Additional Transparency for Secondary Market Transactions of Treasury Securities.

A Study on the Impact to the Market and Market Participants

October 2022

Study Background & Acknowledgements

Project Background and Methodology

Sia Partners (www.sia-partners.com), a global management consulting firm, was asked by SIFMA to conduct a study reviewing the Department of Treasury RFI (request for information) related to transparency for U.S. Treasury products.

Sia's study was conducted through individual one on one interviews with a variety of investors and a select group of primary dealers. The study group included participants from the U.S., Canada, Europe, UK and APAC. The investor group involved a mixture of Pension Funds, Insurance Companies, Asset Managers, Hedge Funds, Bank Treasuries and global government entities. There were approximately sixty firms in the project. Participation in the study was confidential and the list of those involved was not shared with anyone. The interviews were conducted in July, August and September. The questions posed to the participants were drawn from the Department of Treasury RFI and supplemented with topics focused on regulatory, reporting and operational issues participants may face were reporting to be materially increased.

The report includes charts and graphs with aggregate findings for all the investor participants as well as breakouts for Asset Managers and Primary Dealers. The findings for the remainder of those involved (groupings noted above) are shown with heat maps identifying their answers as an individual breakout. The full results are shared only with the participating firms. It is important to note that each firm involved in the project understood that the operating assumption was that their feedback assumed that a new transparency regime would be implemented in some manner. Hence, as participants were responding to all questions inclusive of exchanges on potential mitigants (i.e. delays, caps, etc.,) there was an understanding that their answers assumed a supplemental or new transparency approach enacted impacting the U.S. Treasury Market.

We want to thank our colleagues at Sia Partners—John Gustav and Joe Willing for their support throughout our project. Jonathan Kerbis and Paul Collins individually gave unsparingly their time in assisting with the research and the drafting of materials for this document and we appreciate their efforts enormously. Finally, it is important that we recognize the enormous contributions of Nicolas LaSala, the project manager for this effort. Nic provided the grounding for the organization and structure of this effort—analysis of the interviews, editing and drafting throughout this project—all of which were indispensable. We want to thank everyone for their contributions and assistance to this initiative.

Bradley P. Ziff
Operating Partner, Sia Partners N.A.
Tel: 347-331-2651
Bradley.ziff@sia-partners.com

Eric Blackman
Partner, Sia Partners N.A.
Tel: 917-769-6278
Eric.Blackman@sia-partners.com

Participant Overview

Participant Firm Size
(by total firm AUM)

16%: $3 - $10 Trillion AUM

25%: $1 - $3 Trillion AUM

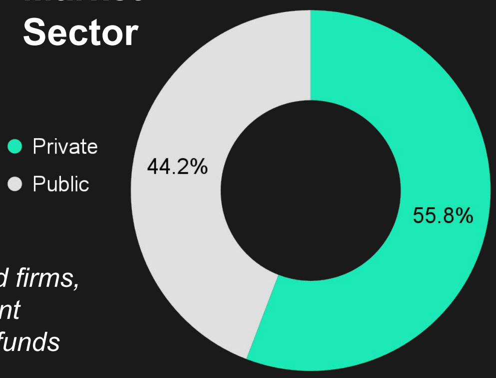
59% < $1 Trillion AUM

Participant Market Sector

55.8%
of participants are
Private Firms

44.2%
of participants are
Public Firms

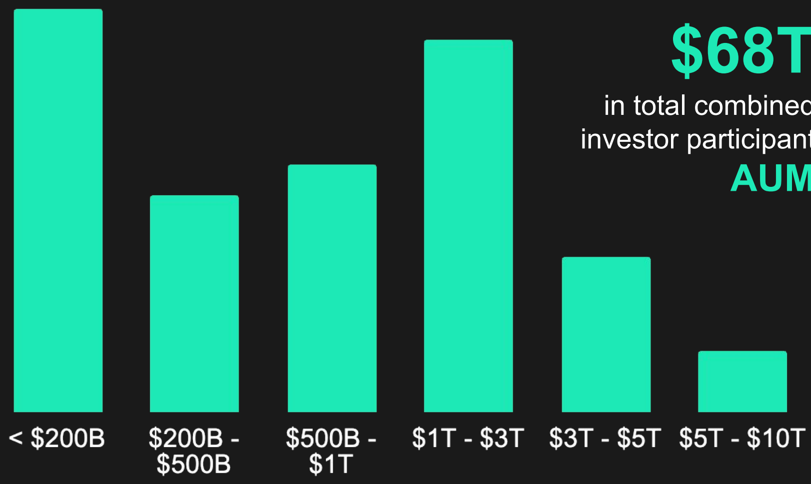
Includes publicly traded firms, a number of government entities, state pension funds and central banks.



Participant Breakdown

The below displays participant firm types and groupings referenced throughout the report.

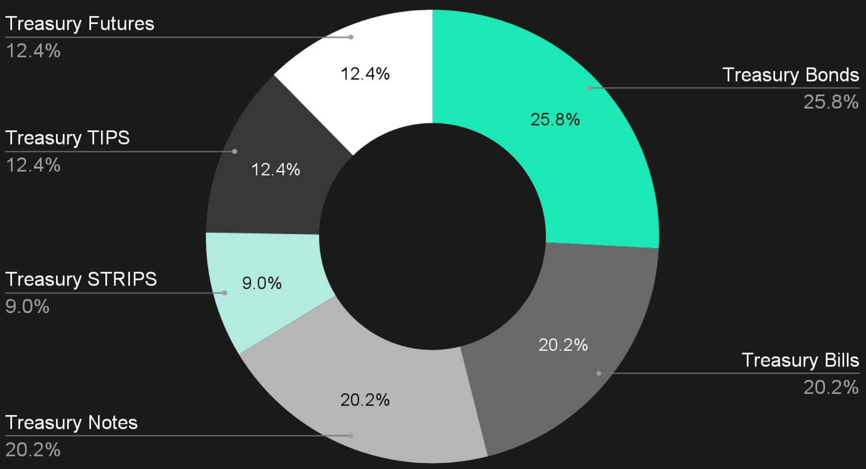
- **Investors**
  - Asset Managers
  - Bank Treasuries
  - Government Entity/Pension Funds
  - Hedge Funds
  - Insurance Firms
- **Dealers**
  Banks and Primary Dealers
- **Asset Managers**
  (Broken out from investor aggregate)
  Asset Management Institutions/Firms



$68T
in total combined investor participant
AUM

Treasury Holdings Breakdown

Percentages (%) of investor participant UST holdings



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Executive Summary

The role of the U.S. Treasury market is unique, serving as the "primary means of financing the U.S. federal government, a critical store of value and hedging vehicle for global investors and savers, the key risk-free benchmark for other financial instruments, and an important conduit for the Federal Reserve's implementation of monetary policy." [1] Confidence in the Treasury market, and in its ability to function efficiently even in times of stress, is critical to the stability of the global financial system. In normal market conditions the market has functioned and continues to function well and has generally maintained resiliency throughout the years. However, recent periods of market volatility including the flash crash" of 2014, the Treasury repo market stress of September 2019, and the COVID-19 shock of March 2020, have created doubts about its continued capacity to absorb shocks and focused attention on factors that may be limiting the resilience of Treasury market liquidity under stress." [2] Additionally, with the Fed reversing its pandemic related buyback relief through quantitative tightening, or Q.T., "some investors worry that the quickening pace of the Fed's pullback could become too much for markets to bear, undermining the safety and reliability of the Treasury market." [3]

On June 27th, 2022, the Treasury released an RFI seeking public comment on "additional post-trade transparency in the Treasury securities market", allowing market participants to provide feedback on potential changes to the current reporting regime, particularly in light of the markets lessened liquidity due to the periods of market volatility (i.e. 2014, 2019, 2020) "Since 2017, every trade made by a broker-dealer in US government securities has been logged on an industry database known as Trace, but that information is, for the most part, not accessible to the general public. There are weekly releases of aggregated Trace data, with the rest only available to a group of governmental regulatory bodies including the Federal Reserve Bank of New York, the Federal Reserve Board, and [others in the] US government." [4] The Treasury asked for commentary on whether, and under what conditions, this market data should be shared with the broader group of the investing public. "Proponents of expanded public reporting argue it would improve liquidity by removing information barriers and fostering competition; critics fear it would do the opposite, making it more difficult for liquidity providers and investors to manage their risks. These may be well-worn arguments, but the stakes – when applied to one of the pillars of the financial markets – are high." [5]

In an effort to obtain comprehensive feedback on these topics, and as discussed in the outset of our report, Sia's study consisted of one on one interviews with a variety of investors and a select group of primary dealers in the market, including participants from the U.S., Canada, Europe, UK and APAC. The investor group involved a mixture of Pension Funds, Insurance Companies, Asset Managers, Hedge Funds, Bank Treasuries and global government entities. Out of the approximately sixty firms involved in the study, around 56% of firms are private companies and 44% operate in the public sector, which includes publicly traded firms as well as government entities, state pension funds and central banks. Investor participants have an estimated combined total assets under management (AUM) of $68 trillion and participants trade broadly across all Treasury types including Treasury bills, notes and bonds & more specifically with TIPS, STRIPS and Treasury futures.

Executive Summary

Consistent with our confidentiality commitments to the study participants, we did not disclose either the names of those involved in the study or the exact breakdown by category. In two categories, investment/asset managers and market-makers/dealers we portrayed their feedback on almost all questions using pie charts/percentages. For the remainder of those involved in the study; pensions funds/government entities; insurance companies; alternative investment managers; and bank treasuries, we portrayed their answers in bar charts reflecting participant feedback relative to one another.

Our initial approach included examining a set of the materials shared by industry participants and trade groups with the official sector as discussions surrounding public transparency and the US Treasury Market were initiated over the past ten years. This included letters from the market to regulatory bodies and proposed rulemakings that we also reviewed. We identified selective feedback from those documents to include in our findings to supplement our interview data.

The focal point in our discussions with participants was on the merits of public transparency as noted in the Treasury RFI. Numerous entities explained that data should be shared directly with regulators and they were not concerned about sharing transparency with regulators. The dialogues therefore on all questions revolved around additional dissemination in the public domain which elicited substantially greater opposition on many questions. Our study reached several clear conclusions outlined below:

- Investors and market makers shared the view that changes of any type to the regulatory parameters surrounding transparency associated with the U.S. Treasury market needs to be considered and implemented very carefully and prudently so as not to cause unnecessary distress to the stability of the market.

- Participants emphasized caution in moving in a precipitous manner and expressed consideration for appropriate mitigants (i.e., dissemination delays, volume caps) as steps to accompany any of those new guidelines.

- Investors and dealers also shared the view that while enhanced transparency efforts were broadly accepted as being more feasible in the more liquid ‘on-the-run’ market, there was broad agreement that changes to the ‘off-the-run’ (less liquid securities) needed significant additional scrutiny before incorporating supplemental transparency initiatives.

- Participants agreed that steps towards additive transparency should only accompany other efforts to build out liquidity in secondary markets including, most importantly recognition to providing more balance in capital requirements for dealers.

Section I: Transparency and Market Segmentation

This section examines the impact of additional transparency on the market, considering the variety of ways in which transparency requirements could be different depending on Treasury security type, liquidity characteristics, segment (on-the-run versus off-the-run) and the underlying maturity. We asked participants the following questions:

Should there be fewer, or varied, transparency requirements for less liquid segments (i.e. off-the-run) than in more liquid segments (On-the-run)?

- **82% of the broader study participants agree that less liquid market segments (i.e. off-the-run) should be subject to fewer, or varied, transparency requirements.**

- **100% of primary dealer participants agree that less liquid market segments (i.e. off-the-run) should be subject to fewer, or varied, transparency requirements.**

Participants explain that an increased transparency regime, particularly for less liquid segments, would expose vulnerable positions in the market before participants had the ability to properly manage and warehouse risk. Participants emphasize that this is particularly true as off-the-runs are traded less frequently in the market and since they are commonly traded in larger sizes, additional time is required for liquidity providers to warehouse risk. Respondents expressed that intermediaries are critical sources of liquidity for investors wishing to buy and sell Treasury securities in the secondary market. Any new transparency regime should reflect this and allow both the investor and dealer community to effectively and efficiently transact in the market.

- **17% of participants disagreed that less liquid market segments (i.e. off-the-run) should be subject to fewer, or varied, transparency requirements.**

Participants who did not agree, believed that transparency requirements should be standardized regardless of liquidity segment, or on-the-run versus off-the-run. A few participants explained that additional transparency is helpful for portfolio management and the ability to identify where the market is trading at a given time. For the on-the-run segment, participants explain they don't believe additional transparency is necessary, emphasizing that they are not concerned with market making ability, due in part to the availability of real time quoting for on-the-runs and generally increased levels of liquidity in that segment.

Should securities with longer maturities (i.e 30yr bond versus a 7yr note) be subject to fewer, or varied, transparency requirements?

- **64% of participants agree that securities with longer maturities (i.e. 30yr bond versus a 7yr note) should be subject to fewer, or varied, transparency requirements.**

- **75% of primary dealer participants agree that securities with longer maturities (i.e. 30yr bond versus a 7yr note) should be subject to fewer, or varied, transparency requirements.**

The general consensus among participants is that maturity should be considered as an important factor in determining the level of transparency requirements, and that requirements for securities with longer maturities should be less stringent. Participants broadly explain that there are increased risks associated with longer maturities and that securities with longer durations generally experience lowered levels of liquidity in the market.

- **35% of participants disagreed that securities with longer maturities (i.e. 30yr bond versus a 7yr note) should be subject to fewer, or varied, transparency requirements.**

- **25% of primary dealer participants disagreed that securities with longer maturities (i.e. 30yr bond versus a 7yr note) should be subject to fewer, or varied, transparency requirements.**

A smaller number of participants, particularly central banks and bank treasuries, expressed the view that transparency requirements should not be based on maturity. A few participants said that information should be promoted on all parts of the curve in order to maintain a fair market, specifically in the ability to utilize information to assess market conditions regardless of the point of the curve. Some participants explained that the transparency regime should be consistent, with a group of our study participants arguing that maturity or duration should not have an impact, particularly for on-the-run segments where tenor is less relevant for this market segment in terms of level of risk.

Section II: Impact of Transparency on Liquidity

This second section of our report focuses on the potential impacts to liquidity as a result of increased transparency, including the impact on participants' understanding of the market and competition in the market. The section also reviews considerations for advancing and enhancing liquidity in the market. Finally, we consider how transparency would have impacted market resilience during recent periods of volatility including the 2014 flash crash, 2019 repo pressures and March 2020 disruptions; as well as discussing the general impact of transparency on resiliency in the market.

Would Transparency in the US Treasury markets promote an increased understanding of the market and promote market competition?

- **51% of participants do not agree that transparency in the US Treasury markets promote an increased understanding of the market and promote market competition.**

- **66% of primary dealers do not agree that transparency in the US Treasury markets promote an increased understanding of the market and promote market competition.**

Participants explain that the dissemination of additional information is not necessary as both dealers and investors already have an understanding of the market. Participants pointed to the on-the-run space, where there is near real time transparency and there has been no indicative growth either in intermediation or among the investor population. Participants were somewhat divided on whether competition would increase or remain the same, which is dependent on whether transparency promotes additional participation in the market. Generally, participants agreed that current levels of transparency are sufficient and that they don't see a nexus between additional transparency and more liquidity providers, either among institutional investors or market makers.

- **49% of participants agree that transparency in the US Treasury markets promote an increased understanding of the market and promote market competition.**

- **33% of primary dealers agree that transparency in the US Treasury markets promote an increased understanding of the market and promote market competition.**

Participants noted potential benefits to the market as a result of increased transparency, with some saying that faster and more frequent reporting could lead to enhanced trading execution, encouraging additional market entrants. In particular, study participants shared that additional data dissemination would provide a better understanding for certain individual investors and day traders in their ability to transact. These participants emphasize that such additional transparency should improve the ability for efficient price discovery and trade execution for both investors and dealers.

Would additional transparency incentivize or disincentivize intermediation in the market?

- **72% of participants believe that additional transparency would disincentivize Intermediation in the market.**

- **100% of primary dealers believe that additional transparency would disincentivize Intermediation in the market.**

Participants, and dealers in particular, share that releasing too much information would inhibit the ability to properly manage and move risk if trading positions were exposed. Participants broadly shared the view that additional transparency could decrease risk taking capacity, ultimately undermining liquidity in the market and decreasing intermediaries' willingness to participate. Participants explained that dealers may be unable to confidentially hedge positions.

- **28% of participants believe that additional transparency would incentivize Intermediation in the market.**

A group of participants, namely a select group of insurance firms, pension/hedge funds and bank treasuries indicated that transparency could incentivize intermediation in the market, if properly calibrated. Some participants argued that more information for intermediaries could result in more transparent pricing for the buy side. Others indicate that additional transparency would be useful as markets move toward becoming more electronic and would assist firms that thrive on technology to trade (i.e. quantitative trading firms).

Are there specific metrics or data you find most useful in measuring liquidity?

In evaluating the impact that additional transparency would have on liquidity in the market, Treasury in their RFI asked respondents how they measure liquidity and how they define what optimal liquidity looks like in the market. Participants in our study highlighted some of the metrics are detailed below:

- **Bid-Offer Spread**: Participants find bid-offer useful for information on price stability and determining associated levels of risk for transacting.

- **Volume Data**: Participants shared that looking at the amount of transactions for a given security on a particular day allows for an increased understanding of overall activity and participation in the market, and reflects the flow of Treasuries trading in and out of the market.

- **Market Depth**: Participants view market depth as being helpful in understanding the impact to pricing in the context of trading volumes. Participants also explain its usefulness as a measure of risk.

- **Price Impact**: Participants explain that it can be useful to look at price changes by hours, days or weeks to understand any price volatility in the market, particularly the response to large net transaction flows for Treasuries.

Can you describe additional considerations for improving liquidity in the Treasury market?

Participants expressed that the Treasury market has also experienced decreased levels of liquidity in recent years due to adjustments to regulatory requirements, impacting both dealers and ultimately investors in the market. Participants explained that Supplementary Leverage Ratio (SLR) changes have contributed to capacity constraints for dealers, particularly for off-the-run Treasuries. Some participants expressed the usefulness of utilizing central clearing for transactions in an effort to better manage risk. Finally, participants emphasize the need for a properly calibrated transparency regime that, along with other industry improvements, would be of benefit to the Treasury market. Respondent suggestions are detailed following:

- **SLR Reform**: With the expiration of pandemic related adjustments to the SLR, bank intermediaries must now comply with the adjusted rules. Participants explain that as a result such intermediaries will reduce their “Treasury-collateralized short-term lending (i.e., repo) business, require larger bid/ask spreads to intermediate between clients, and encourage institutional depositors to shift into money funds.” [1] The majority of participants expressed that giving dealers relief on capital requirements (SLR) in particular, in off-the-run treasuries, would enhance Treasury market liquidity. This recommendation was first and foremost of the participating study respondents in identifying steps that would enhance Treasury liquidity.

- **Central Clearing**: A more limited group of participants shared that clearing for Treasuries would assist potentially in reducing settlement risk and alleviating capital and balance sheet constraints. As participants explained that with the potential increase in risk from a new transparency regime, clearing could be used as a way to better manage that additional risk. It’s also important to note that other participants did not believe clearing would be useful in solving issues in the market or in helping liquidity. They explained that it could lead to additional operational costs and that the benefits are dependent on the type of market participant who was being asked to clear those transactions.

- **Calibration**: Participants broadly agreed the need for proper calibration in determining the level of transparency, including granularity of data ensuring that vulnerable market positions can be protected by not disclosing too much information or hindering the ability to efficiently manage risk. It is particularly important to review the potential impacts to less liquid segments (i.e. off-the-runs) and the consideration for appropriate caps and dissemination delays. These issues should be addressed prior to the implementation of transparency regime changes, such that it lessens any negative impact to Treasury market liquidity.

Do you believe that additional transparency would improve Treasury market resilience, specifically during recent periods of market volatility including 2014 flash rally, September 2019 repo market pressures, and March 2020?

- **59% of participants believe that increased transparency would harm market resilience, particularly during recent periods of market volatility. (2014, 2019, 2020)**

- **90% of primary dealer participants believe that increased transparency would harm market resilience, particularly during recent periods of market volatility. (2014, 2019, 2020)**

- **25% of participants believe that increased transparency would help market resilience, particularly during recent periods of market volatility. (2014, 2019, 2020)**

- **16% of participants believe that transparency does not impact Treasury market resiliency.**

The majority of participants do not believe that transparency would have impacted the ability of the market to maintain resiliency during these periods of market disruption. This view was shared overwhelmingly by primary dealer participants who emphasized the impact in their ability to warehouse risk, as they are asked to take on and hold these positions during volatile market periods. Participants explained that many of the issues surrounding market disruption and impacting liquidity, were related to the ability and capacity of market participants to take on additional risk and not enhanced transparency. Participants did not identify any linkage between these events, regardless of the availability of information in the market. Ultimately, participants agreed that an increased transparency regime could have caused additional disruptions to the market, its participants and overall Treasury market resilience.

Section III: Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

This final section of our report examines the utilization of dissemination delays and caps depending on underlying type of security, liquidity characteristics, segment (on-the-run versus off-the-run). Additionally, this section reviews participant suggestions for an appropriate phase-in schedule in for potential changes to the Treasury market's transparency regime. The Treasury RFI posed these questions:

Should volume caps be utilized to address concerns of increased transparency, if so how?

- **87% of participants were in favor of implementing volume caps. The most common approach on how to implement volume caps involved using a risk-based measure such as DV01 or an independent exercise for on vs. off-the-run securities. Many participants wanted to implement volume caps with time delays.**

Most of our study participants agreed that implementing volume caps would protect market participants trading large transactions (especially in the off-the-run space) from the risks associated with a blow out of bid-ask spreads that would reduce market liquidity. Participants also noted that it would protect both dealers and investors from potential harmful market behavior of certain industry participants where the provisioning of liquidity often diminished markedly in volatile markets. Finally, study respondents said that they wanted additional tools to be used in conjunction with volume caps, noting that that this mitigant alone would not be sufficient to protect the industry but should be used in conjunction with reporting delays and data aggregation among other measures.

- **13% of participants were not in favor of volume caps.**

Some of our respondents had not considered either the value of volume caps or the implications of utilizing them and did not have meaningful feedback on how regulators could structure them for the Treasury market. Other participants did not want Treasury's proposed transparency requirements to be implemented in the first place as they did not see any benefit to the market.

Do you believe that large trades should be excluded from volume data aggregates?

- **61% wanted large trades included in volume data aggregates.**

Overall, a majority of participants in the study argued in favor of including large trades in volume data aggregates. This group argued that including these trades would enhance market understanding and the additional transparency would allow investors to better understand how larger volumes influence changes in price activity.

Furthermore, inclusion of large trades in volume data aggregates would allow regulators to monitor the market and improve the mitigation of potential financial instability. This view was not shared by a majority of asset managers and primary dealers.

- **39% of Participants wanted to Exclude or Include only with a delay. This group included most Asset Managers (64%) and Primary Dealers (71%) who have the largest trading volumes in US Treasuries.**

There was a meaningful set of participants that were not in favor of having large trades included in volume data aggregates. These participants argued that that a failure to exclude large trades could increase transaction costs and bid ask spreads while leaving intermediaries compromised in their ability to warehouse risk or work a trade over a period of several days or longer. Other participants recognized the benefits of including large block trades in volume aggregates but thought it was prudent to include a delay to protect intermediaries in the market. Although there were a majority of participants that wanted large trade volume aggregates included, a majority of Asset Managers and Primary dealers wanted large trade volume data aggregates excluded or included with an additional mitigant such as a delay.

Should volumes be capped if data is disseminated at the transaction level as is done for other fixed-income securities? (i.e. corporate bonds)

- **82% Supported Volume Caps.**

Assuming that there were a new regulatory transparency regime in place, most of the participants across our study felt that transaction size should be capped in some manner or another. Similar to earlier arguments made in this report, respondents noted that volume caps would serve as one of several vehicles to protect market participants holding illiquid securities as they looked to work positions out in the market with discretion. Moreover, participants made it clear that this cap should be calibrated to account for the liquidity profile of the underlying security. Some participants did not mind if on-the-run securities had a higher transparency threshold than their off-the-run counterparts and possibly a different set of criterion for delays.

- **18% did not Support Volume Caps.**

Those that argued that volumes should not be capped if data is disseminated at the transaction level offered they did not understand the benefits that volume caps would achieve. Some participants questioned if increased reporting requirements to improve transparency were even needed in the first place.

