

April 2016

**PRUDENTIAL
FIXED INCOME**
A PGIM Business

U.S. Department of the Treasury



Request for Information

Questions for Public Comment

Treasury requests comment on the questions below. These questions are intended to solicit views on the implications of changes to U.S. Treasury market structure, including changes to financing markets (i.e., the repurchase agreement market) using Treasury securities, for liquidity provision, and market functioning. We also welcome any input on the current market structure and how participants believe U.S. Treasury market structure will evolve in the coming years.

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.

There is strong evidence that the demand for liquidity has increased significantly across the different segments of the U.S. Treasury market. On-the-run premiums are relatively high despite sizeable and frequent issuance (Exhibits 2 and 3). We believe the anonymity, liquidity, and implicit leverage embedded in futures contracts are causing prevalent “richness” of those instruments relative to comparable cash Treasury securities (Exhibit 8). Nominal Treasury securities as a whole are pricing at a discount relative to comparable risk-free interest-rate curves (Exhibits 5 and 7). Off-the-run Treasuries have become significantly less liquid relative to on-the-run (OTR) Treasuries, futures contracts, and interest-rate swaps. The lack of liquidity in off-the-run issues can be so severe during times of stress that we will refrain from transacting in these securities given their extremely wide bid/ask spreads. Finally, TIPS suffer from an illiquidity price discount (Exhibit 4) considering that they are significantly less liquid than nominal Treasury securities or inflation linked interest-rate swaps.

Factors contributing to these pricing dynamics include: a) regulatory frictions imposed on primary dealers, resulting in limited risk taking capability and/or balance sheet capacity,¹ b) limited access to balance sheet for non-dealer entities, particularly for repurchase agreements, and c) an evolving market structure away from over-the-counter (OTC) voice execution towards an electronic, centralized structure. This evolution has resulted in the ascent of IDB platforms that arguably enhance the liquidity of futures and OTR Treasury securities, while worsening the liquidity in off-the-run Treasury securities.

As noted, one of the major factors affecting pricing dynamics has been the added/increased capital requirements for dealers, constraining their ability to hold positions on their balance sheets. In addition, the scrutiny on dealers’ balance sheets has increased as the frequency of balance sheet reporting has accelerated from quarterly to monthly—and in some instances, even daily. Within the cash Treasuries market, these regulations have contributed to wider bid/ask spreads and have affected trade sizes. In particular, the liquidity in coupon STRIPS has decreased as there are a limited amount of broker/dealers that trade these securities, resulting in dramatically wider bid/ask spreads.

Another indication of liquidity in the Treasury market can be observed in the relationship between Treasuries and interest-rate derivative curves, such as LIBOR and the overnight-index swap (OIS). Based on these measures, Treasuries have priced near historically cheap levels on a relative basis over the past year.

In addition, please consider the following questions, as applicable:

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

We define liquidity as the extent to which an asset can be bought or sold within a minimal bid/ask spread. It is the ability to convert cash into the acquisition of an asset with a minimal loss in value, or the ability to sell an asset for cash with a minimal loss in value.

We define liquidity provision as the ability to quickly transact at a single price and point in time—in large size—with a dependable and consistent bid/ask spread in all market environments. Liquidity provision also encapsulates the role of principal risk takers to provide liquidity, warehouse risk, and otherwise distribute risk into the market in an orderly way.

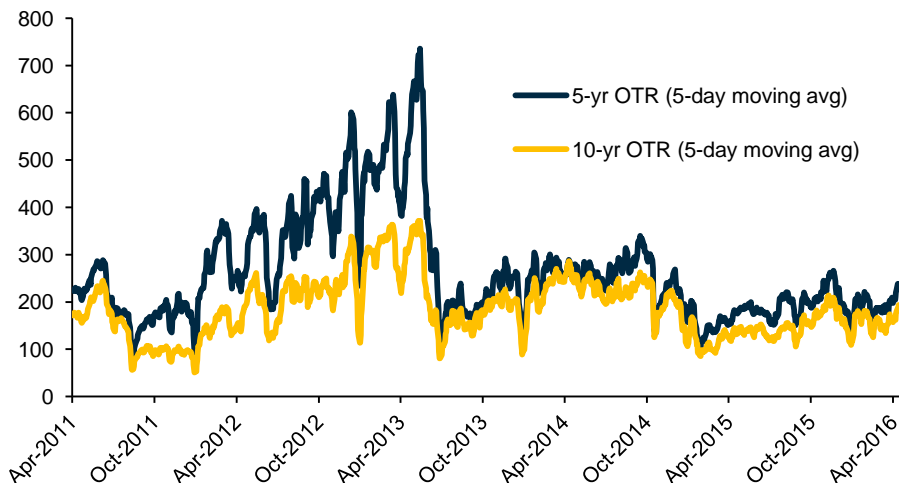
¹ SLR and capital requirements.

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?

We consider volume traded within a minimal time window, within a tight price bid/ask spread as the most indicative measure of the degree of liquidity.

We also consider the quantities that can be transacted behind the bid or offer as indicative of the depth of the market, as depicted in Exhibit 1.

Exhibit 1. Market Depth: OTR Treasuries (\$ billions)

