Emerging Bond Issues: Market Update, Refunding Bonds and Other Issues Impacting Financings in the Current Market

May 4, 2018

Robert Lewis
PMA Securities, Inc.
(630) 657-6445
rlewis@pmanetwork.com

Kyle Harding
Chapman and Cutler LLP
(312) 845-3278
harding@chapman.com

#iasboAC18

THE POWER OF i
2018 Illinois ASBO Annual Conference
May 3 – 4, 2018, Schaumburg, IL

4832-5651-6960

Overview

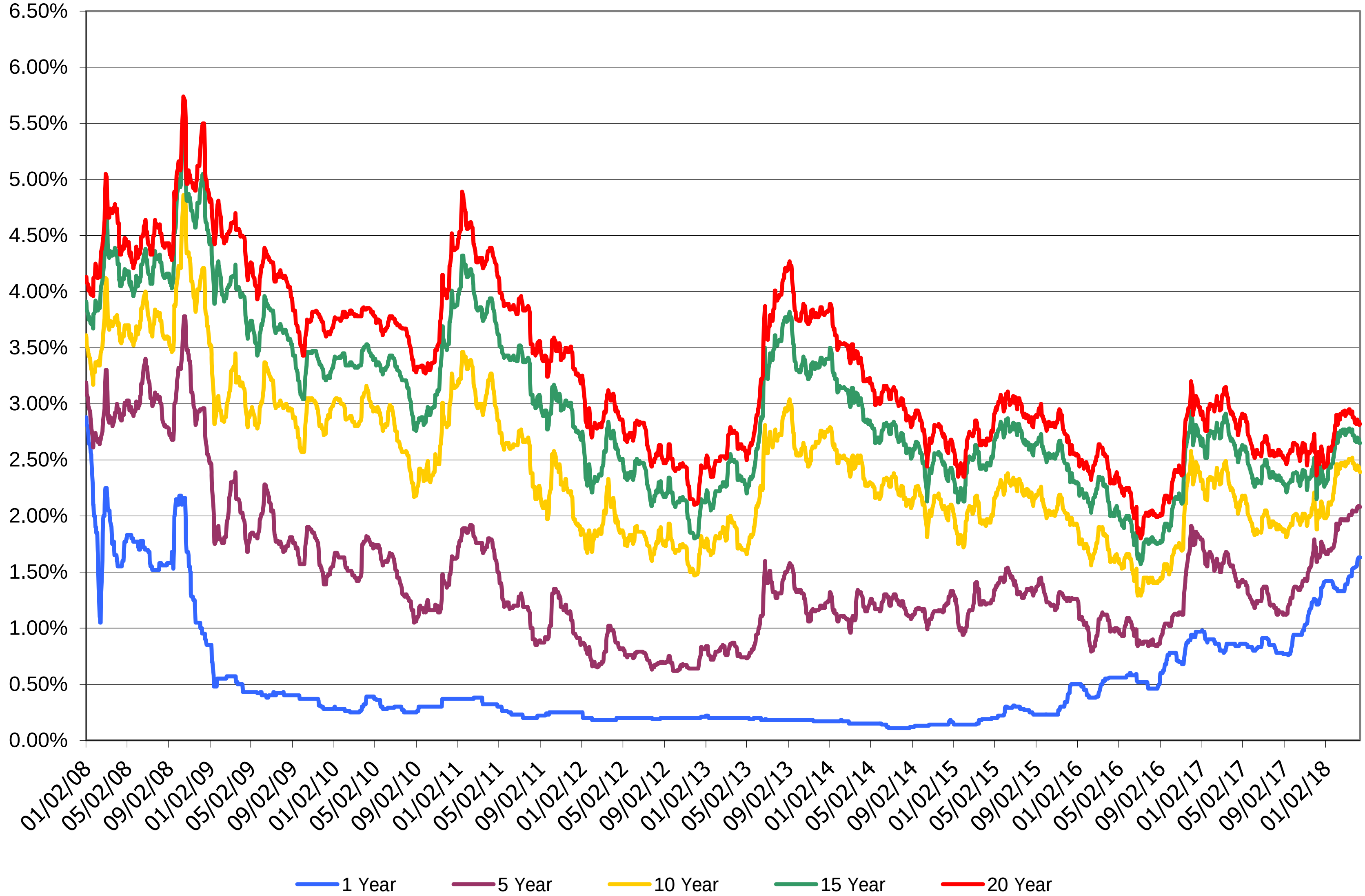
- Bond Market Conditions
- Refunding Basics
- Valuing Potential Refundings
- Advance Refunding Replacement Structures

