

# Government Finance Officers Association of New Jersey



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## 2017 Tax Law and Financial Market Update

September 26, 2018

## 2017 TAX LAW CHANGE IMPACTS ON MUNICIPAL BONDS

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- The Tax Cuts and Jobs Act of 2017 had the following impacts on the municipal bond market, effective January 1, 2018
  1. **Eliminated the use of tax-exempt advance refundings;**
  2. Eliminated the use of tax-credit bonds by municipal issuers;
  3. Lowered the corporate tax rate from 35% to 21%;
  4. Capped State and Local Tax deduction at \$10,000; and
  5. Eliminated the corporate alternative minimum tax.
  
- Issuers and Investors of municipal bonds are both impacted and have spent 2018 adjusting and reacting to these changes

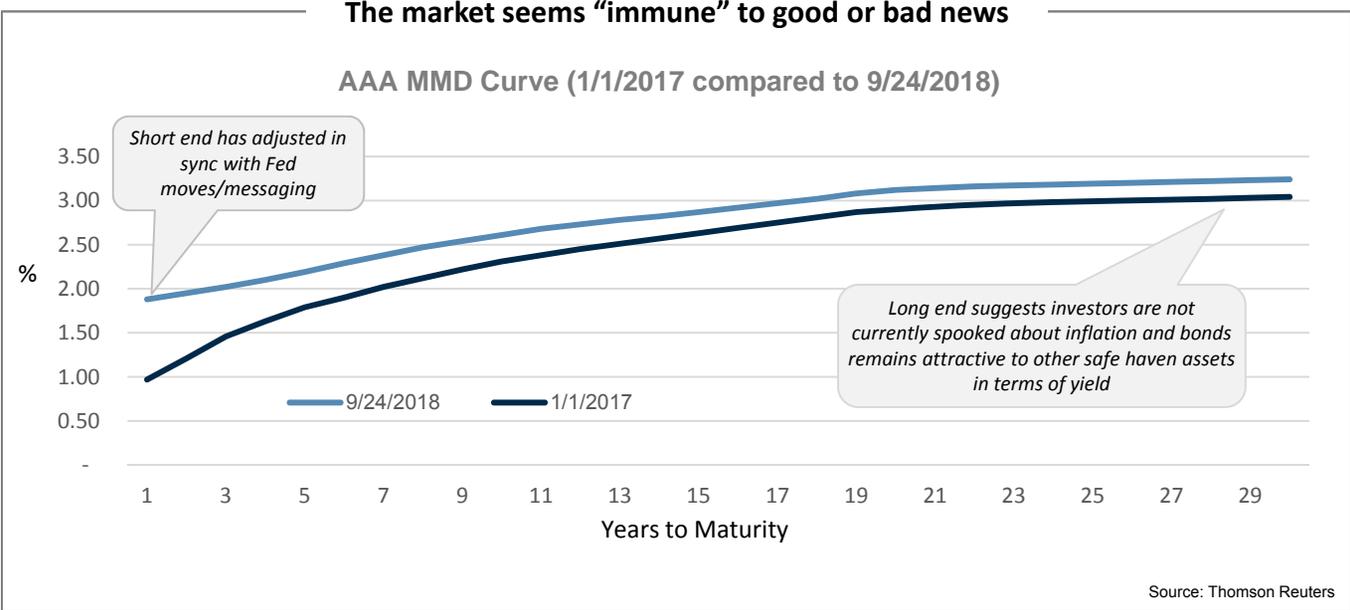
# CURRENT MARKET THEMES

- U.S. Economy
  - Positive job growth
  - Wages stagnant
- Seemingly endless growth in Treasury issuance
- Tariff tussle with China has investors re-evaluating US economy's growth trajectory
- Despite tax cuts, increased borrowing, and a trade war, market rates are remarkably stable