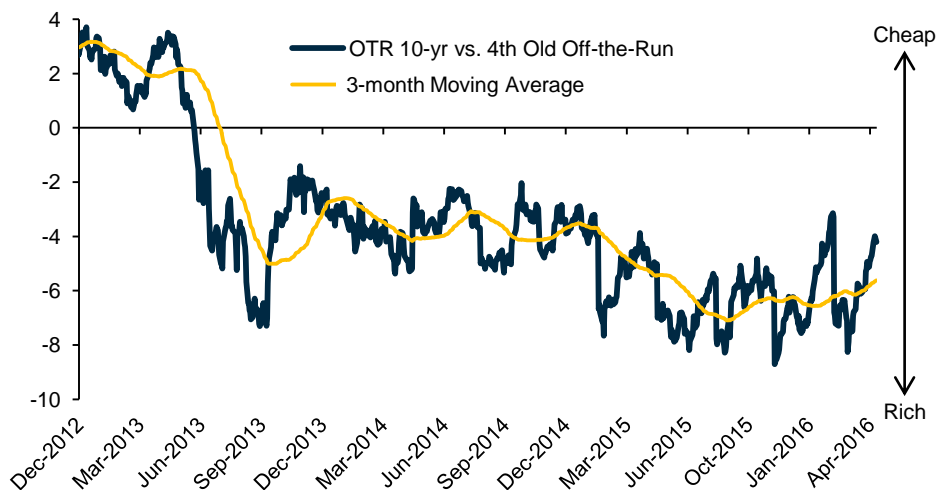


Source: JP Morgan as of April 2016. Market Depth is defined as the top 3 bids plus the top 3 offers, divided by two. A snapshot is taken every 5 minutes between the hours of 8:30 and 10:30am, and then the 24 snapshots are averaged.

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

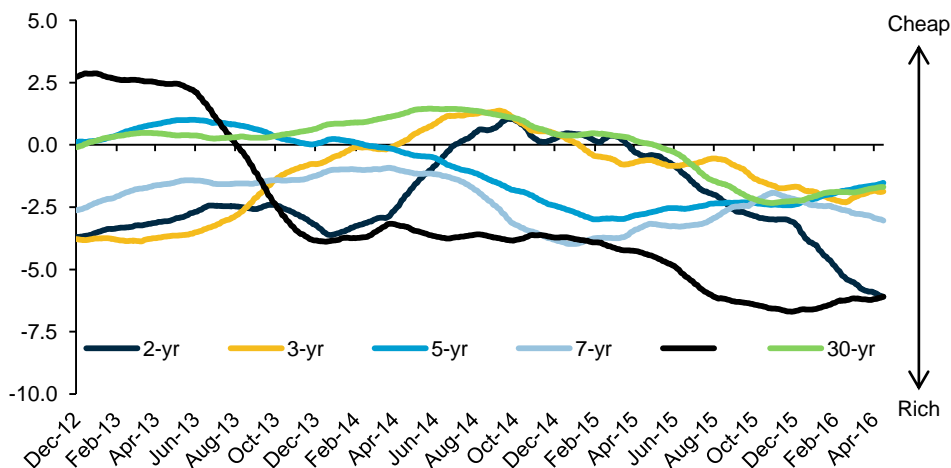
There are a number of different indicators that reveal relevant levels of liquidity that are priced into different segments of the Treasury market. One such indicator is commonly referred to as “on-the-run liquidity premium,” as measured by a fitted-yield curve / yield-deviation differential between the 4th old off-the-run issue versus the current on-the-run, as observed in Exhibit 2. And as seen in Exhibit 3, OTR Treasuries have richened versus an off-the-run equivalent across the yield curve.

Exhibit 2. Liquidity Premia: OTR 10-Year vs 4th Old: Yield Deviation, Daily Observations with 3-month Moving Average Trend Line (bps)



Source: Prudential Fixed Income and Bloomberg as of April 2016.

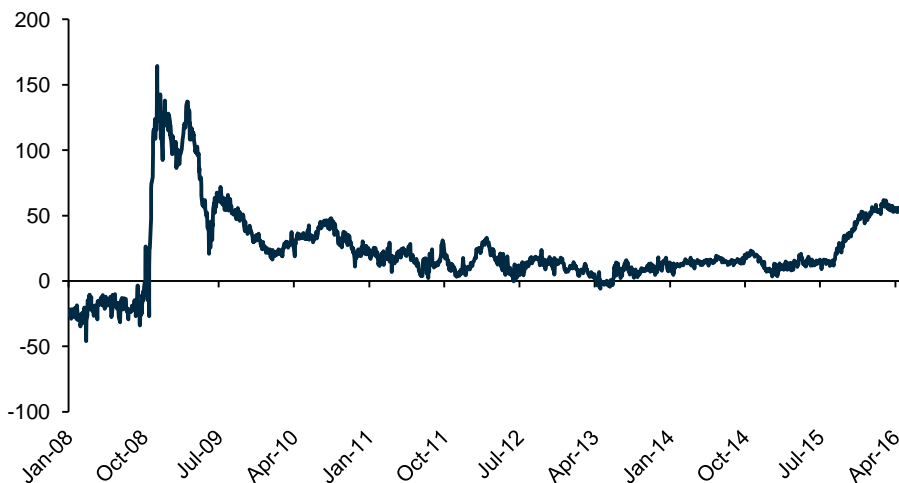
Exhibit 3. Liquidity Premia: OTR vs 4th Old Yield: Deviation (Rolling 6-month Average) (bps)



Source: Prudential Fixed Income and Bloomberg as of April 2016.

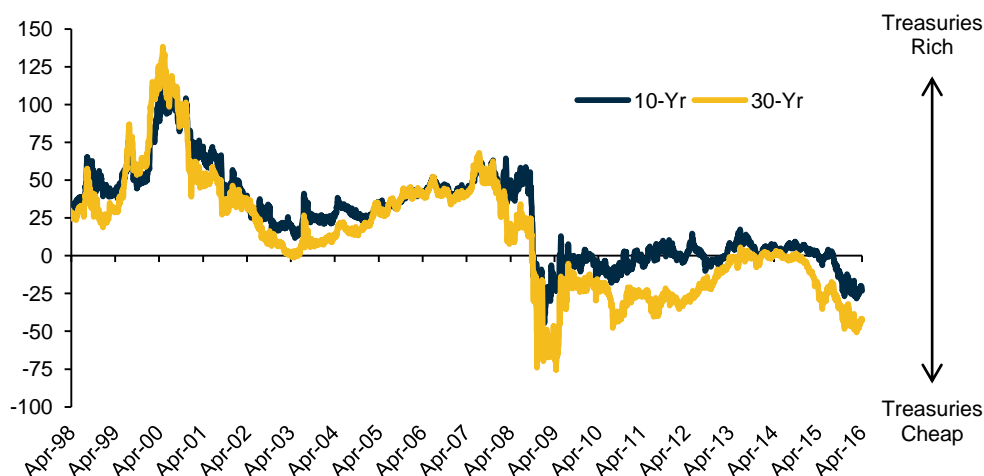
In addition, there is evidence that some illiquid segments of the Treasury market, such as the TIPS market, suffer from an illiquidity yield premium, as observed in Exhibit 4.

