



State Debt Management Network

Municipal Bond Collateral and the Federal Home Loan Bank

Presented by:

Dave Erdman- Webinar Chair SDMN (Wisconsin)

Mark Pascarella- SDMN Board Member (Indiana)

Introduction

- Quick overview
 - Federal Home Loan Bank (FHLB) System now accepts certain municipal bonds as collateral from members
 - This webinar is designed to introduce this concept to market participants.
 - Webinar is intended for all market participants and will be available for public viewing on our website. Slides will also be available and are able to be shared with individuals outside of the network
 - Participants may include but not limited to:
 - Issuers
 - Investors
 - Municipal Advisors
 - Bond Attorney
 - Underwriters

Why should issuers care?

- Simple answer, potentially this could mean greater demand for municipal bonds
 - Greater demand can produce lower spreads as any liquidity premium erodes
 - How does this happen? FHLB's require members to provide collateral in order to borrow advances
 - **FHLB MEMBERS ARE OUR INVESTORS!**
 - Our investors (FHLB members) may be more likely to buy municipals if they know the investments can be used as collateral within the FHLB system
 - This concept is similar to the HQLA issue for banking regulations
 - This is not a one size fits all as we will find out

Goals

- What are we looking to achieve today?
 - FHLB will provide some background on what the FHLB system is, what type of municipals can be pledged and what muni issuers can do to make their issuances FHLB eligible
 - Taylor will demonstrate the demand from FHLB members (Our investors) for the ability to pledge muni bonds and how that can benefit issuers
 - Our primary goal is to get the dialogue started with the FHLB's and market participants to determine the demand from muni investors (FHLB members) and what issuers can do to help issuances become FHLB eligible

SDMN Contact

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317-234-2228

Municipal Bonds & the Federal Home Loan Banks

STATE DEBT MANAGEMENT NETWORK

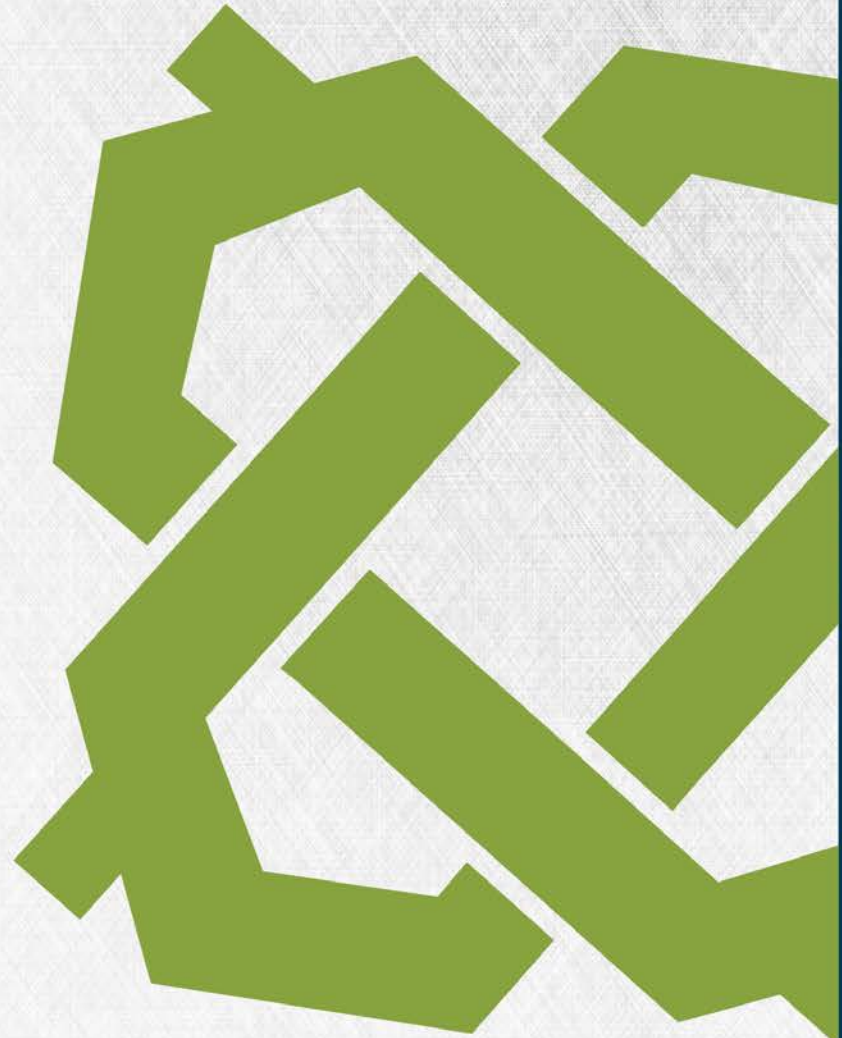


FHLBank
INDIANAPOLIS

BUILDING PARTNERSHIPS.
SERVING COMMUNITIES.

9/21/2107

James B. Eibel, CFA, CTP, VP-Senior. Account Director
John D. Bingham, VP-Credit Risk Manager





Discussion Overview

- **Introduction to FHLBank System and Membership**
- **Municipal Bonds as FHLBank Collateral**
- **Maximizing the Impact of FHLBank Members as Municipal Bond Investors**