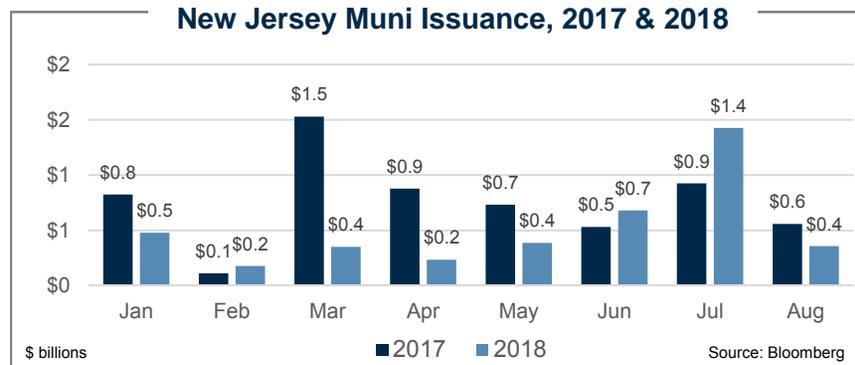
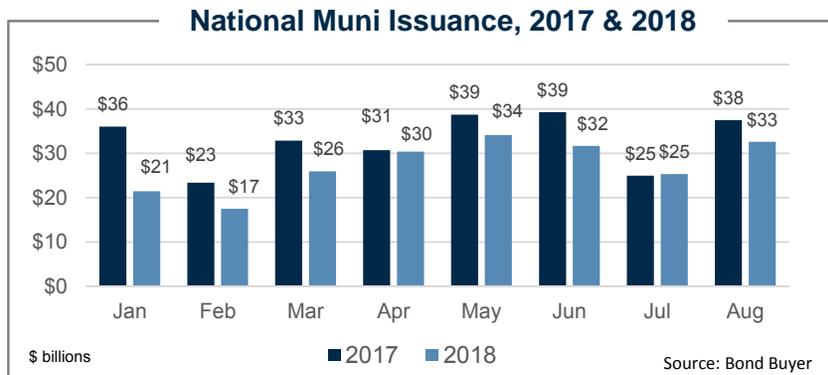
**Fed Funds Futures consistent with Fed messaging two additional rate hikes this year**

FOMC Target Rate Projections ( as of September 24, 2018)			
Rate Increase	Current Rate	+25 bps	+50 bps
Target Rate	1.75-2.00%	2.00-2.25%	2.25-2.50%
<b>9/26/2018</b>	0.00%	97.9%	2.1%
<b>11/8/2018</b>	0.00%	97.9%	2.1%
<b>12/19/2018</b>	0.00%	22.0%	76.3%
<b>1/30/2019</b>	0.00%	20.2%	71.8%
<b>3/20/2019</b>	0.00%	8.8%	42.7%

