

Conference on Treasury Market Structure, October 24, 2016: A Summary

This note summarizes information exchanged at “The Evolving Structure of the U.S. Treasury Market: Second Annual Conference,” held at the Federal Reserve Bank of New York on October 24, 2016. The conference, jointly organized by the U.S. Department of the Treasury, the Federal Reserve Board, the Federal Reserve Bank of New York, the U.S. Securities and Exchange Commission (SEC), and the U.S. Commodity Futures Trading Commission (CFTC), was attended by domestic and international representatives from the official sector, the press, academia, and the private sector. Key issues discussed included (i) official comments on progress regarding Treasury market reform and priorities, (ii) the reporting of data on Treasury cash market transactions, (iii) Treasury secondary market clearing practices, (iv) the future of Treasury market settlement, and (v) the evolution of Treasury market structure.

Welcoming [Remarks](#) by William C. Dudley, President of the Federal Reserve Bank of New York

In welcoming the participants, President Dudley observed that the second conference on Treasury market structure was an important opportunity to continue the dialogue on the changing nature of the Treasury market—a dialogue spurred by the “flash rally” of October 15, 2014, and the release of the Joint Staff Report exploring the events of that day. He noted that significant progress had been made over the past year in our collective understanding of the Treasury market, and expressed his belief that it will be important to pursue official and private sector collaboration on this subject going forward.

Over the past year, Dudley remarked, public and private market participants have provided feedback to officials through the Treasury Department’s Request for Information and through comments on various SEC and CFTC proposals. Officials have also benefited from consultation with groups like the Treasury Market Practices Group (TMPG), an association of market professionals committed to supporting the integrity and efficiency of the Treasury market.

President Dudley also commented on the importance of data collection and the progress that has been made on this front. He remarked that data are indispensable for understanding how flash events—an increasingly common phenomenon across markets—affect market liquidity. Noting the similarity between the 2014 Treasury flash rally and the rapid depreciation and recovery in the British pound in October 2016, Dudley went on to observe that both the Treasury market and the foreign exchange market are highly automated in some market segments, and lack widely available information on trading activity. “As a result, it is challenging for the official sector, market participants, or members of the public to effectively analyze these markets, understand the sources and risks of flash events, or see how liquidity is changing.”

President Dudley summed up his thoughts by reminding the audience that the Treasury market is the deepest and most liquid bond market in the world, and that fuller access to transaction-level

data and improvements in transparency are critical to maintaining the market's role as a risk-free global benchmark.

Remarks by Antonio Weiss, Counselor to the Secretary, U.S. Department of the Treasury

Counselor Weiss discussed how the Treasury and other Joint Member Staffs have undertaken the most comprehensive review of U.S. Treasury market regulatory reform priorities since the early 1990s. Much has changed over the past twenty-five years, including a significant evolution toward more automated and electronic trading. The first electronic trading platform did not come into view until 1999, and now well over half of the volume traded on interdealer brokerage (IDB) platforms can be transacted at micro second frequency. Earlier this year, the Treasury issued a Request for Information (RFI) to explore issues related to this dramatic evolution.

Weiss highlighted three key themes from RFI comment letters:

- broad support for greater data collection by the official sector,
- split opinion on transparency or public disclosure of data, and
- perceived need among most for broader market regulation.

Weiss observed that the Treasury has analyzed post-trade data transparency by considering the unique role of Treasury securities in the global marketplace and the consequences of post-trade transparency for other markets. While the Treasury will closely review the data before making any final determinations, the Department believes that “the debate should shift from *whether* to seek increased transparency to *how, when, and on what basis.*”

In closing, Weiss summarized the Treasury's approach as two pronged: first, “do no harm” and, second, make sure that the regulatory and data structure keep up with the market's evolution. To achieve this second goal, the Treasury has concluded that all significant Treasury market participants should be subject to both comprehensive oversight and trade reporting requirements.

