



Invesco Fixed Income Investment Insights

Municipal bond opportunities for all insurers

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Municipal bonds have been a staple in the general account investment portfolios of insurance companies for many years. This is particularly true in the Property & Casualty (P&C) space, where insurance companies may utilize their tax-exempt status. That said, life insurers are no strangers to municipal bonds considering their strong presence in the taxable market – most notably through the Build America Bonds (BABs) program. Municipal bonds provide the opportunity to diversify credit risk, which is particularly important given today's valuations and the large exposure to corporate credit in most insurance portfolios. We believe now is a great time for insurers of all types to explore opportunities in the tax-exempt market.

Opportunity #1 – Investment grade tax exempt bonds. There are a number of reasons why insurers might consider allocating to this space. Decades of credit rating agency data show that defaults of municipal issuers are significantly lower than for corporate issuers (see Exhibit 1). Also, munis may be an effective way to increase diversification relative to other assets (see Exhibit 2).

Exhibit 1: Historical Defaults - Municipal vs. Corporate Bonds (1970-2017)

Rating categories (Moody's/S&P)	Moody's ¹ (1970-2017)		S&P ¹ (1986-2017) (1981-2017)	
	Munis (%)	Corps (%)	Munis (%)	Corps (%)
Aaa/AAA	0.00	0.37	0.00	0.71
Aa/AA	0.02	0.81	0.03	0.75
A/A	0.11	2.16	0.10	1.34
Baa/BBB	1.15	3.76	0.81	3.58
Investment Grade	0.10	2.32	0.20	2.03
Non-Invest Grade	7.58	29.33	9.70	21.21
All	0.17	10.24	0.32	9.05

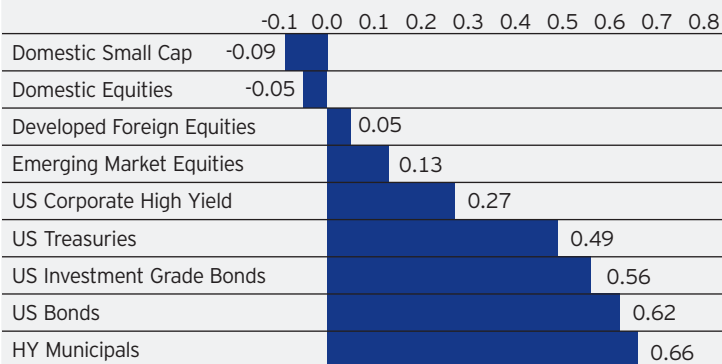
1 2017 data may increase cumulative default rates from both municipal and corporate bonds. A credit rating is an assessment provided by a nationally recognized statistical rating organization (NRSRO) of the creditworthiness of an issuer with respect to debt obligations, including specific securities, money market instruments or other debts. Ratings are measured on a scale that generally ranges from AAA (highest) to D (lowest); ratings are subject to change without notice. For more information on rating methodologies, please visit the following NRSRO websites: www.standardandpoors.com and select 'Understanding Ratings' under Rating Resources on the homepage; www.moody.com and select 'Rating Methodologies' under Research and Ratings on the homepage.

Sources: Moody's Investor Services ("Moody's") data through December 31, 2017, released July 31, 2018. Standard and Poor's ("S&P") data through December 31, 2017, released May 8, 2018. Past default rates are no assurance of future default rates. The data presented is the most recent data available from the various bond rating agencies.

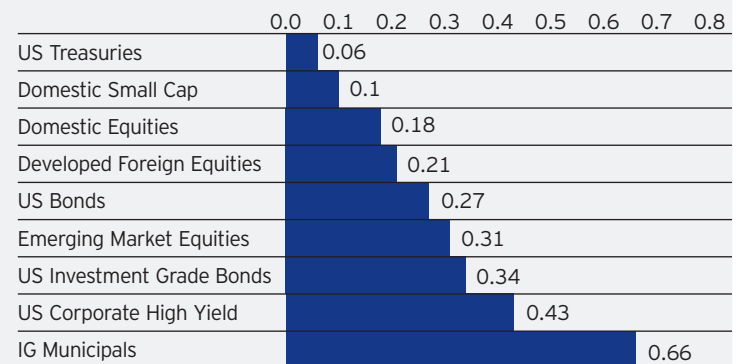
Exhibit 2: Portfolio Diversification - Municipal Bond Correlations to Other Asset Classes as of 9/30/2018

10-Year municipal bond correlations

Investment grade municipal bond correlations



High yield municipal bond correlations



Source: Bloomberg Barclays, as of June 30, 2018. Asset Classes are represented by the following Index returns: Bloomberg Barclays Municipal Bond Index represents IG Municipals, Bloomberg Barclays High Yield Municipal Bond Index represents High Yield Municipals, Bloomberg Barclays US Corporate Investment Grade Index represents US Investment Grade Bonds, Bloomberg Barclays US Aggregate Bond Index represents US Bonds, Bloomberg Barclays US Corporate High Yield Index represents US Corporate High Yield, Bloomberg Barclays US Government Index represents US Treasuries, MSCI EAFE Index represents Developed Foreign Equities, MSCI Emerging Markets Index represents Emerging Market Equities, S&P 500 Index represents Domestic Equities, Russell 2000 Index represents Domestic Small Cap. Past performance cannot guarantee future results. An investment cannot be made directly in an index.

