WHAT YOU NEED TO KNOW ABOUT INVESTING IN MUNICIPAL BONDS

By Annette Thau

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Municipal bonds, "munis" for short, are issued by city, county, and state governments, as well as by enterprises with a public purpose, such as certain electric utilities, universities, and hospitals.

Municipal bonds are the only sector of the bond market where the primary buyers are individual investors. The chief attraction of munis is that they are exempt from federal taxes. If you are a resident of the state issuing the bonds, they are also exempt from state taxes.

Overwhelmingly, munis deserve their popularity among individual investors. Even though there are thousands of issues outstanding, munis are sound and relatively uncomplicated instruments. Nonetheless, buying individual municipal bonds is not quite as simple as buying Treasuries. The buyer of municipal bonds must be aware of a number of issues: The first one is whether or not you would earn more by buying munis than by buying taxable bonds; second, you need to understand credit quality; and finally, commission costs can be high—particularly if you need to sell a bond before it matures. However, commission costs are hidden.

This article will discuss how to determine whether it pays for you to buy munis rather than taxable bonds, as well as explaining the credit quality of the many types of munis available. A future article will discuss how to get information and shop for munis.

SHOULD I BUY MUNIS?

No one likes to pay taxes. But it does not always pay to buy tax-exempt bonds rather than taxable bonds.

If you are considering buying munis, your first step should be to determine whether you will earn more by buying munis or by buying taxable instruments. The method used most often is to calculate how much you would have to earn on taxable investments to earn as much as you net on municipal bonds. This is called the taxable-equivalent yield.

This is easy to do. First, determine your exact tax bracket. Then, use the following formula:

$$\text{Taxable-equivalent yield} = \frac{\text{tax-exempt yield}}{(1 - \text{tax bracket})}$$

For example, suppose you are in the 39% tax bracket and you are considering the purchase of a muni with a 5% yield to maturity. To obtain the taxable-equivalent yield, convert percentages to decimals. Your calculation looks like this:

$$\text{Taxable-equivalent yield} = \frac{0.05}{(1 - 0.39)} = 0.082 = 8.2\%$$

Annette Thau, Ph.D., is author of "The Bond Book: Everything Investors Need to Know About Treasuries, Municipals, GNMAs, Corporates, Zeros, Bond Funds, Money Market Funds, and More," (copyright 2001, published by McGraw-Hill; $29.95).

Ms. Thau is a former municipal bond analyst for Chase Manhattan Bank. She also until recently was a visiting scholar at the Columbia University Graduate School of Business.

TABLE 1. CREDIT QUALITY RATINGS AND WHAT THEY MEAN

Moody's	Standard & Poor's	Fitch	Interpretation
Aaa	AAA	AAA	Gilt-edged. If everything that can can go wrong does go wrong, they can still service debt.
Aa	AA	AA	Very high-quality by all standards.
A	A	A	Investment grade: good quality.
Baa	BBB	BBB	Lowest investment grade rating: satisfactory, but needs to be monitored.
Ba	BB	BB	Somewhat speculative: low grade.
B	B	B	Very speculative.
Caa	CCC	CCC	Even more speculative; substantial risk.
Ca	CC	CC	Wildly speculative; may be in default.
C	C	C	In default.

This tells you that in your tax bracket (39%), a municipal bond yield of 5% is equivalent to a taxable bond yield of 8.20%. If you were in the 15% tax bracket, on the other hand, the same formula would result in a tax-equivalent yield of 5.88%. This changes the picture considerably: You might actually earn more by buying a taxable instrument.

You can use the same formula to determine whether an in-state bond, on which you pay no state tax, would net you more than an out-of-state bond on which you would have to pay state taxes. For example, if your state tax is 5%, add that amount to your federal tax (39% in the preceding example) and substitute the resulting number (44%) in the above formula.

Note that your tax bracket is not the only factor to consider when comparing taxable and tax-exempt yields. You need to compare fixed-income instruments that are comparable in credit quality and maturity length. In the world of bonds, you can always get a higher yield by taking on more risk. That could be interest rate risk (buying bonds with longer maturities) or credit risk (buying bonds with lower credit quality). That does not mean you should not be taking on higher risk, but rather that you need to understand the risk you are taking and be comfortable with it. It also means that you should be compensated adequately for the additional risk. But when comparing bond yields, the first step is to start by comparing bonds whose risk profiles are similar.

Also, be sure that you are comparing the same quoted yields. [For more on the various yields, see "Bond Basics: An Investor's Guide to the Many Meanings of Yield," which appeared in the January 2002 issue of the *AAII Journal*. Back issues are available on the AAII Web site at www.aaii.com.] For individual bonds, you will normally be quoted a yield to maturity.