Delays can be utilized, specifically in less liquid markets for data dissemination. How would you suggest determining an appropriate length of delay?

- **Participants were universally supportive of implementing delays. Participants were evenly supportive of taking an approach for determining an appropriate length of a delay that incorporated a risk-based approach or had off-the-run securities having a longer delay than their on-the-run security counter parts.**

Study participants reflected an interest in determining a delay that would consider the risk and liquidity profile of the bond and treat on-the-run securities differently than off-the-run securities with riskier and less liquid bonds having longer delays. Some participants also stressed their desire to combine dissemination delays with volume caps. Other participants proposed specific lengths of delays ranging from 60 minutes to a few weeks. Many participants saw delays as only one possible tool to be used to address negative impacts to intermediation and risk transfer in less liquid segments. Many participants wanted an approach where dissemination delays would be used along with volume caps to address potential risks as a result of additional transparency.

The following four questions were drawn directly from the Department of Treasury RFI. Some respondents noted that they had already provided us feedback on specific topics through prior responses in our discussions. The participant feedback on these and other questions were consistent: any enhanced transparency was dependent on (a) differentiating between on vs. off-the-run securities and, (b) ensuring proper mitigants such as caps or delays were in place.

Do you agree with releasing daily average prices, trade count, and traded volumes for each individual CUSIP?

- **60% of Participants wanted to Release Daily Average Prices, Trade Count and Traded Volumes for Each Individual CUSIP.**

Most participants favored releasing daily average prices, trade count, and traded volumes for each individual CUSIP. Those in favor believed the increased transparency would assist investors and dealers to properly gauge the liquidity of the market. Many participants who were in favor of releasing the CUSIP data stressed that they would like this released with a dissemination delay ranging from end of week to a month or more.

- **Nearly 32% of the Participants Did not Want to Release Daily Average Prices, Trade Count and Traded Volumes for Each Individual CUSIP.**

A minority (less than 10%) of participants only wanted some of these CUSIP details to be released. They feared that disseminating average daily prices could possibly be misleading to investors.

Slightly less than a third of participants did not want daily average prices, trade count, and traded volumes for each individual CUSIP to be released as they did not see the value this data would provide. In addition they believed that it could be expensive to report due to the need to update business systems and processes.

Do you agree with releasing transaction level details for on-the-run nominal coupons?

- **73% Supported the Release of Transaction Level Details for On-the-run nominal coupons.**

Most respondents favored releasing the transaction level details for on-the-run nominal coupons as participants argued they posed little risk to intermediaries and are already very liquid. Participants still wanted a delay with some wanting volume caps to be applied to this data as well.

- **27% Did not Favor Releasing Transaction Level Detail for On-the-run Nominal Coupons.**

Those that did not favor releasing the transaction level details for on-the-run nominal coupons either did not see the value they provided or opined that it could be used by algorithmic or other quantitative trading firms in an unfair manner.

Do you agree with releasing transaction-level details for every Treasury security?

- **66% of Participants Opposed Releasing Transaction Level Details for Every Treasury Security, Including a Small Group who Agreed Subject to Appropriate Mitigants.**

Most respondents either did not want to release transaction level details for every treasury security outright or wanted them released with a mitigant such as a delay. Most asset managers and the overwhelming number of primary dealers did not want transaction level details released. Those that were against releasing transaction level details argued that it would pose an expanded risk of a liquidity crunch by making it more difficult to warehouse these securities. Furthermore, participants were not in favor of releasing transaction level details for every treasury security because of the difference in liquidity profiles between on and off-the-run securities.

- **34% Favored Releasing Transaction Level Details for Every Treasury Security.**

Those in favor of releasing the transaction-level details said it would benefit those purchasing the securities by increasing transparency and create a higher level of understanding of the market.

Do you agree with shortening the release of reporting trade transactions to 60 minutes, rather than at the end of the day?

- **Nearly Two Thirds of Participants Were Opposed to Shortening the Release of Reporting Trade Transactions to 60 Minutes, Including a Group who Only Supported Shortening the Timeframe for On-the-run Securities.**

Other participants the study either did not want to shorten the release of reporting trade transactions to 60 minutes (rather than at the end of the day) or only wanted it shortened for on-the-run securities. Those that were not in favor of shortening the reporting window believed that there would be increased costs associated with this initiative and an increase in bid-ask spreads. Participants explained this could result in a reduction in intermediation for trades and in overall market liquidity. Respondents made it clear that they would prefer to see reporting shortened for on-the-run securities rather than off-the-run securities. For off-the-run securities many respondents wanted to keep the longer delay while some wanted to additionally introduce volume caps.

- **37% Did Want to Shorten the Release of Reporting Trade Transactions to Sixty Minutes Rather than End of the Day.**

There were some participants that viewed that the reduced reporting window would still provide sufficient time delays for both on and off-the-run securities and were supportive of shortening the reporting window.

In your view, what would be an appropriate phase-in schedule for gradually phasing in additional transparency?

- **83% Wanted a Phase-In Schedule for a year or longer.**

Participants preferred a phase in schedule that was gradual and at least one year or longer even stretching to 2 or 3 years into the future. They wanted a delayed phase in schedule to account for the anticipated operational, system and technology upgrades especially for regulated entities. In addition, respondents emphasized the need to have a grace period to ensure that proper research and industry outreach was completed to properly evaluate the impact of the changes and their efficacy.

Executive Summary

Our report is based off interviews with both investors and primary dealers. The findings do not attempt to reach an overarching conclusion or advocate for one view or another. Indeed, as we iterate several times, this is a complex topic with a variety of attenuated topics and we look to provide the readers with both balance and an even perspective on the issues we considered. Finally, it is important to note that commentary in our interviews and supportive documents emphasized that the issues surrounding transparency are part of a much larger debate which includes other potential steps that regulatory bodies are reviewing, including capital relief related to Treasuries and repos and the potential for increased clearing in the US Treasury market.

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Transparency and Market Segmentation

Transparency and Market Segmentation

This section focuses on the impact of additional transparency on different market segments. Treasury securities may be differentiated based on security type, liquidity characteristics, on-the-run versus off-the-run) and maturity.

Below are some of the key findings discussed in this section of the report:

- The majority of participants (**82%**) agree less liquid market segments should be subject to varied or fewer transparency requirements.
- Participants shared that additional transparency could lead to wider bid-offer spreads, a decrease in the ability to warehouse risk and an increase in the vulnerability of their positions in the market.
- The majority of participants (**64%**) agree that securities with longer maturities (i.e 30yr bond versus a 7yr note) should be subject to fewer transparency requirements, specifically because of the increased risk to execution quality associated with longer maturities where transparency increased, and longer duration securities generally experience less liquidity in the market.

Transparency and Market Segmentation

Should there be fewer, or varied, transparency requirements for less liquid segments (i.e. off-the-run) than in more liquid segments (On-the-run)?

While the Treasury market is one of the deepest and most liquid in the world, differences in security type, elements and market segments, change the way dealers and investors interact, Liquidity characteristics are important in helping to determine how to hedge and warehouse risk and to allow for quick sale the ability to quickly sell without having significant impact on the price of the security. It is important to consider the differences between more liquid and less liquid securities. On-the-run securities (those most recently issued) are commonly more liquid than off-the-run securities and other segments including TIPS, STRIPS, and floating rate notes (FRN), Some of the characteristics for on-the-run and off-the-run Treasuries are set out below:

- “On-the-run: The most recently issued Treasury securities of a particular maturity (known as “on-the-run”) are highly liquid and trade in a largely electronic market. While they constitute just 1% of total Treasury securities outstanding by notional, they account for 64% of the average daily trading volume.” - JPMorgan Chase & Co. comment letter to the Treasury

- “Off-the-run: Treasury securities issued prior to the most recent issuance (known as “off-the-run”) are less liquid and the trading is less electronic. This segment constitutes over 75% of total Treasury securities outstanding by notional, but accounts for just 19% of average daily trading volume.” JPMorgan Chase & Co. comment letter to the Treasury

Since off-the-run Treasury securities are purchased through the secondary market rather than bought directly from Treasury in order to trade, investors rely on intermediation from broker dealers, banks and exchanges who provide liquidity to the market. Off-the-runs also tend to trade in larger block trades/sizes. The Treasury RFI seeks comment on how transparency requirements should differ in particular liquidity segments, specifically if requirements should be different for on-the-run versus off-the-run securities. With this as backdrop we asked participants if less liquid market segments should receive a different transparency framework than more liquid segments.

Participants expressed that, while on-the-run Treasury securities tend to experience greater liquidity than off-the-runs, it’s important to understand how the on-the-run segment might be impacted by additional transparency requirements. While individuals indicated that they already have the ability to obtain real time streaming quotes for on-the-runs, this does not occur in off-the-runs. They shared that with similar transparency for less liquid spaces, it would be difficult to sell large positions and more time lags should be incorporated. Others have indicated that regardless of the securities liquidity characteristics (on-the-run versus off-the-run), the same transparency concerns exist for Treasuries with longer tenors. A large investment manager explained that the ”real distinction would be between a 5 or 20 years for on-the-runs; you really need to weigh it by tenor.” Participants broadly agreed that there would be a greater impact for less liquid, off-the-run segments.

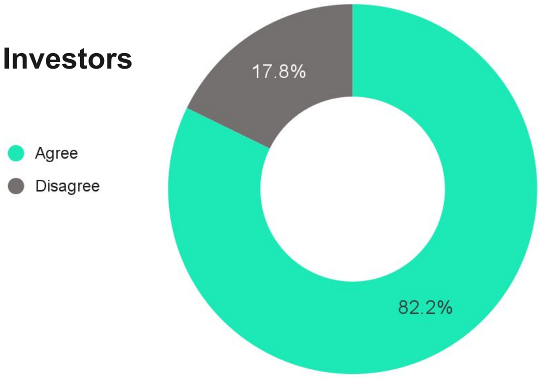
Transparency and Market Segmentation

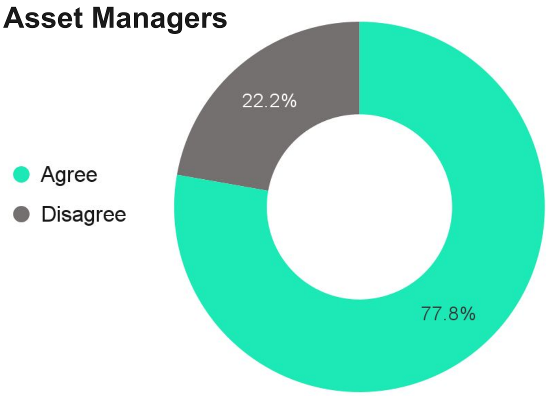
Should there be fewer, or varied, transparency requirements for less liquid segments (i.e. off-the-run) than in more liquid segments (On-the-run)?

When it comes to off-the-runs, participants highlighted that they do not trade as frequently in the market and since positions are commonly traded in larger sizes, additional time is often required for liquidity providers to warehouse risk. Participants nearly universally shared that market makers require additional time to package that illiquid risk to sell pieces off, which often takes days and sometimes weeks or in rare situations multiple months.

Respondents also suggest that additional public market dissemination allows vulnerable market positions to be exposed to competitors and other market participants. Study participants noted that this has resulted in wider bid-offer spreads when dealers could be required to share more information, impacting pricing for investors. Exposing vulnerable positions in the market would have an impact on both investors and the dealer community. The potential drawback of enhanced transparency for dealers is the risk of market participants identifying what their positions are, particularly with larger positions. One bank treasury participant expanded their thinking saying,

"Sell side desks do try best pricing [and] giving us their own gauge of what the price will be given liquidity. There are conduct restrictions on hitting the market. In quantities we trade if it is reported in 15 minutes for the off-the-run spaces it will have adverse impacts on whomever is trying to facilitate trades. Our pricing gets worse and they need to cover [risk] and the rest of the market will push against them. For on-the-runs won't matter"





Participants discussed broadly the limitations for dealers warehousing risk as a result of increased transparency. With less liquid securities (i.e. off-the-runs), there is additional intermediation to facilitate trades and dealers need longer time frames to determine where and how to best manage risk, given market conditions over a period of time. Investors rely on dealers as robust providers of liquidity to buy and own large exposures and be willing to keep trades on their balance sheets until they can be offloaded in the market. One bank shares their views saying,

"With too much transparency and faster dissemination, dealers would be concerned with the trades still being on their balance sheets; we act as principal to these transactions and we cannot unwind those; and some are very illiquid and inhibit our ability to warehouse over time." - Large multinational bank

Transparency and Market Segmentation

Should there be fewer, or varied, transparency requirements for less liquid segments (i.e. off-the-run) than in more liquid segments (On-the-run)?

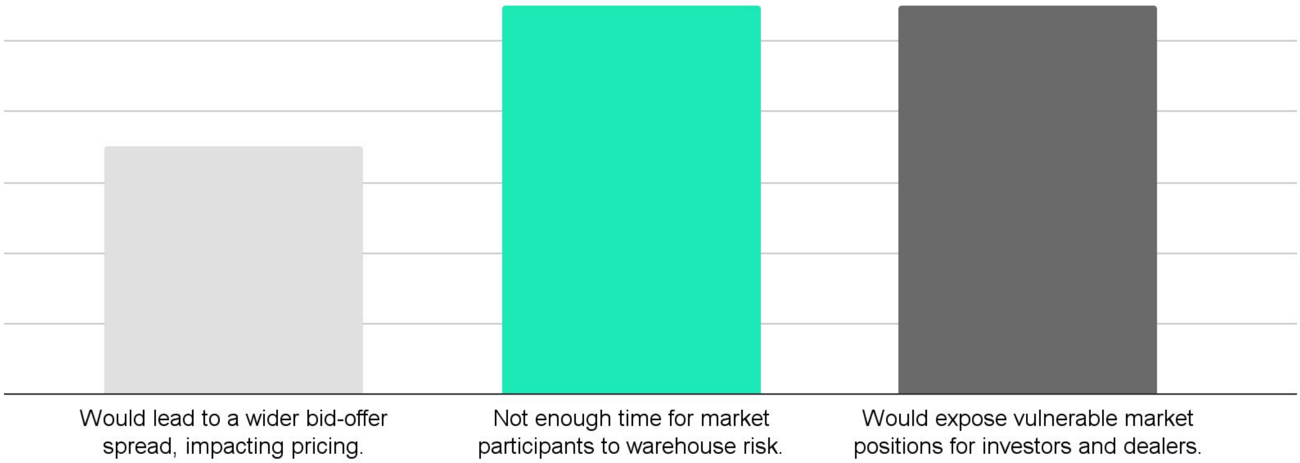
Another investment manager explained these views saying, ***"The Treasury market is more of a principal market; the best dealers who can price things are willing to warehouse the risk; the market maker should be confident in what they are seeing and need time to ascertain their position and maneuver out of the risk."***

One hedge fund further expanded on these views and on the residual impact to investors in the market: ***"If a dealer has to report in a minute or so and [information is disseminated] to the market before they have to warehouse their risk, they would be aggressive with positions inhibiting both liquidity and [making] pricing for investors worse."***

Another asset manager echoed these views and the impact on investors saying, ***"Transparency will be detrimental to dealers to warehouse risk: dealers will step back and HF's step in—not going to be pretty price discovery and that will be multiples for what asset managers think of paying for bid offer; asset managers have to trade in and out. Flows need to re-balance and [investors] would be the true victims."***

How would increased transparency impact less liquid segments? (Off-the-run)

This chart displays a breakdown of reasons that participants shared for the impact that increased transparency has on the market, specifically for off-the-run segments. ***Note****: Chart does not reflect specific values, representative of respondent answers proportionate to one another.*



Respondents indicate that for more illiquid securities, it could be difficult for dealers to get a reasonable margin on thin spreads or properly manage their risk as a result of increased transparency. This could lead to intermediaries limiting trading, and leave market makers to limit risk taking in off-the-runs. One global investment management firm explained that, **"if less liquid flows are made highly transparent it would hurt the transaction going through; they tend to take time to complete and it's not as simple as a one click flow; [could take] hours or days."**

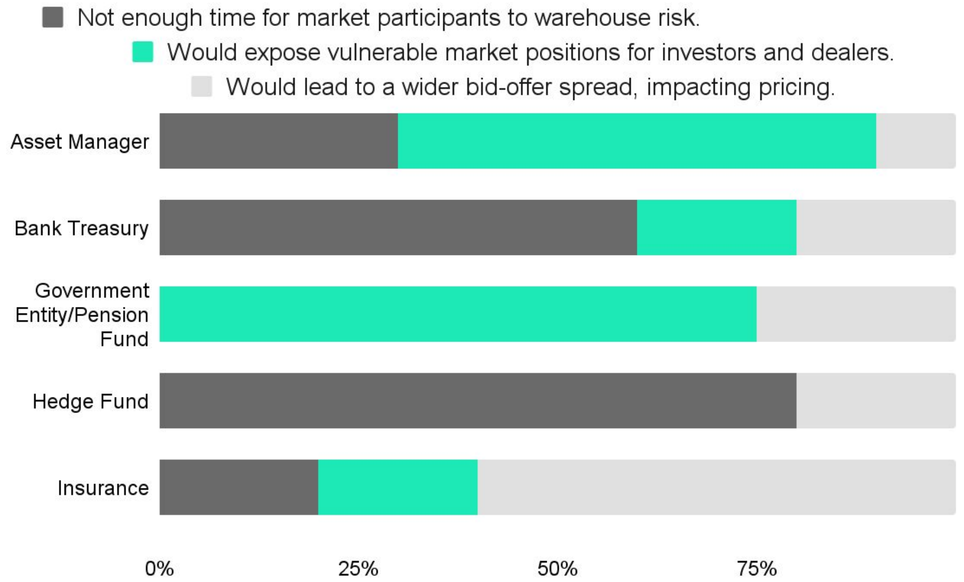
Transparency and Market Segmentation

Should there be fewer, or varied, transparency requirements for less liquid segments (i.e. off-the-run) than in more liquid segments (On-the-run)?

Participants highlighted the impact on bid-ask spreads as a result of near real time dissemination, viewing that for off-the-run securities will cause wider quotes if trade data is disseminated sooner, potentially leaving investors with unfavorable pricing. One investment entity explained that **"we could be negatively impacted; for smaller trades it would benefit us; to have additional data and [see] where things are trading. It depends on the type of account. We are more active in off-the-run securities, with bigger trades and programs [for increased transparency] are detrimental and only a couple of trades would benefit."** Individuals have explained that this could lead market participants to minimize trading in size and volumes, causing liquidity and overall interest in the market to potentially be lowered.

How would increased transparency impact less liquid segments? (Off-the-run)

The below chart displays a breakdown, by respondent type, of reasons that participants shared for the impact that increased transparency has on the market, specifically for off-the-run segments.



Study participants expressed the importance in differentiating between off-the-run and on-the-run segments. Participants explained that transparency requirements should be less extensive for deeper off-the-run securities that have been outstanding for longer periods of time. These participants shared that risk and volatility is higher for such securities and individuals emphasized that it can lead to their portfolios underperforming. Respondents emphasized the importance of considering how far deep off-the-run a security is when determining transparency requirements.

Participants also agreed that there should be fewer, or varied, transparency requirements for illiquid segments including STRIPS, TIPS and floating rate notes (FRNs). One asset manager provided an example, looking at a 10 year on-the-run which experiences increased liquidity versus a coupon strip where volume, price and size information would give up positions in the market. Individuals explained that similar to off-the-run securities, additional time is needed for these transactions to trade out.

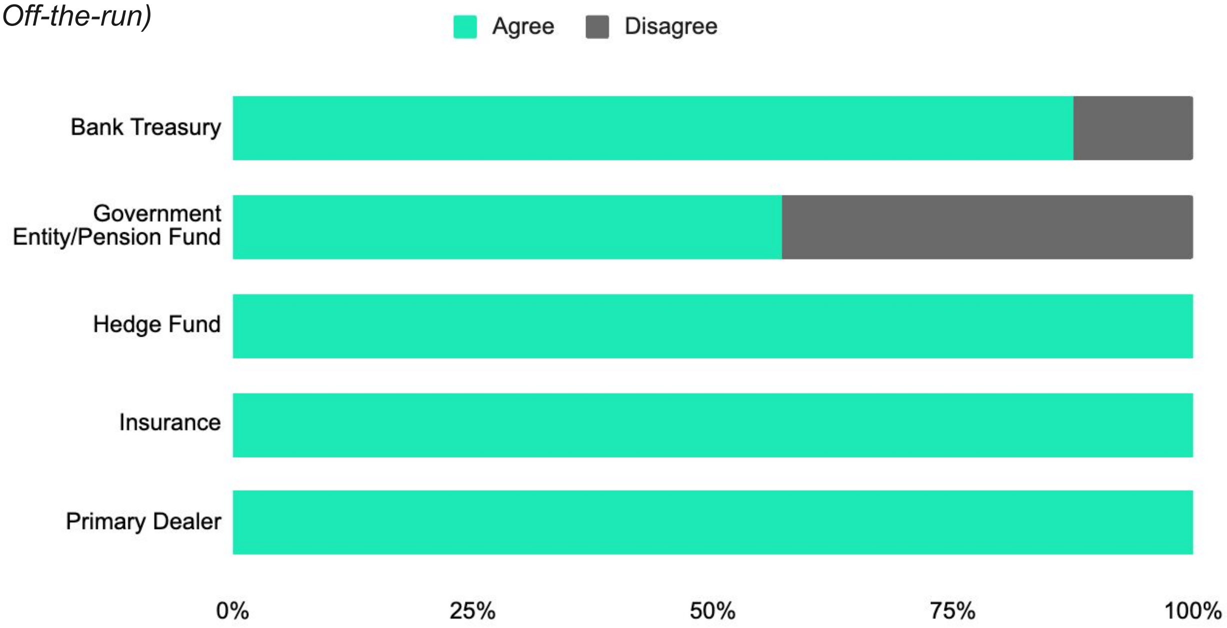
Transparency and Market Segmentation

Should there be fewer, or varied, transparency requirements for less liquid segments (i.e. off-the-run) than in more liquid segments (On-the-run)?

A much smaller number of participants, including government entities/pension funds and some additional investors shared that there should be standardization of transparency requirements regardless of liquidity. Particularly for on-the-runs, these individuals explained that they don't believe there needs to be additional transparency especially with the availability of real time quoting in the market. They noted that the overall risk of additional transparency is lower for on-the-runs and are not concerned with market making ability in this liquidity segment. One institutional investor explained that they "would like the Treasury to level the playing field; there's better liquidity when investors question the best price.

Should transparency requirements be different in less liquid segments (i.e. off-the-run) than in more liquid market segments (On-the-run)?

The below chart displays a breakdown, by respondent type, of whether participants agree or disagree that transparency requirements should be different for less liquid market segments? (i.e. Off-the-run)

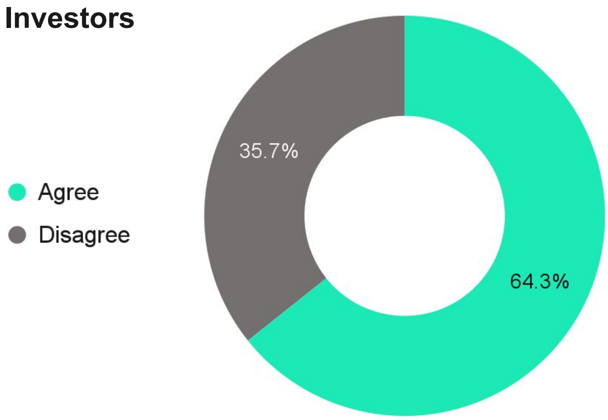


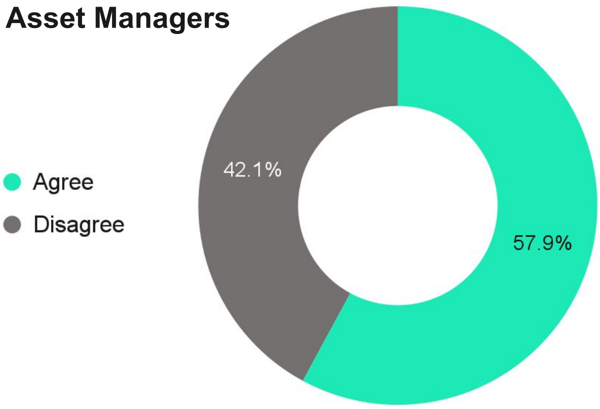
Both investors and dealers share the broad consensus for reduced transparency for off-the-runs and in less liquid segments. They argued that increasing information flow could be problematic as the Treasury market trading structure is not currently set up to incorporate additional transparency. Participants share it would take a couple of years with the right calibration to effectively introduce additional transparency to the market. It is clear the industry believes that this impact would be more apparent for less liquid segments including TIPS, STRIPS, FRNs and off-the-run securities. Respondents explain that considering how often off-the-runs trade and given their less-liquid nature, more information would make it difficult to get better execution, which increases risks for both the buy and sell side firms. They emphasize that additional transparency should feed back to liquidity in a positive way and that the overall benefit of transparency is smaller for the Treasury market' and new/additional information being provided would inhibit rather than promote trading.

