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BONDS 101 AND MARKET UPDATE

October 19, 2018

Martin Ghafoori
Director
(314) 342-8467
ghafoorim@stifel.com

Dan Smith
Vice President
(314) 609-4126
dan.smith@stifel.com

Bonds 101

Bond Basics

- Bonds = loans
  - – Typically issued in $5,000 increments, or denominations
- Repaid with property tax or other revenue source.
  - – Limited by law and set by the taxing jurisdiction.
- <u>May</u> need voter approval.

Bond Basics

- **Multi-trillion dollar marketplace**
- Borrowed money repaid over time
  - Semi-annual interest payments
  - Annual principal payments
- Tax-exempt bonds are issued to finance a variety of capital improvements that benefit the citizens of a particular area.

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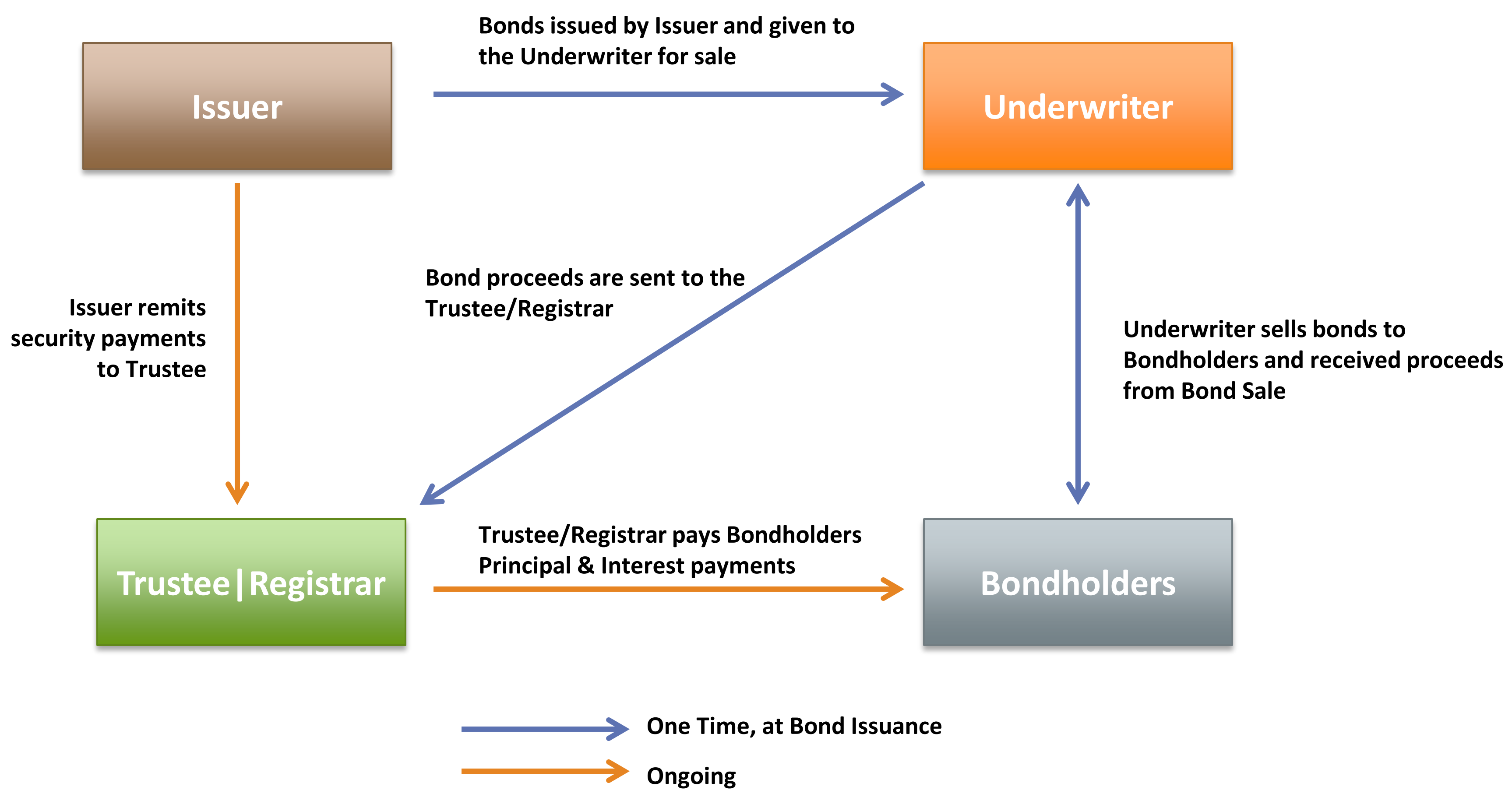
Bonds issued by Issuer and given to the Underwriter for sale
Issuer
Underwriter
Issuer remits security payments to Trustee
Bond proceeds are sent to the Trustee/Registrar
Underwriter sells bonds to Bondholders and received proceeds from Bond Sale
Trustee|Registrar
Trustee/Registrar pays Bondholders Principal & Interest payments
Bondholders
One Time, at Bond Issuance
Ongoing

Types of Bond Financing Options

- General Obligation Bonds
- Annual Appropriation or Lease Debt
  - Certificates of Participation
  - Lease-backed Financing
- Revenue Bonds