Remarks by Timothy Massad, Chairman of the U.S. Commodity Futures Trading Commission

CFTC Chairman Massad's remarks touched on three broad topics: (i) characteristics of the Treasury futures market, (ii) the events of October 15, and (iii) next steps. Massad began by highlighting differences between the structures of the Treasury futures market and the cash Treasury market. For example, the Treasury futures market is primarily a centralized market, with contracts listed on a regulated futures exchange, whereas the cash Treasury market has a dual structure.

Massad noted that the CFTC will be making some new proposals regarding operational risks of automated trading (“AT”) in the next month. Massad expects that the proposals will “include

requirements for pre-trade risk controls and other measures with respect to [AT]” and will apply “regardless of whether the [AT] is high or low frequency.” He also expects that the proposals will recommend “controls at the exchange level, and also at the clearing member and trading firm level.” He said that in most cases, the proposals for risk controls will be principles-based standards and will not prescribe parameters or limits for such controls. Massad noted that the CFTC is considering whether to require the following in the upcoming (and future) proposals:

- pre-trade controls (such as message throttles and maximum order size limits);
- requirements pertaining to the design, testing, and supervision of AT systems;
- registration for proprietary firms not already registered with the CFTC; and
- measures limiting the practice of self-trading.

Remarks by Mary Jo White, Chair of the U.S. Securities and Exchange Commission

SEC Chair White emphasized the importance of prioritizing regulatory enhancements for the Treasury market, drawing on lessons learned from regulating the electronic equity markets and noting that “regulation of the equity markets can and should be deployed to strengthen the U.S. Treasury market.” Chair White identified three focus areas at the SEC for enhancing regulation of the Treasury market: (i) enhancing oversight and reporting of trading and trading platform operations, (ii) strengthening the foundational regulatory regime for trading platforms and broker-dealers that trade in the Treasury market, and (iii) working with the Financial Industry Regulatory Authority (FINRA) as it reconsiders the application of its rules to this market.

With regard to regulatory oversight and trade reporting, Chair White applauded the recent progress in requiring trading data for U.S. Treasury securities to be reported to FINRA for regulatory purposes and emphasized that public transparency of such data is a critical next step. Chair White also announced important initiatives under way at the SEC concerning regulation of trading platforms, indicating that proposals are underway to apply Regulation Alternative Trading System (ATS) and Regulation Systems Compliance and Integrity (SCI) to trading platforms that trade government securities. Chair White also recognized the importance of regulating the dealing activity of principal trading firms; she indicated that consideration is being given to how to clarify the conduct of principal trading firms that triggers dealer registration requirements. Finally, Chair White described the work that FINRA has undertaken to apply important conduct rules to the government securities market.

Remarks by Daleep Singh, Acting Assistant Secretary for Financial Markets of the U.S. Treasury

Assistant Secretary Singh focused his remarks on two topics, debt management and Treasury market liquidity. With regard to debt management, Singh highlighted the Treasury’s recent

actions to improve the structure of its debt portfolio. These actions included increasing the weighted average maturity of its marketable debt portfolio and boosting the supply of Treasury bills outstanding.

Turning his attention to Treasury market liquidity, Singh indicated that in assessing fixed-income liquidity in the post-crisis period, the Treasury gave particular attention to the forward-looking implications for “core policy objectives” (for example, financial stability, well-functioning capital markets, and economic growth). Singh said that one such Treasury policy objective is to foster “stable liquidity.” Compared with mere “fleeting liquidity,” “stable liquidity” enables the market to function even in times of stress. In light of the Treasury’s analysis, Singh said his priority post-crisis “has been to strengthen the core of the system—if we have more resilient intermediaries, funding mechanisms, and infrastructure, we should have more stable liquidity.” Echoing remarks made by SEC Chair White and CFTC Chairman Massad earlier in the day, Singh noted that strengthening the system’s core requires regulatory reforms to address principal trading firms and changes in the market infrastructure itself (for example, the CFTC’s Regulation AT on algorithmic trading and futures markets).