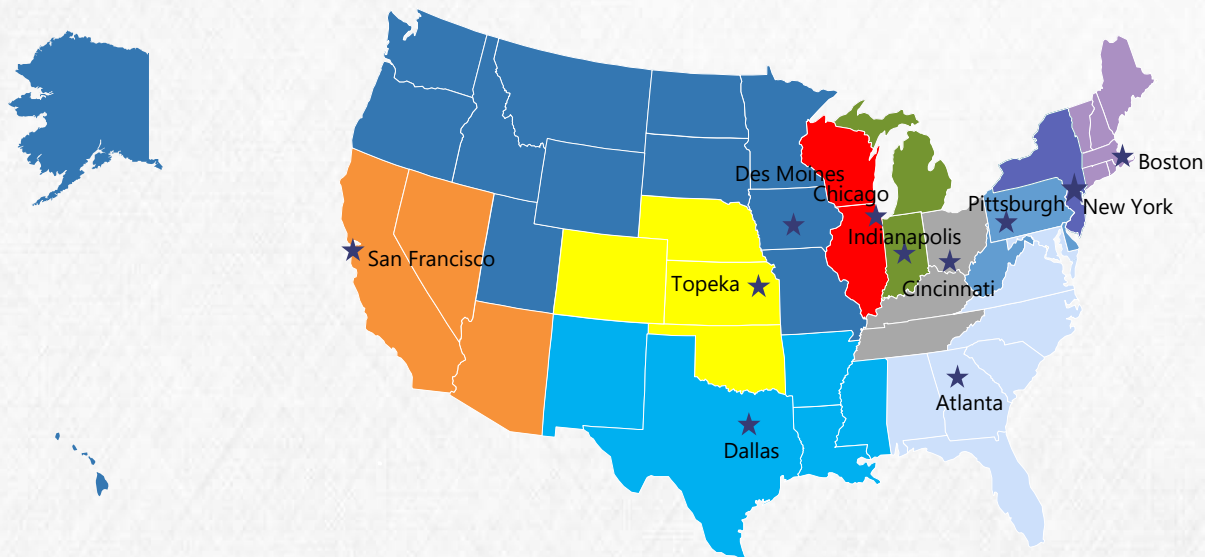
FHLBank System Overview



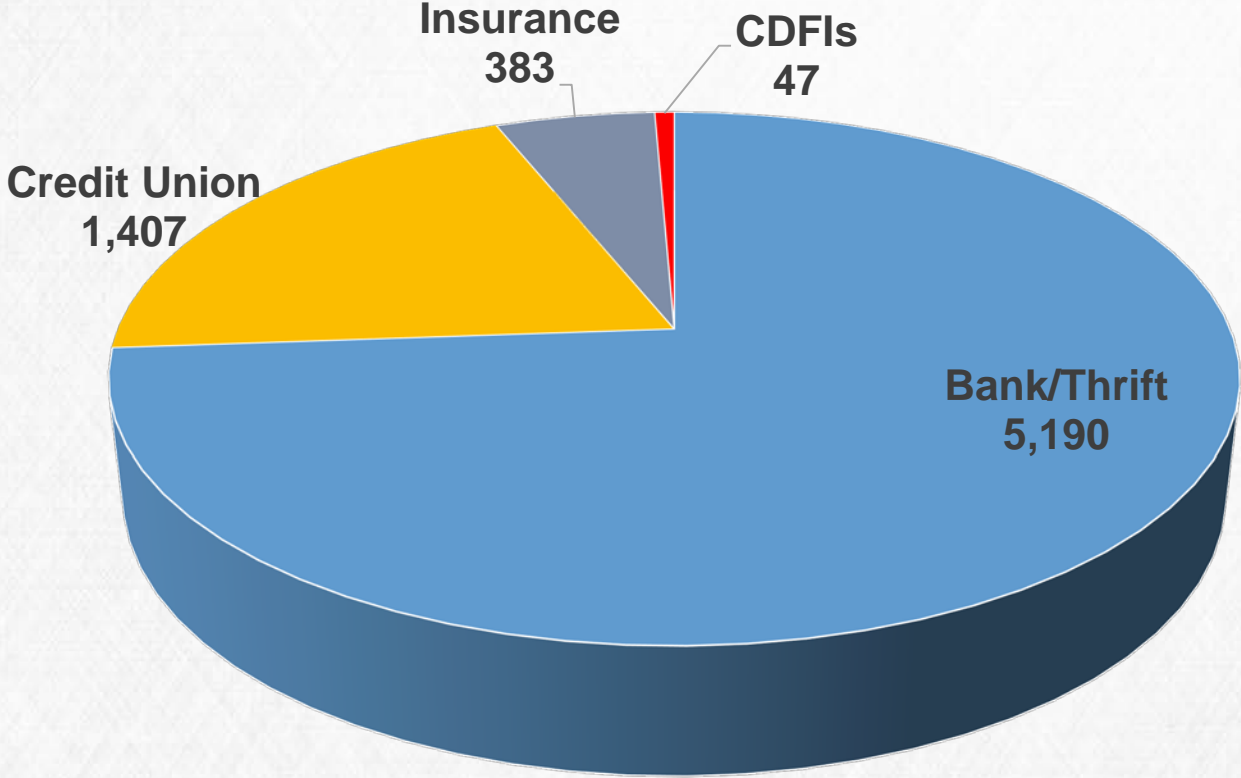
The 11 FHLBanks are separate, independently managed government-sponsored enterprises (GSEs) organized as cooperatives under an act of Congress (Federal Home Loan Bank Act of 1932)

FHLBanks provide their 7,000 members with reliable access to low-cost collateralized funding for liquidity and to support mortgage lending and community and economic development. The FHLBanks are also the nation's largest source of private grant funds for affordable housing.

The FHLBanks access global capital markets by issuing debt securities rated Aaa and P-1 by Moody's and AA+ and A-1+ by S&P.



FHLBank System Member Composition 6/30/17



SOURCE: FHLBank Office of Finance



FHLBank System Member AUM



	Assets (\$Trillions)	%Total Market
Bank/Thrifs	16,116	96%
Credit Unions	1,148	87%
Insurance Companies	5,382	59%
Total	22,646	NA

SOURCE: SNL

FHLBank System Largest Members 6/30/17 (\$Billions)



	FHLB Member	Assets	Type
1	JPMorgan Chase Bank, NA	\$ 2,138	Bank
2	Wells Fargo Bank, NA	\$ 1,749	Bank
3	Bank of America, NA	\$ 1,707	Bank
4	Citibank, N.A.	\$ 1,369	Bank
5	U.S. Bank, National Association	\$ 443	Bank
6	PNC Bank, NA	\$ 360	Bank
7	Capital One, National Association	\$ 282	Bank
8	TD Bank, National Association	\$ 274	Bank
9	State Street Bank and Trust Company	\$ 234	Bank
10	Branch Banking And Trust Company	\$ 215	Bank
11	SunTrust Bank, Atlanta	\$ 201	Bank
12	HSBC Bank USA, N.A.	\$ 200	Bank
13	Goldman Sachs Bank USA	\$ 156	Bank
14	Metropolitan Life Insurance Company	\$ 401	Insurance
15	Teachers Insurance and Annuity Association	\$ 286	Insurance
16	The Prudential Insurance Company of America	\$ 260	Insurance
17	John Hancock Life Insurance Co USA	\$ 235	Insurance
18	Massachusetts Mutual Life Insurance	\$ 229	Insurance
19	The Lincoln National Life Insurance	\$ 227	Insurance
20	Jackson National Life Insurance	\$ 212	Insurance
21	AXA Equitable Life Insurance Company	\$ 179	Insurance
22	Principal Life Insurance Company	\$ 179	Insurance
23	New York Life Insurance Company	\$ 173	Insurance
24	American General Life Insurance	\$ 170	Insurance
25	Charles Schwab Bank	\$ 181	Bank

SOURCE: SNL



Membership Provides Reliable Liquidity



- **Access to global capital markets**
- **Cooperative ownership structure**
- **Reliable, fully collateralized borrowings**
- **FHLBanks maintain large cash positions**
- **Tested during recent events**
 - (9/11, Mortgage Crisis, Hurricane Sandy)