As a rule, taxpayers in the highest tax brackets benefit from buying tax-exempt bonds; those in the lowest do not. But these relationships are not constant. That is partly because tax laws change. In addition, demand for municipal bonds varies over time. Also, the yield curve [the graph of yields at different maturities for bonds of the same credit quality] in the municipal bond market is typically more steep than that of the Treasury market. In the early 1990s, typically, the yield of munis with long maturities (20 to 30 years) was somewhere between 80% and 85% of Treasuries with comparable maturities. For the past two years, and as this is being written, munis with comparable maturities are yielding 95% (or higher) of Treasuries. That means that munis have been a screaming buy for the past two years, even for investors in the 15% tax bracket. Therefore, it always pays to recalculate.

CREDIT QUALITY: RATINGS

Few investors have either the time or the access to information to perform extensive credit analyses. If you buy individual bonds, you would, like most individual investors, rely on the ratings assigned by the major rating agencies. Table 1 lists the main ratings of the rating agencies, along with a translation (in plain English) of what these ratings mean.

The lowest investment-grade rating is Baa (Moody's), which is equivalent to BBB (both Standard & Poor's and Fitch). The wording "investment grade" indicates that bank trust funds are allowed to invest in securities bearing these grades, but it does not denote high credit quality.

Ratings convey information about

credit quality: that is, the likelihood that the issuer of a bond will have sufficient money to pay interest on time and repay principal when a bond matures. The highest rated bonds are those issued by the United States Treasury. Treasuries actually do not carry a rating because it is assumed that a default on the part of the U.S. Treasury is not conceivable. The credit quality of municipal bonds, in the aggregate, is high. Nonetheless, defaults do occur from time to time, and credit rating downgrades occur frequently.

If you are buying bonds, you need to understand the relationship between ratings and yield. Higher ratings come at a cost: The higher the rating, the stronger the credit quality, the lower the yield. On the other hand, and particularly because ratings change over time, if you are buying bonds that have very long maturities, say 20 to 30 years, credit quality is important. You want to know that you will receive interest payments on time and that you will receive principal in full when the bond matures. Also, bonds with very strong credit quality are more liquid: That is, they are bought, and sold, with lower markups than bonds with lower credit quality.

There are a lot of misconceptions concerning ratings and credit quality. What follows is a discussion of some essential points that should clarify these issues.

'GO' AND REVENUE BONDS

Municipal bonds come in two varieties: general obligation and revenue. General obligation bonds (also called GOs) are issued by states, cities, or counties to raise money for schools, sewers, road improvements, and the like. Monies to pay interest to bondholders are raised through taxes and some user fees.

Revenue bonds are issued by a variety of enterprises that perform a public function, such as electric utilities, toll roads, airports, hospitals, universities, and other specially created "authorities." Money to pay interest to bondholders is generated by the enterprise of the issuer. Electric utilities depend on the fees paid by users of electricity; hospitals depend on patient revenues; toll roads depend on tolls and so on.

One misconception concerning municipal bonds is that GOs are safer than revenue bonds. There are strong and weak credits in each sector. The supposed safety of GOs is ascribed to the fact that they are backed by the taxing power of the issuer. Theoretically, that power is "unlimited." That's because bond indentures state that general obligation bonds are backed by the "unlimited taxing power" of the issuer. In the real world, however, the power to tax is limited by political and economic considerations. The classic question any rating analyst has to ask is: In the event there is an economic crunch, who will the issuer pay, its teachers, police and fire department, or the bondholders? If municipalities could tax at will, all GOs would be AAA, and as we know, this is not the case.

Similarly, the supposed lower safety of revenue bonds is based on the fact that issuers run businesses whose revenues cannot be predicted with certainty. Again, that bears no relationship to what goes on in the real world. Most electric utilities and toll roads can, and do, raise rates to pay for increasing costs. Consequently, many revenue bonds, particularly those issued for essential services such as electric power, sewer, or water are high-quality credits. So are many toll roads or state "authorities."

The ratings of revenue bonds revolve around an analysis of revenues generated by sales, compared to money needed to cover interest payments (debt service). In practice, the rating is determined by a key ratio known as the debt service coverage ratio. This is defined as the amount of money specifically available for payment of debt service divided by the amount of debt service to be paid. This ratio is calculated for the past. How much money was actually available for debt service last year, or for the past five years? It is also estimated for the future. How much money is going to be available next year, and the year after, and so on, for debt service? The past ratio is called "the historical debt service ratio."

A historical debt service ratio of at least two is generally required for an "A" rating. That ratio indicates that monies reserved for payment of debt service were equal to twice the amount needed for debt service. A historical ratio of five or six times debt service is considered fantastic. A historical ratio below one—indicating there wasn't enough money in the till to cover debt service—would almost guarantee a below investment-grade rating. Nonetheless, no matter how sound their management or how strong debt service coverage has been, revenue bonds are almost never rated AAA on their own merit. This does not make them unattractive investments—just the opposite. They yield more than GOs.