Considerations of General Obligation Bonds and Lease Debt

General Obligation Bonds	Lease Debt
- Supported by an ad valorem tax on real property within the issuer's limits	- May need voter approval - Only requires simple majority for voter approval of new operating levy (if needed)
- Require voter approval of 4/7 or 2/3 majority, depending on bond election date	- Does not require voter approval if it can be paid from current operating levy or revenues of the proposed project
- Higher credit rating	- Lower credit rating
- Lower interest rates	- Slightly higher interest rates
- Debt limit as a % of assessed valuation (based on type of municipal entity)	- No debt limit
- Maximum maturity of 20 years	- Maximum maturity of 30+ years, depending on security

Debt Limitations

- General Obligation Bonds
  - School District: 15% of Assessed Valuation
  - City: 20% of Assessed Valuation[1]
  - Fire District: 5% of Assessed Valuation
  - County: 10% of Assessed Valuation

- Lease Debt & Revenue Bonds
  - Not limited by assessed valuation
  - Limited by available revenue for repayment (operating revenue)

[1] 10% of Assessed Valuation for general improvements, 10% of assessed valuation for road and sewer improvements, 10 % of assessed valuation for the purpose of water, electric or light plant improvements (so long as the total indebtedness does not exceed 20%)

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Key Steps to Issuing Bonds

Step 1: Initial Process
• Identify project scope and repayment source
• Receive voter authorization, if applicable, for new tax or General Obligation Bond authority
Step 2: Engage Participants
• Bond Counsel, Paying Agent, Underwriter, Architects, etc.
• Begin preparation of issue documents, conduct due diligence
Step 3: Structure the Issue
• Maturity structure, call provisions, sizing and bond insurance
Step 4: Market the Issue
• Prepare Official Statement, Receive Bond Rating, Advertising Strategy
• Advertise in local newspapers and post ads on website and social media (sample to the right)
Step 5: Complete and Close the Issue
• Sale Date/Pricing
• Print Official Statement (Offering Statement)
• Close Sale with the Issuer's receipt of Project Funds

Stifel, as bond underwriter, anticipates pricing the following ***TAX-EXEMPT*** bonds the week of June 19, 2017:

$85,000,000*

Jefferson City School District

General Obligation Bonds

(Missouri Direct Deposit Program) Series 2017

- Interest on the bonds will be free from federal and Missouri state income taxes.
- Anticipated bond rating of AA+ Program rating and AA- underlying rating by S&P.

For more information and a preliminary official statement, please call:

Alan D. Beatty
Financial Advisor

Grover D. Beatty, MBA
Senior Vice President/Investments

Anthony "Tony" C. Shanley
Associate Vice President/Investments

(573) 635-7997

or your Stifel financial advisor.

* Preliminary; subject to change

222 Madison Street | Jefferson City, Missouri 65101
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Step 6: Post closing
• Continuing disclosure
• Arbitrage rebate reporting
• Budget and tax rate setting
• Debt service schedule and annual reports

Election Calendar and Important Dates

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General Obligation Bonds		
Election Month	**Odd numbered years typically have the following approval requirements:**	**Even numbered years typically have the following approval requirements:**
February	2/3 majority approval	2/3 majority approval
April	4/7 majority approval	4/7 majority approval
August	2/3 majority approval	4/7 majority approval
November	2/3 majority approval	4/7 majority approval

(Election Dates are the first Tuesday after the first Monday in February, April, August and November.)

Election Deadlines for 2019 Elections	
Notice to Election Authority (Tuesdays)	**Election Days (Tuesdays)**
November 27 January 22 May 28 August 27	February 5 (1) April 2 (2) August 6 November 5

(1) Bond elections only; no other issues allowed.
(2) General obligation bond questions submitted on these election days require a four-sevenths majority (instead of the two-thirds majority required for all other election dates).

Revenue Sources

- Revenue sources available to the issuer vary by municipal entity, but generally include the following:
  - Debt Service Property Tax Levy (general obligation bonds)
  - General Fund (annual appropriation bonds)
  - Sales Tax
  - Capital Improvement Property Tax Levy
  - Special Assessment
  - Tax Increment

- Some types of Sales Taxes include the following:
  - General Fund
  - Road and Bridge
  - Law Enforcement
  - Capital Improvement
  - Economic Development

Credit Ratings

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Credit Rating Scales and Definitions

	S&P	Fitch	Moody's	
	AAA	AAA	Aaa	**Extremely strong capacity to meet financial obligations**
Investment Grade	AA+	AA+	Aa1	
	AA	AA	Aa2	
	AA-	AA-	Aa3	**Very strong capacity to meet obligations**
	A+	A+	A1	
	A	A	A2	**Strong financial capacity but susceptible to adversity**
	A-	A-	A3	
	BBB+	BBB+	Baa1	
	BBB	BBB	Baa2	**Adequate financial capacity but adverse conditions will lead**
	BBB-	BBB-	Baa3	**to weakness**
Non-Investment Grade	BB+	BB+	Ba1	
	BB	BB	Ba2	**Non-Investment Grade speculative**
	BB-	BB-	Ba3	
	B+	B+	B1	
	B	B	B2	**Highly speculative**
	B-	B-	B3	
	CCC+		Caa	
	CCC	CCC	Ca	**Extremely speculative**
	CCC-		C	
		DDD		
	D	DD		**Default**
		D		

