Treasury Market Practices Group
Clearing and Settlement Outreach
August-October 2018
Agenda

- Introduction to TMPG
  - Mission, background and structure
  - Development of best practices
  - Publications and initiatives
- Clearing and Settlement
- Appendices
- Resources
Introduction to TMPG
Mission

TMPG is a New York Fed-sponsored group of market professionals committed to supporting the integrity and efficiency of the Treasury, agency debt, and agency mortgage-backed securities markets.

- Develops recommended best practices on issues that increase the integrity and efficiency of the covered markets
- Promotes adoption of the best practices it develops, which is critical to their ultimate success as markets evolve
- Serves as an important forum to discuss new developments and practices in these markets, and shares those insights with the New York Fed and U.S. Treasury
- Breadth and diversity of membership supports a comprehensive view
Background and Structure

- Established in February 2007
- New York Fed selects members and designates a Chair
- Secretariat is staffed by the New York Fed
- TMPG may establish standing subcommittees or working groups to focus on specific issues
- Meets regularly (minimum eight times per year)
- Meeting agendas, minutes, and announcements posted on TMPG website (www.newyorkfed.org/tmpg)
- TMPG has created procedures to help maximize compliance with both the letter and the spirit of the antitrust laws
Development of Best Practices

- Best Practice Recommendations: Intended to serve as guidelines for any market participant active in the wholesale Treasury, agency debt, and agency MBS markets
  - Promoting market making and liquidity
  - Promoting appropriate use and handling of confidential information
  - Maintaining a robust control environment
  - Managing large positions with care
  - Promoting efficient market clearing

- Best practices seek to promote good market conduct and are updated as needed over time to maintain applicability in these markets

- Adoption of best practices is voluntary
Publications and Initiatives

- **Recent guidance published**
  - Update to fails charge practices (April 2018)
    - TMPG updated the existing fails charge trading practices for U.S. Treasury, agency debt and agency MBS by including a floor of 1 per cent per annum to ensure that a minimal charge remains in place, thereby maintaining continuity of operational procedures to process fails claims
  - Information handling (January 2018)
    - TMPG published best practice guidance around the sharing and use of confidential information for market participants in the covered markets

- **Current initiatives**
  - Clearing and settlement
    - Study and map existing clearing and settlement processes in the secondary Treasury cash market, identify risk and resiliency issues, and explore possible areas for improvement; consultation paper published
  - Outreach
    - Promote awareness of the TMPG's best practice guidance through outreach to diverse market constituents and considerations of ways to measure adherence to best practices
Clearing and Settlement
C&S: Background

- Uncharacteristic and inexplicable price volatility in Treasury cash market on October 15, 2014
- Focused official sector attention on the evolving structure of the Treasury market
  - Publication of Joint Staff Report (2015)
- TMPG working group formed in late 2016 to study and report on the current clearing and settlement practices in the secondary market for U.S. Treasury securities
  - Published a consultative White Paper on Clearing and Settlement in the Secondary Market for U.S. Treasury Securities on July 12, 2018 that describes the various clearing and settlement arrangements, provides detailed maps that illustrate the process flows, and catalogs potential areas of risk
  - Public comment period open until September 28, 2018
Evolution of Treasury Cash Market

- Since 2000 the Treasury market has seen significant change
  - Increase in sophisticated and highly automated electronic trading across multiple execution venues has significantly increased the speed of trading
  - New market participants – Principal Trading Firms (PTFs) – trade at high speeds and may present risks to clearing and settlement which may not be properly priced or risk-managed
  - Interdealer Brokers (IDBs) are execution venues for PTFs and dealers and as much as two thirds of notional volume may clear bilaterally
  - Dealers are also engaged in automated trading, and have come to rely upon the pricing and the liquidity of IDBs and PTFs for themselves and their customers
  - A vast majority of cash market trading – across dealer client and IDB platforms – is not centrally cleared
- Innovations in execution venues, participants and clearing have contributed to Treasury market liquidity
  - …but innovations have also introduced novel risks in the clearing and settlement process
Two segments in the Treasury cash market