BOND MARKET CONDITIONS

The MMD “AAA” Index

- The Municipal Market Data (MMD) Index is a daily index of AAA-rated municipal bond rates
- Issuers’ bond yields are priced relative to the MMD
  - The relative difference is called the “spread” to the MMD
  - The spread varies due to the following:
    - Credit rating
    - Bank qualification
    - Length of maturity
    - Coupon or interest rates

Historical MMD January 2008 to the Present

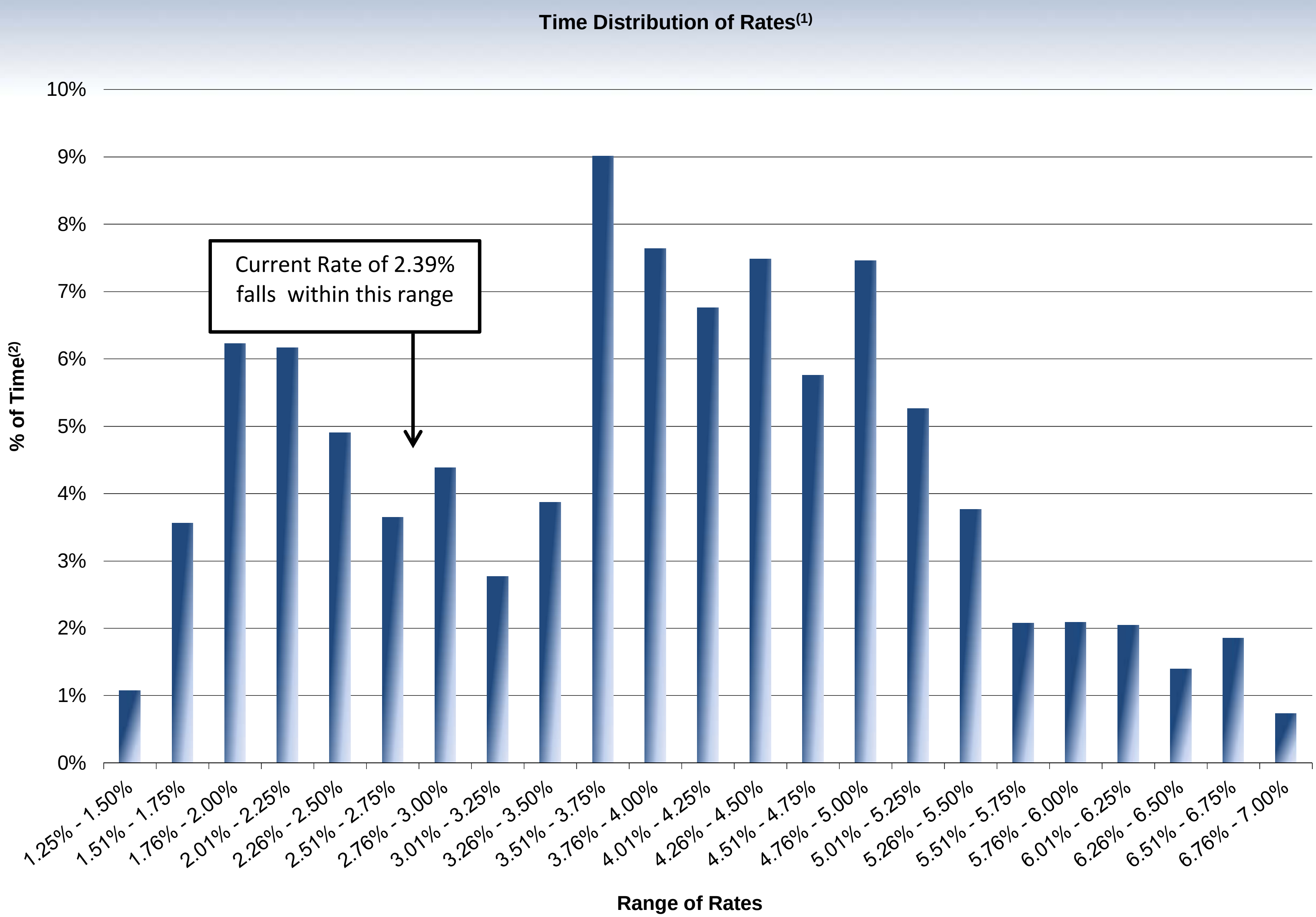


Municipal Market Data as of April 18, 2017

#iasboAC18

THE POWER OF i
2018 Illinois ASBO Annual Conference
May 3 – 4, 2018, Schaumburg, IL

Current 10-Year MMD



(1)Current Rate is the MMD 10-year rate as of 04/13/18.
(2)Data encompasses MMD 10-year rates between 01/02/90 and 04/16/18. Past performance does not guarantee future results.