Transparency and Market Segmentation

Should securities with longer maturities (i.e 30yr bond versus a 7yr note) be subject to fewer, or varied, transparency requirements?

The Treasury RFI argued that the maturity of a particular Treasury security should also be taken into consideration when determining transparency requirements. Maturity as a factor is important as it could have impacts to both investors and dealers as liquidity characteristics are different for different tenors. When considering transparency requirements, it could be useful to analyze maturity along with reviewing the particular market segment for a product. Participants agreed that maturity is a factor in determining transparency requirements, specifically that requirements for securities with longer maturities should provide more protections. Respondents emphasized that securities with longer maturities tend to experience less liquidity in the market, particularly in the off-the-run Treasury segments. They go on to explain that there is increased risk in transacting for investors especially as market makers determine how to warehouse risk in a new transparency regime.





Participants indicated the importance of reviewing maturity while also keeping in mind the different liquidity characteristics by market segment (e.g. on-the-run versus off-the-run & TIPS & STRIPS). For on-the-run segments, the majority of respondents explained that higher degrees of transparency would not negatively impact their ability to trade, considering on-the-runs tend to experience greater liquidity overall. Therefore, respondents believe that for on-the-run segments transparency requirements could be more standardized, as tenor is less relevant for this market segment.

As with nearly every other issue addressed in this report, respondents highlighted that much of the impact would be to off-the-run Treasury segments. Participants shared the general view for the differentiation of requirements for liquid vs. illiquid products and that it's important to consider the impact on off-the-runs, deeper off-the-runs, and for products with longer maturities, where there should be fewer, or varied, transparency requirements imposed. One international wealth manager explained these views below saying:

"For off-the-run and on-the-run different considerations for post trade reporting makes sense. For our liquidity providers; we want reliable liquidity and if a framework can be constructed we are open to it. Need for differentiation for maturities for off-the-run; could see reasons for cost increases for [transactions] in the longer end of curve."

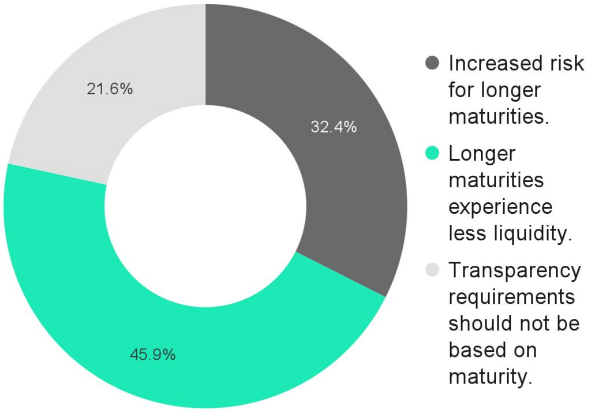
Transparency and Market Segmentation

Should securities with longer maturities (i.e 30yr bond versus a 7yr note) be subject to fewer, or varied, transparency requirements?

Another asset manager specified further that for the ***"most recently issued at a benchmark tenor, it's reasonable for them to have more granularity than for off-the-runs; a benchmark would be 30 year vs. off-the-run 30 year; look at the dimensions for what information is being provided vs. specific volumes and characteristics of a trade and timeliness of importance with information that is shared [by segment]."***

A number of respondents also expressed views on the re-introduction of the new 20 year Treasury security and the liquidity characteristics specific to that segment. Participants explained that there is less liquidity and depth for the 20 year and as a result fewer, or varied, transparency requirements are merited. One bank treasury explained these thoughts saying, "**generally if the security is less liquid and more volatile, especially like a 20 year which is already challenged by liquidity; more disclosure would have an adverse impact. Firms will increase the cost of capital and widen the bid ask.**" Another respondent shared their thoughts on the 20 year Treasury security below:

Why should securities with longer maturities (i.e 30yr bond versus a 7yr note) be subject to fewer, or varied, transparency requirements?



"As a life insurance [firm] on the longer end of the curve and in the off-the-run 20 year Treasuries, we have sensitivities [and] less liquidity vs. 2 year and 5 year securities. The shorter end has more players and more transaction activity and as you get passed 10yrs less funds participating in that part of the curve. Trades tend to be chunkier and not traded as actively as 2 years, 5 years and 7 year [securities]."

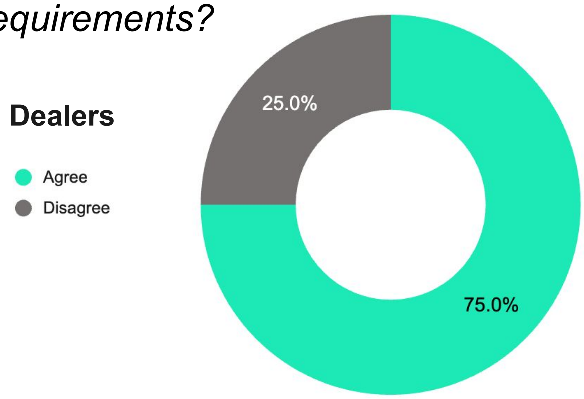
Respondents have indicated that there should be increased sensitivity given to less actively traded products. These securities that are on the longer end of the curve, particularly 20 year securities in their current structure, would be impacted in a material way by the additional dissemination of transaction data. One investment manager explains these views saying, "**in any sector the perceived risk of a duration/longer maturity bond has a higher distinction in the off-the-run space and in longer curves. Determining requirements for these securities would matter for time deferrals and thresholds; and key for market makers to warehouse that risk.**"

Respondents shared that increased risks associated with Treasury securities that have longer maturities are attributable to their relationships with dealers and dealers' ability to warehouse risk. Participants explain that there would be worse execution of trades with the additional dissemination of data, especially if it were disseminated in real time.

Transparency and Market Segmentation

Should securities with longer maturities (i.e 30yr bond versus a 7yr note) be subject to fewer, or varied, transparency requirements?

One large pension fund said they ***"agree that securities with longer maturities should get fewer, or varied, transparency requirements; and there needs to be sensitivity to the flows in that part of the curve as market makers continue to intermediate those flows and additional transparency might impair that."***

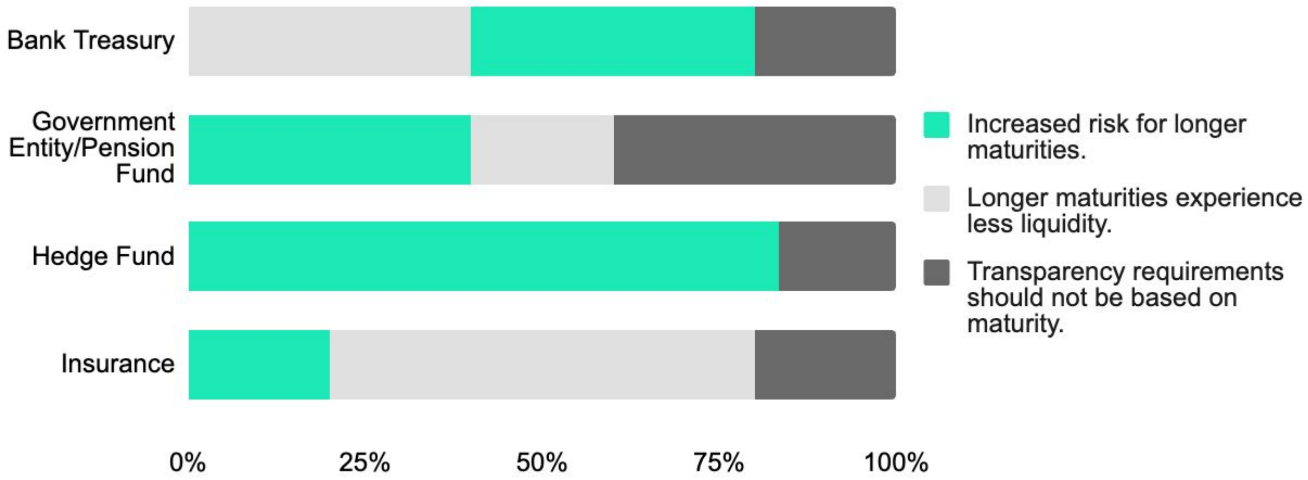


They continued to explain that "maturity is a function of risk" and the higher the maturity the riskier the bond (e.g. 30 year bond riskier than 5 year bond). Individuals indicated that in less liquid markets and in more volatile times, dealers and other counterparties will have wider markets and increased transparency will make the markets even wider. One registered investment advisor further expands on this view below:

"For example, when trading in March 2020, if on top of the [increased] risk participants had to report in a more timely fashion they would have needed to add more protection to enter into those trades. There is no way that transparency would help that issue, especially with off-the-run securities."

Why should securities with longer maturities (i.e 30yr bond versus a 7yr note) be subject to fewer, or varied, transparency requirements requirements?

The below chart displays a breakdown, by respondent type, of reasons why participants believe that securities with longer maturities (i.e 30yr bond versus a 7yr note) should be subject to fewer, or varied, transparency requirements including the view that transparency requirements should not be determined based on maturity.



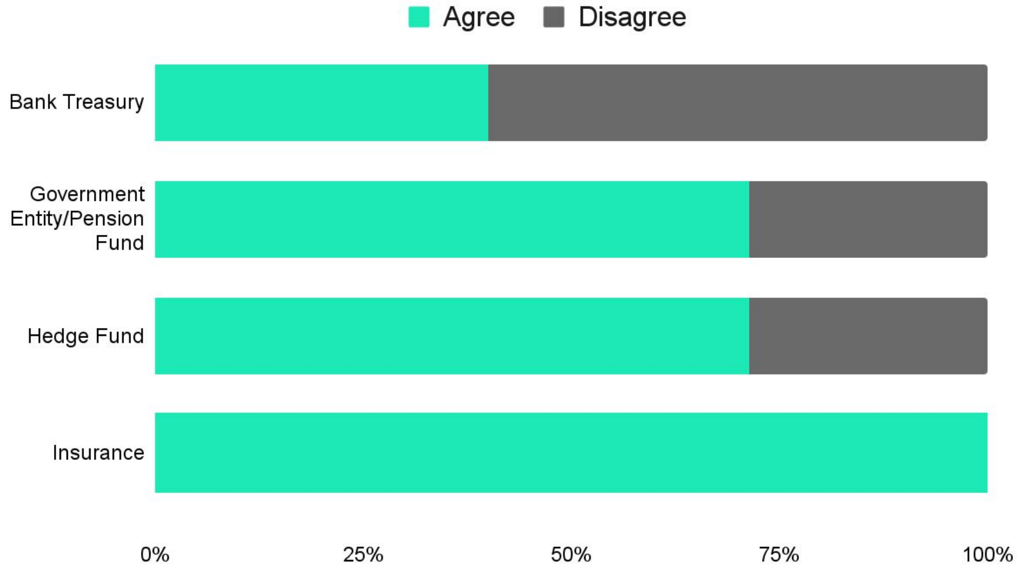
Transparency and Market Segmentation

Should securities with longer maturities (i.e 30yr bond versus a 7yr note) be subject to fewer, or varied, transparency requirements?

There were a smaller number of participants, central banks and bank treasuries in particular, who expressed the view that transparency requirements should not be based on maturity. Some respondents explained that it does not seem fair that information should be promoted in one part of the curve versus another. They continued to explain that fairness of more transparency will better assess the conditions of the market regardless of the point of the curve. One bank treasury shared the view saying that, “whatever the guidance it's better to be consistent and it would be odd to have separate treatments based on tenor.” In the view of some respondents, maturity or duration does not have an impact, sharing the example for off-the-run securities that it does not matter if it’s a 10 year vs. a 30 year, they are subject to the same market dynamics that exist.

Why should securities with longer maturities (i.e 30yr bond versus a 7yr note) be subject to fewer, or varied, transparency requirements requirements?

The below chart displays a breakdown, by respondent type, if participants believe that securities with longer maturities (i.e 30yr bond versus a 7yr note) should be subject to fewer, or varied, transparency requirements.



02 /

Impact of Transparency on Liquidity

Impact of Transparency on Liquidity

This section focuses on the ways in which transparency could impact both understanding, competition and intermediation in the Treasury market. Additionally, the section discusses common measures of liquidity, and considerations for improving liquidity in the market. Finally, we review the impact of transparency on market resilience during periods of volatility, specifically in relation to the 2014 flash crash, 2019 repo pressures and March 2020 disruptions.

Below are some of the key findings discussed in this section of the report:

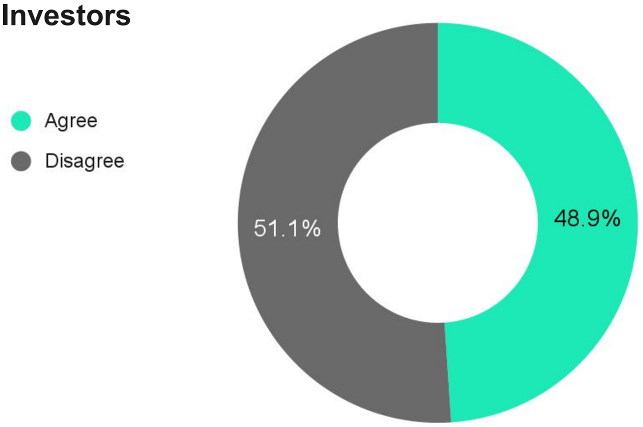
- Half of participants do not believe that increased transparency provides a better understanding of the market and promotes market competition. These participants share that:
    - Additional transparency could cause market entrants to hesitate from entering the market and constrict the ability to transact, harming liquidity.
    - Additional transparency is not necessary as market participants are already receiving real time quotes and understand how the market functions.
- Half of participants believed that increased transparency provides a better understanding of the market and promotes market competition. These participants share that:
    - Increased transparency allows market participants to see what is occurring in the market with a primary focus on retail entities.
    - Transparency promotes market entrants, however this could include quantitative trading firms (HFTs, PTFs, other algorithmic trading) who many argue wouldn't add liquidity to the market, particularly during stressed market times.
- The majority of participants (**72%**) believe that increased Transparency disincentivizes Intermediation in the market. Participants share that:
    - Transparency could expose trading positions, decreasing intermediation.
    - Transparency could decrease risk taking capacity and hurt liquidity in the market, decreasing intermediation.
- Participants identified a number of preferred metrics and data for measuring liquidity in the market including Bid-Offer Spread, Volume Data, Market Depth and Price Impact
- Participants identified a number of alternatives for increasing liquidity in the secondary market including, SLR reform, the potential of central clearing and ensuring proper calibration for additional transparency.
- The majority of participants (**59%**) believe that increased transparency would harm market resilience, particularly during recent events of market volatility. (2014, 2019, 2020)

Impact of Transparency on Liquidity

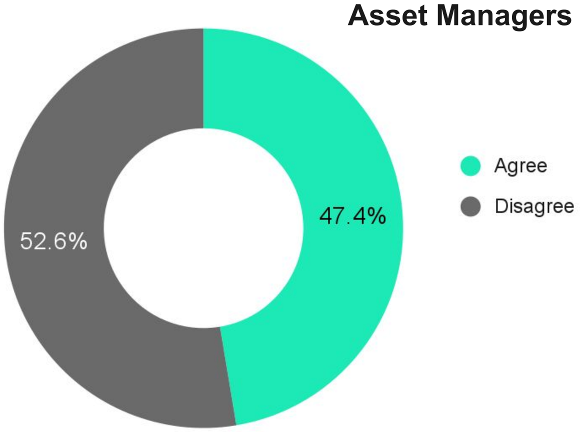
Would Transparency in the US Treasury markets promote an increased understanding of the market and promote market competition?

The Treasury RFI recognized both the importance of considering the potential impact that additional transparency could have on market liquidity and if the additional data that would come from that effort would increase or potentially decrease competition in the markets. Treasury shares a view that "providing additional insight into transactions may enhance liquidity by fostering a greater understanding of market activity across market segments [and that] additional transparency may also promote greater competition in the Treasury securities market." The Treasury RFI states that "based on the vital roles and unique structure of the Treasury securities market, careful consideration is necessary regarding how much and in what form information should be made available, so that market participants are not disincentivized from providing liquidity and one group of participants is not unduly favored over another." We asked participants if they thought transparency in the US Treasury markets would both promote an increased understanding of the market and promote market competition.

Investors



Asset Managers



A group of participants noted what they thought were core fallacies in the supposition advanced. First, there is near real time transparency in fixed income markets in the on-the-run space and there has been no indicative growth either in the intermediary space or among the investor population. If the thesis which is being advanced were correct, participants noted that there should be some identifiable growth among banks or price takers and that has not occurred. Indeed, there has been a reduction in liquidity in that space and regulators are seeking remedies including recommendations in the Treasury RFI to reverse that trend.

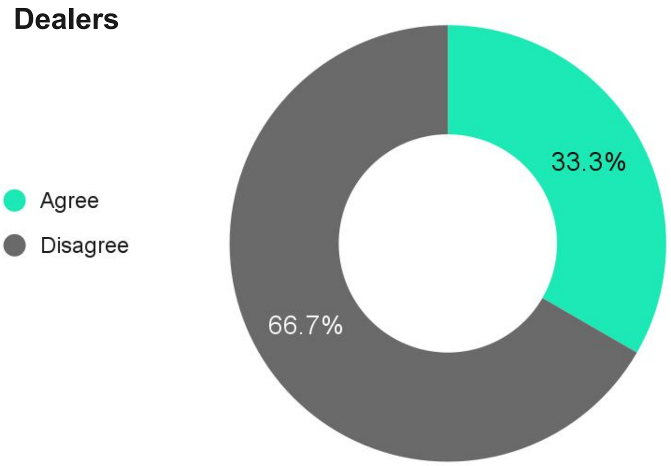
A broader point was made by a large GSIB who commented**," would there be additional participants? The answer is obviously no. Everyone can already see what is occurring for on-the -runs. The record shows that post March 2020 all the talk was that dealers were preventing investors from trading off-the-runs. But forget transparency—even in on-the-run securities when making money would be feasible, this thesis is demonstrably false. They were not there before and they are not there now. They would not advance liquidity or competition."**

Impact of Transparency on Liquidity

Would Transparency in the US Treasury markets promote an increased understanding of the market and promote market competition?

However, our participants were somewhat divided around arguments on whether market competition would increase or remain the same. The split was indeed a reflection of whether enhanced transparency would actually have any impact on adding more participants to the market, or if it could possibly lessen participation. A smaller number of individuals viewed that more frequent and faster reporting could lead to enhanced trading execution, and as a result, might encourage additional market entrants. A large hedge fund shared this view below:

"Transparency can be very helpful to liquidity to the degree that it enables and solves an asymmetric problem; having clarity around the size of market and prices of market is important; enabling more effective participation. However, if transparency creates asymmetry of information of certain trades and can identify participants, changing their behavior and supply and demand, it impacts more illiquid markets and results in more costly transactions [for market participants]." large hedge fund



Participants explained that the enhanced transparency could encourage the growth of quantitative strategies and participants (e.g. HFTs, PTFs) who may not provide the market with liquidity especially in challenging circumstances. Some investors noted that the core of the dealer side would remain intact but the liquidity for other product offerings could decrease with a new transparency regime. Others noted that those with a more niche presence (trading on TIPS or STRIPS as an example) who concentrate on the "off-the-run" sector could experience diminished liquidity provisioning. One participant shared their view on competition in the market, saying,

"With the combination of many restrictions we are just adding perhaps another role to the game. In terms of increasing competition? People will price wider as a result, so the other way around, as positions are exposed immediately and more [time] is needed to move out of the position." - Large bank treasury

Participants explained that it's important that further dissemination of trade data doesn't inhibit both dealers and investors in their ability to absorb transactions and additional risk. They express that In order to benefit the market, increased transparency should be an asset to firms that have enough capital and can actually add liquidity to the market. Therefore, both investors and dealers noted that such changes would take time and would require very careful and prudent efforts in the off-the-run space by regulatory bodies.

Impact of Transparency on Liquidity

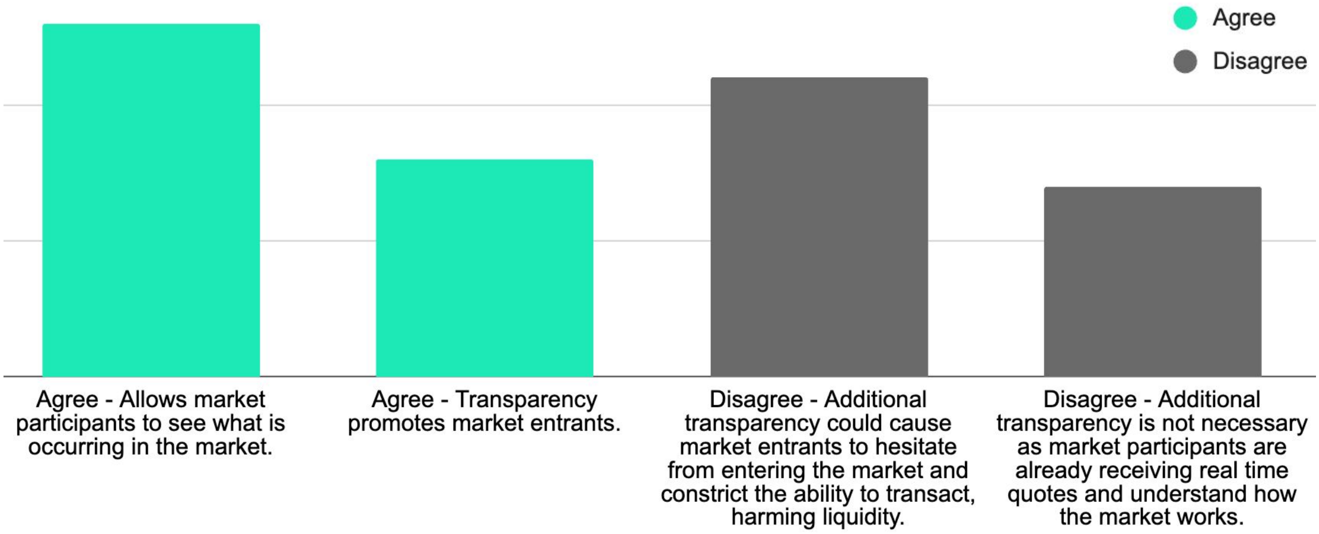
Would Transparency in the US Treasury markets promote an increased understanding of the market and promote market competition?

Market makers had a somewhat less favorable view and noted additional concerns about what enhanced transparency might bring to the functioning of efficient markets. Both investors and dealers identified potential concerns with new market entrants and the risks of their market participation in times of higher volatility in global markets. One bank shared their view saying, "**The benefit of increased transparency, [specifically] transaction level data, is questionable and no strong case has been made that it will help. And this could hurt other issues [in the market] that need solutions.**" Another primary dealer explained their thoughts saying, "**Our concern is the functioning of the market [in light of increased transparency]. If this is the direction of the market and there were not appropriate delays and not appropriate caps there would be migration in the Treasury market that would result in larger bid offer spreads.**"

One bank explains that ***"calibration at the right level is needed; recognizing potential changes to liquidity. Small trades need no protection; the key element is the recognition for protecting risk transfer."***

Why do you agree or disagree that transparency in the US Treasury markets promote an increased understanding of the market and promote market competition?

The below chart displays reasons why participants agree or disagree that increased transparency promotes a better understanding of the market and promotes market competition. ***Note****: Chart does not reflect specific values, representative of respondent answers proportionate to one another.*



One asset manager echoed these opinions sharing the below:

"We don't think it would promote a new set of dealers. I struggle to see how this is a sustainable business model especially if primary dealers have to take down all the auctions and would actually hurt liquidity as well. New participants would be those who could pick off trades and not liquidity providers."

Impact of Transparency on Liquidity

Would Transparency in the US Treasury markets promote an increased understanding of the market and promote market competition?

