants to (1) identify the optimal scope, detail and flow of market data to be provided to the official sector in a way that is manageable by the industry; (2) work together to preserve and promote the diversity of market participants and liquidity providers; and (3) weigh the potential benefits and fairness of any regulatory or risk management reform against the likely costs of such reform to market participants and market operations.

As discussed more fully in this letter, our recommendations include the following to help achieve these goals:

- Enhance official sector reporting, to allow for more timely, comprehensive, and regular assessments of changes to market dynamics and analysis of historical trends and market participant behavior, particularly in the context of stress events or external shocks.
- Preserve and promote the diversity of market participants by refraining from pursuing public disclosure mandates of positions or transactions in the absence of clear, compelling, demonstrable benefits to overall liquidity from such disclosure.
- Assess aspects of regulations and risk management, monitoring and trading practices that may be disproportionately affecting some market participants or products in a manner that is detrimental to the efficient and effective functioning of the market, with a view towards establishing an activity-level approach to market regulation such that the same types of market conduct are similarly regulated.
- Evaluate the potential merits of mandatory centralized cash Treasury and repo clearing, assessing whether it can be appropriately structured to improve liquidity in a cost effective and risk-sensitive way that, with respect to cash Treasuries, addresses potentially significant systemic risk implications.
- Assess the coherence of capital and liquidity-related regulations with regard to their impact on liquidity for the U.S. Treasury market to ensure that regulations are appropriately calibrated and harmonized to promote the goal of safety and soundness while at the same time minimizing any negative impact on Treasury market liquidity.

In offering these and other recommendations, we emphasize that while the issues raised by the RFI reflect real and significant changes in market structure and practices that deserve a fresh and critical look, we believe that the U.S. Treasury market is not, in any sense, fundamentally flawed. However, we also believe that the events of October 15, 2014, when U.S. Treasury cash and futures markets briefly experienced unusual volatility consisting of sharp rises and then subsequent drops in prices, amidst record trading volumes, may be an indication, albeit a troubling one, that the aggregate impact of a series of changes in market structure are causing the market's overall liquidity profile to fundamentally change.

This submission provides comments on each of the four areas identified in the RFI. Specifically, **Section II** of this letter provides a brief overview of the U.S. Treasury market, our view of its liquidity profile and how that liquidity has changed. This section establishes the critical role of primary dealers in the Treasury auction process and for providing liquidity, and the importance of diversity of market participants and products in the Treasury market. It also emphasizes the need to observe and contextualize multiple metrics for a comprehensive understanding of the market's liquidity profile, and how that profile has changed and continues to change notwithstanding market participants' relatively static expectations that Treasury securities can always be liquidated at or near fundamental value.

Section III addresses official sector reporting. We support increasing official sector access to U.S. Treasury market data to build a more comprehensive understanding of the U.S. Treasury market and to afford market regulators augmented oversight. We urge Treasury to invite further discussion from participants from all segments of the market to determine the best methods for establishing an enhanced public sector reporting scheme, while leveraging certain existing infrastructure and data that can give the official sector the perspective it needs with the least possible burden on the market.

Section IV addresses the significant challenges raised by the prospect of mandatory public reporting and questions whether a real benefit could flow from such a requirement, particularly given the breadth of the information that is already available to market participants. It further details the basis for our belief that compelling any pre- and/or post-trade reporting to the public that departs from data already publicly accessible under current market practice would have significant identifiable and predictable negative impacts on both buy-side and sell-side secondary market participation. In the same way, public dissemination also impedes the ability of primary dealers and other significant market participants to hedge their positions at all stages of market activity (*i.e.*, when-issued, during auctions and their aftermath, and in the secondary market). Together, the impacts of public reporting pose actual threats to liquidity, which we believe would outweigh any potential (as yet unidentified) benefits.

Finally, **Section V** addresses regulation and risk management and possible approaches to improving these aspects of the Treasury market. Shifts in market structure, participation and the market's liquidity profile, as well as the growth of high frequency trading,⁴ have illuminated new

⁴ See generally Promontory Financial Group, *Emerging Issues in the Functioning of the U.S. Treasury Market* (April 2016) (Promontory White Paper).

risks and imbalances in market operations that could be addressed with minimal market disruption. Recommendations include reassessing the scope of applicable mandatory risk mitigation practices and establishing a risk-sensitive activity-level approach to market regulation. Additionally, we suggest that Treasury consider and evaluate whether mandatory centralized clearing of cash Treasury transactions and repos could produce meaningful risk-mitigating outcomes, both for firms individually and from a systemic risk perspective. While there are a range of potential benefits and costs that could be implicated by moving to the required use of central counterparty clearing platforms (CCPs), the key suggestion of this letter is to highlight this as an issue that should be the subject of deliberate further study. For example, this letter will propose that a further assessment of, among other things, the increasing concentration of intraday settlement risk within inter dealer platforms or brokers (IDBs) through their facilitation of bilateral settlements between non-CCP member market participants is merited given the critical role the IDBs play in the market, and whether central clearing could potentially become a new mechanism for enhanced official sector reporting. We also focus on the potential costs of central clearing (including the allocation of shared costs related to CCP loss mutualization), all of which requires extensive further study. Finally, we support a broad assessment of the regulatory landscape affecting banks to determine if capital and liquidity requirements which address the same risk multiple times may be having the unintended consequence of contracting liquidity in the U.S. Treasury markets.

The Appendix to this letter maps the discussion below to the specific questions presented in the RFI, as applicable.

II. Further Study of the Evolution of the U.S. Treasury Market and the Implications for Market Structure and Liquidity

(a) Preliminary considerations for examining the U.S. Treasury market

The U.S. Treasury market is the most important global benchmark for pricing and hedging spread asset classes and is a key transmission mechanism for U.S. monetary policy. Additionally, the U.S. Treasury market fundamentally underpins the new prudential regulatory framework for liquidity of U.S. and many other global financial institutions. It is a multi-faceted and complex market, consisting of a variety of products, with an ever-increasing number and variety of trading platforms and market participants.

Treasury's ability to borrow to finance the U.S. federal government's debt is built around a truly unique, principal-based market structure, one that is not easily (or appropriately) comparable with more traditional agency (*e.g.*, equities) markets. The fundamental starting point of this market rests in the Treasury auction process.⁵

⁵ See New York Fed, *Treasury Auctions*, available at www.newyorkfed.org/aboutthefed/fedpoint/fed41.html.

Treasury has structured the auction process to minimize government costs by promoting broad, competitive bidding.⁶ Primary dealers—banks and broker-dealers that have been approved to trade in U.S. Treasuries with the Federal Reserve Bank of New York (New York Fed)—have traditionally constituted the largest group of buyers in such auctions (bidding on behalf of their own accounts or on behalf of identified customers). Other direct auction bidders include investment funds, pensions and retirement funds, insurance companies, foreign accounts and others. Primary dealers are, however, the only market participants who are obligated to participate in all auctions of U.S. government debt, with all bids to be made (at a minimum), for an amount of securities representing their pro rata share of the offered amount. The New York Fed further expects primary dealers to act as “responsible counterparties and market participants in their overall conduct and support of market efficiency and liquidity.”⁷ The obligation to support market liquidity extends not only to on-the-run securities, but also to a host of less liquid off-the-run securities.