Source: The Municipal Market Data "MMD" is a AAA municipal bond market index produced by TM3.

#iasboAC18

THE POWER OF i
2018 Illinois ASBO Annual Conference
May 3 – 4, 2018, Schaumburg, IL

Variables that Impact the Municipal Bond Market

FED Reserve Policy
Quantitative Easing
Fed Funds Rate

Budget and Credit of the US Government

Inflation Expectations

Health of national, state and local economies

State of Illinois Fiscal Challenges – Budget Impasse/Pension Situation

Bank Qualification

Municipal Bond Supply and Demand

Europe

Municipal Bankruptcies (*e.g.*, Detroit)

Chicago’s Fis
Challenges

Credit ratings of state and local governments

Level of federal and state income taxes

#iasboAC18

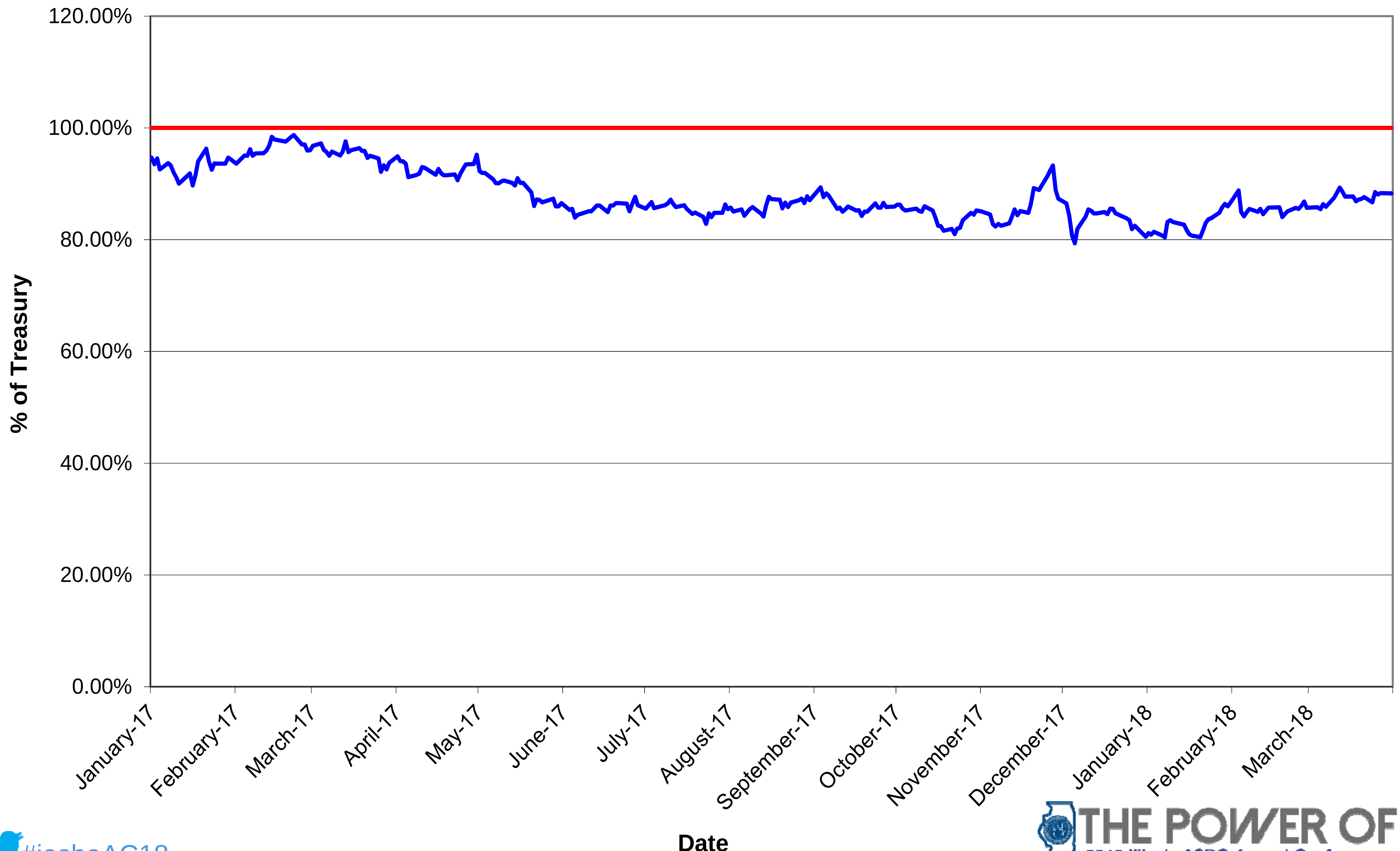
THE POWER OF i
2018 Illinois ASBO Annual Conference
May 3 – 4, 2018, Schaumburg, IL