Value of Obtaining an Underlying Rating

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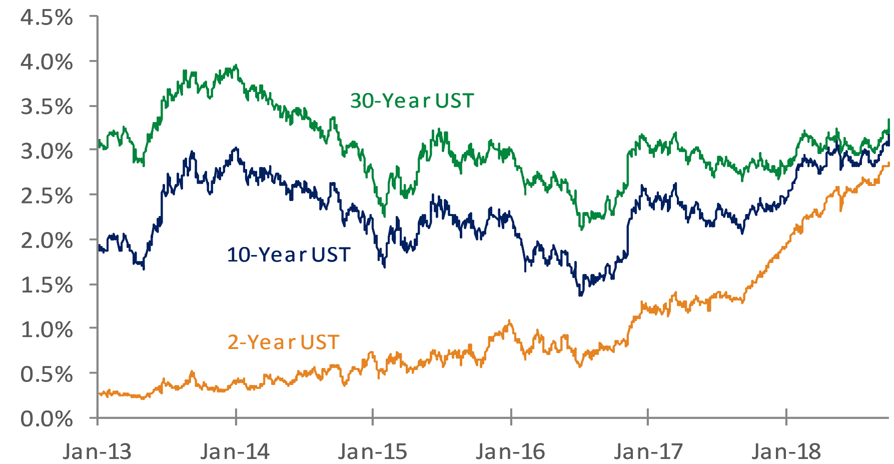
- Cost/benefit analysis
- Evaluates financial, economic and overall management of the Issuer
  - Provides investors with “relative” indication of credit quality
  - Issuer’s ability and willingness to repay debt obligation
- Rating Agencies charge a fee that is based on the type of issue, for example whether it is General Obligation or Annual Appropriation, as well as the par amount of the issue.
- General Obligation bonds and smaller issues are usually charged the lowest amount.

Market Update

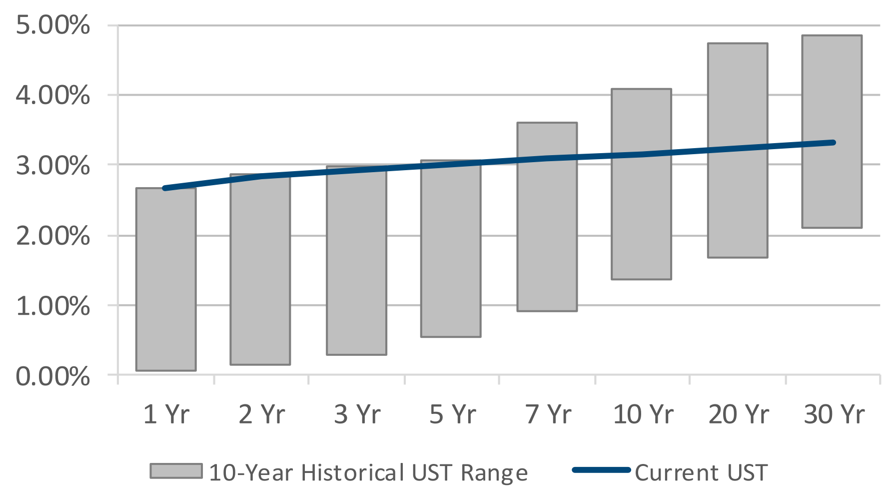
Financial Markets Overview

- **Fixed Income market volatility**
  - Treasury Market has seen enormous pressure over the last month, increasing volatility – 10yr treasury 3.16% on 10/15
  - Equity market volatility has negatively affected Treasury rates
- **Equity market volatility**
  - Strong market reactions to various economic indicators:
    - Strong ADP Employment report showed 230,000 jobs added in August, compared to expected 180,000 jobs
    - Unemployment at 3.7%, lowest since 1969
    - Renegotiated USMCA (NAFTA) deal and further trade concerns causing uncertainty
- **Market remains focused on the Federal Reserve**
  - Fed increased the Target Rate from 2.00% to 2.25% on September 26th, the 8th increase since December 2015
  - Market forecasts an additional rate hike at the Fed's December meeting with a 73% probability
- **Increasing fixed income yields and flattening curve**
  - On August 27th, the spread between the 2 and 10 year Treasuries fell to 18 bps, the lowest level in over a decade
  - Spread between the 2 and 10 year Treasuries expected to decline to 15 bps by Q4 2019
  - The 30 year Treasury is up 8 bps in the first two weeks of October

