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DISRUPTION IN TREASURY PAYMENTS: DISCUSSION OF SCENARIOS

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Revised December 2021

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Overview of Potential Scenarios

There are three potential scenarios for the handling of government securities whose principal or coupon payments are disrupted:

Scenarios where instruments with delayed payments remain transferable on Fedwire

- **Scenario 1:** Delay of Principal Payment – US Treasury delays principal payment and extend the maturity date of the instrument, resulting in a new operational maturity date on Fedwire for the payment of the principal.
- **Scenario 2:** Delay of Coupon Payment – US Treasury delays coupon payment on a security
- Scenario 1 can occur independently from scenario 2, eg. a T-Bill maturity
- Scenario 1 and 2 can both occur on the same day, eg. a coupon payment date on maturity date, or a mix of T-Bills and coupon payments
- Scenario 2 can occur independently from scenario 1, eg. a coupon payment date not on that security's maturity date. In this case, there is no operational extension of maturity dates. This scenario is highly unusual and has not happened in at least the last 5 years.
- *Scenario where instrument is no longer transferable on Fedwire*
- **Scenario 3:** No extension of instrument's maturity on Fedwire – US Treasury fails to make principal and coupon payment when due and maturity date on Fedwire remains unchanged, rendering the instrument non-transferable

Key Terms and Assumptions for All Scenarios

- Coupon and principal payments are ultimately made in full.
- Under delay of payment scenarios, the holders of a security at actual maturity will still have a claim to principal.
- These scenarios use the following convention for describing days before, on, and after the following dates:
 - Legal maturity date: The originally scheduled maturity date of a security, which does not change whether or not the operational maturity date is extended in Fedwire
 - Coupon payment date: The originally scheduled payment date for a coupon, including regularly scheduled and final coupon payments
 - Actual payment date: The day when a principal or coupon payment is made
- Decisions on payment are made by US Treasury one day at a time
 - Decisions to delay principal payments and extend the operational maturity of a security must be made before end-of-day processing after the close of Fedwire Securities Service the day prior to the legal maturity date. The Fedwire Securities Service ordinarily closes at around 7 p.m. eastern time (ET), but this close can be postponed up until 10 p.m. ET.
 - Decisions by Treasury to delay any payments on the day of must be made before 7:30am on the payment date
 - Principal payments can be delayed on the legal maturity date before 7:30am, but the security's operational maturity date cannot be extended at that time and the security will be non-transferable on Fedwire
- We assume there should be no change to the handling of securities which do not have principal or coupon falling due during this period. However, we do not know how the market will react, and may change haircuts, deem them ineligible as collateral etc. In addition, any event would be restricted to affected CUSIPs – there would not be a cross default with other Treasury securities with different maturities
- The assumption is that a disruption occurring on Friday would be largely the same, but some processes may continue into the weekend, depending on analysis and coordination among market participants and internal system constraints

Scenario 1 – Delay of Principal Payment

Overview

- US Treasury extends the originally scheduled principal payment date (or legal maturity date), and as a result, the payment on any Treasury instrument on Fedwire is pushed back one day– to what is now referred to as the operational maturity date. US Treasury will make decisions on extending operational maturity dates for additional days one day at a time.

Assumptions

- Securities with extended operational maturity dates will be able to be traded and transferred normally
 - CUSIPs with extended operational maturity dates will remain transferable on Fedwire
 - FICC and Fedwire will be able to process securities with extended maturities as normal
 - We assume that pricing services will be able to support markets for these securities, and their value would be adjusted accordingly based on conditions
- Market for securities with extended operational maturity dates will continue
- Notification of the extension of operational maturity dates will be communicated through Fedwire
- If the affected security has already been stripped, the principal portion will be handled like any other principal on systems, and the interest component will be handled like any other interest component; there will be no forced stripping or reconstitution
- The ultimate payments of principal will be made to the legal holder of record as of the night before the security’s operational maturity date; all payments of interest will be made to the original holder of record for the originally scheduled payment date
- Interest will not accrue on the delayed payment (no compounding); there may be a rate announced for compensation.
 - Fedwire is not able to calculate or create any “make-up” interest payments, US Treasury would have to decide how to approach any such payments, and how to operationalize such payments
- Market participants should not expect interest payments from their custodial or clearing counterparties until payment is made on the instrument by US Treasury.