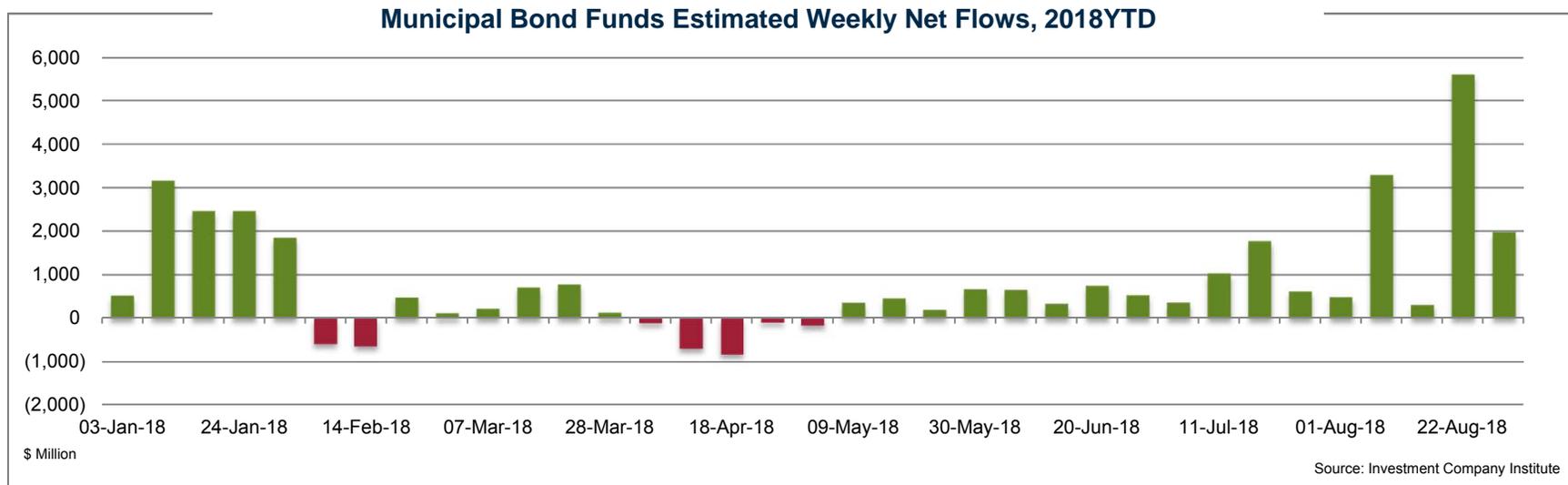
Source: Bloomberg



## MUNI NEW ISSUE SUPPLY HAS DECREASED DRAMATICALLY WHILE DEMAND HAS REMAINED STABLE



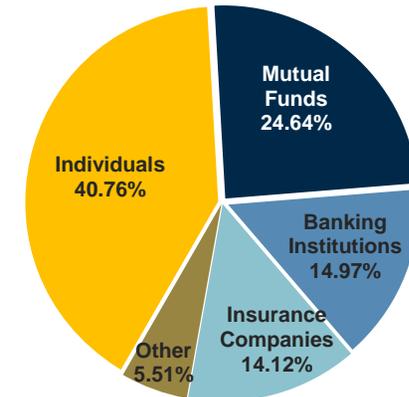
- Projected 2018 annual issuance: \$322 billion, down 30.5% from 2017
- National volume down 16.9% through August from \$263.5bn to \$218.9bn; New Jersey volume down 33% (excludes \$3bn Tobacco transaction) from \$5.5bn to \$3.7bn
- Issuance of direct placements has also decreased as banks have increased rates based on new corporate tax rates



## IMPACT OF TAX REFORM VARIES BY TYPE OF INVESTOR

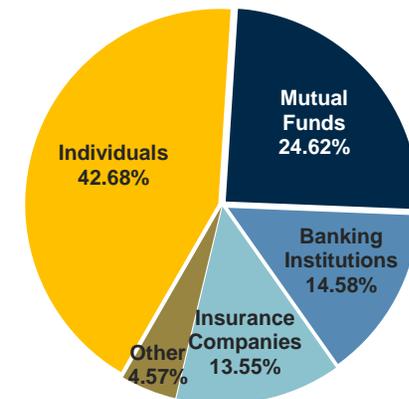
- Tax Reform has created a bifurcated market for tax-exempts
- Due to loss of various deductions (particularly SALT), we anticipate that individuals will likely make up a larger portion of the market in the future, currently 67% (direct retail and mutual funds), particularly in high tax states like New Jersey
  - Individuals are steady buyers, but don't have the capacity to absorb large issuance calendars
  - Professional Retail Investors (particularly Separately Managed Accounts) continue to drive the market in the 1-15 year range
- Corporate tax rates being reduced to 21% from 35% has reduced attractiveness of municipals to insurance companies and banks
  - These buyers' involvement will depend on relative value (vs. taxable alternatives)
- Reduction in corporate rate has decreased relative value of bank qualified bonds, with zero current value vs. non-bank qualified municipal bonds

