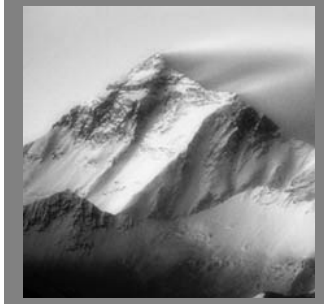

2015 Municipal Market Overview

Texas Bond Review Board
Public Finance Seminars

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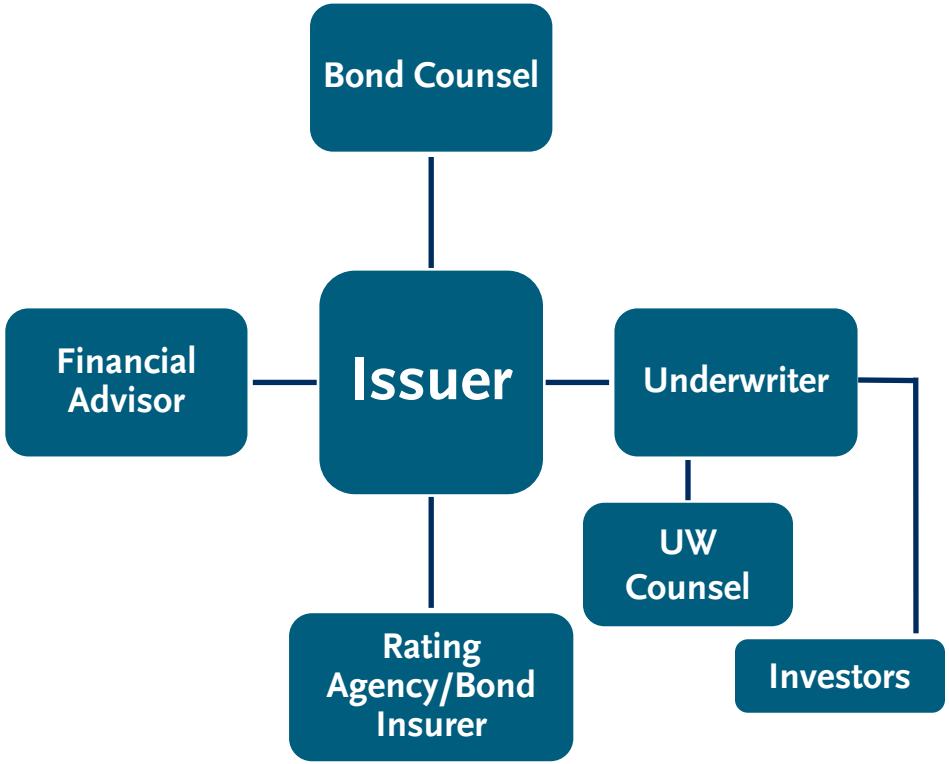
November 3, 2015

Guides for the Journey® | PiperJaffray®

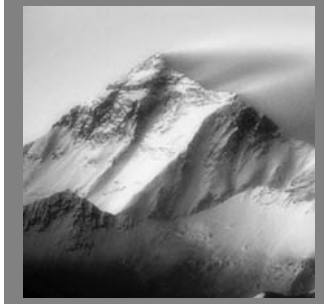
Kim Edwards, Public Finance, Piper Jaffray & Co.

Kim Edwards, Sr. VP, Piper Jaffray
Kim Edwards has worked in the public finance industry for over twenty- five years. She has worked as an Investment Banker for Piper Jaffray since 2012, and prior to that she served as the Executive Director of the Texas Public Finance Authority for 11 years.

In that capacity she was involved in the issuance and administration of over $5 billion of municipal securities for the State of Texas. She has also served as Assistant Executive Director of the Municipal Advisory Council of Texas, and as a financial advisor to state and local governments, as a Vice President for Government Finance Group in Arlington, VA, and worked for the Government Finance Officers Association and Price Waterhouse in Washington, D.C..

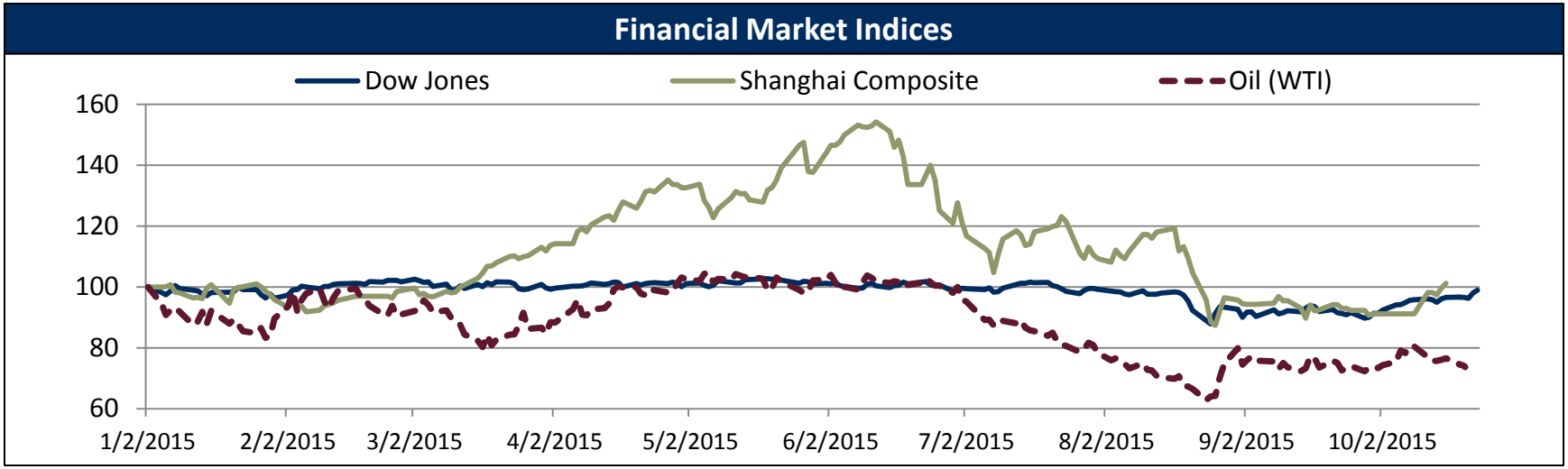


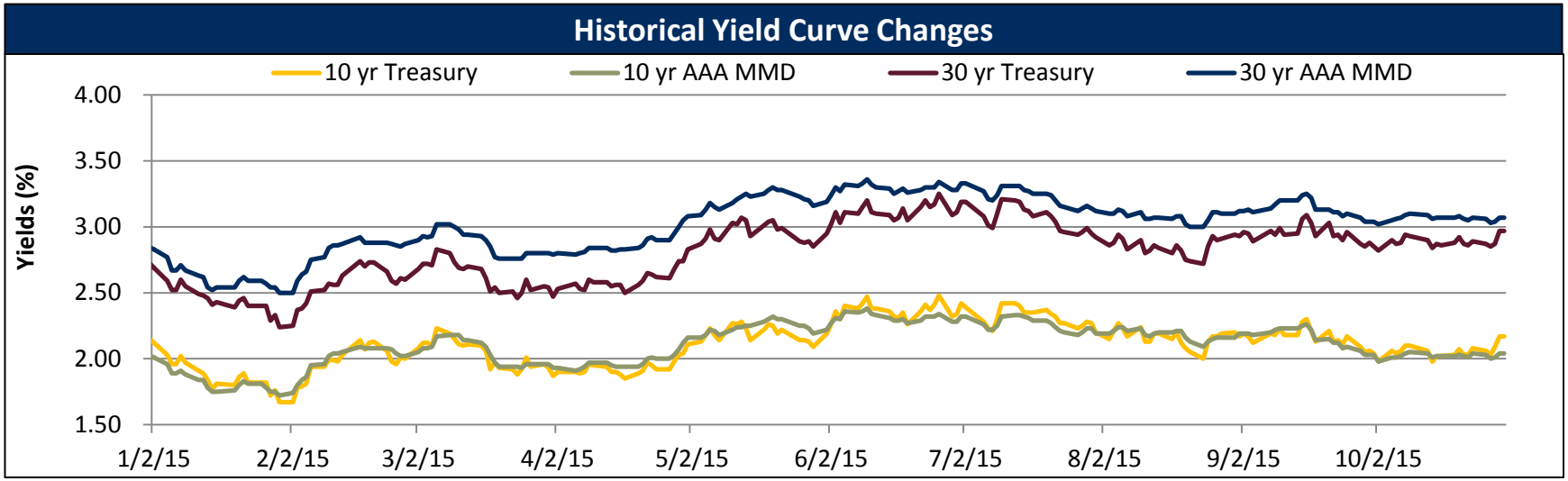
Kim has served on the executive board of the National Association of Treasurer's State Debt Management Network, the Board of Directors of the Municipal Advisory Counsel of Texas and as President of the Texas Chapter of Women in Public Finance. She holds a B.A. from Rice University, an MBA from the University of Texas, and a Masters degree from the LBJ School of Public Affairs at UT Austin. She holds a Series 7, 53 and 63 licenses.



