

# Operational Plans for Various Contingencies for Treasury Debt Payments

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## Introduction

This document is intended to provide a technical reference on some of the trading, clearing, settlement, and other operational challenges that might arise in the unlikely event of a delayed payment on Treasury debt. It focuses strictly on operational practices, with the intention of outlining steps that market participants might take to reduce some of the adverse consequences stemming from the operational complications associated with a delayed payment.

A delayed payment on Treasury debt could arise from a number of circumstances, such as systems failures, natural disasters, terrorist acts or other reasons. Contingency planning for such remote events is valuable, because a delay would present significant technical problems for the trading, clearing, and settlement of affected Treasury securities. Moreover, market participants would have difficulty preparing for these contingencies and coordinating with one another without some framework for understanding how payments and other operational matters might be handled.

Given these challenges, the Treasury Market Practices Group (TMPG) evaluated what practices might be adopted to support market functioning. The results of that effort are summarized in this document. It should be emphasized that the practices described here, if implemented, would only modestly reduce, not eliminate, the operational difficulties posed by a delayed payment on Treasury debt. Indeed, even with these limited contingency practices, a temporary delayed payment on Treasury debt could cause significant damage to, and undermine confidence in, the markets for Treasury securities and other assets. Moreover, some participants might not be able to implement these practices, and others could do so only with substantial manual intervention in their trading and settlement processes, which itself would pose significant operational risk. Other operational difficulties would also likely arise that could be severe and cannot currently be foreseen.

Of course, the appropriate approach for addressing these operational issues might depend on the exact circumstances that prompted the delay, and on how various systems and market infrastructure, including the Fedwire<sup>®</sup> Securities Service, evolve in the future. Nevertheless, we hope that this document will provide a sharper focus on some of the relevant issues

and, at a minimum, serve as a useful starting point for any future discussions.

### Some Important Operational Features of the Fedwire Securities Service

Before discussing the potential practices contemplated in this document, we briefly review some important operational features of the Fedwire Securities Service, including how securities are ordinarily handled upon their maturity.

In the normal course of business, a security becomes non-transferable at the close of the Fedwire Securities Service the day prior to its maturity date, and the holders of record at that time receive payment on the maturity date. The Fedwire Securities Service ordinarily closes at around 7 p.m. eastern time (ET),<sup>1</sup> but this close can be extended by a couple of hours in exigent circumstances. Once a security becomes non-transferable, it cannot be transferred from one participant to another in the Fedwire Securities Service; in essence, the security is “frozen.”<sup>2</sup> Given the design of the Fedwire Securities Service, once frozen, a security cannot be unfrozen.

Assuming that today and tomorrow are business days, if a security matures tomorrow, the final holders of the security on the Fedwire Securities Service at the close of business today will receive the principal payment on the maturity date (tomorrow). Ordinarily, at or around 8:05 a.m. ET on the maturity or coupon payment date, the Fedwire Securities Service makes principal and interest payments. The Fedwire Securities Service has the capability to delay a principal and/or interest payment if necessary or if requested to do so in advance by the issuer.

### Summary of Potential Practices

The potential practices described here are designed to allow for the continued trading and transfer of securities that are subject to delayed principal payments. The potential practices rely on rolling the operational maturity date forward in the Fedwire Securities Service and other systems to allow affected securities to continue to trade and be transferable. Extending the operational maturity date of securities with delayed payments would allow more liquid market function than if the securities

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<sup>1</sup> Under normal circumstances, interbank originations for delivery-versus-payment transactions close at 3:15 p.m. ET, reversals related to those transactions close at 3:30 p.m. ET, transfers against payment between two accounts of the same participant close at 4:30 p.m. ET, and transfers free of payment between two accounts of the same participant close at 7:00 p.m. ET.

<sup>2</sup> Please see the appendix for a glossary of terms.

were frozen in the Fedwire Securities Service. In some cases, there may not be sufficient time to make this necessary adjustment.

To help preserve the transferability of securities for which payment is not made in a timely manner, the potential practices are explained below.

