Treasury Market Practices Group
Proposed Practice Guidance on Clearing and Settlement

Background:

In July 2018, the Treasury Market Practices Group (TMPG) published a consultative *White Paper on Clearing and Settlement in the Secondary Market for U.S. Treasury Securities*. The White Paper described the various clearing and settlement arrangements for U.S. Treasury securities, provided detailed maps that illustrated the process flows, and cataloged potential areas of risk. The TMPG found that market participants may not be applying the same risk management rigor to their U.S. Treasury clearing and settlement activities as they do to other aspects of risk taking. Further, risk management practices may not have kept pace with the increased speed of trade execution.

During the consultation period for the White Paper, the TMPG proactively conducted outreach to a diverse set of industry groups and market participants to promote awareness about counterparty credit risks and seek feedback on the accuracy and completeness of the various arrangements and resiliency issues discussed.[1] Apart from discussions at the outreach meetings, the TMPG also received comment letters with reactions to the paper and suggestions to improve the clearing and settlement processes (see a summary of comments here).

I. TMPG proposes best practice recommendations

Reflecting on the risks identified in the clearing and settlement process and also feedback received on the White Paper, the TMPG is proposing to strengthen certain existing best practices and is proposing several new practice recommendations.

As an over-arching recommendation, the TMPG calls on market participants in the Treasury, agency debt and agency MBS markets to apply rigorous risk management to clearing and settlement practices to all products, including instruments with high credit quality or a short settlement cycle. The proposed recommendations fall into two broad areas:

- First, the TMPG recommends market participants increase their attention to counterparty risks in the clearing and settlement process, including:
    - understand the role of various entities in the clearing process;
    - understand whether a counterparty is acting as principal or agent in a trade at different points in the trade life-cycle;
    - use the appropriate set of tools to manage counterparty risk while considering factors like speed and volume of trading;
    - understand the depth, breath, and durability of any credit enhancements provided;
    - and be attentive to potential liquidity needs, particularly in contingent events.

[1] The TMPG conducted outreach to various groups including the Payments Risk Committee, Treasury Borrowing Advisory Committee, Investment Company Institute, Futures Industry Association-Principal Traders Group, Risk Management Association, SIFMA Asset Management Group, SIFMA Government Operations Committee, SIFMA Funding Committee, and Managed Funds Association among others.

- Second, the TMPG recommends market participants strengthen clearing and settlement related operational resiliency, planning and processes, including:
    - periodically evaluate all clearing options available;
    - plan for potential lack of access to service providers and critical trading venues as well as clearing and settlement services;
    - recognize that operational disruptions may have systemic implications;
    - and ensure that trade matching and block allocations occur as close to real-time as possible and, at a minimum, by the end of trade date.

A more detailed description of all proposed best practice recommendations is available in the Appendix. In addition to proposing practice recommendations, the TMPG will also consider several potential future priorities related to clearing and settlement and will continue to evaluate practice recommendations as the market evolves further.

II. TMPG encourages action by stakeholders other than TMPG

The TMPG believes practice recommendations alone do not address all the risks identified in the clearing and settlement processes. The group recognized that significant changes have occurred in the structure of the government securities market over the past two decades, including new types of market participants, increased use of advanced technology, innovations in execution venues, and widespread use of high speed and automated trading strategies and emerging concentrations of activity. These changes have occurred organically over time and it is prudent for both the participants and stakeholders in these markets to take a fresh look at how, especially under certain contingent circumstances, these changes may have created underappreciated risks in the clearing and settlement infrastructure.[2] Given its benchmark status and global importance, any stress in the government securities market could spread to other domestic and international capital markets through various transmission channels.

In particular, the TMPG identified certain clearing and settlement issues which are outside the remit of the group's best practices and where the TMPG believes further review by public- and private-sector stakeholders is warranted. While the TMPG did not reach its own conclusions on these issues, the group recommends that public- and private-sector stakeholders conduct a review of whether the regulation and oversight of market participants and trading venues remains fit for purpose, the potential role of expanded central clearing in mitigating risks, and the adequacy of risk management safeguards.

