



# ENHANCING THE RESILIENCE OF THE U.S. TREASURY MARKET: 2022 STAFF PROGRESS REPORT

*U.S. Department of the Treasury*

*Board of Governors of the Federal Reserve System*

*Federal Reserve Bank of New York*

*U.S. Securities and Exchange Commission*

*U.S. Commodity Futures Trading Commission*

*November 10, 2022*

This is a report of staff findings from the U.S. Department of the Treasury, the Board of Governors of the Federal Reserve System, the Federal Reserve Bank of New York, the U.S. Securities and Exchange Commission, and the U.S. Commodity Futures Trading Commission. The report represents only the views of staff, and the organizations listed above have expressed no view regarding the analysis, findings, or conclusions contained herein.

## Section 1: Introduction

The Treasury market remains the deepest and most liquid market in the world and a central component of the financial system. In response to evolution in the market as well as several episodes of abrupt deterioration in market functioning, the authorities in 2021 began an extensive program of analysis and policymaking to help ensure that the market continues to reliably fulfill its vital role. This paper provides an update on a wide range of significant steps taken in that effort over the past year.

The relevant authorities in the Treasury market collaborate to ensure effective surveillance and coordinated policymaking. This paper presents the views of the Inter-Agency Working Group for Treasury Market Surveillance (IAWG), which consists of staff from the U.S. Department of the Treasury, the Board of Governors of the Federal Reserve System, the Federal Reserve Bank of New York (FRBNY), the Securities and Exchange Commission (SEC), and the Commodity Futures Trading Commission (CFTC).<sup>1</sup>

As discussed in a Staff Progress Report issued in November 2021 (the “2021 Staff Progress Report”),<sup>2</sup> the authorities have three primary objectives in the Treasury market:

First, as the issuer of Treasury securities, the Treasury Department seeks to finance the federal government at the lowest cost to the taxpayer over time. Second, the authorities aim for the Treasury market to support the broader financial system. The market does so by serving as a source of safe and liquid assets that support the efficient, stable flow of capital and credit to households and businesses, and by establishing a benchmark credit-risk-free yield curve. Third, the Federal Reserve implements monetary policy partly through transactions in the Treasury market. More broadly, the smooth operation of the Treasury market is important to the transmission of the stance of monetary policy to broader financial conditions and the U.S. economy.

The 2021 Staff Progress Report identified six principles that the IAWG staffs judged should guide public policy in the Treasury market to achieve the official sector’s objectives. These principles are:

1. Resilient and elastic liquidity;
2. Transparency that fosters public confidence, fair trading, and a liquid market;
3. Prices that reflect prevailing and expected economic and financial conditions;

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<sup>1</sup> The IAWG was formed by the Treasury Department, SEC, and Federal Reserve Board in 1992 to improve monitoring and surveillance and strengthen interagency coordination with respect to the Treasury markets following the Salomon Brothers auction bidding scandal. See U.S. Department of the Treasury, Securities and Exchange Commission, and Board of Governors of the Federal Reserve System, 1992, “Joint Report on the Government Securities Market,” U.S. Government Printing Office, January 22, available at <https://home.treasury.gov/system/files/276/joint-report-on-the-government-securities-Market-1992.pdf>. Today, the IAWG consists of staff from the Treasury Department, SEC, Federal Reserve Board, FRBNY, and CFTC.

<sup>2</sup> U.S. Department of the Treasury, Board of Governors of the Federal Reserve System, Federal Reserve Bank of New York, U.S. Securities and Exchange Commission, and U.S. Commodity Futures Trading Commission, 2021, “Recent Disruptions and Potential Reforms in the U.S. Treasury Market: A Staff Progress Report,” November 8, available at <https://home.treasury.gov/system/files/136/IAWG-Treasury-Report.pdf>.

4. Economic integration across cash, funding and derivatives markets;
5. Financing that does not pose a significant threat to financial stability; and
6. Infrastructure that operates effectively and efficiently.

The IAWG's ongoing assessment of policy options is grounded in these principles and in recent experience with Treasury market stresses.

Over the past year, the IAWG has made significant progress toward its goals. The IAWG member institutions and staffs have, among other steps:

- proposed policies to enhance the oversight of significant participants in and trading venues for the Treasury market and to centrally clear more Treasury transactions;
- initiated a pilot collection of data on non-centrally-cleared bilateral repurchase agreements;
- approved enhancements to the collection and public release of data on secondary market transactions, and begun expanded collection of data on depository institutions' secondary market transactions in Treasury securities;
- collected public feedback on possible approaches to additional public transparency;
- studied the potential benefits and costs of all-to-all trading in the market; and
- analyzed options for establishing more uniform leverage requirements across different market segments and for consistently identifying market participants across data collections.

These steps build on the work described in the 2021 Staff Progress Report, which assessed the causes of recent market stress events, proposed the six guiding principles listed above, outlined policies under consideration, and reviewed the effects of steps that had already been taken, particularly the Federal Reserve's establishment of standing repurchase agreement facilities.

The IAWG's recent work has been structured in five workstreams: improving resilience of market intermediation, improving data quality and availability, evaluating expanded central clearing, enhancing trading venue transparency and oversight, and examining effects of leverage and fund liquidity risk management. This report reviews the past year's progress on each of these workstreams in turn, noting that there are important potential interactions across the workstreams. In the future, the IAWG member institutions may take additional steps beyond the scope of the current workstreams.<sup>3</sup>

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<sup>3</sup> This report reflects developments through October 28, 2022.

## Section 2: Improving the resilience of market intermediation

The IAWG staffs' principles, as described in the 2021 Staff Progress Report, call for the Treasury market to "have the capacity to support robust primary issuance and secondary trading across a wide range of economic and financial circumstances." However, in several stress episodes preceding that report, demand for intermediation in the Treasury market surged beyond the market's capacity for intermediation. Accordingly, the IAWG member institutions and staffs are considering or have proposed steps to enhance the resilience of intermediation in the Treasury market. These steps include proposed changes in the criteria for dealer registration, evaluation of market structure considerations (including all-to-all trading), and consideration of the congruence of margin requirements across different market segments.