Timeline of Scenario 1 – Delay of Principal Payment

	Operational Maturity Date -1	Operational Maturity Date	Operational Maturity Date +1 (& successive days until resolved)	Actual Principal Payment Date
<i>US Treasury Activity</i>	US Treasury instructs Fedwire to delay the payment of principal past the legal maturity date to an operational maturity date one day later	US Treasury instructs Fedwire to delay the payment of principal past the legal maturity date to an operational maturity date one day later (additional 1 day extension of already extended securities)	US Treasury instructs Fedwire to delay the payment of principal past the legal maturity date to an operational maturity date one day later (additional 1 day extension of already extended securities)	US Treasury makes principal payment to new holder of record on final, extended operational maturity date
<i>Firm Activity</i>	Firms and clearing banks prepare extended securities for operational maturity date	Normal transference of extended securities through Fedwire, clearing through FICC	Normal transference of extended securities through Fedwire, clearing through FICC	

Note: At the time when the process begins, Operational Maturity Date -1 is the same as Legal Maturity Date -1

Scenario 2: Delay of Coupon

Overview

- US Treasury delays an interest payment. (A scenario where only coupon payments are due on a given day without any principal payments is highly unusual and has not happened in at least the last 5 years.)

Assumptions

- Securities with delayed coupons that have not reached their legal maturity date, or have been extended past their legal maturity date to a new operational maturity date; they will remain transferable on Fedwire, and can be processed by clearing banks
- Securities with delayed coupons that have reached their legal maturity date and have not been extended, will be non-transferable.
- Eventual payment of delayed coupon will be made to the holder of record as of the close of business on the day before the originally scheduled payment date (or, in case of a final coupon, the original maturity date)
- Failure to pay a regularly scheduled coupon prior to maturity of the security may or may not be preceded with a government announcement of extension
 - At a minimum, any notification of delay in coupon would be communicated through Fedwire
- Market participants should value the security as if the coupon has been paid on the originally scheduled payment date because a transferee would not be entitled to receive such coupon – as it goes to the holder of record on the originally scheduled payment date
- It's possible that clearing banks are notified of the delayed coupon payment after processing payments to entitled recipients. In such a case, clearing banks will take action to reverse the coupon payments made.
- All coupons for US Treasury securities due on a given day will be paid, or all will not be paid, there will not be a partial payment of some coupons; all coupon and principal payments for a given security due on a given day will be paid, or all will not be paid, together
- Interest will not accrue on the delayed coupon payment (no compounding). There may be a rate announced for compensation but it would most likely not be the same as the stated coupon.
 - Fedwire is not able to calculate or create any “make-up” interest payments, US Treasury would have to decide how to approach any such payments, and how to operationalize such payments
 - Market participants should not expect interest payments from their custodial or clearing counterparties until payment is made on the instrument by US Treasury.
- These assumptions hold true **if** it is known that US Treasury is delaying a payment. If there is no clarity from US Treasury, institutions may begin making payments in the normal course of business, assuming the payment will be made
 - For delayed coupons on maturing instruments, firms should confirm how their systems would handle the coupon accrual in the stub period beyond the originally scheduled maturity date. For example, if the instrument's maturity date is extended and the stated coupon remains on the security master of firms, then the instrument will accrue interest in the settlement proceeds. Two ways to mitigate this would be to change the coupon to 0 in the stub period, which may or may not be possible with all systems, or alternatively cancel and correct the trade proceeds to adjust out any calculated accrued interest.

Timeline of Scenario 2 – Delay of Coupon Payment

	Coupon Payment Date -1	Coupon Payment Date	Coupon Payment Date + 1 (& successive days until resolved)	Actual Coupon Payment Date
<i>US Treasury Activity</i>		Coupon payments delayed, interest does not accrue on delayed payments	Coupon payments delayed, interest does not accrue on delayed payments The expectation is that it will be up to US Treasury to determine if additional compensation is potentially paid and how that payment would be made; there are no assumptions on if and how it would be done	Coupon payments made to holder of record on the originally scheduled payment date (or, in case of a final coupon, the legal maturity date)

Scenario 3 – No extension of operational maturity date

Overview

- US Treasury does not provide instructions to extend the operational maturity date of securities before Fedwire reaches end of day processing, rendering the securities non-transferable on Fedwire.