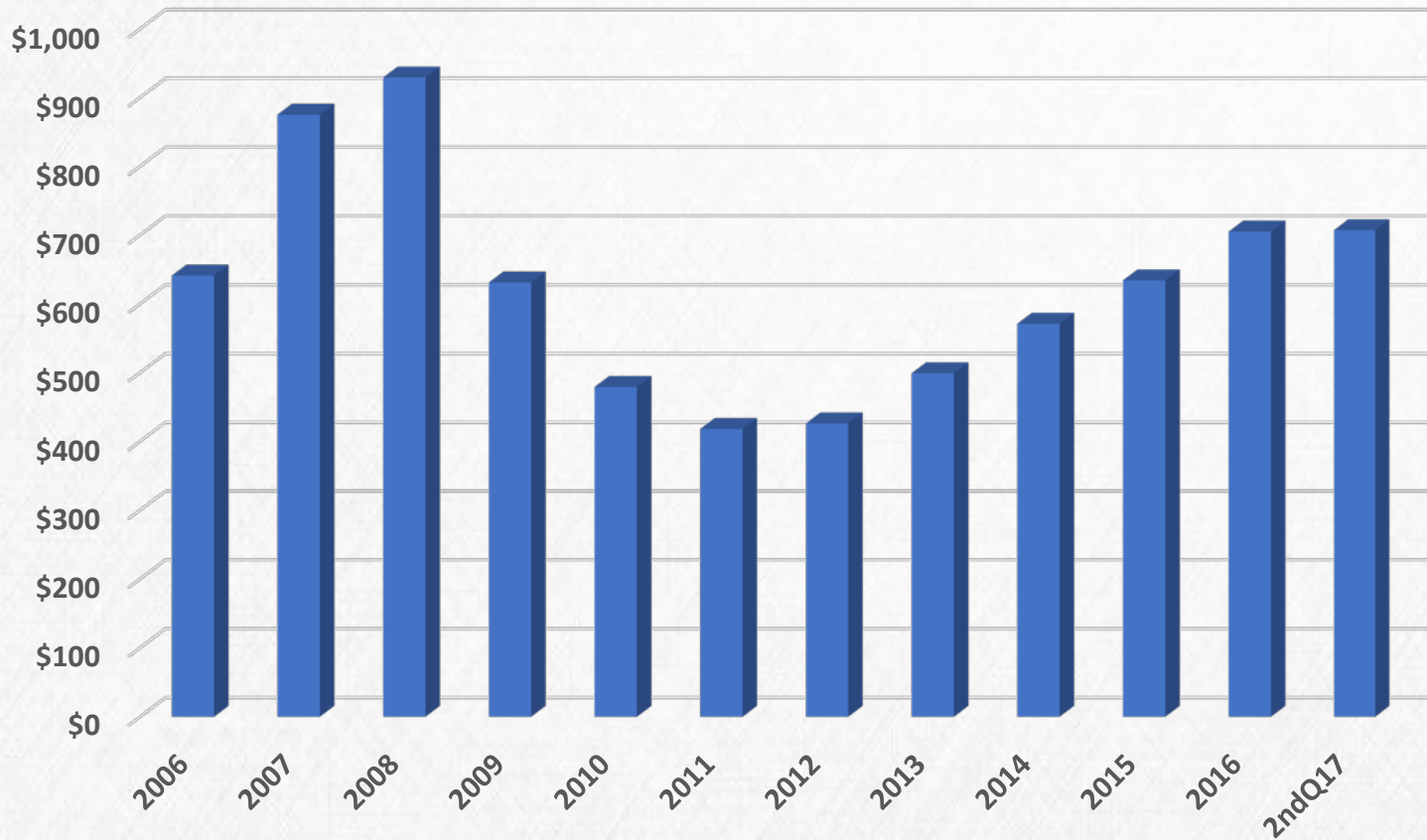
Financial Crisis Performance



“During the recent liquidity crisis, money market investors ran away from debt issued or sponsored by depository institutions...By issuing implicitly guaranteed debt, the FHLB System was able to re-intermediate term funding to member depository institutions through advances.”

“The Federal Home Loan Bank System: The Lender of Next to-Last Resort,” Federal Reserve Bank of New York Staff Report no. 357, November 2008, p. 3.

FHLBank System Borrowings (\$Billions)



SOURCE: FHLBank Office of Finance



FHLBank System Avg. Lendable Values



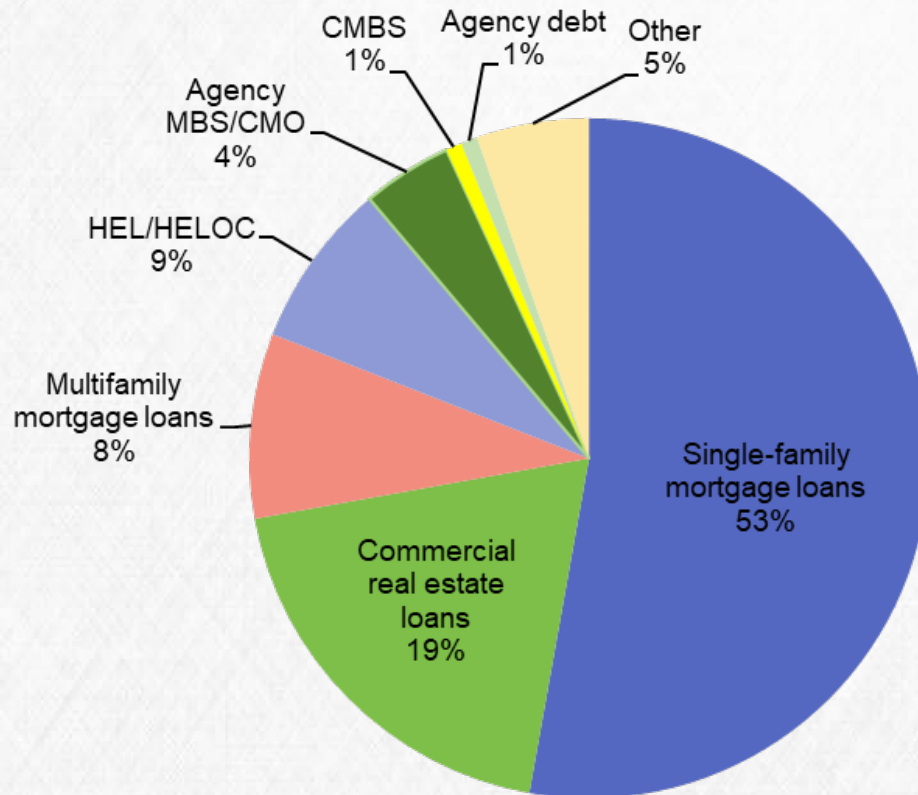
Collateral Type	Average Effective Lending Value ⁽¹⁾		
	Blanket Lien	Listing	Delivery
Cash, U.S. government, & U.S. Treasury securities	N/A	N/A	93%
State & local government securities	N/A	N/A	89%
U.S. agency securities	N/A	N/A	95%
U.S. agency MBS/CMO	N/A	N/A	95%
Private-label MBS/CMO	N/A	N/A	83%
CMBS	N/A	N/A	84%
Single-family mortgage loans	80%	86%	78%
Multifamily mortgage loans	74%	82%	75%
Other US government-guaranteed mortgage loans	84%	91%	N/A
Home equity loans & LOCs	64%	65%	63%
CFI ⁽²⁾ collateral	55%	68%	57%
Commercial real estate loans	68%	73%	71%
Other loan collateral	49%	79%	72%