### *A. SEC dealer registration proposal*

On March 28, 2022, the SEC proposed new rules that would require market participants, such as proprietary or principal trading firms, that assume certain dealer-like roles and/or engage in certain levels of buying and selling government securities to register with the SEC, become a member of a self-regulatory organization (SRO), and comply with federal securities laws and regulatory obligations applicable to dealers.<sup>4</sup> In proposing the new rules, the SEC indicated that the registration of these market participants "would provide regulators with a more comprehensive view of the markets through regulatory oversight and would enhance market stability and investor protection."<sup>5</sup>

The proposed new rules would further define the phrase "as a part of a regular business" in Sections 3(a)(5) and 3(a)(44) of the Securities Exchange Act of 1934 (the Exchange Act) to identify certain activities that would cause persons engaging in such activities to be "dealers" or "government securities dealers" and subject to the registration requirements of Sections 15 or 15C of the Exchange Act, respectively.

The proposed rules for dealers and government securities dealers would set forth identical qualitative standards designed to identify activities of market participants that assume certain dealer-like roles and, in particular, those that act as liquidity providers in the markets. In addition, the proposed rule for government securities dealers would set forth a quantitative standard under which a person engaging in certain specified levels of activity would be deemed to be buying and selling government securities "as a part of a regular business," and thus a government securities dealer, regardless of whether that person met any of the proposed rule's qualitative standards.<sup>6</sup>

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<sup>4</sup> See Securities and Exchange Commission, 2022a, "Further Definition of 'As a Part of a Regular Business' in the Definition of Dealer and Government Securities Dealer" Federal Register 87, No. 74 (April 18): 23054-23106.

<sup>5</sup> See Securities and Exchange Commission, 2022a, p. 23054.

<sup>6</sup> Under the proposal, no presumption would arise that a person is not a dealer solely because that person does not satisfy the standards identified in the proposed rules. The proposed rules do not seek to address all circumstances under which a person may be acting as a dealer or government securities dealer or to replace otherwise applicable interpretations and precedent.

Both proposed rules would exclude any person that has or controls total assets of less than \$50 million and any investment company registered under the Investment Company Act of 1940.

The comment period ended May 27, 2022. The SEC staff is considering comments received in making recommendations for the SEC's consideration.

## ***B. Market structure***

The resilience of intermediation in a financial market may depend on the market's structure, such as the venues where trading takes place and the nature of relationships between buyers and sellers. The IAWG staffs are studying how Treasury market structure influences intermediation capacity, with an initial focus on the potential benefits and costs of more widespread all-to-all trading.

All-to-all trading is a form of trading that, in concept, allows any participant in a financial market to trade with any other market participant. For example, a form of all-to-all trading exists on stock, options, and futures exchanges that operate central limit order books, where any market participant can submit an order through an exchange member that can, in principle, be matched with the order of any other participant. Other forms of all-to-all trading also exist. All-to-all trading can be contrasted with dealer-intermediated markets where most participants trade with dealers that hold inventories of assets on their balance sheets. However, in practice, different forms of trading exist on a spectrum: Even on all-to-all platforms, a subset of participants typically act as liquidity providers and take the other side of most trades by the remaining participants.

Some observers have suggested that more widespread all-to-all trading could enhance the supply of liquidity in the Treasury market, although there has been limited study of this possibility to date.<sup>7</sup> In theory, all-to-all trading may improve market liquidity by increasing the number and diversity of potential counterparties to a trade or reshaping the competition among them. All-to-all trading may also offer increased transparency of executable and executed prices, which could increase the bargaining power of liquidity consumers (market participants that seek to execute specific trades) or lower the barriers to entry for new liquidity providers. In addition,

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<sup>7</sup> See Darrell Duffie, 2020, "Still the World's Safe Haven? Redesigning the U.S. Treasury Market After the COVID-19 Crisis," Hutchins Center Working Paper No. 62, Brookings Institution, available at [https://www.brookings.edu/wp-content/uploads/2020/05/WP62\\_Duffie\\_v2.pdf](https://www.brookings.edu/wp-content/uploads/2020/05/WP62_Duffie_v2.pdf); Nellie Liang and Pat Parkinson, 2020, "Enhancing Liquidity of the U.S. Treasury Market Under Stress," Hutchins Center Working Paper No. 72, Brookings Institution, available at [https://www.brookings.edu/wp-content/uploads/2020/12/WP72\\_Liang-Parkinson.pdf](https://www.brookings.edu/wp-content/uploads/2020/12/WP72_Liang-Parkinson.pdf); Katy Burne, 2021, "Future-Proofing the U.S. Treasury Market," Bank of New York Mellon, available at <https://www.bnymellon.com/us/en/insights/aerial-view-magazine/future-proofing-the-us-treasury-market.html>; Group of Thirty Working Group on Treasury Market Liquidity, 2021, "U.S. Treasury Markets: Steps Toward Increased Resilience," available at <https://group30.org/publications/detail/4950>; Peter Ryan and Robert Toomey, 2021, "Improving Capacity and Resiliency in US Treasury Markets: Part III," Securities Industry and Financial Markets Association, available at <https://www.sifma.org/resources/news/improving-capacity-and-resiliency-in-us-treasury-markets-part-3/>; Marta Chaffee and Sam Schulhofer-Wohl, 2021, "Is a Treasury Clearing Mandate the Path to Increased Central Clearing?," *Chicago Fed Insights*, Federal Reserve Bank of Chicago, June 23, available at <https://www.chicagofed.org/publications/blogs/chicago-fed-insights/2021/treasury-clearing-mandate>; Sharon Thiruchelvam, 2022, "Duffie: SEC plan heralds all-to-all Treasuries trading," Risk.net, Sept. 26, available at <https://www.risk.net/regulation/7954577/duffie-sec-plan-heralds-all-to-all-treasuries-trading>.