- Dealer to customer segment
- IDB platform segment
  - High speed central limit order book like futures, equities
  - Traditionally only broker-dealers, but since early 2000’s open to others (mostly PTFs)

Notes: The figures are estimated using FR 2004 data covering the first half of 2017 and various assumptions, including that a) primary dealers account for all dealer activity, b) 5% of dealers’ trading not through an IDB is with another dealer, c) the shares of dealer and non-dealer activity in the IDB market for coupon securities equal the weighted averages of the shares reported in the October 15 report (that is, 41.5% and 58.5%, respectively), d) only dealers trade bills, FRNs, and TIPS in the IDB market, and e) the likelihood of dealer and non-dealers trading with one another in the IDB market solely reflects their shares of overall volume.
C&S: Evolution of Market Participants

- Strong presence of PTFs (CCP non-members) on IDBs
  - Trade large volumes intraday but have small overnight positions
  - Trading on flash rally saw a manifold increase compared to the average daily volume

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<tr>
<th>Firm Type</th>
<th>5 Year</th>
<th>10 Year</th>
<th>30 Year</th>
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<tbody>
<tr>
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<td>0.1%</td>
<td>0.1%</td>
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<td>9.4%</td>
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<td>56.3%</td>
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<td>Non-bank Dealer</td>
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**Avg Daily Volume (in millions):**
- 53,077
- 44,088
- 9,860

**Cash Treasury Volume on October 15 by Firm Type**

<table>
<thead>
<tr>
<th>Firm Type</th>
<th>5 Year</th>
<th>10 Year</th>
<th>30 Year</th>
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<td>0.0%</td>
<td>0.0%</td>
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<tr>
<td>Bank/Dealer</td>
<td>30.1%</td>
<td>35.7%</td>
<td>40.6%</td>
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<tr>
<td>Hedge Fund</td>
<td>9.0%</td>
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<td>6.0%</td>
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<tr>
<td>PTF</td>
<td>57.1%</td>
<td>54.8%</td>
<td>51.4%</td>
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<tr>
<td>Non-bank Dealer</td>
<td>3.9%</td>
<td>3.9%</td>
<td>2.0%</td>
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</table>

**Total Volume (in millions):**
- 150,386
- 123,198
- 21,915

Note: Control days: 04/02/2014 - 04/17/2014
Source: Joint Staff Report, based on data from BrokerTec.
Trades in Treasury Cash Market

**Bilateral clearing:** Credit risk managed by counterparties bilaterally; clearing completed by T+1

**Central clearing:** Credit risk transfers rapidly to CCP on novation which occurs within minutes of execution on T+0
C&S: Process Flow Maps

- TMPG developed a set of maps that illustrate the detailed clearing and settlement processes in the secondary market for Treasury securities

- Details include
  - Trade life cycle stages
  - Participants involved in different stages
  - Timeline
  - Information flows and movements of cash or securities
  - Identification of exposures in both bilateral and central clearing
**Figure 1A: Bilateral Clearing (no IDB)**
CCP member selling to CCP non-member; bilateral clearing

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<th>Overnight (O/N)</th>
<th>T+1</th>
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<td>Clearing/Settlement (3)</td>
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<td>Matching</td>
<td>Buyer Holds O/N Risk</td>
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<td>Voice, Electronic</td>
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<tr>
<td>CCP Member/ Seller</td>
<td>Trade Booking</td>
<td>Matching</td>
<td>Seller Holds O/N Risk</td>
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</tbody>
</table>

**Bilateral Exposure**
- **Buyer/Seller**: Has counterparty replacement risk to other party
- **Buyer/Seller**: Has counterparty replacement risk to other party
- **Buyer/Seller**: Has counterparty replacement risk to other party
- **Custody Bank**: Holds credit risk until final settlement with Buyer
- **Custody Bank**: Final Settlement upon funding of purchase from Buyer

