TMPG Treasury Market Practices Group

BEST PRACTICES *for*

Treasury, Agency Debt, and Agency Mortgage-Backed Securities Markets

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INTRODUCTION

The Treasury Market Practices Group (TMPG) recognizes the importance of maintaining the integrity and efficiency of the U.S. government securities (Treasury), agency debt, and agency mortgage-backed-securities (MBS) markets. We believe that the public and all market participants benefit from a marketplace that is transparent and efficient. We believe that these characteristics help maintain vigorous competition and liquidity in the Treasury, agency debt, and agency MBS markets. To that end, we recommend that all Treasury, agency debt, and agency MBS market participants incorporate best practices in their operations in order to promote trading integrity and to support an efficient marketplace.

Best practices are meant to serve as guidelines for market participants seeking to organize their operations in a manner that fosters strong controls and reinforces overall market integrity. The best practices in this document are intended not only for dealers, but also for any market participant active in the Treasury, agency debt, and agency MBS markets, including dealers, banks, buy-side firms, investors, investment advisors, market utilities, custodians, and others. We believe that these best practices, if adopted, can strengthen each market participant's existing controls. In addition, we believe that the implementation of these best practices will help reduce market disruptions—including, but not limited to, episodes of protracted settlement failure—and buttress overall market integrity, resulting in important benefits for Treasury, agency debt, and agency MBS market participants as well as the public. Further information about specific subject matter TMPG recommendations can be found on the TMPG's website and in the appendix to this document.

These best practices seek to affirm existing notions of good market conduct and are intended as useful operational guideposts rather than binding rules or regulatory guidance. As each market participant makes use of these recommendations, it should take into account its own unique characteristics, such as asset size, transaction volume, and the form of the organization's participation in the market (for example, market maker, investor, or custodian).

This compilation is by no means a comprehensive guide to doing business in the Treasury, agency debt, and agency MBS markets. Rather, for both new and established market participants, it can serve as a benchmark when reviewing the adequacy of operating procedures. In addition to considering these best practices, market participants should be aware of, and comply with, applicable laws, rules, and regulations at all times and should not engage in illegal activities such as price manipulation.

I. PROMOTING LIQUIDITY AND TRANSPARENCY

The smooth and efficient functioning of the Treasury, agency debt, and agency MBS markets relies on the integrity, honesty, good faith, and mutual trust shown by all participants. An efficient market fosters liquidity, which helps all market participants find buyers and sellers more effectively. It is important that all market participants promote market liquidity.

1. Market participants should communicate in a manner that is clear and truthful. Market participants also should not omit any material fact or qualification if the omission would cause the communications to be misleading.

2. All market participants should behave in a manner that supports market liquidity and integrity. Market participants should avoid trading strategies that hinder market clearance or compromise market integrity. Examples of strategies to avoid include those that cause or exacerbate settlement fails, those that inhibit the provision of liquidity by others, those that restrict the floating supply of a particular issue in order to generate price movements in that security or related markets, and those that give a false impression of market price, depth, or liquidity.

- Such strategies include those that may cause undue latency, artificial price movements, or delays in other participants' executions and result in a false impression of market price, depth, or liquidity. Manipulative practices, including those in which a trader enters a bid or offer with the intent to cancel the bid or offer before execution (such as "spoofing" or "layering"), "painting the tape," and improper self-trading, may also create a false sense of market price, depth, or liquidity and should be avoided.

3. Market participants should be responsible in quoting prices and should promote overall price transparency across trading platforms.

- Price discovery activities are an integral part of the Treasury, agency debt, and agency MBS markets and should be encouraged. Market participants should pursue pricing practices that have the objective of resulting in a transaction, rather than resulting in market distortions.

- Price discovery relies on efficient price reporting and transparent markets.
    - Voice trades should be transparent. Market participants should conduct trades through interdealer voice brokers with electronic trading screens only if those trades are published on the electronic trading screens at the time of the transaction. Interdealer voice brokers with electronic trading screens should publish all voice trades to those screens when the trade is agreed.
    - Market participants should not engage in conduct that deliberately seeks to evade regulatory reporting requirements or impedes market transparency efforts.
    - The TMPG believes that transparency supports market liquidity and consequently benefits all market participants.