all-to-all trading may influence the way prices, quantities traded, and market liquidity respond to shocks and thus change the resilience of intermediation, potentially in different ways from the effect on the overall availability and cost of intermediation. Further, to the extent that multiple forms of trading coexist in a market, it is necessary to consider the combined implications for liquidity of all available forms of trading, rather than considering each form of trading in isolation. Staff at the FRBNY, Federal Reserve Board, and Treasury have collaborated to author an FRBNY Staff Report, titled “All-to-All Trading in the U.S. Treasury Market,” to explore the concept of all-to-all trading in the secondary cash market for Treasury securities and evaluate the benefits and challenges around broader adoption.<sup>8</sup> The study is informed by the IAWG staffs’ outreach to a variety of market participants, including liquidity providers, liquidity consumers, and trading platforms. The study also leverages other research on Treasury market structure as well as information on the corporate bond market, where all-to-all trading grew to 12 percent of activity in recent years.<sup>9</sup>

The study provides an overview of existing protocols that widen the field of potential counterparties to a trade in the Treasury market and identifies some factors that could support wider adoption of such protocols. In particular, the analysis finds that reforms discussed elsewhere in this Staff Progress Report, including data transparency and increased central clearing, could make wider adoption of all-to-all Treasury trading more likely. The analysis also identifies risks and limitations of a general expansion of all-to-all trading or of existing protocols that allow for a broader range of counterparties. For example, while trading protocols with a broader range of counterparties could make liquidity more resilient, existing liquidity providers could also respond to changes in trading protocols by reducing their activity.

Looking forward, the IAWG staffs will continue to study how elements of Treasury market structure may affect the attainment of the official sector’s objectives for the market. Potential areas of future research include all-to-all trading in the market for repurchase agreements, or repos; the use of firms with committed market-making responsibilities in other markets; the role of the Treasury futures market in overall Treasury market structure; and the influence of public policy on the private sector’s development of different market structures.

### ***C. Congruent margin regulation***

The IAWG staffs’ principles for the Treasury market call for avoiding “leverage that makes the financial system vulnerable to instability.” One important determinant of this vulnerability is the margin collected on various Treasury transactions, including repos, as well as Treasury derivatives. Margin requirements help to protect market participants against a counterparty’s default and to prevent the buildup of excessive leverage.

In principle, leverage standards that are not market-wide are subject to potential arbitrage or avoidance. For example, information from hedge funds and banks indicates that the margin, or

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<sup>8</sup> Alain Chaboud, Ellen Correia Golay, Caren Cox, Michael J. Fleming, Yesol Huh, Frank M. Keane, Kyle Lee, Krista Schwarz, Clara Vega, and Carolyn Windover, 2022, “All-to-All Trading in the U.S. Treasury Market,” Federal Reserve Bank of New York Staff Report No. 1036, available at [https://www.newyorkfed.org/research/staff\\_reports/sr1036.html](https://www.newyorkfed.org/research/staff_reports/sr1036.html).

<sup>9</sup> See Terrence Hendershott, Dmitry Livdan, and Norman Schurhoff, 2021, “All-to-All Liquidity in Corporate Bonds,” Swiss Finance Institute Research Paper Series No. 21-43, available at [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3895270](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3895270).

equivalent haircut, that major hedge funds face on non-centrally-cleared bilateral Treasury repos is often notably below the margin or equivalent haircut prevailing on Treasury collateral in the triparty repo market and in centrally cleared repo. Given the lower margin standards often set on non-centrally-cleared trades, minimum haircuts that applied only to centrally cleared Treasury repo contracts could motivate counterparties to move toward types of repo trades that are not centrally cleared (such as open or option-embedded repo transactions) or to offshore entities that are not clearing members. Additionally, margin requirements that are set lower for Treasury derivatives than for securities financing may encourage the use of synthetic exposures, such as total return swaps, that have lower margin requirements but can unwind in disorderly ways that affect core Treasury markets.

As discussed in section 4 of this report, the SEC has proposed rules to require that clearing agencies in the Treasury market adopt policies to require their members to submit all eligible trades for central clearing. If implemented, this requirement could increase the share of hedge funds' and other leveraged investors' Treasury repo financing that is centrally cleared and therefore subject to a uniform, risk-based margin system. However, the proposed requirement would be unlikely to capture all Treasury securities financing transactions (SFTs), including both repo transactions and economically similar securities lending or other transactions, given that some types of repo trades are not currently eligible for central clearing.

Addressing the gap between margin requirements in non-centrally-cleared financing transactions and centrally cleared transactions would reduce incentives to avoid a central clearing requirement and help to address leverage in transactions that remained outside of central clearing. Such an approach would also mirror the approach that was taken in addressing risks in derivatives markets under the Dodd-Frank Wall Street Reform and Consumer Protection Act, which directed U.S. agencies both to implement central clearing requirements for some forms of derivative transactions and to institute margin requirements on non-centrally-cleared trades.

The extent of the gap may depend on the SEC proposals on dealer registration and central clearing discussed in sections 2.A and 4. The IAWG staffs have conducted a preliminary analysis of potential avenues through which a more uniform margin regime could be achieved between centrally cleared and non-centrally-cleared SFTs, including through steps that could be taken by various federal agencies acting separately or in coordination.



### Section 3: Improving data quality and availability

To support the IAWG staffs' principle of "transparency that fosters public confidence, fair trading, and a liquid market," the official sector is working to improve the quality and coverage of data on Treasury market transactions and positions. These actions encompass both collecting additional data, which can help the official sector to assess market conditions and respond to stresses, and providing additional public transparency.

#### *A. Enhancements to data collection*

Since the 2021 Staff Progress Report, the official sector has proposed enhancements to Form PF, which collects data on private funds such as large hedge funds; approved enhancements to the collection of Treasury market data through the Trade Reporting and Compliance Engine (TRACE) of the Financial Industry Regulatory Authority (FINRA); collected pilot data on non-centrally-cleared bilateral repos, with the intention to pursue a permanent data collection; and examined options for improving the official sector's ability to identify participants' activities across key Treasury market data collections.