(1) Please see the pg 82 of the 2016 Combined Financial Report for the range of effective lending values applied to collateral

(2) Community Financial Institution – Total assets capped at \$1.148 billion for 2017 by FHFA and adjusted annually for inflation



Types of Collateral Securing Advances As of 6/30/17



SOURCE: FHLBank Office of Finance

Selection Criteria Overview



Each FHLBank will have their own set of criteria. As an example of municipal bond selection criteria, an overview of the FHLBank Indianapolis criteria is as follows:

- **General Obligation or Special Revenue Bonds**
- **Proceeds have been or will be used to finance the acquisition, development and/or improvement of real estate (*Real Estate Improvements*)**
 - **Eligible balance is limited to that portion which finances Real Estate Improvements**
- **Rated A- or higher by Fitch, Moody's and/or Standard & Poor's, using the lowest of ratings provided**

What FHLBank Indianapolis looks for...



- In determining eligibility, the Official Statement is reviewed
 - Attempt to gain clarity regarding the nexus to real estate via the Official Statement, often focusing on the *Purpose*, the *Sources of Funds* and *Uses of Funds*

PURPOSE . . . Proceeds from the sale of the 2016A Bonds will be used (1) for acquisition, construction and equipment of school buildings and the purchase of school sites and school buses and (2) to pay the costs associated with the issuance of the 2016A Bonds. Proceeds from the sale of the 2016B Bonds will be used (1) to refund a portion of the District's outstanding debt (the "2016B Refunded Bonds") for debt service savings and (2) to pay the costs associated with the sale of the 2016B Bonds. See "PLAN OF FINANCING – Purpose of the 2016B Bonds"; also see Schedule I for a description of the 2016B Refunded Bonds.

- Taken from 2016 Arlington Independent School District refunding bond
- The inclusion of “*school buses*,” without additional detail or an itemized *use of funds* makes it difficult to ascertain how much of the issue is earmarked for Real Estate Improvements and eligible as collateral.

What FHLBank Indianapolis looks for...



Purpose

The purpose of the Bonds is for renovations and additions to the elementary, middle school, and high school buildings, paying interest on the Bonds through January 15, 2005, and to pay the costs of issuing the Bonds.

Estimated Sources and Uses of Funds

Estimated Sources of Funds:

First Mortgage Bonds, Series 2004	\$7,805,000.00
Less: Original issue discount	(60,840.00)
Plus: Estimated interest earnings	55,000.00
Net estimated sources of funds	<u>\$7,799,160.00</u>

Estimated Uses of Funds:

Construction	\$6,468,494.00
Contingency	142,967.78
Equipment, furnishings, technology	285,000.00
Soil testing , surveys & printing costs	50,000.00
Builders risk insurance	20,000.00
Architect	400,400.00
Underwriter's discount	62,440.00
Bond insurance	36,000.00
Costs of issuance	115,265.00
Capitalized interest through 1/15/2005	218,593.22
Total estimated uses of funds	<u>\$7,799,160.00</u>

- Taken from a Covington Community School Corporation bond
- To ascertain Real Estate Improvements component, one may utilize the more detailed overview in the Use of Funds Section
- Uses of Funds Section is used to ascertain the Real Estate Improvements factor

Arriving at the Lendable Value



Estimated Sources and Uses of Funds

Estimated Sources of Funds:

First Mortgage Bonds, Series 2004	\$7,805,000.00
Less: Original issue discount	(60,840.00)
Plus: Estimated interest earnings	<u>55,000.00</u>
Net estimated sources of funds	<u>\$7,799,160.00</u>

Estimated Uses of Funds:

Construction	<u>\$6,468,494.00</u>
Contingency	142,967.78
Equipment, furnishings, technology	285,000.00
Soil testing , surveys & printing costs	50,000.00
Builders risk insurance	20,000.00
Architect	100,000.00

Arriving at the Real Estate Factor:

$$\frac{\$6,468,494}{\$7,799,160} = 0.8294$$

Original Balance for Pledge	\$5,000,000
Real Estate Factor	0.8294
Eligible Balance for Pledge	<u>\$4,146,917</u>
Market Value Price	0.9876
Market Value	<u>\$4,095,495</u>
Lendable Value at 110% Overcollateralization Ratio	\$3,723,178
Lendable Value at 120% Overcollateralization Ratio	\$3,412,913
Lendable Value at 135% Overcollateralization Ratio	\$3,033,700

FHLBI Does Not Provide Investment Advice



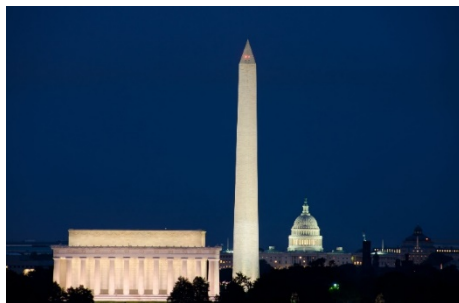
This agenda and other presentations may contain forward-looking statements that are subject to risks and uncertainties including, but not limited to, the effects of economic market conditions on demand for the FHLBank of Indianapolis' (FHLBI) products, legislative or regulatory developments concerning the FHLBank System, or competitive forces and other risks detailed from time to time in the FHLBI's filings with the Securities and Exchange Commission. The forward-looking statements speak as of the date made and are not guarantees of future performance. Actual results or developments may differ materially from the expectations expressed or implied in the forward-looking statements, and the FHLBank undertakes no obligation to update any such statements. All statements are based on current FHLBI policies and procedures.

The FHLBI, acting through its sales and marketing employees and agents, does not provide investment or consulting advice.