4. Market participants employing trading strategies that involve high trading volume or quoting activity should be mindful of whether a sudden change in these strategies could adversely affect liquidity in the Treasury, agency, or agency MBS markets, and should seek to avoid changes likely to cause such disruptions. Because market participants may need to change their trading or quoting activity, they are not expected to continue trading or quoting at the same level under all circumstances, but they should evaluate the impact of abruptly changing their traded volume or quoting activity on market liquidity. Market participants who employ strategies that involve high trading volume or quoting activity should have plans in place that would allow them to change participation in a manner that incorporates the impact of the changes on market functioning. These plans should be vetted with senior management and control functions and be reviewed on a regular basis.

5. Market participants should not plan or make sudden changes to trading strategies with the intention to disrupt market liquidity or functioning.

6. Market participants should ensure adequate oversight of their Treasury, agency debt, and agency MBS trading activity. The nature of the oversight may vary depending on the role that each market participant plays in the marketplace and the organizational structure of the firm. However, all firms should develop a mechanism for

measuring and scrutinizing the market participant's overall trading activity in the Treasury, agency debt, and agency MBS markets to ensure that trading behavior in the aggregate, as well as along individual business lines, is understood by senior business managers. Oversight coverage should include, at a minimum, the organization's activities in the Treasury, agency debt, and agency MBS cash markets (including primary and secondary trading), related financing activity, and related derivatives or structured products activity.

II. PROMOTING APPROPRIATE USE AND HANDLING OF CONFIDENTIAL INFORMATION

Appropriate handling of confidential information is important to promote the integrity and efficiency of the Treasury, agency debt, and agency MBS markets. The misuse of confidential information adversely affects the integrity of the market by undermining trust and confidence and, moreover, may constitute illegal activity. Nevertheless, there are legitimate reasons for appropriately sharing and using confidential information in certain circumstances.

Confidential information may include non-public information— received or created by a market participant or its counterparties—relating to the past, present, and future trading activity or positions of a market participant or its counterparties. If a market participant publicly releases its own confidential information, to satisfy regulatory requirements or through other public forums, such information would no longer be considered confidential. The nature and types of confidential information may vary across firms and may include, for example, the identity of market participants, their positions or trading strategies, details of their order book including the size and type of trades (limit, market, etc.) or axes.

Please refer to the TMPG Best Practice Recommendations on Information Handling with Illustrative Examples for a set of examples to illustrate situations when certain information handling best practices could apply.

1. Market participants should not share or use confidential information with the intent of adversely affecting the interests of other market participants or the integrity of the market.

2. Market participants should limit sharing and use of confidential information. Market participants should exercise care in disclosing confidential information, including own position information and information received from counterparties or third parties, whether internally or externally.

- **Internal sharing:** Confidential information should not be shared internally except on a need-to-know basis.

- **External sharing:** Market participants should not disclose confidential information to other market participants that could reasonably enable those market participants to anticipate the flows of a specific counterparty, including flows or information related to transactions to be executed at a to-be-determined time or level. Confidential information about specific pending or executed trades may be shared externally only to the extent necessary to facilitate the execution, clearing, or settlement of a transaction (which may include arranging offsetting transactions).

    - **Market color:** Market color should be shared in a manner that does not disclose any confidential information. For example, market color should not directly or indirectly reveal confidential

information about specific (i) market participants' identity, (ii) times of execution, (iii) pending trading activity or orders (including entry and exit points), and (iv) position size.

- **Own position information:** Market participants should not disclose confidential information related to their own trading positions with the intent to influence market prices or negatively impact market functioning. Market participants should exercise particular care when sharing confidential information related to their own trading positions, especially when it is a large position relative to the floating supply. Confidential information related to trading positions may include, but is not limited to, individual trades, open orders, positions or investments, axes, and inventory. Confidential information related to one's own trading position may be shared externally only to the extent necessary to facilitate an executed or potential transaction or to obtain an independent valuation. Confidential information shared with third parties for the purpose of facilitating an executed or potential transaction or obtaining an independent valuation should be limited to that which is necessary for these activities.

3. Market participants should adopt written policies and procedures that identify and address the handling of confidential information, including limitations on the sharing and use of such information.
The policies may vary across firms and across business lines within firms and should address risks, where they exist, associated with:

- **Sharing of information:** The extent to which confidential information, including pre- and post- trade information, can be shared internally or externally. The policies should also address the extent to which confidential information should be aggregated or anonymized prior to sharing.

- **Use of information:** The extent to which confidential information may be used, including, for example, in activities such as customer facilitation, investment decisions, trading, and hedging.