##### *Form PF amendments*

In January 2022, the SEC proposed to amend Form PF to require, among other things, that large hedge fund advisers file a current report within one business day of the occurrence of specified events with respect to their qualifying hedge funds.<sup>10</sup> In August 2022, the SEC and CFTC jointly proposed additional amendments to Form PF to, among other things, enhance reporting by large hedge funds.<sup>11</sup> These amendments would include improvements in the reporting of investment exposures and enhanced differentiation between positions in the cash and derivatives markets for Treasury securities. Both proposals are designed to improve the ability of the Financial Stability Oversight Council (FSOC) to monitor systemic risk as well as bolster the SEC's oversight of private fund advisers and its investor-protection efforts.

##### *TRACE data enhancements*

FINRA introduced TRACE reporting requirements for Treasury securities transactions in 2017. In August 2022, the SEC approved FINRA's amendments to its TRACE reporting rules to improve the timeliness and quality of the data.<sup>12</sup> The amendments will reduce the post-trade transaction reporting timeframe in most instances to no more than 60 minutes, as well as increase the granularity and consistency of execution timestamps for electronic transactions. The shorter reporting timeframe will enable the official sector to receive data on a timelier basis than the current next-day schedule, and it will allow for more accurate trade matching in cases where

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<sup>10</sup> See Securities and Exchange Commission, 2022b, "Amendments to Form PF to Require Current Reporting and Amend Reporting Requirements for Large Private Equity Advisers and Large Liquidity Fund Advisers," Federal Register 87, No. 33 (February 17): 9106-9235.

<sup>11</sup> See Commodity Futures Trading Commission and Securities and Exchange Commission, 2022, "Form PF; Reporting Requirements for All Filers and Large Hedge Fund Advisers," Federal Register 87, No. 169 (September 1), 53832-53985.

<sup>12</sup> See Securities and Exchange Commission, 2022c, "Order Approving a Proposed Rule Change to Amend FINRA Rule 6730 (Transaction Reporting) to Enhance TRACE Reporting Obligations for U.S. Treasury Securities," Release No. 34-95635, File No. SR-FINRA-2022-013, available at <https://www.sec.gov/rules/sro/finra/2022/34-95635.pdf>.

multiple FINRA members report different sides of the same trade. In addition, more granular execution timestamps will improve the ability to discern precise counterparties and sequences of trades in high-frequency trading environments.

The Federal Reserve Board expanded collection of data on depository institutions' secondary market transactions in Treasury securities. Following the announcement in October 2021 of a rule requiring banks filing form G-FIN and with at least \$100 million in average daily trading to report transactions to TRACE, affected depository institutions began submitting their Treasury transactions on a daily basis to TRACE on September 1, 2022.<sup>13</sup> Although the largest proportion of transactions in the Treasury market are conducted through FINRA members, which had already reported their transactions to TRACE, the addition of reporting by depository institutions will help to ensure more complete coverage of the market. Twenty-two banks, whose Treasury transactions constitute 7 percent of overall volume, have begun filing under the rule.

On July 29, 2022, the SEC proposed amendments to an exemption from joining a national securities association that would, among other things, support FINRA's collection of data through TRACE.<sup>14</sup> By limiting the scope of an exemption to rules requiring broker-dealers to join a national securities association such as FINRA, the proposed amendments would require certain broker-dealers that are significantly involved in proprietary trading of Treasury securities to become FINRA members and therefore to report their Treasury transactions to TRACE. Although many of these transactions are already reported to TRACE by alternative trading systems (ATSS), some are reported without specific information identifying the participant, and others are not reported at all. The proposed rule would improve the comprehensiveness of Treasury securities TRACE data and strengthen oversight of these firms by subjecting them to FINRA's direct, membership-based jurisdiction and rules.

#### *Bilateral repo data collection*

The 2021 Staff Progress Report noted an important gap in the official sector's data on Treasury repos: Data are not collected on non-centrally-cleared bilateral repos. In February 2022, the Treasury Department's Office of Financial Research (OFR) announced its intention to pursue a permanent collection of transaction-level data to fill this gap.<sup>15</sup> The new data collection would complement the OFR's existing collection of data on cleared repo transactions and the Federal Reserve Board's collection of data on triparty repo.<sup>16</sup> Data collected would help regulators

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<sup>13</sup> The Federal Reserve's form FR 2956 requires reporting of secondary market transactions in Treasury securities and/or agency issued mortgage-backed securities of every national bank, state member bank, state non-member bank, savings association, or U.S. branch and agency of a foreign bank filing a Notice of Government Securities Broker or Government Dealer Activities Form (Form G-FIN) with average daily transaction volumes of more than \$100 million for Treasury securities, or more than \$50 million for agency-issued debt and MBS, respectively, during the prior fiscal year.

<sup>14</sup> See Securities and Exchange Commission, 2022d, "Exemption for Certain Exchange Members," Federal Register 87, No. 155 (August 12): 49930-49973.

<sup>15</sup> See Dino Falaschetti, 2022, "Remarks by Director Falaschetti at the Open Session of the Meeting of the Financial Stability Oversight Council," Office of Financial Research, February 4, available at <https://www.financialresearch.gov/from-the-director/2022/02/04/remarks-by-director-falaschetti-at-the-open-session-of-the-meeting-of-the-financial-stability-oversight-council/>.

<sup>16</sup> See Office of Financial Research, 2020, "OFR Begins Publishing Repo Data, Unveils Short-term Funding Monitor," press release, September 9, available at <https://www.financialresearch.gov/press-releases/2020/09/09/ofr-begins-publishing-repo-data-unveils-short-term-funding-monitor/>; and Board of Governors of the Federal Reserve

monitor transactions in Treasury repo and repo in other collateral classes, would provide insights into the behavior of leveraged participants in Treasury markets, and could be used to increase transparency for market participants.