- **Review of regulation and oversight of market participants**. As is common in most financial markets, participants in the Treasury market are not all regulated in the same manner (or regulated at all), depending on their business model and whether they act as an intermediary (e.g., broker, bank), an end user (e.g., asset manager, corporate), a market maker (e.g., dealer, a Principal Trading Firm (PTF)), or another type of participant. However, as the TMPG learned in its work on the White Paper, changes to market structure have resulted in certain types of market participants representing a substantial portion of activity, particularly on IDB platforms, but also in the market more generally. These include some PTFs that may utilize automated trading strategies with high speed, high volumes, and limited resources, as well as hedge funds and other asset managers that may take very large directional positions in the Treasury market. Some of these firms are regulated, others are not. Though the TMPG did not take a

[2] These stakeholders may include private sector entities such as an interdealer broker (IDB), a central counterparty (CCP), or other market participants and the public sector including the regulatory community.

view on the appropriateness of the current regulatory and oversight framework, the TMPG felt that given the systemic importance of the Treasury market and the outsize role that certain participants play it is worth considering whether existing regulation and oversight needs to evolve to reflect changes in market participation. In particular, a review might consider whether regulation and oversight of various types of firms and activities is commensurate with their significance and potential risks to the marketplace. Risks to the marketplace can arise both from risks to the resiliency and well-being of the market participant itself and the transmission of that risk to its counterparties.

- **Assess regulation and oversight of government securities trading platforms**. The TMPG learned in its work on the White Paper that trading platforms for Treasury cash products are not regulated to the same extent as those for comparable platforms offering trading in equity or other non-government securities. This is principally the result of Regulation Alternative Trading System (Reg ATS), which the Securities and Exchange Commission (SEC) adopted in 1998 to address how to regulate the increasing number of electronic platforms then-proliferating with increased adaption of internet-based activity. Reg ATS exempts trading platforms that meet the definition of an exchange under the Securities Exchange Act from the requirement to register as an exchange, if the platform registers as a broker-dealer and complies with the requirements of Reg ATS including disclosures around system and trading protocols, risk management, and business continuity and resiliency. Reg ATS does not apply to ATSs that solely trade government securities and many of its provisions are oriented toward equity trading platforms. The TMPG believes that public disclosures by all trading venues whether government securities ATSs or single- or multi-dealer platforms are useful in providing relevant information to market participants to enable them to make an informed decision about using a particular venue.[3]

  The TMPG understands that certain government securities platforms may nonetheless be registered as ATS voluntarily or as a result of other products being offered, but it remains a question worth considering whether public policy interests would be advanced by eliminating this exemption. Indeed, recent amendments to Reg ATS increasing operational transparency and regulatory oversight for ATSs that trade stocks, as well as system resiliency and integrity requirements set forth in the SEC's Regulation Systems Compliance and Integrity continue not to apply to a trading platform offering government securities only. Resiliency of both IDBs and multi-dealer platforms is crucial given their limited number and overall importance to the government securities market. For instance, a single platform can account for a considerable share of the trading volume and its continuous availability is vital for market functioning. The TMPG believes that the same types of considerations and concerns that have driven regulation in the equity trading platform space are of at least equal importance to government securities trading as well.

[3] In June 2015, the TMPG published updates to its Best Practices related to the use of automated trading in the TMPG-covered markets. The group provided specific guidance for trading venues: **Trading venues should develop processes and procedures to adhere to best practices.** Items of coverage include clear rules for all participants, information on available services and functionality to all participants, and authority to monitor quoting and trading behavior and take responsive action. Trading venues should make available to all existing and prospective users guidelines covering the various levels of services available to different users, rules on error trade policies with examples of situations that would lead to canceled trades, clear policies on price time priority of order entry, and descriptions of available market depth and transaction-level data. Additionally, trading venues should actively manage any risks to the platform associated with the offering of automated trading, including through the implementation of risk limits, "fat finger" controls, and monitoring and surveillance capabilities to detect potentially problematic activity.

- **Potential role for expanded central clearing in mitigating clearing and settlement risk**. The TMPG learned through its work that the changes to market structure that have occurred have also resulted in a substantial increase, in both absolute and percentage terms, of the number of trades that clear bilaterally rather than via a central counterparty. This is principally due to the increased prevalence of PTFs activity on IDB platforms which activity does not centrally clear. The majority of dealer-to-customer activity also continues to be bilaterally cleared. Mandatory central clearing has long been required in the futures market and under Dodd-Frank central clearing has now been mandated or incentivized for many swap instruments.[4] Central clearing offers certain immediate benefits for individual firms such as transfer of counterparty credit risk to the CCP through novation, multilateral netting of exposures, and other risk mitigation features like margining that also serve to reduce broader market functioning and liquidity risks. However, these need to be weighed against other considerations such as the cost of clearing, the ability to access a CCP and concentration risk typically associated with central clearing. Members of the TMPG did not form a consensus view as to whether increased use of central clearing services should effectively be compelled, either through a regulatory mandate or strong regulatory incentives, but there was agreement that certain market participants were less likely to voluntarily move to more widespread use of central clearing in the current environment. Thus, the TMPG believes that to the extent that public policy interests are served by moving to more widespread utilization of central clearing, that is something best addressed by the official sector.