- ❖ Prior to running the Fedwire Securities Service end-of-day process on the day before a *principal* payment is due, if the Treasury determines that a principal payment cannot be made the following day, the operational maturity date of the securities on trading, custodial, settlement, and transfer platforms would be rolled forward, or extended, by one business day.<sup>3</sup> This practice could be repeated each day until the principal payment is made.<sup>4</sup> Once Treasury notifies the Reserve Banks that the principal payment will be made, the operational maturity date would no longer be rolled forward in the Fedwire Securities Service, and the principal payment would be made on the last established operational maturity date. This eventual payment of principal would be made to the holder of record as of the close of business the day before the actual principal payment is made.
- ❖ If a *coupon* payment is delayed, the eventual payment of the coupon would be made to the holder of record as of the close of business the day before the originally scheduled coupon payment date.
- ❖ Additionally, under these potential practices, the standard market conventions of quoting bills on a discount basis and notes and bonds on a “clean price” basis are expected to remain as viable market standards.

The asymmetric treatment of principal and coupon payments is preferable because of a number of operational issues faced by many large participants in the market, including clearing banks, utilities, and others. The proposed treatment of coupon payments would allow most systems to continue to track the proper settlement

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<sup>3</sup> The Fedwire Securities Service’s roll of the operational maturity date would need to be instructed by the Treasury.

<sup>4</sup> The Fedwire Securities Service has the capacity to roll maturity dates day by day, if instructed to do so by the issuer before the close of the Fedwire Securities Service on the day prior to the maturity date. The Fedwire Securities Service can roll the maturity date for operational purposes for Treasury bills, principal payments on coupon-bearing instruments, and principal STRIPS. Interest STRIPS would not roll forward and would be treated consistently with the associated coupon payment for a fully constituted note or bond, which would also not roll forward, given a delay. Of note, the process of rolling the operational maturity date forward would not change the actual maturity date specified in the terms and conditions of the Treasury Offering Circular—it would simply be intended to facilitate continued transferability in the affected securities.

proceeds of trades with less manual intervention, as it is consistent with conventional calculations of accrued interest, overall settlement proceeds, etc.

Even under the potential practices, a delay in the payment of Treasury debt would still entail significant operational difficulties and require manual intervention for nearly all market participants. Moreover, from an operational perspective, these practices can only be accommodated by the Fedwire Securities Service if instructions to roll forward the operational maturity date are provided by the Treasury before the close of the Fedwire Securities Service on the day prior to a scheduled maturity.

Of course, there may be circumstances under which notification on the required timeline would not be possible. If circumstances do not allow for timely notification, the affected issues would cease to be transferable over the Fedwire Securities Service. In such cases, market participants would need to consider securing other sources of funding or making bilateral arrangements to contractually transfer interests in the security outside of the Fedwire Securities Service.

Market participants should recognize that how the Fedwire Securities Service will treat a delayed payment would be determined by the Treasury. The potential practices discussed in this document represent just one approach that the Treasury could take.

### **Treatment of Securities with Delayed Principal**

*Across various systems (including the Fedwire Securities Service), the operational maturity date of securities with delayed principal payments could be rolled forward one day at a time until payment is made. The eventual payment of principal would be made to the holder of the security as of the close of Fedwire the day before the actual principal payment is made.*

Operationally, this practice would be triggered each day by a communication from the Treasury prior to the close of the Fedwire Securities Service and would need to continue on a day-by-day basis for as long as the delay lasts. If no action was taken, the operational maturity date for affected issues would not be rolled forward and these securities would cease to be transferable over Fedwire Securities Service. Trading in these issues would likely dramatically decrease or might cease altogether.

Rolling forward the operational maturity date appears operationally feasible for most large market service providers. Most large clearing banks have indicated that they would likely still be able to clear trades and perform other services for their clients (including custody services, tri-party repurchase agreements, and securities

lending), albeit with substantial manual intervention. The primary central counterparty utility for the Treasury market, Fixed Income Clearing Corporation (FICC), would also be able to accommodate this solution.

Importantly, while the potential practices envision rolling forward the operational maturity date by one day, such action would not change the underlying payment terms or the legal maturity date of the security; the practices would simply represent an operational step taken to allow the affected securities to continue to be transferred.

### **Treatment of Delayed Coupons**

*All coupon payments should be paid to the holder of record as of the close of business the day before the originally scheduled, or contractual, coupon payment date.*

Two potential treatments of delayed coupon payments were initially considered: paying the coupon to the holder of record at the time that the funds become available to make the payment, or paying the coupon to the holder of record at the time of the originally scheduled payment.

The originally scheduled payment date approach appears to work best with existing accounting and settlement systems across a range of market participants. Most systems are set up to trade and settle on a standard invoice price basis, and continuing to carry missed coupons in the invoice price would require significant manual overrides and lead to considerable additional operational risk.