“The market is not equal to all participants; dealers are obligated to make prices and participate; and with that comes a lot of regulatory hurdles that liquidity provides like a HFT does not have to handle [which is] not fair to the dealer.” - large investment fund

*Another large asset manager expressed a similar view saying, ‘**I do have more platforms with a clearly defined market now; if I don’t like the dealer's price and I have good market discovery; for me in my seat it does not help and does not increase competition.”***

Separately dealers noted the risk that additional transparency would inhibit the ability to transact and could cause a further shrinkage in the Treasury market. One pension fund explains that, “**in the current construct of the treasury market microstructure we do not believe that more transparency would help; concentrating liquidity in the money center banks and constricting their ability to transact is the root issue; without an evolution of the market; transparency is not necessarily the right answer.”** Respondents noted other reforms that would allow for increased capacity, most notably SLR reform. As one primary dealer emphasizes that “there’s a finite amount of risk dealers are willing to take. They also explain that a real hurdle is the need for unlimited capacity to execute transactions.

Participants emphasized that a number of factors contributed to reduced liquidity in the market, specifically in off-the-runs and for other thinly traded securities. They also cite March 2020 as a factor where there was no bid for the 30 year on-the-run bond; and that market participants were experiencing significantly higher bid-ask spreads and large price differences between on-the-run and off-the-run Treasury securities, with significantly less liquidity for off-the-run products.

In terms of additional transparency increasing market understanding, participants have mentioned there is potential for tangible benefits to be garnered from enhanced transparency. Respondents generally agree that additional data dissemination would only provide a better understanding to individual investors, day traders and larger quantitative trading firms.

One investment manager explained saying, *“**market participants are aware of what is going on. Different from a personal account; everyone involved from an institutional side is well informed already, can see the screens and have a good understanding.”***

A multinational financial services firm shares this view saying, ***“For non market participants who want to analyze the micro and macro structure, [transparency] could be very helpful; on the con side; it could be very bad for market makers if [participants] can push a dealer out of a position.” - Multinational financial services firm***

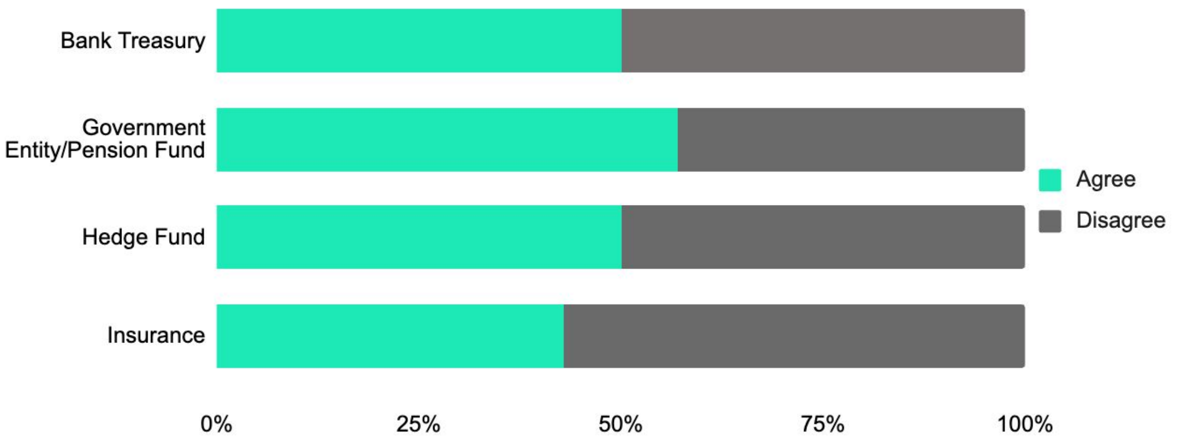
Impact of Transparency on Liquidity

Would Transparency in the US Treasury markets promote an increased understanding of the market and promote market competition?

Some participants have argued that quantitative trading (HFT, PTFs, algos) or other less regulated entities may well increase competition, however such participants may not be providers in adding liquidity to the market during times of stress. Therefore, it's important to have strong participants on the market making side who are not withdrawing from liquidity provision in the market especially in times of volatility. For example, as quantitative shops make up an increasingly larger part of trading volume in the Treasury market, considerations should be made as to how it will impact specific investors and the broader market.

Do you agree or disagree that transparency in the US Treasury markets promote an increased understanding of the market and promote market competition?

The below chart displays reasons why participants agree or disagree that increased transparency promotes a better understanding of the market and promotes market competition.



Another global investment bank shared this view saying that, ***"markets evolve and change and over time and become electronic and transparent; information dispersion increases with each year through various channels (messaging, Bloomberg, etc.,) central thrust is markets are evolving; block trades—futures are all disseminated in 5-15 minutes of time. We find those trades very difficult to navigate when they become public because we cannot do size—99% of the time the transparency moves those positions against us—hurts our ability to mitigate risk—offset with clients and hedge against other transactions. If the Treasury wants more dissemination we can deal with it as we would eventually have to show wider prices—ultimately hurting customers and everyone knowing when a transaction occurs will prohibit them from doing another transaction. Won't benefit liquidity; wider prices---benefits those who use the information and are non liquidity providers."***

Respondents suggest that such firms, specifically from the institutional side, are already receiving real time quotes and have an understanding of how the market works. Some of our participants noted that the immediate public dissemination of information could harm liquidity, widen the bid-ask spreads and benefit market participants that have little to nothing to do with the original positions. (i.e. participants looking for vulnerable positions)

Impact of Transparency on Liquidity

Would Transparency in the US Treasury markets promote an increased understanding of the market and promote market competition?

One global investment manager shares their view on potential impacts sharing that **"having all that information would have more participants pick off smaller positions with no market adjustment. I would think that with HFT's and certain quantitative funds, the pain points are not helpful to the system as HFT liquidity is countercyclical and they back away from volatile markets. Hence, having more information would increasingly take away actual human decision-making. It would not be better."**

Study participants took pains to emphasize the importance of distinguishing between more liquid and less liquid segments of the market, reiterating that the liquidity for off-the-runs and larger trade sizes will decline with added transparency. Firms specifically pointed to that happening in other fixed income markets today. For example in more liquid segments (i.e on-the run), one insurance company shared that transparency will "**promote more competition except in areas where there is not a bond outstanding and not traded as frequently [i.e. off-the-runs]; For some parts of the Treasury market, without having a lot of volume around a specific security you are not going to get more or better information from that trade. However, the larger the issue the volume should have shorter time frames to promote greater liquidity in certain areas of the treasury market that can afford that amount of transparency. The ability to absorb the volume is the key."**

For off-the-runs, study participants recommended that if some form of additional transparency were to proceed, it combines elements of reporting on a delayed basis with some phased-in additional transparency. Dealers felt they could quote on trades of larger sizes and work trades through the market if there were some time lags on the reporting. A large investment manager comments below on the current state of the treasury market and the impact to more compromised market segments, **"The Treasury market as an asset class had grown but the whole liquidity provision changed after the most recent Financial Crisis; the size of growth was not sustainable. Price discovery has been reduced; we want to make sure as we seek ways for dissemination that does not further disrupt the ability to trade in some of the more compromised areas like off-the-run's, TIPS and Strips which are a very specific subset of the market."**

Respondents also pointed out the impact to deep off-the-runs, or securities that have been outstanding for the longest periods of time. Participants expressed that there should be fewer, or varied, transparency requirements for deeper off-the-runs as such trades sit on the balance sheet longer, impacting dealers' ability to evaluate and move positions. One global asset manager shared their experience in trading deeper off-the-runs saying, "**we are using deep off-the-run bonds; there are not a lot of bonds to go around, they are very ill-liquid and don't trade often; [with increased transparency] a HF or HFT who does not trade them will know the TRACE report price attached and will know in the market whether it's a buy or sell; leading to [information] asymmetry with additional players having access to your trade data."** Respondents concurred that deeper off-the-runs should be considered a specific segment that would be harmed by the release of additional trade details.

Impact of Transparency on Liquidity

Would Transparency in the US Treasury markets promote an increased understanding of the market and promote market competition?

The study feedback suggested that forced transparency on larger off-the-run trades could undermine liquidity and affect both the institutional and retail investor. One bank treasury commented that, **"while transparency could be useful for competition in the market; general market participation is more important; and competition could lessen particularly for less liquid products."** There could also be associated risks (i.e. cost of duration risk) to the off-the-run market if this effort was undertaken without some careful calibration. Participants recommend that additional transparency could first be focused on smaller transactions and Treasury could build a regime for implementation as they proceed more slowly. Study participants emphasized that the Treasury should work on this initiative in a thoughtful and concrete manner with proper calibration. A hedge fund shared this view below:

"We are in favor of good transparency that is good for investors with caveats [for] calibration; practical applications to an end-investors better predictive modeling and end price modeling teams that work on that; depending on pre-trade pricing and better ability to negotiate in the less liquid space." - Large hedge fund

One respondent explains how additional trade information can be utilized as well as the potential harm to the market saying, ***"Transparency to enhance the understanding should be relegated to academia or research institutions; no problem with regulators research or other folks having access to trade data. However, as an example Dissemination of 3/2020 data would have allowed regulators a better insight but for all the market participants, it would have exacerbated the problem."***

A set of respondents argued that increased transparency would actually help the Treasury market in understanding and the ability to transact and increase market participation. One participant shares that additional transparency is useful because "when people don't know the market they don't want to participate in" and that this transparency as a result would be helpful to liquidity.

One participant explains that depending on how the transparency regime is set up, it could help to even the playing field and "create a more fair market; which is a principle we want to preserve." Additionally, they view that faster reporting is generally beneficial and more data is better for enhanced execution and useful for building portfolios and strategy. However these participants explain that it's not a perfect free market and it's important to consider what additional transparency would mean for the fixed income space as a whole.

Other respondents suggest that depending on how data is used, transparency when properly calibrated should promote better markets and that there are more pros than cons. They explain knowing the full scope of the market and movements of a particular security can be helpful and is particularly impactful to market depth in the ability to transact without a significant disruption to price levels.

Impact of Transparency on Liquidity

Would Transparency in the US Treasury markets promote an increased understanding of the market and promote market competition?

A central bank explains, **“more information helps investors make better decisions; investors would like to see the trend of what’s happened before; with increased transparency we would have a more fundamental understanding of trading volume and when someone is buying a particular part of the curve; I could see who was ahead of me.”**

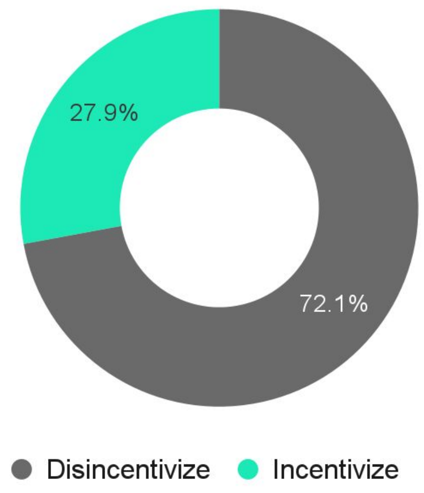
The general consensus among our participants is that additional transparency would not materially impact understanding of the market. Our feedback was consistent that market participants have a good understanding already and that the current levels of transparency are sufficient on the broader views of market competition. Most shared the view that they don’t see a nexus between additional transparency and more liquidity providers, either among institutional investors or market makers. Participants explained that potential benefits would mainly impact quantitative trading and more electronic trading such as HFT, PTF etc. They noted that it was unclear that market makers who could or would join as a result of enhanced transparency would provide liquidity as envisioned. Participants agreed that additional transparency should improve the ability to aid the price discovery mechanism and not to the detriment of the existing liquidity provision. Any transparency regime should be tailored so that the market remains efficient, resilient, and liquid, and continues to be attractive to the long-term investors who fund the U.S. government.

Impact of Transparency on Liquidity

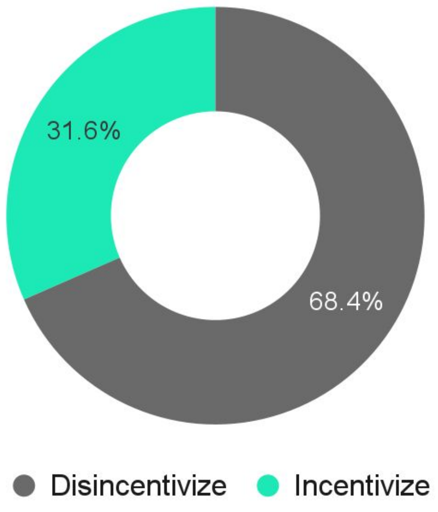
Would additional transparency incentivize or disincentivize intermediation in the market?

The study also tackled the question which is raised in various forms within the Treasury RFI on the value of transparency in enhancing intermediation and broadening participation from dealers, exchanges and services offered to investors. Treasury states that "some market participants have expressed concerns regarding the effect of additional transparency on the potential willingness and ability of intermediaries to [hedge and move risk (i.e. engage in large institutional risk transfer)] in the Treasury securities market, specifically for off-the-run Treasury securities." They also state that "other market participants have cited the benefits of additional transparency, including post-trade data for use in transaction cost analysis and for greater visibility into intermediation patterns."

Investors



Asset Managers



As we discuss the impact on market understanding and market competition, it is important to review how transparency affects those who are intermediating in the market and providing the market with liquidity (sell-side). The majority of respondents share the view that increased transparency would disincentivize intermediation and undermine Treasury market liquidity. Respondents further indicate that for liquid market segments, (i.e. on-the-run), there is sufficient price transparency with central order limit books, which provide a general sense of market willingness to take down a certain amount of duration on a security.

However, participants also share that public post-trade transparency could pose significant risks to investment and intermediation particularly for less liquid market segments, such as off-the-run Treasuries, TIPS and STRIPS." Respondents emphasize that principal-based intermediation is critical for this market segment given that transactions in any particular security are infrequent relative to the on-the-run segment. Additionally, there is a risk that too much information would be released, harming opportunities to trade specifically for larger block sizes.

One asset manager explains this view saying, ***"The tail risks of too much reporting would be a burden for intermediaries and make liquidity worse; a dealers' asset is [the] information they have and [additional transparency] makes it difficult to hold on to that advantage."***

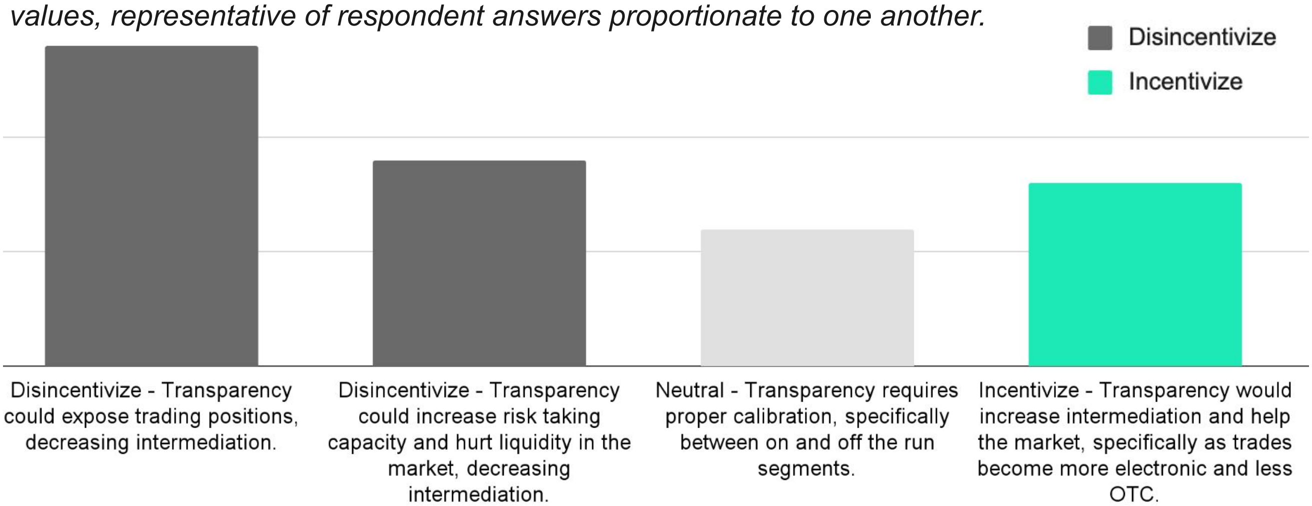
Impact of Transparency on Liquidity

Would additional transparency incentivize or disincentivize intermediation in the market?

Similar to respondent views on how transparency impacts market understanding and competition, participants expressed their view that quantitative and electronic trading firms stand to benefit the most from increased transparency, as such firms can make small gains by trading in and out of the market quickly. Dealer participants in particular, share this view and believe it would be harder to move and transfer risk. They also share that real-time data release would hurt dealer intermediation quite a bit, so dealers are concerned with trying to weigh the extent of information that's disseminated to the public. To the extent that any transparency regime disincentivizes principal-based intermediation, it could reduce market liquidity and weaken market resilience.

Do you agree or disagree that transparency in the US Treasury markets promote an increased understanding of the market and promote market competition?

The below chart displays reasons why participants believe that additional transparency incentivizes or disincentivizes intermediation in the market. ***Note****: Chart does not reflect specific values, representative of respondent answers proportionate to one another.*



One investment manager expands these views on HFTs and the residual impacts on dealers saying, **"HFT and algo accounts trade in and out, and volatility is low and liquidity is up; however when volatility spikes HFT go away; [intermediaries] less incentivized to step up as liquidity providers will pull the plug in times of stress; times of low volatility markets could be for our benefit. [The Treasury] market is substantiated by the dealer community in high volatility and they are needed."** Another primary dealer expresses these views saying, **"those players that are not dealers like PTF's withdrew in high volatility environments; not sure how public dissemination of information, [specifically for] less liquid segments would increase intermediaries."**

Participants explain that additional transparency could also result in primary dealers being unable to hedge their positions on a confidential basis, especially as trades are stored on their balance sheets. Confidentiality has a limited shelf life and if the entire market knows a position within 60 minutes, this would harm liquidity. Liquidity is where risk can be warehoused for the buy and sell side and it's hard to do if too much information is released.

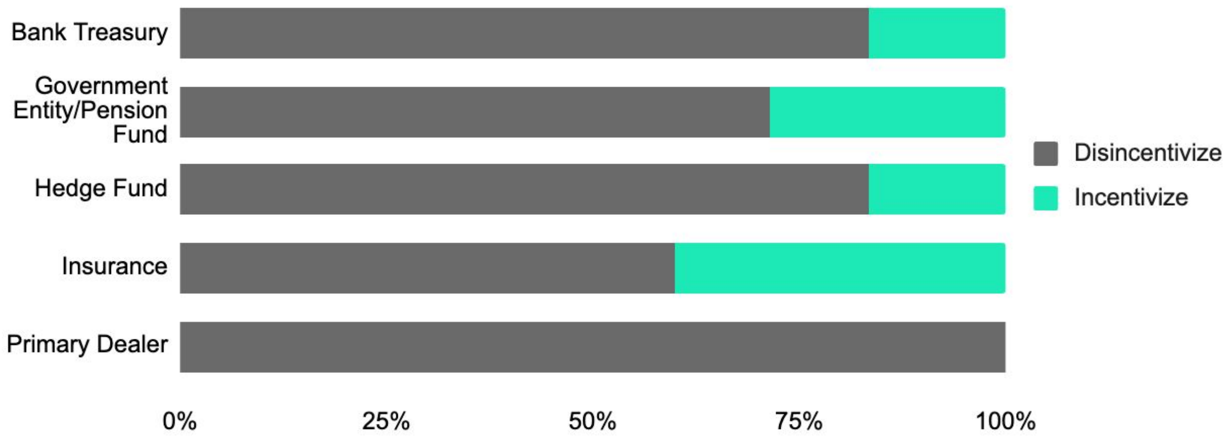
Impact of Transparency on Liquidity

Do you believe that additional transparency would incentivize or disincentivize intermediation?

Participants suggest that transaction level data is anonymized, to protect trading positions and intermediation in the market. One government entity shares their views saying that the ***"incentive to intermediate is profitability and availability of balance sheet and scarce resources like capital on the broker dealer side; risks are higher and scales with the time from trade to being reported publicly; less intermediation will take place and real time dissemination, [in particular], would hurt dealer intermediation quite a bit."***

Do you believe that additional transparency would incentivize or disincentivize intermediation?

The below chart displays, by respondent type, if participants believe that additional transparency incentivizes or disincentivizes intermediation in the market.



A smaller subset of respondents, including Insurance firms, pension/hedge funds and bank treasuries indicated that transparency, if properly calibrated, could actually incentivize intermediation in the market. A large financial services company believes that the more information that is out there, the more we can process and intermediaries could utilize tools to be more transparent to the end buyer. Another asset manager expresses the view that **"it would help professional trading shops that thrive on technology as markets move toward becoming more electronic; and becoming more focused on the [Treasury] market as they have with US equities, it increases market depth and could reduce bid offer spreads over time."**

However, a number of these firms also recognized the potential impacts by HFT, PTF and other algo traders and insist that proper market studies are conducted to account for an increase in quantitative trading. One large investment manager explains these views saying that "**if well calibrated, it can create more intermediation; and more model based for algos to take advantage and make markets; there is risk to larger trades [which should] be subject to [dissemination] delays."** It's important to highlight again that the dealer participants in our study do not believe that increased transparency would incentivize them to participate in the market and views around incentivization relate to specific firms and their trading circumstances.

Impact of Transparency on Liquidity

Do you believe that additional transparency would incentivize or disincentivize intermediation?

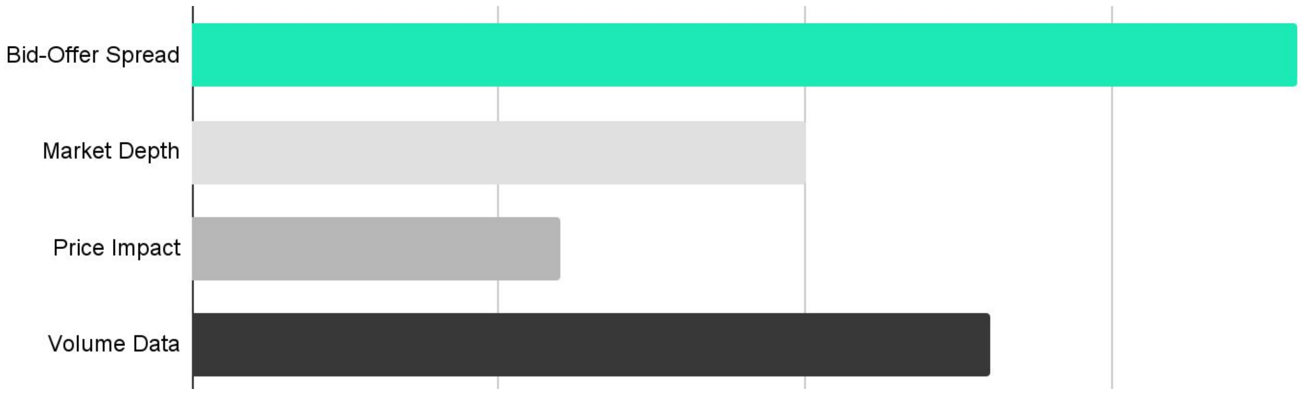
The consensus among all firm types is that additional transparency would lead to dealer hesitancy in the market and an reduction in risk taking capacity. This could result in lowered liquidity in the market, specifically for less liquid segments. Important considerations should be made for determining the appropriate level of transparency by looking at the residual impact on investors in terms of pricing and the ability to efficiently transact in the market. Additionally, the Treasury should consider the level at which quantitative trading affects dealers and the market as a whole and how increased transparency may change their trading strategies, particularly in times of stress.

Impact of Transparency on Liquidity

Are there specific metrics or data you find most useful in measuring liquidity?

To evaluate the impact of additional transparency on liquidity, the Treasury asked how liquidity is measured by market participants as well as how firms define optimal liquidity. Participants explained that liquidity generally means the ability to quickly and efficiently execute transactions at low prices with minimal impact to overall pricing in the market. They go on to emphasize that in determining changes to transparency requirements, Treasury should review comprehensive sets of data captured over an adequate time period to account for different market conditions and periods of lowered liquidity.

The Treasury RFI specifically, asks for "perspectives on how best to measure liquidity in the Treasury securities market and how liquidity is likely to change with additional transparency of transactions. Our respondents views on preferred metrics and data are identified below and we will briefly endeavor to discuss the following liquidity measurements. Please note that the c*hart below does not reflect specific values, representative of respondent answers proportionate to one another.*



Participants agree that bid-offer spread is one of the most important and common measures for liquidity. Bid-offer can be helpful for price stability, investor flow and determining the dissemination of risk for specific Treasury securities transactions. Citigroup in their comment letter to the Treasury explains that bid offer is indicative of "perceived overall wholesale liquidity, the liquidity of the particular security, the size of the transaction, the dealer's inventory in that security, and the dealer's perception of its ability to redistribute the potential risk exposure."