Panel 1: Data Reporting and the Cash U.S. Treasury Market

Participants in the first panel expressed a shared recognition of the appropriateness of the official sector gaining broader access to post-trade transaction-level data. However, there was more debate concerning the specific parameters of Treasury data that should be made transparent to the public. On balance, the panel urged caution but did not dispute the notion presented by Counselor Weiss that increased transparency in the Treasury market was coming in the future and that the key questions related only to design and implementation. Panelists broadly agreed that increased Treasury market transparency would change the way the market operated, and agreed, too, that the market could adapt to the change in data availability.

Some panel members argued that owing to the Treasury market’s importance and support of the dollar’s role as the reserve currency, more was at stake with changes to Treasury market transparency than with changes to corporate or agency-MBS market transparency; these speakers urged extreme caution in the rollout. Other panel members noted that the risks associated with increased Treasury market transparency were somewhat mitigated by the fact that the Treasury market is more transparent than other markets that have been subject to FINRA’s Trade Reporting and Compliance Engine (TRACE). Still others argued that this was not true of the entire Treasury market: While some parts (on-the-run securities, for example) were very visible, other parts were less so. All panelists agreed that such differences and the special status of the Treasury market justified a very careful approach to designing caps, thresholds, and delays across the spectrum of Treasury products.

The panel discussion kicked off with a thorough description of FINRA’s TRACE reporting scheme, which has been in place for fifteen years. While FINRA has learned a great deal over

this time, they have always followed an incremental and gradual approach, often choosing to run controlled experiments prior to finalizing arrangements. This approach is particularly evident in transparency decisions. FINRA representatives shared six trade-reporting principles and eight dissemination principles:

FINRA Trade Reporting Principles

- Understand market structure (so reporting does not change structure).
- Collect all transactions from day one (helps reset conventional wisdom).
- Begin with simple requirements, refine over time.
- Maintain data integrity (accuracy and completeness objective).
- Be sensitive to implementation issues for reporters.
- Recognize that establishing a new reporting regime is complex and difficult for all.

FINRA Data Dissemination Principles

- Strive to provide useful information as early as possible.
- Be flexible in disseminating information; recognize that different facets of the market get different treatment.
- Protect the identity of individual respondents.
- Adjust data reporting frequency with experience.
- Address the most liquid parts of the market first, as transparency risks are lower there.
- Continually assess dissemination practice with empirical evidence.
- Ensure the effective distribution of data.
- Look for opportunities to aggregate raw data in unique and useful ways for market participants.

One panelist reviewed the academic literature on TRACE reporting in corporate securities, and learned that most studies have found benefits to TRACE transparency. These studies benefited from TRACE collection methods that provided data from both pre- and post-transparency periods. Before discussing the academic findings, the panelist reviewed the theoretical advantages and disadvantages of transparency. In theory, greater transparency should bring about increased competition and lower transaction costs, as well as a heightened ability for customers to monitor dealers for excessive mark-ups. One drawback of greater transparency is the increased difficulty faced by market makers if disclosure of activity occurs faster than the risk exposure of market making can be hedged.

The literature cited for the corporate bond market concluded that transactions costs decreased 50 percent for insurance companies after the introduction of TRACE—a reduction that is quite large

for institutional (and hence relatively sophisticated) clients. In addition, transaction costs also declined for corporate bonds not eligible for TRACE reporting, perhaps reflecting a positive externality of transparency to closely related securities. (It was suggested subsequently that such a positive externality might also occur with increased Treasury market transparency, given that it touches so many related markets.) Third, the concentration among dealers in corporate securities declined post-transparency, consistent with greater competition.

Despite these positive empirical results, the caveat was offered that such studies do not necessarily mean that all forms of transparency are beneficial to markets. Consideration must be given to whether current TRACE parameters for corporate bonds are optimal for Treasury securities. For this reason, controlled experiments during the earliest phases of TRACE Treasury data collection could be very beneficial. Another caveat noted by the panelists was the need to consider liquidity stability. While TRACE dissemination does not appear to harm liquidity on average, its effects on liquidity during stress periods are harder to determine. Research to understand market liquidity stability more deeply is expected to continue.