Treasury Market Yields



Historical Treasury Market Yield Ranges



Source: US Treasury Department, Bloomberg, Thomson Reuters. As of 10/11/18

Municipal Market Overview

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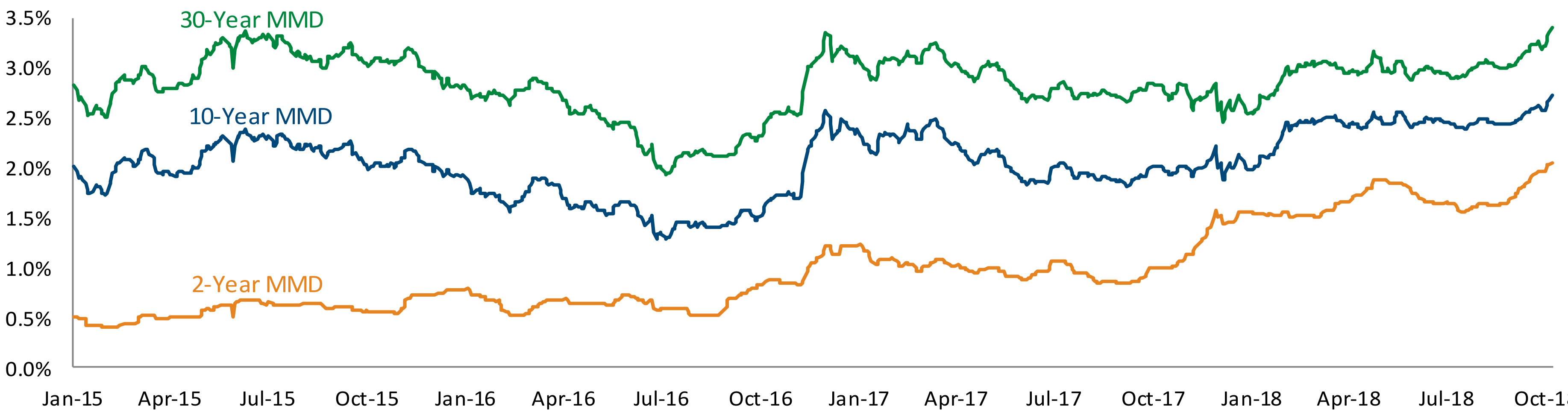
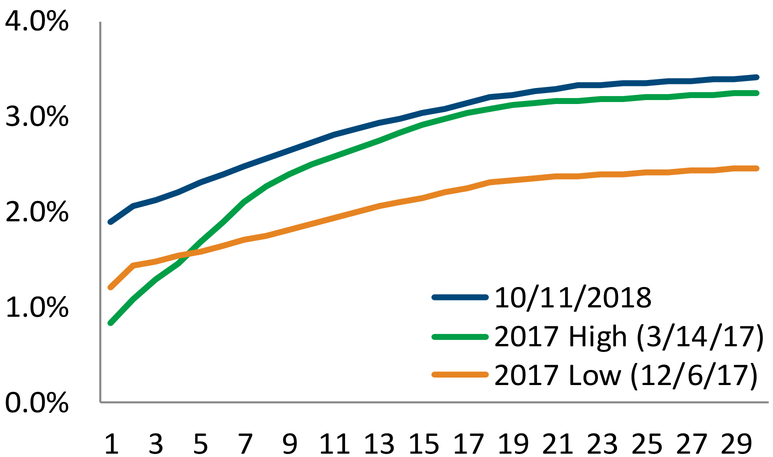
- **Yield curve has flattened as rates have risen**

'AAA' Municipal Market Data Yields



MMD Yield Curve



'AAA' MMD Yield Moves in 2018

	2 YR	10 YR	30 YR
Jan 2	**1.56%**	**1.98%**	**2.55%**
Jan 31	1.55%	2.35%	2.91%
Feb 28	1.52%	2.47%	3.05%
Mar 29	1.65%	2.42%	2.95%
Apr 30	1.87%	2.49%	3.09%
May 31	1.75%	2.41%	2.87%
Jun 29	**1.64%**	**2.46%**	**2.94%**
Jul 31	1.62%	2.45%	3.01%
Aug 31	1.70%	2.44%	3.02%
Sep 28	**1.97%**	**2.58%**	**3.19%**
Oct 11	**2.05%**	**2.73%**	**3.41%**
YTD Change	**0.49%**	**0.75%**	**0.86%**