2017 Municipal Bond Holders



Source: Federal Reserve

2018Q1 Municipal Bond Holders



Source: Federal Reserve

## ALTERNATIVES TO MITIGATE LOSS OF TAX-EXEMPT ADVANCE REFUNDINGS

	<b>Current Refunding</b>	<b>Taxable Advance Refunding</b>	<b>Forward Delivery Bonds</b>
<b>Strategy</b>	Issuer issues tax-exempt refunding bonds within 90 calendar days of the call date of refunded bonds.	Refund outstanding non-advance refundable bonds with taxable bonds	Sell tax-exempt bonds today to be delivered in the future (when the Bonds are currently callable)
<b>Benefits</b>	<ul style="list-style-type: none"> <li>– Highest potential debt service savings if rates remain stable or decline</li> </ul>	<ul style="list-style-type: none"> <li>– Locks in current market rates</li> <li>– Expansion and diversification of investor base for issuer’s bonds</li> <li>– Elimination of tax-exempt compliance</li> <li>– Can be executed any time</li> </ul>	<ul style="list-style-type: none"> <li>– Locks in current market rates (at a premium)</li> </ul>
<b>Risks/Considerations</b>	<ul style="list-style-type: none"> <li>– Rates may increase between today and current refunding window reducing or eliminating potential savings</li> <li>– Refunded bonds are a wasted asset if not called on first call date</li> </ul>	<ul style="list-style-type: none"> <li>– Higher cost of debt</li> <li>– Taxable investors may require more upfront education on issuer’s credit</li> <li>– May have restrictive/more costly redemption provisions</li> </ul>	<ul style="list-style-type: none"> <li>– Higher cost of debt due to forward premium (approximately 4-8 bps per month)</li> <li>– Viable up to approximately 20 months from current refunding window</li> <li>– Refunding could be executed with different administration</li> </ul>
<b>Legal Considerations</b>	<ul style="list-style-type: none"> <li>– Fewer legal limitations</li> </ul>	<ul style="list-style-type: none"> <li>– Fewer legal limitations</li> </ul>	<ul style="list-style-type: none"> <li>– Potential “outs” could result in cancelation of the forward delivery agreement</li> </ul>

# ALTERNATIVES TO MITIGATE LOSS OF TAX-EXEMPT ADVANCE REFUNDINGS

	<b>Forward Bond Options</b>	<b>“Cinderella” Bonds</b>	<b>Cash Optimization</b>
<b>Strategy</b>	Dealer purchases the right to direct Issuer to issue bonds concurrent with the first call date. Bond option results in upfront payment to Issuer	Issue taxable bonds that convert to tax-exempt when the escrowed bonds are within 90 days of their redemption date	Consider using cash that would otherwise be used to fund new capital projects to redeem bonds and issue bonds for the projects
<b>Benefits</b>	<ul style="list-style-type: none"> <li>– Issuer receives savings upfront</li> <li>– Interest rate risks are eliminated</li> <li>– Issuer retains right to call bonds if option not exercised</li> </ul>	<ul style="list-style-type: none"> <li>– Lock in current market rates</li> </ul>	<ul style="list-style-type: none"> <li>– Closest economics to tax-exempt advance refundings</li> </ul>
<b>Risks/Considerations</b>	<ul style="list-style-type: none"> <li>– Less savings/less liquid than other non-bond alternatives</li> <li>– Issuer must maintain minimum ratings to realize full savings (portion of upfront premium may be “clawed back” upon downgrade)</li> <li>– Dealer can claim Issuer for loss if Issuer defaults or does not fulfill obligations under Option Agreement</li> <li>– Refunding could be executed with different administration</li> </ul>	<ul style="list-style-type: none"> <li>– There are no natural buyers of “Cinderella” bonds, making price discovery difficult</li> <li>– Investors may demand a higher rate for committing to a tax-exempt rate in the future determined today</li> <li>– If federal tax law changes between sale date and tax-exempt conversion date, the tax-exempt conversion may not occur</li> </ul>	<ul style="list-style-type: none"> <li>– Requires attention to ensure current tax law isn’t violated</li> <li>– Requires liquid cash and eligible projects</li> </ul>
<b>Legal Considerations</b>	<ul style="list-style-type: none"> <li>– Tax, Legal &amp; Accounting treatment of received premium</li> </ul>	<ul style="list-style-type: none"> <li>– Ensure documents are written to trigger reissuance for tax-exemption</li> </ul>	<ul style="list-style-type: none"> <li>– Bond counsel must approve nexus between funds used to defease existing debt and new money proceeds</li> </ul>