Collecting data on non-centrally-cleared bilateral repo transactions is critical for three reasons:

1. Non-centrally-cleared bilateral repos constitute a major segment of the U.S. repo market, making up roughly 60 percent of primary dealer reverse repos and roughly 40 percent of primary dealer repos, based on new statistics from the Federal Reserve’s weekly primary dealer reports.<sup>17</sup>
2. The non-centrally-cleared bilateral segment is particularly important for the borrowing of certain leveraged funds for which there is otherwise little transparency.<sup>18</sup>
3. This segment lacks the transparency provided by interdealer brokered screens and official statistics for other segments of the market, and it can lack transparency even for the participants.<sup>19</sup>

Non-centrally-cleared bilateral markets have no central institution that stores data, meaning that there can be substantial heterogeneity in what data is stored and how values are recorded, as the OFR found in its 2015 pilot collection of data on bilateral repo transactions.<sup>20</sup> In light of this heterogeneity, the OFR examined existing data standards and market practices for non-centrally-cleared bilateral repos before proceeding with the planned permanent data collection.

The OFR’s recent work began with outreach to market participants, industry associations, and providers of market infrastructure such as electronic request-for-quote (RFQ) platforms. RFQ platforms allow customers to submit a portfolio of securities to fund or source to multiple dealers, which then provide quotes for repo transactions using those securities as collateral. These platforms also provide standardized information on trades and data management for both dealers and customers. However, the OFR’s outreach indicated that despite the rising share of RFQ platforms in non-centrally-cleared bilateral repo, much of the activity in this market takes place over the phone or through electronic chat messages, leaving it to the participants to determine what information they record on a trade.

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System, 2017, “Request for Information Relating to Production of Rates,” Federal Register 82, No. 167 (August 30), 41259-41262.

<sup>17</sup> See Sebastian Infante, Lubomir Petrasek, Zack Saravay, and Mary Tian, 2022, “Insights from revised Form FR2004 into primary dealer securities financing and MBS activity,” FEDS Notes, Board of Governors of the Federal Reserve System, August 5, available at <https://www.federalreserve.gov/econres/notes/feds-notes/insights-from-revised-form-fr2004-into-primary-dealer-securities-financing-and-mbs-activity-20220805.htm>; and Samuel J. Hempel, R. Jay Kahn, Vy Nguyen, and Sharon Y. Ross, 2022, “Non-centrally Cleared Bilateral Repo,” OFR Blog, Office of Financial Research, August 24, available at <https://financialresearch.gov/the-ofr-blog/2022/08/24/non-centrally-cleared-bilateral-repo/>.

<sup>18</sup> See Infante et al. (2022) and Hempel et al. (2022).

<sup>19</sup> See Hempel et al. (2022).

<sup>20</sup> See Viktoria Baklanova, Cecilia Caglio, Marco Cipriani, and Adam Copeland, 2016, “The U.S. Bilateral Repo Market: Lessons from a New Survey,” Office of Financial Research Brief Series 16-01, available at [https://www.financialresearch.gov/briefs/files/OFRbr-2016-01\\_US-Bilateral-Repo-Market-Lessons-from-Survey.pdf](https://www.financialresearch.gov/briefs/files/OFRbr-2016-01_US-Bilateral-Repo-Market-Lessons-from-Survey.pdf).

The OFR’s outreach also provided insight into the reasons why market participants use non-centrally-cleared bilateral repo, including lower costs of onboarding clients relative to central clearing and a greater variety of tenors, collateral and haircuts.<sup>21</sup> Market participants also reported that many dealers are able to net non-centrally cleared trades with clients such as large relative-value hedge funds on their own books, because these trades naturally have matched long and short repo positions with the same fund as a counterparty. For these naturally netted repo trades, central clearing would have no incremental netting benefit for an individual dealer.

Using the information gathered from this outreach, the OFR began a voluntary pilot data collection from nine broker-dealers with large exposures to the non-centrally-cleared bilateral repo market.<sup>22</sup> The OFR requested data as of three dates in June 2022 on all of the participants’ outstanding U.S. repo transactions with no central counterparty and no custodian. The data fields the OFR asked pilot participants to provide cover many details about these repos on a transaction level, including trade sizes, underlying collateral, trade times, and contractual terms such as rate, haircut, and tenor. The three dates were chosen to correspond with aggregated reports on repo activity from the FRBNY’s Primary Dealer Statistics and the SEC’s Form PF and Form FOCUS, so that the OFR can examine the percentage of total trades in these reports that the pilot collection captures.

All nine pilot participants have submitted data from the first collection date. The OFR plans to use these data to brief regulators and the public on features of the non-centrally-cleared bilateral repo market that are relevant to Treasury market functioning and financial stability more broadly.

The OFR is using pilot participants’ feedback to inform its planned rulemaking for a permanent, transaction-level collection of non-centrally-cleared bilateral repo.<sup>23</sup> This permanent collection would require daily submissions of all non-centrally-cleared bilateral repo trades for certain financial firms with substantial activity in this market segment.

### *Participant identifiers*

The 2021 Staff Progress Report noted that broader use of Legal Entity Identifiers (LEIs) could further improve the official sector’s ability to understand market participants’ activity across Treasury market segments.<sup>24</sup> In 2022, the IAWG staffs formed a working group to evaluate the official sector’s ability to identify participants’ activities across key Treasury data collections and to consider options for improvement along with their potential costs and benefits.

The working group reviewed each of the official sector’s main Treasury market data collections, including both transaction-level reporting (including FINRA’s and the Federal Reserve Board’s secondary cash market collections, the OFR’s Treasury repo collection, the Federal Reserve’s supervisory collection of triparty repo transactions, and Treasury futures and

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<sup>21</sup> See Hempel et al. (2022).

<sup>22</sup> See James Martin, 2022, “OFR Continues Efforts to Fill Key Gap in Financial Data,” Office of Financial Research, August 1, available at <https://www.financialresearch.gov/from-the-director/2022/08/01/ofr-continues-efforts-to-fill-key-gap-in-financial-data/>.

<sup>23</sup> See Hempel et al. (2022) and Martin (2022).

