

November 21, 2013

Has the U.S. Department of the Treasury (the “Treasury Department”) finalized terms related to accrual and the frequency of the rate change? -

On July 31, 2013, the Treasury Department published the final rule which, among other things, addresses the accrual and the frequency of the rate change. The final rule also summarizes key provisions and features of the floating rates note (“FRN”) program. The Treasury Department’s final rule, frequently asked questions, term sheet and other supporting information are available at: www.treasurydirect.gov/instit/statreg/auctreg/auctreg.htm.

On November 20th, 2013, “Treasury has provided [examples](#) of floating rate note calculations and an interest accrual schedule. Please note that these examples are for illustrative purposes only.” http://www.treasurydirect.gov/instit/statreg/auctreg/auctreg_frncalex.htm

What changes is the Government Securities Division (“GSD”) making to its processing with regard to FRN?

Currently, GSD does not process or guarantee FRN. However, GSD intends to do so, subject to the Securities and Exchange Commission’s approval. The Fixed Income Clearing Corporation (“FICC”) is updating its systems to support the processing of FRN. This effort entails upgrades to the security master file, identifying CUSIPs as FRN (i.e. reference index and frequency of the reset), and the related output.

These changes were noted in Important Notice GOV012.13 dated February 26, 2013, available at http://dtcc.com/downloads/legal/imp_notices/2013/ficc/gov/GOV012.13.pdf.

UPDATED - How will GSD process FRN?

From a trade flow perspective, FRN’s will be handled in the same manner that FICC currently handles fixed rate notes. The matching logic, netting and subsequent settlement logic will not change, with the exception of par summarization which will not be applied to FRN’s. GSD is enhancing its output to update final money, which may be modified in the GSD system, for certain compared T+1 trades and compared forward cash trades (buy/sell only) crossing over a reset date.

How will this impact a member firms input to GSD's systems?

As noted below in the section below relating to When Issue trades, there will be no input changes to the RTTM® system, messages or batch files.

REVISED TO CLARIFY - How will a T+1 Buy/Sell trade be handled?

There will be no change in processing for the majority of T+1 Buy/Sell trades. Firms executing a Buy/Sell transaction and trading off of the existing index rate at the time of the trade, submit the price and/or final money to GSD for matching and processing.

However, if a T+1 trade is booked on a Monday and Tuesday is a holiday, the final money calculation will change. Please see the examples below which highlights how final money will change on T+1 trades when the settlement date is extended due to a holiday. In this scenario, the T+1 trade will accrue final money at two different rates.

UPDATED - Will there be any impact to "When Issue" Processing?

Current GSD When Issue Processing

- Firms trade on a yield basis and submit CUSIP, yield and par during the When Issue period
- On a daily basis, GSD calculates a trade's assumed final money, based on an assumed coupon, and performs a Mark-to-Market ("MtM")
 - GSD derives an assumed coupon from the weighted average of all the WI trade yields in the system at that time
 - For the purpose of MtM, a yield-to-price ("YTP") conversion is performed using the trade's yield and the calculated GSD assumed coupon
 - From the point of match until auction, each night GSD will recalculate the trade's assumed final money based on the most current assumed coupon as calculated by all the trades in the system
 - Each night GSD sends out batch files reflecting GSD's calculated assumed final monies
- Upon auction, the real coupon is known and the actual (current) YTP conversion is run to calculate final money on the trades
 - This final money is sent to firms and GSD's final money will match the final money as calculated by the firms

Proposed Approach for FRN's (see pages 11-13 for examples)

Section IV of the Treasury Department's final rule states that "auctions will be conducted as a single-price auctions in which competitive bidders will bid in terms of a desired discount margin." **GSD requests that member firms submit trades on an all in basis ("yield"), defined as the index rate plus the discount margin.**

GSD’s application currently supports trades with price types of Yield, Price or Discount. Changing the DVP application to support a discount margin rate would require an extensive build by member firms to support changes with regard to messages, end of day batch files, web screens, print image reports which would not be completed by the January 2014 target date.