Also, in practice, the boundary lines between revenue and general obligation bonds are sometimes fuzzy. For example, some counties and cities own hospitals and/or electric revenue plants, sometimes both. Therefore, the revenue bonds they issue have both general obligation and revenue backing. These bonds are sometimes called "double barreled" credits.

Among GOs, the weakest credits are found in two groups: GOs of large cities with deteriorating downtown cores and large social outlays; and older, small cities or districts with shrinking populations, a shrinking tax base, and deteriorating economies.

Among revenue bonds, the riskiest bonds have been hospitals with strong dependence on government reimbursement (government programs do not cover hospital expenses in full); bonds issued by developers of nursing homes (many

of these are highly speculative); and so-called private-purpose bonds (also called industrial development bonds, or IDBs). These are issued by specially constituted authorities on behalf of private businesses.

Finally, keep in mind that, inevitably, ratings change. When the economy prospers, generally bond ratings improve. When the economy undergoes stresses, bond ratings deteriorate. At the current time, many state and local governments are experiencing revenue shortfalls and as a result, many bond ratings are being downgraded.

How concerned should you be about these downgrades? This is a difficult question to answer. Downgrades from a high quality rating (strong AA or AAA) to one or even two notches below may mean that the price of the bond would go down slightly. But that is not a concern unless you need to sell the bond before it matures. Also, issuers (such as states or cities) that issue a lot of bonds and come to the market often simply cannot afford to default.

On the other hand, defaults can and do occur. Some have been highly publicized (for example, in the 1970s, the defaults of Washington Public Power and the near default of New York City, as well as the more recent default of Orange County in California). But other less publicized defaults have occurred as well, mainly in the speculative areas discussed above. One indication is yield. If an issue sports a much higher yield than other issues with comparable maturities, that is an indication that credit risk is high.

Therefore, if you have a small portfolio, it is best to limit purchases of individual munis to issuers that are large, well known, and have high credit quality—even if that means a lower yield.

MUNICIPAL BOND INSURANCE

Bond insurance is relatively recent: it had its inception in the late 1970s. It owes its existence primarily to the shocks created by the Washington Public Power (WPPSS) default, and the near default of New York City bonds. Bond insurance has proved very popular with individual investors and has continued to expand. Currently, as many as 60% of all municipal bonds come to market with bond insurance. Insurance, however, does not remove all of the risks of buying bonds. And it comes at a cost.

Insurance is purchased by an issuer when bonds are brought to market. The insurance guarantees that in the event the issuer experiences financial problems, the insurer will step in and take over payment of both interest and principal. Generally, an entire bond issue is insured, and it is insured for the life of the bond. Occasionally, only part of an issue is covered, perhaps only specific maturities (the longest term bonds), or perhaps the reserve fund only.

There are a number of firms that insure municipal bonds. The oldest and best known bond insurance firms are:

- Municipal Bond Insurance Association (MBIA),
- Financial Guaranty Insurance Company (FGIC), and
- American Municipal Bond Assurance Co. (AMBAC).

A fourth firm, Financial Security Assurance (FSA) entered the market in the early 1990s. All of these firms are rated AAA by the major rating agencies, and the bonds they insure are consequently rated AAA as well. The AAA rating of the major bond insurance firms indicates that, in the opinion of the rating agencies, the insurers have sufficient reserves to back up their guarantee—even under a simulated severe depression scenario.

As in any other industry, however, changes occur. One major change is that several new firms have appeared on the scene. And unlike the older firms, these firms are not rated AAA:

- Asset Guaranty (AG), is rated AA; and therefore, so are the bonds it insures.
- Another firm, American Capital Access (ACA) is rated only A. It insures mainly lower quality credits; those are also rated A, based on the rating of that insurer.

Issuers who have a strong credit history (A+ or better) generally come to market without insurance. Issuers who need "enhancements" in order to attract buyers are most likely to insure their bonds. These would include credits that are marginally investment grade, that are not well-known, or that may be undergoing temporary difficulties.

In effect, bond insurance transforms a potential lemon into lemonade. Instead of coming to market with a rating that may be barely investment grade, the bond comes to market with a AAA rating, based, however, on the rating of the insurance firm.

For municipal bond insurers, municipal bond insurance has proved a dream product. These companies screen bonds very carefully. Only issuers deemed unlikely to default are granted insurance. Some minor defaults have occurred, but to date, no major bond insurance firm has taken a hit that has been significant enough to threaten its rating.