In meeting those obligations set forth by the New York Fed, and in attempting to satisfy market and client demands, primary dealers are frequently required to commit capital in significant size. As highlighted elsewhere in this letter, principal trading activity in the “when-issued” market, during auctions, in the aftermarket of auctions, and in the secondary market (including with respect to off-the-run securities) correspondingly requires these dealers to hedge their positions with other treasury products (both in the specific security and other related securities) on a confidential basis. The ability of primary dealers to do so is critical to the overall functioning of the U.S. Treasury market and to helping maintain appropriate levels of liquidity in this market.

Similarly, internalization⁸ by dealers is an important feature of the Treasury market which provides for efficient risk transfer and duration hedging using on-the-run treasuries. It is also important for those parts of the market where there is concentrated risk, *i.e.*, where investors hold specific off-the-run issuances in size. Such investors are sensitive to market flows given the price impact that large transactions could have in the interdealer market. Internalization gives these investors access to the liquidity they require to transact in size, without undue price impact. It also provides for tighter bid-offer pricing through efficient use of hedging for on-the-run and off-the-run treasuries, and allows dealers to price improve for customers when they are risk reducing (as opposed to crossing the bid-offer spread in IDBs). From a dealer’s perspective, the matching of customer order flow reduces the need for inventory to be held and hence is efficient from a balance sheet and risk management perspective. This is one tool that increases a dealer’s capacity to undertake market-making activity, providing depth and liquidity to the market, which

⁶ See New York Fed, *The Treasury Auction Process: Objectives, Structure, and Recent Adaptations*, Current Issues in Economics and Finance (Feb. 2005), available at www.newyorkfed.org/medialibrary/media/research/current_issues/ci11-2.pdf.

⁷ See New York Fed, *Operating Policy: Administration of Relationships with Primary Dealers* (Mar. 24, 2016), available at www.newyorkfed.org/markets/pridealers_policies.html.

⁸ Internalization is defined in the RFI as “... a broker filling a customer order either from the firm’s own inventory or by matching the order with other customer order flow, instead of routing the order to an inter-dealer market for execution.”

is important in the face of the regulatory and other market changes discussed herein that have put pressure on the market making function.

Other market participants are not similarly bound by the market-making obligations that put primary dealers in a position of providing both buy and sell quotes on a more-or-less continuous basis. Corporate hedgers and hedge funds, for example, seek to hedge specific business risks but do not serve clients as in a typical broker-dealer business model, and are generally liquidity takers, rather than liquidity providers. Principal trading firms (PTFs) similarly do not serve clients, but play a more pronounced role in providing liquidity, trading for their own accounts and in volume to maximize profit on all trades, for which very limited capital is committed. Asset managers, by contrast, serve investors and clients as fiduciaries, on a low-leverage, long-term investment basis, and while they have the capacity to provide liquidity, their primary obligation is to serve their clients and investors, making them predominantly liquidity takers.⁹ At the same time, each of these non-primary dealer market participants contribute in unique and important ways to the liquidity profile of the U.S. Treasury market.¹⁰

The characteristics of the market also vary significantly across product segments, particularly with respect to the on-the-run and off-the-run segments, with the on-the-runs trading much more frequently¹¹ and electronically (*i.e.*, typically on *many-to-many* platforms in both the cash and futures markets). Significant differences among market participants may also be seen in their business models, functions, trading practices and strategies. Some factors and forces that have been reshaping the Treasury market have enhanced liquidity and stability, and others have had more negative effects. In addition, the suggestion by some that cash Treasuries trading activity may be shifting toward the futures market, or other markets, increases the importance of understanding the reasons for these changes, and how an appropriate regulatory response could enhance market operations while facilitating greater liquidity.

Given these multi-directional changes, and the systemic questions raised by the Joint Staff Report¹² about the causes of the October 15, 2014 event, it is appropriate that our starting point should be to try to define what market liquidity really means in this market.

⁹ PricewaterhouseCoopers LLP, *Global Financial Markets Liquidity Study* (Aug. 2015) (GFMA Study) at 22, available at <https://www.pwc.se/sv/financial-services/assets/global-financial-markets-liquidity-study.pdf>; Joint Staff Report, Appendix A.

¹⁰ See generally Promontory White Paper.

¹¹ See generally Promontory White Paper.

¹² Treasury, Board of Governors of the Federal Reserve System (Federal Reserve), New York Fed, U.S. Securities and Exchange Commission (SEC), Commodity Futures Trading Commission (CFTC), *Joint Staff Report: The U.S. Treasury Market on October 15, 2014* (July 13, 2015) (Joint Staff Report), available at http://www.treasury.gov/press-center/press-releases/Documents/Joint_Staff_Report_Treasury_10-15-2015.pdf.

(b) *How do we define market liquidity?*

A liquid market is one where participants have the ability to readily trade at a predictable price and in a desired size without materially moving the market. While, by this definition, the U.S. Treasury market remains the most deeply liquid and well-functioning market in the world, the aggregate impact of changes in market structure, participation, and the regulatory landscape over the last several years has fundamentally changed the nature of liquidity in the Treasury market. A broad appreciation of these changes is required in order to effectively monitor the market's liquidity, efficiency and fairness today. To fully observe and understand historical and ongoing changes in liquidity, we suggest that multiple metrics are needed, contextualized by market segment and, in some instances, participant type.

These metrics most commonly allow for the measurement of immediacy (speed of order execution), tightness of bid/ask spreads (low transaction costs), depth (abundant orders above and below the current price), breadth (numerous and large orders), and resiliency (new orders flowing in quickly to correct order imbalances). No single metric fully captures all of these dimensions and so an evaluation of a number of metrics is necessary to determine and comprehensively evaluate how liquidity is changing over time and how those changes may impact different market segments and participants.

(c) *What factors are driving changes to the Treasury market's liquidity profile?*

Many factors and forces have been reshaping the U.S. Treasury market over the past decade. The market has tripled in size, to \$12.8 trillion¹³, and now represents approximately 30% of the fixed income market. Average bid/offer spreads, after doubling during the financial crisis in late 2008, have returned to historical norms.¹⁴ Diversity of market participants has increased and helped generate new sources of liquidity (*e.g.*, PTFs), and in some respects, the market appears as liquid as ever. But beneath the surface, the Treasury market's liquidity profile is more complex. Market depth has become less resilient in recent years, and has the propensity to diminish more rapidly during times of stress. While measures such as declining trading volumes, which could reflect low interest rates and uncertainty about monetary policy as the market reassesses the timing and pace of Federal Reserve normalization, combined with reduced market turnover, have exhibited more shifting dynamics in the past few years,¹⁵ declines in dealer participation and liquidity, as measured by market depth, may point to a more problematic overall liquidity profile, reflecting more fundamental structural and operational changes.