Accordingly, the TMPG recommends that the eventual payment of interest be made to the holder of the security as of the close of business the day before the originally scheduled coupon payment date.

### **Compensation for Delayed Payments**

It would require explicit legislation by Congress to provide compensation to holders of securities affected by a delayed payment on Treasury debt for the delay in these payments. As a result, at the time of a delay, investors most likely would not know whether this compensation would be provided and what form it might take. Nevertheless, market prices of Treasury securities would take into account the possibility of such compensatory payments, and hence this document proposes a potential practice to accommodate this. The most straightforward practice for the market to accommodate would likely be as follows:

- ❖ The parties that receive the delayed payments (either the holder of record as of the close of business the day before

the actual payment date in the case of delayed principal payments, or the holder of record as of the contractual payment date in the case of delayed coupon payments) should also be the ultimate beneficiaries of any subsequent related compensatory payments. Although the parties would likely not know at the time of the delay whether compensatory payments would be forthcoming, to whom they would initially be paid, or the magnitude of any such payments, agreeing to their ultimate disposition (should the compensation be realized) in the trade confirmation would serve to reduce uncertainty and support liquidity in affected issues.

This practice recognizes that parties entitled to receive the coupon payments would receive such payments later than originally scheduled, and hence could be compensated for not receiving the payment in a timely way. It also clarifies who receives any compensatory interest on the delayed principal payments in a simple manner, allowing the security to trade at a price that appropriately reflects any expected accrual of compensatory interest. To be clear, the TMPG makes no presumption that such a compensatory payment would be made.

### **Proposed Quoting Conventions**

Given the recommended practices above, the TMPG recommends that standard market practices for trading and quoting Treasury securities should continue to be used in the event of a delayed payment on Treasury debt. In particular, Treasury bills should continue to be quoted on a discount basis, and notes, bonds, and Treasury Inflation-Protected Securities (TIPS) should continue to be quoted using the practices that are in place currently.<sup>5</sup> Of note, for Treasury bills, relatively small price discounts could result in unusually high discount rates given a one-day effective maturity under a delay. Market participants should ensure that their systems for processing bill trades are able to handle abnormally high discount rates.

Most trading systems are set up to transform “clean” quotes on notes, bonds, and TIPS into invoice prices (that is, price quotes inclusive of accrued interest). We believe continuing to quote notes, bonds, and TIPS that have experienced a delayed payment of principal or interest on a clean price basis should allow most systems to continue to process trades in a more straightforward manner than would be seen if quoting for affected issues

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<sup>5</sup> The date used to convert a discount rate to price should be the value of the maturity date in place at the time of the trade. As an example, if a payment was originally due on a Thursday, and on Wednesday night the operational maturity date had been rolled forward to Friday, trades that take place on Thursday should use Friday as the assumed maturity date for discount rate-to-price conversion purposes.

moved to an invoice, or “dirty price,” basis. Even if the operational maturity date was not rolled forward in the Fedwire Securities Service, the market might still adopt the same convention of quoting securities based on an assumed maturity date of the following business day.

### **Pricing Conventions**

In the event of a delayed payment on Treasury debt, another key issue would be how pricing vendors would treat Treasury securities with delayed payments. Some service providers, such as large clearing banks, typically accept quotes obtained from pricing vendors without adjustment. Therefore, if vendors were to provide problematic pricing data, such as setting the price of a Treasury with a delayed payment to \$0 (as is common treatment for defaulted commercial paper or certificates of deposit) or selecting a different quoting convention than their customers use, they will generally accept this pricing. We believe that the market would benefit from having pricing service providers continue to provide reasonable (that is, non-zero) prices for Treasury securities that have experienced a delayed payment and such prices should be provided on a timely basis.

### **Payment System and Custody Considerations**

Under a delayed Treasury debt payment scenario, there would likely be a number of problems encountered by custodians, but these might be somewhat less disruptive with some preparatory work. Most custodial arrangements for Treasury securities operate such that custodians advance payments that are to be generated by securities held in custody. In the event that these payments were not paid to custodians in a timely manner, custodians would need to decide whether or not to advance principal and interest proceeds. In light of the potential practices in this document, custodians and their customers may wish to discuss the potential challenges faced in the event of delayed payment on Treasury debt.