While panelists expressed a range of views on the benefits and risks of greater transparency in the Treasury market, the overall message was that if officials used an extremely cautious approach to the disclosure of trade data, the market would be able to adapt to this new environment.

Panel 2: Treasury Secondary Market Clearing Practices

This panel's focus on clearing practices in the Treasury secondary cash market reflected issues identified in the *Joint Staff Report: The U.S. Treasury Market on October 15, 2014*:

“Firms trading on the interdealer platforms have cleared through the Fixed Income Clearing Corporation (FICC), which offers central clearing services for cash Treasury securities. However, as PTFs have gained access to the platforms, they have remained outside the FICC membership and clear with each other either bilaterally, or through a prime broker for trades executed with a FICC member. The significance of trading volume of firms outside the FICC membership—now larger in aggregate than that of FICC netting members—raises the question of whether trades cleared for non-CCP members are processed as prudently as those for firms inside the CCP. Trades cleared outside the CCP may not be subject to the same level of settlement risk mitigation techniques such as margin collection, disciplined clearing fund balance requirements, and pre-defined loss sharing arrangements.” (p. 55)

Moreover, a number of responses to the Treasury RFI in January 2016 asked whether clearing practices in the Treasury market had kept up with automated trading. While clearing practices in both the dealer-to-customer (D2C) and interdealer broker (IDB) spheres of the Treasury market are important, the panel focused more closely on issues related to IDB trade clearance, because trading on IDB platforms has evolved more than D2C trading in recent years.

At present there are two primary IDB platforms for secondary Treasury trading and each is organized as a central limit order book (CLOB). CLOBs allow for anonymous trading in a single order book; and while anonymity in a CLOB is valued to protect confidential trading information, it makes counterparty evaluation more challenging. IDB platform function is important because the most active trading in Treasury on-the-run securities takes place there. Trading in these “benchmark” securities is critical to price discovery in the Treasury market and yields on such securities also serve as important reference points for corporate securities, mortgage securities, and interest rate derivatives. Given such central functions, any disruptions to the IDB platforms could have broader effects. IDBs are the “introducing broker” and own the credit risk of non-CCP platform users even if there is a clearing agent in the chain.

Questions for the panel reflected responses to the Treasury’s RFI and were organized under three thematic areas: (i) counterparty risk management, (ii) growth in decentralized clearing, and (iii) broader central clearing possibilities.

Panel 2 Discussion: Summary Highlights:

- Margin practices have not kept up with automated trading, and flash events are here to stay.
- A big difference between the Treasury market and other markets is that interdealer brokers can be a counterparty risk. Disruption to one or both IDBs could disrupt trading.
- Having visible uniform margin practice is considered the optimal approach. In the Treasury market, however, this is not the case, because each IDB has its own approach and has no visibility into exposures in the other IDB.
- While there is room for improvement in the Treasury market clearing architecture, panelists noted that there are safeguards in place and a number of storms have been weathered:
 - IDBs performed very well during the October 15, 2014, flash event.
 - IDBs were not disrupted during the MF Global, Refco, or Lehman events.
- One panelist noted that although IDBs are acting as riskless principals to trades, they still get margined twice a day because of incomplete CCP participation—an outcome that reflects an opportunity for improvement in current arrangements.
 - There could be a need for a regulatory mandate, perhaps similar to the one in the swaps market that specifies that participants of a certain size must have direct or sponsored membership from a prime broker to the CCP.
- Another panelist compared the current state to a situation not unlike tri-party repo prior to reforms, in that activity with intraday risk of someone outside the CCP is being borne by the IDBs and CCP.