As respondents have discussed, one of the main impacts of additional transparency is the effect on pricing for investors with wider bid-asks. With potential declines to liquidity from increased transparency and in more illiquid market segments, bid-offer spread will quickly be indicative of how the market is impacted in real-time.

One government entity explains that they are "**concerned with moving risk and how far away will that be executed with the next bid/ask at the time. As transaction volumes are being reported, we have to determine how far off execution price it will be; If we had to liquidate CT2 are we appropriately paid for taking on off-the-run securities?...**"

Impact of Transparency on Liquidity

Are there specific metrics or data you find most useful in measuring liquidity?

"…**we need to know how much a dealer intermediary will charge and if dealers knew the [transaction] was getting reported quickly; they look at how far from the bid offer without being able to warehouse the risk."**

Respondents highlighted the usefulness of looking at the volume data of trades, or the amount of transactions for a given security that's traded and recorded daily. Participants explain that higher trading volumes correlate with greater activity in the market, increased ability to execute order and ultimately helpful to liquidity. Respondents also share that this data can assist in determining whether market participants are running risks with the sizes of positions.

Respondents also emphasized volume data, specifically for larger blocks, as being helpful for measuring liquidity in the market. Participants share its usefulness in looking at large flows, ratio of dealer to client holdings and volume data, at the transaction level specifically, for off-the-runs and deeper off-the-run securities. In addition, study participants also shared that reviewing overall volume for each CUSIP in the interdealer market is helpful as well. One bank treasury commented that "**volume data in big chunks (aggregate) would be helpful. For investors, "they have to prove that liquidity buffers can be monetized in times of stress [so this provides] value to the investor community."**

Market depth was also frequently mentioned in our interviews as an essential measure for liquidity. Participants explain that market depth relates to the market's ability to endure larger orders without material impacts to pricing. The participants share that this information is usually derived from a list of transaction orders at a given price level. One investment manager commented that **"depth of the market correlates with getting trades done at a reasonable market cost, allowing one to observe liquidity for off-the-run and on-the-run securities. Looking at market depth at a given risk, along with the stated outstanding limit, gives a better sense of understanding how to reduce any associated risk."**

Participants share that reviewing top of the book/top of the stack data, is helpful in seeing what the current highest bid and lowest offer prices are, ultimately indicating the price at which an order would get executed. Respondents suggest looking at depth in the stack and bid offer of the top of the stack as well as the abundance of orders above and below a certain price level.

One Investment manager explains that: ***"Market depth is important as we pay for those services in real time, Bloomberg, Trade Web, and dealer research etc. We look at it all; and the top of book depth has declined in the past twelve months with how the cost of trading has changed over time. Think of why liquidity is less today and review these changes in trends over time."***

Impact of Transparency on Liquidity

Are there specific metrics or data you find most useful in measuring liquidity?

Respondents also suggest that price impact is a useful metric in measuring liquidity, which looks at how much you expect the price to move when you transact, how quickly the market reacts and the impact in response to large net flows. One International broker dealer says that **“price impact takes into account many factors and gives you one single number [to analyze].”** Participants concur that it can be useful to look at price changes by hours, days or weeks to understand any price volatility, which directly impacts liquidity in the market. Industry participants emphasize that there is not one “best” metric for measuring liquidity and expressed the importance of utilizing a number of metrics and measures in conjunction to provide an appropriate balance between transparency and liquidity.

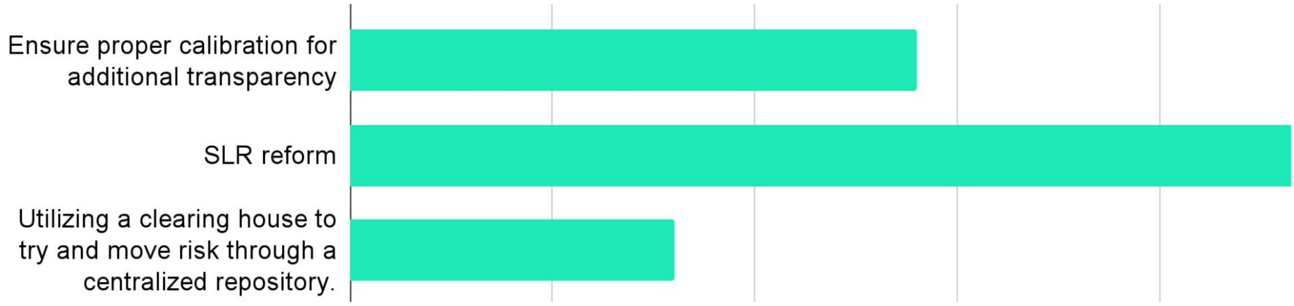
Impact of Transparency on Liquidity

Can you describe additional considerations for improving liquidity in the Treasury market?

Survey participants believe that the Treasury market, particularly in recent years, has experienced lower levels of liquidity due to increased regulatory requirements impacting the dealer community and ultimately investors in the market. Participants shared a number of concerns around improving liquidity in the Treasury market namely with reforms to the SLR and banking side balance sheet costs as well as the usage of centralized clearing. Respondents also emphasized again the need for proper calibration and provided suggestions for the implementation of more transparency.

Are there additional considerations for improving liquidity in the Treasury market?

The below chart displays, suggestions by market participants for improving Treasury market liquidity, including SLR reforms, utilizing central clearing and a focus on proper calibration. ***Note****: Chart does not reflect specific values, representative of respondent answers proportionate to one another.*



Last year, the Federal Reserve announced that the temporary changes to its supplemental leverage ratio, or SLR, expired. “These changes, which were implemented last year, aimed to ease strains in Treasury markets resulting from the COVID-19 pandemic. Although Treasury market liquidity has improved since the disruptions last March, it’s still reliant on bank intermediaries that must shift their business to comply with these rules. In the near term, we think global systemically important banks (GSIBs) will reduce their Treasury-collateralized short-term lending (i.e., repo) business, require larger bid/ask spreads to intermediate between clients, and encourage institutional depositors to shift into money funds. Although the changes should augment the safety and soundness of the banking system, they likely will come at the cost of reducing Treasury market liquidity and driving down yields on the lowest-risk short-term assets.” [1]

Participants echoed the views that re-assessment of the capital requirements on banks would go a long way to improve their ability to intermediate, favoring a broker dealer capital regime with more capacity from a balance sheet perspective. Namely, participants shared that they would like to ease up the requirements related to holding Risk Weighted Assets (RWA), which refers to the amount of capital that banks are required to keep in reserves. Respondents suggest that RWA holdings could be lessened or that Treasuries should be exempt in RWA in the first place. Participants highlighted SLR Reform/leverage reform as the biggest driver for both sides (buy and sell) of the market. Respondents explained that easing this regulatory burden would ultimately help to promote liquidity at quarter end, year end, and during periods of volatility.

Impact of Transparency on Liquidity

Can you describe additional considerations for improving liquidity in the Treasury market?

One large investment manager says “**conditions exists that dealers, because of their capital requirements, are less able to take on risk and are left with hedge funds and other prop firm intermediation; not a day to day we do see ebbs and flows that are related to those constraints; clarifying capital for Treasuries is needed.”** Respondents explain that during periods of market stress reform would help dealer confidence in their return of capital; reduce uncertainty and reduce risk and allow banks to use their balance sheet for more efficient capital transfer.

One large asset manager noted: “it absolutely is a good idea to change the RWA’s and the SLR’s for banks. Anyone who understands fixed income agrees with that. Allowing banks to dedicate more balance sheet to the space is not a destabilizing factor.”

An insurance firm summarizes these views saying, **“SLR reform would help tremendously; some will happen naturally when balance sheets shrink. We need improved liquidity by lessening capital constraints imposed on treasuries to the extent that is eased and liquidity improves.”** Participants suggest that cutting capital costs for dealers for the ability to warehouse securities could help to accomplish a state of increased liquidity in the market.

“In the short run, in an effort to optimize their business around these rules, the largest banks that must comply with the SLR will take several steps to mitigate the earnings impact of the additional capital charges. These steps include encouraging institutional depositors to move their money into money funds or Treasury bills, possibly by charging additional fees; reducing lower-margin activities, including short-term collateralized lending and Treasury trading; and requiring more expected return (term premium) to hold Treasuries outright.” [1]

Participants agree that such changes to the regulatory environment for Treasuries would help in dealers’ ability to intermediate in the market and further assist buy side activity, ultimately helping liquidity. One of the larger banks in our study noted: **“tweaking regulation for less punitive regulation for treasuries would be useful; this would have been helpful five years ago but the financing problems are now spreading to hedge funds and others and it has eroded confidence in liquidity which begets further ill-liquidity.”**

An intergovernmental entity commented that **“capital reforms would help; the DC views on banks has put the clamps on them and really hindered their capacity to use balance and provide liquidity to clients.**”

A number of participants also shared views on clearing in the Treasury market as a way to try and move risk through a centralized repository. Participants explain that centralized clearing could help improve the “productivity and utilization of the existing dealer balance sheets committed to intermediation.”

Impact of Transparency on Liquidity

Can you describe additional considerations for improving liquidity in the Treasury market?

Respondents shared that clearing would help to reduce settlement risk and that if participants can centrally clear treasuries, it would also alleviate pains of balance sheet requirements. Participants believed that clearing could assist in addressing potential concerns on the outcome of an increased transparency regime.

A subset of respondents separately shared that they were skeptical that Treasury clearing would solve any issues in the market or lead to greater liquidity. One asset manager echoed the view saying, clearing for Treasury does not add a solution to the issue—do not see the value it provides; leads to hassles operationally and costs involved. Do not need to create a problem. One hedge fund explained that “clearing is not necessary for Treasuries and it is a false sense of confidence and that there's no marginal benefit reducing settlement risk and netting with clearing.” These respondents generally believed that a clearing regime is not necessary for treasuries and that associated benefits are dependent by the type of market participant.

A few of our participants mentioned that the Treasury should focus on buy back operations as a way to increase the functioning of the market and the industry. They share that the official sector should be a dealer of last resort to buy back, similar to the buybacks that occurred in March 2020. One large international bank shared the same view saying, “**Fed support for the markets to intervene can help to restore confidence in the market and something reiterated many times post COVID; we need to have a buyer of last resort and unlimited capacity to execute.”** Respondents explain that a buyback program should take on more problematic securities for a period of time and put in securities that are more liquid. Additionally, they express having the Fed as a buyer and seller of last resort is a very practical solution and can potentially foster enhanced levels of liquidity and promote calm in the market, particularly during periods of market volatility.

Study participants also emphasized the need to focus on calibration for transparency requirements, so that any potential impacts to liquidity would be addressed before a new transparency regime is implemented. Respondents shared that it’s important to determine the level of granularity for data release. One asset manager participant says that if you release too much there is a risk that people can decode or decipher trades and patterns. Specifically, they explained if you are disclosing too much on block trades it defeats the purpose and the person on the other side of the trade won't have time to hedge. Again, respondents highlighted the need for dissemination delays and volume caps, particularly for large block trades as a result.

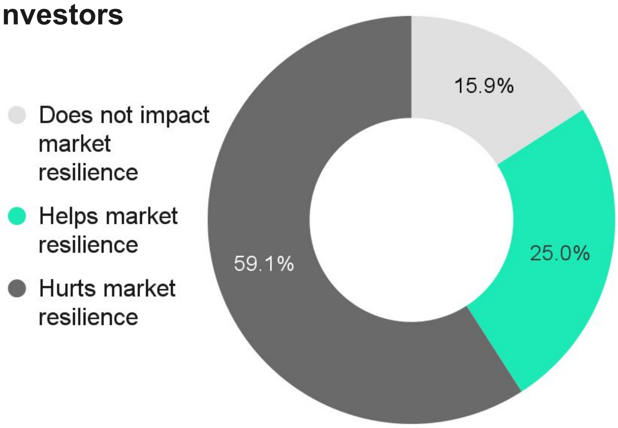
In summary, participants indicated that an overall easing of regulatory requirements would help liquidity in the market. Specifically, participants think that giving dealers relief on capital requirements (SLR), particularly for off-the-run treasuries, would help improve levels of liquidity in the market. Additionally, participants shared the usefulness of central clearing and the need for properly calibrating a transparency regime that is not a detriment to the market. Participants generally agree that less requirements on the inter-dealer market and more leniency, could lead to a greater willingness to make markets.

Impact of Transparency on Liquidity

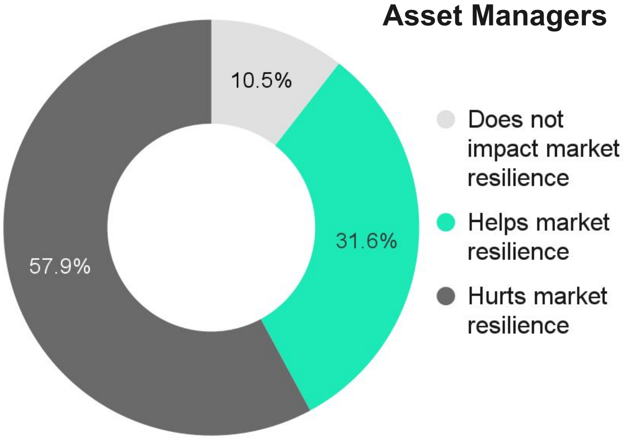
Do you believe that additional transparency would improve Treasury market resilience, specifically during recent periods of market volatility including 2014 flash rally, September 2019 repo market pressures, and March 2020?

The Treasury securities market has been tested in recent years, facing a number of periods of volatility that display the market's ability to absorb risk and respond to sudden disruptions. The Treasury RFI points to specific events including the "October 2014 flash rally, the September 2019 repo market pressures, and the March 2020 COVID-19 pandemic-related dislocations." The Treasury seeks comment on how an increased transparency regime would have impacted the market and decision making during these events and more broadly if transparency, in itself, could help to improve Treasury securities market resilience in the future. It is important to first review some of the underlying causes for the recent events of market instability.

Investors



Asset Managers



Our study participants explain they are skeptical transparency would have fundamentally changed markets during the 2014 crisis. One large asset manager shares their view saying that, "**If you look at the data on the 2014 Flash Crash, trades jumped up to 20% of total volume and under 5% and they became huge shares and caused algos to jump in on positions. Transparency stayed away from that."** Separately, they share that the "CFTC was convinced that they had some model that reduced algo risk; however this was eventually shut down when it became clear the model didn't work." Participants agree that rules around algo trading and other electronic trading should be reviewed to help better prepare for and respond to the market, in the event that such a disruption occurs again.

Respondents share that in 2014, they were unsure what transparency would have done to help given how short the period of time was. One large investment bank says that, "**The Flash Crash of 2014 that was built off transparency of bad information in the market and argue that transparency helped to create the issues."** Respondents generally agree that the Flash Crash was a specific event "not rooted in anything in particular" and any additional transparency at the time may have only exacerbated volatility in the market.

Respondents explained one of the reasons for the 2019 repo market pressures was due to an excess reserve regime environment and that a large part of liquidity declined due to the volatility of things in the market.

Impact of Transparency on Liquidity

Do you believe that additional transparency would improve Treasury market resilience, specifically during recent periods of market volatility including 2014 flash rally, September 2019 repo market pressures, and March 2020?

One pension fund explains that **"transparency would not have helped getting flow out the door; If the dealers are constrained on their balance sheet, like in 2019, you will continue to have these types of market episodes."** Another respondent says that the "Fed took too much of the balance sheet down, and did not see transparency as being an issue at all for reporting a price or trade." Additionally, participants suggest that there was a liquidity issue back in 2019, not a transparency issue and was a function of "reserves going down to $1.4 trillion resulting in a liquidity crunch; important to help inject liquidity back into the market." [2] One insurance firm echoes the view that the 2019 repo strike "**was a product of reserves in the system and how the Fed was able to unwind and manage the reserve."** Participants emphasize that regulators should evaluate reforms to the market that would help with both increased levels of liquidity and stability in the Treasury market.

During the periods of March 2020, as the Covid-19 crisis intensified, stresses emerged in the market for Treasury securities. "During the period of the 9th to the 18th of March, the 10-year yield surged sharply by 64 basis points while the stock market kept falling. This is contrary to typical risk-off events which are characterized by a simultaneous drop in equity prices and long-term yields. This yield spike was driven by the urgent liquidity needs of mutual funds, foreign official agencies and hedge funds. In response to these developments, on March 15th the 2020 Board of Governors of the Federal Reserve System (the Fed) unveiled a new programme to buy large amounts of Treasuries. Purchases exceeded $1 trillion in Q1 2020." [3]

Respondents generally agreed that transparency would not have helped in 2020. They explain that many market participants were desperate to unwind their risk and raise cash. Additionally, as panic in the market became more prevalent "it would lead to a domino effect that ideally you want to slow." One large investment dealer expands on these views saying that, **"there is no way you would want more transparency. March 2020 stemmed from other banking issues. It also goes back to the amount of resources and the amount of capital needed to run a broker dealer. In March 2020, if [participants] had an infinite balance sheet they would have bought as much as they could. Increased transparency would be detrimental to the market and increase stress on the market, especially with the implementation of more timely reporting."** One large international asset manager expressed these views commenting "**we do not share the view in any of these situations that transparency would have helped. Challenges were in the least extreme parts of the market and March 2020 would have been least likely to be impacted by Treasury transparency and there is also no other instance historically that it would have helped especially for a large asset manager."** Another investment advisor summarizes these views below saying,

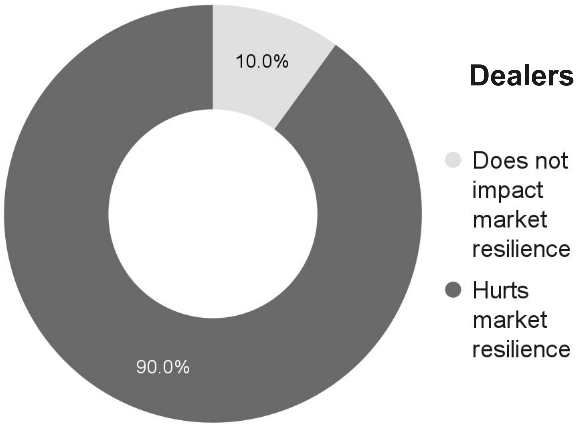
"Transparency would not have helped as actions in the market during March 2020 were purely driven by opacity in post trade transparency. The market was looking for a level and it could be agreed that the Fed program repurchase of 2020 helped solve the issue."

Impact of Transparency on Liquidity

Do you believe that additional transparency would improve Treasury market resilience, specifically during recent periods of market volatility including 2014 flash rally, September 2019 repo market pressures, and March 2020?

The majority of study participants agree that additional transparency would hurt overall market resilience, particularly in reference to the recent periods of volatility and stress. A hedge fund who participated in our study said, **"one of the things that would be harmful if large trades were made public, HFT and other speculators would trade against them; especially during volatile times that would be harmful and more costly for participants in the market. Another investment manager shares similar views saying, "there is zero chance that transparency would improve [market resilience], particularly in reference to these [recent] events; in an environment of hyper information, there would more participants who pick out smaller positions and I would think that HFT and certain quantitative funds would find pain points in the market and that is not helpful to the system. I do believe HFT liquidity is countercyclical and they back away from volatile markets and having more information would increasingly take away actual human decision-making in high stress. Would not be better."**

Primary dealers specifically, overwhelmingly believe that transparency would hurt market resilience and would not have assisted the market environments of 2014, 2019 or 2020. One large bank says that, "transparency for transparency's sake would not have changed things; telling everyone when we need to sell off-the-runs, for example, and no one wants to buy them such as in March 2020 would have worsened the situation." Another primary dealer expresses their view saying,



"Transparency would not have helped at all in these individual instances; issue is there is a seller of securities that needs to find a buyer; in every party in a transaction buyer and seller need to agree to a price; going back to COVID can look at all the transparency you want and would not get a willing buyer to the table."

One government entity shares this view explaining that increased transparency would **"hurt the market rather than help and would have added to volatility and more transparency could make people more concerned."** A barrier to entry is the inability to allocate capital in the Treasury market and this should be addressed on top of reviewing a new transparency regime.

A number of other participants argued that transparency could actually help in the market and provided specific instances where they believe it would have helped during periods of volatility. Respondents shared that **"the lack of transparency probably hurt in these environments where it was unclear where markets were moving and there was a lot of difficulty to price the off-the-run securities resulting in higher risks for dealers."**

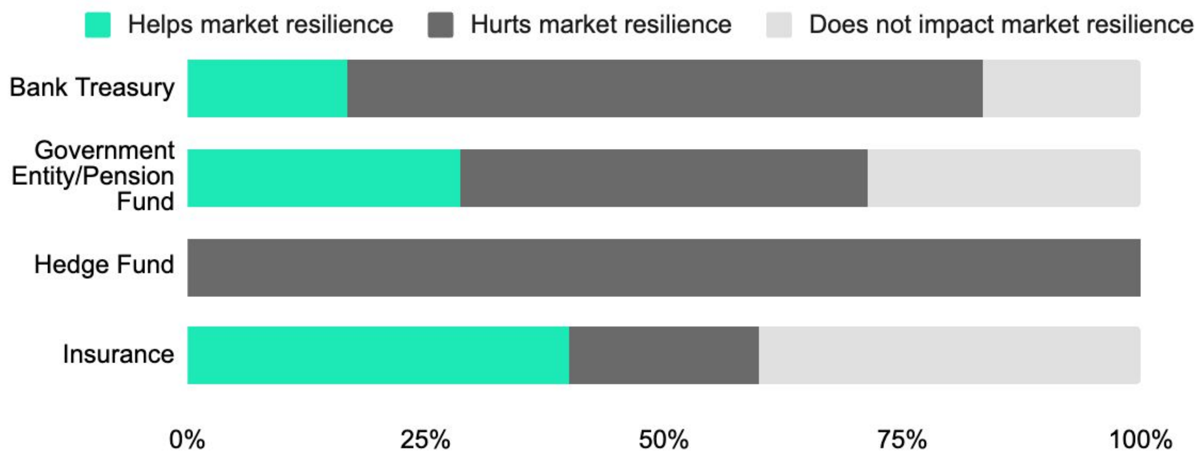
Impact of Transparency on Liquidity

Do you believe that additional transparency would improve Treasury market resilience, specifically during recent periods of market volatility including 2014 flash rally, September 2019 repo market pressures, and March 2020?

Insurance firms and pension funds, in particular, agreed that supplemental post trade transparency data might have been beneficial at the time. A large pension fund participant explained that during periods of market disruption, "knowing that brokers are backing away, and volumes are falling; that additional information helps firms to better understand how prices are moving and in the ability to see brokers' positions." One global insurance provider expressed similar views noting that it "may have helped them with bid offers in 2020 and attaining more clarity [around] where things were trading." Separately, another large insurance firm commented that "having more information for certain areas, for on-the-runs, would not have hurt either."

Do you believe that additional transparency would improve Treasury market resilience?

The below chart displays, by respondent type, if respondents believe that additional transparency helps, hurts and has no impact on market resilience.



Respondents share that markets which are exchange traded tend to be resilient in these environments and knowing what is happening and transpiring in the market is helpful. One global asset manager says that "transparency would have helped Treasury for the Flash Crash, however they now have this transparency with weekly reporting; but publicly disseminated information may have helped." Another hedge fund explains that more information, for example during the repo situation, would lead to a more willing buyer base for UST to step in at those times." Finally, a bank treasury member who participated in our study suggested that for March 2020, specifically in the off-the-run market, where there were no bids for certain bonds, seeing what is trading in what size is helpful for investors. One insurance firm summarizes these views and emphasizes again the need for the right level of calibration, saying,

"Transparency could have some benefit with aggregated information going forward allowing dealers to quote sizes that could be beneficial to make markets. More timely data for both on and off-the-runs, as far as the size and offer at any given point in time. Ultimately, depending on implementation, extreme daily reporting of all products would be very detrimental to market liquidity; Implementation matters."

Impact of Transparency on Liquidity

Do you believe that additional transparency would improve Treasury market resilience, specifically during recent periods of market volatility including 2014 flash rally, September 2019 repo market pressures, and March 2020?