I. The Municipal Market - National Perspective

Financial Market Volatility Driven by Global Demand





Source: Yahoo Finance, TM3

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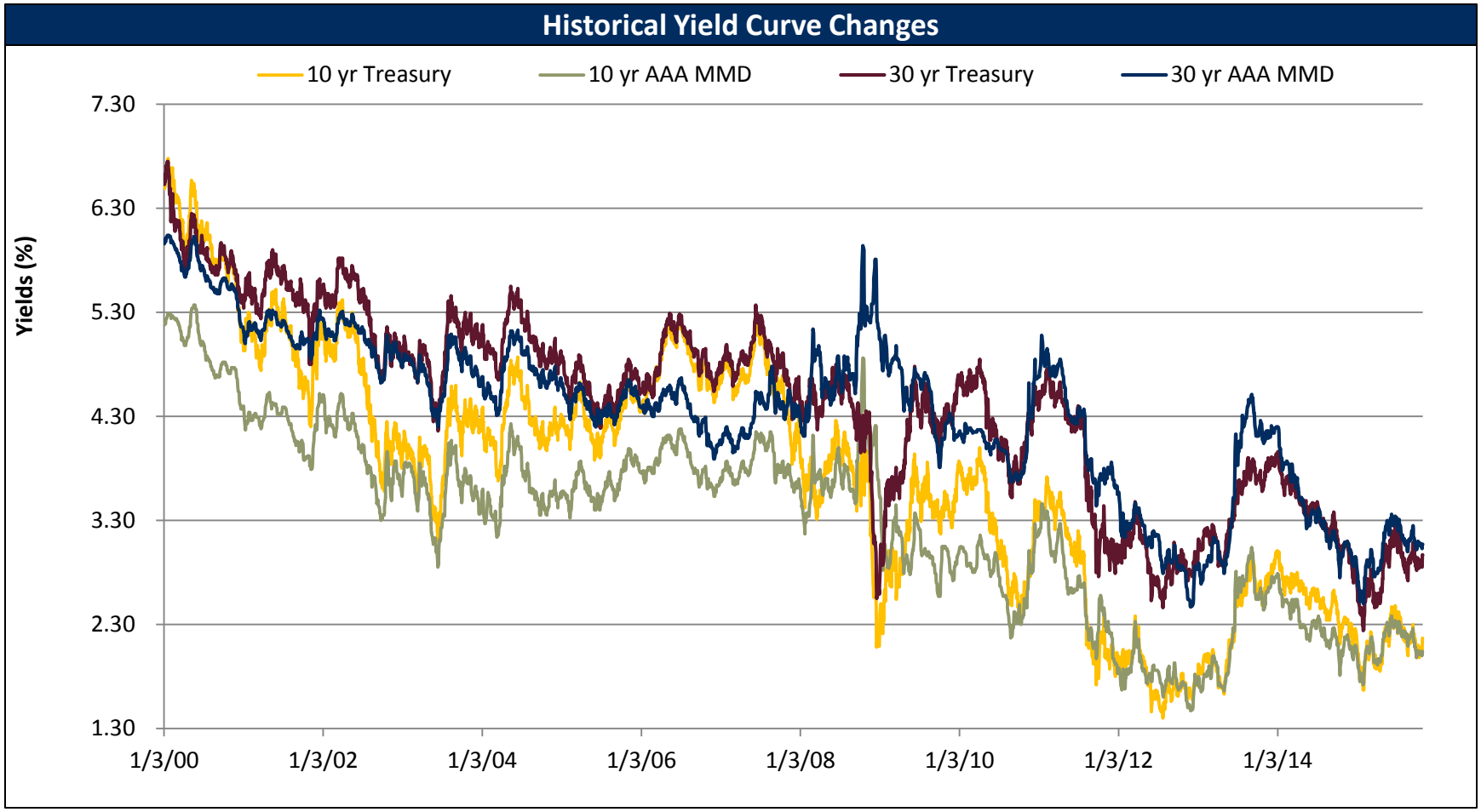
Historical Interest Rates 2000 – 2015 YTD

- Interest rates are at historical lows, but the relationship between taxable and tax-exempt rates has changed dramatically.

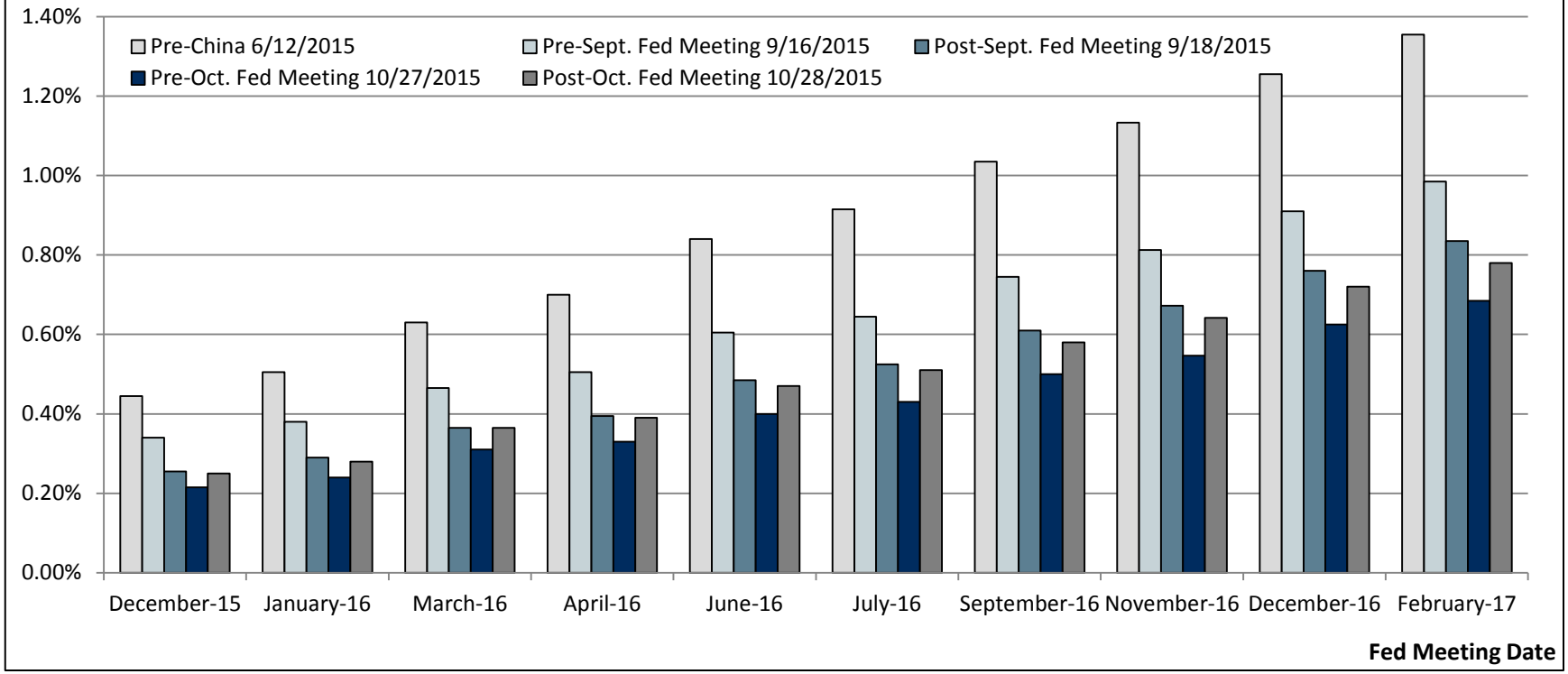


Source: TM3

Volatility Could Dampen Prospects of Future Rate Hikes

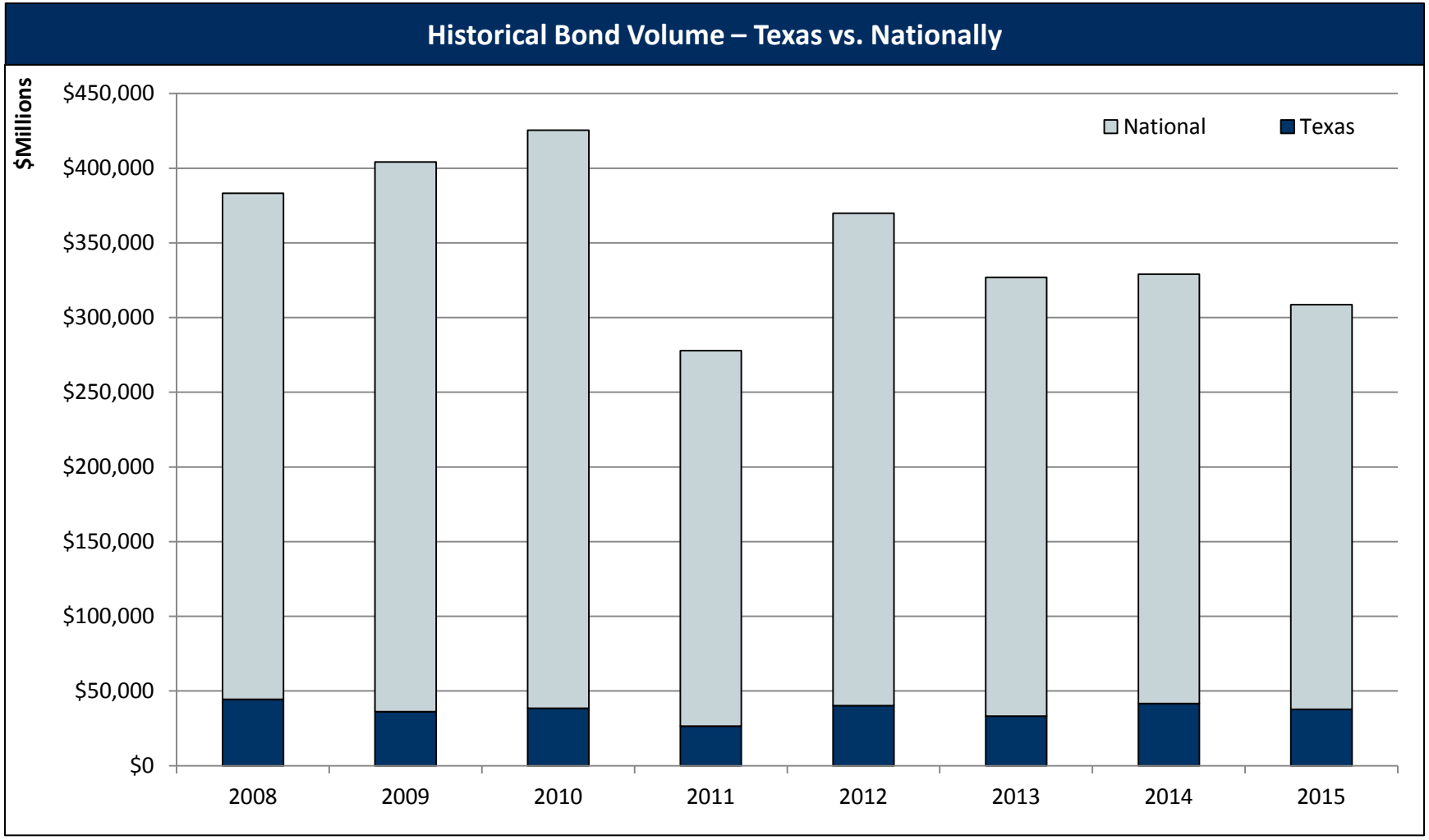
	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16
Meeting		Yes	Yes		Yes	Yes		Yes	Yes		Yes		Yes
Rate Decision		Yes	Yes		Yes	Yes		Yes	Yes		Yes		Yes
Forecast Release		Yes			Yes			Yes			Yes		