Exhibit 4. TIPS' Illiquidity Yield Premium (bps)



Source: Prudential Fixed Income, Bloomberg as of April 2016. The TIPS Illiquidity Premium is calculated as the difference between the 10-Year Zero Coupon Inflation Swap Rate (per Bloomberg) and the implied average 10-Year inflation rate derived from Prudential Fixed Income's fitted spot U.S. Treasury and U.S. TIPS models. We then back out Prudential Fixed Income's fitted nominal 10-Year Swap Spread. The bps differential is our proxy for the premium commanded by investors for investing in cash Treasury Inflation Protected Securities.

Furthermore, the comparative valuation of Treasuries to interest-rate derivatives, such as futures contracts and interest-rate swaps, indicate that the cash securities trade cheap, potentially compensating investors for their relative illiquidity when compared to the associated derivatives.

Exhibit 5. The Richening of Fitted Swap Spreads (Difference between Modeled Par Libor and Par Treasury Rates) (bps)

Source: Prudential Fixed Income as of April 2016.

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

The resilience of liquidity can be measured by the depth of the market and the bid/offer spreads that are prevalent in all market environments. More specifically, we may consider the average trade size that can be completed within a bid/offer spread. For example, large trade sizes at a specific level could indicate that market participants are completing trades at their desired sizes, indicating broader acceptance of price levels and a market with fluid two-way flows. These conditions can reflect the resilience of liquidity as large trades are executable within a tight bid/offer in a consistent manner.

As has been previously described and observed in certain occurrences, such as the market events of October 15, 2014, the resilience of liquidity has potentially become less dependable. In periods of muted volatility and relatively normal market conditions, participants using high-frequency trading techniques appear to help liquefy activity across the electronic trading platforms. However, bouts of increased volatility—October 15, 2014, for example—indicate that liquidity availability may be withdrawn to some degree as volatility increases. Indeed, the variations in liquidity conditions that were described in the Joint Staff Report regarding the events on October 15, 2014, reflect some measures of ample liquidity, such as bid/ask spreads and the yield dispersion around a fitted yield curve. Yet, other measures, including price impact coefficients, surged on October 15, 2014, indicating that liquidity resilience has become more dependent on market conditions amid the increased presence of principal trading firms (PTFs) and firms using high-frequency trading tactics.

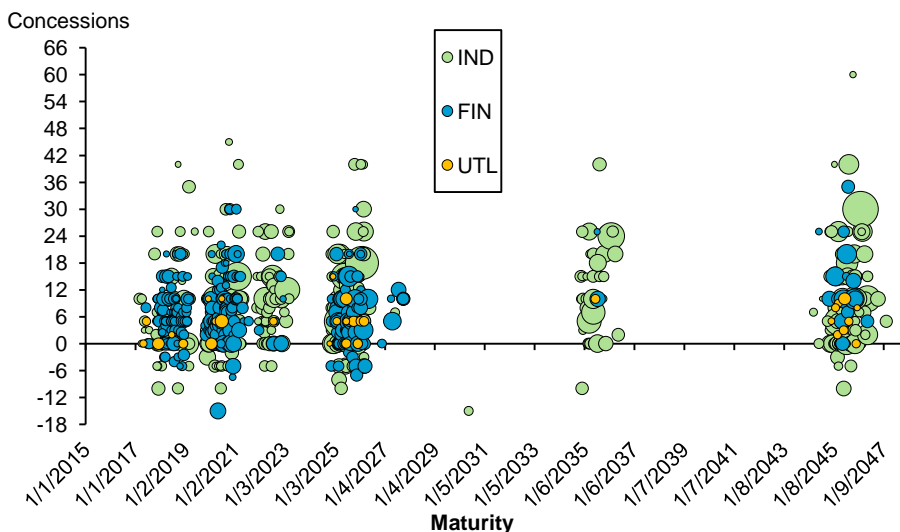
e. To what extent are these measures of liquidity and the resilience of liquidity different from measures used in other markets that have witnessed similar market structure changes? What are the idiosyncratic factors unique to Treasury cash markets that may cause these measures to differ?

In comparing the Treasury market to the corporate bond market, for example, the former has several unique characteristics. One of the foremost features is that Treasuries are relatively homogeneous securities and, therefore, are better suited for electronic trading and the potential use of algorithmic trading strategies. The use of Treasuries for collateral also supports demand for the securities during volatile periods and could consequently enhance liquidity in the Treasury market in these instances.

The heterogeneous characteristics of corporate securities lend themselves to more bilateral over-the-counter (OTC) trading and make it challenging to effectively utilize algorithmic trading strategies. In addition, corporate bond trades are generally smaller in size as there is no central order book within the corporate market.

An additional difference between the asset classes is that Treasuries often command a premium at issuance, while investment grade corporates often require notable spread concessions when pricing, particularly during periods of heightened volatility within the corporate markets.