Source: Thomson Reuters. As of 10/11/18

Municipal Market Weekly Supply

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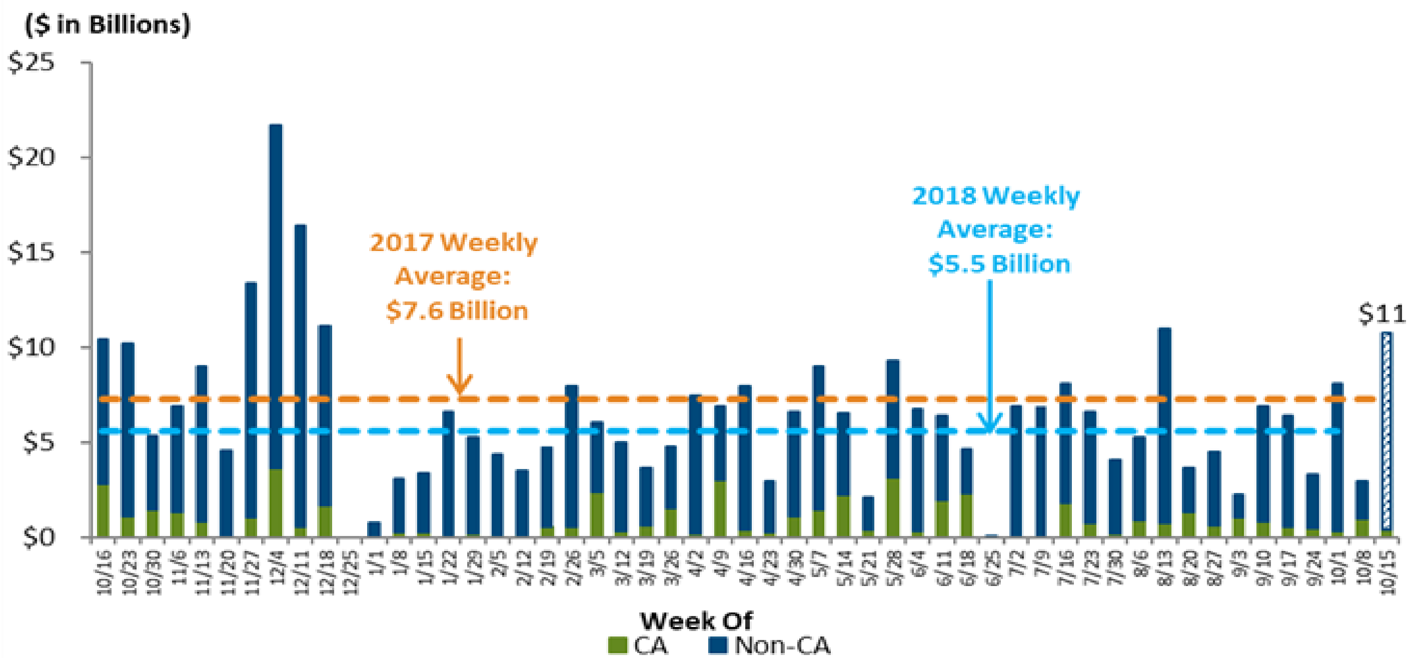
Municipal Market Weekly Supply



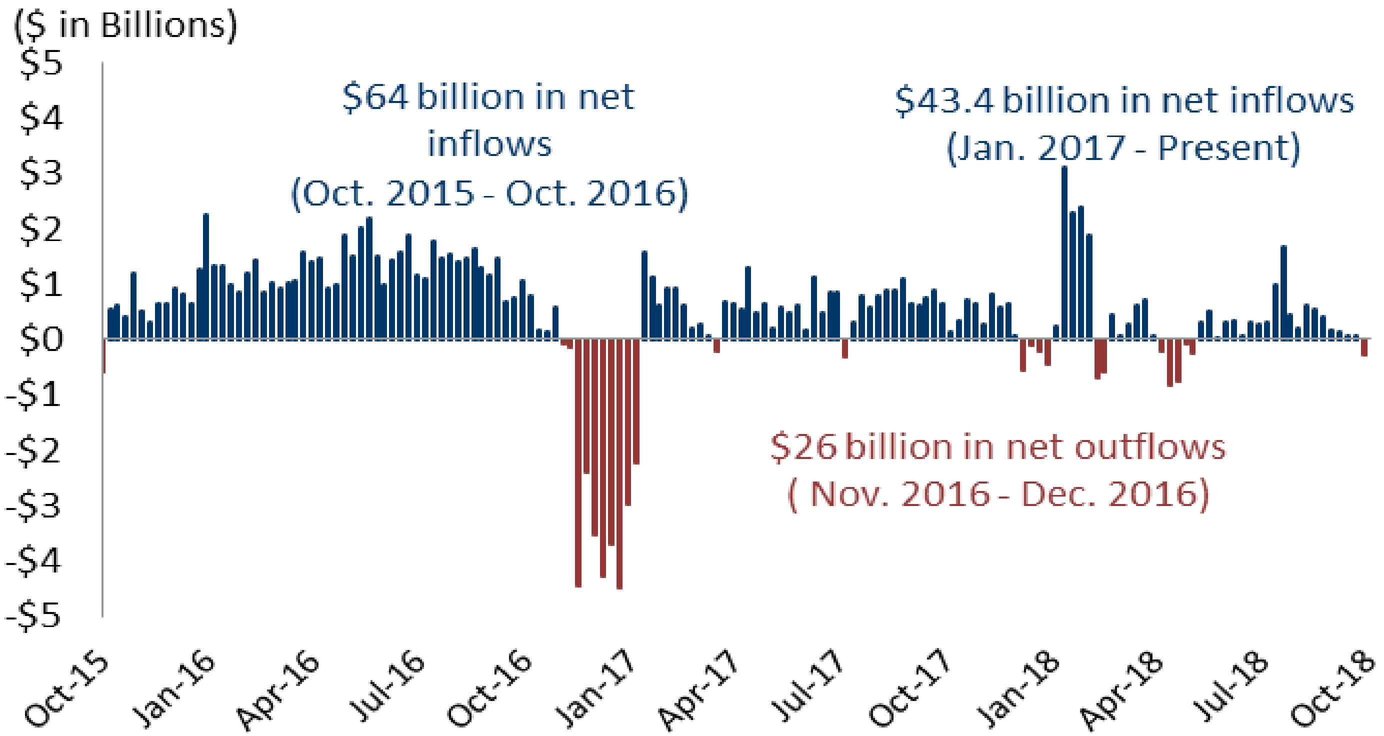
- Sharp increase of supply this week

Sources: SDC, Thomson Reuters, Investment Company Institute. As of 10/11/18

Municipal Market Investor Demand

- **Investor demand reacting to market changes**
  - Strong overall inflows into municipal mutual funds 2018 YTD
  - Recent rate shifts caused outflows in 3 out of past 5 weeks
  - $847mm outflows in latest period