- Discussion took place around the possibility that a voluntary model that would be economic for the PTF business model could be developed, but no consensus suggestion emerged.
- It is unfair to conclude that PTFs clear for free currently, as IDBs do require collateral deposits, but it was recognized that such risk mitigation is not transparent to the market or to the CCP, and consequently cannot be vetted thoroughly.
- There is some concern that a Knight Capital event in the Treasury market, should one arise, might prove challenging given the bifurcated nature of the IDBs in the Treasury market and the increase in decentralized clearing. Knight had everything routed to a single marketplace.
- Visibility of individual PTF activity to the CCP is nonexistent, and this might result in unseen indirect intraday exposures to the CCP.
- Treasury-only IDB platforms are exempt from SEC 15c35; one panelist expressed the view that this exemption should be removed.
- Participants generally believed that an increase in central clearing was likely to need a regulatory mandate.
- Even under a regulatory mandate, economic considerations would be important, and a clearing solution would have to avoid negating new business models.
- In response to an audience question, panelists discussed the potential application of distributed ledger technology to clearing arrangements. While no such application is in the immediate pipeline, the potential for distributed ledger technology to move the market to a T+0 capability was seen as its largest benefit, eliminating end-of-day risk and significantly reducing intraday risk.

In summary, the panel found that present clearing arrangements were working but were not ideal, and that there was support for mandatory clearing if voluntary arrangements did not emerge. In addition, there was some support for increased platform oversight, and for the possibility that aggregate counterparty and intraday risks might be lower than under current arrangements. While unlikely, disruption to IDB platforms from a credit event would have negative downstream impact on market function and should be avoided.

Panel 3: The Future of Treasury Market Settlement

The conference's third panel focused on an important transition taking place in the settlement infrastructure of the U.S. government securities market which is vital to market function and financial stability. . Since the early 1990s, two clearing firms have dominated the industry, providing a full suite of settlement services for U.S. government securities—Bank of New York Mellon (BNYM) and J.P. Morgan Chase (JPMC). JPMC, however, recently announced its plan

to exit this business—a move that will soon leave BNYM as the sole provider of U.S. government securities settlement and tri-party repo services for broker-dealers.

In his [remarks](#) Federal Reserve Governor Jerome H. Powell, moderator of the panel, described the Federal Reserve's response to this development. He noted that the Fed has been working closely with the Department of the Treasury and with BNYM to ensure a smooth transition as JPMC prepares to exit the settlement service.

Powell also touched on expectations going forward:

- The Federal Reserve has long recognized that any disruptions to these critical market services could have serious consequences for financial stability, and has calibrated its supervisory expectations accordingly. As BNYM becomes the sole provider, the Federal Reserve will raise supervisory and oversight expectations even higher.
- The Federal Reserve does not have a specific market design end state in mind. Rather, it recognizes the systemic importance of these activities and the need to ensure their continued availability in nearly all states of the world, regardless of the firms that offer them or the specific market structure.
- The industry as a whole should play an important role in shaping the evolution of the settlement infrastructure.

In the discussion that followed Powell's remarks, panelists considered the transition and its implications in more detail:

- Representatives from BNYM recognized the importance of the Treasury securities settlement services and pledged to set a high standard for their provision, noting that they had a long history in this market, and that they were working with JPMC clients who had expressed interest in moving over. The representatives also expressed a willingness to work with both private and official sectors in a collaborative way as the market structure and technology evolve.
 - A panelist noted that even now, when two banks are providing settlement services, no firm has a “hot backup,” that is, no firm could just use the other settlement bank if its bank faced a serious disruption. Thus, the loss of one bank should not bring about a significant change in resilience.
 - Another panelist highlighted the need to stage the transition of JPMC clients in a way that does not trap liquidity for those clients who have yet to transition. At the same time, the panelist saw potential for eventual repo market liquidity gains: With tri-party repo participants all moving to a single settlement service, this

could reverse some recent repo market liquidity declines associated with the mandated bifurcation of GCF repo market activity.