<table>
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<th>Indicator</th>
<th>Description</th>
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<td>Security Movement</td>
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<td>Cash Movement</td>
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Figure 3: Central Clearing (IDB)
Two CCP members trade via IDB; central clearing
Figure 5A: Hybrid Clearing (IDB)
CCP member and CCP non-member trade via IDB; bilateral and central clearing

<table>
<thead>
<tr>
<th>Entities</th>
<th>Execution (1)</th>
<th>Affirmation/Confirmation (2)</th>
<th>Clearing/Settlement (3)</th>
<th>T+1</th>
</tr>
</thead>
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<tr>
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<td>Trade Booking</td>
<td>Trade Details Submission</td>
<td>Buyer Holds O/N Risk</td>
<td>RVP Instructions</td>
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<td>Clearing Bank 2</td>
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<tr>
<td>CCP Member/Seller</td>
<td>Trade Booking</td>
<td>Trade Details Submission</td>
<td>Seller Holds O/N Risk</td>
<td>DVP Instructions</td>
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</table>

Bilateral Exposure
- **Buyer/Seller/IDB**: Counterparty/Replacement Risk exists between Buyer, Seller, and IDB until clearing
- **IDB**: IDB may act as a full or limited principal to the PTF based upon third party credit support (e.g. LoC)

Clearing Exposure
- **CCP**: Holds Credit Risk to IDB on behalf of Seller until delivery to clearing bank
- **CCP**: Holds Credit Risk to IDB on behalf of Seller until delivery to clearing bank

Indicator | Description | Indicator | Description | Indicator | Description
---|---|---|---|---|---
Counterparty Credit Risk | | Centrally Cleared Credit Risk | | CCP Counterparty Risk | Credit Extension Risk
Two Way Information Flow | | One Way Information Flow | | Security Movement | Cash Movement
C&S: Preliminary Risks Identified in Current Clearing Structure

- Market participants may not be applying the same risk management rigor to their US Treasury clearing and settlement activities as they do to other aspects of risk taking
  - Counterparty credit risk incurred indirectly through the clearing chain may not be transparent to participants in the market
  - Role of IDB platforms and the associated risks have evolved and are not well understood by all market stakeholders
  - Risk management practices may not have kept pace with market evolution, particularly in a high-speed trading environment
  - Increased prevalence of bilateral clearing and use of bespoke risk management practices creates greater system-wide risk
  - Operational disruptions (e.g., from a cyber-attack or a flawed algorithm) may have systemic implications
  - Concentration risk related to limited number of IDBs and clearers that play an essential role
  - Some may not fully understand credit enhancement practices in bilateral settlement chain
  - Unmatched trades or delays in matching trades creates uncertainty about counterparty exposures
  - Risk management should contemplate gross value of trade as entire notional amount is required for settlement
C&S: Consequences of Mispricing Risks

- Consequence of not recognizing and pricing clearing and settlement risks
  - Defaults have the potential to create systemic risk given the importance of the Treasury market
  - Default of dominant IDB (80 percent share) would result in a loss of a key execution platform for Treasury trading and a transparent source of pricing information for benchmark securities
  - Loss mutualization may expose CCP members to non-members in unexpected ways
Next Steps

- TMPG engaged in a public comment period to get feedback on the following elements:
  - accuracy and completeness of clearing and settlement processes described
  - risk and resiliency issues identified, and
  - any other observations or suggestions

- TMPG expects to finalize the White Paper following the consultation period and may develop best practice recommendations around clearing and settlement
Appendices and Resources
Resources

- Consultative White Paper on Clearing and Settlement

- Best Practices (updated January 2018 to include guidance on information handling)

- Best Practice Recommendations on Information Handling with Illustrative Examples


- Liberty Street Economics Blog Post

- FRBNY Staff Report: The Treasury Market Practices Group: Creation and Early Initiatives
  - https://www.newyorkfed.org/research/staff_reports/sr822.html