Weekly Municipal Mutual Fund Flows



Sources: SDC, Thomson Reuters, Investment Company Institute. As of 10/11/18

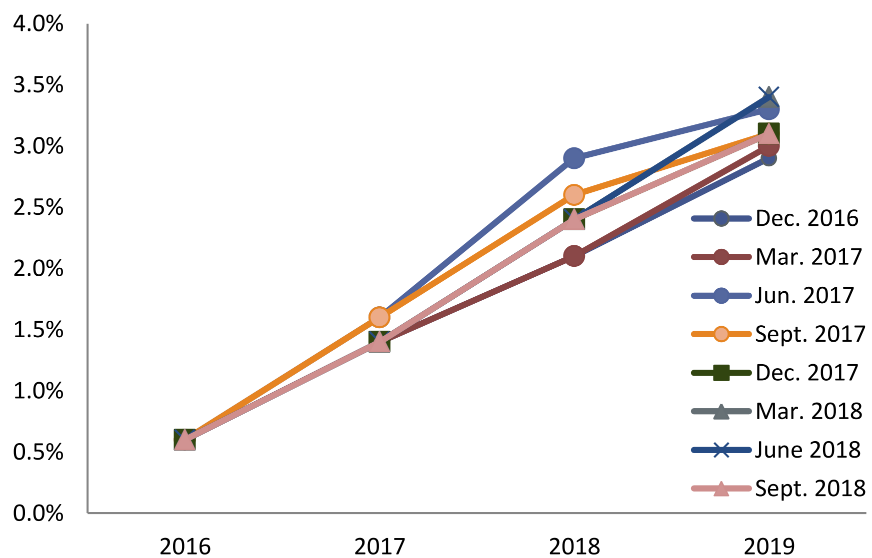
Interest Rate Forecast

- **The Market expects the Fed to hike rates one more time in 2018, forecasted for December with a 73% probability**
  - Fed hiked the federal funds rate from 2.00% to 2.25% on September 26th
- **Federal Reserve expected to continue "gradual" pace of rate increases with economic recovery**
- **Three rate hikes are expected in 2019**
  - Chance of recession forecasted at 15%

Market Consensus Yield Curve Projections

	Current	4Q18	1Q19	2Q19	3Q19
Fed Funds	2.25%	2.45%	2.70%	2.90%	3.05%
2-Year UST	2.85%	2.89%	3.02%	3.12%	3.20%
10-year UST	3.15%	3.17%	3.26%	3.33%	3.36%
30-year UST	3.37%	3.34%	3.43%	3.51%	3.56%

Fed Funds Rate Projections

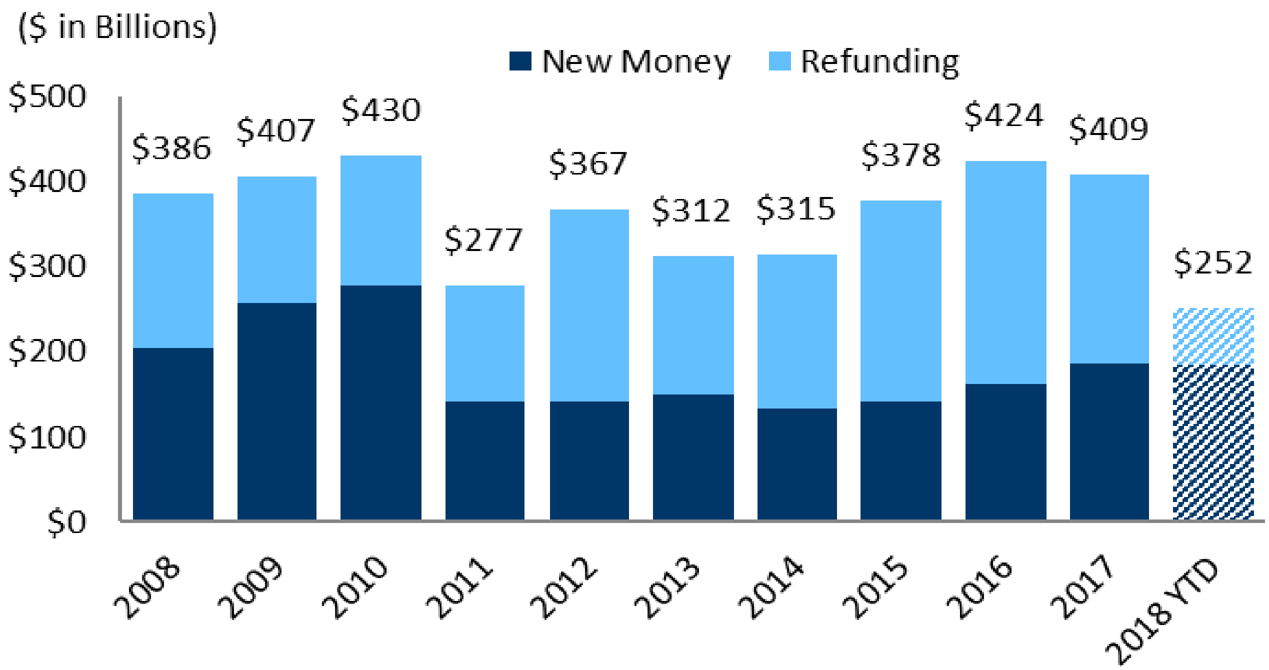


Source: U.S. Treasury Department, Bloomberg. Market Consensus Projections as of 10/11/18