At present, differences in systems capabilities exist across various market utilities that process Treasury trades. The two major clearing banks can roll forward the operational maturity date and still clear trades and perform other services for their clients (including custody, securities lending, and tri-party repo), albeit with a fair amount of manual intervention. It is recommended that all firms that clear Treasury trades or perform related custodial or payment system functions review the capability of their systems to operate under the practices provided in this document.

### **Documentation Considerations**

In light of the proposed practices, the TMPG recommends

that market participants review existing contractual documentation to determine if extending the operational maturity date for a security with a delayed payment would raise concerns with respect to terms and conditions related to pricing or default provisions.

### Operational Practices

Treasury market stakeholders should keep in mind the potential practices discussed in this document during routine systems maintenance efforts, and should consider opportunistically incorporating the ability to follow the practices. This planning should consider questions such as:

- ❖ What systems issues arise and what manual procedures would need to be invoked if the proposed treatment of delayed interest and principal payments was implemented?
- ❖ Are there any operational modifications that can shorten the time needed to roll forward the operational maturity date in key systems, given short notice?
- ❖ If the operational maturity date was not rolled forward in the Fedwire Securities Service before the close one day before the legal maturity date, what system changes would be necessary to support continued trading of Treasuries that would only be transferable within a clearing or custodial bank (that is, not over the Fedwire Securities Service)?
- ❖ Would settlement and custodial systems process maturities on an automated basis on the night before maturity for the next day's settlement? If so, would positions automatically reflect the receipt of cash, posing a problem if the cash was not received as scheduled?
- ❖ Would changing the operational maturity date of the security lead systems to cancel and re-book entries? Would

systems continue to accrue interest for a security that has its operational maturity date rolled forward? Would there be a need to manually intervene to zero out the coupon during the delay period?

- ❖ Would the manual nature of the potential practices lead to operational bottlenecks?
- ❖ Would the protocol for handling one-day-to-maturity securities in tri-party repo transactions in the normal course of business apply as well in a payment delay scenario?

### Summary

While the practices contemplated in this document might, at the margin, reduce some of the negative consequences of a delayed payment on Treasury debt for Treasury market functioning, the TMPG believes the consequences of such a delay would nonetheless be severe. In part, this reflects the fact that some participants may not be able to implement these practices. Moreover, participants that do implement them may need to rely on substantial manual intervention—a recourse that poses additional operational risks. In general, it is difficult to anticipate the full range and severity of problems that could emerge from delayed payments. Nevertheless, the potential practices outlined here provide a framework under which market participants can begin to make adjustments to their contingency plans. As participants consider the robustness of their internal systems to these practices, we believe it would be a matter of prudent planning to begin developing more flexible internal systems and processes for this remote contingency.



# Appendix: Glossary of Terms

Discussing operational arrangements given a delayed payment on Treasury securities is made easier if participants use a common vocabulary.

**Actual payment date:** The date on which payments are made to the holder of record. In the normal course of business, this is the same as the contractual payment date, but in a contingency scenario, delayed payments might be made and settled after the original maturity date.

**Contractual payment date:** The date on which payments are originally due to be paid. All principal and interest payments in the normal course of business are paid on this date.

**Fedwire Securities Service:** A book-entry securities transfer system that provides safekeeping, transfer, and delivery-versus-payment settlement services. “Fedwire” is a registered service mark of the Federal Reserve Banks.

**Frozen:** Refers to a security no longer being transferable on the Fedwire Securities Service. Once frozen, a security cannot be transferred from one holder of record to another on Fedwire.

**Legal maturity date:** The scheduled maturity date of a security, which does not change whether or not the operational maturity date is rolled forward on Fedwire.

**Operational maturity date:** The date reflected in the maturity date field in various systems. Under a payment delay, it is envisioned that the operational maturity date can be extended by modifying the maturity date in Fedwire and other systems beyond the legal maturity date to maintain transferability and liquidity on a one-day rolling basis (subject to timely authorization by Treasury). Such an operational roll would not change the legal maturity date.

**Rolling the operational maturity date:** Refers to a situation in which, subject to timely authorization from an issuer, the operational maturity date of a security is extended one day at a time to maintain transferability over Fedwire until a delay is resolved. Rolling forward the operational maturity date would not change the legal maturity date.

**Transferable:** Refers to a security’s ability to be transferred from one holder of record to another across the Fedwire Securities Service.

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