- During the When Issue period, firms should submit FRN trades to GSD on a “yield” basis where yield is equal to “r” + “m” (see definitions below), CUSIP and par per GSD’s current processing
 - For FRN’s as with current WI processing, trades with a negative “yields” should be held back by firms for input to GSD during the WI period and should be submitted after the auction.
- Like the current WI process (described above), on a daily basis the assumed spread “s” will be derived by taking the average of the trade “yields” (“r” + “m”) for the purpose of calculating a MTM
- Upon FRN auction, using the effective index rate and the actual spread the FRN “yield”-to-price conversion (as defined by the Treasury and referenced below) will be executed for the computation of GSD’s final money.
 - For firms trading during the WI period, post FRN announcement and prior to FRN auction, if an index rate change occurs, FICC will update the index rate on the transaction to the index rate in effect at auction to perform the “yield”-to-price conversion
 - This final money is communicated to firms with GSD’s final money matching the final money as calculated by the firm

The Treasury Department’s FRN will trade on a discount margin basis “m”. The Treasury Department published the following formula for the margin-to-price conversion.

$$P = \sum_{i=1}^N \left(\frac{100 \times \frac{1}{360} (T_i - T_{i-1}) \times \max(r + s, 0)}{\prod_{k=1}^i \left(1 + \frac{1}{360} (T_k - T_{k-1}) \times (r + m) \right)} \right) + \frac{100}{\prod_{k=1}^N \left(1 + \frac{1}{360} (T_k - T_{k-1}) \times (r + m) \right)}$$

Definitions as per the Final Rule, <http://www.treasurydirect.gov/instit/statreg/auctreg/2013-18178.pdf> :

“m” is the discount margin on which the security will be traded

“r” is the index rate, **to a precision of 9-decimal places**, the High Rate from the 13-week T-bill auction converted to a simple-interest money market yield on an actual/360 basis as computed in the Uniform Offering Circular

“s” the spread, or the assumed coupon

NEW - Will the Auction Process change with GSD?

No, the firms will participate in the auction as they do today. The Fed will forward the final results of the auction awards to GSD on Auction date and these trades inclusive of final money will be processed as they are today. These trades are locked-in trades. Firms as they do today will have the option of submitting trades against the Auction Takedown trades to operationally match.

Can you describe the change if a matched forward trade (post when issue) is open in the system and crosses a reset date?

Please see the example below which describes this scenario.

Can you define any other current GSD processing that will not change with the introduction of FRNs?

As stated the Auction process will not change. In addition, TMPG fail charges, coupon and redemption processing and repo activity will not change.

What updates will be made to support the processing of FRNs in the GSD when the final money is changed on a trade?

Matched forward trades that are in the system and that subsequently cross over the FRN index reset date, will have a change in its processing. While the initial input for forward trades (i.e., messaging, web or batch) will not change, there will be a change to output. When a forward Buy/Sell trade crosses over the reset date, GSD will change the final money on the trade based upon the new index adjusted “new” accrual. The final money change will be reflected on the following output:

- PDF reports in Report Center
- The MT 518 Advisory message will be generated with a new qualifier PROC/GSCC/CPNR which will be introduced in field tag 22F in the CONFDET Block indicating the final money has been changed. This MT 518 message will be generated at the end of business day of reset date minus 1
- As noted in Important Notice GOV012.13 dated February 26th, 2013, a new end-of-day MRO Record Type “25” to support the batch file process and will be introduced for firms opting to take this output. This new file will be generated at the end of business day of reset date minus 1.

Forward trades in the system that are open on payable date will settle vs. GSD via the Funds Only Settlement process and will reflect the most recent accrual.

How will fails be handled?

If the fail is open on payable date, the appropriate amount of cash will settle vs. GSD via the Funds-Only Settlement process and will reflect the most recent coupon.

UPDATED - How will FRNs impact GSD's GCF Repo® service?

Initially, GSD is planning to include FRNs in the existing shells. GSD will advise member firms with more details via an Important Notice

Once eligible, how will term GCF Repo® trades crossing over the reset date be handled?

There will be no change to final monies on term GCF Repo® trades. The output messages and end-of-day files will not change on these transactions. If the GCF Repo® is open on a payable date, the coupon interest will settle via GSD's Funds-Only Settlement process reflecting the most recent accrual.

NEW - Any changes to the RTTM® web application?

No changes will be made to the web.

UPDATED Has GSD issued any specifications regarding the proposed changes to messages and end-of-day batch files that firms can utilize to begin coding?

Yes. These changes were defined in Important Notice GOV 012.13 dated February 26, 2013, which is available at http://dtcc.com/downloads/legal/imp_notices/2013/ficc/gov/GOV012.13.pdf.

UPDATED - What will member firms need to test?