## TAXABLE VS. FORWARD VS. CURRENT REFUNDING – BY THE NUMBERS

- Refunded Bonds
  - Issued in 2010
  - Call date of January 1, 2020
- Current/Forward delivery date of October 3, 2019
  - 90 days before the call date
- Taxable delivery date of January 9, 2019
- Market Conditions as of September 17, 2018

Structure	Tax-Exempt Current	Tax-Exempt Forward	Taxable Advance
Delivery Date	10/3/2019	10/3/2019	1/9/2019
Pricing Date	September 2019	January 2019	January 2019
Forward Premium	n/a	≈ 6 bps per month	n/a
Refunded Par Amount	15,815,000	15,815,000	15,815,000
Refunded Maturities	2020-2028	2020-2028	2020-2028
Refunded Call Date	1/1/2020	1/1/2020	1/1/2020
True Interest Cost	2.488%	3.090%	3.407%
Arbitrage Yield	2.401%	2.999%	3.322%
Escrow Yield	2.098%	2.098%	2.513%
Negative Arbitrage	11,796	35,049	124,484
Refunding Efficiency	99%	97%	86%
Gross Savings (\$)	1,703,747	1,247,031	891,462
PV Savings (\$)	1,540,699	1,247,031	767,230
PV Savings (%)	9.742%	7.885%	4.851%
Breakeven Rate	n/a	60 bps	105 bps

- When contemplating a forward delivery or taxable advance refunding, Issuers should determine the breakeven rate i.e where rates would have to be on the first available call date for the forward/taxable to provide an equal level of savings.
- If the issuer believes that long-term tax exempt rates will increase by more than the breakeven by the first available call date then the current and/or taxable may be the most economical option

## ALTERNATIVE REDEMPTION FEATURES FOR NEW ISSUANCE

- The elimination of tax-exempt advance refundings may incentivize issuers to sell bonds with shorter calls

### Shorter Calls at Par

**Pros:** Deep investor base makes for most marketable short call feature

Widely utilized in the current market

Current market is seeing tighter spreads to MMD for shorter call features

Increased option value

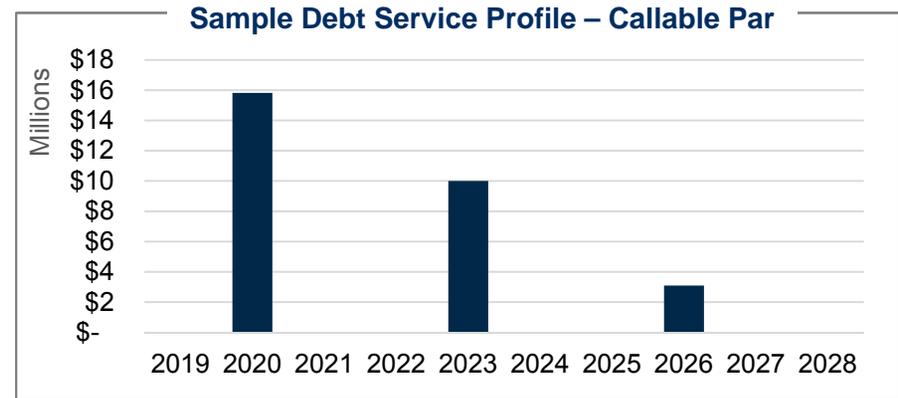
Market is seeing call dates as short as 3-yrs (most 5-years or longer)

**Cons:** More costly than 10-year par call if not executed

Impact on proceeds generated due to premium callable structure

### Aligning Call Features

Issuers may also consider staggering their call features to create critical masses of callable bonds on specific dates or to avoid dates that have significant callable par or target dates with little or no callable bonds.