4. All market participants should be aware of their counterparties' practices for handling confidential information; market participants should make available their practices for handling confidential information to their counterparties. Such practices may be high-level summaries of internal policies and may include, but are not limited to, the handling of confidential information related to requests for quotes, requests for indicative prices, valuations, axes or other indications of trading interest, cover information, the placement of orders, inventory, and details of completed transactions.

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.

Internal Controls

1. **Each market participant should maintain a strong internal control environment sufficient to ensure that each of its business areas (front, middle, and back offices) acts in accordance with applicable laws, regulations, self-regulatory organization rules, and best market practices.** Firms should ensure that their organizational structures support a strong control environment. Sales and trading desk management and the operations, finance, legal, and compliance staff should work collectively to ensure that any questionable sales or trading practices are identified and addressed in a timely manner. To the extent possible, all policies and procedures should be documented. Trading desk management and supervision should be aware of, and responsible for, strategies executed by the trading desk. Other control functions, and particularly legal and compliance staff, should be poised to evaluate and respond promptly to potentially inappropriate sales and trading practices should they occur. Firms should aspire to provide system tools that relay real-time trade position information and well-designed exception-based reporting to the compliance function in order to provide timely notification of large positions or other indications of potentially problematic activity. Depending on the type of entity and its activities, some of the issues that market participants should be attentive to include fair and non-misleading communication, best execution and markup obligations, rules and regulations applicable to participation in U.S. Treasury auctions, prohibited sales and trading practices, trade reporting requirements, information barriers (for example, between loan origination and trading functions), robust supervision of sales and trading personnel, and proper licensing of sales, trading, and supervisory personnel. Market participants should adopt and adhere to policies and procedures designed to eliminate trading strategies that are manipulative or that result in a false impression of market depth to others.

2. Market participants should establish internal controls designed to ensure that confidential information is handled in a manner that complies with their established policies. Such internal controls may include training of employees who have access to confidential information.

3. Market participants should ensure that the individuals responsible for legal and compliance functions adhere to robust review and oversight procedures regarding trading and settlement operations. Senior business managers should take responsibility for ensuring that internal control policies are fully implemented and followed in their business areas.

4. Individuals responsible for internal control functions should have a sufficient understanding of trading strategies engaged in by trading desks to allow them to recognize potentially problematic activity.
Individuals responsible for internal control functions, and particularly operations, finance, legal, and compliance staff, should have sufficient awareness and understanding of the objective and execution of trading strategies to enable them to detect and deter questionable trading that could result in market disruption, illiquid market conditions, or legal or reputational risk to the organization.

5. Individuals responsible for internal control functions, and particularly operations, finance, legal, and compliance staff, should be empowered to bring any concerns to the attention of appropriate senior business managers within the organization.

6. Individuals responsible for internal control functions that track business-related charges (including, for example, fails or capital charges) associated with trading activity, including settlement fails, should communicate these charges and their sources to senior and trading desk management.

7. Trading venues should develop processes and procedures to adhere to best practices. Items of coverage include clear rules for all participants, availability of 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.

8. Market participants, including service providers, such as data providers, trading venues, and clearing and settlement services, should ensure that they employ a robust change control process for designing, testing, and introducing new trading technologies, algorithms, risk systems, order types, or other potentially impactful system features or capabilities. Changes to market participants' written processes and procedures should promote market integrity and should consider, prior to implementation, behavior and market impact that these changes may foster. Market participants, including service providers, should also evaluate the potential consequences of an operational disruption to their systems, including liquidity or credit counterparty exposures, that could result in a wide range of scenarios (both intraday and more extended) - especially if a trading counterparty relies on the high use of intraday liquidity and credit that is implicit in high gross, low-net trading activity. Market participants, including service providers, 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 support areas such as compliance, risk, and operations. Such processes should be reviewed on a regular basis for ongoing compliance.