Market Expectations for Fed Funds Rate



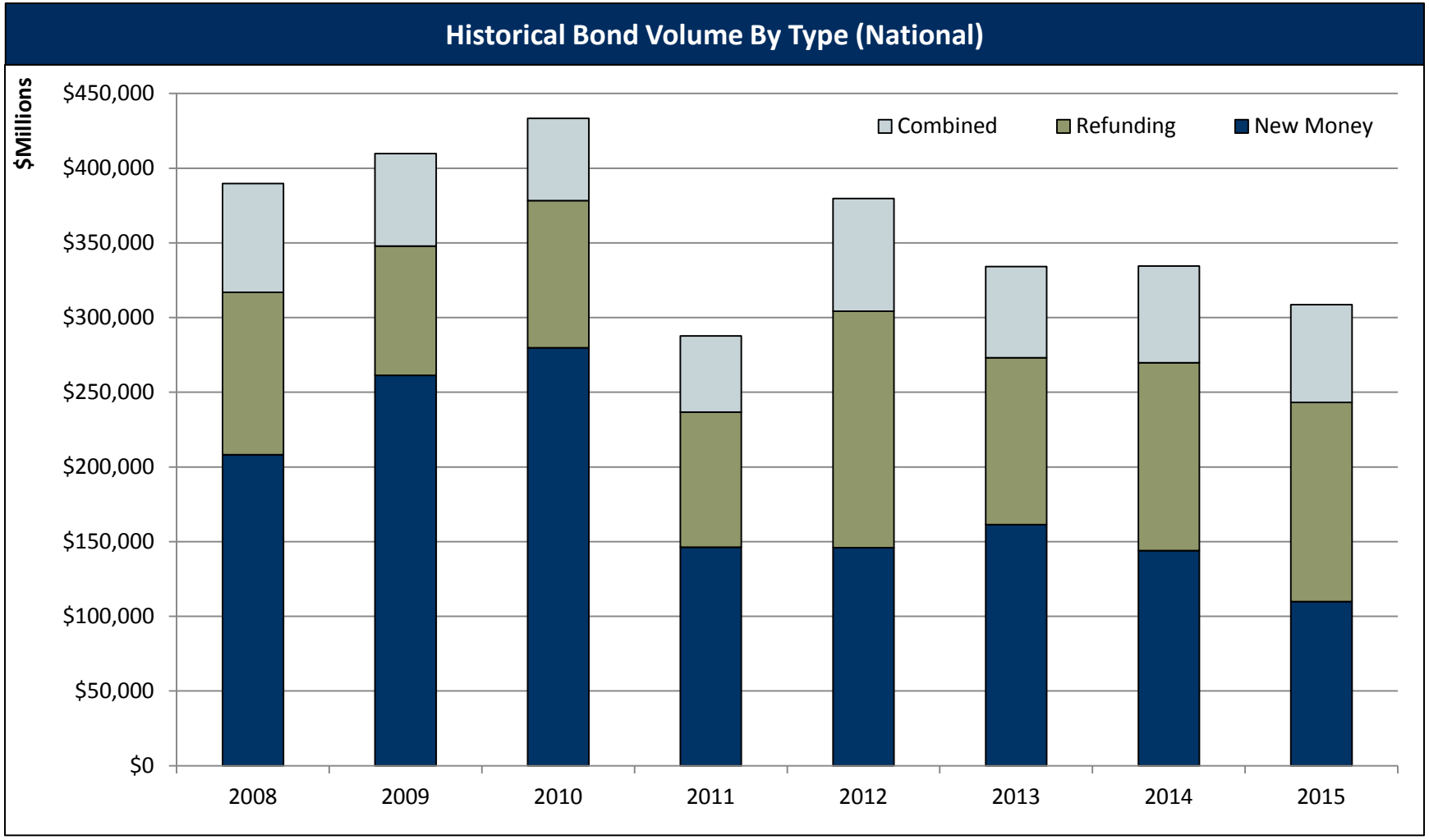
Source: Bloomberg – 10/28/2015
Data based on Fed Futures Contracts