<sup>24</sup> The LEI is a 20-character alphanumeric code that enables clear and unique identification of legal entities participating in financial transactions. Further details on the LEI are provided by the Global Legal Entity Identifier Foundation at <https://www.gleif.org/en/about-lei/introducing-the-legal-entity-identifier-lei>.

swaps reporting collected by the CFTC and SEC) as well as position-level reporting (including the Federal Reserve’s collections on forms FR2004 and FR2052 and the SEC’s Form PF).<sup>25</sup> The working group found that the official sector Treasury data collections use different entity identifying information with different properties and that readily available mappings between collected identifiers, while present for certain combinations of entities and identifiers, are lacking across the full span of the data sets.

On occasion, agencies have been able to incorporate auxiliary information on market participants from other collections, registration documents, or vendor data. But, in most cases, agencies have had to rely primarily on the skill, judgment, and experience of their own staffs, often using imperfect name matching techniques given the lack of common entity identifiers or mappings to other common reference data.

The working group identified several potential solutions, including:

- collecting common entity identifiers from reporters in all of the key Treasury market collections;
- collecting common entity identifiers from larger or more active reporters;
- requiring reporters that already have a given identifier to report it; and
- encouraging additional interagency coordination on data mappings.

IAWG members already work together in creating common mappings, for example with TRACE data, but further coordination could be helpful in certain cases, such as mapping reporters to parent-firm information. There could also be use cases for external vendors to aid in matching entities across data sets if relevant authorities determined it was appropriate. However, neither of these solutions would address cases where no robust identifiers were available. Most working group members expressed a preference for more widespread use of LEIs, which are already required in the OFR collections and in swaps reporting, and whose broader inclusion in official data collections has also been supported by the FSOC.<sup>26</sup> However, agencies may have reasons to prefer other identifiers that could be linked to LEIs and could be used to identify participants across the key data collections.

## ***B. Enhancements to public data availability***

In August 2022, the SEC approved a FINRA rule amendment that will enable FINRA to release aggregated Treasury securities data on a more frequent basis than the current weekly publication.<sup>27</sup> In its proposal, FINRA noted the potential to release aggregate data on a daily basis and to include additional information such as “aggregate trade count and pricing

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<sup>25</sup> Data collections that focused on Treasury auctions and Federal Reserve custody holdings on behalf of foreign central banks were not considered.

<sup>26</sup> See Financial Stability Oversight Council, 2021, “2021 Annual Report,” section 4.5.1, available at <https://home.treasury.gov/system/files/261/FSOC2021AnnualReport.pdf>.

<sup>27</sup> See Securities and Exchange Commission, 2022e, “Order Approving a Proposed Rule Change to Amend FINRA Rule 6750 Regarding the Publication of Aggregated Transaction Information on U.S. Treasury Securities,” Release No. 34-95438, File No. SR-FINRA-2022-017, available at <https://www.sec.gov/rules/sro/finra/2022/34-95438.pdf>.

information.”<sup>28</sup> As noted in FINRA’s proposal and in the 2021 Staff Progress Report, the weekly aggregated data have been well received. Publishing information on a more frequent basis should provide market participants with further insights into transaction volumes and pricing.

Additionally, in November 2021, after the 2021 Staff Progress Report was finalized, the Treasury Market Practices Group (TMPG) released a draft catalog and summary note on data available in the Treasury cash, futures, and financing markets.<sup>29</sup> While the TMPG has not completed a full assessment of the draft catalog, the work to date shows how differences in market structure across products result in differences in the level and consistency of available data. Building on the catalog, the group is developing a white paper that will identify data gaps and opportunities for improving transparency.

Moreover, in June 2022, the Treasury Department issued a request for information seeking public comment on potential additional post-trade transparency of data regarding secondary market Treasury transactions, including potential benefits and risks of additional transparency.<sup>30</sup> Treasury received comment letters from a broad set of stakeholders, including industry trade groups, primary dealers, asset managers, principal trading firms, platforms, and academics.

Commenters were broadly supportive of incremental increases in transparency, but recommendations varied regarding the pace and extent of additional transparency. Suggestions ranged from pursuing real-time transaction-level reporting to maintaining public release of aggregated information.

Commenters who supported transaction-level transparency generally noted benefits to market participants broadly, including increased investor confidence, better price discovery, reduction in barriers to entry for liquidity provision, improved risk management, and better assessment of execution quality. While acknowledging the unique nature of the Treasury market, commenters noted that these benefits of transparency have lowered transactions costs in other markets. Nevertheless, most commenters highlighted that transaction-level transparency would have greater risks in less-liquid market segments, such as cash trading of off-the-run securities. Specifically, commenters suggested that transaction-level transparency could reveal movements of large positions in off-the-run securities, which could make it more difficult to trade these securities, increase investors’ perceived cost of holding them, or make intermediaries less willing to commit balance sheet to them. Most commenters thought these risks could be mitigated by limiting the release of transaction-level data for certain securities, such as by introducing delays or capped trade sizes based on security characteristics or liquidity profiles. A few commenters

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<sup>28</sup> See Financial Industry Regulatory Authority, 2022, “Proposed Rule Change to Amend FINRA Rule 6750 Regarding the Publication of Aggregated Transaction Information on U.S. Treasury Securities,” SR-FINRA-2022-017, available at <https://www.finra.org/rules-guidance/rule-filings/sr-finra-2022-017>.

<sup>29</sup> See Treasury Market Practices Group, 2021a, “TMPG Releases Updates for Working Groups on Clearing and Settlement Practices for Treasury SFTs, Treasury Market Data and Transparency,” available at [https://www.newyorkfed.org/medialibrary/Microsites/tmpg/files/DT\\_Draft\\_Catalogues.pdf](https://www.newyorkfed.org/medialibrary/Microsites/tmpg/files/DT_Draft_Catalogues.pdf), and Treasury Market Practices Group, 2021b, “Treasury Market Data and Transparency Working Group Update,” available at [https://www.newyorkfed.org/medialibrary/Microsites/tmpg/files/DT\\_Note.pdf](https://www.newyorkfed.org/medialibrary/Microsites/tmpg/files/DT_Note.pdf). The TMPG is sponsored by the Federal Reserve Bank of New York and comprises senior business managers and legal and compliance professionals from a variety of institutions, including securities dealers, banks, buy-side firms, market utilities, and others.