Assumptions

- Once Payment Day -1 has ended, as represented by the start of end of day processing, without the operational maturity date being extended, the affected securities will still be visible on Fedwire Securities Service, but these securities cannot be transferred from one holder of record to another
- The final transfer window on Fedwire Securities (repositioning free of payment) will close at 7 pm regardless of whether Treasury requests additional time to make a decision or not. In the event of a later decision, only end of day processing will be held later.
- These securities will not be able to be transferred normally or settled through FICC
- These securities cannot be “unmatured” - Once Fedwire generates end of day file the night before their maturity date, their maturity date can no longer be modified and they will remain non-transferable
- Interest does not accrue after a missed originally scheduled final coupon payment date
- Eventual payments of principal and final coupon payments may only be made to holder of record on the originally scheduled, legal maturity date
- FICC has capabilities to adjust P&I payments of its Funds Only Settlement process, however, a prolonged delay in notification of payments could impact the timing of such processes
- Confirmation that P&I payments will not be made on the expected maturity date could occur late on Payment Date, which could disrupt firm’s onward payments

Payment Timeline

- If Fedwire has not received instructions to extend the operational maturity date of securities by ~10:00 PM on the day before maturity (Payment Date -1), notifications will be generated with CUSIPs maturing based on originally scheduled interest and principal payments
 - While this notification is originally generated shortly after the start of end of day at 7:02 PM, it can be made later
 - These notifications, once generated, are then delivered to the clearing banks for their end of day activities
- Regularly scheduled payment is made the following morning on the Payment Date, when Fedwire makes delivery of funds
 - US Treasury can instruct Fedwire to withhold or delay principal or interest payments on a legal maturity date or coupon payment date prior to 7:30 AM; however Treasury cannot extend the maturity date of such securities and they will remain non-transferable on Fedwire. Treasury must inform Fedwire by 4:00 PM if they want the payments processed that day. Principal and interest payments cannot be made after the close of the securities-cash wire, which is regularly scheduled for 4:30 PM

Timeline of Scenario 3 – No extension of operational maturity date

	Operational Maturity Date -1	Operational Maturity Date	Operational Maturity Date +1 (& successive days until resolved)	Actual Principal Payment Date
<i>US Treasury Activity</i>	Treasury makes no announcement, implying it plans to make P&I payments the next day	US Treasury announces P&I payments due that day will not be made at 8:05 AM. US Treasury could instruct payments to be delayed on the legal maturity date prior to 7:30am.	US Treasury misses P&I payments due that day.	US Treasury makes payments of principal and interest to original holder of record on legal maturity date
<i>Firm Activity</i>		Affected securities no longer transferable on Fedwire, clearing banks systems and therefore the securities are not transferable anymore	No trading in affected securities (OTC market may develop)	
<i>Fedwire Activity</i>	If US Treasury makes no announcement of delay, Fedwire generates file with P&I payments originally to be made on legal maturity date	US Treasury can determine by 7:30 AM to delay delivery of P&I payments; Any decision to make P&I payments that day must be made no later than 4:00 PM	US Treasury can determine by 7:30 AM to delay delivery of P&I payments; Any decision to make P&I payments that day must be made no later than 4:00 PM	Payment of P&I made to holder of record on legal maturity date

Note: At the time when the process begins, Operational Maturity Date -1 is the same as Legal Maturity Date -1

Impact on Repo Market and Tri-Party Repo

Treasury Repo market

How to handle repo-to-maturity securities with affected securities?