IMPACT OF TAX REFORM ON MUNICIPAL MARKET

- Corporate Income Tax Rate
  - Reduced from 35% down to 21%
  - Approximately **30%** of the municipal market is owned by "corporations" (banking and insurance companies)
  - The tax rate reduction dis-incentivizes corporations from purchasing tax-exempt municipal bonds, reducing demand in the market
  - Reduced demand will create downward pressure on municipal bond prices and **upward pressure on bond yields**
  - This will have a particularly negative impact on the **bank-qualified bond market** for issuers that issue $10 million or less of tax-exempt bonds in a single calendar year
  - The municipal bond market will have increased reliance on **retail investor** participation

- Elimination of Advance Refundings
  - Advance refundings have typically made up approximately **10% - 25%** of the municipal bond market
  - Elimination will significantly reduce municipal bond supply for at least the next couple years, which may impose **downward pressure on interest rates**
  - The reduced supply is magnified by the fact that an estimated **$30 billion** of issuance came in December 2017 that otherwise would have come to market throughout 2018

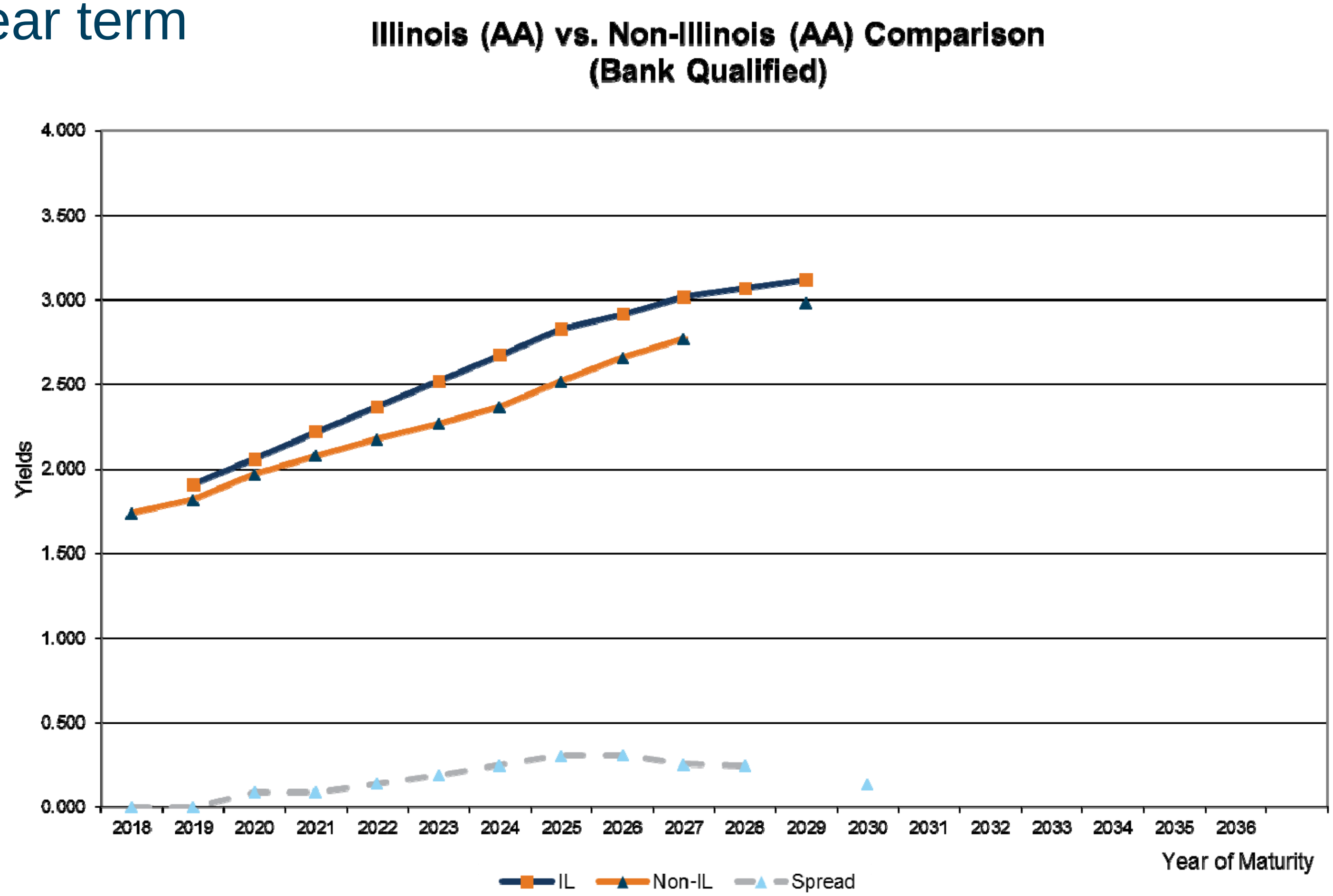
10-YEAR MMD VS. 10-YEAR US TREASURY



*As of April 2, 2018.

The "Illinois Penalty"