9. Internal control policies should further the firm's ability to detect and prevent potentially disruptive trading activity by identifying the specific trading trends, positions, strategies, or behaviors within the trading operation that constitute triggers for mandatory business and compliance review. Mandatory review does not in itself automatically suggest that a trading position, strategy, or behavior must be altered; that will depend on the results of the review and consultations between management and compliance. Triggers, among other controls, should aim to identify trading activities that reduce supply circulating in cash or collateral markets. Because the structure of the Treasury, agency debt, and agency MBS markets is always evolving, triggers for mandatory review—and the appropriate thresholds for individual triggers—may change over time as the size, execution speed, and structure of the market change. However, market participants, including trading venues where appropriate, should consider including the following non-exhaustive list of indicators in their compliance plan to prompt further review:

- a large concentration of holdings in the floating supply of a particular Treasury or agency debt security or in the deliverable supply of a to-be-announced (TBA) MBS issue;
    - In the case of the Treasury or agency debt markets, floating supply, at its largest, reflects the amount of the security originally issued less the amount that has been stripped into zero-interest instruments. Other factors, such as defeasance programs or holdings of large buy-and-hold investors, can limit floating supply further.
    - In the case of the agency MBS market, deliverable supply of a TBA MBS, at its largest, reflects the amount of the security originally issued less any amount that has been paid down or structured into real estate mortgage investment conduits (REMICs). Other factors, such as holdings of large buy-and-

hold investors or the categorization of a basket of pools as "specified collateral," can limit deliverable supply further.

- elevated delivery or receive fails in a particular security and/or the presence of particular trades that persistently fail to settle;
- elevated capital charges resulting from settlement fails;
- persistent and deep "specialness" of a security;
- an appreciable or unusual amount of market turnover in a particular security;
- unusual levels or patterns of either profits or losses;
- changes in a market participant's normal securities lending or borrowing patterns in a security in which the market participant has a large position; and
- in the case of Treasury and agency debt, when securities are trading "special," placing a substantial percentage of floating supply in general collateral funding arrangements, such as general collateral finance (GCF) or tri-party repo, an apparent increase in such financing over time, or placing large blocks of collateral with select counterparties that typically do not recirculate collateral;
- unusual quoting activity submitted to the market through electronic trading platforms over time or throughout a trading day, such as:
    - unusual volume of quotes,
    - unusual number of modifications or cancelations, and
    - unusual number of quotes submitted without a resulting transaction;
- unusual number of transactions and potential accumulation of positions;
- breaches of, or frequent changes to, risk limits; and
- changes to trading systems or algorithms released outside of a defined release management protocol.

Risk Management

1. Market participants should apply appropriate risk management rigor to the clearing and settlement of all trading activity. Neither the high credit quality of an underlying instrument nor the short length of the settlement cycle should 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 contingency events,

including counterparty default, can potentially result in unintended liquidity or credit exposure to gross trading volumes. In addition, market participants facilitating central clearing for clients should ensure that all aspects of that activity are well risk managed, including any bilateral risks that the client may pose to the participant facilitating central clearing.

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 such 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 that counterparty.

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 counterparties 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 assume both liquidity and credit risk until all trades are settled.

All market participants should have a clear understanding of the depth, breadth, 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 trading counterparty 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 their indirect potential exposure to a counterpart's other bilateral counterparties. The CCP as a counterparty is not risk free and market participants should understand the CCP'S framework for measuring and monitoring ongoing creditworthiness of all members.

11. Consistent with appropriate risk management of counterparty exposures, all Treasury repurchase agreements (repos) should be prudently risk managed. This includes the application of haircuts (or margin) on the value of the securities, in concert with other risk management techniques, as appropriate. Haircuts (or margin) and other risk management techniques, taken as a whole, should protect against counterparty credit risk, as well as the liquidity and market risks of the transaction. Haircuts (or margin) can be applied together with other risk management tools, such as position limits, netting agreements, and/or portfolio margining, and should be supported by a robust risk management framework and a complete set of legally enforceable written agreements. Documentation – whether in the form of legal agreements, trade confirmations, policies, disclosures, forms, or some combination thereof, which is understood and agreed in advance or at the time of trade - should describe, in all material respects, the margining regime, including timing, frequency, and thresholds of margin calls and exchanges; valuation of exposures and collateral; and close out netting and liquidation in case of counterparty default. For trades with maturities longer than overnight, to help both parties mitigate counterparty risk owing to market value changes, variation margin should be

exchanged by the counterparties to the transaction on a regular basis as necessary, in the context of the overall risk management framework.

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 recognize that in light of the interconnectedness of systems and operations, market participants have a shared interest in and responsibility to collaborate to mitigate and resolve cyber risk and disruption that could have a systemic impact on market participants, and/or their service providers, such as counterparties, funding providers, data providers, trading venues, or clearing and settlement services. Since external cyber risk is faced by all market stakeholders, market participants should engage with both industry and official sector efforts to mitigate and manage such risks. This includes, but is not limited to, participation in industry-wide testing initiatives, facilitating resumption of operations, certification of reconnection to cyber affected systems, and centralized communication with respect to the same.