### Shorter Calls with Declining to Par Feature

**Pros:** Less costly than short-calls at par if unexecuted  
Increased option value

**Cons:** Little pricing precedent in past ten years

- Determining appropriate decline-to-par steps
- Relative value vs. 10-year par call
- Impact on proceeds generated due to premium callable structure

### Tax-Exempt Make-Whole Redemptions

Basic mechanics are similar to the make-whole call feature on taxable bonds but enhancements provide potential for true economic savings

**Pros:** Present Value to call date rather than maturity date

Redemption premium based on MMD rather than Treasuries

**Cons:** Pricing impact and market reception uncertain

Premium may be taxable income to investors

Requires legal review

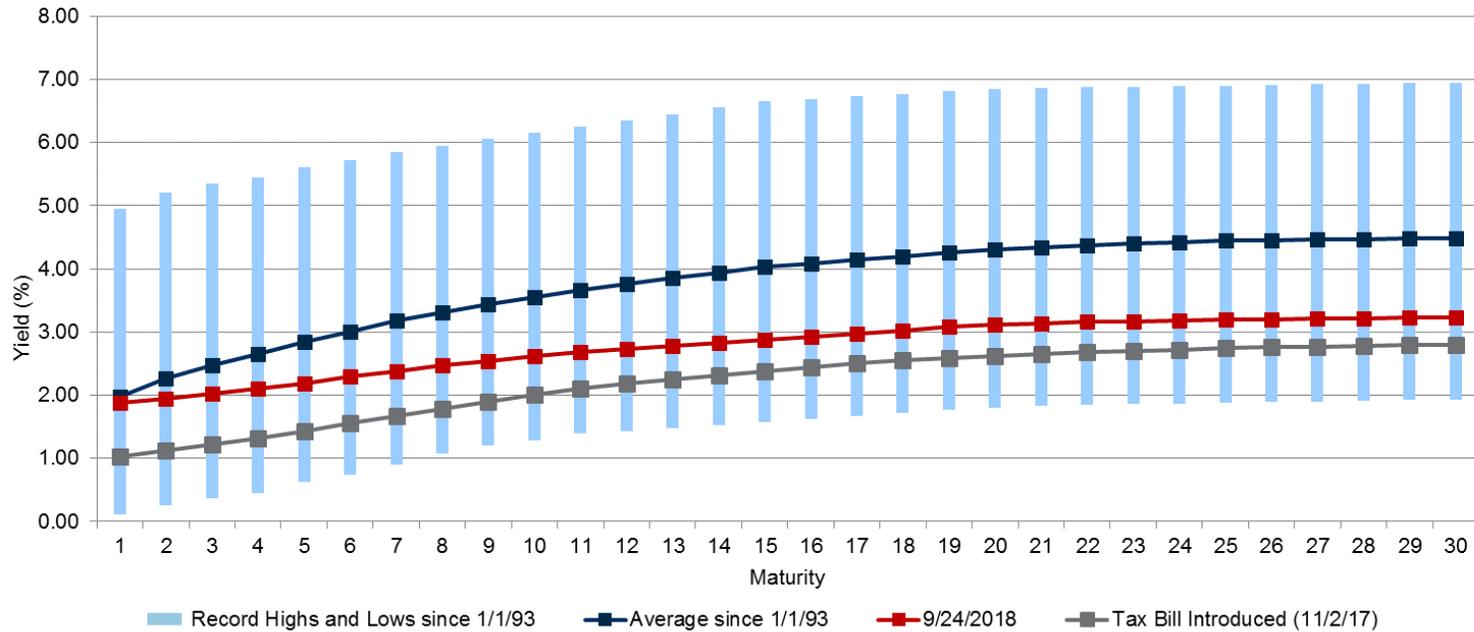
## ADDRESSING CALL OPTIONS GIVEN TAX REFORM

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- Currently there is no spread difference for bonds with call options occurring in 8 years or more, however, the effective yield on such bonds quickly exceeds the yield on bonds with longer call dates should they remain outstanding after the call date
  - With a premium coupon structure, 5 to 7 year calls can be issued with a 10 to 15 basis point benefit on the yield to call
  - Although the yield to call pricing is beneficial, the yield to maturity (“YTM”) on short call bonds outpaces the YTM on a standard ten year par call bond should the bonds remain outstanding beyond the call date
- Issuers must evaluate additional refunding flexibility vs. cost and interest rate projections
- Who buys short calls?
  - Money Managers, Bond funds, Retail, Total return accounts
- Why do investors buy short call bonds?
  - Yield to maturity attraction, yield to call is greater than a regular bond due on the same date, 5 to 15 year maturities preferred