Analysis of these developments has been well documented,¹⁶ and we will briefly highlight the factors we see as most significant. As noted, these factors are complex and varied, and we

¹³ *Id.*

¹⁴ J.P. Morgan, *U.S. Treasury Market Structure and Liquidity: The Changing Dynamics of Liquid Markets*, (April 2, 2015) (JPM White Paper) at 2-3.

¹⁵ *Id.*

¹⁶ *See generally* GFMA Study; Promontory White Paper.

emphasize the importance of contextualizing these factors for understanding changes to the overall liquidity profile.

Monetary Policy. U.S. monetary policy, and global monetary conditions more generally, have profoundly impacted liquidity dynamics in the U.S. In particular, the Federal Government’s policy of Quantitative Easing (QE) has boosted demand for Treasury securities and lifted asset prices, improving liquidity and, according to some, lowering associated risks.¹⁷ On the other hand, large scale purchases of government bonds by the Federal Reserve under QE programs has likely reduced the overall volume of Treasuries available for trading.¹⁸ Outstanding Treasury debt has also substantially increased,¹⁹ while buyers of size (*e.g.*, foreign central banks) have grown significantly, both outright and when viewed as a percentage of all holders.²⁰ These factors are not risk free, and we note that a “normalization” of monetary policy, were it to occur, involves a risk of an analogous but reverse level of impact on markets.

Market Structure. New technologies, regulatory developments, and changing strategies, demands and expectations among participants have significantly reshaped Treasury market structure over the past decade. These changes have led to the growing role of electronic trading venues and a surge in the prominence of exchange traded funds, index and passive funds, algorithmic trading and active money managers. Electronification has also significantly increased the speed of trading and the ease of matching buyers and sellers, creating new incentives for market participants to shift trading strategies, and for new participants to enter the market. PTFs for example, many of which rely in large part on high frequency algorithmic trading strategies, now account for a substantial volume of all trading and the majority of all on-the-run treasuries.²¹ The rapid growth of PTFs (in number of firms and market share) has paralleled these technology developments and has created a valuable source of new and growing liquidity.

With these changes in market structure has also emerged a class of market participants who largely remain outside of the current regulatory framework, and whose business models are fundamentally different than those of traditional, principal-based participants that used to be responsible for the majority of the volume in the market. The result can be higher volumes and lower trade sizes.²² However, while these participants are responsible for increases in volumes, this does not mean that such participants are establishing and holding positions or willing to meaningfully provide liquidity during stress events. These factors tend to exacerbate volatility in rapidly changing markets, even absent fundamental catalysts.

¹⁷ GFMA Study at 31.

¹⁸ *See generally* Promontory White Paper.

¹⁹ *See generally* Promontory White Paper.

²⁰ Joint Staff Report at 41.

²¹ *Id.* at 6.

²² Joint Staff Report, Appendix A.

With the increased presence of these PTFs and greater availability of electronic trading technology, inter-dealer markets have adapted and now “resembl[e] . . . other highly liquid markets, including equities and foreign exchange markets, where PTFs and dealers transact in automated fashion” in large sizes and at high speed.²³ Of some concern as a result of these changes is an increase in clearing and settlement being facilitated by IDBs outside of regulated CCP platforms, *i.e.*, the Government Securities Division (GSD) of the Fixed Income Clearing Corporation (FICC), and therefore not subject to the same level of risk mitigation standards (*e.g.*, margin collection, clearing fund balance requirements, pre-defined loss sharing agreements) as regulated CCP platforms.²⁴ Much of this activity is driven, in particular, by PTFs who are not clearing at FICC or through a FICC member, and who trade in very large volumes through the IDB platforms. This shift increases risks when intermediating and managing intraday settlement.

Regulatory changes. Prudential regulatory reform has attracted particular scrutiny in recent writings and analysis, which note a gradual and systematic de-leveraging by bank affiliated primary dealers to comply with prudential regulations.²⁵ The Liquidity Coverage Ratio requires banks to hold an adequate amount of unencumbered high quality liquid assets (HQLA) that can be converted easily and immediately into cash.²⁶ Increased capital charges for low risk, low yielding assets held for LCR purposes as well as in trading inventories are compelling banks to reexamine and reduce their traditional role as liquidity providers and raising the threshold under which they can confidently step in and remain in the market to support it during times of stress, a development that is “potentially introducing new and unforeseen risks to our markets and economy.”²⁷ PTFs, among other types of market participants, on the other hand, are appearing to fill a certain amount of the void resulting from a decreased ability or willingness of primary dealers to provide various aspects of liquidity as readily as before.

The scope and breadth of the changes described above have not been fully understood or appreciated, as the Joint Staff Report makes clear. Yet, some consensus has formed that shifts in liquidity provision suggest a confluence of both positive and negative developments that has fundamentally altered the Treasury market’s liquidity profile, which may appear more robust during normal activity but may prove to be weaker during periods of stress. The results of Treasury’s present review will be critical to building a comprehensive and informed understanding of these developments, and formulating an appropriate policy response.

²³ RFI at 3928.

²⁴ *Id.* at 55.

²⁵ *See, e.g.*, GFMA Study, Appendix C; Promontory White Paper.

²⁶ GFMA Study at 39.

²⁷ *Id.* at 7. *See* Basel Committee on Banking Supervision, *Implementation*, available at <http://www.bis.org/bcbs/implementation/12.htm>.

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

The Associations fully support increasing official sector (*i.e.*, market and prudential regulators) access to data related to U.S. Treasury market transactions. We strongly believe that the official sector must have access to the data necessary to carry out its various regulatory functions, to develop a more comprehensive understanding of U.S. Treasury market activity and to improve Treasury's ability to oversee market liquidity, resiliency and efficiency.

Above, we noted the primary dimensions of liquidity which we recommend Treasury monitor to achieve these goals. These metrics include market depth, bid/ask spread, trade size, turnover, and price impact. Additional insight can be derived from these metrics when contextualized by shifts in the overall size of the Treasury market segments being monitored as well as sensitivity to delivered volatility.

It is critical, in considering the gathering of the underlying data necessary to populate these metrics, to take a balanced approach. The reporting must meet the desire to provide the official sector with a comprehensive and expedient view of the markets. But any initiative must also recognize that overly broad reporting requirements with material cost or burden on market participants can be counterproductive to Treasury's goal of maximizing diversity in the marketplace and maintaining liquidity. This will inevitably require a balancing between these two objectives.

With this in mind, we would strongly urge Treasury to engage in one or more roundtable discussions with participants from all segments of the market as soon as possible in order to determine the best way to quickly accumulate the needed data in the most cost effective manner. This discussion would allow for a dialogue about the specific data that would be needed (*e.g.*, issues traded, volume and price, time and date of execution, and identifying category of market participant), the most expedient source of such data (*e.g.*, IDBs, futures exchanges, electronic dealer-to-customer platforms, and other market participants where necessary), and what a reasonable time frame for delivery of such information should be, as well as the periodicity of such reporting. Consideration should also be given to the existing official sector reporting framework for Treasuries (for example, weekly primary dealer reports²⁸ and large position reporting under futures and swaps market data reporting²⁹), and how to build a framework that could most efficiently leverage this existing framework and data.