A smaller subset of participants explained that there is no causal argument made by Treasury that transparency would be an improvement and they do not link transparency to any past disruptions of volatility. One insurance firm goes on to explain that they would need to see how the market digests, saying they are “50/50 on the impact to overall market resilience.” These respondents explain that the issues were related to liquidity in the market rather than any lack of transparency. One government entity commented that the problems had nothing to do with this; and the **“impact from transparency would be marginal; and [that] the market should be made more efficient in other ways because it never would have prevented the instances of volatility discussed.”**

Participants agree it is important that the market review and stress test for the impact that increased transparency could have on the environment during future periods of volatility. To this point, the majority of study participants agreed that an increased transparency regime would disrupt both market liquidity and ultimately the overall resiliency of the Treasury securities market.

03 /

Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

This section focuses on volume caps and delays as tools for the impact of additional transparency and data dissemination. The section reviews specific examples of transparency regimes and discusses suggestions for the gradual phase in of any changes in transparency requirements.

Below are some of the key findings discussed in this section of the report:

- The majority of participants (**~90%+**) agree that volume caps and dissemination delays could be useful tools to address concerns of increased transparency.
    - Participants shared that volume caps should be utilized particularly for the off-the-run segments, that volume caps should be implemented in conjunction with time delays and that caps could be set with a risked based measure like DV01.
- The majority of participants (**81%**) argued that large trades can be be included in volume data aggregates, emphasising that proper calibration is required for such decisions and that the inclusion of large trades should be subject to appropriate dissemination delays.
- The majority of participants (**81%**) agreed that volumes should be capped if data is disseminated at the transaction level as is done for other fixed-income securities. (i.e. corporate bonds)
- Participants suggested that off-the-runs should have a longer delay than on-the-runs and that it's necessary to analyze potential risks when determining an appropriate delay.
- The majority of participants (**68%**) agreed with releasing daily average prices, trade count, and traded volumes for each individual CUSIP.
- The majority of participants (**72%**) agreed with releasing transaction level details for on-the-run nominal coupons.
- Around half of participants agreed with releasing transaction-level details for every Treasury security, with a number of participants saying dissemination delays should be utilized. The remaining half of participants do not agree that transaction-level details should be released for every Treasury security.
- The majority of participants (**60%**) agreed with shortening the release of reporting trade transactions to 60 minutes, rather than at the end of the day.
- The majority of participants (**82%**) suggest a year or longer as an appropriate phase-in schedule for implementing increased transparency.

Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

Should volume caps be utilized to address concerns of increased transparency, if so how?

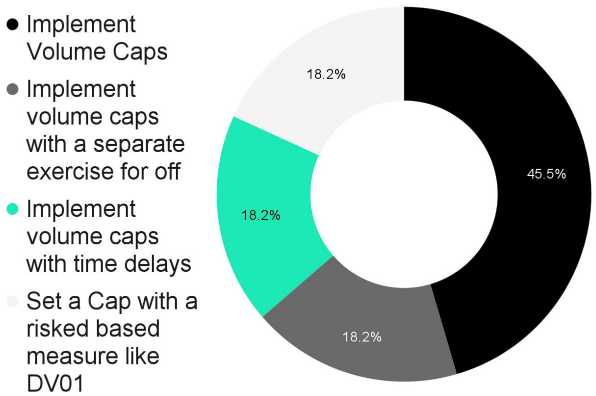
Our study sought feedback on how and if volume caps should be used with an increased transparency regulatory regime that has been utilized for other fixed income securities and is considered in the current Department of Treasury RFI. Our study importantly examines the use of these two potential mitigants where participants assumed such a new transparency structure was in place, although very few specifics have been identified in which mitigants would operate. Respondents noted that volume caps are already featured in other transparency efforts in financial markets including swaps and corporate bonds. Many market participants recognize these tools are critical to ensure that primary dealers are able to continue facilitating meaningful risk management and transfer in larger sizes even when transparency guidelines are enhanced.

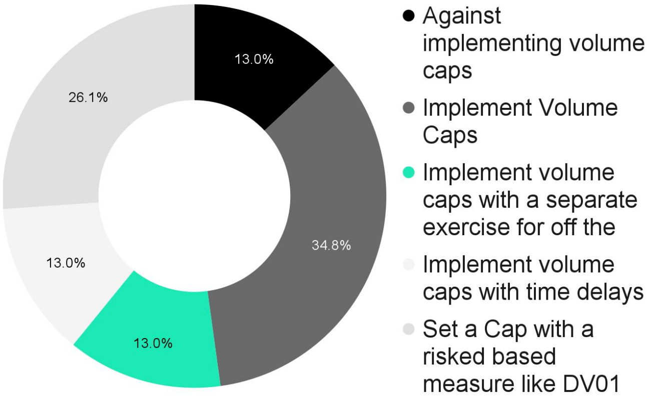
Asset Managers

Majority of Asset Managers and dealers were in favor of implementing Volume caps with some supporting implement a time delay for reporting as well.

Investors

Most respondents, assuming some implementation of the Treasury thinking, agreed that implementing Volume caps would be desirable





Most of our study respondents agreed that implementing volume caps would protect market participants conducting large transactions (especially in the off-the-run space) from the risk that bid-ask spreads would change drastically in a manner that would undermine market liquidity. Participants also noted that it would protect both dealers and investors from potential harmful market behavior, where the provisioning of liquidity was questionable. Finally, study respondents noted that they wanted additional tools to be used in conjunction with volume caps, noting that this mitigant alone would not be sufficient to protect the industry but should be used in conjunction with reporting delays and data aggregation among other mitigants.

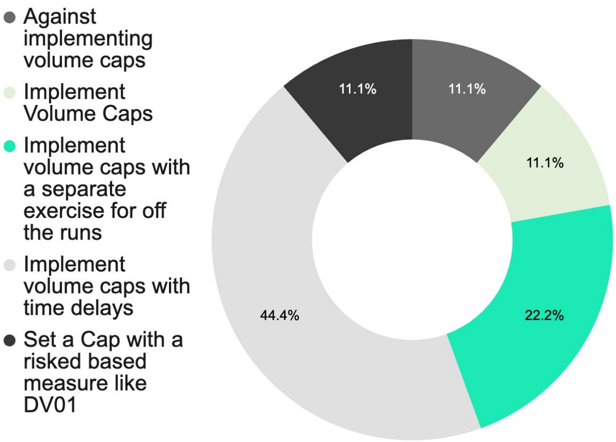
One asset manager noted that volume caps would protect market liquidity and investors explaining, ***"Caps police and eliminate large investors from getting run over and they still provide price posted and time for it. Caps can prevent the market from becoming less liquid and hence becoming less attractive for institutional investors—insurance, pensions, and other fund managers who would still want to invest"***

Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

Should volume caps be utilized to address concerns of increased transparency, if so how?

Our study posed to the participants how to attain a better understanding on what guidance should be incorporated when regulators consider building out an appropriate volume cap. Study respondents provided considerations for on vs. off-the-run securities, government bonds and the overall risk profile of the individual security. This guidance on how to implement or what the caps should be was varied across our respondents. Many of those in our study proposed using risk-based measures like DV01 with riskier assets having lower volume caps. These participants also recommended approaches that would determine an appropriate cap dependent on the size and daily trading volume of the individual market segment.

Dealers



The approach to use a risk-based measure like DV01 or VAR was flagged by an asset manager who said that such a risk measure should be varied to account for market conditions and the type of security commenting,

"It is very important to set up an approach incorporating DV01 as a baseline to exposure analysis. There needs to be an understanding of where a dealer would be reluctant to put a price on a bond due to liquidity risk. This approach should also take into account volume, market depth along with the underlying risk. We think that TIPS are different than nominals and we think that off-the-runs are different than deep off-the-runs so this approach should be flexible and take into account variable market conditions."

Many respondents were also keen to suggest that volume caps could be accompanied with an appropriate time delay to protect market pricing and dealers. This was not an uncommon view as numerous participants emphasized that if additional steps were taken to expand transparency and implement a cap on volume, that there should also be a delay so market participants could complete their transactions without the attenuating risks associated with liquidity.

As one large Asset manager explained: ***"We recognize that dealers need to intermediate and warehouse many of these trades and we need to provide them the capacity to undergo large transfers without post reporting to the markets. Some version of a cap and/or a delay could facilitate that."***

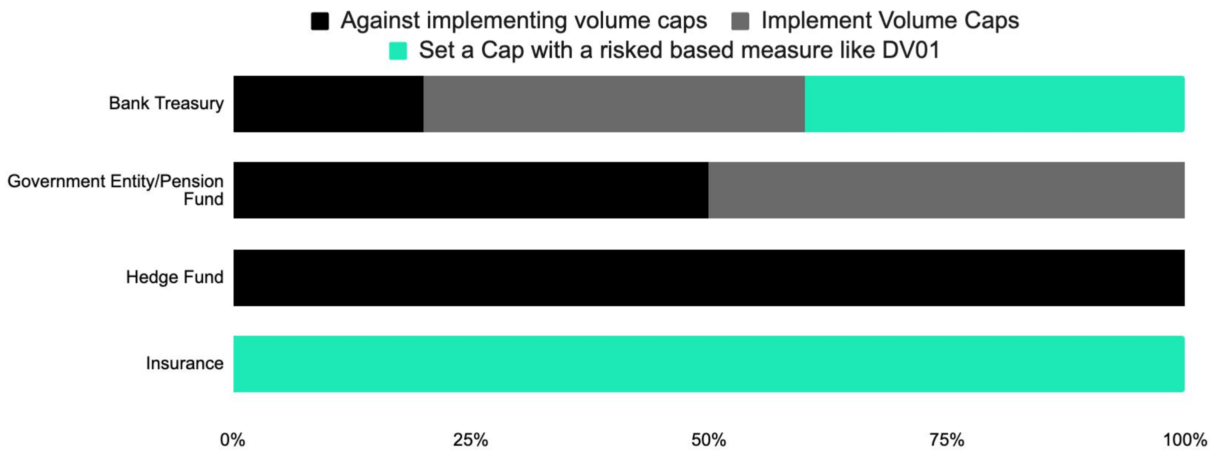
Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

Should volume caps be utilized to address concerns of increased transparency, if so how?

Some of our respondents explained that they could find a way to work around the potential guidelines similar to what has been implemented in the corporate bond market if there are increased transparency requirements to delayed reporting, ***"Corporate bonds must be reported within 15 minutes and recently efforts were enhanced to change reporting rules and increase transparency requirements for corporate bonds. However, there is a common work around to avoid immediate reporting. When you trade corporate bonds you are trading a spread and therefore, when you execute on a corporate yield you must agree on the treasury yield as well. Therefore, you don't have to agree on the treasury yield until the end of the day. If you trade at 9 am in the morning you may not price the trade until end of the day. You can avoid disclosure to TRACE in that fashion and it is quite common for this to happen and you see a spike in printing at 4:00 p.m. coincidentally."***

Should volume caps be utilized to address concerns of increased transparency, if so, how?

The below chart displays a breakdown, by respondent type, of opinions on the inclusion of volume caps and a suggestion for how volume caps should be set.



There were a category of study participants who had very different reasons for opposing volume caps. One of our asset managers opposed this concept arguing that such caps could be driven by market participants whose principle strategy was based in algorithmic trading or was model driven. They also noted that such a guideline based on practices often seen in other fixed income markets could prove very difficult to effectively monitor. They commented:

"From our experience bid-ask spreads get wider with size of the trade; if anyone is smart enough to actually pay a lower transaction cost then an algorithm or dividing trade in different tranches or trade different times of day provides no incentive to put a cap for each trade. Some of those firms are eager to buy or sell and will pay the incremental cost. But we are not sure how the regulators can restrict this behavior in the market with volume caps."

Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

Should volume caps be utilized to address concerns of increased transparency, if so how?

Numerous industry participants noted that volume caps alone would not be enough to protect market makers but could be additive to reporting delays and data aggregation if a more enhanced transparency approach was implemented. They further explained that the approach to determining an appropriate cap should depend on the size and daily trading volume of the market segment which was similarly echoed by many respondents in the study.

Finally, it is worth noting that some of our respondents had not considered either the value of volume caps or the impact of implementing them and did not have meaningful feedback on how regulators could structure them for the Treasury market. Other participants did not want Treasury's proposed transparency requirements to be implemented in the first place as they did not see their benefit to the market. One asset manager explained,

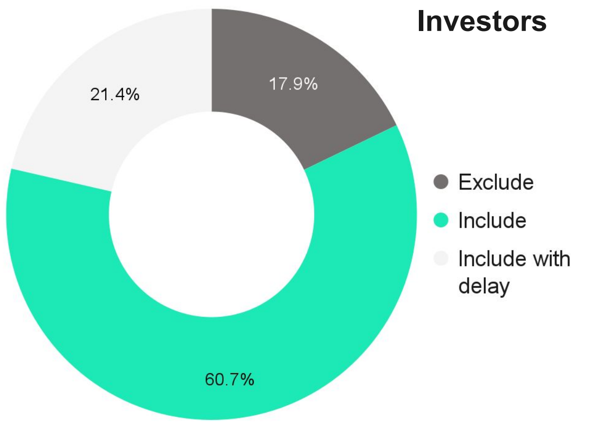
"The current level of transparency in the market is fine now; I do not believe higher levels are needed. Higher transparency is not a panacea; The Treasury market is a large market that gets enough color from dealers. We know where off-the-runs are trading at given time, so we have enough information. If there is too much information disseminated too quickly it could hurt liquidity timing with its release and impact trading in volume size particularly for off-the-run and for dealers as well. "

In summary, most of our study participants favored some volume caps assuming that there was a higher level of transparency imposed on the US Treasury market. Those volume caps could incorporate the risk and profile of the underlying security, the size/daily trading volume of the market segment and type of security (i.e off vs. off-the-run). Some participants expressed doubts that increased transparency requirements would be followed or that if the current status quo should change. Finally, if volume caps were chosen, many participants felt that they should be combined with other approaches including dissemination delays to be efficacious.

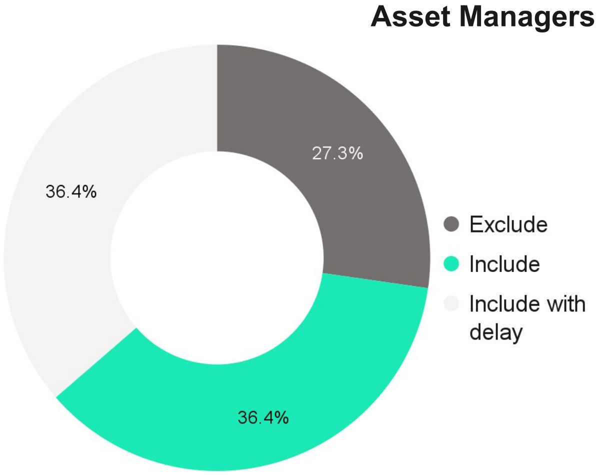
Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

Do you believe that large trades should be excluded from volume data aggregates?

This question sought to glean from industry experts what their thoughts were on if large trades should be excluded from volume data aggregates and if it would be harmful or beneficial to the market to do so.



Many of our participants wanted large trades to either be excluded from volume aggregates or included with an additional mitigant such as a delay. Among organization types, Primary dealers and asset managers, who tend to have the very largest trading volumes in US Treasuries either wanted volume aggregates of large trades to be fully excluded or included with delays to further protect market participants from any possible liquidity risk disruption. Most bank treasuries, government entities, pension funds, and hedge funds advocated for the inclusion of large trades in volume data aggregates. It should be noted that some participants favored transparency in volume data aggregates rather than for individual transaction details as seen in other questions in this study because data aggregates provide anonymity and less granular details than reporting at the transaction level.



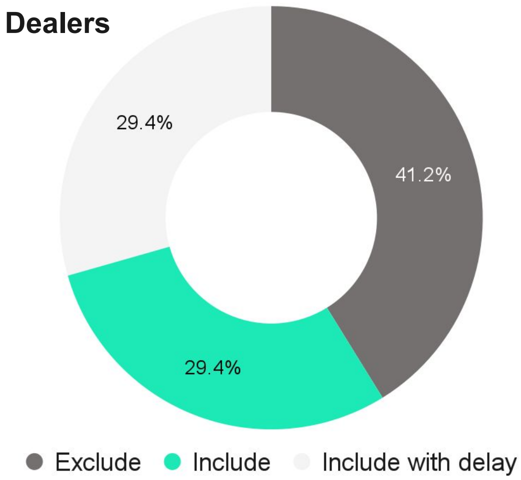
There was a meaningful set of participants that did not want large trades included in volume data aggregates. These participants argued that a failure to exclude large trades could increase transaction costs and bid ask spreads while leaving intermediaries compromised in their ability to warehouse risk or work a trade over a period of several days. This sentiment was encapsulated by an investment manager who argued that not excluding large trade volumes would increase transaction costs, **"If we are in a world that Trace reporting happens then large size trades should be excluded; Publishing this data may incur associated risks with intermediation. Last thing you want to do is increase transaction costs with large trades being included."**

Numerous industry participants explained that aggregation would not protect intermediaries from market risk and should be avoided if possible. Instead, data aggregation especially for large volumes and less liquid markets should be subject to volume caps and delays if reported.

Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

Do you believe that large trades should be excluded from volume data aggregates?

Other participants recognized the benefits of including large trades in volume aggregates, but saw it prudent to include a delay to protect intermediaries in the market. One of our participants in the study further argued this point recognizing the benefits of inclusion but that a practical delay applied to the dissemination of volume aggregates would assist in the ability to warehouse additional risk that increased transparency could cause. One participant also shared the following saying, ***"Why is it fair for investors to not have the transparency of knowing where their portfolio is trading; this could be seen as a disadvantage for them…"***



"…There is value of knowing the monthly or weekly aggregate volumes for fixed income markets. My opinion is that you want to report volume data aggregation as soon as possible. A time delay of two weeks should be enough to protect most large trades to warehouse risk."

Many of our respondents had mixed views on the value of data volume aggregation but felt that a dissemination delay should be included to protect intermediaries and allow them to properly manage risk. One asset manager commented, ***"At some point we would like to see large trades included; There needs to be a delay perhaps a week or two or even a few days makes sense. There has to be some recognition that dealers need to intermediate, and they need to be given the capacity to conduct large transfers without posting a report to the markets."***

Those in the study that favored including large trades in volume data aggregates argued that it would defeat the purpose of increased transparency as market participants would not be able to gain a full understanding of the market. Study participants in favor of including large trades viewed increased transparency as equitable to investors saying they had the right to know how securities they own are being traded. Participants in the study with this view opined that volume data aggregates would allow investors to understand how certain volumes influence changes in prices and in understanding the depth of the market.

An investment manager in the study further argued the inclusion of large trades into volume aggregates as it would provide market participants indicators on the depth and health of the market while letting them understand how certain volumes change prices saying, ***"Yes, we would oppose excluding large trades since that would distort the data and move the pricing to unrealistic levels. Market participants would need a whole range of indicators to see the health of the market; market depth would be one; secondly, how much volume is required to take a 10 year to move a tick would be another is useful too; all of those things are very valuable information."***

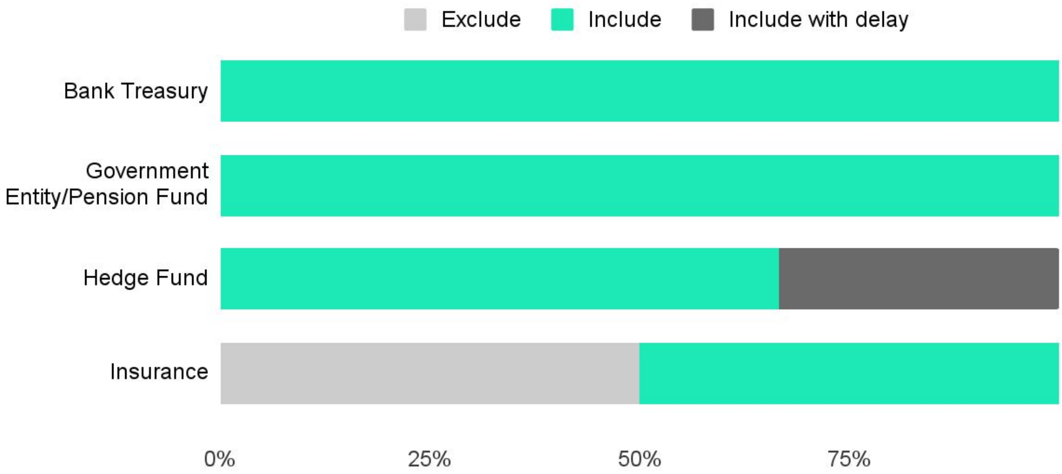
Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

Do you believe that large trades should be excluded from volume data aggregates?

Industry participants expressed to the Treasury that increased data would allow regulators to monitor the market and mitigate potential risks. They argued that regulators would not be able to effectively monitor, identify and assess risks without full transparency of the market.

Do you believe that large trades should be excluded from volume data aggregates?

The below chart displays a breakdown, by respondent type, of whether participants believed that large trades should be included or excluded from volume data aggregates.



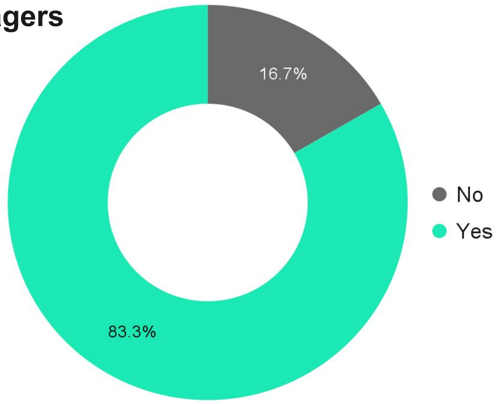
In summary there was a group in our study who argued in favor of including large trades in an attempt to enhance market understanding and additional transparency so investors could understand changes in pricing and allow for regulators to monitor the market and mitigate financial instability. Another group favored exclusion arguing that market makers would be given insufficient protection to properly execute block trades and those with ill-liquid securities would be subject to the knock-on impact of heightened price volatility and expanding transaction costs. Many participants, who favored the inclusion of large trades in volume aggregates acknowledged a series of risks to the industry and advocated a delay accompany that dissemination process. A majority of primary dealers and asset managers, the two groups with the largest trading volumes of US Treasuries, either wanted large trades excluded from data volume aggregates or included with an additional mitigant such as a delay. We will next focus on the comparability of the US Treasury market and the constructs around today's other fixed income securities.

Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

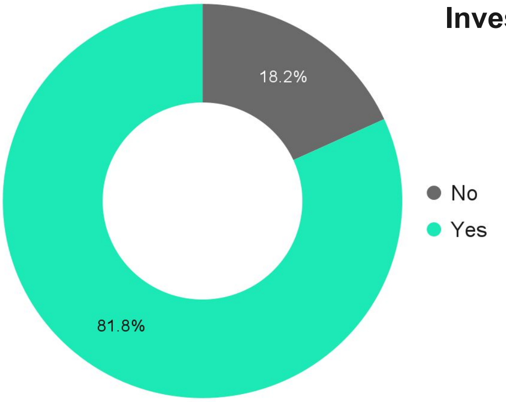
Should volumes be capped if data is disseminated at the transaction level as is done for other fixed-income securities? (i.e. corporate bonds)

Market participants and the Department of Treasury have identified Volume Caps and Dissemination Delays as potential tools to promote liquidity while improving transparency especially because of similar transparency requirements imposed on other fixed-income securities such as corporate bonds. Analysis of corporate bond liquidity claims that the introduction of post trade Transparency via TRACE have reduced liquidity and transaction sizes.[4] According to a study done by FINRA between 2007 and 2013, the volume of investment grade credit greater than the $5mm block trade threshold diminished by 15% while the average trade size for the 1,000 most active issuers declined more than 30% over the same time frame. Supplementing this data, market participants have reported that block size transactions have become more challenging to execute and take longer to distribute because the presence of a block trade in TRACE is enough to cause an adverse market reaction even though the actual size of the block is not disclosed.[6]

Asset Managers



Investors



Participants shared that to improve liquidity in the corporate bond market some US banks and asset managers have pushed for delays in the dissemination of TRACE reporting requirements and lower volume cap thresholds. There is some consensus among market participants that volume cap thresholds in the reporting of large corporate bond trades would give primary deals an incentive to take on reasonable risk and facilitate transactions that they would not otherwise.[7] These challenges were reiterated by a corporate bond intermediary in our study who said the **"reality is yes that reporting does lead to difficulty in the principal markets where intermediaries have to take down a position and move it later. The transparency curse occurs when others find out about the trade, and they want to take part in the action."** Given these conclusions in the corporate bond market this study found it necessary to ask market participants about their thoughts on if volumes should be capped if data is disseminated at the transaction level as is done for other fixed-income securities.