National Municipal Market Volume 2008 – 2015 YTD

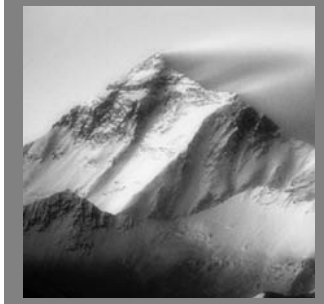


Source: The Bond Buyer and The Texas MAC
Excludes Texas TRANs

National Municipal Market Volume 2008 – 2015 YTD

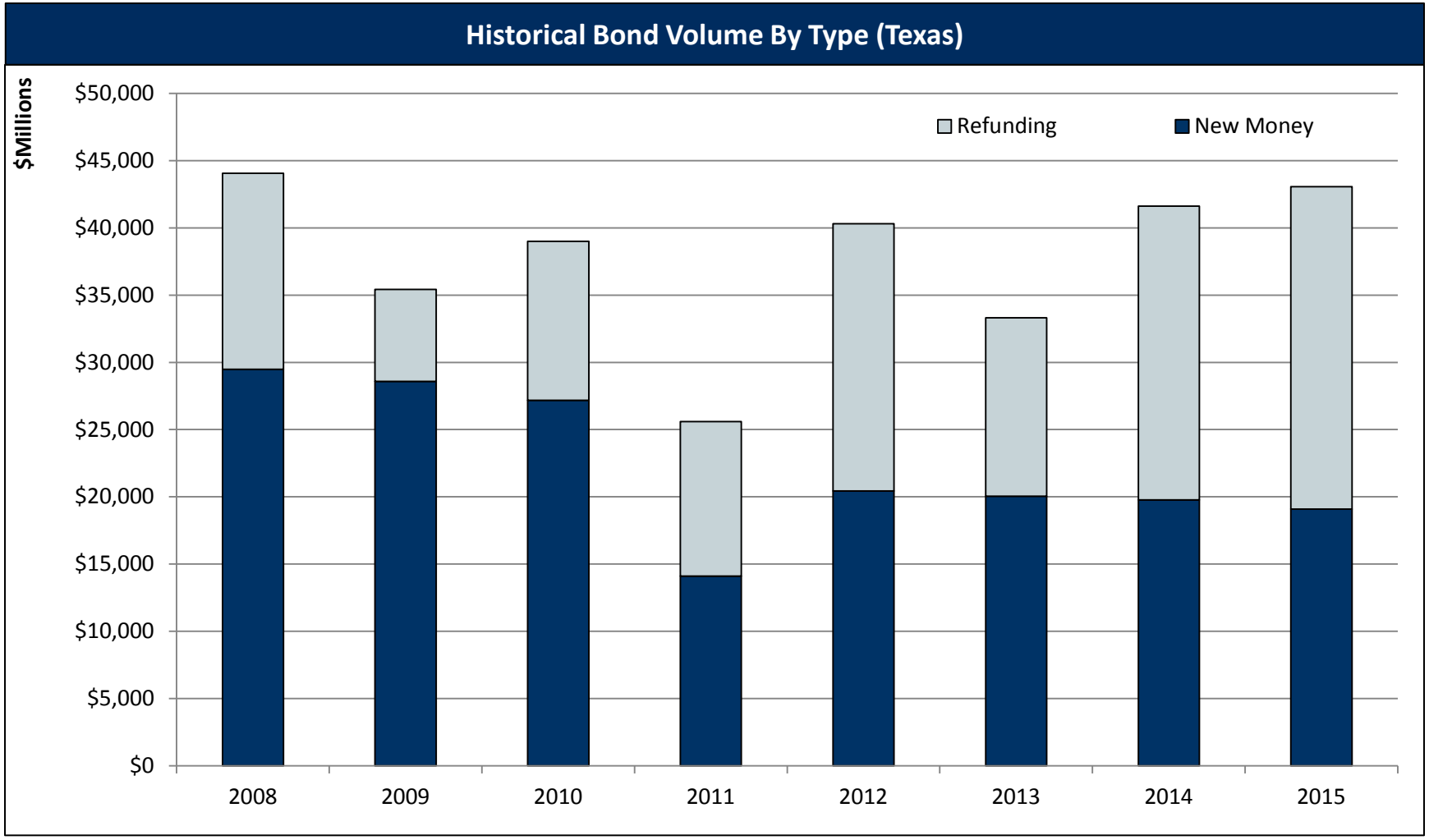


Source: The Bond Buyer



II. The Municipal Market - Texas Perspective

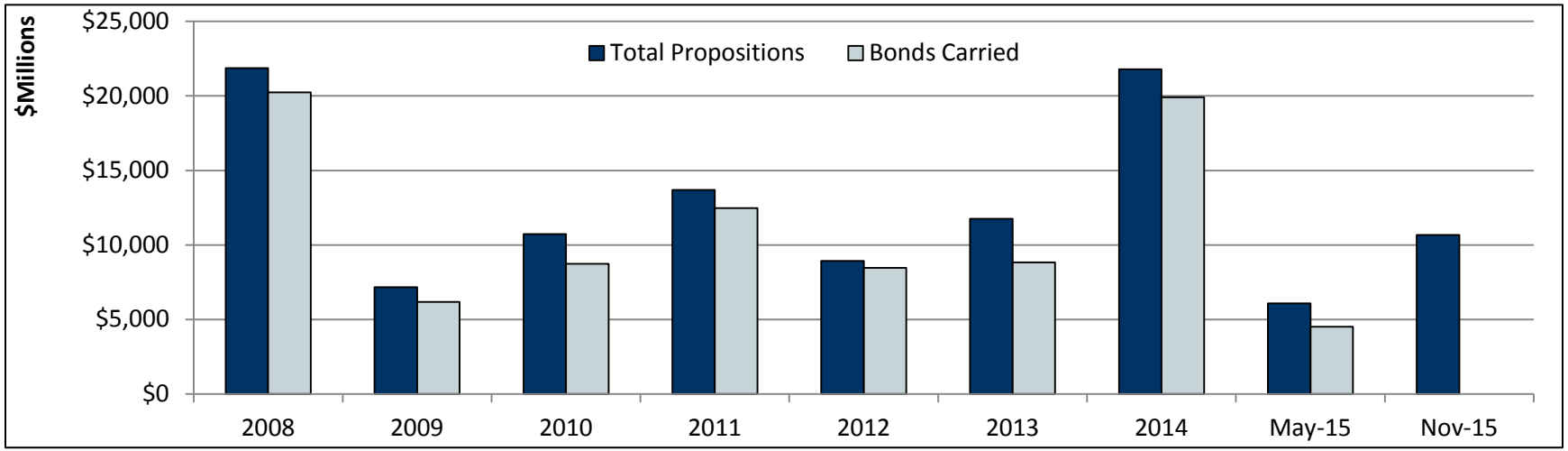
Texas Municipal Market Volume 2008 – 2015 YTD



Source: The Texas MAC
Excludes Texas TRANs

Texas Bond Elections Reflect State's Economic Growth

	Issuer Type	Elections	Total Propositions	Bonds Carried	Carried %	Issued	Unissued
2015 (Proposed November)	Cities	16	767,095,920	-	-	-	-
	Counties + Road Dist + Tollway Auth	7	1,557,875,000	-	-	-	-
	Community Colleges	1	425,000,000	-	-	-	-
	Schools	39	6,353,570,000	-	-	-	-
	Water and Special Districts	17	1,573,061,009	-	-	-	-
2015 (November)	Total	80	10,676,601,929				
2015 (May)	Total	103	5,957,053,005	4,381,507,430	73.55%	1,862,000,511	2,519,506,919
2014	Total	192	21,783,885,023	19,913,556,722	91.41%	5,685,763,387	14,227,793,335
2013	Total	228	11,749,594,190	8,836,841,190	75.21%	5,458,149,082	3,378,692,108
2012	Total	127	8,653,672,935	8,205,392,935	94.82%	4,093,836,326	4,111,556,609
2011	Total	161	13,695,905,035	12,483,060,035	91.14%	3,899,507,965	8,583,552,070
2010	Total	171	10,727,114,000	8,734,413,000	81.42%	5,613,337,000	3,121,076,000
2009	Total	138	7,177,712,267	6,188,802,267	86.22%	2,249,702,384	3,939,099,883
2008	Total	240	21,873,677,101	20,232,918,101	92.50%	11,801,577,274	8,431,340,827



Source: The Texas MAC

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The Municipal Market - Texas Perspective

- Texas is the second largest issuing state, behind California.

State	2015 YTD Volume ($MM)	Rank	2014 Volume ($MM)	Rank
California	43,059.10	1	33,616.70	1
Texas	37,779.90	2	28,292.20	2
New York	30,621.90	3	24,666.30	3
Florida	16,107.40	4	9,719.90	5
Pennsylvania	15,253.10	5	7,439.30	6
Washington	11,026.40	6	5,936.80	11
Michigan	9,581.80	7	6,323.20	9
Illinois	9,380.00	8	10,590.70	4
Ohio	7,219.30	9	6,233.00	10
New Jersey	6,990.70	10	7,211.10	8
Massachusetts	6,504.80	11	7,244.80	7
Georgia	6,176.80	12	4,148.80	17
Virginia	6,004.90	13	4,564.20	16
Minnesota	5,994.70	14	5,211.50	13
North Carolina	5,460.20	15	2,935.40	23
Wisconsin	5,362.70	16	4,024.90	18
Arizona	5,312.00	17	3,555.10	19
Maryland	5,104.10	18	4,626.00	15
Connecticut	5,092.70	19	4,899.60	14
Oregon	4,918.90	20	2,560.20	26

Source: The Bond Buyer

The Municipal Market - Credit Rating Distribution by State ($MM)

State	Total Outstanding	Rated	Unrated	AAA	AA	A	BBB	High-Yld
California	527,229	476,883	50,347	8,727	223,542	203,540	21,790	19,284
New York	370,342	342,393	27,950	18,349	237,125	66,530	11,630	8,760
Texas	**310,636**	**283,606**	**27,030**	**117,354**	**96,588**	**50,414**	**17,116**	**2,134**
Illinois	151,666	134,296	17,369	5,985	45,473	65,652	16,410	775.80
Florida	139,622	123,662	15,960	2,730	56,373	59,629	4,215	715.60
Virginia	59,502	56,246	3,256	15,364	32,820	3,572	2,395	2,094

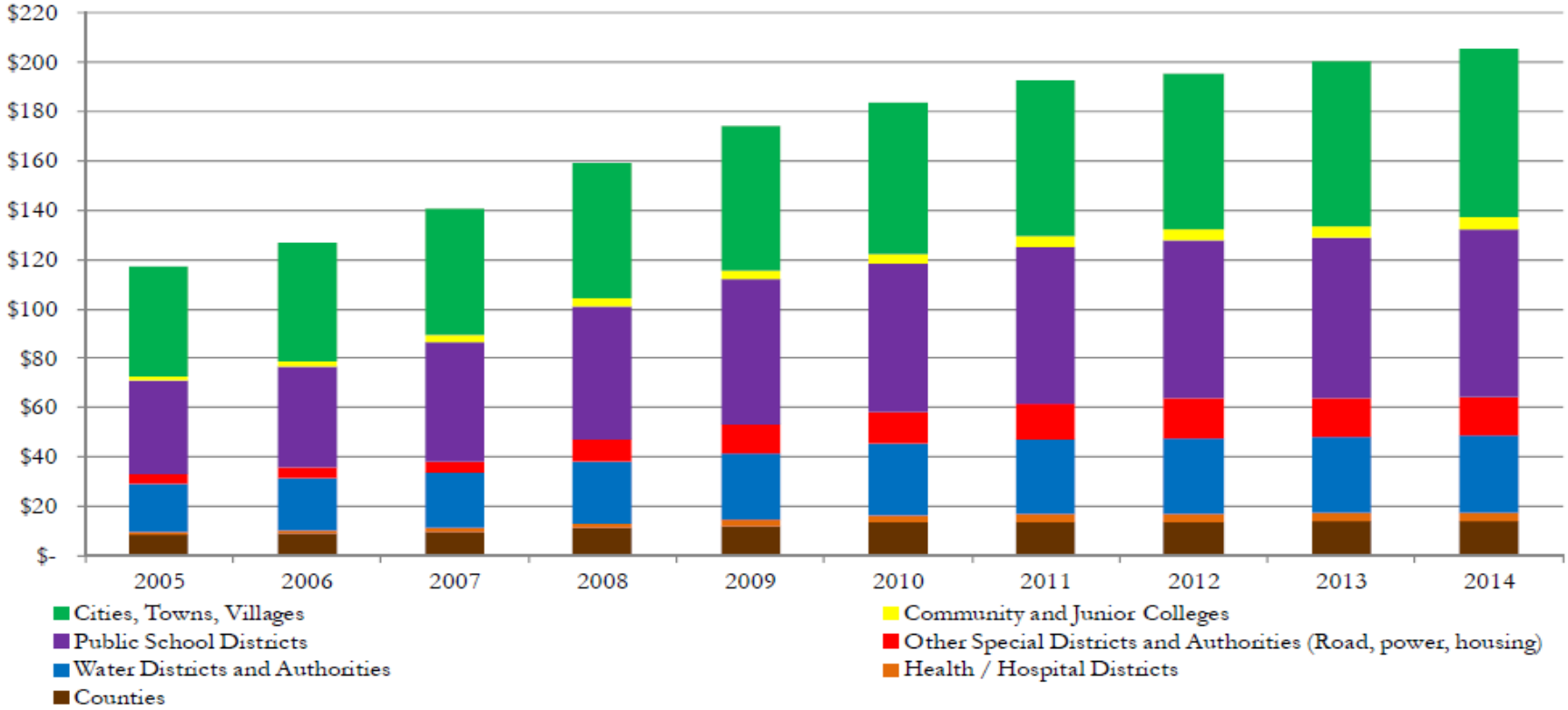
State	Total Outstanding	Rated	Unrated	AAA	AA	A	BBB	High-Yld
California	527,229	90.45%	9.55%	1.66%	42.40%	38.61%	4.13%	3.66%
New York	370,342	92.45%	7.55%	4.95%	64.03%	17.96%	3.14%	2.37%
Texas	**310,636**	**91.30%**	**8.70%**	**37.78%**	**31.09%**	**16.23%**	**5.51%**	**0.69%**
Illinois	151,666	88.55%	11.45%	3.95%	29.98%	43.29%	10.82%	0.51%
Florida	139,622	88.57%	11.43%	1.95%	40.38%	42.71%	3.02%	0.51%
Virginia	59,502	94.53%	5.47%	25.82%	55.16%	6.00%	4.02%	3.52%

Source: SIFMA Municipal Credit Report, Second Quarter, 2015

Texas Local Government Debt Outstanding

- Over 3,500 issuers in Texas; about 1,600 issues in 2014.
- Last year, local issuers were the biggest issuers.