*Investments
Asset / Liability
Risk Management*

State Debt Management Network | Municipal Securities Webinar



Presented by: Omar A. Hinojosa, CFA, Senior Consultant
Sasha A. Antskaitis, CFA, Managing Partner

 **TAYLOR**ADVISORS

Types of Municipal Bonds

- Tax Status (Federal)
 - Taxable
 - Tax Exempt
 - Bank Qualified
 - Bank Eligible
 - General Market (bank-permissible)
- Source of Repayment
 - General Obligation
 - Limited Taxing Authority
 - Unlimited Taxing Authority
 - Revenue
 - Essential Services (water & sewer)
 - Transportation (roads, bridges)
 - Hospital
 - Other
 - Certificates of Participation
 - Double-Barrel
 - Combination of Taxes and Revenues
- Credit Enhancements
 - Monoline Insurance
 - AMBAC, FGIC, etc.
 - State Programs
 - ST-INTERCEPT, Q-SBLF, PSF etc.

Illinois – Historical Credit Default Swaps

ILLIST CDS USD SR 5Y D0 **370.040** -0.030 354.610 / 385.470
 At 21 Jul Source CHAN

ILLIST CDS USD SR 5 **95** Compare **96** Actions **97** Edit

Bar Chart



Australia 61 2 9777 8600 Brazil 5511 2395 9000 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000
 Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2017 Bloomberg Finance L.P.
 SN 455022 EDT GMT-4:00 G447-1975-1 24-Jul-2017 15:23:40

- Previous non-investment grade and non-rated standards now apply to all securities
 - Institutions should utilize a credit scoring model to assess credit worthiness

Agency	Reference	Effective	Published Title
Dodd Frank		7/21/2010	Section 939A
OCC	OCC Bulletin 2012-18 FIL-48-2012	7/21/2012	Final rule establishing alternatives to the use of external credit rating in OCC regulations
FDIC	FIL-34-2012	7/21/2012	Final rule and Guidance - Permissible investments for Federal and State Savings Associations
FDIC	FR 77 43155	7/21/2012	Guidance on due diligence requirements FIL-34-2012
FDIC			Summer 2013 Supervisory Insights - Credit Risk Assessment of Bank Investment Portfolios
OCC	FR 77 35259	1/1/2013	Final guidance on due diligence requirements in determining whether investment securities are eligible for investment



Comptroller of the Currency
Administrator of National Banks

US Department of the Treasury

NR 2015-37

FOR IMMEDIATE RELEASE

March 18, 2015

Contact: Bryan Hubbard

(202) 649-6870

Comptroller of the Currency Issues Statement Regarding Bank Investment in the Municipal Securities Market

WASHINGTON – Comptroller of the Currency Thomas J. Curry today issued the following statement regarding investments in municipal securities made by national banks and federal savings associations:

The Office of the Comptroller of the Currency recognizes the importance of the \$3.6 trillion municipal securities market as a source of infrastructure funding for states, cities, and localities in the United States. **The agency considers bank investments in municipal securities a prudent activity when part of a safe and sound investment strategy.** Banks historically have invested in municipal securities for a variety of purposes, including yield and community support. Bank ownership of municipal securities represents approximately 10 percent of all outstanding issuances as of mid-2014. Banks continue to be active participants in this market. In fact, since the interagency Liquidity Coverage Ratio Rule became final in October 2014 banks have increased their overall holdings of municipal securities, and the OCC will continue to monitor activity in the market. **The OCC supports banks' prudent investments in municipal securities.**