Exhibit 6. Investment Grade New Issue Concessions (bps)

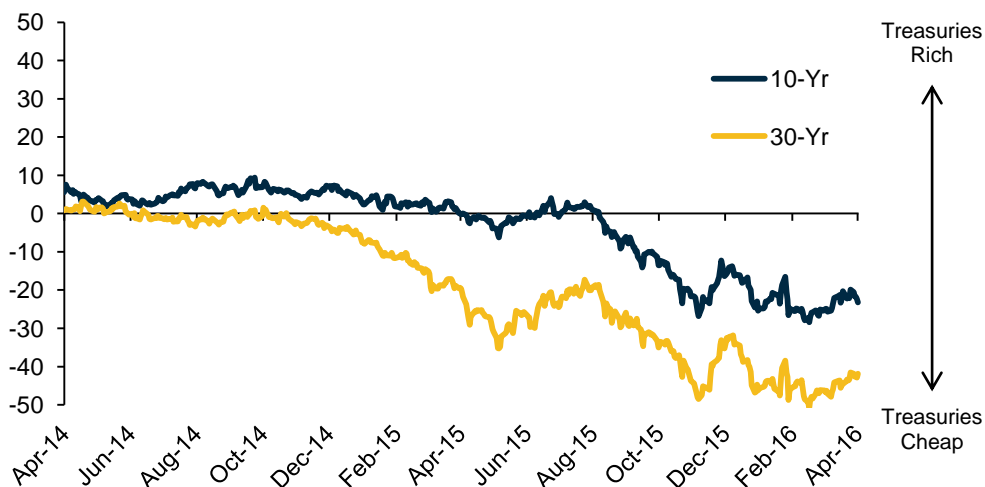


Source: Prudential Fixed Income estimates. Investment grade issuance from 10/27/2014 to 2/23/2016. Data point size scaled by issue book size. Issues less than \$500mm excluded.

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

The following Exhibits display the dramatic, recent richening in interest-rate swap spreads and futures contracts. Most recently, a persistent cheapening of cash Treasury securities versus both interest-rate swaps (swap spreads) and futures contracts (futures basis) reflects: a) less relative liquidity for cash Treasury securities and b) lack of available leverage for cash Treasury securities due to balance sheet constraints.

Exhibit 7. The Significant, Recent Richening in Long-Term Swap Spreads (Fitted Swap Spreads, Difference between Modeled Par LIBOR and Par Treasury Rates) (bps)



Source: Prudential Fixed Income, Bloomberg as of April 2016.

Exhibit 8. A Similar Dynamic Has Recently Occurred with Futures Contracts

Source: Prudential Fixed Income, Bloomberg as of April 2016.

g. 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?

For relatively small Treasury trades, liquidity during normal market conditions has been enhanced by electronic trading platforms, high-frequency trading techniques, and central order books. However, in terms of liquidity provision, the increasing influence of these combined factors may impair principal risk takers to effectively provide ample liquidity. The speed advantage and volume concentration among PTFs and high-frequency traders (HFTs) on inter-dealer broker (IDB) trading platforms calls the dependable nature of their underlying liquidity into question. From our perspective, the lack of dependable liquidity present in IDB platforms inhibits primary dealers' risk taking ability when pricing dealer-to-client flow.

Electronic trading platforms, such as TradeWeb and Bloomberg, have increased the trading efficiency for buy side firms in the request-for-quote (RFQ) format when transacting with primary dealers. Straight through trade processing also increases efficiencies and helps limit trade input errors.

Electronic futures trading and central limit order books have increased participation and broadened the use of futures contracts. Trading costs have decreased and ease of execution has made futures contracts more economically feasible.

PTFs—or those conducting high-frequency trading tactics—have generally been an impediment within the Treasuries market. These firms generally impede dealers' ability to provide liquidity to end users. In our opinion, suggestions that PTFs could eventually replace dealers are tenuous because most of these firms are less regulated than dealers, hold minimal amounts of capital, and the potential failure of one, or several, of these entities could contribute to widespread systemic risk.

In addition, PTFs generally do not take principal risk as they tend to conclude each day with flat exposures. Rather, it is the dealer participants that remain the principal risk takers, and as a result, they promote trading functionality throughout the primary and secondary markets.

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?

Changes in the Treasury market's structure have required longer time horizons for investment transactions. For example, when transacting in large size, longer time frames are needed in order to execute at the best price given a lack of market depth. Longer time horizons not only pertain to hedging or risk reducing transactions (see above), but also pertain to non-hedging or alpha producing strategies as well.

Another change we've observed is that dealers are disincentivized to provide leverage via the repo market due to regulatory constraints.

Coupon STRIPS have also become less liquid due to increased capital charges. Off-balance-sheet securities, including futures contracts, have consequently richened as they are preferred over cash securities as indicated by the increase in implied repo rates.

Dealers are also less likely to hold positions, and they rely on the brokers' screens, which increases volatility in the Treasuries market. In the past, it was easier for dealers to absorb positions, requiring less buying and selling across the brokers' screens and, therefore, limiting price movements of the respective securities.

In addition, derivatives, such as Treasury futures, drive the pricing of their cash equivalents in the current environment. Thus, cash Treasuries derive their value from the more liquid futures contracts given the latter's ease of transaction, tight bid/ask spreads, and transaction anonymity.

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?

During periods of heightened volatility, off-the-run Treasuries have become significantly less liquid relative to OTR Treasuries, futures contracts, and interest-rate swaps. The lack of liquidity can be so severe, that we will refrain from transacting in off-the-run securities during times of stress given the extremely wide bid/ask spreads. Under these conditions, larger trades could incur a greater cost due to the market's relative "thinness." It is an environment where dealers are forced to charge more due to their inability to warehouse risk for notable periods of time.

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?

Absent further regulatory changes, supplementary leverage ratios and increased capital requirements could continue to reduce the economic justification of liquidity providing businesses. Given that HFTs and PTFs are not typically bound by the same level of regulation, they may continue to gain market share and potentially crowd out primary dealers. The potential "equitization" of the market through a central order book is becoming a possibility in the minds of some participants.

We will continue to increase our access to and use of technology, including electronic trading platforms, such as TradeWeb and Bloomberg. As our use of technology continues to expand, our trading practices could potentially shift to smaller lot sizes, fewer block trades, and more frequent trading.