Assuming that a new regulatory transparency process was put in place, most of the organizations across our study felt that volumes should be capped in some manner or another. Similar to earlier arguments made in this report, respondents noted that volume caps would serve as one of several vehicles to protect market participants holding illiquid securities as they seek to work positions out in the market with discretion.

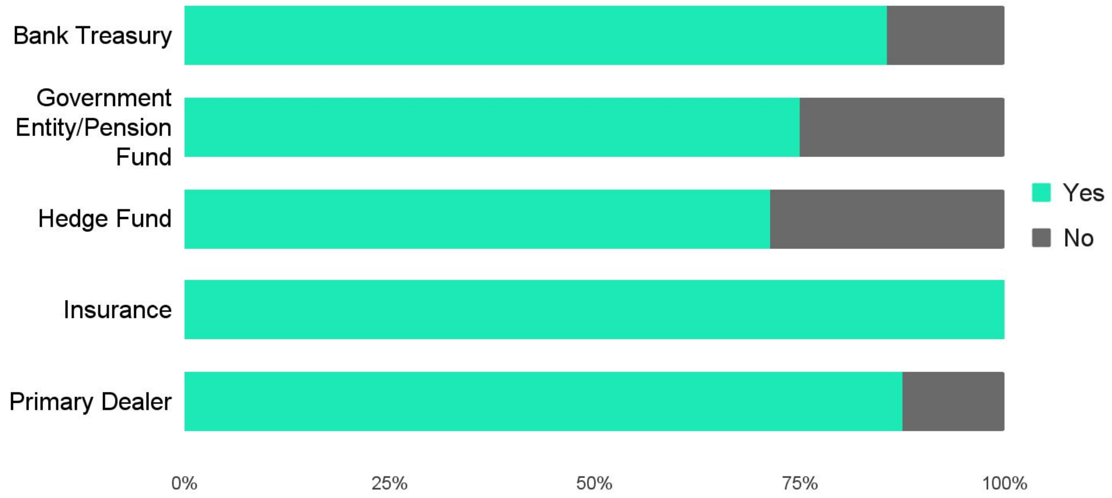
Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

Should volumes be capped if data is disseminated at the transaction level as is done for other fixed-income securities? (i.e. corporate bonds)

One bank treasury in our study offered: **"It is important to increase transparency on pricing without giving up dealer positions. It would be prudent to make adjustments to size based on coupons, to keep the duration cap in line."** The argument that large volumes should be capped to protect market makers was common among participants and also to have lower cap thresholds for off-the-run product.

Should volumes be capped if data is disseminated at the transaction level as is done for other fixed-income securities? (i.e. corporate bonds)

The below chart displays a breakdown, by respondent type, of whether participants believed if volumes should be capped if data is disseminated at the transaction level.



In a letter to the Treasury, one large asset manager explained their support for volume caps and urged regulators to take a similar approach to the Treasury market as the Corporate bond market by considering bond liquidity (e.g. on vs. off-the-run) to set an appropriate cap. They commented, ***"We believe this model has served the corporate bond markets well and encourage regulators to take a similar approach should they determine that it is appropriate to publicly disseminate Treasury transaction data in near-real time. The thresholds at which caps would apply to public dissemination should be informed by historical data and consider the security's liquidity profile. For example, more liquid security types (e.g., on-the-run Treasuries) could be subject to higher dissemination caps and shorter delays than off-the run Treasuries and TIPS, which are less liquid than on-the-run Treasuries."***

A primary dealer touted the benefits of increased transparency while acknowledging the need for the right tools to be put in place to protect the integrity of the market especially for less liquid and large transaction sizes, **"Prompt and granular transaction-level public transparency may be appropriate for the most liquid segments of the Treasury market and for small or average size transactions; however, such transparency could negatively impact intermediation and risk transfer in less liquid segments and for large transactions."**

Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

Should volumes be capped if data is disseminated at the transaction level as is done for other fixed-income securities? (i.e. corporate bonds)

This sentiment was reiterated a large pension fund in our study who commented in their analysis a distinction for on-the-run securities who said, ***"We think you need volume caps; for deep off-the-run securities you need two days to work out of trades with one dealer; on-the-runs however, you need a 15-minute window; We want an even working a program because there is a value to see transaction flows as we see it in futures market. There must be a way to work through their risk so that dissemination is okay."***

A small group of participants went a step further in their argument suggesting that excluding large transactions from reporting requirements would protect the treasury market from being manipulated by programmatic trading firms, as one North American bank commented, ***"Collective view is yes --large transactions should be excluded to protect market makers but also to protect end users from large programmatic transactions."***

Those that argued that volumes should not be capped if data is disseminated at the transaction level offered they did not understand the benefits that volume caps would achieve. Some participants questioned if these reporting requirements for improve transparency were needed in the first place.

Providing similar support by articulating the comparative benefits vs. disadvantages of enhanced transparency one primary dealer commented: ***"We emphasize our view is this should be slowly rolled out with pilot programs so the investor and US taxpayer are not at a disadvantage; There needs to be examination of the proposal itself and to demonstrate that there is evidence how this improves resilience for the market or taxpayer costs; if there are going to make changes they should be incremental and long dated. There should be a multi year process for pilot programs to see cycles and confirm benefits before regulators commit to public dissemination."***

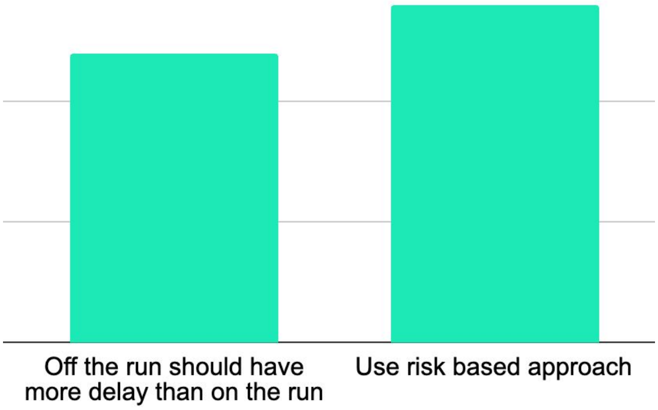
In sum, there was support of capping volumes if data were to be disseminated at the transaction level. Participants made it clear that it would protect the dealer community and that less liquid securities should have lower thresholds than more liquid securities. A small group of participants reiterated the need for further evaluation if data should be disseminated at the transaction level and others placed a specific concern on large programmatic transactions. The next question in this study will analyze how dissemination delays should be incorporated with increased reporting requirements.

Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

Delays can be utilized, specifically in less liquid markets for data dissemination. How would you suggest determining an appropriate length of delay?

The U.S. Treasury in their RFI urged regulators to consider, “how much and in what form information should be made available, so that market participants are not disincentivized from providing liquidity”. Time delays, like volume caps are viewed in the Treasury RFI as a potential tool to protect liquidity and market participants. Our study sought to understand if participants agreed to the implementation of dissemination delays and if so, what would be the best approach to determining an appropriate length of delay.

The below chart displays participant suggestions for determining an appropriate length of delay for data dissemination. ***Note****: Chart does not reflect specific values, representative of respondent answers proportionate to one another.*



Participants universally agreed that time delays would be a useful tool (among others) to address the impacts caused by additional transparency and often that feedback was based on their current experiences in the agency and corporate bond and swap market. Participants saw delays as an efficient way to protect against irregular price movements and to prevent primary dealers or intermediaries from being exposed to difficulties in warehousing risk. Industry participants expressed to the Treasury that regulators should ensure that all data disseminated from block trades is delayed from dissemination so that there is enough time for the trading counterparty to hedge its position.

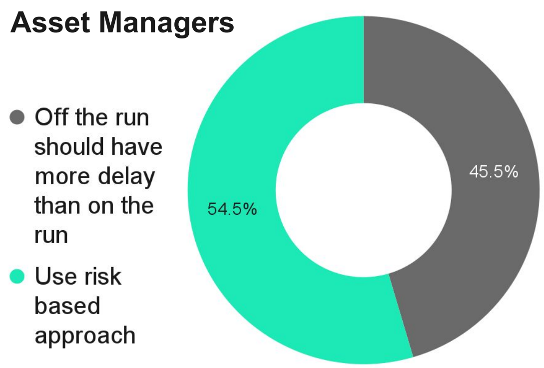
They argued that failing to provide an adequate delay for block trade transactions would reduce liquidity in the market and ultimately hurt funds and investors. They further opined that that block trade thresholds should be analyzed by regulators to determine an appropriate length by security type which may require different lengths of delay such as a much longer delay for off the run securities or other securities that are more illiquid.

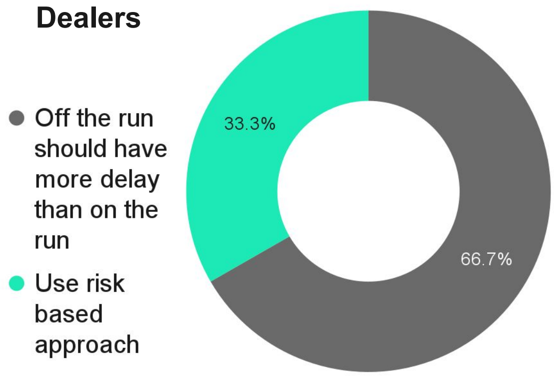
The most common answers to how to implement an appropriate time delay incorporated themes emphasizing a risk-based approach including a bonds duration liquidity profile or to ensure that off-the-run securities had a longer delay than the on-the-run counterparts. Study participants wanted to make clear that the reduced liquidity for off-the-run securities meant that a longer delay is needed to protect those holding the securities. A large primary dealer noted: **“For on-the-run securities the volume window is shorter than for off-the-run securities. This is because off-the-run securities must hold assets for days at a time on the balance sheet. Understanding the liquidity profile for off-the-runs is imperative to doing this exercise the right way. This exercise should be done separately for off-the-run vs. on-the-run.”**

Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

Delays can be utilized, specifically in less liquid markets for data dissemination. How would you suggest determining an appropriate length of delay?

Other participants went into more detail regarding analyzing the risk characteristics of a security. One Hedge Fund made clear that the appropriate length of the delay should depend on the bond's liquidity and risk with the less liquid and riskier bonds having a longer delay: **"We would like the more illiquid trades to be reported in a fashion that incorporates the relevant risk profile of the security. Transactions that have a high value at risk and high notional should be delayed more than standard, liquid transactions."** There was also strong support for providing delays and additional insight on how to implement delays. Many industry participants proposed a phase in approach that would allow for flexibility and periodic calibration of the delays to accommodate the needs of the market. According to participants this plan should be implemented first on the on the most liquid securities and evaluated for effectiveness before progressing to the less liquid securities.

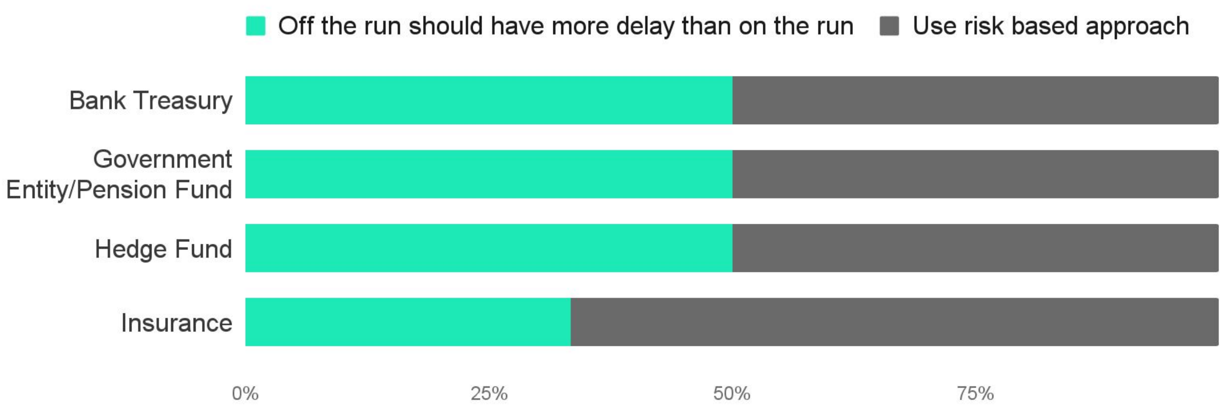




According to participants this plan should be implemented first with the most liquid securities and evaluated for effectiveness before progressing to less liquid securities. Participants echoed that a thorough analysis should be done for less liquid securities such as for off the run treasury securities because the impact of changes to dissemination may be greater than their more liquid counterparts.

Delays can be utilized, specifically in less liquid markets for data dissemination. How would you suggest determining an appropriate length of delay?

The below chart displays, by respondent type, participant suggestions for determining an appropriate length of delay for data dissemination.



Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

Delays can be utilized, specifically in less liquid markets for data dissemination. How would you suggest determining an appropriate length of delay?

In summary, our study participants reflected an interest in determining a delay that would consider the risk and liquidity profile of the bond and treat on-the-run securities differently than off-the-run securities with riskier and less liquid bonds having longer delays. Some participants also stressed the desire to combine dissemination delays with volume caps. Other participants proposed specific lengths of delays ranging from 60 minutes to a few weeks. Many participants saw delays as only one possible tool to be used to address negative impacts to intermediation and risk transfer in less liquid segments. Many participants wanted an approach where dissemination delays would be used along with volume caps to address risks associated with additional transparency.

The next segment of this section considers very specific topics related to how the potential approaches for enhanced post trade transparency could be implemented. The measures relate to the type of information that could be reported, for which securities, and what the reporting window would look like. The Treasury RFI identified each of the topics below specifically and sought input as to how the market would react to implementing each of these steps individually and their impact on transacting treasury securities. The four proposed measures in order are as follows:

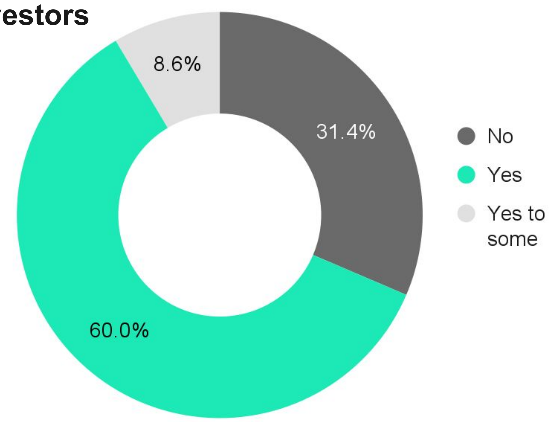
1. Releasing daily average prices, trade count, and traded volumes for each individual CUSIP.
2. Releasing transaction level details for on-the-run nominal coupons.
3. Releasing transaction-level details for every Treasury security.
4. Shortening release of reporting trade transactions to 60 minutes, rather than end of the day.

Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

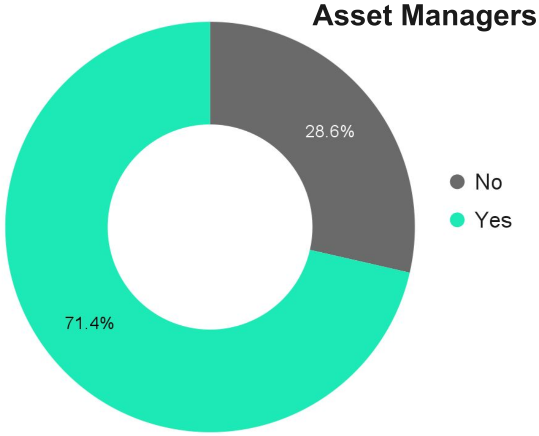
Do you agree with releasing daily average prices, trade count, and traded volumes for each individual CUSIP?

Overall, most participants favored releasing daily average prices, trade count, and traded volumes for each individual CUSIP. Those in favor believed the increased transparency would assist investors and dealers in properly gauging the liquidity of the market. Many participants who were in favor of releasing the CUSIP data stressed that they would like this released with a dissemination delay ranging from end of week to a month or greater, which is likely more than regulatory bodies had been considering. A small minority of participants only wanted some of these CUSIP details to be released. They feared that disseminating average daily prices could possibly be misleading to investors. Lastly, less than a third of participants did not want daily average prices, trade count, and traded volumes for each individual CUSIP as they did not see the value this data would provide. Additionally, they thought it could be expensive to report due to the anticipated costs associated with updating business systems and processes.

Investors



Asset Managers



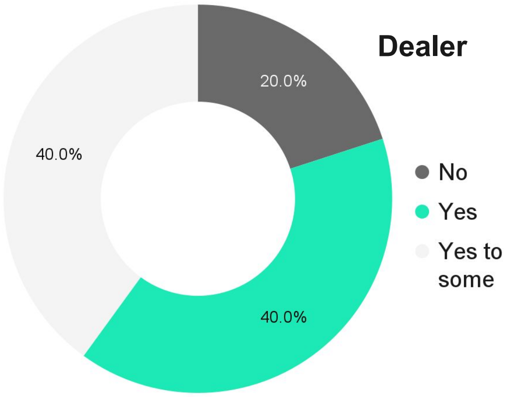
One of the most important reasons why participants wanted to report different details for each individual CUSIP is because they believed it would help market participants identifying levels of liquidity in the market. One pension fund said, **"We have no problem reporting at the CUSIP level; We think it would be very useful and determining liquidity of the market and that would be valuable transparency."** Other participants shared the value of releasing different details by each individual CUSIP but reiterated the need to have a significant delay in place prior to that release. One investment manager noted, **"We understand that this data is less harmful to intermediation (were a lag in place). We view that with a one month lag disseminating this data does not run the risk of distorting the pricing of a bond. Therefore, we are okay with this but only with a substantial lag of one to 3 months."** We should again note that this is likely longer than what is being considered by regulatory officials.

Other participants did not see the value that these transactions would provide. One of our investment managers commented: **"The daily average price is irrelevant, and we are not sure what you would do with it; Furthermore, releasing the number of trades is not relevant on the trade date. We are also not in favor of releasing traded volumes either. If you have to release data, we prefer that is done in aggregate and not by individual order size."**

Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

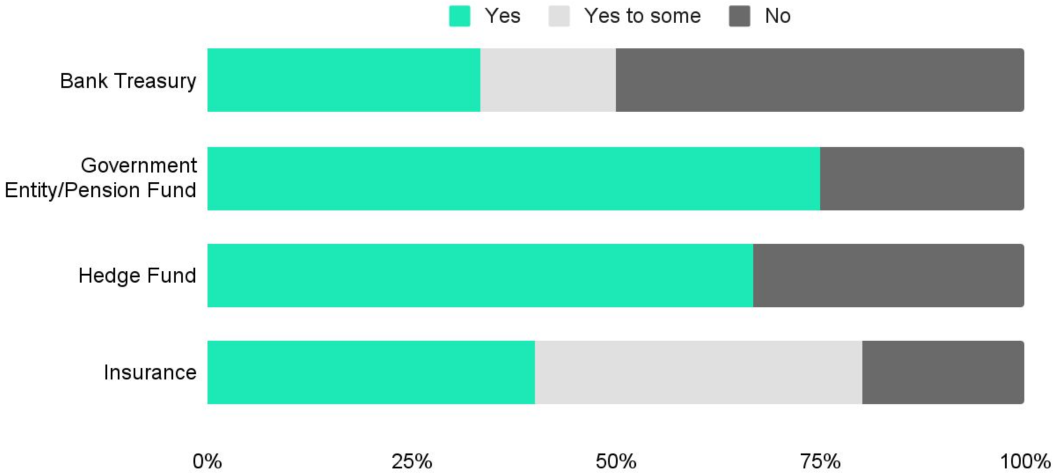
Do you agree with releasing daily average prices, trade count, and traded volumes for each individual CUSIP?

Lastly, while some saw the value this information would provide to a regulatory authority, they did not want to see information released for each individual CUSIP as it would be expensive to update internal business systems. One asset manager explained the challenge: **"We would prefer not to release information details for each individual CUSIP. It is okay to release for a regulatory authority, but it would be expensive. It would be quite the hassle to update IT and portfolio management systems for this."**



Do you agree with releasing daily average prices, trade count, and traded volumes for each individual CUSIP?

The below chart displays, by respondent type, if participants agree with releasing daily average prices, trade count, and traded volumes for each individual CUSIP.



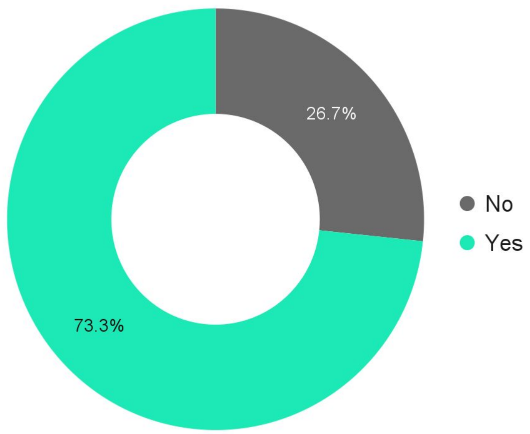
On balance, most participants were in favor of releasing daily average prices, trade count, and traded volumes for each individual CUSIP as they argued that it could help investors measure liquidity and understand changes in the market. Many participants wanted a delay for releasing this information. About a third of respondents did not want to release this information for each individual CUSIP at all as they did not see the value this would provide and argued it would be expensive to implement. The next question will ask study participants if they would support releasing transaction level details for on-the-run nominal coupons.

Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

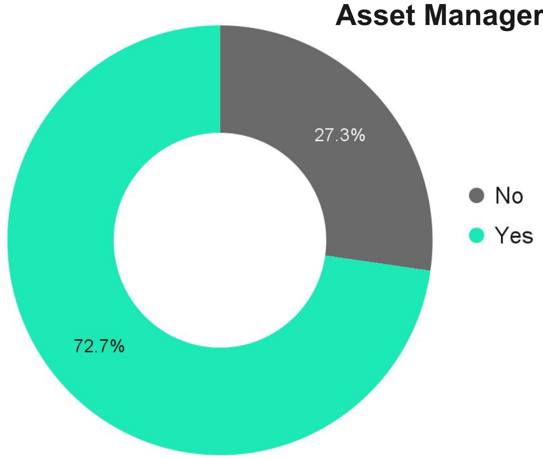
Do you agree with releasing transaction level details for on-the-run nominal coupons?

Most respondents supported releasing transaction level details for on-the-run nominal coupons. This majority held true through every organization type that responded. Those who were in favor of releasing transaction level details for on-the-run nominal coupons made it clear that since these securities were the most liquid of the treasury securities, they posed little liquidity risk if their transaction details were released. However, many respondents still wanted some sort of delay to go along with this disseminated information with some wanting a volume cap as well. Those that did not favor releasing transaction level details for on-the-run nominal coupons either did not see the value they provided or opined that it could be used by high frequency traders.

Investors



Asset Managers



One asset manager viewed on-the-run securities as less risky, **“This is ok for on-the-runs as it's less risky, there is little risk in releasing this information.”** A bank treasury shared this view saying, **“It’s ok to release this information as 70% of the market reports on-the-run; it’s easy for somebody to get a price and there is little risk in warehousing on-the-run securities. We do not favor releasing this information for off-the-run but on-the-run is okay.”**

Many respondents wanted appropriate volume caps with some wanting dissemination delays to go along with releasing the transaction level details for on-the-run nominal coupons. One asset manager commented, **”Without knowing the time frame — we would not want real time publication but yes if it is released at the end of the day.”**

One primary dealer went a step further by wanting volume caps to be implemented along with dissemination delays noting: **“We believe that releasing details at a transaction level is appropriate, subject to a block trade for larger transactions. The block trade regime should incorporate volume caps and publication delays.”**

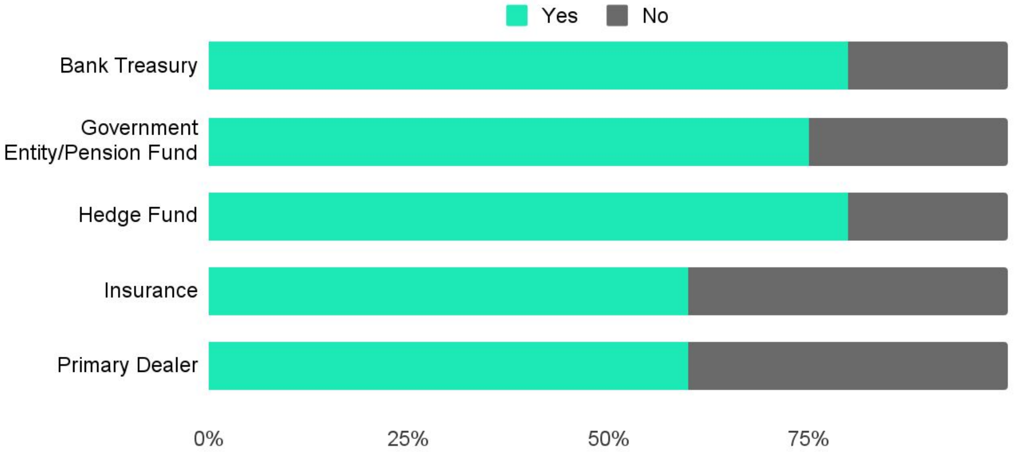
Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

Do you agree with releasing transaction level details for on-the-run nominal coupons?

