Municipal Fixed Income Market Outlook 2018

The latest in what appears to be a new annual market tradition, the final quarter of the year once again brings with it increased interest-rate volatility. This episode of volatility has been driven by the cloud of fiscal policy and tax risk that could adversely impact both municipal issuers and municipal investors. Bouts of volatility may dampen total returns[1] for what otherwise has been a stout year for municipal bond market performance. Total return drivers for 2017 included declining municipal interest rates, stable-to-declining municipal credit risk premiums, and firm demand for investment-grade and high-yield municipal bonds accompanied by reduced year-over-year new issuance of municipal securities.

The market similarities to the fourth quarter of 2016 end there. From a relative value perspective, the new year commences with the municipal market in a considerably different position than the 2017 entry point. As of December 20, 2017, municipal bonds have become costly or "rich" to comparable maturity U.S. Treasury bonds. Beyond the traditional drivers of returns, forthcoming federal tax policy changes will exert influence as a significant determinant of municipal performance in 2018. As always, sector allocation and security selection will remain the focus through fundamental credit research, strategy execution, diligent interest-rate risk calibration, and a steadfast commitment to our investment process. Our market outlook highlights macro issues that stand to impact municipal performance in the coming year. As well, we provide guidance on how we have positioned our municipal strategies to generate excess return.

Federal Tax Reform

While many of President Trump's anticipated policy initiatives failed to materialize in 2017, the president signed a wide-ranging tax reform bill in late December. The legislation contains myriad initiatives that will impact corporations and individuals, some of which will have a direct effect on the municipal market:

Table 1: Tax Reform's Major Initiatives and Muni impacts

Initiative	Summary	Policy Impact on Tax-Exempt Bonds
Lower Individual Tax Rates	Lower overall marginal tax rates	Negative
Corporate Tax Rate Cut	Lowered to 21% from 35%	Negative
Budget Deficits	Approximately $1.4 trillion over 10 years	Negative
Limitation of SALT Deduction	State and local property tax deduction capped at $10,000	Mixed
Alteration of Advance Refundings	Eliminates tax-exemption on early refundings	Somewhat Negative
Alternative Minimum Tax	Repeal (corporate) or increase exemption (individual)	Somewhat Positive

Source: PNC Capital Advisors, New York Times

The fixed income markets in general will be forced to reckon with the bill's overall disdain for fiscal balance. Specifically, the municipal yield curve and risk premiums will also be asked to respond via municipal bond valuations into 2018 and likely beyond.

The Federal Reserve and Interest Rates

The Federal Open Market Committee (FOMC) increased the policy rate by 75 basis points (bps) in 2017 ending the year at 1.25% to 1.50% and commenced with contracting the Federal Reserve's balance sheet. The Fed's monetary policy action has led to a flattening of the Treasury yield curve as short rates have moved considerably higher. As of December 12, 2017, the market consensus is for two to three additional 25 bps policy rate increases at a measured pace during 2018. As the FOMC continues to roll back its policy accommodation, it brings with it the enhanced possibility of a deceleration of economic growth. This risk

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supports a view that intermediate-to-long interest rates are not likely to move materially higher in 2018. As always, the Fed will be data dependent in its decision making and will need to see economic policies take hold before rates change materially from current levels.

Municipal Bond Market Liquidity

The proposal in the U.S. House of Representatives' version of the tax reform bill to eliminate private activity bonds did not make the final version of the bill. Nevertheless, the mere prospect of its inclusion could still affect municipal supply in 2018. The first few months of the new year could experience sharply-reduced new issue supply as many deals that would have been issued in January and February were brought forward in a scramble in December 2017, in anticipation of the loss of access to the tax-exempt market for 501(c)3 issuers. As a result, municipal investors may have fewer deals to choose from among Higher Education, Hospital, Transportation, and Housing issuers. This tax-exempt bond scarcity would create natural demand and improved market liquidity leading into the new year, at the same time that legacy positions mature and coupon payments need reinvestment. Likewise, the broker-dealer community is noted to be on firmer financial footing, but will continue to add risk to their balance sheets only on a seasonal basis, which creates pockets of liquidity-driven volatility throughout the year. Our unique investment process ensures a significant liquidity buffer in all of our municipal strategies through our proprietary portfolio construction process, which evolved out of the 2008 liquidity crisis. This process ensures a risk budget that enables us to opportunistically add exposure when a liquidity event takes place and is an important aspect of our competitive advantage.