Municipal Market Supply

- **Municipal supply in 2017: $410 billion[1]**
  - Federal tax reform caused a spike in year end volume as issues were accelerated into 2017
- **Municipal supply in 2018 YTD: $252 billion[1]**
  - National volume down 11% compared to same period in 2017
  - **SIFMA projects 2018 issuance volume down 20% to $323 billion[1]**

Municipal Market Annual Volume (2008-2018Q2)



[1]Long term issues only. Weekly averages of estimated 30-day visible supply.
Sources: SDC, Thomson Reuters, Investment Company Institute. As of 10/11/18

Potpourri

(A.K.A. Other Items of note in the Municipal Market)

Tax Reform's Potential Impact on Municipal Market

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- The tax reform bill signed by the President on 12/22/2017 will impact the municipal market as summarized below:

Provision	Description	Impact on Municipal Issuers and Market
Individual Income Tax Rates	Modifies seven brackets (10% - 37%)	May reduce attractiveness of tax-exempt bonds
Property Taxes & State and Local Tax Deduction (SALT)	$10,000 cap for combination of state property tax, income and sales tax deduction	May induce investors to seek more tax-exempt bonds
Corporate Tax Rate	Reduce to 21% effective January 1, 2018	May reduce attractiveness of tax-exempt bonds for corporations and insurance companies
Pass-Through Business Tax Rate	Deduction of up to 20% of qualified business income (up to first $315,000 of income)	May reduce attractiveness of tax-exempt bonds
Private Activity Bonds (PABs)	Preserve PABs (AMT remains)	Expect no change; helps financing for infrastructure, affordable housing, etc.
Advance Refundings	Eliminates tax-exempt advance refundings	Limits issuers to current refundings; may reduce/defer market volume or encourage use of forwards, swaptions, taxable refundings, etc.
Fiscal Impact	Estimated to generate $1.5 trillion deficit over the next decade	Deficit of more than $150 billion in any year may trigger additional sequestration of Federal Subsidies for BABs and similar products; may increase Treasury borrowing needs which may be inflationary

Elimination of Tax-Exempt Advance Refundings

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The federal Tax Cut and Jobs Act, effective January 1st, 2018, eliminates tax-exempt advance refundings; however, there are other refinancing tools still available.

Refunding Options

Execution Risk

Higher Execution Risk / Low Complexity • Formal Tender • Negotiate with Bondholders (Informal Tender) • Cash Optimization	**Higher Execution Risk / Higher Complexity** • Cinderella Bonds • Sale of Call Option
Lower Execution Risk / Lower Complexity • Tax-Exempt Advance Refunding of Build America Bonds (BABs) • Forward Delivery Refunding • Taxable Advance Refunding • Wait for Current Refunding	**Lower Execution Risk / Higher Complexity** • Rate Lock (Forward Starting Swap) • Swaption

Complexity

Optional Redemption Provisions in Missouri

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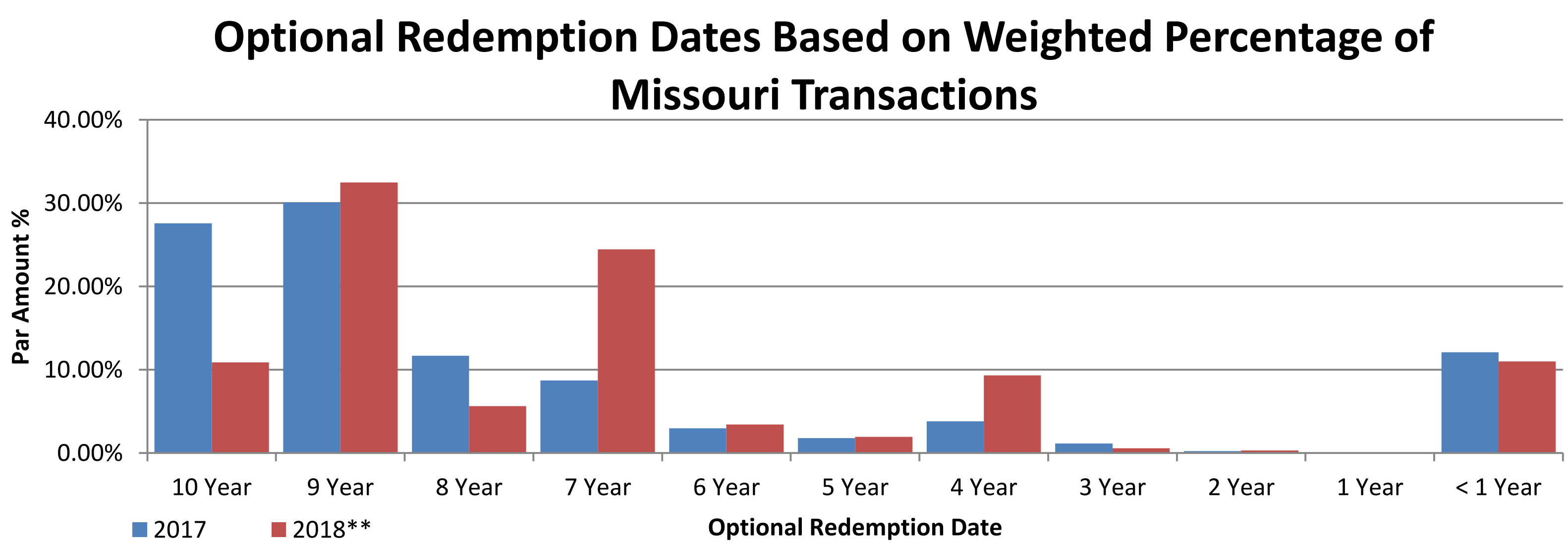
Weighted Percentage of Missouri Deals*		
	2017	2018**
Call	Par Amt %	Par Amt %
10 Year	27.57%	10.87%
9 Year	30.08%	32.49%
8 Year	11.66%	5.61%
7 Year	8.69%	24.47%
6 Year	2.98%	3.41%
5 Year	1.80%	1.93%
4 Year	3.78%	9.31%
3 Year	1.14%	0.57%
2 Year	0.22%	0.30%
1 Year	0.01%	0.07%
< 1 Year	12.08%	10.97%
Totals	100.00%	100.00%