Without trying to anticipate the specifics of any eventual reporting scheme, we also submit that if both pre- and post-trade transaction metrics are being considered for inclusion in official sector reporting, we believe that pre-trade data can only practically come from the *many to many* platforms that facilitate screen based order book type trading. Similarly, however structured, any reporting requirement must incorporate a timeliness element such that the party or parties

²⁸ That is, the FR 2004 Primary Government Securities Dealers Reports, as authorized by 12 U.S.C. §§ 248(a)(2), 353-359, and 461(c).

²⁹ See the CFTC's large trader reporting programs at 17 CFR Parts 17, 18 and 20.

responsible for reporting have sufficient time to compose, validate and otherwise prepare the data for submission. Whether that evaluation leads to a conclusion that reports must be submitted weekly, or at some other frequency, will be a key component of the public discussion to come on this issue.

Legislative expediency should not outweigh the need for thoughtful consideration of how to develop these goals in a way that will avoid operational and market disruptions. Market participants must also be assured that any reporting to the official sector would be subject to the same level of confidentiality and privacy protection that is afforded data under the Freedom of Information Act. These, and other considerations should be further developed to reflect market participant input and possibly more targeted rule-making initiatives.

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

The Associations believe that preserving the uniqueness and diversity of the Treasury market should be a high priority of Treasury and of any proposed rule-making. As described in Section II, the Treasury market is unique in its design around the Treasury auction process and the need for primary dealers to be able to hedge their positions on a confidential basis. In addition, the market consists of multiple segments that present different liquidity profiles and transaction characteristics, and a large variety of dynamics around demand for different products, incentive structures, and risk allocation. These features form critical parts of a principal-based market model, which has important implications for clients' risk assessment and management. This model is fundamentally unlike the agency-based model of most other markets (*e.g.*, equities). Tying risk to capital increases the need for primary dealers to hedge their positions with other Treasury products, and for other market participants to be able to execute large block trades with minimum possible risk through hedging on a confidential basis. Further supporting these aspects of the market are a robust request for quotes (RFQ) methodology of execution, and considerable transparency and robustness around price formation due to the availability of prices from multiple sources (*e.g.*, Bloomberg and Tradeweb).

Our studies and feedback from members indicate that there is an abundance of publicly available information sufficient to allow market participants to obtain information needed to trade in a competitive, fair and efficient manner. With respect to the most liquid segment, on-the-run securities, executions and a range of other data are observable by monitoring information available from the primary execution venues for these products. Specifically, we believe there is considerable price transparency in the on-the-run market through platforms such as BrokerTec and eSpeed, and the futures markets, where indicative bids and offers are available and executable, and, for customers, through direct access to dealer franchises. With respect to less liquid products (*e.g.*, off-the-run securities), indicative pricing and other market data is available from Tradeweb and Bloomberg, and customers also have multiple options for direct access to dealer franchises that can also provide indicative bids for less liquid products.

Based on these considerations and the current public availability of information, it is not clear what public or market interests or needs could be meaningfully enhanced with additional public dissemination of transaction or market information. As with official sector reporting, the Associations believe that any regulatory initiative to increase Treasury market disclosure to the

public would need to be based on a high degree of confidence that demonstrable benefits could be achieved through such increased disclosure with minimal unintended or adverse consequences. In contrast to our views on official sector reporting, we do not believe that increased reporting of Treasury transactions to the public would have any net positive effect on improving market functionality or liquidity. Specifically, we believe that there are significant identifiable and predictable risks to market diversity, liquidity and resiliency that arise from the prospect of mandatory increased public disclosures that outweigh any potential (as yet unidentified) benefits. Two aspects in particular should be considered in this context: (i) large positions/client accommodation, and (ii) primary dealers' ability to hedge.

Large investor positions. We believe that a range of market participants would be inhibited in their investing activity if they deemed the detail and frequency of public data dissemination too high, particularly for the off-the-run market and large trades across market segments (which also require time to hedge). Parts of the Treasury market are very concentrated and transactions occur in large sizes.³⁰ Third-party investors, particularly those providing the principal-based liquidity that is so critical to this market, have a legitimate and well established interest in maintaining the confidentiality to be able to trade without concern that too much public information will hurt bilateral price formation.

Primary dealers' ability to hedge. Similarly, the ability of primary dealers to hedge their positions around Treasury market auctions and in meeting counterparty demand in the secondary market, which is critical for such market participants to continue serving as principal-based liquidity providers for a diverse investor base, would be compromised if they were unable to do so on a confidential basis. Without this ability, it would be materially more difficult for primary dealers to commit significant amounts of capital in order to satisfy market and client demands, and to meet their obligations set forth by the New York Fed. Given the importance of primary dealers' role in the auction process, and for maintaining liquidity in the market as a whole, we believe that the prospect of losing confidentiality for these market participants would have serious consequences for their critical role and the market more broadly.

Given the situational-specific nature of these transactions, setting an industry standard timeframe, such as is the case in TRACE, for public disclosure would be harmful to the Treasury market. While we recognize that TRACE reporting has some investor protections built in (such as masking)³¹ in applicable markets, we do not believe that such protections go far enough to achieve the optimal level of confidentiality for the Treasury market. Nor do the benefits of such framework for other markets, such as centralization of order books and pre-trade transparency for all transactions, similarly translate to the Treasury market. A structure similar to the swaps model can have even more pronounced impacts in this market. Proponents of live reporting invest heavily to build technology which reads the tape as quickly as possible, which has two adverse consequences: (i) an "arms" race to build technology to read the tape and react to it with

³⁰ See Joint Staff Report at 52.

³¹ See Financial Industry Regulatory Authority (FINRA), *Trade Reporting and Compliance Engine (TRACE)*, available at <http://www.finra.org/industry/trace>.

ever-increasing speed, and (ii) adverse effects on large position principal investing and hedging, as discussed above. This was, and remains, a significant problem for certain large market participants, including airlines operating in the now real-time reported swaps market,³² and there is a real danger that similar problems could arise in the Treasury market were such a reporting structure implemented. Moreover, the potential problem would be amplified due to the strong reliance on liquidity in this market as described in Section II, above.

Importantly, bid/ask spreads would be unlikely to tighten materially as a result of increased public disclosure, whereas large portions of risk-taking participation and liquidity could very well exit the market, and the ability of primary dealers to meet their client obligations and the expectations or requirements of regulators would be materially compromised with serious implications for the rest of the market's functionality.

V. 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

In Section I, we noted a number of significant changes that have occurred in the Treasury market that have fundamentally altered how the market functions and its liquidity dynamics. We believe that this critically important market does function well and, while the liquidity profile continues to evolve, it remains strong. However, we do see a few specific imbalances affecting the Treasury market's overall liquidity profile, and suggest some ways in which the market's regulatory and risk management framework could be further evaluated in order to identify potential initiatives that could address these imbalances. We recommend a risk-sensitive approach to regulation that ties regulations to activities and ensures that best practices are observed consistently and fairly by market participants. The following discussion offers a starting point for the important public discussions that must continue to occur if any regulatory initiative is pursued to address various imbalances that can be observed in the Treasury market.