## LONG TERM TAX EXEMPT RATES REMAIN BELOW HISTORICAL AVERAGES

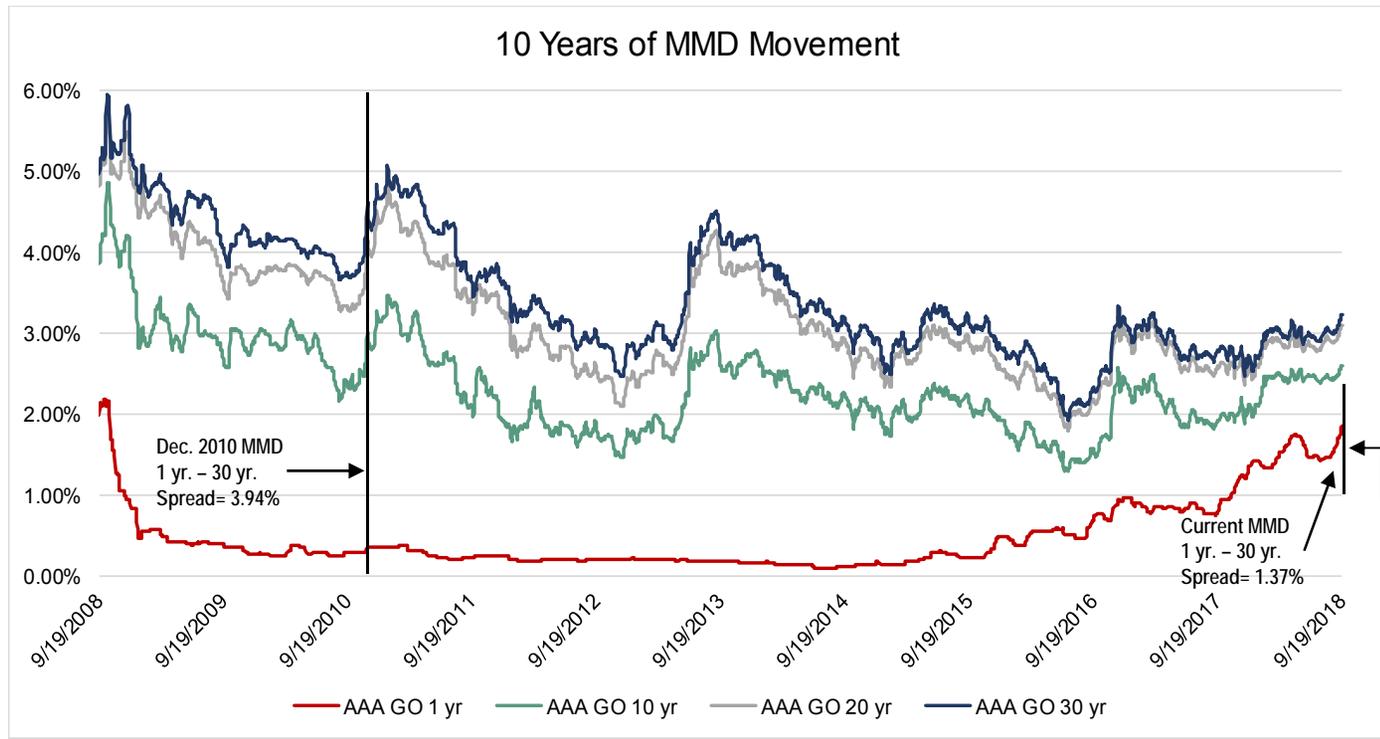
- AAA MMD rates set multiple record lows in June and July 2016, and current rates remain well below the historical average
- Lack of supply has kept rates and credit spreads stable despite changes in tax benefit for certain investors