**Reported Information available from SDC stating specific call dates*

***2018 information is from January 1 - July 31, 2018*



Current and Historical Sequestration Levels

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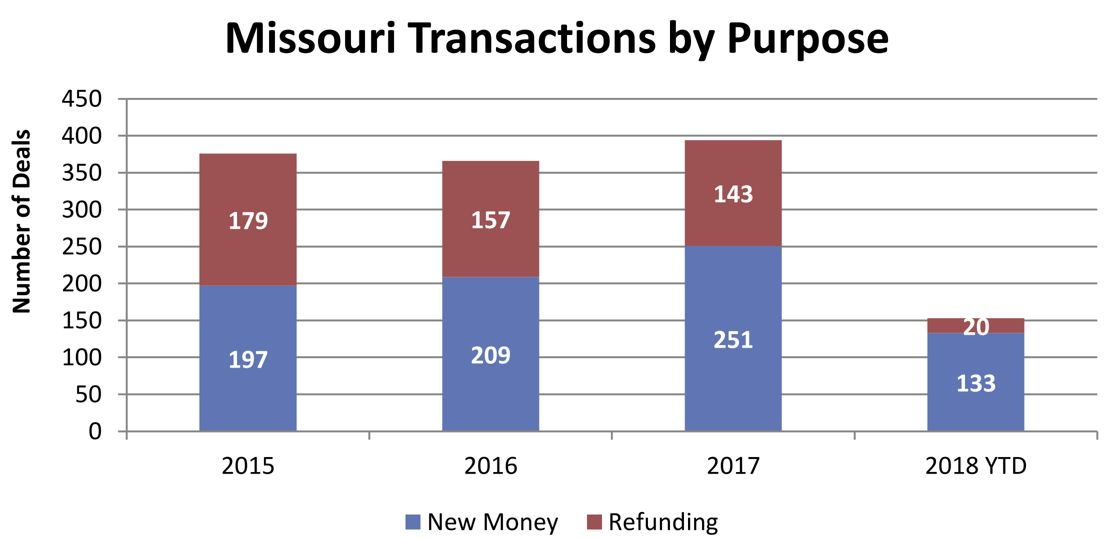
BABs Subsidy Rate by Federal FY		
Federal FY	**Sequestration Rate**	**BABs Subsidy Rate**
2009	0.00%	35.00%
2010	0.00%	35.00%
2011	0.00%	35.00%
2012	0.00%	35.00%
2013[1]	8.70%	31.96%
2014	7.20%	32.48%
2015	7.30%	32.45%
2016	6.80%	32.62%
2017	6.90%	32.59%
2018	6.60%	32.69%
2019	6.20%	32.83%

[1] 2013 Sequestration went into effect on March 1, 2013 and impacted payments through the end of government FY 2013 (September 30, 2013)

Municipal Supply by Use of Funds

Missouri Transactions January 1, 2015 - Present				
Year	New Money	Refunding	% NM	% REF
2015	197	179	52.39%	47.61%
2016	209	157	57.10%	42.90%
2017	251	143	63.71%	36.29%
2018	133	20	86.93%	13.07%
Totals	790	499		
Percentages	59.34%	40.66%		

Source: SDC; Refunding includes both current and advance refundings. Transactions with both new money and refunding proceeds are listed as refunding transactions.



- Amendment to Rule 15c2-12 expanding the list of events that require disclosure
  - Compliance date: 180 days from publication in the Federal Register
  - Two additional events include:
    - Incurrence of a financial obligation of the issuer or obligated person, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a financial obligation of the issuer or obligated person, any of which affect security holders, if material; and
    - Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of the financial obligation of the issuer or obligated person, any of which reflect financial difficulties.

Questions?

Martin Ghafoori
Director
(314) 342-8467
ghafoorim@stifel.com

Dan Smith
Vice President
(314) 609-4126
dan.smith@stifel.com

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