(a) Mandatory Central Clearing

The Associations support the further investigation and study, to be led by Treasury, of the potential costs and benefits of implementing a mandatory central clearing requirement for the cash Treasury market, and we believe this study should consider all potential forms of a clearing requirement that could be implemented across the cash Treasuries product ecosystem (*i.e.*, on and off-the run issues, the when-issued market, repos, *etc.*). That is, there are many ways in which a central clearing model can be designed, and careful considerations should be made as to (1) the appropriate scope of transactions subject to such a model, (2) the perceived benefits, (3) the challenges to the realization of those benefits, and (4) the corresponding costs. However approached, the Associations believe that mandatory central clearing is best characterized as a long-term goal and that this process will require a significant amount of further dialogue between

³² See CFTC, *CFTC Staff Issues Time-Limited No-Action Relief to Allow Southwest Airlines and its Counterparties Additional Time for Public Reporting of Long-Dated Brent and WTI Crude Oil Swap and Swaption Contracts Executed by or with Southwest Airlines* (Nov. 6, 2014), available at <http://www.cftc.gov/PressRoom/PressReleases/pr7050-14>; CFTC Letter No. 14-134 (Nov. 6, 2014).

Treasury, its fellow regulators, and each category of market participants active in the Treasury markets.

Potential benefits – identifying and solving for systemic risks. Historically, primary dealers were the dominant (and perhaps only) participants on the *many-to-many* inter dealer platform environments where cash Treasuries were transacted. Non-dealer customers and other end-users transacted directly with the enterprise businesses of dealers. However, as described above, the market has evolved, and we understand that the participants that are most active on inter dealer platforms today represent a much more diversified set of business models and capital structures than the dealer centric trading environments of a decade ago. Specifically, as PTFs have gained access to these platforms, they have nevertheless remained outside of CCP membership, clearing bilaterally with each other or through a prime broker for trades executed with a CCP member.³³ With the growth in market share represented by this trading activity, coupled with the concentrated nature of the IDB market, the resiliency of the IDBs has become critical to the current market structure. The risk that could result from the intraday failure of one or more PTFs cannot be allowed to threaten the viability of any IDB that has become critical to the market's efficient operation.

Historically, the intra-day settlement risk that is inherent in any platform trading environment was managed exclusively (or even primarily) at the primary dealers and a central counterparty intermediary. Now, as noted above, the IDBs, in conjunction with their non-clearing member market participants, are carrying the intraday settlement risk themselves. In the case of an intraday failure of one or more major market participants that are transacting on an uncleared basis, a potentially systemic consequence could emerge in, for example, the largely exchange traded market for on-the-run cash Treasuries (which settles on a T+1 basis)³⁴ or the when-issued market. The when-issued market can settle days after trades are executed, and these trades, like all Treasury trades, are unmargined and uncollateralized. The prompt matching and margining regime of a CCP could, depending on the model, negate much of this risk. Therefore, as large segments of the market continue to operate in the absence of a pre-defined or formalized loss mutualization plan, we suggest that the further assessment and evaluation of the potential benefits of central clearing as a risk mitigation tool be a central part of Treasury's continued study of the Treasury market.

However, and underscoring and re-emphasizing the need to carefully consider (1) all of the potential benefits, (2) the likelihood of realizing those benefits, and (3) the costs of any implementation of a mandatory clearing requirement, we note that the level and type of settlement risk that can be observed through the inter dealer platforms and when-issued market is significantly less pronounced (if present at all) in other segments of the cash Treasuries markets. For example, the bilateral customer facing secondary market trading of both on- and off-the-run cash Treasuries done via a bank dealer's enterprise customer business, with its own customers, does not typically present this level of settlement risk.

³³ Joint Staff Report at 55.

³⁴ Relatedly, we suggest that measures be considered that would permit this market to settle on a T+0 basis.

Potential benefit – tool for official sector reporting. Another potential benefit of mandatory central clearing lies in the possible use of a CCP as a new tool to facilitate or supplement official sector reporting. However, the value, if any, of using CCPs as a source and tool in connection with the official sector data gathering process is fundamentally tied to the workability and usability of whatever regulatory structure is ultimately crafted to implement a central clearing requirement. Understanding the details and getting them right will not be an insignificant effort, and we again note our view that progress on the question of central clearing for Treasuries is best evidenced at this stage only by deliberate additional study and public dialogue.

Potential costs.

Treasury must also carefully focus on identifying and understanding the risks, challenges and potential costs of centralized cash Treasury clearing. Foremost, Treasury would need to consider the complexity of clearing model effectiveness and how to implement a cost-effective and fair model for risk management that acknowledges and includes the diversity of participants in this unique market.

Loss mutualizations at certain CCPs (*i.e.*, FICC) that clear Treasuries are presently potentially uncapped, meaning that existing members could fully bear any losses arising from a member default once that defaulting member's collateral is utilized (although members do have the ability to withdraw and effectively cap their liability in some circumstances, even though exercising such rights may become impractical in a stress scenario). The appropriateness of this structure would need to be reevaluated with a more heterogeneous membership base and possibly the addition of an official sector member. Increased financial safeguards and liquidity requirements of the CCPs, and determining who should bear the costs, are likely to be highly sensitive and difficult issues to resolve, particularly in light of the regulatory burdens already affecting bank-affiliated dealers mentioned elsewhere in this letter.

An additional consideration is liquidity. Bank-affiliated primary dealers would not be in position to fund additional liquidity needs in connection with central clearing, given that primary dealing for this product is already challenged by significant regulatory costs relative to these low yielding assets. Therefore consideration should be given to central bank funding as a way to avoid additional balance sheet pressures on primary dealers and to facilitate a broader membership base. This issue alone re-emphasizes the level of serious and significant study that will be required in order to eventually propose when, where and how a mandatory clearing requirement could be successfully implemented in the cash Treasury market.

As with any move towards centralized loss mutualization schemes, the further concentration of risk, if not correctly modeled and implemented, could have the very negative impact of increasing systemic risk and materially weakening liquidity.

Centralized repo clearing

Consistent with the discussion above, we recommend that Treasury also carefully evaluate mandatory centralized repo clearing (and to be clear, in this letter we are addressing only Treasury repos, not other asset classes). The repo market is key to the proper functioning of the broader U.S. Treasury market as many investors in this market will only invest if they are able to

use the repo market to enhance their returns. Therefore, as Treasury evaluates the liquidity dynamics of this market, evaluation of the repo market is critical as well. One potential benefit of central clearing for repo is that it would allow for increased netting and efficiency for broker-dealers.