The respondents that did not support releasing transaction level details for on-the-run nominal coupons felt that it was not relevant and did not provide any intrinsic value. One alternative investment manager stated that the increased information at this level could be used by high frequency traders commenting, **"we cannot see how this benefits us; With on-the-run it brings no value as the price for these securities are already available. This only gives information to an algorithmic trader or someone who is trying to find something out."** A hedge fund manager shared this view, **"The High Frequency Traders would benefit by looking at the data, but we would not."**

Do you agree with releasing transaction level details for on-the-run nominal coupons?

The below chart displays, by respondent type, if participants agree with releasing transaction level details for on-the-run nominal coupons?



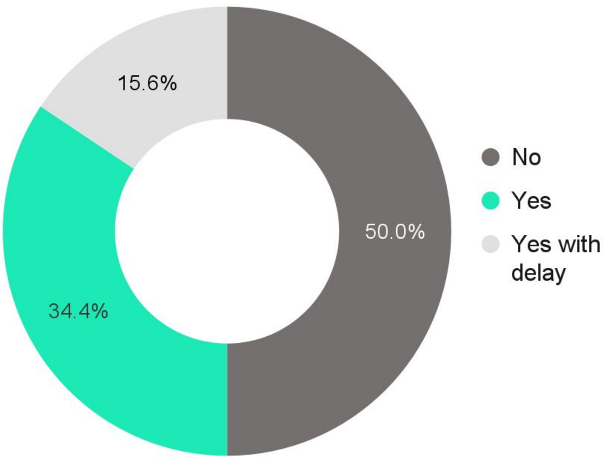
In sum, most respondents favored releasing transaction level details for on-the-run nominal coupons as they posed little risk and are already very liquid. Participants still wanted a delay with some wanting volume caps to be applied to the data that's disseminated as well. Lastly, a minority of participants did not want this information released as they did not see the benefit it would provide and argued it could benefit firms with more quantitative trading strategies. The next question respondents are asked is if they would want transaction level details to be released for every treasury security.

Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

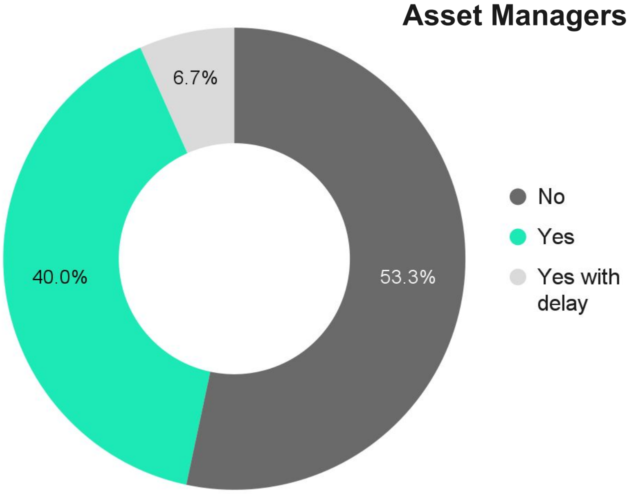
Do you agree with releasing transaction-level details for every Treasury security?

Most respondents either did not want to release transaction level details for every treasury security outright or wanted them released with a mitigant such as a delay. Most asset managers and the overwhelming number of primary dealers did not want transaction level details released. Those that were against releasing transaction level details argued that it would pose an expanded risk of a liquidity crunch by increasing costs and hurting those needing to warehouse these securities. Furthermore, participants were not in favor of releasing transaction level details for every treasury security because of the difference in liquidity profile between on and off-the-run securities. Those in favor of releasing the transaction-level details said it would benefit those purchasing the securities by increasing transparency and a higher level of understanding of the market by participants in those transactions.

Investors



Asset Managers



Respondents' argument against releasing transaction level details for all treasury securities was that it poses a risk to market liquidity by increasing costs and hurting the entities holding the securities. One large primary dealer noted: **"We would not support given the risk it poses to market liquidity, intermediation and end- investors transacting in less liquid market segments, where publication of transaction-level details would pose a significant risk."**

Other participants were not in favor of releasing transaction level details for every security because of the liquidity profile difference between off and on-the-run securities. One asset manager succinctly said, **"Liquidity changes for on-the-runs and is different when the Fed is a big buyer of trading volumes, and a big ask is off-loaded. When the Fed is gone liquidity is reduced."**

Some participants that were in favor of releasing transaction-level details for every treasury security stressed that it is important to differentiate between on-the-run and off-the-run securities. Participants proposed having a delay for off-the-run securities due to their decreased liquidity profile.

Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

Do you agree with releasing transaction-level details for every Treasury security?

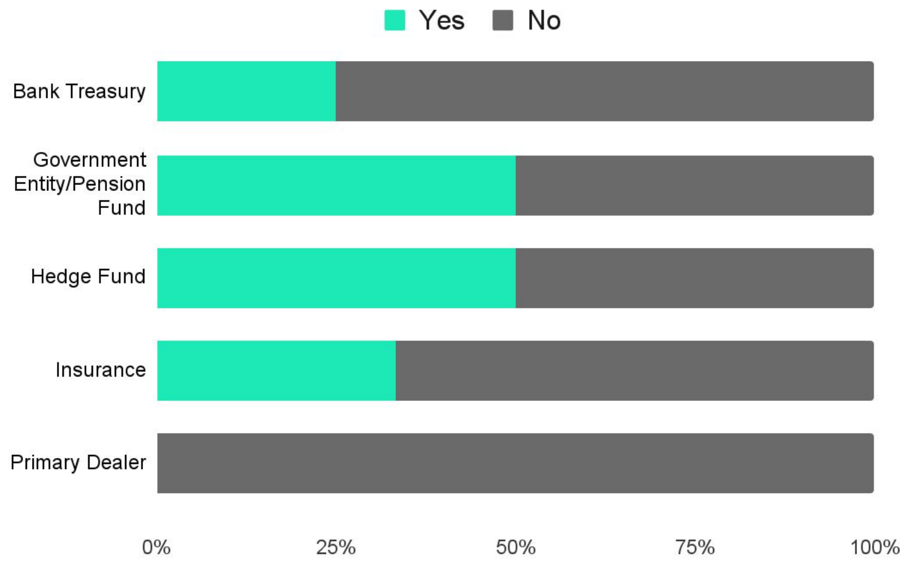
Some respondents went a step further saying that they would only support releasing transaction level details if there were a volume cap implemented. One hedge fund highlighted the need to protect the most common trade participants from the dissemination of information saying,

"It depends on the delay and the nature of the application; there is value of releasing price transparency, but this needs to be done with some lag for it to be acceptable. This release of data needs to be obfuscated in some way and the level of granularity should not reveal common trade participants."

In summary, participants highlighted the need to consider the liquidity profile of on vs. off-the-run securities and that it would hurt intermediation as reasons for opposing the release of Treasury securities at a transaction level. The next question in this study will ask participants if they would support shortening the release of trade transactions from the end of the day to 60 minutes.

Do you agree with releasing transaction-level details for every Treasury security?

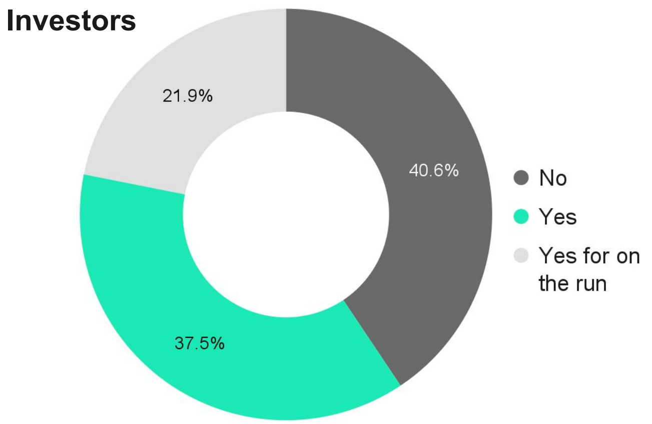
The below chart displays, by respondent type, if participants agree with releasing transaction-level details for every Treasury security?

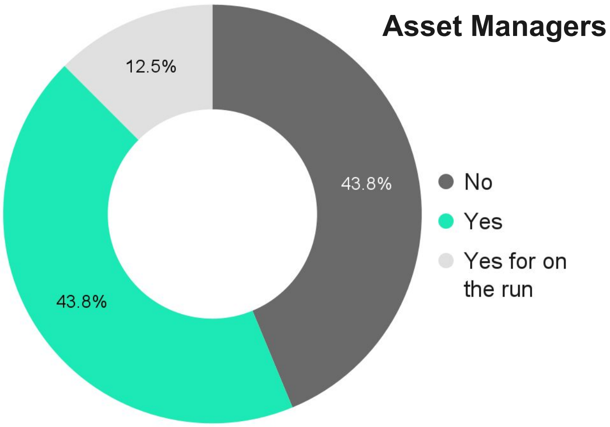


Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

Do you agree with shortening the release of reporting trade transactions to 60 minutes, rather than at the end of the day?

In their request for information, Treasury sought feedback on market structure features, security characteristics, and other factors relating to post trade disclosure of information related to US Treasury products. This question discusses specific quantitative timing delays related to reporting transactions, which stemmed from a proposal by FINRA to "reduce the trade reporting timeframe for transactions in U.S. Treasury Securities to generally require reporting to TRACE as soon as practicable but no later than 60 minutes." In none of our prior questions was there a time driven premise for respondents to consider as a baseline for considering whether transparency should be enhanced in a new regulatory framework or maintain the status quo.





FINRA, in a 2020 letter to the SEC, supported shortening the release of reporting trade transactions to 60 minutes rather than at the end of the day because it would provide regulators with more timely information regarding the Treasury market and give more insights into intraday pricing and liquidity.[5] FINRA said the following in their letter:

"FINRA believes the proposal to require that members report transactions in U.S. Treasury Securities to TRACE as soon as practicable, but no later than within 60 minutes of the Time of Execution (or within 60 minutes after the TRACE system opens for trades executed during specified periods, as described above) is a beneficial next step towards providing FINRA and the official sector with more timely information about activity in the U.S. Treasury Security markets than the current reporting timeframe, including more timely data about intraday pricing and liquidity. As discussed further in the Economic Impact Assessment, FINRA also notes that members already report over 90 percent of transactions in U.S. Treasury Securities within 60 minutes of the Time of Execution. FINRA will continue to consider whether further reducing the reporting timeframe for U.S. Treasury Securities may be beneficial."

Overall, most participants in our study either did not want to shorten the release of reporting trade transactions to 60 minutes (rather than at the end of the day) or only wanted it shortened for on-the-run securities. Those that were not in favor of shortening the reporting window believed that there would be increased costs associated with this initiative and that it would increase bid/ask spreads.

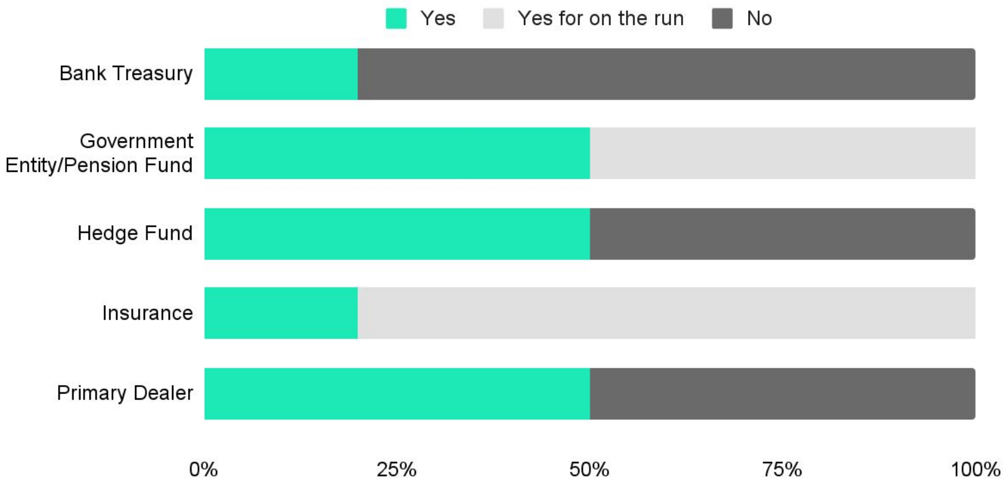
Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

Do you agree with shortening the release of reporting trade transactions to 60 minutes, rather than at the end of the day?

Others thought that it would lead to diminished liquidity by reducing intermediation. Many participants supported shortening the reporting window but only for on-the-run securities as they viewed the less liquid off-the-run securities as more vulnerable to increased transparency. Lastly, there were some participants that viewed that the reduced reporting window was still a long enough delay for both on and off-the-run securities and were supportive of shortening the reporting window.

Do you agree with shortening the release of reporting trade transactions to 60 minutes, rather than at the end of the day?

The below chart displays, by respondent type, if participants agree with shortening the release of reporting trade transactions to 60 minutes, rather than at the end of the day?



Respondents made it clear that they would prefer to see reporting shortened for on-the-run securities rather than off-the-run. For off-the-run securities many respondents wanted to keep the longer delay while some even wanted to introduce volume caps.

One fund manager said the following, ***"An hour delay for on-the-run is fine and we would be fine with even shorter; theoretically block futures get done in 5 minutes; For off-the-run securities, however, is harder to qualify if an hour is enough and we would like to see volume caps introduced for this type of security as well." An insurer reiterated this statement, "off-the-runs should continue to be reported at the end of day while for on-the-runs 60 minutes is okay."***

Another asset manager agreed for shortening the release for on-the-run securities but was more wary for off-the-run securities. **"This proposal is fine for on-the-runs. Right now, the way all the data is disseminated works for us; maybe regulators should impose a gradual shortening of the reporting window and see what that does and that is what we would support. Start there with on-the-runs before changing reporting for off-the-runs."**

Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

Do you agree with shortening the release of reporting trade transactions to 60 minutes, rather than at the end of the day?

One of our respondents who opposed shortening argued that it would disincentivize market makers from providing liquidity. An asset manager commented:

“Our stance on this is a resounding ‘no’. We would avoid participating in this market as shortening the release would impair liquidity in the market.” Others noted, as they have in other segments of our report, that there would be increased costs to create an expedited reporting process which would increase bid/ask spreads. One asset manager said, **“The costs associated with shortening the release of information from compliance, monitoring, technology, and large risk transfers will lower depth and widen bid offers. So, we are not in favor of it.”**

A primary dealer reiterated this view but recognized the benefit this reporting would provide to regulators as opposed to those on both sides of the market: **“We do not see the benefits of shortening reporting from end of day to 60 minutes and we would oppose it; the costs to shorten reporting are not insignificant. This is not an issue that regulators see in real time— It would be helpful if regulators could step in if things were bizarre, however, there is no value for everyone else.“**

A bank treasury did not support the reduction of the reporting window to 60 minutes as they viewed the 24 hour reporting window as a better way to address risks with disseminating this information: **“The proposed shortening is an arbitrary timing; we view 24 hours as best as it provides a good timeline to remove risk associated with the timing of reporting.”**

Those that were in favor of shortening reporting transactions to 60 minutes for both on and off-the-run securities viewed the hour delay as a long enough window to protect market participants. One asset manager shared this view but also advised to shorten the reporting window incrementally to see how the market would respond saying,

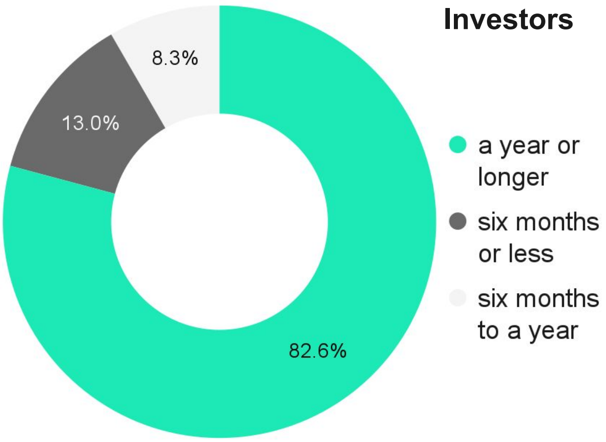
“Yes, this shortening is appropriate; an hour is still a long window, so we support shortening of trade transactions to 60 minutes; We propose shortening the reporting trade transactions in increments as an appropriate approach to evaluate how the market responds to this.”

In sum, a majority of respondents either did not favor shortening the reporting of trade transactions to 60 minutes rather than at the end of the day or only supported this shortening for on-the-run securities. Participants feared that shortening the reporting window would diminish liquidity and increase costs. Many participants highlighted the difference in liquidity between off and on-the-run securities. A minority of participants still viewed 60 minutes as a sufficient delay for both on and off-the-run securities while increasing transparency. Some of these repondants advised to shorten the delay incrementally to evaluate how the market would react to this change.

Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

In your view, what would be an appropriate phase-in schedule for gradually phasing in additional transparency?

Our study participants were asked to provide input on how much time should be allotted for the proper implementation of the guidelines that were part of the Treasury RFI initiative. With few exceptions participants believed that at least one year if not 2-3 years would be required for regulated entities to make the necessary operational, system and technology upgrades. In addition, respondents emphasized the need to have a grace period to ensure that proper research and industry outreach was completed to evaluate the impact of the changes and their efficacy.



Participants recommended a detailed analysis evaluating the costs, benefits and attenuated risks that would accompany the newly proposed transparency effort. Numerous firms identified a range of investments for technology and business systems along with updated procedures for compliance, governance, and legal operations. Finally, firms noted that it would be preferable to avoid having to make these changes under a period of liquidity or volatility challenges related to the Federal Reserve's downsizing on Quantitative Easing and suggesting that this effort would take the better half of a year or longer.

A very consistent response among participants in our study was expressing to regulators that increased transparency should have a benefit on the market. A market maker in the study reiterated this request for ensuring that transparency measures were appropriate highlighting the need for a phased-in gradual approach, specifically for less liquid market segments saying, **"Each phase should allow for at least one year's worth of data to be collected and subsequently reviewed prior to implementing further transparency. Transparency measures should be phased-in on a gradual basis, starting with the most liquid parts of the market and moving to less liquid segments only if thorough analysis determines that it is appropriate and beneficial to do so, by taking into account potential harms to liquidity and resilience."**

One investment manager participant urged regulators to consider using TRACE as a model for a phase in approach to new transparency measures: "We encourage the financial regulatory community to consider using TRACE as a model for a reporting regime that has created progressively more transparency in corporate bond markets while also protecting liquidity. TRACE has accomplished this by phasing in public transparency requirements over time and establishing protocols to protect the identity of market participants, their holdings and their trading strategies. We believe a similar approach could work well in Treasury markets."

Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

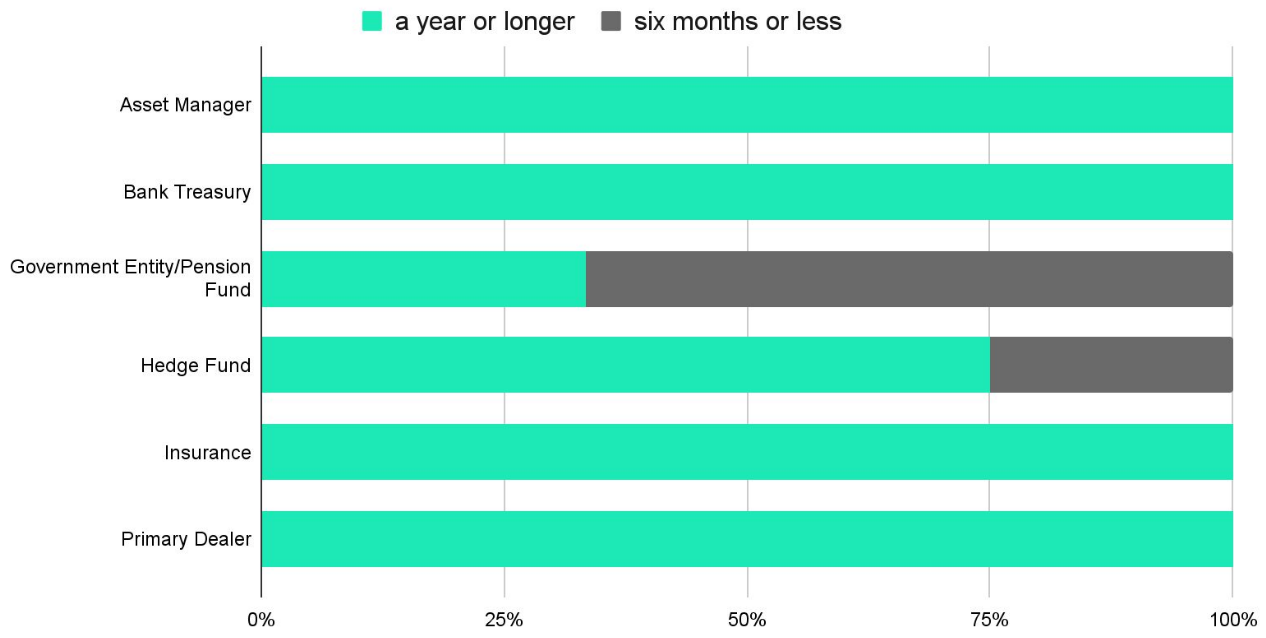
In your view, what would be an appropriate phase-in schedule for gradually phasing in additional transparency?

A Bank Treasury among other firms in the study reiterated the need to verify that proposed changes were beneficial to the market and systems used to transact, also highlighting how firms' technology and business systems would take time to modify for updated regulations:

"Treasury needs to ensure that this is the right thing for the market; They need to make sure increased transparency measures enhances the market and not the other way around; regulators should be cautious; We need to have compliant systems and technologies and adjust business models and that should require about a year to accomplish. Treasury should take some time and see how the market reacts."

In your view, what would be an appropriate phase-in schedule for gradually phasing in additional transparency?

The below chart displays, by respondent type, participant suggestions an appropriate phase-in schedule for gradually phasing in additional transparency.



A fund manager in the study summarized succinctly that internal rules, trading mechanisms, and compliant regulations would need to be considered before implementing any changes: **"We would think that slower the better. We reason that many rules, how we trade and mechanisms will need to change. All this rebalancing will need time and to re-write those things will take over a year; We need to go through a full trade cycle to ensure any new system is compliant with new regulations and still stays true to risk management."**

Views on Transparency Requirements and Volume Caps and Delays for Increased Transparency.

In your view, what would be an appropriate phase-in schedule for gradually phasing in additional transparency?

Many industry participants proposed consideration of a potential phase in approach that would address the most liquid securities first, followed by the less liquid ones while implementing delays and caps, utilizing transaction data that's reported to TRACE. Lastly, some participants in the study were wary to implement changes to the Treasury market status quo given the current period of quantitative tightening. They argued that increased volatility in the era of rising interest rates would exacerbate any liquidity challenges posed by increased post-trade transparency.

In conclusion, participants were very cognizant of the need for changes to transparency reporting to be phased in gradually over a period of a year or longer. Participants wanted to further evaluate the risks and benefits of the proposed changed status quo by regulators. Participants cited challenges to updating internal systems and compliance processes within their organizations as well as comparing this initiative to past gradual policy changes by regulators.

04 /

Conclusion

Conclusion

The Department of Treasury RFI, which was the focus of our study, is one of a broader set of public policy initiatives focused on the US Treasury market. Efforts evaluating the potential impact of enhanced transparency on the Treasury securities market is part of a broader package of regulatory initiatives which taken individually or collectively could have meaningful impact on the market at many levels. Study participants agreed that each of these efforts needed careful consideration, evaluating their impact on market liquidity, on-going stability and the ability to promote market growth and efficiency. Continuing to build on that balance will be critical to the success of this effort.

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- Japan
- Luxembourg
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- Saudi Arabia
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