Municipal Interest Rates and Sector Relative Value

As predicted in last year's outlook, municipal interest rates displayed greater stability than corresponding Treasury rates during 2017:

Table 2: Municipal to Treasury Yield Ratios 2017

AAA Municipal (%)	2 year	5 year	10 year	30 year
12/30/16	1.21	1.79	2.31	3.04
12/20/17	1.55	1.75	2.13	2.72
Change	0.34	-0.04	-0.18	-0.32
US Treasury (%)	**2 year**	**5 year**	**10 year**	**30 year**
12/30/16	1.19	1.93	2.45	3.07
12/20/17	1.87	2.24	2.50	2.88
Change	0.67	0.31	0.05	-0.19
Muni/Treasury Ratio (%)	**2 year**	**5 year**	**10 year**	**30 year**
12/30/16	101.3	92.8	94.4	99.2
12/20/17	83.1	78.1	85.2	94.5

Source: Investortools

While the market consensus is for higher interest rates in 2018, municipal rates should be positioned to outperform their U.S. Treasury rate counterparts again as municipal-to-Treasury yield ratios (Page 3, Tables 3 and 4) move even lower given a technical supply dislocation during the first half of the year.

Given the structural features of municipal securities, we continue to believe that the municipal sector will outperform most other fixed income sectors in a rising interest-rate environment. With that assertion, we also recognize that at the current nominal level of interest rates, fixed income mandates can move into negative total return territory with minor increases in rates. The timing and magnitude of interest-rate increases will determine if total returns approach zero. The tables on the next page provide an illustration of the magnitude that municipal interest rates need to move and the time horizon before PNC Capital Advisors' Municipal strategies generate zero total return.

Municipal Credit

Municipal credit performance in 2017 took advantage of a very weak fourth quarter 2016 to rebound inspiringly, as predicted in last year's outlook. The absence of a similar downstroke in the final quarter of 2017 is the distinguishing factor in limiting analogous optimism today, despite some recent choppy waters from the aforementioned tax-reform legislation. Therefore, the prospects for an encore credit-driven performance in 2018 are somewhat diminished. Across markets, corporate credit spreads and default expectations, which tend to lead municipals, are offering similar signals as option-adjusted spreads (OAS) compressed significantly during 2017. How the credit markets, collectively, navigate the uncharted waters of tax reform will be an important factor in credit

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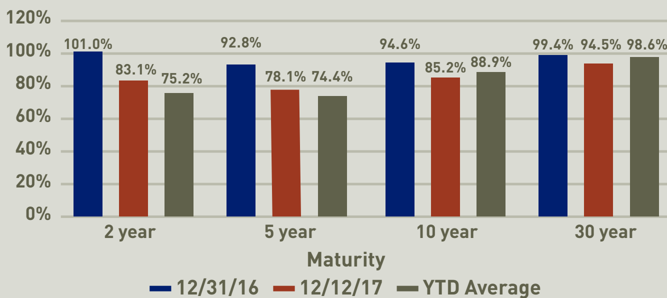
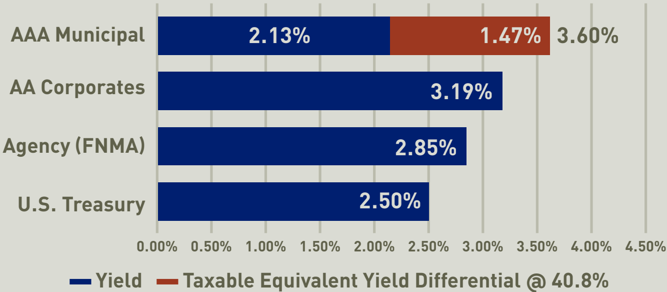
Table 3: Municipal to Treasury Yield Ratio Comparison



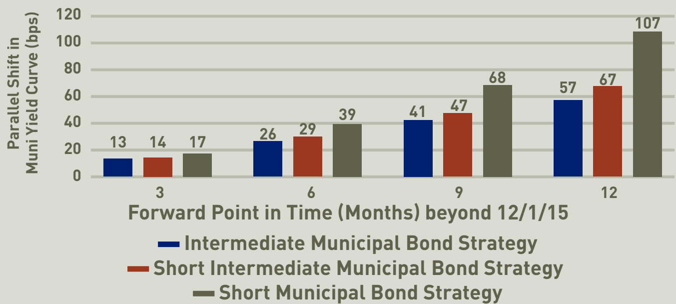
Source: Thomson Reuters

Table 4: 10 Year Bond Cross Sector Relative Value 12/20/2017



Source: Bloomberg, Thomson Reuters

Table 5a: Composite - Breakeven Analysis by Time Period



Source: Investortools Perform

Table 5b: Municipal Bond Index Breakeven Analysis 12-Month Horizon

Index	Scenario* (bps)	Total Return**	Yield Return	Price Return
Short	+122	0%	2.78%	-2.78%
Short-Intermediate	+77	0%	1.87%	-1.87%
Intermediate	+64	0%	1.28%	-1.28%