Similar considerations apply to centralized repo clearing as those described above, although a few important differences should be noted. Most notably, intraday settlement risk considerations do not apply for this segment – instead, repo clearing is more focused on the more traditional second role of central clearing as a margin and collateral management platform throughout the life of a longer term transaction. In addition, the concerns around loss-sharing mechanics most clearly affect money market mutual funds and other entities that are clients of dealers because they, by definition, cannot participate in mutualized loss sharing arrangements due to their own regulatory requirements. In addition, expanding the central clearing model for Treasury repo may require an increase in the model’s default liquidity requirement to ensure that a CCP meets its same day settlement obligations in the event that the largest repo borrower defaults. While a client clearing model would be required in order to accommodate entities who are not permitted to directly participate in CCP loss mutualization, as with the cash Treasury market, clearing members would not be in position to fund additional liquidity needs in connection with central clearing of repo. This is because U.S. Treasury repo activities are already challenged by significant regulatory costs, and consideration should be given to central bank funding as a way to avoid additional balance sheet pressures on repo counterparties and to facilitate a broader membership base. Lastly, and however formulated, any initiative to bring clearing to the Treasury repo market should consider whether and how to incorporate the concept of portfolio margining, which will likely require regulatory collaboration where there are products subject to oversight by different regulators. Consequently, and consistent with the discussion above, while a mandatory central clearing requirement for repos should be considered and evaluated, the Associations encourage Treasury to be cautious against reaching any specific solution or conclusion in the absence of significant further study and public dialogue.

(b) *Other regulatory considerations*

Liquidity is impacted by the ability of market participants to compete on a relatively level playing field in which similar activities are regulated in similar fashion across the marketplace. As technology has improved and with it the diversity of market participants and complexity in trading practices and strategies, the Treasury market’s regulatory framework needs to adapt and update to optimize stability and resiliency, and ensure the market’s continuing viability. The following recommendations highlight areas that could be improved in these and related respects.

Algorithmic/automated trading strategies. Patterns in certain automated trading strategies may warrant closer scrutiny to the extent that such strategies have a potentially destabilizing effect on the U.S. Treasury market. For example, programmatic changes in the nature of automated liquidity provision should be subject to appropriate testing and risk controls. In addition, excessive messaging by some participants may be distorting true market metrics such as depth and liquidity and market participants should be individually responsible for submitting legitimate

orders in good faith.³⁵ We urge Treasury to examine these patterns and practices from the perspective of broadening the application of best practices standards, as well as from an official sector transparency perspective, insofar as such increased transparency could lead to certain self-modification by market participants, or go further by increasing focus on pre-trade activity.

Self-trading rules; disruptive trading and manipulation. “Self-trading” occurs when a market participant finds itself on both sides of a transaction, often unintentionally but it can also result from deliberate, illegal market manipulation. Unintentional, or inadvertent, self-trading frequently results from electronic glitches that can occur due to the complexity and speed of algorithmic trading, complexity resulting from pursuing several strategies at the same time, or separate parts of a trading institution transacting in the same security, for example. Where there is a pattern or practice of self-trading (notably when representing a material percentage of the volume in a particular security) pricing, volume and transaction data, and the price-formation process, can be distorted. At worst, self-trading can be used in furtherance of disruptive or manipulative trading strategies.³⁶ The Associations support a collaborative definition of self-trading that includes a materiality threshold, and a corresponding regulatory approach informed by FINRA rules and guidance which would not impose an absolute ban, except in the case of manipulation or reckless trading.³⁷

Coherence of prudential regulations to maximize safety and soundness while preserving market liquidity. As described above, liquidity and capital requirements have had a material impact on banks’ traditional role as primary dealers and their associated market-making function in the Treasury market and their willingness and ability to hold inventory. Specifically, we believe that the measurable reduction in primary dealer inventory and market-making capacity that is potentially affecting Treasury market liquidity can be tied, at least in part, to banks’ responses to the implementation of new prudential regulations. The new rules increase the amount and quality of capital that banks have to hold, and introduce a minimum leverage ratio requirement designed to limit excessive leverage in the banking sector.³⁸ We are supportive of the capital and liquidity regulations that have been put in place since the crisis to improve the safety and soundness of banking institutions. We are concerned, however, that the resulting reduction in primary dealer inventory and market-making capacity being driven by what is, in some cases, non-harmonized capital rules that target the same risk numerous times, may be hampering the ability of other market participants to execute trades, particularly in stressed environments. This is because as the mandate of the franchise business is narrowed by external regulatory requirements, the ability to service customers is constricted.

³⁵ See TMPG White Paper at 5–6; Joint Staff Report, Appendix C.

³⁶ See Joint Staff Report at 31 & notes 28–29.

³⁷ See FINRA Rule 5210 (providing that “no member shall publish or circulate, or cause to be published or circulated, any . . . communication of any kind which purports to report any transaction as a purchase or sale of any security unless such member believes that such transaction was a bona fide purchase or sale of such security”); FINRA Regulatory Notice 14-28 (June 2014).

³⁸ GFMA Study at 36.

The requirement for bank-affiliated primary dealers to hold HQLA illustrates our concern. As banks, such primary dealers are required to hold a buffer of HQLA, *e.g.*, Treasuries, to meet the Liquidity Coverage Ratio. The increased demand for HQLA has decreased their supply (and has decreased the level of inventory that may otherwise be available). Relatedly, higher capital charges on banks for low yielding assets have increased the banks' need to hold higher yielding collateral and decreased their ability to act as dealer or market makers in low yielding assets such as Treasuries. At the same time, the cost of financing capital has increased. Banks traditionally use repo markets to finance trading and market-making activity. Because repos were traditionally assigned low risk weights, since they are normally fully collateralized with high quality collateral, banks only needed to allocate limited capital to repo positions. However, banks now face higher capital charges to account for counterparty credit risk from repo exposures.³⁹

As the capital constraints on banking institutions continue to increase due to recent proposed changes to capital and leverage ratio calculations, banks' willingness to engage in such low margin businesses will likely come under increased pressure and their ability to step in and support the market during times of stress will be challenged. The liquidity being provided by PTFs has filled the liquidity void under normal market conditions to some extent, but market depth has become more fleeting in general. Moreover, less diversity in liquidity providers leads to less resiliency, particularly during stress periods.

We believe that a review of the coherence of the current regulatory regime is timely and should include, among other assessments, an evaluation of several issues, including, for example, how the Treasury market is impacted by the Liquidity Coverage Ratio (LCR). As described above, under the LCR, banks are on one hand forced to hold HQLA, such as Treasuries, and on the other hand they are forced to hold more capital as a result of holding these very same assets. We urge Treasury, in conjunction with the banking and other regulators, to review and assess these concerns by examining duplicative and overly burdensome capital and liquidity regulations on market participants, and to determine whether they are having the unintended effect of reducing or weakening market liquidity.

Securities Exchange Act Rule 15c3-5, relating to risk management and regulatory controls for brokers or dealers with market access,⁴⁰ currently applies only to broker-dealers and alternative trading systems (ATs).⁴¹ Treasury, in conjunction with the SEC and other regulators, should consider whether a broader scope of applicability is warranted. The increased diversity of the market means that platforms are no longer strictly only dealer-to-dealer, while the exemption for Treasury-only platforms may have little to no relevance today. Risk limits and controls utilized by ATs should be reviewed and applied more consistently, particularly insofar as some of their members are non-broker-dealers and are not currently subject to the same level of oversight as broker-dealers, rather relying on the ATs to implement controls. Thought should also be given

³⁹ *Id.* at 39; *see also* TMPG White Paper at 5.