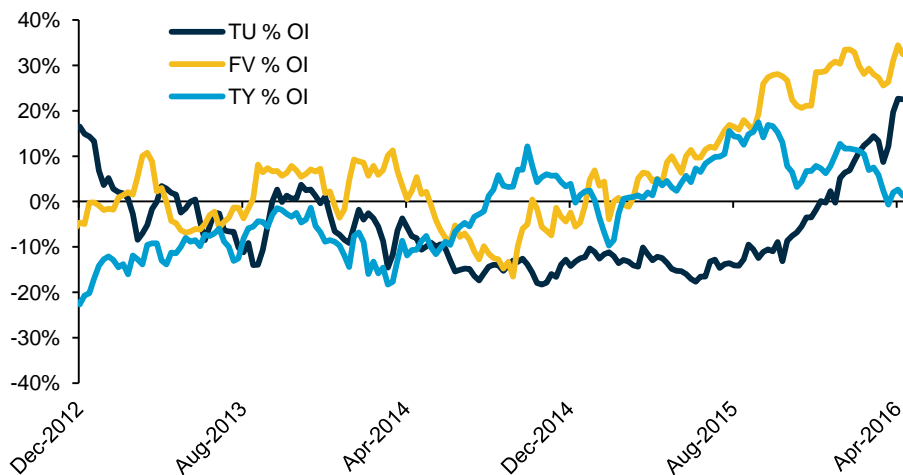
In terms of potential changes in market structure, suggestions for a clearinghouse structure for the repo market could greatly improve liquidity in the Treasury market. Centrally cleared repo would limit dealers' capital needs for existing repo positions and would economically incentivize greater participation. Counterparty risk would marginally decrease as the clearinghouse would theoretically offer better credit than an individual firm. However, obtaining the capital required to start a clearinghouse may prove challenging, but should not prevent its development. The eventual creation of a clearinghouse could be encouraged and/or driven by the Treasury Department, other regulatory entities, or by market participants if the liquidity in repo markets hinders properly functioning markets. One notable step is that firms would need to create the requisite documentation process before trading through the clearinghouse.

A clearinghouse for the financing market could improve liquidity in the U.S. Treasuries market as long as enough market participants are permitted and/or able to participate. Dealers already have access to the Fixed Income Clearing Corporation (FICC) for dealer-to-dealer transactions, so a central clearinghouse would need to include other market participants for the central clearinghouse to add value. Insurance companies, REITs, supranationals, foreign central banks, asset management companies, money market funds, regional banks, and securities lenders would need to be able to utilize the central clearinghouse in order for it to add value. The cost or ability of funding the central clearinghouse may be prohibitive for some of these entities, but as each entity enters the central clearinghouse, liquidity will increase in the financing market as more of the market activity is removed from dealers' balance sheets.

We also anticipate market participants may continue migrating towards futures contracts in lieu of cash Treasuries given the anonymity, liquidity, and implicit access to leverage. As observed in Exhibits 9-12:

1. Asset managers have continued to build net open-interest positions across the futures complex, according to data compiled by the CFTC.

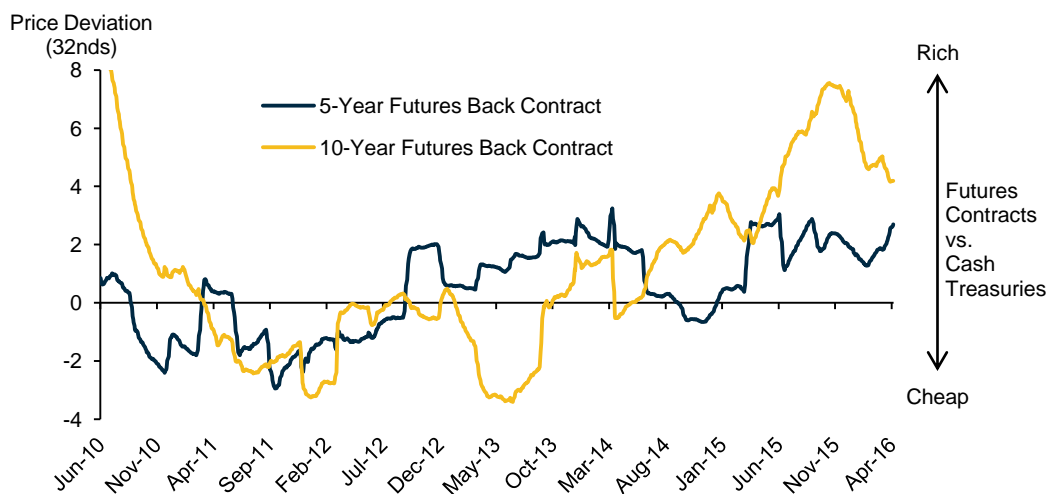
Exhibit 9. Asset Manager Net as % of Total Open Interest



Source: U.S. Commodity Futures Trading Commission, Bloomberg as of April 2016.

2. As a result, much of the futures complex trades “rich” to cash Treasuries of similar tenors.

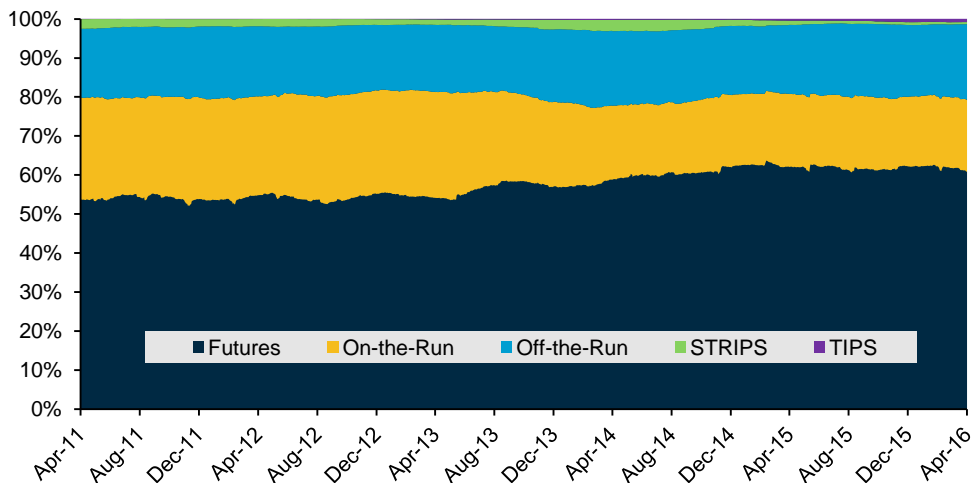
Exhibit 10. The “Richening” of Futures Contracts



Source: Prudential Fixed Income as of April 2016.