Municipal Credit Risk is Much Lower vs. Corporates

Average Cumulative Default Rates, 1970-2011, Municipal vs. Corporates

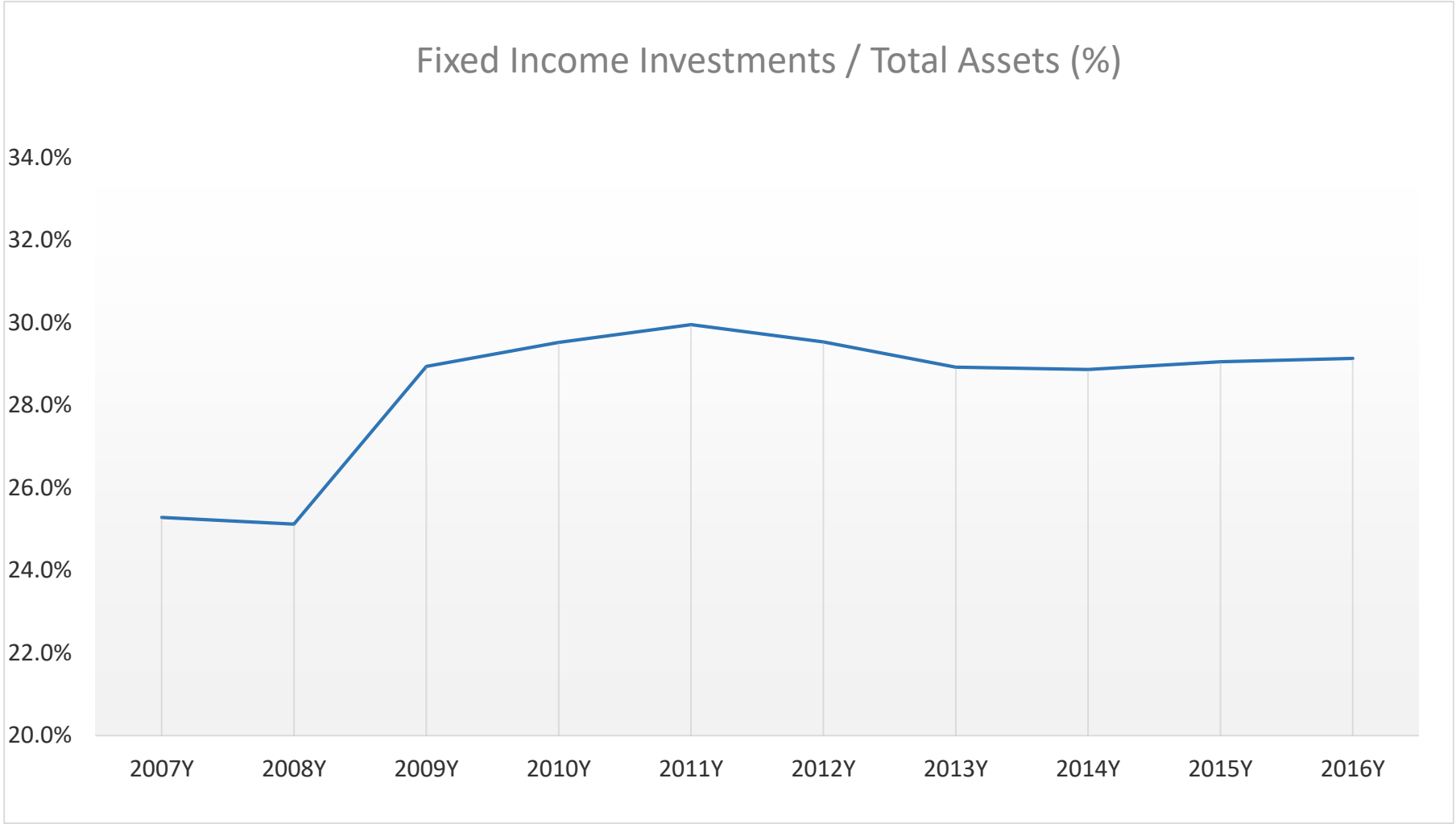
All Municipals

From/To:	1	2	3	4	5	6	7	8	9	10
Aaa	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Aa	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
A	0.00%	0.00%	0.01%	0.01%	0.02%	0.02%	0.02%	0.03%	0.04%	0.04%
Baa	0.01%	0.04%	0.07%	0.11%	0.14%	0.19%	0.24%	0.28%	0.33%	0.37%
Ba	0.28%	0.80%	1.32%	1.83%	2.29%	2.76%	3.26%	3.60%	3.82%	3.92%
All Rated	0.01%	0.03%	0.04%	0.05%	0.07%	0.08%	0.09%	0.10%	0.12%	0.13%

Global Corporates

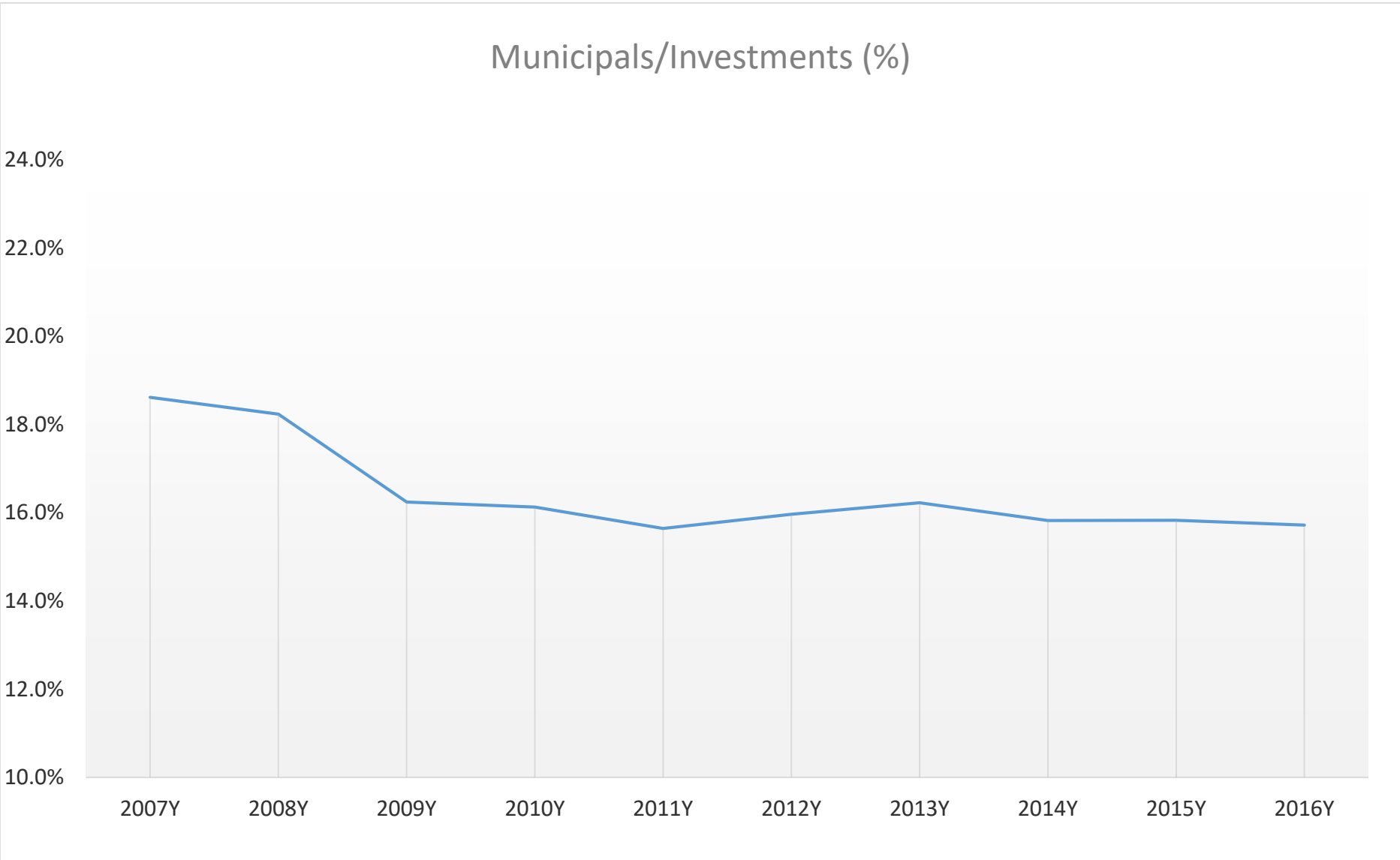
From/To:	1	2	3	4	5	6	7	8	9	10
Aaa	0.00%	0.01%	0.01%	0.04%	0.10%	0.17%	0.24%	0.31%	0.39%	0.48%
Aa	0.02%	0.06%	0.13%	0.24%	0.35%	0.46%	0.57%	0.67%	0.76%	0.86%
A	0.06%	0.19%	0.39%	0.58%	0.80%	1.04%	1.30%	1.61%	1.93%	2.22%
Baa	0.18%	0.50%	0.91%	1.38%	1.89%	2.42%	2.92%	3.44%	4.03%	4.71%
Ba	1.12%	3.10%	5.44%	7.91%	10.15%	12.21%	14.02%	15.83%	17.67%	19.54%
All Rated	1.61%	3.27%	4.82%	6.14%	7.26%	8.22%	9.04%	9.79%	10.50%	11.17%

“If You Can’t Lend It, You Have to Invest It”