- **Adequacy of risk management safeguards of clearing firms, trading platforms and CCPs.** The White Paper noted the critical role played by entities such as clearing firms, trading platforms and CCPs in the secondary market for Treasury securities. During the consultation period, some commentators questioned whether current or prospective trading platforms and clearing firms have adequately assessed the sufficiency of their clearing and settlement risk management mechanisms, including liquidity and financial resources to effectively withstand a market stress event. As highlighted in the White Paper, market participants managing risk that customarily involves the netting of positions should nonetheless carefully consider gross trading volumes, as liquidity needs could greatly exceed anticipated net settlement obligations if netting were to fail (for example, if a PTF had an unbalanced net position in case of an intraday stress event). It is prudent for the public- and private-sector entities (e.g., regulators, clearing firms, trading platforms and all market participants that act as principals in a trade) to understand the robustness of underlying risk management mechanisms, including the netting arrangements and the sufficiency of the liquidity and financial viability resources available.

  Similarly, a common theme in the feedback to the White Paper was to encourage CCPs to consider changes in their business operations and risk management practices to address any risks they may face in contingent scenarios. Some of the suggestions included: broader membership models to improve access to central clearing in the cash Treasury market; establishing new safeguards to address intraday risks under contingent circumstances; and amending practices to monitor the bilateral trading activity and credit risk management (e.g. margining and/or collateral) practices of its members.

[4] Elements of centralized clearing did arise in the futures markets as far back as in the early 20th century in response to the interests of market participants and exchanges to address counterparty credit risk in an anonymized market, but the utilization of a central clearing counterparty by all market participants for all transactions did not occur until regulatory requirements mandated such.

APPENDIX: Proposed best practices for clearing and settlement

Below are the proposed amendments to the *TMPG Best Practices* to address risks in the clearing and settlement processes. The proposed new text is indicated in red font.

III. MAINTAINING A ROBUST CONTROL ENVIRONMENT

Market participants that are active in financial markets are familiar with the importance of establishing and maintaining a rigorous internal control environment. Indeed, the variety of legal and reputational risks that a market participant's Treasury, agency debt, and agency MBS trading and settlement operations are subject to suggests that a vigorous, well-informed, and assertive internal control program is essential. An internal control program should include the active engagement of the business, audit, legal, risk, operations, finance, and compliance functions.

A. INTERNAL CONTROLS

8. Market participants and trading venues should ensure that they employ a robust change control process for designing, testing, and introducing new trading technologies, algorithms, order types, or other potentially impactful system features or capabilities. Changes to trading venue processes and procedures should promote market integrity and should take into account, prior to implementation, behavior and market alterations that these changes may foster. Market participants and trading venues should also evaluate liquidity or credit counterparty exposures that could result in a wide range of scenarios including a midday cyber or operational disruption, especially if a trading counterparty relies on high use of intraday liquidity and credit implicit in a high gross, low net trading activity. Market participants and trading venues should adopt written policies and procedures identifying the types of changes that must be vetted and ensuring that such changes are vetted with appropriate representatives from key support areas such as compliance, risk, and operations. Such processes should be reviewed on a regular basis for ongoing compliance.

B. RISK MANAGEMENT

1. **Market participants should apply appropriate risk management rigor to the clearing and settlement of all trading activity.** The high credit quality of an underlying instrument or the short length of the settlement cycle should not diminish the attention paid to clearing and settlement processes and risks. Risks to clearance and settlement in covered markets can manifest themselves in a number of ways, including counterparty credit concerns and liquidity needed to cope with operational issues or processes. In their risk management framework, participants should contemplate both gross and net exposures in the clearance and settlement chain because contingent events, including counterparty default, can potentially result in unintended liquidity or credit exposure to gross trading volumes.