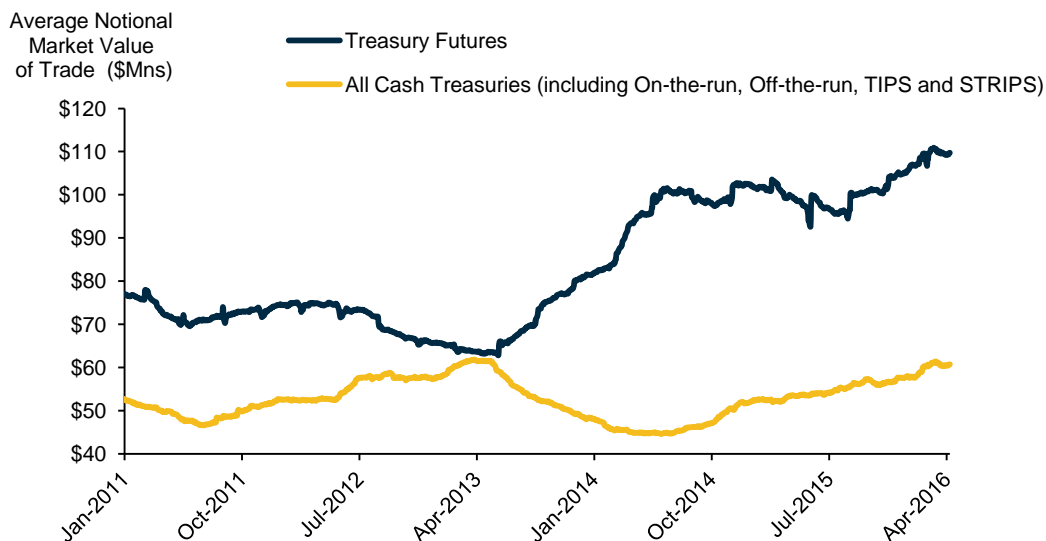
3. Our own internal transaction data show the increase in trade frequency and trade volume in the futures complex relative to cash Treasury securities over the past several years.

Exhibit 11. Prudential Fixed Income: More Frequent, Higher Volumes of Futures Trades vs Cash Transactions
 (% of Treasury Transactions, in Notional Market Value, Rolling 1-Year Average)



Source: Prudential Fixed Income as of April 2016.

Exhibit 12. Prudential Fixed Income: Average Treasury Trade Size (with Notional Market Value above \$10mm), Rolling One-Year Average.



Source: Prudential Fixed Income as of April 2016.

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 the development of a repo clearinghouse would have a positive effect on the market and would generally be regarded as a utility within the marketplace. It could increase the availability of leverage, and as a result, the Treasury could likely experience a reduction in funding costs. The implementation of a swaps clearinghouse may serve as a model for the development of a repo facility.

A couple of initiatives could be used to improve liquidity in the STRIPS market. One option is to make principal and coupon STRIPS fungible, similar to other developed rates markets. The key benefit would be to increase liquidity in coupon STRIPS, thus improving liquidity in these bonds and in the Treasury market as a whole. Another option, given the persistent demand for very long-duration principal STRIPS, is for the Treasury itself, in a regular and predictable manner, to issue a 30-year zero-

coupon bond. This would eliminate the need for primary dealers to strip coupon-bearing bonds while alleviating balance sheet pressures from shorter-dated residual coupon cash flows. There is also the potential for the Treasury to issue these securities into a liquidity premium given their demand.

In addition, the Treasury could create a buyback program that buys discounted, less liquid issues in the open market. By buying cheap issues and funding the buybacks with issuance of rich on-the-run securities, the Treasury could enhance liquidity in these issues, while decreasing its borrowing costs. A buyback program could also alleviate some dealer positions that have become balance sheet intensive. Furthermore, dealers could be more likely to buy securities from investors if they know that the Treasury may be an eventual buyer of that security. We believe investors would be willing participants in such a buyback program as it would offer an opportunity to move into more liquid issues.

Another change could involve the Treasury's issuance of 20-year securities to fill in the 15 to 20-year part of the yield curve with a current-coupon issue rather than a more seasoned, off-the-run position offering less liquidity in the cash market.

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?

Firms using high-frequency trading tactics essentially align with on-the-run securities on electronic platforms and maintain market depth in these securities under normal market conditions. However, when conditions change, the risks presented by their ubiquitous market presence manifest in rapidly deteriorating liquidity and heightened potential for an algorithmic failure (as was the case with Knight Capital). We believe capital requirements for HFTs and PTFs could reduce the risks posed by such failures.

Policy makers could consider making firms that use low-latency, algorithmic trading strategies without assuming principal risk overnight to assume some level of principal risk. Given that PTFs represent 50% of the daily trading volumes without accepting principal risk on a closing basis, this underscores their objective of miniscule, short-term gains without improving market functionality.

1.7 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?

Liquidity in the cash Treasury market has decreased as a result of changes in the financing markets. The move to off-balance-sheet trades, such as those involving interest-rate futures and interest-rate swaps, is reflected by the increase in the implied repo rate of futures contracts and deeply negative swap spreads.

To reiterate a prior suggestion, a clearinghouse structure for the repo market could greatly improve liquidity in the Treasury market. Centrally cleared repo would limit dealers' capital needs for existing repo positions and would economically incentivize greater participation. Counterparty risk would marginally decrease as the clearinghouse would theoretically offer better credit than an individual firm. Again, obtaining the capital needed to start a clearinghouse may prove challenging, but not insurmountable.

We believe that regulations have reduced the amount of balance sheet that is available to the financing market. The reduction has been extensive and the impact is visible in wider bid/ask spreads and wider spreads between money market tri-party rates and general collateral finance (GCF) repo rates. A clearinghouse could alleviate some of this pressure, but as previously stated, the clearing house concept is not a panacea if all or most market participants cannot or will not participate.