- Scenario 1 Delay of Principal Payment: The repo matures and the operationally extended security could be used as collateral for another repo-to-maturity transaction
 - Financing transactions involving securities with one day to operational maturity can continue as long as the counterparty is willing and the clearing and settlement platform allows such transactions
- Scenario 3 No Extension of Operational Maturity Date: Firm now holds a non-transferable open payable or receivable of cash and there is no way to include this in repo markets

Tri-Party Repo

- Under Scenario 1, an extended security is transferable and so is eligible for tri-party repo, as it is good collateral
- BNY Mellon Clearing Bank Position: As long as the security is in the clearing bank system and is online with the Fed systems, it is a good position from their perspective
 - If individual clients don't want to receive operationally extended securities this can be handled through eligibility schedules
 - Currently building tools to allow clients to request extended securities not be eligible, however the CUSIP would have to be identified in advance
 - Need to have both sides agree to changes in eligibility schedule

Handling fails

Question of how trades that are failed at time of disruption will be handled:

- The clearing bank know who is holding what
- FICC handles this like a trade in its system. The coupon is paid to the holder of record on that date, credits the coupon and then backs it out manually.
- Would keep coupon open until the issue is resolved. In handling payment FICC would debit the account in question and give a credit back, which would then be manually adjusted back to provide an audit trail of the resolved payment
- Broadridge handles in a similar way as well – redemption is held for whoever holds the security at maturity.
- The “failer” is the holder of record for the coupon, and the future receiver is owed the coupon
- Fail charges should be waved in case of Scenario 3, but apply normally in case of Scenarios 1 and 2.

FAQs

Q: Will the haircuts agreed in tri-party repo change on the affected securities?

A: Haircuts are negotiated bi-laterally between buyers and sellers.

Q: Will there be changes to the haircut that the Clearing Banks assign when assessing net free equity?

A: Haircuts between Clearing Banks and their clients are bi-laterally negotiated.

Q: Will the affected securities remain eligible at the FICC for cash trading, repo trading, and GCF repo trading?

A: If the security is able to be transferred by the Clearing Banks and the Fedwire, it will remain eligible to settle via FICC.

However, FICC recently revised its collateral eligibility for GCF Repo to exclude next day maturing Treasuries. So depending upon the timing of an announced delay in payment and when BNYM (the FICC Agent for GCF Repo settlement) updates its security masterfile, affected securities may become eligible if the GCF Repo Settlement process had not completed.

Q: Will the securities be eligible for tri-party repo?

A: If the securities can be transferred by the Clearing Banks and the Fedwire, it will remain eligible to settle in tri-party repo subject to bi-laterally agreed collateral eligibility schedules.

Appendix: Timeline of late day activity on Legal Maturity or Coupon Payment Date -1

Time (ET PM)	Activity	Comments
6:30	If needed, Treasury can request more time to make a decision to operationally extend maturity dates; Fedwire Securities will close at 7 PM; EOD may be pushed to a later time	
7:02-8:00	Fed end of day process runs, generating notifications on P&I payments to be made; Clearing Banks receive notification from Fed with info on CUSIPs maturing	Can be delayed
7:02-10:00	If Fed end of day process delayed at 6:30, can be run at any point upon receiving instructions from US Treasury	
8:00	Start of Asian trading day; FICC scheduled to close window for trade input and begin the end of day process	FICC activity can be delayed
9:00	Past 9:00 PM firms will find it difficult to make needed cancels and corrects without full staff	
10:00	Final opportunity for Treasury to instruct Fedwire Securities to operationally extend maturity dates	
10:30 -11:00	Final time for Fedwire to deliver notifications on P&I payments to be made, including time needed for any changes to maturity dates	
10:00-10:30	Deadline for FICC to close window for trade input and begin the end of day process; Clearing banks begin overnight jobs	

Appendix: Timeline of Activity on Legal Maturity of Coupon Payment Date activity

Time (ET)	Activity	Comments
7:30 AM	Deadline for US Treasury to direct Fedwire not to make regular P&I payments at 8:05 AM	P&I payments cannot be delayed longer than COB that day
10:00 AM	FICC Daily Payment Cycle (1 st of 2)	
4:00 PM	Deadline for US Treasury to decide to make payments that day	Fedwire Funds open till 7 PM
4:30 PM	Securities cash window closes	
4:30 PM	FICC Daily Payment Cycle (2 nd of 2)	Can be delayed, but length of delays is dependent on FRB's National Settlement Service (NSS)
Late afternoon	If expected cash is not delivered, firms would begin to experience issues with connected onward payments	
Evening	If failure to pay occurs, FICC would reverse previously made P&I payments	