Fixed Income Fundamentals

Ascent Investment Partners

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Municipal Bond Default Risk

In December 2010, independent analyst Meredith Whitney rattled the municipal bond marketplace with her pronouncement on 60 Minutes that there would be "fifty to one hundred significant municipal bond defaults" in 2011 that together would total "hundreds of billions" of dollars. In fact, the rate of municipal defaults decreased in 2011 compared to 2010. Though her prediction failed to materialize, Whitney's comments focused investor attention on municipal credit risk and the economic impacts of the national recession on municipal issuers.

Municipal bonds have historically been regarded by investors as high quality investments involving little or no credit risk and very little potential for default (we define default as a missed interest or principal payment). In fact, default studies by the three municipal bond rating agencies bear out what investors have long held to be true: municipal bonds as an investment class are extremely safe, second only to U.S. Treasury securities in terms of timely payment of scheduled principal and interest. From 1970 through 2011, rating agency studies show that for holding periods as long as 25 years (see Table 1 below):

- The default rate for all rated municipal bonds is less than one half of one percent (less than 0.50%).
- Municipal bonds rated in the investment-grade range (Baa3 / BBB- or higher) have a default rate of less than one quarter of one percent (less than 0.25%).
- Investment-grade general obligation bonds – those secured by the full faith and credit unlimited taxing pledge of the issuer – have had a default rate of one hundredth of one percent (0.01%).
- Despite the significant pressures on state and local government budgets, default rates for rated muni bonds have not increased meaningfully since 2008.
- The vast majority of default risk in the municipal market has been in issues in the health care, housing and development sectors, specifically in those low rated and non-rated bonds sold to finance new projects, and in issues secured by payments from corporations.

Table 1
Cumulative Municipal Default Rates
For Rated Municipal Bond Issues (1)

	5 years		10 years		20 years	
	Moody's	S&P	Moody's	S&P	Moody's	S&P
Aaa/AAA	0.00%	0.00%	0.00%	0.00%	NA	0.00%
Aa/AA	0.01	0.01	0.01	0.03	NA	0.10
A/A	0.02	0.03	0.04	0.06	NA	0.15
Baa/BBB	0.14	0.15	0.37	0.27	NA	0.41
Ba/BB	2.29	1.42	3.92	2.32	NA	2.68
B/B	15.20	6.02	21.85	10.54	NA	10.54
Caa/CCC (2)	17.58	31.42	23.68	38.15	NA	41.28
Investment-Grade	0.03	0.05	0.08	0.09	NA	0.19
Speculative-Grade	5.35	4.70	7.94	6.91	NA	7.48
All Rated Municipal Bonds	0.07	0.10	0.13	0.17	NA	0.28

(1) Moody's calculations for the period 1970 through 2011. S&P calculations for the period 1986 through 2011.
(2) Calculations include all ratings in the C category, from Caa/CCC to C/C.
Source: Moody's; S&P

In this report, we examine the findings of the rating agencies' default studies and generalize some guidelines for municipal bond investors. However, general default rates do not indicate the creditworthiness of any one specific bond or issuer, as Jefferson County, AL and Harrisburg, PA have clearly shown. It is critical that investors understand the specific security structure and credit features of a bond issue and evaluate its credit quality and suitability based upon its individual characteristics.

Investing Guidelines

In a low-rate environment such as we are experiencing today, spreads between high-grade and lower rated municipal bonds compress (the yield differences between highly rated and lower rated bonds get smaller) as investors become increasingly willing to trade increased credit risk for incremental pick-up in yield. Such an approach can increase portfolio yield in the near term. However, reaching down the credit curve risks not only underperformance of lower rated bonds in a rising interest rate environment – as rates rise, credit spreads tend to widen, so lower rated bonds lose more value than higher rated bonds – but can also expose investors to substantially more default risk.

Because municipal issues tend to be unique, credit risk and investor suitability should be assessed for each specific bond. However, a few general conclusions can be drawn from historical default experiences in the marketplace:

- The overall default rate of municipal bonds as an asset class is very low, making munis a relatively safe investment option for fixed income investors.
- Ratings are a very strong indicator of credit risk, and investors can avoid the vast majority of the default risk in the municipal market by limiting their holdings to highly-rated municipal bonds.
- There are significant differences in credit quality among sectors in the municipal market. Investors can avoid almost all of the default risk in the market by sticking to essential governmental purpose and utility bonds.
- The majority of defaults happen in sectors that are subject to competition or market forces: corporate-linked development bonds, multifamily housing bonds, health care bonds and non-rated special tax bonds for new development.
- Bonds secured by payments from companies reflect the credit risk of the company and default at rates in line with corporate markets. These bonds are far riskier than general municipal bonds and should be considered as risk-equivalent to corporate bonds unless there are specific structural enhancements incorporated into the issues to protect payments to bondholders.
- Non-rated municipal bonds are much riskier than rated municipals and are generally unsuitable for conservative investors.