<sup>30</sup> See Department of the Treasury, 2022, “Notice Seeking Public Comment on Additional Transparency for Secondary Market Transactions of Treasury Securities,” Federal Register 87, No. 122 (June 27): 38259-38263.

advocated for maintaining data at an aggregated level, arguing that the risks would outweigh the benefits even if transaction data release were limited.

The comments received will help inform the Treasury Department's policy perspectives on additional post-trade data transparency in the Treasury securities market, as well as the IAWG's work more generally.

#### **Section 4: Evaluating expanded central clearing**

The IAWG staffs' principles emphasize the value of "well-designed and well-managed infrastructure" for achieving the authorities' goals for the Treasury market. The institutions and processes for clearing and settling Treasury transactions are a critical part of that infrastructure.

On September 14, 2022, the SEC proposed to amend the standards applicable to covered clearing agencies (CCAs) providing central counterparty services for Treasury securities to require that such CCAs have written policies and procedures reasonably designed to require that every direct participant of the CCA submit for clearance and settlement all eligible secondary market transactions in Treasury securities to which it is a counterparty.<sup>31</sup> The SEC proposed to define eligible secondary market transactions as:

- secondary market transactions in Treasury securities of a type accepted for clearing that are either a repo or reverse repo collateralized by Treasury securities, in which one of the counterparties is a direct participant; or
- certain specified categories of cash purchase or sale transactions, specifically, those where the direct participant is providing interdealer broker services or where the direct participant's counterparty is a registered broker-dealer, government securities broker, or government securities dealer, a hedge fund, or a leveraged account satisfying certain criteria.

The SEC believes that these proposed amendments would help reduce contagion risk to the CCA and bring the benefits of central clearing to more transactions involving Treasury securities, thereby lowering overall systemic risk in the market. The SEC also believes that increasing the volume of transactions submitted for central clearing is consistent with promoting the prompt and accurate clearance and settlement of securities transactions.

In addition, the SEC proposed to require that a CCA providing central counterparty services for Treasury securities (referred to as a "U.S. Treasury securities CCA") have written policies and procedures reasonably designed to calculate, collect, and hold margin for transactions in Treasury securities submitted on behalf of an indirect participant separately from margin for transactions submitted on behalf of the direct participant. The SEC also proposed to require that a U.S. Treasury securities CCA have policies and procedures reasonably designed to ensure that the CCA has appropriate means to facilitate access to clearance and settlement services of all eligible secondary market transactions in Treasury securities, including those of indirect participants. The SEC believes that such requirements also will improve the risk-management practices at U.S. Treasury securities CCAs and incentivize and facilitate additional central clearing in the Treasury market, thereby lowering systemic risk.

Finally, the SEC proposed to amend the broker-dealer customer protection rule to permit margin required and on deposit with U.S. Treasury securities CCAs to be included as a debit in the reserve formulas for accounts of customers and proprietary accounts of broker-dealers, subject to certain conditions. Currently, broker-dealers are not permitted to include a debit in the customer reserve formula equal to this amount of margin or, more generally, to use customer

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<sup>31</sup> See Securities and Exchange Commission, 2022f, "Standards for Covered Clearing Agencies for U.S. Treasury Securities and Application of the Broker-Dealer Customer Protection Rule With Respect to U.S. Treasury Securities," proposed rule, available at <https://www.sec.gov/rules/proposed/2022/34-95763.pdf>.



cash or customer fully paid or excess margin securities to meet a CCA margin requirement. This proposal would therefore help to address the potential substantial increase in the margin that broker-dealers would be required to post to a U.S. Treasury securities CCA resulting from their customers' cleared Treasury securities positions.

Separately, in November 2021, after the 2021 Staff Progress Report was finalized, the TMPG released a draft set of maps and summary note illustrating current clearing and settlement processes for common SFT types for Treasury securities, including both repos and securities lending agreements.<sup>32</sup> Complementary to the TMPG's earlier work on clearing and settlement of purchases and sales of Treasury securities in the secondary market published in 2019, the group mapped the structure of clearing and settlement for SFTs under different scenarios and across different market segments and identified potential risk and resiliency issues.<sup>33</sup> The draft maps illustrate current clearing and settlement processes for SFTs under different scenarios and across different segments of the market. The draft maps showed that bilateral clearing and settlement processes are not uniform across market participants and are less transparent than central clearing. These more bespoke bilateral processes may reflect differences in the level of understanding among market participants of the inherent risks of SFT clearing and settlement.

Building on last year's progress, the TMPG plans to publish a consultative white paper further detailing the potential risk and resiliency issues in SFT clearing and settlement. The group has observed across all SFTs that the clearing and settlement process is fragmented, third-party credit extension arrangements may not be fully understood, and market participants lack a clear and comprehensive view of market functioning. For non-centrally-cleared bilateral SFTs in particular, clearing and settlement is bespoke and opaque. For both non-centrally-cleared bilateral SFTs and agent-cleared triparty repo, positions carry counterparty and liquidity risks, with potential systemic implications during times of stress. The TMPG's updated best practices issued in 2019 mitigate some of these risks.<sup>34</sup> The group plans to engage in public dialogue and update the paper and best practices as appropriate.

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<sup>32</sup> See Treasury Market Practices Group, 2021c, "Clearing and Settlement in the Secured Financing Transaction Market: Working Draft – Trade Flow Mapping," available at [https://www.newyorkfed.org/medialibrary/Microsites/tmpg/files/CSP\\_SFT\\_Draft\\_Maps.pdf](https://www.newyorkfed.org/medialibrary/Microsites/tmpg/files/CSP_SFT_Draft_Maps.pdf), and Treasury Market Practices Group, 2021d, "Clearing and Settlement Practices for Treasury Secured Financing Transactions Working Group Update," available at [https://www.newyorkfed.org/medialibrary/Microsites/tmpg/files/CSP\\_SFT\\_Note.pdf](https://www.newyorkfed.org/medialibrary/Microsites/tmpg/files/CSP_SFT_Note.pdf).