Source: Investor Tools Perform

**A parallel shift of the benchmark yield curve*
***Total return = yield return + price return*

performance in 2018. It remains to be seen how municipal investors adjust their behavior in response to the limitation of state and local tax (SALT) deductions — which could increase the attractiveness of tax-exempt income in high-tax states — and the reduction of personal and corporate tax rates, which has the potential to decrease the attractiveness of tax-exempt income. The elimination of private activity bonds, had that provision of the House bill survived, would have permanently moved most of the enterprise issuers from the tax-exempt investor base to the taxable investor base. It also would have resulted in pricing dislocations as the two markets conformed to the new reality. Legacy revenue bond issues would have gained scarcity value in the municipal market and that value would have manifested itself through spread compression and consequential outperformance of the more commonly found government-backed debt. Nevertheless, tax reform outcomes in 2018 could still mark a true inflection point in credit pricing.

Pedestrian economic growth will support stability in the fundamental credit environment, but greater investor credit differentiation has the potential to emerge, with tax reform as one of several possible catalysts. Considering the depth of the current expansion, tax-backed bonds have traditionally been viewed as the safe harbor in the municipal market when economic cycles begin to turn, however that orthodoxy may not hold in the next cycle. Pension underfunding and the lack of satisfactory reserves built up over the course of this rising economic tide may offset the lagged revenue and flexibility benefits governments tend to enjoy. Any refuge sought among the highest-rated state governments could also be upended by downward rating transition. Conversely, greater investor comfort may be found in enterprise entities that exhibit inelastic demand qualities, including Public Power, Housing, and to a lesser extent, Nonprofit Healthcare.

2018 PNC Capital Advisors Municipal Composite Strategy

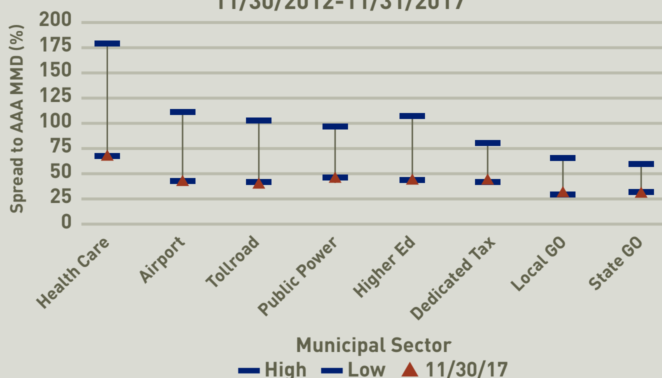
Interest Rate Exposure

The path of interest rates in 2018 remains unpredictable and our municipal composites will remain key rate duration neutral to their respective S&P benchmarks. Our investment philosophy, coupled with our portfolio construction process, ensures that we are interest-rate

Table 6: A and BBB Municipal Credit Spreads 2009 - 2017

Source: Thomson Reuters TM3

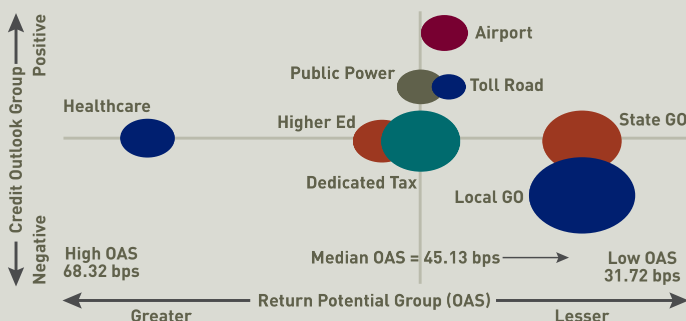
Table 7: Intermediate Index OAS by Sector 11/30/2012-11/31/2017



Data Sources: MMD, JJ Kenney, Axiom, S&P Index, PNC Capital Advisors Sectors

Select Sector Opinions

Table 8: Sector OAS 11/30/2017 Intermediate Index



Horizontal Axis represents weighted average Option Adjusted Spread for the sector in the JJK Intermediate Index for Non-AMT bonds

OAS data was obtained from Wilshire Axiom

agnostic; most excess return will be generated from tactical and strategic views unrelated to interest rates.

Credit Quality

As indicated by table 6, credit performance has been quiet in the very recent past and therefore has provided a smaller overall contribution to total returns. Portfolio quality will not change dramatically, but will enter 2018 with designs of a slightly more conservative stance. Most of the current concern surrounds the risks that hamper the tax-backed segment of the market.