Credit Risk in the Municipal Market

Essential purpose municipal bonds have historically experienced very low default rates. While it is true that there have been some very large and high-profile defaults by highly-rated municipal issuers that have affected large numbers of bondholders – Washington Public Power Supply System (“Whoops”); Orange County, CA; Jefferson County, AL; and Harrisburg, PA are prominent examples over the past 25 years – the municipal market as a whole has proven to be a very safe market in which to invest. The notoriety of large municipal defaults is due in large part to their rarity.

In the investment-grade range, defaults are extremely rare in any of the top three rating categories. Bonds rated in the triple-A, double-A and single-A categories have historically defaulted at rates of less than one tenth of one percent. Even triple-B category municipal issues, just a few notches above junk levels, default at less than one-half of one percent.

There are, however, some significant differences among rating categories, and particularly among sectors of issuance, within the larger municipal market. Investors crossing over these lines into lower rated categories or higher risk market sectors take on substantially more statistical default risk and should carefully evaluate the returns they expect to receive for such added default risk.

Credit Risk by Rating Category

As Table 1 above illustrates, bond credit ratings have been an excellent indicator of relative credit risk within the larger municipal market. For the population of rated municipal bonds, S&P has calculated a 20-year cumulative default risk of investment-grade municipals of 0.19%. Within the investment-grade category, default risk is heavily concentrated in the triple-B rating category.

Dropping below investment-grade exposes investors to a much riskier class of investments. Investors with municipal bonds rated in the speculative grades (BB+ and below or non-rated) face a degree of default risk far higher than investment-grade bonds. For this reason, we view downgrades to below investment-grade as strong sell signals.

Default risk in the non-rated segment of the municipal market is far greater than in the market as a whole. Unlike the corporate bond market, in which there is a large population of below-investment-grade ("junk") rated issues, municipal issuers of bonds that are unlikely to earn an investment-grade rating tend to bring these issues to market without ratings. Non-rated issues are typically subject to less stringent, and certainly less frequent, review and analysis after they are issued, further increasing the long-term holding risk for investors who lack the ability to do comprehensive credit surveillance on their holdings.

Credit Risk by Market Sector

Moody's 2011 default study notes that defaults of rated municipal bonds are rare, and that those Moody's-rated issues that have defaulted since 1970 are very heavily concentrated in the housing and health care sectors. In fact, housing and health care together account for 51 of the 71 total defaults (71.8%) recorded over the 41 year study period (see Table 2, below). The remaining defaults are spread among the various other segments of the municipal market, with five (7.0%) representing defaults on general obligation bonds. It is important to note that the category "general obligation bonds" includes all bonds supported by tax pledges from all state and local issuing entities, including counties, cities, towns and school districts. According to Moody's, roughly 55% of its ratings apply to general obligation bonds of all types, making this category of issuers larger than all other sectors combined.

Table 2
Moody's Rated Defaults by Sector
1970 - 2011

Sector	Number of Defaults	Percentage of all Defaults
Housing[1]	29	40.8%
Hospitals and Health Service Providers	22	31.0
Education[2]	3	4.2
Infrastructure[3]	4	5.6
Electric Utilities	2	2.8
Cities[4]	2	2.8
Counties[4]	1	1.4
Special Districts[5]	1	1.4
Water & Sewer Utility	1	1.4
State Governments	1	1.4
Sub-Total, All Non-General Obligation	**66**	**93.0**
All General Obligation[11]	5	7.0
Total	**71**	**100%**

(1) All state and local issues for single-family and multi-family housing projects, including senior living and retirement housing projects.
(2) All private K-12 schools and public and private higher education issuers.
(3) Highway revenue, toll revenue, transit fee revenue and parking facility revenue projects.
(4) Non-tax supported appropriation debt.
(5) Tax Increment / Tax Allocation district revenue bonds.
Source: "U.S. Municipal Bond Defaults and Recoveries, 1970-2011." Moody's Investors Service, March 7, 2012.