<sup>33</sup> See Treasury Market Practices Group, 2019a, "White Paper on Clearing and Settlement in the Secondary Market for U.S. Treasury Securities," available at [https://www.newyorkfed.org/medialibrary/Microsites/tmpg/files/CS\\_FinalPaper\\_071119.pdf](https://www.newyorkfed.org/medialibrary/Microsites/tmpg/files/CS_FinalPaper_071119.pdf).

<sup>34</sup> See Treasury Market Practices Group, 2019b, "Best Practices for Treasury, Agency Debt, and Agency Mortgage-Backed Securities Markets," available at [https://www.newyorkfed.org/medialibrary/Microsites/tmpg/files/TMPG\\_BestPractices\\_071119.pdf](https://www.newyorkfed.org/medialibrary/Microsites/tmpg/files/TMPG_BestPractices_071119.pdf). For up-to-date information on TMPG clearing and settlement work, see <https://www.newyorkfed.org/TMPG/clearing-settlement.html>.

## Section 5: Enhancing trading venue transparency and oversight

Trading venues are a form of market infrastructure, as they are platforms that enable transactions to take place. The IAWG staffs' principles observe that the effectiveness and efficiency of market infrastructure influence the ability to achieve all of the other principles. In particular, appropriate oversight of trading venues can help ensure not only that the venues facilitate transactions efficiently, but also that they are reliable and resilient and that they foster fair trading and public confidence in the market, among other goals.

On January 26, 2022, the SEC proposed to amend a rule so that the definition of "exchange" would encompass marketplaces that offer the use of non-firm trading interest and communication protocols to bring together buyers and sellers of securities. Such marketplaces include RFQ platforms, which are a significant source of liquidity for Treasury securities.<sup>35</sup> Because they perform a similar marketplace function to registered exchanges and ATSS, the proposal is designed to require these systems to comply with the same federal securities laws and regulations applicable to registered exchanges or ATSS. As result, investors who use these systems would receive the same investor protection and fair and orderly market principles that apply to today's registered exchanges and ATSS.

In addition, to promote operational transparency, investor protection, system integrity, fair and orderly markets, and regulatory oversight, the SEC re-proposed to apply provisions of Regulation ATS and Regulation SCI to ATSS that trade U.S. government securities and repos and reverse repos on government securities ("Government Securities ATSS").

The proposed amendments would, among other things:

1. eliminate the exemption from compliance with Regulation ATS for, and apply the provisions of Regulation ATS to, an ATS that limits its securities activities to government securities or repos and registers as a broker-dealer or is a bank;
2. require Government Securities ATSS to file public revised Form ATS-N, which would be subject to the SEC's review and effectiveness process; and
3. apply the Fair Access Rule and Regulation SCI to Government Securities ATSS that meet certain volume thresholds in Treasury securities or agency securities.

The proposal builds upon a 2020 proposal and public comments received in response to that proposal.<sup>36</sup>

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<sup>35</sup> See Securities and Exchange Commission, 2022g, "Amendments Regarding the Definition of 'Exchange' and Alternative Trading Systems (ATSS) That Trade U.S. Treasury and Agency Securities, National Market System (NMS) Stocks, and Other Securities," Federal Register 87, No. 53 (March 18): 15496-15696.

<sup>36</sup> See Securities and Exchange Commission, 2020, "Regulation ATS for ATSS That Trade U.S. Government Securities, NMS Stock, and Other Securities; Regulation SCI for ATSS That Trade U.S. Treasury Securities and Agency Securities; and Electronic Corporate Bond and Municipal Securities Markets," Federal Register 85, No. 251 (December 31): 87106-87253.

## **Section 6: Examining effects of leverage and fund liquidity risk management practices**

As described in the 2021 Staff Progress Report, the growing size and influence of certain investor positions and associated trading flows, such as from open-end funds and hedge funds, may amplify stresses in the Treasury market.

In 2021, the FSOC established the Open-end Fund Working Group and reestablished the Hedge Fund Working Group in order for agencies to share information and expertise on the risks to financial stability from these types of funds. In February 2022, the FSOC issued a statement on nonbank financial intermediation that highlighted its work evaluating and addressing the risks to financial stability, including updated findings from the two working groups.<sup>37</sup> Among these findings, the Hedge Fund Working Group noted gaps in the availability of data related to hedge funds. (See section 3 for a discussion of proposed amendments to Form PF that would enhance data on hedge funds.) Both working groups also highlighted the roles of certain types of funds in the March 2020 market disruptions. The FSOC said it will continue to evaluate, monitor, and address these risks.

In addition, the Financial Stability Board has recognized the vulnerabilities associated with structural liquidity mismatch in some open-end funds, is examining the availability and effectiveness of their liquidity risk management tools, and plans to make recommendations to mitigate these vulnerabilities. Also, the Chair of the SEC has asked the SEC staff to consider changes to rules for open-end funds, including related to fund liquidity, pricing, and resilience in stress periods.<sup>38</sup>

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<sup>37</sup> See Financial Stability Oversight Council, 2022, “Financial Stability Oversight Council Statement on Nonbank Financial Intermediation February 4, 2022,” press release, February 4, available at <https://home.treasury.gov/news/press-releases/jy0587>.

<sup>38</sup> See Gary Gensler, 2022, “Statement before the Financial Stability Oversight Council on Money Market Funds, Open-End Bond Funds, and Hedge Funds,” available at <https://www.sec.gov/news/speech/gensler-fsoc-statement-020422>.

## **Section 7: Conclusion**

The IAWG staffs' comprehensive and collaborative approach to examining policy options has generated significant progress along several dimensions in the past year. The staffs plan to continue their work to enhance the resilience of the Treasury market. The staffs intend for their work to complement that of the FSOC and to align with the broad agenda laid out by the Financial Stability Board regarding core bond markets and nonbank financial intermediation. The staffs welcome continued engagement with academics, market participants, and other interested parties.