- The Illinois penalty will vary depending on term and credit rating. In this example, the Illinois penalty is approximately 0.30% at the 9-year term



Source: Bloomberg

#iasboAC18

THE POWER OF i
2018 Illinois ASBO Annual Conference
May 3 – 4, 2018, Schaumburg, IL

REFUNDING BASICS

How Refunding Bonds Might Help A School District

- B&I levies (for each bond) are set at the time the bond is sold and are filed with the county clerk(s) prior to closing
- Refundings allow the issuer to change B&I levies:
  - Lower interest rates may allow savings from a refinancing (new, lower B&I levies replace existing B&I levies)
  - Restructure existing debt service levies based on lower EAV projections for a targeted tax rate over time (lower B&I levies in the short term)
  - A combination that captures savings and restructures debt service with a targeted tax levy

State Law Authorization

- Refunding Bonds are authorized under Section 19-15 of the School Code
- Refunding Bonds may be issued to pay outstanding bonds in order to:
  - Realize interest savings
  - Restructure debt burden
    - State law: max term of refunding bonds is 20 years
    - Tax law: if refunding bonds are tax-exempt, average life of refunding bonds cannot exceed 120% of useful life of asset financed (or refinanced) with refunded bonds
- Tax levies for Refunded Bonds must be abated
- No BINA Hearing required
- No 30-day Petition Period required