Texas Local Government Debt Outstanding ($ Billions)



*Local debt outstanding for FY 2012 and FY 2013 has been reduced by cash defeasances totaling an estimated $8.20 billion.
Source: Texas Bond Review Board - Bond Finance

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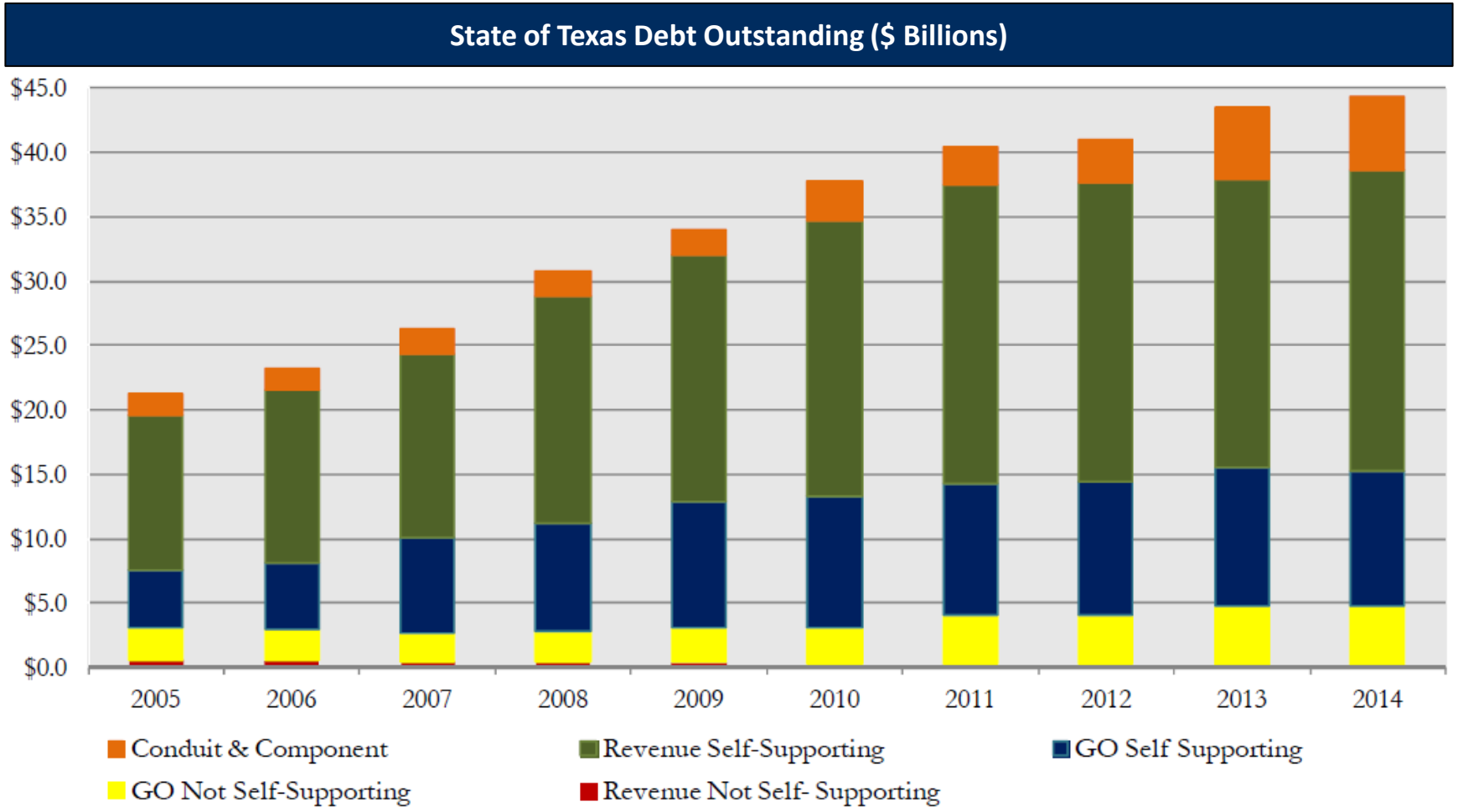
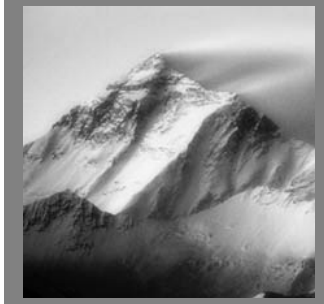
State of Texas Debt Outstanding



Source: Texas Bond Review Board - Bond Finance Office



III. Who Buys Municipal Bonds?

Who Buys Municipal Bonds?

Municipal Issuer

↓

Underwriter

Retail Investors

- Individuals buying through a broker

Middle Markets

- Registered Investment Advisors
- Professional money managers (ex: fee-based advisors)
- Separately Managed Accounts ("SMA" or "Wrap Accounts")
- Trust Companies/ Bank Trust Departments

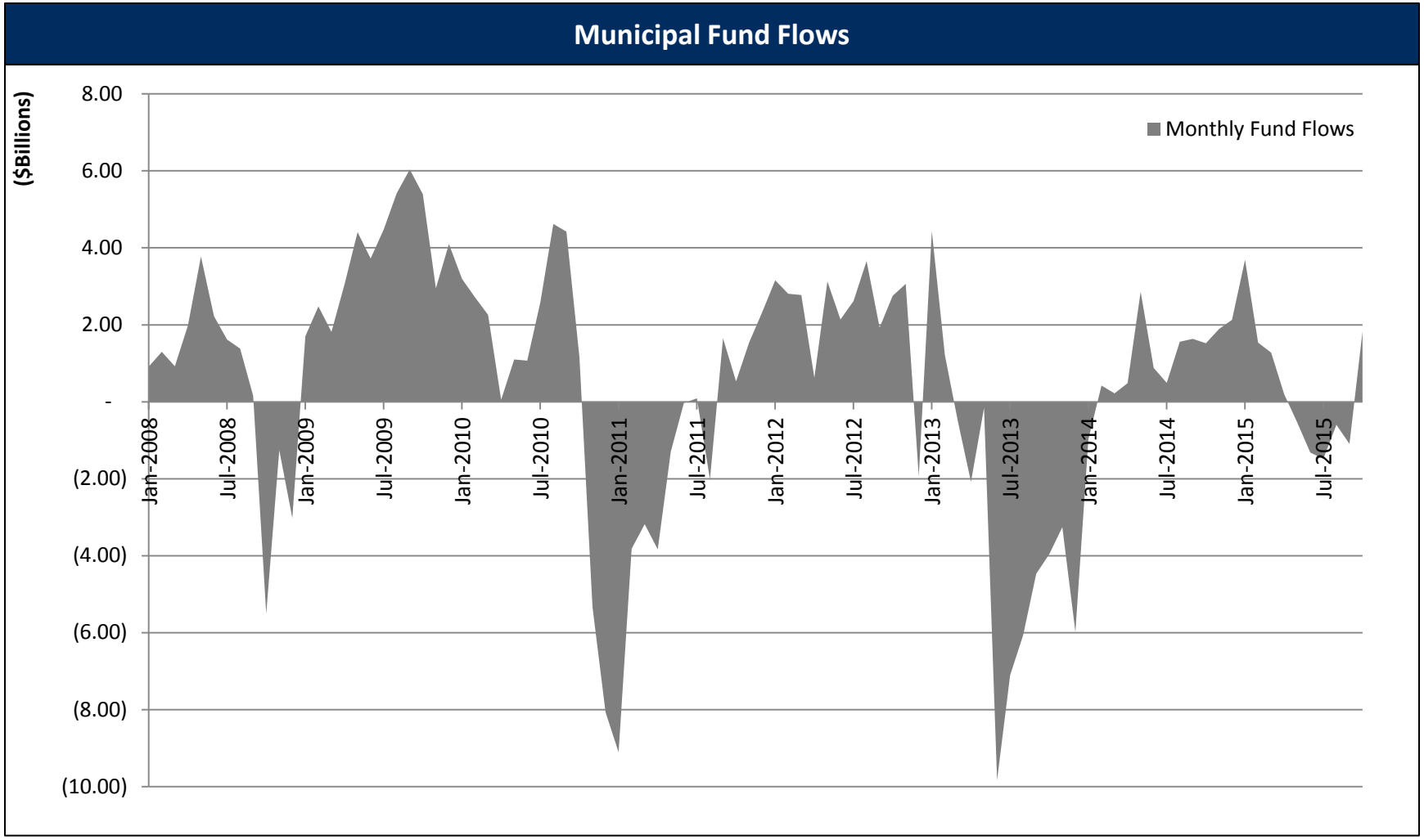
Institutional Investors

- Mutual Funds (Bond Funds, Money market funds)
- Insurance Companies
- Banks
- Hedge Funds/Arbitrage Accounts
- Pension Funds (taxables)
- Municipalities

"The Street"