⁴⁰ Securities Exchange Act Release No. 63241 (November 3, 2010), 75 Fed. Reg. 69,791 (November 15, 2010).

⁴¹ 17 C.F.R. § 240.15c3-5.

to how ATSS implement such controls, particularly with respect to the credit worthiness of counterparties. Finally, while oversight of ATSS falls to the SEC and to FINRA for dealers subject to Rule 15c3-5, an appropriate level of oversight of other market participants and trading environments currently not monitored should also be considered.

Similarly, while they exist as recommendations that all market participants are encouraged to comply with, the TMPG Best Practices⁴² currently require only primary dealers to attest that they comply. Treasury should consider extending the requirement to material non-primary dealer market participants as well. Among the more important Best Practices in this environment are that (i) all market participants should behave in a manner that supports market liquidity and integrity; (ii) market participants should be responsible in quoting prices and should promote overall price transparency across trading platforms; (iii) similar best practices extend to electronic trading; and (iv) internal control policies should further a firm's ability to detect and prevent potentially disruptive trading activity by identifying the specific trading trends, positions, strategies, or behaviors within the trading operation that constitute triggers for mandatory business and compliance review. More formal, additional regulatory oversight of compliance with these and other best practices should be considered to ensure that material market participants are complying.

Tools to stem market disruptions. We do not believe that market-wide halts or circuit breakers, as the RFI asked that we consider, are appropriate or even practical for the U.S. Treasury market given its current structure and interconnectedness with other global asset classes and markets. A market halt or pause could have material instantaneous ripple effects compromising vital risk transfer and risk management practices globally. A Treasury market halt or pause could have the unwanted effect of signaling systemic or economic stress well beyond reality which in turn could cause panic and magnify a volatility event. Indeed, as noted in the Joint Staff Report,⁴³ since trading was continuous without gapping, albeit rapid, a halt or pause would likely not have triggered and so would likely not have mitigated the flash events of October 15, 2014.

All of that being said, we believe a deeper evaluation should be undertaken to determine whether tools and practices exist that might allow a regulator to stem market disruptions given the unique dynamics that govern the U.S. Treasury market. While we are not in a position at this time to recommend specific tools or actions, we support the underlying premise and would welcome further opportunity to engage with the Treasury on this important consideration.

* * *

From a process perspective and in reviewing and potentially reacting to the comments received on the RFI, we recommend that Treasury pursue any next steps only in conjunction with an active and ongoing dialogue with market participants. Any regulatory responses, including any new reporting requirements, should be preceded by public roundtables, where appropriate, and

⁴² TMPG White Paper at 6.

⁴³ Joint Staff Report at 16.

detailed published studies that assess and request additional public comment on the impacts of any proposed changes.

We appreciate Treasury's consideration of these recommendations, and we welcome the opportunity to assist Treasury in its ongoing review. If you have any questions, please do not hesitate to contact us with any questions or for further information.

Sincerely,

A handwritten signature in black ink, appearing to read "Rob Toomey".

Robert Toomey
Managing Director and Associate General Counsel,
The Securities Industry and Financial Markets Association

A handwritten signature in black ink, appearing to read "Alison Touhey".

Alison Touhey
Senior Regulatory Advisor,
American Bankers Association

Cc: Antonio Weiss, Counselor to the Secretary

[Appendix begins on next page]

Appendix

1. **Further Study of the Evolution of the U.S. Treasury Market and the Implications for Market Structure and Liquidity**
2. **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:**
 3. **How do you define liquidity? How do you define liquidity provision?**

Please see the Executive Summary and Sections II(a) and (c) for a discussion of the liquidity profile of the U.S. Treasury market generally, including the provision of liquidity to that market, and see Section II(b) for a discussion of the definition of liquidity. See also Section V(b) for a discussion of factors contributing to recent shifts in liquidity provision.

4. **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?**

Please see Section II for a discussion of measures of liquidity in the U.S. Treasury market.

5. **How do different indicators provide information on different aspects of liquidity, and in what ways?**

Please see Section II for a discussion of liquidity indicators and aspects of liquidity in the U.S. Treasury market.

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

Please see Section II and Section V(b) for a discussion of the resilience of liquidity and volatility in the U.S. Treasury market.

- 7. 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?**

Please see the Executive Summary and Section IV for a discussion of the uniqueness of the U.S. Treasury market and points of contrasts with certain other markets.

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

Please see the Executive Summary and Sections II(a) and (c) for a discussion of changes in the liquidity profile of the U.S. Treasury market over recent years.

- 9. What microstructure features of the U.S. Treasury futures and cash markets, including both IDB venues and dealer-to-client markets, have affected the functioning, liquidity, efficiency and participation in these markets? What features have affected the functioning of the Treasury market as a whole?**

Please see the Executive Summary, Sections II(a) and (c) and Section V for a discussion of certain microstructure features of the U.S. Treasury market and their implications for functioning, liquidity, efficiency and participation in these markets.

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

Please see the Executive Summary, Sections II(a) and (c) and Section V for a discussion of changes in market participants' behavior in response to shifts in U.S. Treasury market structure.

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

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12. 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?

Please see Section II(c) and Section V for a discussion of anticipated changes in U.S. Treasury market structure and the implications of those changes.

13. 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?

Please see Section III and Section V for a discussion of recommendations on public sector initiatives related to U.S. Treasury market structure.

14. 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?

Please see Section II(c) and Section V for a discussion of the trend toward increased speed of transactions in the secondary market for U.S. Treasury securities and the implications of this trend and of the growth of high frequency trading.

15. To what extent have changes in Treasury financing markets affected liquidity in cash Treasury markets, and what is the best evidence of those effects? Looking forward, do you anticipate major changes in the Treasury financing markets and how would this impact the functioning of the cash Treasury markets? How have firms modified their trading strategies in response to, or in anticipation of, these changes? What changes in Treasury financing markets could improve market efficiency? What are the potential benefits and risks to the Treasury market of increased access to central clearing of Treasury repurchase agreement (“repo”) transactions?

Please see Section V for a discussion of the benefits of central clearing of Treasury transactions.

16. What share of trading (in the case of dealers, your own trading) is internalized? To what extent does it vary depending on security type (e.g.,

on-the-run, off-the-run)? How has this changed over time and how do you expect it to develop? What implications for the Treasury market, if any, do you see as a result of these developments?

Please see Section II(a) for a discussion of internalization by brokers and the implications of this practice for the functioning of the Treasury market.

17. 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

18. 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:

19. 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.

Please see Section II(c) and Section V for a discussion of risks associated with increased automation, speed and order complexity, and see in particular Section V(a) for a discussion of risk management benefits associated with central clearing.

20. 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?

Please see Section V(b) for a discussion of certain venue-level risk management practices and tools to stem market disruptions.

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

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- 22. 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?**

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- 23. What types of algorithmic trading strategies are commonly used by participants in the U.S. Treasury market? What features do those strategies have in common, and what features differ across strategies? What are the potential benefits and risks to an effective U.S. Treasury market functioning resulting from certain algorithmic trading strategies, certain order types, and/or particular trading venue policies or practices.**

Please see Section II(c) and Section V(b) for a discussion of certain algorithmic trading strategies used by participants in the U.S. Treasury market and the implications of the use of such strategies for Treasury market functioning.