1.8 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?

Our firm generally does not internalize trading.

Questions for Public Comment

We request comment on the questions below. We are interested in what further steps the public and private sectors can take to address any outstanding risks, including operational risks to market functioning and risks to market integrity. We are also interested in the extent to which rules and practices applicable in other markets may be effective, in whole or in part, in improving the resilience of U.S. Treasury markets.

No comment.

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:

We cannot verify the risk management practices at other entities. One potential adjustment to risk management controls is that HFTs and PTFs should be subject to heightened regulatory oversight given their large share of the daily trading volume.

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.

In our opinion, the use of a central counter party, such as the FICC, for high-frequency and principal-trading firms would contribute to more resilient market operations. Given the increased market presence of firms providing alternatives to the traditional registered broker/dealers and banks, the benefits provided by the CCP—including settlement netting, margin requirements and risk protocols—would benefit all market participants. The additional controls provided by a CCP would help to ensure that traditional market participants are appropriately aligned with other non-traditional liquidity providers. This is increasingly important as institutional investors who transact in the dealer-to-customer part of the market increase their focus on counterparty risk while relying upon the settlement efficiency in this highly liquid market.

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?

We believe it may be too difficult to initiate a trading halt in an over-the-counter venue, such as the Treasuries cash market. It is unclear if trading halts even calm market conditions, or just cause additional panic as investors rush to execute trades before another trading halt takes place.

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

If the technology is available to conduct such monitoring, the platforms should report activities that they deem as suspicious.

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?

No comment.

2.3 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.

No comment.

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?

The Treasury Market Practices Group (TMPG) best practices recommendations are broadly aligned with the risk management framework for large institutional investors. While some components of the recommendations are only applicable to the dealer community, the overall concepts are consistent, and our firm adheres to the recommendations where applicable. The benefits to the practices have been most evident in the fail charge implementation, where the observed fails across the market have been reduced, thus limiting the counterparty exposure for our client accounts. The best practices reinforce market integrity by eliminating ambiguity via a set of uniform procedural steps. That said, the best practices are a set of recommendations, and they may not be followed by some participants in the dealer-to-customer portion of the market. These participants would mostly include non-U.S. institutional investors whose local regulations may be in conflict with certain aspects of the recommendations.

2.5 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:

a. 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?

Margining practices provide a great example of the value of "knowing your customer," and the need for all parties in a transaction to conduct due diligence. For example, intra-day margining is not applicable to the institutional investor base. Even if it were possible, an extension of this concept to institutional investors would provide little benefit. Overall, we believe current margining practices are sufficient. However, for less regulated participants with minimal capital buffers, we believe intra-day margining requirements would have merit.

b. 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?

The concept of loss mutualization remains the largest obstacle in any central clearing model. Institutional investor separate accounts, mutual funds, and other investment vehicles do not introduce systemic risk into the clearing environment and, therefore, have limited ability to share in the losses of a central clearing platform. There has been a lot of research conducted on these topics following the recent swaps clearing conversion. For example, the various central counterparty clearing (CCPs) houses have different models, and the collateral segregation models vary as well. Thus, the concept of centrally clearing cash transactions would encounter the same challenges that exist with centralized swap clearing.

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:

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?

A registration requirement for firms using high-frequency trading tactics would improve market structure and efficiency, investor protection, and market oversight. Although the registrants will incur some additional costs, the benefits would outweigh the costs for the broader market.

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?

Yes, we believe these firms should be subject to the proposed standards. Indeed, many other market participants are already subject to these requirements, particularly those entities designated as Systemically Important Financial Institutions (SIFIs). Subjecting PTFs to the proposed standards would create a more level playing field across the Treasuries markets.

2.7 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?

No comment.

Questions for Public Comment

We request comment on the questions below. The questions in this section of the RFI seek information about which U.S. Treasury market data the official sector should have regular and ongoing access to. We are also interested in views regarding the potential for additional coordination across futures and cash markets, as well as interest rate swaps and options. These questions relate to the provision of U.S. Treasury market data to the official sector. Accordingly, while there may be considerations regarding data dissemination to the public that may be relevant to the answers to the questions posed in this section, those considerations should not factor into the answer to these questions (unless otherwise noted), but should be addressed, to the extent applicable, in Section IV.

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?

The cash and futures markets are inherently integrated and both are widely used by market participants, so each needs to be monitored. While some investors may strictly use one market and not the other, only monitoring one market may miss some trading practices that influence market developments. In addition, if participants know that only one of these markets is being monitored, entities seeking to avoid regulatory attention could migrate to the unmonitored market. In general, data collection should include security identifiers, transaction sizes, and transaction price for both the cash and futures markets.

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?

Generally, all transactions should be reportable to the official sector. Transaction level data, including instrument, size, and price, should provide a sufficient level of granularity.

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?

We believe all securities transactions should be reportable.

b. Should repurchase agreement transactions be reportable?

We believe that repurchase agreement transactions should be reportable.

3.3 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?

One sided reporting would be preferable. Ideally, this should be done by the broker/dealer and not based on the entity that bought or sold the security. For small investment firms, reporting trades may not be economically feasible, and dealers already have the infrastructure in place.

In addition, our experience with the reporting requirements mandated by European Market Infrastructure Regulation underscores the administrative burden—with no apparent benefit—of dual reporting regulations.

We believe that reporting for the financing market should be done at the primary dealer level, and they should report all trades—bilateral, tri-party and GCF. Smaller broker dealers and most other market participants do not have the scale or resources to report all financing trades, and reporting could place them under an undue burden. As previously indicated, primary dealers already have the infrastructure in place to complete this type of reporting. Capturing all primary dealer activity, in addition to the data already collected by the Fed on tri-party and GCF repo, should capture most of the activity in the financing 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?

The burden of transaction reporting should lie with the primary dealers, and end investors should not be subject to such requirements.

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?

We believe all trades should be subject to the same reporting requirements.

b. Should cross market transactions have special indicators to link the different legs of the transactions?