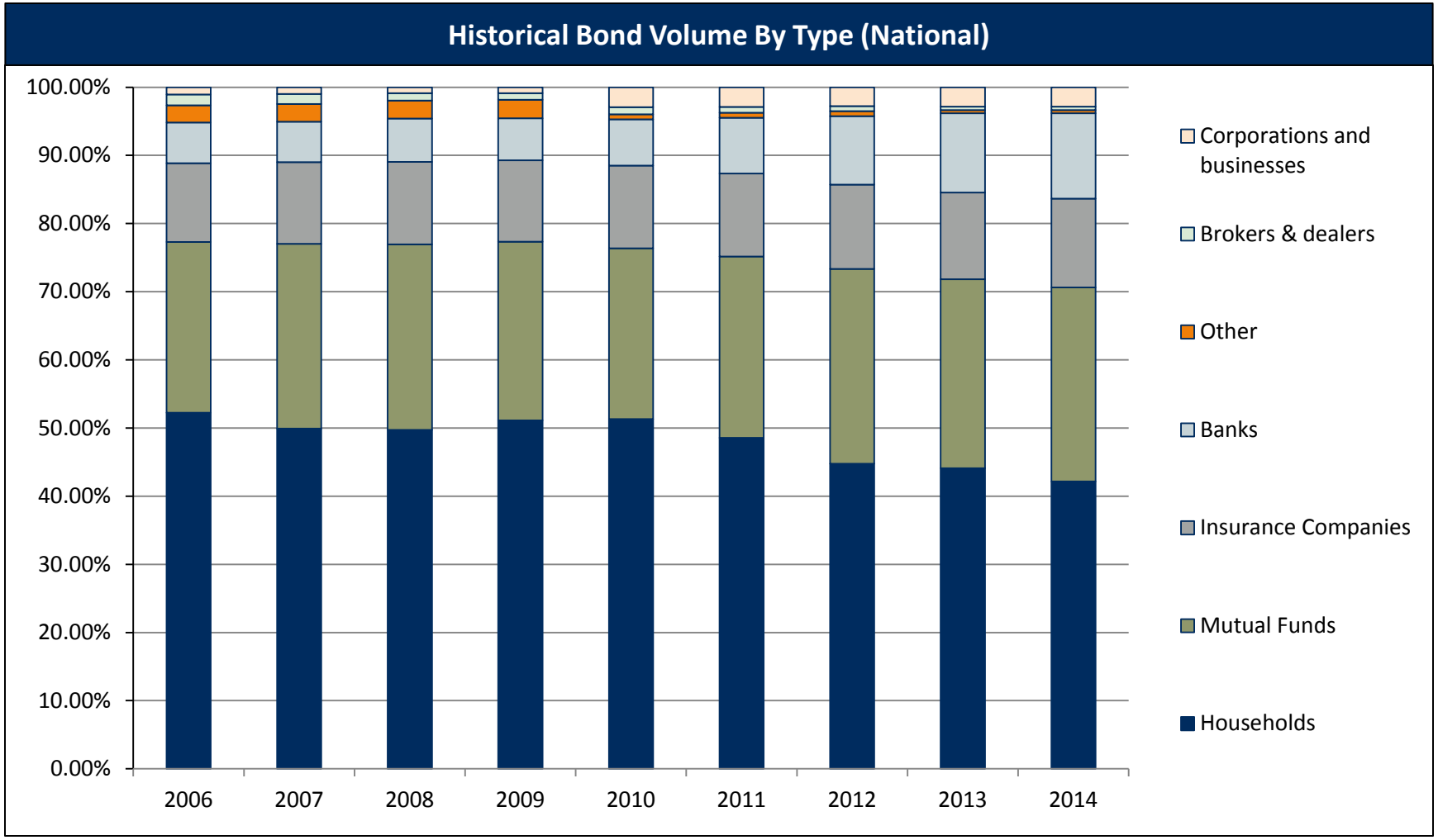
- Broker/Dealers buying inventory or to trade for their own account

Municipal Bond Mutual Fund Flows Measure Investor Demand



Source: Bloomberg

Holders of Municipal Bonds



Source: Federal Reserve Board

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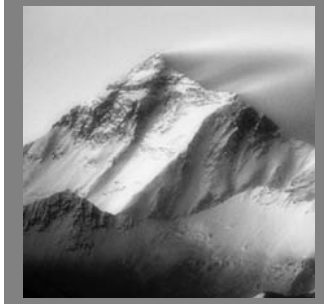
Different Maturities May Appeal to Different Buyers

1 year	▪ Money Market Mutual Funds (2a-7), Individuals, Corporations
2-5 years	▪ Retail: Individuals and Asset managers ▪ Corporations ▪ Municipalities ▪ Short term bond funds
5-10 years	▪ Retail: Individuals and Asset managers ▪ Intermediate bond funds ▪ Banks, Trust Departments
10-20 years	▪ Retail: Individuals (depending on yields) and Asset managers ▪ Insurance companies ▪ Bond Funds ▪ Hedge Funds/Proprietary trading desks for arbitrage accounts* **(no longer very active due to lack of leverage)*
30-40 years	▪ Bond Funds ▪ Insurance Companies ▪ Retail: Individuals looking for yield ex: 5% or higher



IV. Current Trends in Municipal Finance

Current Issues in Public Finance - Overview

- **Federal Regulatory Environment**
- **Hot Topics in Texas**
- **Refundings to lower debt service**
- **Short Term and Variable Rate products**
- **Public Improvement Districts**
- **Bank Qualified Bond Market**

Federal Regulatory Update – Continuing Disclosure

- **SEC Rule 15(c) 2-12 – Continuing Disclosure:** Requires Issuers of Municipal Securities to enter into an "undertaking" to provide continuing disclosure of certain financial and operating data disclosed in the OS (1994).
- **Federal Securities Exchange Act of 1934, Section 10-b-5 – Anti-Fraud provisions**
- **Post 2008/Dodd Frank –** SEC increased enforcement of these provisions, with a number of enforcement actions: Harrisburg PA (misleading statements outside of the offering documents, i.e., statements by an elected official), West Clark Community Schools (false claim of continuing disclosure compliance, inadequate due diligence by underwriter), Greater Wenatchee Regional Events Center (SEC assessed a financial penalty against an issuer)
- **March 2014 SEC launched the MCDC Initiative – Municipalities Continuing Disclosure Cooperation,** "a voluntary self-reporting program targeting material misstatements and omissions in municipal bond offering documents."
- **SEC has fined 58 firms to date** (36 in July, 2015 and 22 in October, 2015)
- **Issuers should develop processes and procedures for POS preparation and filing on-going continuing disclosure.**

Source: The Texas MAC

Federal Update – Misc.

- **Dodd-Frank Wall Street Reform and Consumer Protection Act, Section 975**
- **Municipal Advisor Rule (SEC Rule 15ba1-1, and MSRB Proposed Rule G-42):**

  - Unlawful to provide "advice" to or on behalf of a "municipal entity" or "obligated person" with respect to "municipal financial products" or the issuance of municipal securities unless you are registered with MSRB as a "Municipal Advisor."

  - Imposes a fiduciary duty on the municipal advisor in favor of the municipal entity that they advise

  - Municipal Advisor can not also act as an underwriter (MSRB Rule G-23)

  - Municipal Advisors will be required to pass a Qualification Exam (currently in pilot phase)
- **MSRB Initiatives:**

  - Municipal Advisor Rule

  - Market Structure/Price Transparency: Best Execution Rule, T+2, Retail Price Transparency

  - Bank Loan Disclosure: treat bank loans/private placements as a municipal security
- **Treasury/IRS – Issue Price Rules:** 10% actually sold to public vs. expected to be sold
- **Federal Budget Deal/Debt Ceiling –** SLGS Window to reopen, BABs Sequestration to continue through 2025
- **Highway Funding Bill passed**

Source: The Texas MAC

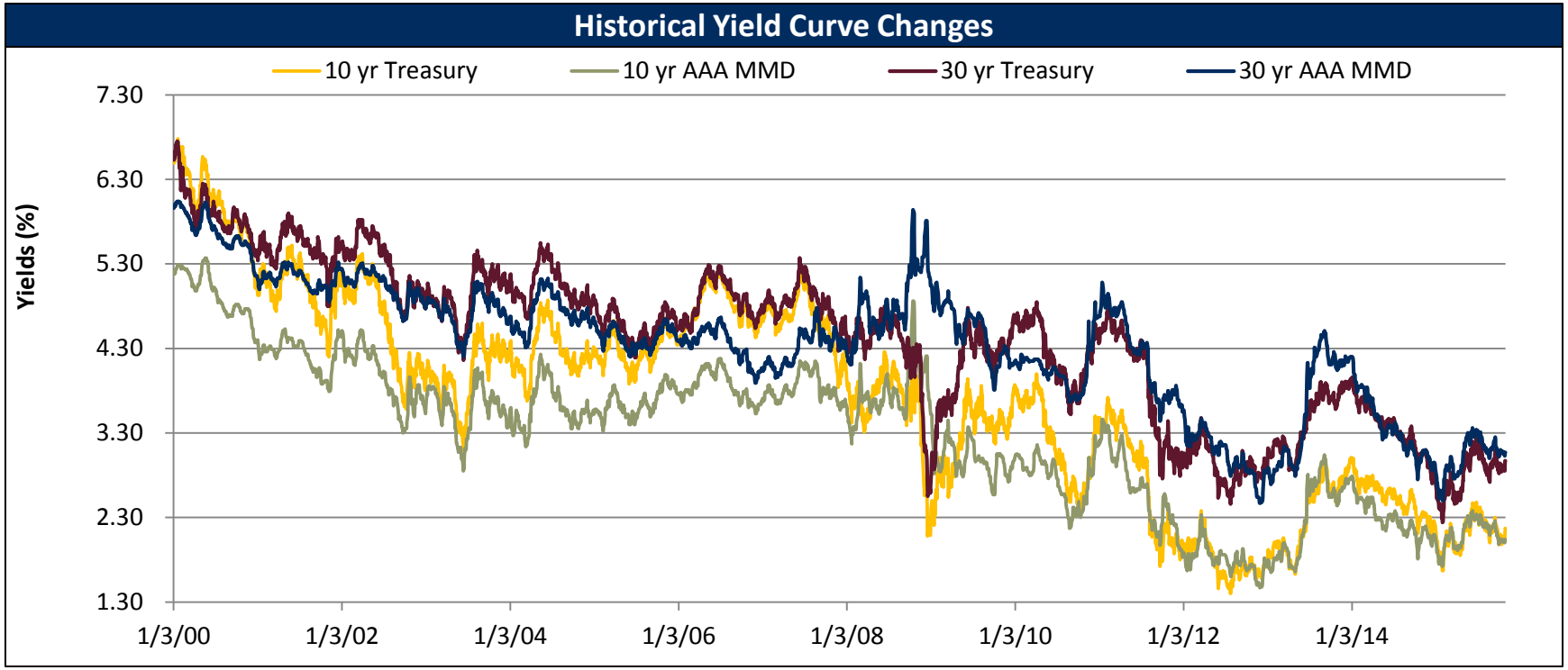
Hot Topics in Texas – 84th Texas Legislature