All market participants, including service providers, should develop written protocols to determine when it is appropriate to safely reconnect with those impacted by a cybersecurity incident. In addition, cyber risk is also an internal risk that market participants should address and mitigate based on the nature of their market operations and engagement, and market participants are encouraged to perform regular internal testing and periodic reviews of their respective systems to ensure alignment with operational and security protocols.

14. Market participants should plan for a potential lack of access to service providers, such as counterparties, funding providers, data providers, trading venues, and clearing and settlement services, and manage the associated risk. All market participants, including service providers, should develop their own written contingency plans, given the potential loss of access to service providers. At a minimum, such contingency plans should consider single points of failure, alternative backup providers, concentration risk, and fourth-party downstream reliance, and should account for both potential sudden intraday loss of access and more extended disruptions and outages. Market participants are also encouraged to periodically test their contingency plans. All market participants should, in a manner commensurate with their level of risk and volume in the market, be aware of the potential for the loss of access to service providers, and understand their related contingency plans.

IV. MANAGING LARGE POSITIONS WITH CARE

Although large long or short positions are not necessarily problematic, these positions should be managed responsibly to avoid market disruptions. From time to time, a market participant may amass a particularly large long or short position in a specific Treasury, agency debt, or agency MBS issue or product**. A market participant should manage that position with heightened vigilance, mindful of the need to support market liquidity.** In particular, large short or long positions in the floating supply of an issue should be given close scrutiny because of the uncertainty of the tradable

float. Market participants with large short positions or active shorting strategies have similar responsibilities to support the liquidity and smooth functioning of the market to those with large long positions.

1. Market participants should avoid any strategies that create or exacerbate settlement fails. Such vigilance should be intensified when a large position predominantly or entirely results from non-market-making activity since the market participant has more control over that position's size and growth.

2. Firms should adopt a strong presumption against using relatively more expensive funding arrangements to finance large portions of an issue trading deeply special, even on an overnight basis. If such financing is used, senior management should fully understand why the exception is appropriate. Management and legal and compliance functions should be notified of such activity in a timely manner. Failing to deliver is not an acceptable funding arrangement.

- In the Treasury or agency debt market, when a participant controls a significant percentage of the floating supply of an issue that is trading deeply special, it should ensure that it is making a good-faith attempt to lend the security into the specials market, rather than choosing to finance large portions of collateral in relatively more expensive funding arrangements.

- In the agency MBS market, when a participant holds a large position or controls a significant percentage of the deliverable supply of a TBA issue that is trading deeply special, it should not finance the position with the intent to adversely affect the liquidity of the TBA issue. One example of this type of behavior would be financing a large position in a more expensive manner through the repo market, rather than through the dollar roll market, in order to limit the deliverable supply of the TBA issue.

3. Market participants with large short positions should make deliveries in good faith. Market participants with a particularly large short position in an issue should be sure that they are making a good-faith attempt to borrow needed securities in order to make timely delivery of securities. Market participants should avoid trading strategies designed to profit from settlement fails. Examples of this type of behavior include the practice of selling short a security in the repo market around or below zero percent, and selling a dollar roll around or below zero percent, with little expectation of being able to obtain the security to make timely delivery. In cases where transactions are subject to a fails charge, different thresholds for profiting from such behavior may be relevant.

4. When evaluating trading strategies for sizable positions and trading activity, market participants should take care that sudden changes in those strategies do not adversely affect the liquidity or settlement of the Treasury, agency, or agency MBS issue in the marketplace. Market participants need not refrain from trading when they hold a large position. However, when market participants consider implementing a new trading strategy for a large position, they should evaluate whether it may affect market liquidity. For example, although open interest in MBS TBAs in a given issue often well exceeds the deliverable supply in the coupon, delivery decisions should not be made with the intention of distorting prices of either the cash security or the dollar roll. Market participants representing a material share of trading volume should similarly evaluate the impact of abruptly changing their traded volume on market liquidity. Senior management and the credit and market risk, operations, legal, and compliance functions should be made aware of any significant changes to trading strategies that may have adverse implications for market liquidity.

5. Management and compliance functions should be alerted as soon as possible about particularly large positions—long and short—taken by a trading desk and, depending on the circumstances of a given situation, early escalation to the legal department may also be appropriate. Market participants should have policies and systems in place to ensure that appropriate personnel in management and in compliance are alerted in a timely fashion in order to take any necessary actions to safeguard a market participant's reputation and manage any legal or regulatory risk.

