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U.S. Municipal Bond Market

Updated Pricing Detail: Federal Reserve's Municipal Liquidity Facility

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Summary

- The U.S. Federal Reserve today released additional pricing details for its Municipal Liquidity Facility (MLF).
- The pricing details further reinforce that issuers should view the Federal Reserve's MLF as a program to be utilized only if an issuer or issuers do not have market access. The MLF should not be considered an alternative to selling debt in the market in the manner in which the 2008 Recovery Act's Build American Bond (BAB) program was a decade ago.
- For more details about the Federal Reserve's Municipal Liquidity Facility please see our commentary: Fed Expands Municipal Liquidity Facility, Provides Details (April 29, 2020) and More Good News than Bad This Week (April 9, 2020), pages 2-4.
- Also please see the following source info via the Federal Reserve:
    - Municipal Liquidity Facility, from the Fed's Website.
    - Term Sheet, as of May 11, 2020.
    - FAQs: Municipal Liquidity Facility: Frequently Asked Questions, May 11, 2020.

Term Sheet: Pricing Update – Fed's Municipal Liquid Facility

The U.S. Federal Reserve today released pricing details for its Municipal Liquidity Facility (MLF). The below is directly from the Federal Reserve's Term Sheet, as of May 11, 2020.

The pricing details further reinforce that issuers should view the Federal Reserve's MLF as a program to be utilized only if an issuer or issuers do not have market access.

- **Pricing:** The methodology for pricing is set forth in the attached Pricing Appendix (see below).
- **Origination Fee:** Each Eligible Issuer that participates in the Facility must pay an origination fee equal to 10 basis points of the principal amount of the Eligible Issuer's notes purchased by the SPV. The origination fee may be paid from the proceeds of the issuance.[1]
- **Municipal Liquidity Facility - Pricing Appendix**
  Tax-Exempt Eligible Notes: If interest on the Eligible Notes is excluded from gross income for federal income tax purposes, pricing will be at a fixed interest rate based on a comparable maturity overnight index swap (OIS) rate plus the applicable spread based on the long-term rating of the security for the Eligible Notes as follows:

Rating*	Spread (bps)
AAA/Aaa	150
AA+/Aa1	170
AA/Aa2	175
AA-/Aa3	190
A+/A1	240
A/A2	250
A-/A3	265
BBB+/Baa1	325
BBB/Baa2	340
BBB-/Baa3	380
Below Investment Grade	590

Source: Federal Reserve and HilltopSecurities.

Please see disclosure starting on page 4.

*To account for split ratings across different credit rating agencies, an average rating generally will be calculated.

- **Taxable Eligible Notes:** If interest on the Eligible Notes is not excluded from gross income for federal income tax purposes, pricing will be at a fixed interest rate that is calculated by (i) first, adding the comparable maturity OIS rate to the spread in the above table that would apply to such Eligible Notes if the Eligible Notes were tax-exempt Eligible Notes, and (ii) second, dividing the sum calculated under clause (i) [the above section] by 0.65.

Under Section 13(3) of the Federal Reserve Act and the Board's Regulation A, the interest rate on the Eligible Notes must be a penalty rate.

From Fed's Q&A: Pricing Update – MLF

There were also additional pricing details included in the Fed's FAQs, Frequently asked Questions and Answers. The below is directly from the Federal Reserve's Q&As, as of May 11, 2020.[2]

C7. How will the Federal Reserve determine pricing under the MLF?
Under Section 13(3) of the Federal Reserve Act and the Board's Regulation A, the interest rate on the Eligible Notes must be a penalty rate, meaning a rate that is a premium to the market rate in normal circumstances, affords liquidity in unusual and exigent circumstances, and encourages repayment of the Eligible Notes and discourages use of the Facility as the unusual and exigent circumstances that motivated the program recede and economic conditions normalize.

The SPV will purchase Eligible Notes with a fixed interest rate that is determined on the pricing date of the Eligible Notes. The method of sale selected by an Eligible Issuer will not affect the determination of the interest rate. The Federal Reserve's pricing methodology will be publicly available and applicable to all Eligible Issuers. The pricing methodology will be based on the overnight indexed swap (OIS) rate for a comparable maturity plus a fixed spread that corresponds with the ratings of the Eligible Notes and their relevant tax status. The ratings considered in pricing the Eligible Notes will be all of the Eligible Issuer's long-term ratings from major NRSROs for the specific credit of the Eligible Notes at the time of pricing of the Eligible Notes. If the credit has different ratings (i.e. "split ratings"), the applicable spread will be determined by calculating an average of all of the confirmed ratings. If interest on the Eligible Notes is not excluded from gross income for federal income tax purposes, the pricing of the Eligible Notes will be calculated using the methodology for taxable notes. If the SPV purchases multiple Eligible Notes from the same Eligible Issuer over the term of the MLF, pricing will be determined based on the ratings as confirmed by the applicable major NRSROs on the pricing date of each Eligible Note.

The SPV will purchase Eligible Notes with a fixed interest rate that is determined on the pricing date of the Eligible Notes.