For individual investors, there are a number of pluses to bond insurance. For starters, the insurance does confer a layer of protection against default. As a result, the bonds are more liquid. If a major issuer is downgraded, the insured bonds of that issuer decline less in price than the uninsured bonds of the same issuer. Also, bond insurance functions as a second opinion on credit quality. Someone other than the rating agencies—who moreover has money on the line—has carefully screened a possibly marginal issuer for credit quality.

On the minus side, however, insurance protects only against default risk. It does not protect against fluctuations in the price of a bond due to changes in interest

rates. Also, insurance comes at a cost—a somewhat lower yield than the issuer would have to pay based on its own rating.

Nor is there any guarantee that the rating of the bond insurance firms will not be downgraded. As noted earlier, changes have already occurred in the industry. More are likely to occur. Insurers may continue to prosper, and they may not. In the event that a bond insurance firm is downgraded (certainly a possibility), then all the bonds guaranteed by that firm would be downgraded as well to reflect the new rating of the insurer. This, in turn, would result in some decline in the price of the bond due to the downgrade.

There may also be a misconception concerning the relative safety of insured bonds. Many individual investors consider bonds that are insured to be safer than bonds rated AAA on their own merit, but the opposite is true. In the bond market, insured bonds rated AAA are not considered quite as gilt-edged as bonds that are rated AAA on their own merit. The yield of bonds rated AAA based on the rating of an insurer tends to track AA credits, and not, as their rating would suggest, AAA credits. To an individual investor, this means that insured bonds yield somewhat more than AAA bonds, and that may be considered a plus. The yield (and therefore the price) of an insured bond is actually based both on the insurance and on the underlying credit of the issuer. For that reason, you should find out how the bonds would be rated if they were not insured. To check the rating of the issuer, find out, if you can, how uninsured bonds of the same issuer are rated.

If a broker offers you a AAA credit, be sure to inquire if the bond is rated AAA on its own, or if that AAA rating is based on bond insurance. Many brokers do not differentiate between the two. However, the distinction is important.

Is bond insurance a good deal for the individual investor?

On balance, for most individuals, the answer is yes. The main advantage is that bond insurance adds a layer of protection against totally unforeseeable risks. This is particularly true for bonds with maturities of longer than 10 years, or if you are buying riskier credits such as hospitals, or if you have a relatively undiversified portfolio (any portfolio consisting of a few individual issues).

OTHER QUALITY INDICATORS

If you want to be sure that you are buying high-quality credits, there are possibilities other than insured bonds.

Any bond rated A to AAA on its own is a sound investment. The strongest credits, however, are those of "refunded" bonds. These are high-coupon bonds, usually selling at a premium. They are backed by U.S. Treasury bonds held in escrow. How can that be?

Well, suppose a municipality issued bonds five years ago when interest rates were much higher than current rates, say 8%. Suppose also that, due to the original call provisions, the municipality cannot just call the bonds. How can that municipality lower its interest costs?

The answer is that the municipality may "refinance" by issuing new bonds at the current lower coupon rate (say 5½%). The newly issued bonds are known as "refunding" bonds. The municipality issues an amount of bonds sufficient to cover interest payments and to redeem principal of the older bonds (the 8% bonds) at the first call date. The proceeds from the sale of the refunding bonds (the 5½% bonds) are used to purchase U. S. Treasury securities, which are then placed in an escrow account. The coupons of the Treasury bonds are used to pay the coupon payments on the older bonds (the 8% bonds), now called the "refunded" bonds. At the first call date, the remaining assets in the escrow account are used to redeem the refunded bonds.

The refunded bonds are totally free of default risk since monies to pay the bondholders are held in escrow and invested in Treasuries. Whatever the initial rating of the bonds may have been, it now jumps to AAA. This is not automatic, however. Technically, the issuer has to apply for a new rating—because the rating agencies want their fee. In the event the refunded bonds are not re-rated, they will generally trade like AAA bonds. The refunding bonds (that is, the newly issued 5½% bonds), on the other hand, trade with the rating of the issuer.

Note that another advantage of "refunded" bonds is that maturities for such bonds are short to intermediate. Therefore, interest rate risk is low.

A number of states, such as Maine and Virginia, issue bonds for small localities through very well-run and highly rated "bond banks." Other states (including New York and New Jersey) add a layer of protection to the bonds of local school districts by reserving state aid payments for debt service if the school district is in financial difficulty.

Many other possibilities will no doubt continue to turn up as the markets and economic conditions change. This is one reason for dealing with a knowledgeable specialist who can assist you in uncovering new opportunities.

TO SUMMARIZE

Here are some important points to keep in mind concerning municipal bond investments:

- Before buying any bond, first determine whether you will earn more by buying a taxable or a tax-exempt bond;
- Be aware that ratings may change, and monitor credit ratings of the bonds you own; and
- The longer the maturity of the bond, the higher the rating you should require. ✦