- 24. 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?**

Please see Section V(b) for a discussion of market participants' use of TMPG's best practices and the related attestation requirements.

- 25. What are the benefits and risks associated with the current structure for clearing and settling Treasury securities transactions in the dealer-to-customer market and on IDB platforms, as applicable. For example:**
- 26. Are intraday margining practices in the Treasury cash market for both cleared and non-cleared transactions currently sufficient to protect against counterparty risk, especially in light of the speed at which positions can be accumulated? What options are available to improve margining practices? Should the maximum potential intraday exposure of firms be calibrated relative to their level of capital? If so, how should it be calibrated? Are alternative measures of potential exposure more meaningful for automated trading strategies, and if so, which type of measures?**
- 27. Currently, there are no statutory requirements that require participants to centrally clear cash Treasury transactions. Should such a requirement apply to any participants, particularly those with large trading activity or large positions? Would the secondary market for cash Treasury securities benefit from broader participation in centralized clearing? Why or why not?**

Please see the Executive Summary and Section V for a discussion of our recommendations regarding central clearing of Treasury transactions.

- 28. 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:**
- 29. 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?**
- 30. 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?

Please see Section V (and in particular, Section V(b)) for a discussion of certain considerations regarding regulatory approach to the U.S. Treasury market, including recommendations regarding potential forms of activity-level regulation, and see Section IV for a discussion of differences in market dynamics between the U.S. Treasury market and other markets.

- 31. Should self-trading be expressly prohibited in the cash Treasuries market? Does self-trading provide any benefits to the markets? Are there risk management tools, either at trading firms or at trading platforms, which can effectively reduce levels of self-trading and improve trading efficiencies?**

Please see Section V(b) for a discussion of our recommendations regarding self-trading by market participants and regulatory approach to such activities.

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

- 33. 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?**

Please see Section III for a discussion of our recommendations regarding data reporting to the official sector.

- 34. 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?**

- 35. 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?**

36. Should repurchase agreement transactions be reportable?

Please see Section III for a discussion of our recommendations regarding data reporting to the official sector.

37. What criteria should be used to determine who should report to the official sector? Should both counterparties (buyer and seller) be required to report a trade or is one-sided reporting preferable? Should reporting requirements depend on the platform or execution method? Should only a subset of participants, such as brokers, dealers, futures commission merchants (FCMs) and commercial bank dealers be required to report transactions? Should other parties to a transaction, such as banks and PTFs, be required to report? Should trades executed on automated trading venues be reported by those venues and not the individual brokers, dealers, FCMs, bank dealers, etc. transacting on such venues?

Please see Section III for a discussion of our recommendations regarding data reporting to the official sector.

38. 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?

Please see Section III for a discussion of our recommendations regarding data reporting to the official sector.

39. For those instruments subject to official sector reporting requirements:

- 40. Should all transactions be subject to the same reporting time requirement? Are the answers different for different types of transactions or instruments?**
- 41. Should cross market transactions have special indicators to link the different legs of the transactions?**
- 42. Are there specific trades and/or trading strategies that should be considered for additional identification to ensure that regulatory organizations can accurately interpret the data (similar to Dollar**

Rolls or Stipulations on deliverable collateral in mortgage to-be-announced trading)?

- 43. Are there other industry practices and/or special situation information that should be considered for reporting?**
- 44. Should trade allocations be reported? Are there any special pricing issues that should be considered (e.g. mark ups, commissions, ATS fees) or is dollar price adequate for determining the price of the trade?**
- 45. Should settlement date and/or other settlement terms be reportable?**
- 46. Are there any special considerations/conditions for determining the time that a trade is executed? Does this differ across trade types or venues?**
- 47. 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?**
- 48. Should transaction counterparties be identified uniquely or categorized by counterparty type? If the latter, what counterparty types should be identified? Are there generally accepted definitions for these categories of counterparties?**
- 49. For transactions that are already subject to reporting requirements to the official sector, are there particular data standards or identifiers that should be used for the reporting of transactions in the Treasury cash market to aid harmonization? What transmission protocols, data standards and identifiers should be utilized to enhance authorities' ability to integrate data, share information and cooperate on analysis, for both existing and new data reporting?**
- 50. 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?**

Please see Section III for a discussion of our recommendations regarding data reporting to the official sector.

51. For those securities subject to official sector reporting requirements:

- 52. 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?**
- 53. 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?**
- 54. Are there additional elements that are important for regulators to understand beyond the categories of quote/order originator, price, size and time of the order (e.g., inventory or position data)? Should the type of an order or any special order instructions be collected? Should all order changes be reported? Is the answer different for electronically submitted versus voice submitted orders?**
- 55. Should the submitter of a quote and/or order be identified uniquely or categorized by counterparty type? If the latter, what counterparty types should be identified? Are there generally accepted definitions for these categories of counterparties?**

Please see Section III for a discussion of our recommendations regarding data reporting to the official sector.

- 56. 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?**

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

Please see Section III for a discussion of dealers' existing infrastructural capabilities relating to data reporting and costs associated with implementation of such capabilities.

58. 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?

59. 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?

60. Would one approach impose fewer burdens on smaller reporters than another? If so, why and by how much?

61. Is the answer different for trades, orders, quotes, or execution methods?

Please see Section III for a discussion of operational and market factors and potential negative consequences associated with official sector data reporting and collection.

62. What additional infrastructure would be necessary for market participants to begin reporting comprehensive U.S. Treasury market transaction data? Should reporting requirements be phased in? If yes, how and why? Does phasing affect the cost of implementation for market participants? What transmission protocols, data standards and identifiers should be utilized to minimize reporting burdens?

Please see Section III for a discussion of market participants' infrastructural capabilities relating to trade data reporting and potential costs associated with the development of such infrastructure, and of our recommendations regarding data reporting to the official sector.

63. 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?

Please see Section III for a discussion of potential competitive implications of data reporting to the official sector.

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

65. 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?

Please see Section IV for a discussion of the public availability of information regarding U.S. Treasury market trading activity and our recommendations regarding Treasury's consideration of potential enhancements to public reporting of such activity.

66. 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?

Please see Section IV for a discussion of the public availability of information regarding U.S. Treasury market trading activity and our recommendations regarding Treasury's consideration of potential enhancements to public reporting of such activity.

67. If additional public transparency is necessary at the transaction level, what is the most appropriate level of transparency for publicly available data on trading in the secondary market? Should additional public transparency be phased in over time in any way? Should all quotes and/or orders in the inter-dealer market be made public, or just “top of book”? What characteristics should be reported (e.g., participant type, aggressor side, volume, price)? Should the release of any or all of the data be in real time or delayed? Should the available data differ depending on the age of the security, size of the transaction or other characteristics of a particular security or transaction?

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68. 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?

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69. 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:

70. Should information about order types, agreed upon fee arrangements, user agreements, and/or brokerage agreements be disclosed?

71. Should the degree to which subscribers to the platform may limit their interaction with or exposure to other subscribers be disclosed?

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

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