The middle range of the investment-grade credit spectrum engenders the most confidence. Nonetheless, a selection of lower-grade securities will find space in the current portfolio with an eye on specific issuers that offer prospective returns in excess of current pricing or those that stand to benefit directly from prospective tax law changes. With a broad focus on the enterprise sectors, under the expectation that they remain eligible for tax-exempt financing in 2018, protection is available from the specific risks buried within the tax-backed portion of the market. Therefore, return sought from credit opportunities will target enterprise sectors, favoring Airports, Higher Education, Housing, and Public Power.

Tax-backed allocations will be largely segregated to the highest rungs of quality and, likewise, degrees of circumspection will surround highly structured tax-backed instruments, particularly those that garner ratings considerably above that of their sponsor entity. Chicago provides the most salient and contemporary example of this design, with its newly formed Sales Tax Securitization Corporation. This investment approach will hold, and even strengthen, should these structures show evidence of benefiting from improved reception among a growing swath of high-grade investors.

Our credit investment philosophy has not changed. We focus on opportunities for non-interest-rate-driven return contributions from obligors that are, first, large enough to influence composite performance and, second, that offer compelling opportunities for idiosyncratic total return. The composite strategies will, as always, incorporate our approach in 2018, overlaid by the sector-level investment preferences expressed above.

State Government

The risk-reward tradeoff in the State sector is tilted against investors at the start of 2018. Current pricing is not appreciative of the inherent credit risks. Therefore, the best opportunities are found at the very top and very

bottom of the credit spectrum in this sector, but the latter could be quite vulnerable to specific provisions in the tax bill, especially the limitations to the SALT deduction. Collectively, the states are likely to see relative degradation in 2018 and they have failed to necessarily rebuild financially over the course of the recovery and expansion thus far.

Local Government

The Local Government sector is not poised to generate excess returns in 2018. This sector is susceptible to many of the same risks as the state sector, but with lesser autonomy to impact its own financial condition. Exposure in the sector, therefore, favors higher-quality issuers where balance sheets enjoy greater absorptive capacity.

Health Care

The Health Care sector faces significant risks related to possible Congressional actions subversive to the Affordable Care Act in 2018, which adds considerable volatility to potential outcomes. The tax bill's elimination of the individual mandate could lead to further bad-debt expense for hospitals. In the meantime, financial performance has become less robust on its own. As a result, the outlook has grown less favorable. Weaker, single-site hospitals face the most risks.

Housing

The Housing sector continues to offer a very favorable risk-reward outlook into 2018. Balance sheets are re-emerging with very high-quality collateral, which sets a very positive performance trajectory. Any increases in mortgage rates stand to benefit state housing agency loan providers by widening the rate differential between private lenders and the agencies.

Higher Education

The overall outlook for the Higher Education sector is positive entering 2018. Ongoing strong capital market performance pays dividends to the comprehensive financial position. Nonetheless, attention must be paid to some of the deleterious provisions in the current tax reform bill that will hurt the sector, including most notably the tax levied on the investment income of large endowments.

Public Power

Public Power will carry a favorable profile into 2018. Regulatory relief will benefit the sector's overall credit quality. Commodity prices and regulatory changes will result in some performance differentiation among the mix of fuel sources.

Transportation

Projected conditions in 2018 are conducive to excess returns in the Transportation sector. Moderate economic expansion should support continued air passenger and vehicle traffic growth in the coming year. We express a slight preference for Airport credits relative to Toll Roads as slowing national vehicular traffic has been noted in recent months.

CONCLUSION

The outlook for 2018 favors a year of modest-to-flat total returns for fixed income investors, but the municipal sector is positioned to provide excess after-tax total returns relative to other fixed income sectors. Quite unique to the 2018 outlook, the potential impacts of tax reform will hang over the market as investors and municipal issuers conform to the new legislation and the sector should expect adjustments in broad municipal bond valuations. Municipal credit risk premiums have been stable, but underperformed corporate debt risk premiums for 2017. Municipal credit spreads have the potential to continue their slow march downward in 2018. We expect liquidity to remain supportive in the municipal sector, but we are prepared to take advantage of any dislocation that will arise through economic developments, geopolitics, and fiscal or monetary policy. We will focus on credit selectivity. Municipal credit will exhibit divergence and risk premiums will be guided by idiosyncratic movements. For 2018, we will position portfolios with a mix of credit quality and maintain a neutral duration profile relative to our benchmarks.

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[1] Total return = price return + coupon return

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