No comment.

c. 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)?

If the official sector deems that certain identifiers would assist in accurately interpreting the data, then they should be considered.

d. Are there other industry practices and/or special situation information that should be considered for reporting?

We believe the reporting model should be congruent with OTC derivatives reporting.

e. 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?

We believe that trade allocations should not have a reporting requirement as it would necessitate a significant burden on end users. Rather, we believe dollar price is adequate for determining the price of the trade.

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

In our opinion, we believe all trade dates and settlement terms should be reported.

g. Are there any special considerations/conditions for determining the time that a trade is executed? Does this differ across trade types or venues?

The time of a trade can be an important consideration as a large trade during the overnight trading session may be considered a small trade during New York trading hours. Indeed, minimum sizes on block futures trades overnight are lower than those during New York trading hours.

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?

We do not consider the method of transaction as an important factor for reporting. Specifically, trades on request-for-quote platforms tend to be smaller in size and additional transparency on these trades will seemingly offer little benefit to the market as a whole.

i. 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?

In our opinion, transacting counterparties should be identified by type and not by unique identifiers. Counterparty identification could hurt liquidity as counterparties conducting large trades may be reluctant to trade if they know the rest of the market could recognize that they entered a large position and have the inability to warehouse the position for a long period of time.

If additional information is needed due to possible market manipulation, data can subsequently be examined to identify the counterparty uniquely. For example, if a specific Treasury issue is in high demand, the regulators could request a position report. For on-the-run reporting, the category types used in the CFTC's Commitment of Traders report would be appropriate for the approach stated above.

j. 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?

For transactions that are already subject to reporting requirements, Dodd-Frank derivatives reporting requirements could be a useful model in the harmonization of trade 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?

No comment.

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?

We believe that quotes and orders should be reported as this may reveal how the price and quantity for orders may change while they are live. Electronic orders are more easily monitored than voice orders. The reporting of quotes being submitted for Treasury securities could allow the official sector to monitor the validity and dependability of liquidity being presented on electronic trading platforms.

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?

In our opinion, the order should be reported 24 hours after it is filled or cancelled.

c. 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?

In addition to order data, position data is also important to collect as it may determine if a market participant is trying to manipulate a security. Changes in the price and/or quantity for the orders should be monitored as well.

d. 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?

In our opinion, the submitter of a quote and/or order should be identified by type and not by unique identifiers.

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?

Time stamping transactions, orders, and quotes at a certain clock precision would only be possible for electronic trades. This could include trade reporting and order reporting for all Treasury-related products, which would mostly pertain to HFTs and PTFs. This level of reporting would be too difficult for voice information.

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?

No comment.

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 major operational issue is the cost involved with the data collection. It raises the question of whether the technology is available to report without incurring significant costs. In general, the cost to provide data and answering inquiries about the data are the negative consequences of reporting.

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?

No comment.

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

No comment.

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

No comment.

3.10 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?

Our experience with the regulatory reforms that have been implemented in recent years indicates that phased approaches to any changes provide the best chance for smooth implementation, and phasing does not typically affect implementation costs. Longer time horizons, clear reporting protocols, and the ability to leverage existing market infrastructure are all key steps toward efficiently implementing changes. For example, the ability to leverage the "Legal Entity Identifier (LEI)," is a data element that could remain consistent across specific reporting regimes. Additionally, clearly defined data standards that are widely used across the industry are critical to minimizing the operational burden for any reporting regime that may be implemented.

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?

As it pertains to the swap market, data can show the reaction of swap spreads the morning after a risk-off event, as duration receivers need to utilize a swap executing facility (SEF) in order to initiate interest-rate swap positions. The swap transaction has to be shown to a minimum of three dealers and is immediately reported to the swap data repositories. Therefore, the competition may immediately know what positions are being warehoused by competitors. This may make it difficult for a swap dealer to provide liquidity and could lead to additional volatility as well as wider bid/ask spreads.

Questions for Public Comment

We request comment on the questions below. We are interested in the appropriate level and form of data about Treasury market activity that should be made available to the public. This includes use of transmission protocols, data standards and identifiers to facilitate the public's ability to link and integrate data.

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 consider the publicly available information for U.S. Treasury market trading as sufficiently transparent. As an end user, we see little benefit in disclosing actual transactions. It is incumbent upon those who need to source liquidity—due to transaction sizes that are larger than the social dealing size—to, over time, find some other means for assessing liquidity available in the market. This real-time disclosure can actually be damaging in that it hinders the ability of the market maker to clear risk, thereby leading to even wider bid/offer spreads than otherwise would be required for the initial, end-user transaction.

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?

We believe that transaction cost data for larger trades would be helpful. However, data should not be attributed to an individual market participant. Additionally important information might include the total amount that could be tradable at the specified bid. For example, market participants often only show a portion of a trade that they are willing to execute at a certain price ("iceberg" algorithm). In these cases, the liquidity in the market would be actually more than what is displayed.

4.3 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?

We do not believe additional public transparency is necessary at the transaction level, particularly for less liquid issues. If a trade will be disseminated to the market, dealers will be less willing to show a competitive price for that particular trade. An example of this dynamic occurs on TradeWeb; when a trade is completed, all the dealers that were shown the trade know if it was completed or cancelled. If the trade is large or for an illiquid issue, the losing dealers know that the winning dealer will likely have to hedge that position or will have that exposure on its books.

We believe there are certain trades that might be considered for additional identification. These include: Treasury rolls, where investors sell off-the-run securities to buy on-the-run securities (or vice versa); selling principal STRIPS to buy coupon STRIPS (or vice versa); and selling nominal Treasuries to buy TIPS (or vice versa).

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?

A public reporting model would not benefit market liquidity, in our opinion. In fact, it could likely decrease liquidity.

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:

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

No, we do not believe that this type of proprietary information should be made public. Some of this information may be arbitrary, such as fee arrangements that are usually determined by trading volume.

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

No comment.

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

Yes, we believe sponsor activity on platforms should be disclosed.