- **House Bill 114: Restricts use of Capital Appreciation Bonds**
- **House Bill 1378: Debt Transparency**
  (1) requires all cities to file an annual financial report with the state comptroller; and
  (2) prohibits the issuance of certificates of obligation when there has been a failed bond election on the same issue in the previous three years.
- **HB 3132: Municipal Advisors (Financial Advisor, Investment Advisor) –** requires registration, consistent with federal regulatory requirements imposed by Dodd Frank
- **HB 870/HB 1148 – Public Funds Investment Act Training –** after initial 10 hour training period, reduced to 8 hours every two years, or to zero if investments are limited to CD's or interest bearing accounts
- **HB 2679: Public Facility Corporation "Clean up" bill**
- **School Finance Lawsuits –** Judge reheard arguments reflecting additional funding; Ruling not likely until 2016, some likelihood of a special session.

Source: The Texas MAC

Refunding – Refinancing Debt to Lower Debt Service

- Most bonds are issued with a call option which allows the issuer to call the bonds prior to maturity. Typically, 10 year, par call (Debt Issuance: Chapter 1371 Gov't. Code; Refundings Chapter 1207)
- Refunding – issue new bonds (Refunding) to pay off old bonds (Refunded) with an Escrow Account.
- **Refunding economics depend on four variables: coupon of the old bonds, interest rates on the refunding bonds, length of time to the call date, interest rates on the escrow(taxable market).**



Source: TM3

Overview of Refunding Bonds and Bond Issuance Process

- Federal Tax Law allows you to advance refund bonds only one time prior to the call date on a tax-exempt basis.
- **Advance Refunding** – Refunding bonds are issued prior to 90 days before the call date of the refunded bonds. Proceeds of the refunding bonds are placed in an escrow account, invested in Treasury securities, and used to pay debt service on the refunded bonds until the call date.
- **Current Refunding** – Refunding bonds are issued within 90 days of the call date, so the escrow account is only funded for 90 days or less.
- **"Negative Arbitrage"** – In the current interest rate environment, the interest rate on the escrowed investments may be less than the interest rate on the refunding bonds; however, overall, savings can still be positive since the interest rate on the new bonds is so low. The shorter the escrow period, the lower the negative arbitrage.
- **Taxable Advanced Refundings** – It may be possible to issue taxable advance refunding bonds and still obtain debt service savings. Do you "wait it out" until the call date and hope that rates do not go up, or do you do a taxable advance refunding?
- Issuing refunding bonds is like any other bond issue – the Issuer needs to hire Bond Counsel and a Financial Advisor and obtain credit ratings. Combining a refunding with a new money issue may present some economies of scale in terms of issuance costs and administrative effort.

Refunding Case Study

Summary of Refunding Results	
General Obligation Bonds	
Par Amt of Refunded Bonds ($):	18,630,000
Par Amt of Refunding Bonds ($):	17,095,000
True Interest Cost:	3.04%
NPV Savings (%):	9.40%
NPV Savings ($):	1,750,814
Savings ($):	2,172,704
Negative Arbitrage ($):	579,444
Negative Arb/NPV Savings:	33.10%

Debt Service Savings			
FYE (9/30)	Prior Net DS	Refunding DS	Savings
2016	342,628	316,668	25,960
2017	920,494	850,750	69,744
2018	1,212,994	1,050,750	162,244
2019	1,160,869	999,750	161,119
2020	1,213,119	1,052,000	161,119
2021	2,027,019	1,866,250	160,769
2022	2,100,750	1,944,250	156,500
2023	2,374,750	2,215,750	159,000
2024	2,374,375	2,215,750	158,625
2025	2,375,000	2,217,000	158,000
2026	2,373,875	2,214,250	159,625
2027	2,373,375	2,212,500	160,875
2028	2,373,250	2,211,500	161,750
2029	2,373,250	2,216,000	157,250
2030	2,375,625	2,215,500	160,125
	27,971,372	**25,798,668**	**2,172,704**

Refunding Case Study

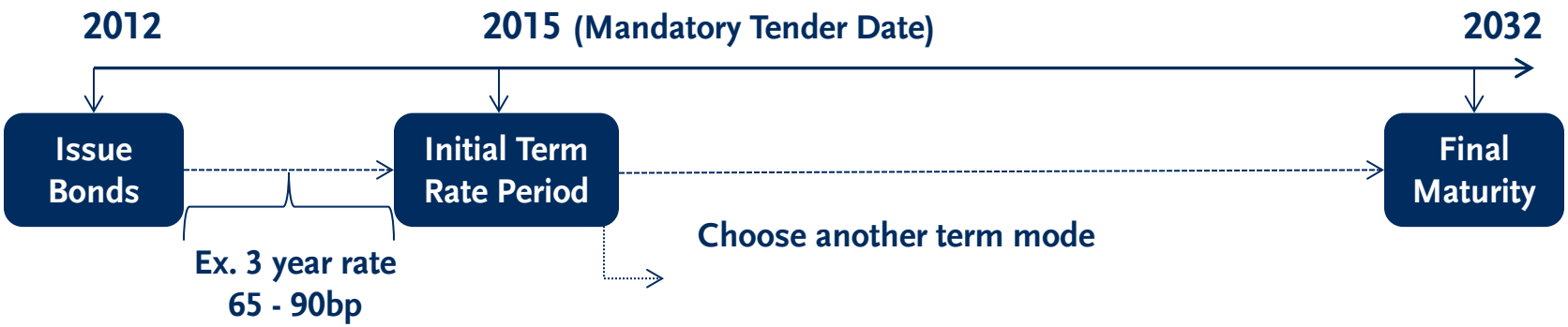
Maturity by Maturity Savings Analysis						
Refunded Maturity	Refunded Coupon	Refunded Par ($)	PV Savings ($)	PV Savings (%)	Negative Arb ($)	Negative Arb/ NPV Savings
Series 2008 General Obligation Bonds - Callable 4/1/2017						
4/1/2018	5.000%	292,500	6,585	2.25%	1,826	27.70%
4/1/2019	5.000%	255,000	12,791	5.02%	2,777	21.70%
4/1/2020	4.250%	320,000	16,168	5.05%	4,749	29.40%
4/1/2021	4.250%	1,147,500	68,209	5.94%	21,471	31.50%
4/1/2022	5.000%	1,270,000	123,402	9.72%	28,672	23.20%
4/1/2023	5.000%	1,607,500	165,228	10.28%	41,828	25.30%
4/1/2024	5.000%	1,687,500	195,216	11.57%	46,225	23.70%
4/1/2025	5.000%	1,772,500	222,012	12.53%	51,225	23.10%
4/1/2026	5.000%	1,860,000	234,913	12.63%	58,078	24.70%
4/1/2027	5.000%	1,952,500	227,890	11.67%	63,895	28.00%
4/1/2028	5.000%	2,050,000	221,032	10.78%	69,877	31.60%
4/1/2029	5.000%	2,152,500	207,978	9.66%	76,880	37.00%
4/1/2030	5.000%	2,262,500	202,030	8.93%	83,264	41.20%

Public Improvement Districts

- Texas Public Improvement Districts authorized under Local Government Code Chapter 372.
- Special limited purpose financing vehicle for public improvements
- Funded by a property assessment, which is a lien that remains on the property regardless of subsequent ownership.
- The assessment is established annually at a fixed dollar amount to cover cost of services. It is not an ad valorem tax.
- Can be used to finance core infrastructure and community amenities for new development, through a bond issue
- Can also be established in existing areas, such as a Central Business District, to finance landscape or street scape improvements
- PID is created by the City – it is not a political subdivision of the State or separate legal entity.
- Powerful in that it allows for the tax exempt monetization of assessments and other contracted revenue streams such as TIRZ, 380 agreements and impact fees.

Variable Rate Alternatives: Term Mode ("Soft Put") Bonds

- Long term bond (20 – 30 years) with provisions to allow the issuer to change the interest rate mode from time to time: fixed mode, weekly mode, or daily mode.
- A Term Mode (i.e. "Soft Put") structure would be priced and bear a fixed interest rate through the initial term rate period. The initial term can range from 1 to 5 years, depending on investor demand and the Issuer's preferences.
- The Issuer will pay a fixed rate during the initial "term" period that reflects the term (one year rate, two year rate, etc), eliminating any interest rate risk during the term. With the short end of the yield curve experiencing very low yields, the overall fixed rates are favorable.
- At the end of the initial term, the Issuer would have the option to convert the bonds to another mode, including fixed rate, or remarket the bonds for another term rate period.