All firms that anticipate trading U.S. cash FRN should update their systems in order to test with FICC. Firms should review the MT 518 message change and the new MRO file. Please consult with your internal technology staff because the netting files may not be sequential within GSD's end-of-day file transmission. FICC recommends that the new MRO 25 records be read prior to reading the MRO 17 record in order to reconcile to the new final money values. Firms opting not to read the new MRO 25 can see the final money adjustment on the MT 518 message as well.

Firms can test:

- New MT518 Message
- New end of day MRO 25 Record (attached to existing file)
- Test to ensure Next Day and Forward cash trade calculations match GSD
- Test T+1 Holiday logic
- Ensure Yield calculations on when-issue trades are submitted properly
- Test to ensure their internal when-issue final money calculations match GSD

The FICC Testing Team can be contacted at qa@ficc.com. A test script will be provided. The test system is open to members.

UPDATED - Can you provide some examples of the proposed processing logic?

These examples show how Regular Way Trades submitted post the when-issue process will work. These trades are submitted to GSD with a price and final money – Non Holiday Timeframe

Sample Calendar

| Date | Activity | Applicable Rate Used for Trade Date |
|--------------------------------|----------------|-------------------------------------|
| Monday February 03, 2014 | T-Bill Auction | Prior T-Bill auction high rate |
| Tuesday February 04, 2014 | | 02/03 T-Bill auction high rate |
| Wednesday February 05, 2014 | | 02/03 T-Bill auction high rate |
| Thursday February 06, 2014 | | 02/03 T-Bill auction high rate |
| Friday February 07, 2014 | | 02/03 T-Bill auction high rate |
| Saturday February 08, 2014 | | 02/03 T-Bill auction high rate |
| Sunday February 09, 2014 | | 02/03 T-Bill auction high rate |
| Monday February 10, 2014 | T-Bill Auction | 02/03 T-Bill auction high rate |
| Tuesday February 11, 2014 | | 02/10 T-Bill auction high rate |
| Wednesday February 12, 2014 | | 02/10 T-Bill auction high rate |
| Thursday February 13, 2014 | | 02/10 T-Bill auction high rate |

T-Bill Auction Date – Mondays excluding holidays

Index Reset Date – T-Bill Auction Date +1

NEW – Trading Logic – All though the T-Bill auction occurs on Monday, and results are announced mid-day, firms should continue to trade off of the prior Monday’s rate all day. The new rate becomes effective on Tuesday.

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| T+1 Trade Example - No Money Changes |
| T+1 Trades with a Trade Date (TD) of Tuesday 2/4 thru Friday 2/7 utilize the Monday 2/3 Rate |
| T+1 Trades with a TD of Monday 2/10 utilize a Rate of Monday 2/3 |
| T+1 Trades with a TD of Tues 2/11 use Monday 2/10 Rate |

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| Forward Trade Example |
| Trades with a TD of Wednesday 2/5 and Settlement Date of Friday 2/7 - use 2/3 Rate - No change to final money |
| Trades with a TD of Wednesday 2/5 and Settlement Date of Monday 2/10 - use 2/3 Rate - No change to final money |
| Trades with a TD of Wednesday 2/5 and Settlement Date of Tuesday 2/11 - use 2/3 Rate- No change to final money |
| Trades with a TD of Wednesday 2/5 and Settlement Date of Wednesday 2/12 - <i>Change to final money</i> - New MT 518 and MRO 25 generated by FICC on Monday night (2/10). Firms will receive MRO 25 reflecting money change. Trades going into the net on 2/11 will reflect new final money. |

Note:

- **For buy sell trades, firms are required to submit price and should submit final money to GSD.**
- **Final money will be changed for compared trades only. Uncompared trades will not see a final money change.**
- **The new MT 518 and MRO 25 will only be sent the night of the weekly T Bill Auction. This new data will be sent on trades even if the final monies are not changing due to the fact the rate did not change from week to week.**

These examples show how Regular Way Trades submitted post the when-issue process will work. These trades are submitted to GSD with a price and final money submission –Showing a Tuesday Holiday

Sample Calendar

| Date | Activity | Applicable Rate Used for Trade Date |
|--------------------------------|------------------------------------|--|
| Monday November 10, 2014 | T-Bill Auction | Prior T-Bill (11/3) auction high rate |
| Tuesday November 11, 2014 | <u>VETERANS DAY HOLIDAY</u> | <u>VETERANS DAY HOLIDAY – accrues at 11/10 rate</u> |
| Wednesday November 12, 2014 | | 11/10 T-Bill auction high rate |
| Thursday November 13, 2014 | | 11/10 T-Bill auction high rate |
| Friday November 14, 2014 | | 11/10 T-Bill auction high rate |