	1	5	10	15	20	25	30
Record Low since 1/1/93	0.11	0.62	1.29	1.57	1.80	1.88	1.93
Record High since 1/1/93	4.95	5.60	6.15	6.65	6.85	6.90	6.95
Average since 1/1/93	1.98	2.84	3.56	4.03	4.30	4.44	4.49
Tax Bill Introduction (11/2/17)	1.03	1.43	2.00	2.38	2.62	2.74	2.80
Current (09/24/18)	1.88	2.19	2.61	2.87	3.12	3.19	3.23

# FLATTENING YIELD CURVE

- The yield curve has flattened over the last several years with significant movement occurring very recently.
- In December of 2010, the spread between the 1-year MMD and 30-year MMD was 3.94%. The current spread between the 1-year MMD and 30-year MMD is 1.37%.



**Low Interest Rates/Steep Yield Curve:**

- Maintain Mix of Floating Rate and Fixed Rate Exposure

**High Interest Rates/Steep Yield Curve:**

- Increase Floating Rate Exposure or Borrow Short

**Low Interest Rates/Flat Yield Curve:**

- Increase Long-Term Fixed Rate Debt

**High Interest Rates/Flat Yield Curve:**

- Consider Short Call Features; Bullet Maturities

## INTEREST RATE FORECAST

Federal Funds Target Rate	Q3 18	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	% Change from Q3 2018 to Q2 2020
Bloomberg Weighted Average	2.25%	2.50%	2.70%	2.90%	3.05%	3.05%	3.00%	3.00%	3.05%	3.05%	0.75%
Median Forecast	2.25%	2.50%	2.75%	3.00%	3.00%	3.00%	3.00%	3.00%	3.25%	3.25%	0.75%
Average Forecast	2.24%	2.48%	2.69%	2.89%	3.03%	3.07%	3.01%	3.02%	3.03%	3.07%	0.78%
High Forecast	2.25%	2.50%	2.75%	3.00%	3.50%	3.50%	3.75%	4.00%	4.25%	4.50%	1.75%
Low Forecast	2.00%	2.00%	2.00%	2.00%	1.75%	1.75%	1.25%	1.25%	1.25%	1.50%	-0.75%
Firm Responses	61	61	59	59	59	53	38	37	36	34	

10-Year US Treasury Yield	Q3 18	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	% Change from Q3 2018 to Q2 2020
Bloomberg Weighted Average	2.98%	3.09%	3.20%	3.26%	3.30%	3.34%	3.39%	3.41%	3.44%	3.49%	0.43%
Median Forecast	2.95%	3.10%	3.20%	3.30%	3.32%	3.39%	3.40%	3.40%	3.40%	3.46%	0.45%
Average Forecast	2.98%	3.09%	3.20%	3.26%	3.30%	3.34%	3.39%	3.41%	3.44%	3.49%	0.43%
High Forecast	3.33%	3.63%	4.20%	4.53%	4.20%	4.12%	4.30%	4.45%	4.55%	4.50%	1.12%
Low Forecast	2.70%	2.30%	2.30%	2.20%	2.20%	2.20%	2.05%	2.05%	2.00%	2.55%	-0.65%
Firm Responses	55	57	56	55	53	50	37	36	35	34	

30-Year US Treasury Yield	Q3 18	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	% Change from Q3 2018 to Q2 2020
Bloomberg Weighted Average	3.14%	3.26%	3.37%	3.46%	3.53%	3.58%	3.62%	3.64%	3.68%	3.73%	0.50%
Median Forecast	3.10%	3.25%	3.35%	3.45%	3.50%	3.54%	3.57%	3.58%	3.67%	3.68%	0.48%
Average Forecast	3.14%	3.26%	3.37%	3.46%	3.53%	3.58%	3.62%	3.64%	3.68%	3.73%	0.50%
High Forecast	3.57%	3.80%	4.34%	4.68%	4.34%	4.53%	4.75%	5.00%	5.15%	4.90%	1.43%
Low Forecast	2.95%	2.40%	2.40%	2.40%	2.40%	2.40%	2.70%	2.70%	2.70%	2.82%	-0.25%
Firm Responses	40	43	43	43	41	38	31	30	29	28	

Source: Bloomberg Bond Yield Forecasts as of 9/24/2018

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