Basic Types of Refundings

- The call date is the date at which the issuer can payoff its bond issue
- Advance refunding
  - Refunding bond issue that closes 91 or more days in advance of the call date
  - Refunding proceeds invested in an escrow until the call date
  - **THE U.S. TAX CODE NO LONGER ALLOWS FOR ONE TAX-EXEMPT ADVANCE REFUNDING IN THE "LIFE" OF A BOND ISSUE**
- Current refunding
  - Current refunding bonds need to close within 90 days of the call date
  - At this time, U.S. tax code allows for multiple current refundings
- Throughout this presentation, "tax-exempt" refers to federally tax-exemption only and does not refer to state or local taxes

VALUING POTENTIAL REFUNDINGS

Valuing Potential Refundings

- Traditionally, the value is measured by the minimum PV savings as a percent of the refunded bonds par amount
  - Effectiveness of minimum PV savings % as a measuring tool depends upon other factors
    - Time to the call date (is it already a current refunding?)
    - Current interest rates relative to historical interest rates and interest rate expectations
    - Shape of the yield curve which impacts the cost of the escrow
- Some practitioners recommend that PV savings should at least exceed the negative arbitrage in the escrow
  - Simplified measure of opportunity cost for exercising the call option
- Call option valuation model to compute a refunding efficiency percentage
  - Complex model that utilizes statistical simulation to value a call option

Valuing Potential Refundings
(cont'd.)

- It is not necessary to refund all the callable bonds
  - Bonds closer to the call sometimes save little or not at all
  - Identify the relative value versus the current yield curve (i.e. where does bank qualification provide the most value)
- Lastly, a refunding should consider future borrowing plans
  - If the district has potential new money plans in the next few years, it may want to consider a restructuring of outstanding bonds to minimize the impact of the new money issue
  - If the bonds are refunded today for cash flow savings, the cost of the restructuring may increase eliminating the savings
    - Due to lengthening of the issue
    - Eligibility for tax-exempt refunding not available

ADVANCE REFUNDING REPLACEMENT STRUCTURES

Newly Prohibited

Tax-Exempt Advance Refundings

- Refunded Bonds to be redeemed more than 90 days after issuance of Refunding Bonds

Transactions Allowed

- Taxable Advance Refundings
- Tax-Exempt Current Refundings

Transactions to Replace Advance Refundings

1. Wait for Current Refunding
2. Taxable Advance Refunding
3. Secondary Market Purchase Refunding
4. Forward Settlement Current Refunding
5. Cinderella Bonds (Taxable Convertible Bonds)
6. Derivative Products (forward starting swaps and swaptions)

Waiting for Current Refunding

- Bond maturity shortens for better yield.
- Negative escrow arbitrage eliminated.
- Risk of interest rate increase exists.
- Delayed savings until bond issuance.

Taxable Advance Refunding

Taxable Advance Refunding

- Few Tax Restrictions
- Higher Taxable Rates
- Escrow Flexibility

Taxable Advanced Refunding (cont'd.)

Taxable Refundings

- If taxable bonds pay down faster than escrow, yield reduction payment may be required

Escrow Securities

- No need to meet bidding rules
- SLGS allowed if refunding tax-exempt

Purchase Refundings

Tax-Exempt Current Refunding

- Locate Bond Holders
- Negotiate Purchase Price

Initially Taxable Convertible Bonds (Cinderella Bonds)

Concept in Theory:

- Taxable Advance Refunding combined with Forward Tax-Exempt Current Refunding
- Taxable and Tax-Exempt rates determined at time of Sale
- Bond holder indifferent to tax status, if rates appropriate

Forward Settlement Current Refundings

- Interest rate locked but closing delayed until 90 days of call date
- Purchaser may want additional “outs” in the bond purchase agreement

Mechanics of Cinderella Bonds

- Taxable and Tax-exempt rates are specified in documents
  - Yields must differ by more than 0.25%
  - Issuer has option to convert (or not)
- Tax-exemption opinion delivered at conversion
  - If opinion is not obtained, bonds stay taxable