2. Market participants should ensure that risk management processes, clearing and settlement procedures, and other front- and back-office activities are documented and commensurate with the speed and sophistication of execution technology. Given the sophisticated nature of the automated trading strategies in the market, all participants should require that the management and supervisory personnel for these strategies have adequate knowledge to understand and supervise these activities. Market participants employing automated trading strategies should have safeguards and controls in place to manage the risk of large or unanticipated positions. Such controls should be reviewed routinely and modified in light of any changes in automated trading strategies or in execution speeds on trading venues. All market participants, including trade platform operators, dealers that provide single-dealer platforms, and market utilities such as central counterparties, should be aware of and utilize, as needed, the variety of risk management tools such as trading limits, margin practices, pre-trade collateral requirements, and other forms of credit support (for example, letters of credit or guarantees) that can help control against counterparty exposures. Market participants should select a tool, or mix of tools, appropriate to the counterparty while considering factors such as speed and volume of trading by the counterpart.

3. Market participants managing against benchmarks or engaging in transactions that reference benchmarks, including transactions conducted at to-be-determined levels, should establish internal guidelines and procedures for executing and managing the risks of such transactions. Firms should understand the risks associated with managing against benchmarks and engaging in transactions that reference benchmarks, and should seek to minimize incentives for inappropriate conduct. For example, transactions conducted at to-be-determined levels should be priced in a manner that is transparent and consistent with the risk borne in the transactions (for example, via a clearly communicated and documented fee structure). For these purposes, transactions conducted at to-be-determined levels include those conducted at an index setting or where the rate or yield is to be agreed in the future.

4. Market participants should have a thorough understanding of how any financial benchmark (as defined in the IOSCO Principles for Financial Benchmarks, "IOSCO Principles") they use is constructed and the vulnerabilities that may exist in its usage. Users of benchmarks should have robust contingency plans to deal with the potential interruption or discontinuation of a benchmark.

5. When utilizing financial benchmarks, market participants should use those that comply with or are consistent with IOSCO Principles. If market participants use indicators or rates that do not comply or are not consistent with the IOSCO Principles, they should develop plans over time to move to alternate benchmarks that comply or are consistent with IOSCO Principles. In the transition, market participants should manage the risks associated with the use of benchmarks that are not compliant or consistent with IOSCO Principles.

6. Market participants should carefully evaluate whether the financial benchmarks they use are fit for the purpose for which they are being used. For instance, using collateralized overnight rates as a benchmark for uncollateralized overnight transactions may result in unexpected tracking errors; users should be mindful of such basis risk and manage it appropriately.

7. Market participants that contribute to the setting of benchmarks through the submission of information, orders, and/or transactions should have clear policies and procedures in place for ensuring that information about such activity is not misused. Examples of such misuse include coordination of activity or sharing of information, internally or externally, in order to influence the market price of a financial instrument or benchmark.

8. Trading desk management and individuals responsible for the determination of credit management policies should be sure to consider the counterparty and market risks associated with transactions and to develop robust risk management processes. Market participants should understand if the counterparts they face are acting as principal or as agent in each trade at different points in the trade life-cycle. For example, market participants should be aware of the role of various entities in the clearing process including an interdealer broker (IDB) or a central counterparty (CCP) that act as principal to trades, conduct appropriate due diligence and effectively manage their counterparty exposures to these entities. When acting as principal between two platform users or clearing members, IDBs and CCPs are assuming both liquidity and credit risk until all trades are settled.

All market participants should have a clear understanding of the depth, breath, and durability of any credit enhancement provided by third-parties to themselves and their counterparties in all bilateral clearing and settlement chains.

9. Market participants should periodically evaluate all clearing options available to them, whether clearing through a CCP or bilaterally. When evaluating bilateral clearing practices, market participants should be aware that they are exposed to the default of the counterparty to the trade prior to settlement. Market participants should also be cognizant of the implications of the bespoke nature of, and limited transparency in, bilateral clearing. For central clearing, market participants should consider how loss mutualization arrangements expose them to other members' default and potentially to non-member defaults under contingent circumstances.

10. As part of the counterparty credit evaluation framework, market participants, including those facing a CCP, should consider the scope and size of indirect potential exposure they have to a counterpart's other bilateral counterparts. The CCP as a counterpart is not risk free and market participants should understand the CCP'S framework for measuring and monitoring ongoing creditworthiness of all members.

11. Market participants should recognize that risk from any disruption that could have systemic impact on service providers, critical venues, or clearing and settlement services—including "cyber risk" originating outside market participant firms—is a risk that the market holds jointly. Since external cyber risk is faced by all market stakeholders, participants should endeavor to work together in industry forums and cooperate with official sector efforts to mitigate and manage such risks. Cyber risk can also be an internal risk that firms address based on the nature of their market operations and engagement.