There is a marked difference between the default rates of essential purpose municipal bonds – those issued for projects or purposes that fall within the traditional core responsibilities of municipal government – and those projects that introduce significant levels of corporate or private market forces. Moody's broad sector results indicate that general purpose municipal issues (e.g., G.O. bonds) and issues for essential service municipal systems (e.g., water and sewer utilities) are unlikely to default. In sectors in which municipalities have long had an important presence, but in which competitive and open market forces come more into play (e.g., electric power, transportation, transportation infrastructure), default rates remain relatively low but the increased market risk is apparent. In those sectors in which municipalities compete directly with private business, or in which companies lend their credit to support payment of municipal bond issues (e.g., hospitals, multi-family housing, non-hospital health care services and economic development projects), default rates more closely parallel those in the private sector and indicate the credit risk inherent in competitive industries. As a result, investors should not rely on the name or credit of the municipal conduit issuer lending its name to the bond – the credit quality of the bond is that of the company or project responsible for debt payments.

It is important to note that Moody's municipal bond default statistics do not include economic development bonds and special facilities bonds issued by state and local agencies but secured by payments from private companies. Corporate default risk is far higher than municipal default risk, and this dynamic is reflected in the performance of municipal bonds secured by payments from corporate obligors. In fact, a study published by Fitch in 2002 estimated that tax-exempt bonds secured by corporations represented nearly one-third (31.9%) of all municipal defaults over the period from 1980 to 2002.

Corporate Credit Risk in the Municipal Market

There are fundamental differences in default risk between municipal bonds and corporate bonds. Municipal bonds backed by corporations – industrial development revenue bonds (IDRs or IDBs), pollution control revenue bonds (PCRs) and airport special facility revenue bonds (SPFs) – should be evaluated in light of the credit risk presented in the corporate market. It is important that investors purchasing these types of bonds understand that the credit risk they are accepting is the risk of the corporate credit that backs the bond, not the municipal issuer lending its name to the bond issue. Unless specifically structured otherwise, these issues provide no additional security features beyond the corporation's promise to make debt service payments. For this reason, the large majority of such corporate-backed municipal bonds are rated equally with the senior unsecured debt (i.e., corporate debentures) of the company securing payment.

A comparison of corporate and municipal default rates (Table 3 below) shows that for an investor holding a bond for a 10-year period, moving from bonds backed by municipalities to tax-exempt bonds backed by corporations increases default risk by more than a factor of 10 in any investment-grade category. For junk-rated issuers, relative risk in the corporate market is on the order of two to six times higher than in the municipal market for a given rating category.

Investors in tax-exempt bonds should be careful that they are adequately compensated for the increased risk of corporate-secured municipal bonds compared to essential service, governmental-purpose bonds. To provide adequate value for the credit risk assumed, corporate-backed munis should always trade at a higher yield than a governmental-purpose bond of the same rating, and after-tax adjusted yields on corporate-backed municipals should approximately equal the yields available on fully taxable bonds of the same corporate obligor.

Table 3
Comparative Default Rates for Municipal vs. Corporate Debt
(10-Year Cumulative Default Rates)[1]

	Municipal	Corporate
Aaa	0.00%	0.48%
Aa	0.01	0.86
A	0.04	2.22
Baa	0.37	4.71
Ba	3.92	19.54
B	21.85	43.00
Caa/C [2]	23.6	70.24
Investment-Grade	0.08	2.61
Speculative-Grade	7.9	33.69

(1) Moody's study period was Jan. 1, 1970 to Dec. 31, 2011.
(2) Calculations include all ratings in the C category, from Caa to C.
Source: Moody's

The municipal bond market is incredibly diverse. Tens of thousands of individual issuers sell bonds that vary widely in structure, security features and credit quality. Even a concept as basic as "general obligation" can have a very different meaning from issue to issue, depending on the specific state and local laws governing taxation and issuance of debt. Default analysis can be very helpful in guiding investors toward the segments of the market that have historically offered the best risk/return balance, but prudent municipal investing requires more than generalizations or relying solely on ratings.

Ascent Investment Partners' approach to investing in municipal bonds is to carefully evaluate the underlying credit characteristics of the bond issuer and the specific bond issue and to only position in clients' portfolios those bonds that we believe offer very high credit quality on their own merits. We look through bond insurance policies and other credit enhancements to identify those issuers that have strong fundamental credit characteristics and offer investors the best credit quality while still achieving market returns.

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