Muni tax treatment changes for life insurers

Historically, the different tax rules for life insurance companies made the municipal bonds' tax exemption less valuable, and since these bonds typically yield less than other fixed income assets (such as corporate bonds), life insurers understandably avoided them. Thanks to the Tax Cuts and Jobs Act of 2017, life insurers may now enjoy similar tax benefits to P&C insurers, effectively paying a 6.3% tax on municipal bond income. As Exhibit 3 shows, current valuations show corporates being slightly more attractive (ignoring defaults) than municipal bonds, so now may not be the best time for life insurers to tactically add municipal bonds. However, looking long-term (especially when considering historical default rates), there is a strong argument in favor of making strategic allocations to tax-exempt municipal bonds in the portfolios of life insurance companies.

Exhibit 3: Valuations as of 9/30/2018 - Tax-Exempt Municipal bonds vs. Corporate Bonds

Rating	Municipals			Corporates		
	Yield to worst	After-tax yield ¹	Historical defaults	Yield to worst	After-tax yield ¹	Historical defaults
A	3.05	2.86	0.07	3.86	3.05	2.22
BBB	3.62	3.39	0.40	4.35	3.44	3.93
High yield	4.89	4.58	8.17	6.24	4.93	29.70

¹ For life insurers under current tax law using a corporate tax rate of 6.3%.

Sources: Barclays, Moodys, Invesco. Past performance is not indicative of future results. An investor cannot invest in an index.

While it's true that changes in tax law have made tax-exempt municipal bonds less attractive for P&C insurers relative to corporate bonds, their low historical defaults and diversification benefits still offer P&C companies good reasons for holding them. And for those concerned about further rate increases, municipal bonds could be attractive on a tactical basis since they have historically performed well relative to other fixed income assets in past rate-hiking cycles. In past rate-hiking cycles, municipal bonds (after adjusting for taxes) have on average outperformed both Treasuries and credit, as seen in Exhibit 4, by roughly 140 and 120 basis points per year, respectively.

Exhibit 4: Municipal bond excess performance during rate hiking cycles

Rate-hiking periods	Annualized excess performance	
	Tax-equivalent Municipal bonds over Treasuries (%)	Tax-equivalent Municipal bonds over Credit (%)
3/31/88 - 2/28/89	4.7	3.2
1/31/94 - 2/28/95	1.0	1.1
5/31/99 - 5/31/00	-3.3	0.0
6/30/04 - 6/29/06	2.8	2.5
12/15/15 - 9/30/18	1.9	-1.1
Average annualized excess performance over the past five (5) rate hiking periods	1.4	1.2

Source: Bloomberg. Data calculated using a corporate tax rate of 21%. Indices referenced: Bloomberg Barclays Municipal Bond Index, Bloomberg Barclays US Treasury Index, Bloomberg Barclays US Credit Index. Past performance is not indicative of future results. An investor cannot invest in an index.

Opportunity #2 – Non-investment grade bonds. Another potential opportunity in the municipal bond market is within the non-investment-grade category. Over the long run, the combination of lower defaults, attractive diversification versus other asset classes and resilience in rising rate environments has made high yield municipal bonds a compelling addition to a strategic asset allocation. Though credit research for high yield bonds is imperative at the individual issuer level, much of the non-investment grade universe is unrated by the major agencies, leading most investors to overlook it. But for institutional investors with the resources to thoroughly underwrite these issues, it may be possible to harness attractive risk-adjusted returns in a less competitive segment of the market.

The municipal bond market continues to be an important asset class for insurance companies, with new opportunities emerging as a result of last year's tax reform. Invesco's municipal team of 6 dedicated portfolio managers and 14 credit analysts¹ is uniquely positioned to take advantage of these opportunities.

The team manages over \$26 billion¹ in municipal assets across different segments of the market (tax-exempt and taxable, investment grade and high yield) and across different vehicles (separate accounts, mutual funds, etc.²). Combining this investment expertise with our dedicated insurance client service, Invesco can customize a municipal bond mandate to achieve your investment objectives while incorporating your unique reporting, accounting, and regulatory requirements.

About risk

Junk bonds involve a greater risk of default or price changes due to changes in the issuer's credit quality. The values of junk bonds fluctuate more than those of high quality bonds and can decline significantly over short time periods.

Municipal securities are subject to the risk that legislative or economic conditions could affect an issuer's ability to make payments of principal and/ or interest.

Fixed-income investments are subject to credit risk of the issuer and the effects of changing interest rates. Interest rate risk refers to the risk that bond prices generally fall as interest rates rise and vice versa. An issuer may be unable to meet interest and/or principal payments, thereby causing its instruments to decrease in value and lowering the issuer's credit rating.

1 Source: Invesco. Data as of September 30, 2018. Number of team members is subject to change at any time.

2 Certain vehicles offered via affiliates of Invesco Distributors, Inc.

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Past performance does not guarantee future results.

Diversification does not guarantee a profit or eliminate the risk of loss.

The opinions expressed are those of the author, are based on current market conditions and are subject to change without notice.

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A basis point is a unit that is equal to one one-hundredth of a percent.