T+1 Trade Example - Holiday (Assume Tuesday 11/11)

T+1 Trade with a Trade Date (TD) Monday 11/10 and a Settlement Date of Wednesday 11/12. **Final Money will be changed.** New Rate is effective Tuesday, the Holiday, as per the Final Ruling. New output (MT 518 and MRO 25) will be generated Monday night. Firms should change final money on trades prior to reading the MRO 17 netting file. Trade will have accrual at two different rates (Monday 11/10 at 11/3 Rate and - Tuesday 11/11 at 11/10 Rate). Also, in this example the MRO 25 and Money updates to the netting file will occur the same night.

T+1 Trades with a Trade Date of Wednesday 11/12 - Use 11/10 Rate - No money change

Forward Trade Example - Holiday Tuesday 11/11

Trades with a TD of Wednesday 11/5 with a Settlement Date of Wednesday 11/12. **Final Money will Change.** New Rate is effective Tuesday the Holiday as per the Final Ruling. New output (MT 518 and MRO 25) will be generated Monday night. Firms need to change final money on trades prior to reading the MRO 17 netting file. Trade will now have accrual at two different rates. Also, in this example the MRO 25 and Money updates to the netting file will occur the same night.

Note:

- **Final money will be changed for compared trades only. Uncompared trades will not see a final money change.**
- **The new MT 518 and MRO 25 will only be sent the night of the weekly T Bill Auction. This new data will be sent on trades even if the final monies are not changing due to the fact the rate did not change from week to week.**

These examples show how Regular Way Trades submitted post the when-issue process will work. Trades are submitted to GSD with a price and final money submission –Showing a Lock Out scenario. Lock out days are defined as *Business Days*.

Sample Calendar

| Date | Activity | Applicable Rate Used for Trade Date |
|-----------------------------|--|---|
| Thursday April 24, 2014 | | 4/21 T-Bill auction high rate |
| Friday April 25, 2014 | | 4/21 T-Bill auction high rate |
| Monday April 28, 2014 | T-Bill Auction – Lock Out Period | 4/21 T-Bill auction high rate |
| Tuesday April 29, 2014 | Lock Out Period | 4/21 T-Bill auction high rate |
| Wednesday April 30, 2014 | Coupon Payment | <u>4/21 T-Bill auction high rate</u> |
| Thursday May 1, 2014 | | 4/28 T-Bill auction high rate |
| Friday May 2, 2014 | | 4/28 T-Bill auction high rate |

Coupon Payment Date Example - Assume Payable Date Wednesday 4/30 – Monday, Tuesday are Lock-Out Period and Wednesday is a Coupon Date

T+1 Trades on Monday 4/28, Tuesday 4/29 and Wednesday 4/30 will utilize the 4/21 Rate

Forward Trades - TD Thursday 4/24 with a Settlement Date of Wednesday SD 4/30. New Rate of 4/28 becomes effective 5/1 - Rate of 4/21 will be used in the calculation 4/24 to 4/29 - **No Money change**

Forward Trades - TD Thursday 4/24 with a Thursday SD 5/2. New Rate of 4/28 becomes effective Thursday 5/1 - **Final Money will Change with output sent on 4/28/14**. New Rate is effective Thursday 5/1 as per the Final Ruling. New GSD output (MT 518 and MRO 25) will be generated Monday night (4/28). Firms should update final money on trades prior to reading the MRO 17 netting file.

This example demonstrates a reopening with a lock out period and the impact on the applicable rate used

Monday Holiday - 05/26/2014 Monday is Holiday (Memorial Day)

Normally, if Monday is a holiday the Auction would take place on Tuesday with the effective new rate being reset on Wednesday. However, Memorial Day will be different due to the Reopening.