Derivative Products

- Forward Starting Swaps
- Swaptions

Forward Starting Swap

- Start Date is the Call Date for Refunded Bonds
- Lock in rates now; no payments to be made until Start Date
- If swap not terminated, Issuer issues variable rate bonds swap to fixed
- Termination possible at Start Date
- If rates increased, Issuer receives termination payment from counterparty
- If rates decreased, Issuer pay termination payment
- May fund termination payment with refunding bonds

<u>or</u>

- May use termination receipt to downsize refunding bonds

Swaption

- Issuer “sells” option to the bank to force Issuer into swap
- Upfront payment approximates refunding savings
- As a result of upfront payment, no counterparty risk
- Like Forward Starting Swap, termination possible at Start/Call Date and Issuer may fund termination with T.E. Refunding Bonds (if upfront payment used for capital)
- Bank may not exercise the option if rates have increased

Takeaways

- Consider refunding opportunities for existing bonds, including BABs
- Consider whether crossover refunding of BABs provides value

Questions and Answers

We thank you for your time!

Disclaimer

This presentation has been prepared by PMA Securities, Inc. for informational and educational purposes to units of local government without regard to any particular entity's investment objectives, financial situation or means. The content of this presentation is not to be construed as a recommendation, solicitation or offer to engage in an issuance, or to buy or sell any security, financial product or instrument, or to participate in any particular trading strategy in any jurisdiction in which such an offer or solicitation, or trading strategy would be illegal. Nor does it constitute any legal, tax, accounting or investment advice of services regarding the suitability or profitability of any security or investment. PMA and its employees do not offer tax or legal advice and any entity should consult with its own tax and/or legal advisors before making any tax or legal related investment decisions.

Although the information contained in this presentation has been obtained from third-party sources believed to be reliable, PMA cannot guarantee the accuracy or completeness of such information. It is understood that PMA is not responsible for any errors or omissions in the content in this document and the information is being provided to you on an "as is" basis without warranties or representations of any kind. The analysis or information presented in this presentation is based upon current market conditions which are subject to change. There is no guarantee that the projected yield will be realized and the actual yield will depend on the available investment product and market conditions at the time of investment.

This presentation is solely intended to suggest/discuss potentially applicable financing applications or investment strategies. Any terms discussed herein are preliminary until confirmed in a definitive written agreement. Although market value, market analytics and other information contained in this presentation have been obtained from third-party sources believed to be reliable, PMA cannot guarantee the accuracy or completeness of such information. No representation is made that any results indicated herein will be achieved. Changes to any prices, levels, or assumptions contained herein may have a material impact on results. Any estimates or assumptions contained herein represent our best judgment as of the date indicated and are subject to change without notice. Examples are merely representative and are not meant to be all-inclusive. All investments mentioned herein may have varying levels of risk, and may not be suitable for every investor. Investment in securities involves risks, including the possible loss of the amount invested. In addition, past performance is no indication of future results and the price or value of investments may fluctuate. Asset allocation does not assure or guarantee better performance and cannot eliminate the risk of investment losses.

Securities, public finance services and institutional and municipal advisory brokerage services are offered through PMA Securities, Inc. PMA Securities, Inc. is a broker-dealer and municipal advisor registered with the SEC and MSRB, and is a member of FINRA and SIPC. Prudent Man Advisors, Inc., an SEC registered investment adviser, provides investment advisory services to local government investment pools and separate accounts. All other products and services are provided by PMA Financial Network, Inc. PMA Financial Network, Inc., PMA Securities, Inc. and Prudent Man Advisors (collectively "PMA") are under common ownership.

 v2.07.17

This document has been prepared by Chapman and Cutler LLP attorneys for informational purposes only. It is general in nature and based on authorities that are subject to change. It is not intended as legal advice. Accordingly, readers should consult with, and seek the advice of, their own counsel with respect to any individual situation that involves the material contained in this document, the application of such material to their specific circumstances, or any questions relating to their own affairs that may be raised by such material.