12. Consistent with prudent management of counterparty exposures, forward-settling transactions, such as agency MBS transactions, should be margined. To help both parties mitigate counterparty risk owing to market value changes, two-way variation margin should be exchanged on a regular basis. Written master agreements should describe the parties' agreement on all aspects of the margining regime, including collateral eligibility, timing and frequency of margin calls and exchanges, thresholds, valuation of exposures and collateral, and liquidation. (Please refer to the TMPG Agency MBS Margining Recommendation for detailed best practice guidance.)

13. Market participants should plan for a potential lack of access to service providers and critical trading venues as well as clearing and settlement services and manage the associated risk. Such planning should include contingency plans given the loss of a key trading platform or market service provider. Market participants should, in a manner commensurate with their level of risk and volume in the market: 1) be aware of the potential for the loss of a key trading platform or market service provider, 2) understand the contingency plans of their trading platforms and service providers, and 3) develop their own contingency plans, contemplating the broader market loss of a trading platform or service provider.

V. PROMOTING EFFICIENT MARKET CLEARING

Smooth and predictable settlement and clearing are crucial for preserving the liquidity and efficiency of the

Treasury, agency debt, and agency MBS markets. Settlement fails prevent the market from clearing efficiently and can damage the market's liquidity and function. While some settlement fails are inevitable, market participants should take care that their internal policies promote practices that support efficient and timely clearing and that avoid unnecessary market congestion. Market participants should avoid practices that intentionally inhibit the efficient clearing of the market.

1. A market participant's policies and systems should ensure that trades are entered into trading systems promptly by the trading desk staff and made available to the operations area as quickly as possible in order to promote efficient settlement. It is important that market participants time their reconciliation activities in a way that does not impede the normal clearing and settlement process. This is particularly important when trades clear bilaterally. Trade matching and block allocations should occur as close to real-time as possible and, at a minimum, by the end of trade date so market participants have time to remediate any misunderstandings, effectively manage overnight counterparty exposures, and avoid settlement fails. Market participants that bilaterally settle transactions in covered securities with banks, dealers, IDBs, CCPs, etc. are exposed to counterparty risk through final settlement. The high credit quality of the underlying securities in TMPG covered markets does not obviate the need to focus on counterparty credit risk.

2. Market participants should be organized to ensure that the operations function is managed independently of the trading desk. Settlement and clearing staff should have reporting lines that are separate from those of the trading staff. In addition, internal controls should be in place to restrict trading staff from delaying or influencing settlement of Treasury, agency debt, or agency MBS transactions. Settlement staff should be empowered to question instructions from trading staff and to elevate unusual instructions to the attention of management. Policies should require that all requests that deviate from normal settlement practice be communicated to legal and compliance staff in a timely fashion.

3. Relevant transaction information should be provided to counterparties well in advance of applicable cutoff times such that counterparties can make timely delivery of securities. Examples of such information include account allocation information and, in the case of agency MBS transactions, TBA pool information.

4. To promote the integrity and efficiency of tri-party repo settlement, market participants should support timely trade confirmation in this market. (Please refer to the TMPG Recommendation for Timely Trade Confirmation in the Tri-Party Repo Market for detailed best practice guidance.)

5. Market participants should submit details of their tri-party repo trades accurately, completely, and consistently to the tri-party clearing banks. For example, the collateral type indicator reported for a given trade should accurately and specifically match the type of collateral that determined the price of that trade rather than using the "Any" collateral classification. In addition, trades submitted with an Open maturity that are not economically equivalent to rolling overnight transactions should be accompanied by an option flag indicating their nature, such as "evergreen," "callable," or "extendable."

6. Market participants should review their clearing and settlement practices in light of the speed with which execution and/or position accumulation may occur. Firms with clearing and settlement exposure to automated trading should be able to review the gross trading flows and net positions to assess potential risks under stress or error scenarios. Market participants should be attentive to potential liquidity needs, particularly considering the ramifications of a contingent event, such as a default or a market wide disruption in the midst of a trading session. Participants should carefully vet that the adequacy of planned risk mitigation through an offsetting position is not undone by operational disruptions. Participants should have a process in place for evaluating the legal enforceability of netting and collateral arrangements in all relevant jurisdictions, risk managing accordingly, and understanding the mechanics and timing of any close out procedure if a counterpart defaults or becomes insolvent.

- For example, large gross volumes can result in large unexpected use of intraday liquidity which can also become an extension of credit under contingent circumstances where a trading session interruption results in an unintended outsized net long exposure. Moreover, a trading session disruption may also result in an unintended large short exposure that can require borrowing of scarce collateral for an extended period if there is a chronic fail in a particular security.