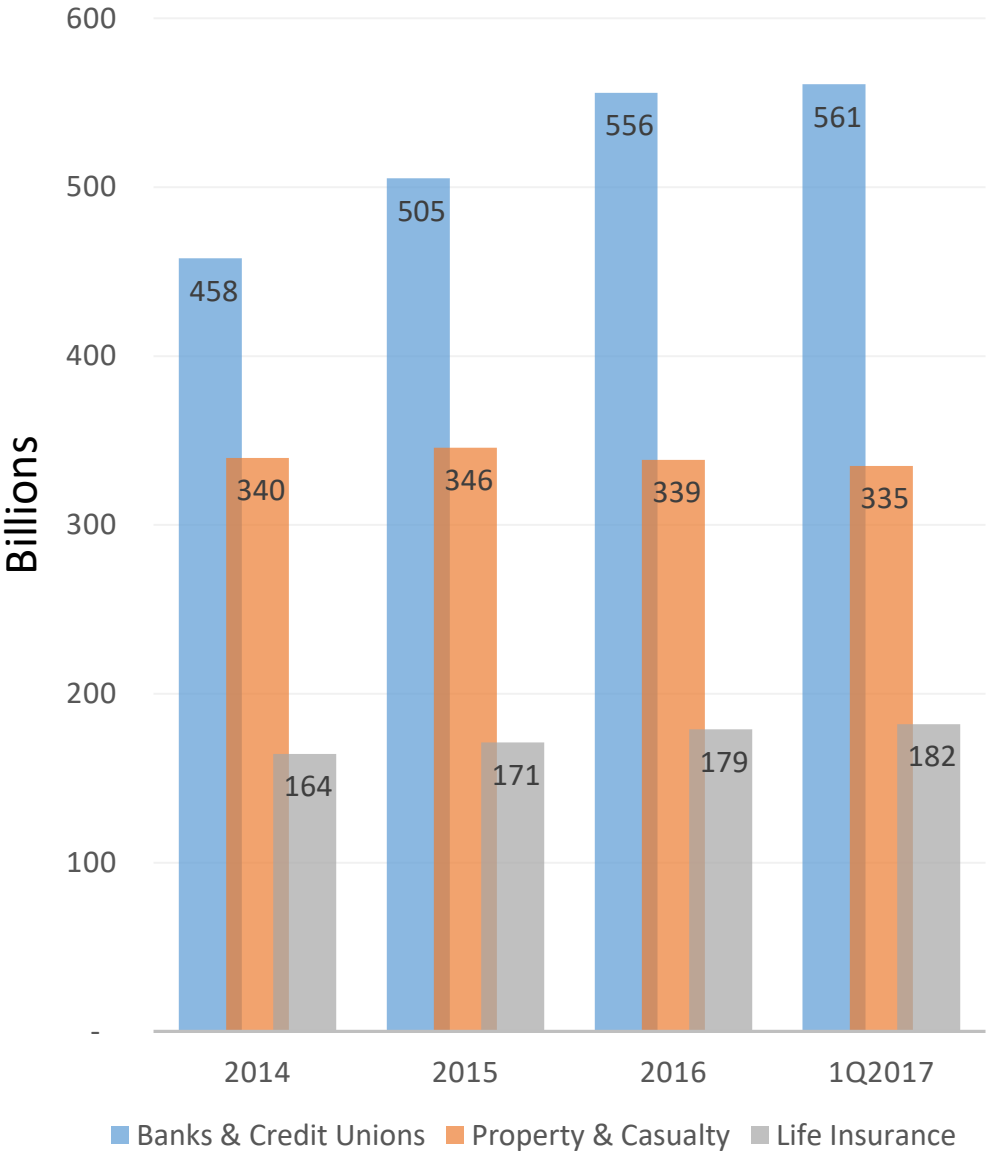
Source: SNL. Consolidated totals for banks and insurance companies nationally.

Allocation to Municipals



Source: SNL. Consolidated totals for banks and insurance companies nationally.

Market Share of Municipals Increasing



➤ 4Q 2014
28% of Total

- Banks & Credit Unions
 - 13% of Muni Market
- Insurance Companies
 - 15% of Muni Market

➤ 1Q 2017
30% of Total

- Banks & Credit Unions
 - 16% of Muni Market
- Insurance Companies
 - 14% of Muni Market