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 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 regarding the ramifications of a contingency event, such as a default or a marketwide 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, for risk managing accordingly, and for understanding the mechanics and timing of any close out procedure if a counterparty defaults or becomes insolvent.

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

7. Trade cancellations and corrections should be rare and occur only as a result of operational errors or other mistakes made in good faith. Trade cancellations and corrections should not be used to adjust or amend previously matched and confirmed trades for purposes other than error correction.

8. Trade cancellations and corrections should be routinely reviewed by senior desk management and compliance staff, with particular focus on any occurrences after 3:00 p.m. ET.

9. To promote efficient market clearing and reduce settlement fails, market participants should avoid the practice of holding back deliveries until immediately before the close of the securities wire.

10. Practices that cause settlement fails should warrant high scrutiny from trading management, settlement staff, and compliance staff. Intentionally failing to deliver on settlement date in order to "hold the box," "sort the box," or substitute TBA pools should be avoided. Repeated or systematic practices that cause settlement fails should not be permissible under a market participant's operating procedures.

11. A "fails charge" should be applied to delivery- versus-payment settlement failures of Treasuries, agency debt, and agency MBS to encourage sellers to effect timely settlement and therefore reduce fails. (Please refer to the TMPG Fails Charge Trading Practice for U.S. Treasury Securities and TMPG Fails Charge Trading Practice for U.S. Treasury Securities: Agency Debt and Agency MBS Securities for detailed best practice guidance.)

12. Delivery of Treasuries, agency debt, and agency MBS should minimize market congestion and the risk of settlement fails. Market participants should have clear policies regarding how and when to make deliveries of securities in the settlement and clearing process. These policies should include internal cutoff times comfortably in advance of any Fedwire deadlines by which market participants should provide new trade notifications. For same-day settlement trades entered very late in the trading session, deliveries should be processed as expeditiously as possible.

Market participants should observe the TMPG and SIFMA Recommended Closing Time Practices for Delivering Fedwire Eligible Securities.

13. Incoming securities from counterparties that are to be delivered to other counterparties should be turned around quickly to minimize fails and promote market clearing and settlement. Internal policies and systems should identify a standard turnaround period for ensuring that securities are processed in a timely and efficient manner.

14. All market participants should be diligent in addressing persistent settlement fails. Protracted settlement fails inhibit market function and can reduce market participation. All market participants should aim to resolve persistent

fails as soon as possible. In addition, market participants should seek to utilize netting solutions in the event of, and in order to mitigate, round-robin fails.

15. Firms engaged in settlement activity involving deliveries or receipts of Treasuries, agency debt, or agency MBS should have controls in place that alert business and compliance managers to significant settlement fails in an individual issue or CUSIP. For instance, approaches that such firms might use to monitor fails are:

- identifying, for each specific issue, a maximum acceptable ratio of fails to aggregate receipts or deliveries during each settlement date;
- identifying a maximum acceptable amount of net fails to deliver or receive; and
- establishing a separate absolute dollar threshold for settlement fails in a specific issue.

Firms with significant financing activity, in particular, should consider including these measures in their internal controls. Internal controls that immediately bring significant fails in an individual issue to management's attention allow managers to respond before fails age or become systemic, thereby helping to improve overall market liquidity and functioning for all participants.

APPENDIX

The TMPG's best practice recommendations include all the general principles listed in the preceding pages of this document as well as their various subject-specific practice recommendations, which can be found under "All Work" on the TMPG website or at the links below.

- Treasury Repo Risk Management Recommendation
- Agency MBS Margining Recommendation
- Fails Charge Practice Recommendation
- Timely Trade Confirmation in the Tri-Party Repo Market Recommendation
- Securities Delivery Closing Times Recommendation
- Information Handling with Illustrative Examples
- Best Practice Guidance on Clearing and Settlement

The Treasury Market Practices Group (TMPG) is a group of market professionals committed to supporting the integrity and efficiency of the Treasury, agency debt, and agency mortgage-backed securities markets. The TMPG is composed of senior business managers and legal and compliance professionals from a variety of institutions—including securities dealers, banks, buy side firms, market utilities, foreign central banks, and others—and is sponsored by the Federal Reserve Bank of New York. Like other Treasury Market Practices Group publications, this document represents the views of the private-sector members. The ex-officio members do not express a position on the matters herein. More information is available at http://www.newyorkfed.org/tmpg.