See Appendix B for the MLF pricing grid and methodology. This pricing grid and methodology are subject to revision should market conditions change materially. Any such revisions will be made available on the FRBNY's website for the MLF.

C8. What is OIS?
An overnight indexed swap (OIS) is an interest rate derivative contract in which parties exchange a payment priced at a fixed rate against a payment priced at an average overnight published reference rate, such as the effective federal funds rate. The MLF will use the fixed OIS rate based on the effective federal funds rate for the maturity that corresponds to the maturity of the Eligible Notes. OIS rate quotes are widely available from bond market service providers and vendors. Additional information regarding OIS is available at https://www.cftc.gov/MarketReports/SwapsReports/DataDictionary/index.htm.

C9. May Eligible Notes have a maturity for which no direct OIS quote is available?
Yes. Eligible Issuers may select any maturity up to 36 months. If an Eligible Issuer selects a maturity for which no direct OIS quote is available, the OIS rate for the Eligible Notes will be calculated using a straight line interpolation of the direct OIS quotes for the

An OIS is an interest rate derivative contract in which parties exchange a payment priced at a fixed rate against a payment priced at an average overnight published reference rate, such as the effective federal funds rate.

nearest maturity that is shorter than the Eligible Notes and the nearest maturity that is longer than the Eligible Notes. The calculation will be conducted by the SPV on the pricing date of the Eligible Notes.

C10. How will the Eligible Notes be priced if the credit for the Eligible Notes has split ratings?

To account for split ratings across different credit rating agencies, an average rating will be calculated by assigning a numerical value to each outstanding rating of the credit for the Eligible Notes from a major NRSRO and rounding the average of such numerical values to the nearest numerical value that corresponds to a rating. If an average rating is equidistant between the numerical value corresponding to one rating and the numerical value corresponding to another rating, then the Eligible Issuer will be treated as having the lower rating. However, if a credit has only two ratings from major NRSROs and one of the ratings is two or more gradations higher than the other rating, then the Eligible Issuer will have the option to either (1) obtain a third rating from a major NRSRO and price the Eligible Notes based on the average of its three ratings or (2) price the Eligible Notes based solely on the lower of the two existing ratings. See below for the numerical values that will be assigned to ratings and a hypothetical example.

Rating Mapping Table						
Rating:	Aaa	AAA				
Value:	0	0				
Rating:	Aa1	AA+	Aa2	AA	Aa3	AA-
Value:	0.66	0.66	1	1	1.33	1.33
Rating:	A1	A+	A2	A	A3	A-
Value:	1.66	1.66	2	2	2.33	2.33
Rating:	Baa1	BBB+	Baa2	BBB	Baa3	BBB-
Value:	2.66	2.66	3	3	3.33	3.33
Rating:	Ba1	BB+	Ba2	BBB	Ba3	BB-
Value:	3.66	3.66	4	4	4.33	4.33

Source: Federal Reserve and HilltopSecurities.

Hypothetical Example

Ratings of Security for Eligible Notes	Numerical Value
A1	1.66
A+	1.66
A	2
Average Numerical Value	1.77
Average Rating	A+/A1

Source: Federal Reserve and HilltopSecurities.

The contact info listed in A6 info has been included in past Federal Reserve communications, but we included again here to help with transparency and communication.

A6. Where should questions regarding the MLF be directed?

Questions should be directed through http://www.federalreserve.gov/apps/contactus/feedback.aspx?refurl=/muni/ or via email to MLF@ny.frb.org.

To account for split ratings across different credit rating agencies, an average rating will be calculated by assigning a numerical value to each outstanding rating of the credit for the Eligible Notes from a major NRSRO and rounding the average of such numerical values to the nearest numerical value that corresponds to a rating.

If an average rating is equidistant between the numerical value corresponding to one rating and the numerical value corresponding to another rating, then the Eligible Issuer will be treated as having the lower rating.

The contact info listed in A6 info has been included in past Federal Reserve communications but we included again here to help with transparency and communication.

[1] We knew the origination fee before this May 11th, this is just a reminder.
[2] The following are the pricing related questions and answers (starting on page 6) that were included on the Fed's website on May 11, 2020.

Recent HilltopSecurities COVID-19 Municipal Commentary

- Municipal Credit and Market Update, May 8, 2020
- Single Family Housing Durability Will Help Endure the New COVID-19 Normal, May 6, 2020
- Credit Deteriorating, Moody's Lowers State Outlook to "Negative," May 1, 2020
- Fed Expands Municipal Liquidity Facility, Provides Details, April 29, 2020
- 2020 Municipal Bond Analyst Survey, April 28, 2020
- "Push the Pause Button" Elevating the Level of Political Risk, April 23, 2020
- No Relief, April 20, 2020

Recent HilltopSecurities COVID-19 Economic Commentary

- The Bright Side of Worst Employment Report Ever, May 8, 2020
- Automakers Face a Rocky Road to Recovery, May 4, 2020
- The Fed's Promise and Vaccine Progress Boost Stocks, April 29, 2020
- News and Notes from a Troubled Week, April 24, 2020
- The Problem With Oil, April 21, 2020