- A representative from the CCP discussed how its plans for modernizing several of its platforms could potentially be combined with work that would allow it to offer settlement services. The representative said that the CCP planned to consult with a broad range of market participants to gauge interest in that potential.

Panel 4: Evolution of Treasury Markets

In the final panel, participants discussed the possible ways they expect Treasury markets might evolve over the next five years. Some key topics of this discussion were:

Market transparency

The panel noted the need to increase Treasury market transparency and pointed to progress made on this front. For example, one panelist brought up the [new FINRA rule](#) requiring official reporting and said that he expects there to be similar requirements for public reporting over time. Another panelist said that increased market transparency and access will in turn lead market participants to increasingly rely on, and adhere to, best practices.

Market infrastructure

Several panelists voiced the expectation that in five years, there could be very liquid, all-to-all electronic trading of on-the-run securities. By contrast, with respect to off-the-run securities, one panelist said that a functioning Treasury market may require either the Treasury or the Fed to provide some kind of “liquidity solution” for these securities (for example, via daily auctions). Several panelists noted that they expect the innovations that have changed the on-the-run securities market over the past few years to start to emerge in the off-the-run sector. Panelists emphasized the “special” status of the Treasury market as compared with other asset classes’ markets (for example, the equity market).

Many panelists also brought up the need for a broader central clearing infrastructure for the U.S. Treasury cash and/or repo markets. For example, one panelist said that he envisions the market infrastructure five years from now as a hub-and-spokes model, where there would be a central hub for clearing and settlement that engages all the market participants—including clearing agents, CCPs, and custodians—at once.

Market participants

The panelists discussed the role of platform traded funds, particularly in light of their increased presence in the Treasury market over the past five years. There was consensus that the market is moving toward fuller automation (rather than voice-based) and that with this “wave of automation,” PTFs will continue to play a large role in the Treasury market. However, several panelists said that they do not foresee end-clients choosing to deal *directly* with PTFs—even if PTFs move up in the market “eco-system.” Instead, these panelists expect end-clients to deal with PTFs *through* existing bank relationships, with one morning panelist relating that this is already in the works. Overall, there was a general sense that PTFs will be subject to more regulation and oversight going forward.

In terms of entities as liquidity providers, one panelist said that primary dealers and large broker-dealers will continue to provide liquidity to clients. When asked about the asset management industry and the growth in the presence of asset management community mutual funds in the Treasury market, another panelist underscored that asset managers and liquidity takers are not (and will not be) liquidity providers at the micro¹ level.

Durability of liquidity

Regarding the definition of “liquidity,” several panelists said that merely looking at the top of the book will not give a full picture of what constitutes market liquidity. For example, one panelist defined a liquid market as one where the price received for a given size you actually transact in is the price you thought you were going to get prior to the transaction. Under this definition, lack of surprises equals higher liquidity. Given the reforms to the U.S. Treasury market discussed throughout the day (for example, increasing transparency and greater information for participants), one participant expected fewer “surprises” in terms of what price buy-side participants actually get for a particular transaction, and in turn, expected markets to be more liquid going forward.

When asked about expectations for the frequency of flash events in the Treasury market in the future, panelists’ views were mixed. One panelist said that even if the frequency of flash events does not increase, the increased visibility into the granularity of market price patterns make flash events *more observable* than they were previously (for example, when granular reporting wasn’t required). Another panelist said that they expect flash events to occur more frequently in the next five years and cautioned that too much transparency (for example, “full” transparency) has the potential to make the U.S. Treasury market—particularly for off-the-run securities and TIPS—less liquid. A third panelist disagreed with this cautionary tale, arguing instead that more

¹ The panelist was distinguishing market maker activity at the “micro” level, when the market is mispriced by about 1/4th or 1 basis point, from activity at the “macro” level, when the market is mispriced by more than 15 basis points.

transparency, particularly when the market begins to move rapidly in one direction, actually works against retractions in the depth of the market during the swing because investors have more confidence in the information they have about market conditions.