Sample Calendar

| Date | Activity | Applicable Rate Used for Trade Date ** WI trades are submitted with a "Yield" Price Type to GSD; "Yield" = "r" + "m" ** |
|-----------------------|---|--|
| Friday May 23, 2014 | | 5/19 T-Bill auction high rate |
| Monday May 26, 2014 | Memorial Day | 5/19 T-Bill auction high rate |
| Tuesday May 27, 2014 | T-Bill Auction | 5/19 T-Bill auction high rate |
| Wed. May 28, 2014 | Lockout Day 1 | 5/19 T-Bill auction high rate |
| Thursday May 29, 2014 | Lockout Day 2 | 5/19 T-Bill auction high rate |
| Friday May 30, 2014 | Settlement Date of 1st Reopening of the April FRN | 5/19 T-Bill auction high rate |
| Saturday May 31, 2014 | | Interest Accrual at 5/27 rate |
| Sunday June 1, 2014 | | Interest Accrual at 5/27 rate |
| Monday June 2, 2014 | T-Bill Auction | 5/27 T-Bill auction high rate |
| Tuesday June 3, 2014 | | 6/2 T-Bill auction high rate |

T+1 Trades on Friday 5/30 will utilize the Rate of 5/19 for trade input. However, final money submitted by member firms should be inclusive of Saturday and Sunday accrual at the 5/27 rate. No money change by GSD.

These examples show how When-Issued Trades submitted during the When-Issue period will work. Trades are submitted to GSD with a “YIELD” Price Type submission, where FICC defines “YIELD” for the purposes of Floating Rate Notes as the Effective Index Rate “r” + or – Discount Margin “m”.

Sample Calendar

| Date | Activity | Applicable Rate Used for Trade Date |
|-------------------------------|--|--|
| Monday January 20, 2014 | Holiday - Martin Luther King Day | 1/13 T-Bill auction high rate used |
| Tuesday January 21, 2014 | T-Bill Auction Held | 1/13 T-Bill auction high rate used |
| Wednesday January 22, 2014 | | 1/21 T-Bill auction high rate |
| Thursday January 23, 2014 | FRN Announcement Date | <ul style="list-style-type: none"> • When-Issue trading Begins • 1/21 T-Bill auction high rate used • Firms submit a “Yield” Price Type to GSD <ul style="list-style-type: none"> ○ “Yield” = “r” + “m” • GSD issues the Compared Trade Summary file with assumed final money <ul style="list-style-type: none"> ○ All compared WI trades shall have assumed final money calculated based on an assumed spread. • Current MRO 29 will be sent. |
| Friday January 24, 2014 | | <ul style="list-style-type: none"> • When-Issue trading Continues • 1/21 T-Bill auction high rate used • Firms submit a “Yield” Price Type to GSD <ul style="list-style-type: none"> ○ “Yield” = “r” + “m” • GSD issues the Compared Trade Summary file with assumed final money <ul style="list-style-type: none"> ○ All compared WI trades shall have assumed final money calculated based on an assumed spread. • Current MRO 29 will be sent. |
| Weekend | | |

| | | |
|-------------------------------|---|---|
| Monday January 27, 2014 | T-Bill Auction | <ul style="list-style-type: none"> • When-Issue trading Continues • 1/21 T-Bill auction high rate used • Firms submit a “Yield” Price Type to GSD <ul style="list-style-type: none"> ○ “Yield” = “r” + “m” • FICC updates the index rate on WI transactions to the 1/27 index rate • GSD issues the Compared Trade Summary file with assumed final money <ul style="list-style-type: none"> ○ All compared WI trades shall have assumed final money calculated based on an assumed spread. • Current MRO 29 will be sent. |
| Tuesday January 28, 2014 | | <ul style="list-style-type: none"> • When-Issue trading Continues • 1/27 T-Bill auction high rate used • Firms submit a “Yield” Price Type to GSD <ul style="list-style-type: none"> ○ “Yield” = “r” + “m” • GSD issues the Compared Trade Summary file with assumed final money <ul style="list-style-type: none"> ○ All compared WI trades shall have an assumed final money calculated based on an assumed spread and using the 1/27 index rate. • Current MRO 29 will be sent. |
| Wednesday January 29, 2014 | FRN Auction Date Lock-Out Period | <ul style="list-style-type: none"> • WI trading ends • 1/27 T-Bill auction high rate used • Post Auction Results, GSD will issue final monies based on the “yield”-to-price conversion utilizing the 1/27 index rate and the announced spread. This is the money that will go into the net. • This is the final money that will appear on the Netting Report • Current MRO 29 will be sent. |
| Thursday January 30, 2014 | Lock-out Period | 1/27 T-Bill auction high rate used (regular way trading). |
| Friday January 31, 2014 | First Floater Issuance Date | 1/27 T-Bill auction high rate used (regular way trading) |