Source: Federal Reserve, Bloomberg

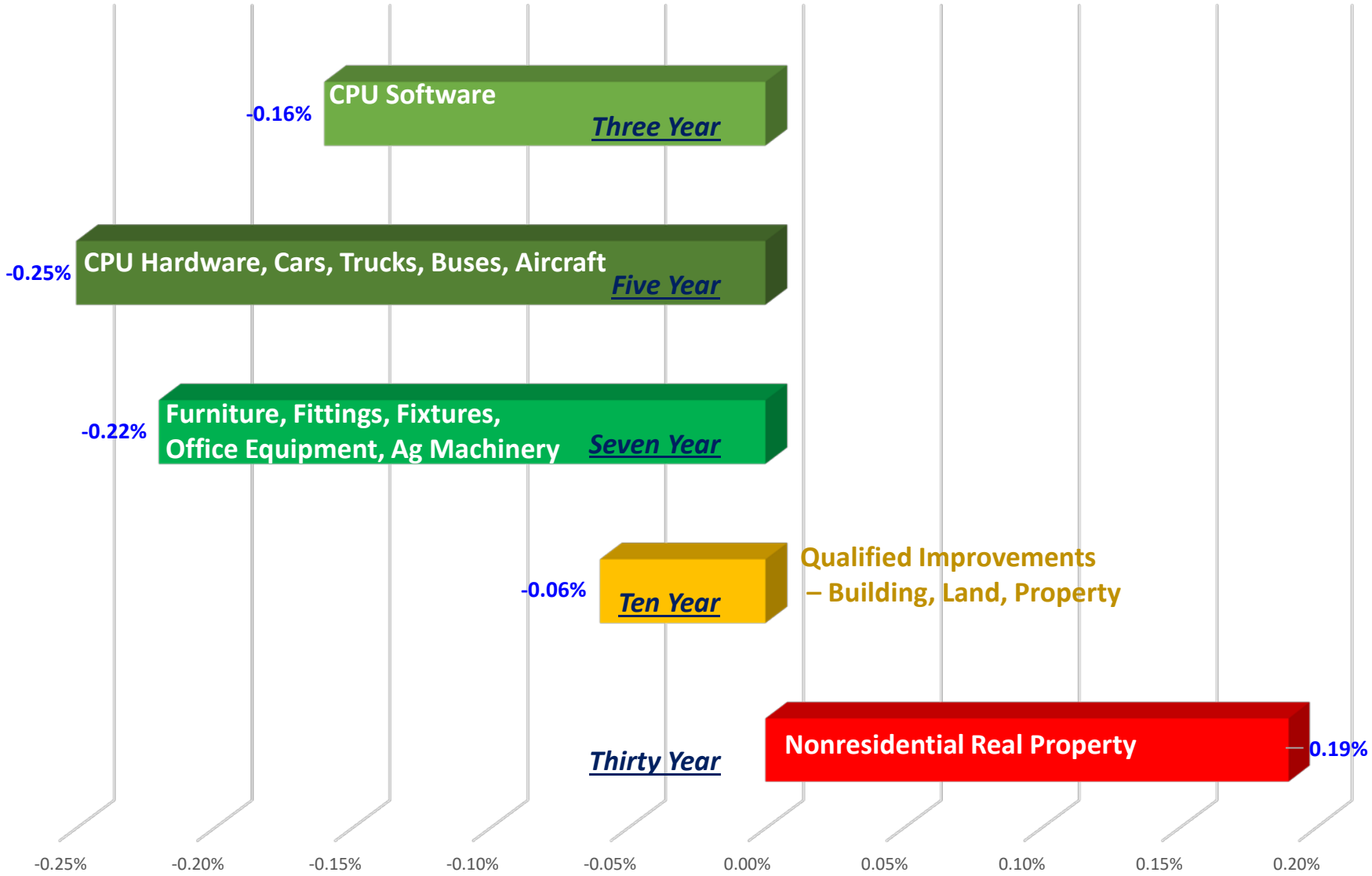
Asset Stratification

	Liquidity		Asset Quality			NET Yield
	<i>est. FHLB Lendable Value</i>	<i>Liquidation Time Frame</i>	<i>Probability of Default</i>	<i>Loss Given Default</i>	<i>Provision Expense</i>	
15yr MBS	95%	3 days	0.0%	0.0%	0.0%	2.25%
Agency 10yr NC 1yr	95%	3 days	0.0%	0.0%	0.0%	2.98%
AAA Bank Qualified Muni GO	90%	3 days	0.0%	0.0%	0.0%	3.69%
1-4 Family 1st Lien Mtg	75%	months -> maturity	1.5%	10.0%	0.2%	4.23%
Commercial Real Estate Loan	60%	months -> maturity	8.4%	20.0%	1.7%	4.51%
AAA General Market Muni GO	90%	3 days	0.0%	0.0%	0.0%	4.69%

Generic Depreciation Guidance

- Three Years
 - Computer Software
- Five Years
 - Computer Hardware, Cars, Trucks, Buses, Aircraft
- Seven Years
 - Furniture, Fittings, Fixtures, Office Equipment, Agricultural Machinery
- Fifteen Years
 - Qualified Improvements – Building, Land, Property
- Thirty Nine Years
 - Nonresidential Real Property

Historical Municipal Spread to Treasuries (last five years)



Source: Bloomberg (MMA AAA GO Consensus Index)

Proposed Municipal Official Statement – Suggested Language

- Option 1

“At a minimum, x% of the deal proceeds will be used for real-state related purposes.”

- Gives FHLB a basis for determining lendable value. Issuer retains flexibility.

- Option 2

“Proceeds from 2017-2024 maturities to be used for non real-estate related purposes such as purchase of new buses, school fixtures, computers, capitalized interest, cost of bond issuance, etc. “

and

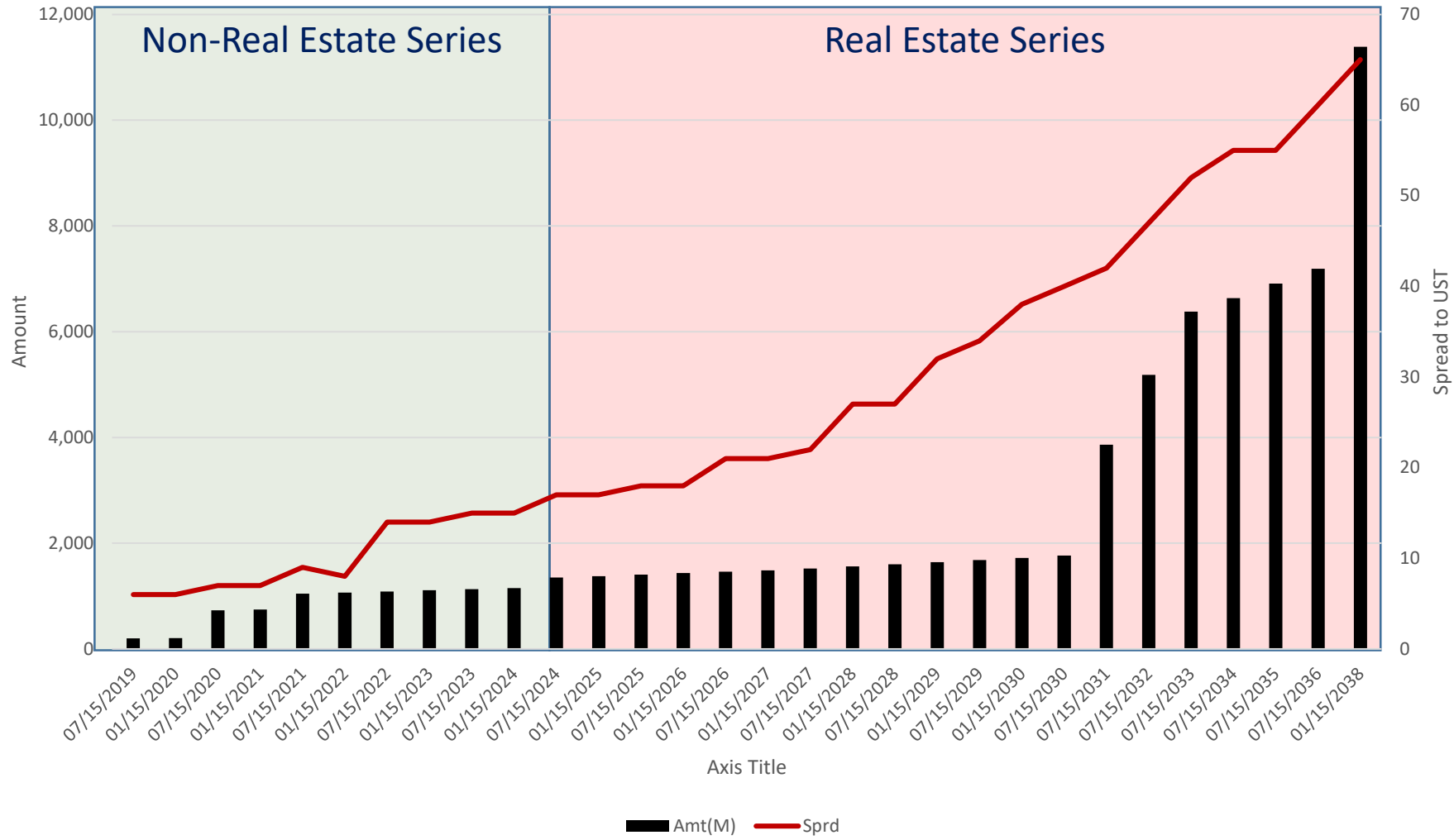
“Proceeds from 2025-2038 maturities to be used for the renovation and improvements to Old Elementary School, Old Jr./Sr. High School and construction of New East End High School.”

- Gives FHLB a basis for determining lendable value. Helps pricing of longer-dated terms.

- Other Options

Recent Municipal Issuance Scale and Spreads

East Allen County School Building Corp
September 2017 Issuance Scale



Source: Trading Desk (MMD Index)