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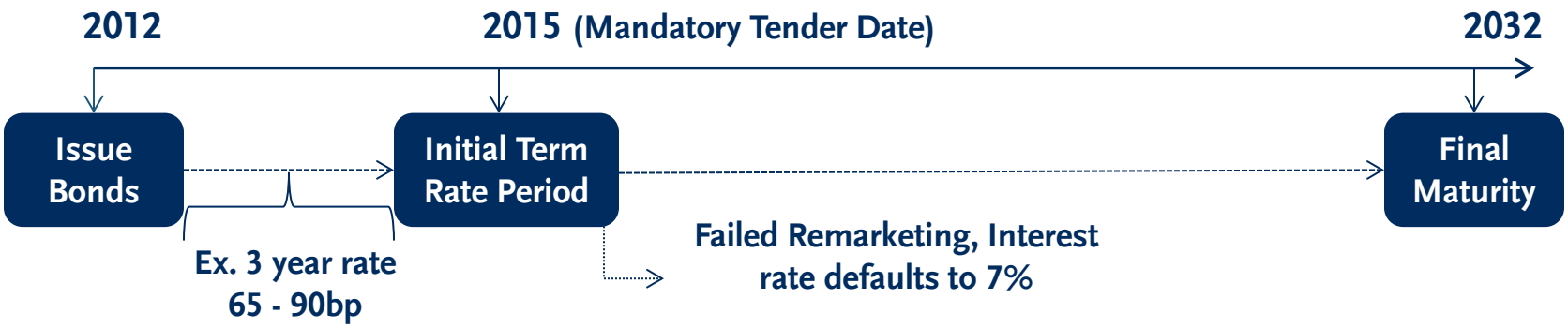
Variable Rate Alternatives: Term Mode ("Soft Put") Bonds

- If for some reason the Bonds are unable to be remarketed at the Mandatory Tender Date, the interest rate on the Bonds would increase to an amount stated in the bond documents.
- **However, a failed remarketing would not constitute an event of default.** The maximum interest rate in Texas is 15%, however typically the Issuer's rate will be between 7% and 10%. This rate can be determined/negotiated based on market acceptance and the Issuer's requirements .
- Unlike a VRDB, the Soft Put structure eliminates counterparty risk and remarketing risk.
- During the entire initial term, the put bonds would not be subject to interest rate changes, market dislocations, or trading differentials due to a credit provider.
- Similar to a VRDB, a Soft Put structure would expose the Issuer to interest rate risk and market access risk at the end of the initial term.



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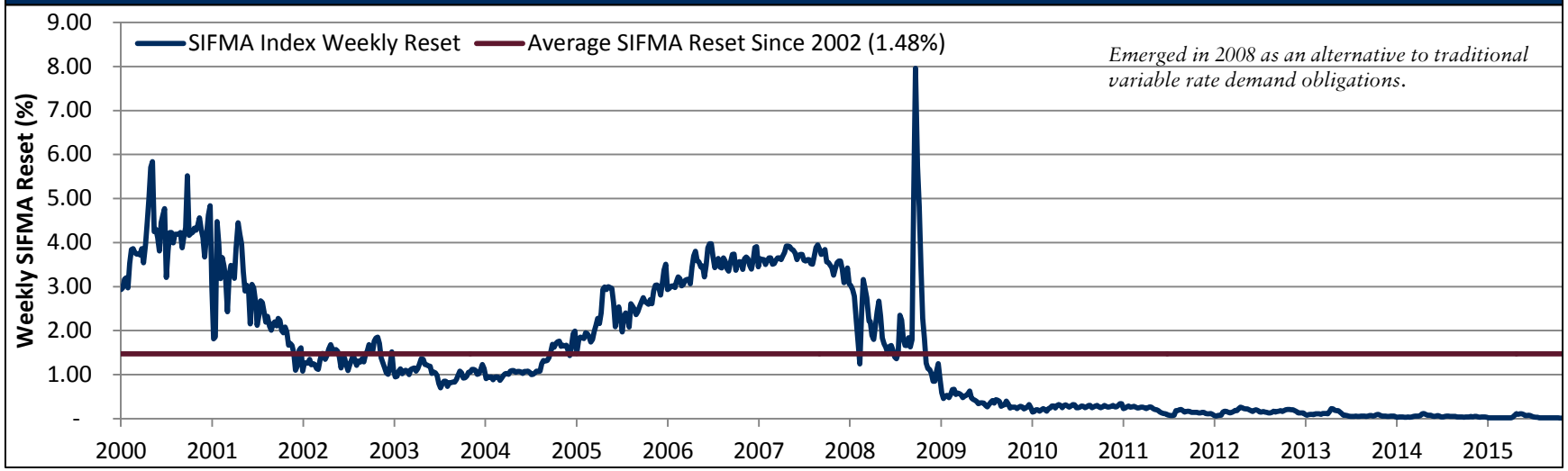
Variable Rate Alternative: Indexed Floating Rate Bonds

- Variable rate, reset weekly, based on a spread to an index such as SIFMA, or CPI (Securities Industry and Financial Markets Association Municipal Swap Index).
- Interest usually paid monthly.
- Since the interest rate fluctuates, the price of the security stays at par, which limits the risk for a bank to hold it on its balance sheet.
- Bondholder's risk is limited to issuer's credit risk – i.e., the spread to SIFMA widens if credit quality declines.
- Provides bondholder a hedge against rising interest rates.
- Provides issuer access to short-term interest rates with no remarketing or liquidity fees.
- Can be combined with the "Soft Put" term bond structure.

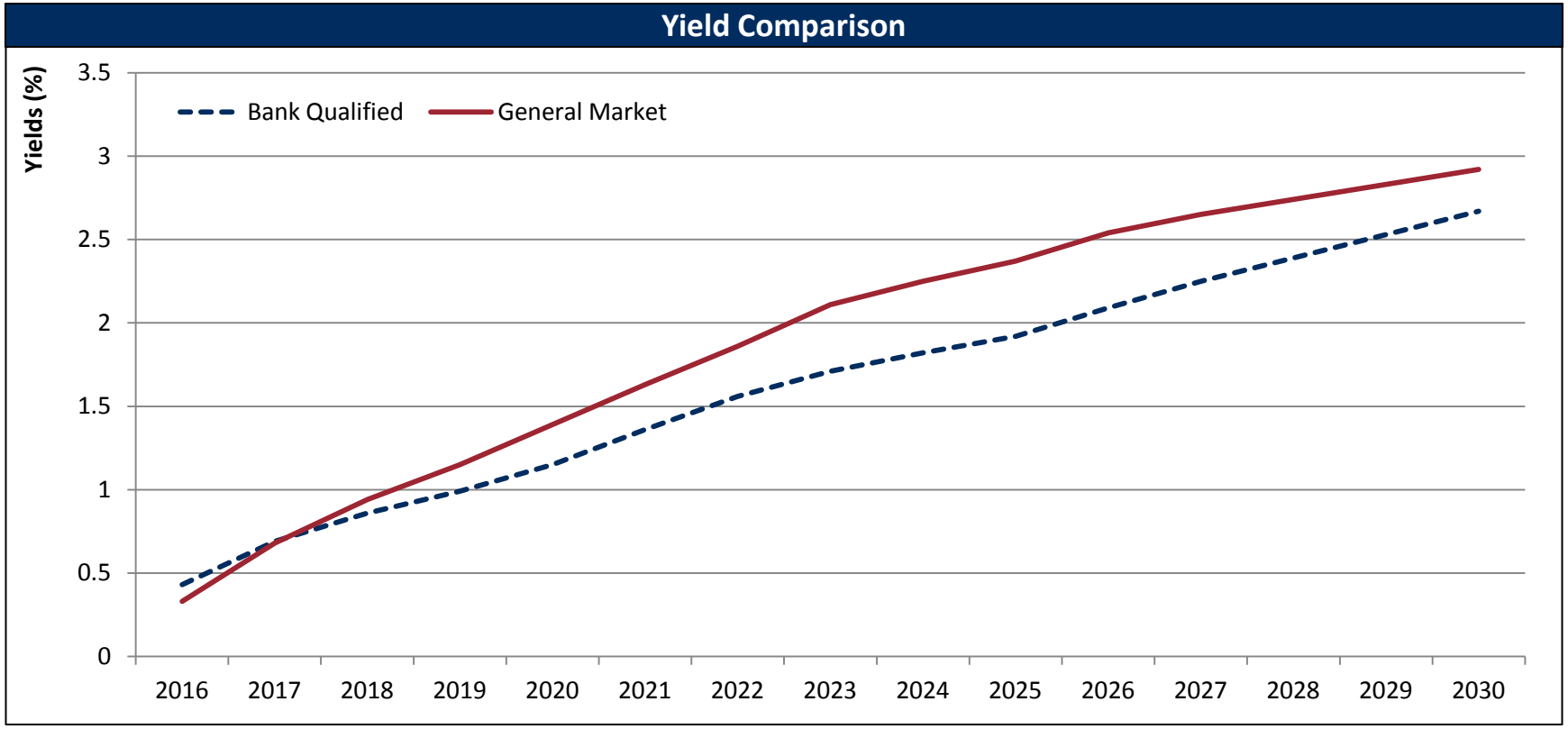
SIFMA Index Weekly Reset 2000 – Present



Source: SIFMA

Bank Qualified vs. Tax-Exempt Rates

- "Bank Qualified" – Banks receive a tax-advantage to holding municipal bonds issued by "small issuers" (Less than $10 million per calendar year), so a bank will pay a lower interest rate for "BQ" bonds. When purchased by a commercial bank for its portfolio, the bank may deduct a portion of the interest cost of carry for the position. A bond that is bank qualified is also known as a "qualified tax-exempt obligation." (Section 256(b) Internal Revenue Code).



Representative AA GO Clients.
Yields as of 10/30/2015.

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