Guide to municipal securities

If you own or are thinking of buying municipal bonds, you should read this general discussion of the risks and features of municipal bonds

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Can you lose money in bonds?

Yes. The easiest way to lose money is to take on more risk than is appropriate for your goals and circumstances. While you may be comfortable with the idea of more risk on an emotional level, that does not necessarily mean it is appropriate for your situation.

For example, if interest rates have gone up and your circumstances force you to sell bonds before maturity, you can lose a substantial percentage of your principal. Does that mean that you should buy only very-short maturity bonds? Not necessarily, because doing so may mean that you would have to accept a lower amount of annual income than you need.

Additionally, reducing one kind of risk may result in an increase of another. For example, the bond investor who reduces market risk by concentrating in shorter-maturity bonds may increase reinvestment risk (the chance that interest rates will fall and investors will not be able to reinvest their proceeds at the original bond yield). In this case, reinvestment risk may rise since a larger percentage of income will be generated by bonds with shorter maturity dates.

The idea of managing risk, according to the late Peter Bernstein, author of *Against the Gods: The Remarkable Story of Risk,* isn't to try to predict the future, but to balance and hedge your investments to reflect the financial risks that you can identify. (*The Wall Street Journal*, "Many Investment Pros Want No Part of the Current Risks," February 24, 2003.)

This guide is intended to provide investors with a broad introduction to some of the key risks of municipal bonds. However, because each security has its own particular risk characteristics, investors should also wish to be familiar with the official statement and any updated disclosure information from the issuer(s) of securities they own or are considering purchasing. Making informed investment decisions requires an understanding not only of the characteristics of individual securities, but also an awareness of historical, current and expected market conditions, including interest rate and economic trends (which can affect the creditworthiness of issuers and the market value of securities). Because changes in interest rates, economic conditions, tax rates and regulations, as well as the passage of time all have an effect on an investment portfolio, it is important for investors to review their portfolios on a regular basis.

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For a fuller understanding of municipal bonds, please see *www.InvestinginBonds.com* or call the Securities Industry and Financial Markets Association (SIFMA) at 908-620-2538 to ask for a copy of *An Investor's Guide to Municipal Bonds.* Additional information about individual municipal securities, including municipal disclosure documents, and about market activity may be available from the Municipal Securities Rulemaking Board's Electronic Municipal Market Access information site, *www.emma.msrb.org*. Bond market trading data are available at *www.finra.org* or *www.InvestinginBonds.com*.

We encourage clients to also review the most recent municipal research reports available from UBS Wealth Management Research (available from your Financial Advisor or by logging onto UBS Online Services and clicking the "Research" tab).

If you have additional questions, please contact your Financial Advisor.

Risks and features of municipal bonds

When you purchase a municipal bond, you are lending money to a municipality (state, county, city or town) or an authority or agency created by a municipality. It is known as the issuer of the security. The issuer signs an indenture, a special kind of contract which spells out its obligations as issuer of a debt security. Sometimes the issuer will immediately loan the money you have just paid for your bonds to a third party, who is obliged to make payments that will be passed back to you. The third party is called an obligor. In return for your money, the issuer provides you with a bond (a security and a legal promise) which will pay a specified rate of interest during the life of the bond and repay the principal (the face value) of the bond when it matures, or comes due. Debt securities are a contractual obligation of the issuer or obligor, and there is no legal, moral, or fiduciary obligation of the issuer to a bondholder beyond those found in the indenture.

Although you buy these bonds through UBS (and usually, UBS has bought them first, so its sale to you is "as principal" rather than "as agent"), this does not mean that UBS will make interest and principal payments to you from its own funds. When you hold your bonds in an account at UBS, we will promptly credit these payments to you, but we are not required to make payments to you if the issuer fails to make payments when due. This simplified explanation is provided for your convenience and understanding and does not supersede or override the agreement you signed when opening an account with UBS.

Credit risk
A fundamental risk of all municipal bonds is that the issuer of or obligor for the bonds (an entity, other than the issuer, who is obliged to pay interest and principal) may experience financial difficulties that prevent it from being able to make timely payment of interest and principal when due. Bond issues (or their insurers or issuers) are often credit-rated by independent credit rating agencies. A credit rating is an alphabetical/numerical symbol that gives a relative indication of credit quality. It represents the rater's assessment of an issuer's ability to make the payment of interest and principal on the bonds. Although the market relies on such ratings, neither UBS nor the credit rating agencies guarantee that a bond will maintain the same rating throughout its existence. Review and updating of ratings is under the control of the ratings agencies, not UBS. (See information on ratings agencies at the end of this document.)

Market risk
Municipal bonds are subject to market risk if sold before maturity. Because markets change constantly, a bond owner may not be able to sell the bonds for as much as he or she paid for them. UBS is not obligated to "make a market" (buy back your bonds) at all times. A market under stress may react with price volatility or it may "freeze" with few or no transactions occurring.

Reinvestment risk
If a bond is sold, called, or matures, it may not be possible to reinvest the proceeds of the sold or redeemed bond in an investment with a comparable yield.

Inflation risk
Most municipal bonds are long-term investments. History suggests that inflation will cause principal that has been returned to be worth less in buying power than when it was invested.

Tax risk and certain tax consequences
Although tax attorneys render an opinion at the time of issuance that the interest on municipal bonds is federally tax-exempt (with exceptions, so **always** read the offering statement), the issuer must comply with certain IRS rules at the time of issuance as well as keep certain promises ("covenants") over time made about the use of the bond sale proceeds to **keep that tax-exempt status** for the bond interest.

For instance, usually bond proceeds must be used for a public purpose, spent within a certain time, and not reinvested solely to gain the economic advantage of borrowing money at tax-exempt rates and investing it at taxable rates. If an issuer fails to observe tax rules and keep its promises, the IRS can declare that the interest on the bonds is (and was) taxable and may seek to recover unpaid taxes and penalties from the bondholders. Furthermore, future changes in tax laws generally could make the value of tax-exempt interest less than it is at the time of purchase. Some municipal bond interest **is federally** taxable from the time of issue; in some cases, it may be subject to the Alternative Minimum Tax (AMT). In addition, there is a category of bonds which provides a tax credit (usable by certain purchasers) rather than tax-exempt interest.

Keep in mind also that only the interest income may be tax-free. There are potential tax implications of buying or selling municipal bonds at a premium or a discount. UBS Financial Services Inc. does not provide tax, legal or accounting advice. Please contact your tax advisor regarding the suitability of tax-exempt investments in your portfolio and your accounting advisor to determine the appropriate accounting treatment. While we do not provide tax, legal or accounting advice, we can confer with you and your advisors to help them understand the investment implications of different securities and investment strategies.

Liquidity risk
For lesser known or lower-rated issuers or in times of great credit stress generally, it may not be possible to sell a bond at the time or price you choose.

Enhancement risk
The credit of many municipal bonds is enhanced by a guaranty of an entity other than the issuer or the obligor, or by an insurance policy that promises the payment of interest and principal if the issuer or obligor is unable to make timely payments. However, guarantors or insurers can face financial difficulties of their own. The difficulties of such credit enhancers can seriously affect the price and liquidity of a bond.

General obligation bonds and bankruptcy
When an issuer pledges its "full faith and credit" (which usually means the ability to impose taxes) to pay interest and principal of its bonds, that is called "general obligation debt." The bankruptcy of a municipal entity (e.g., cities, towns, villages) may affect the general obligation pledge. In the U.S., **states** cannot file for bankruptcy, but municipalities can. Since Congress established a method for municipalities to do this, over 60 years ago, there have been fewer than 500 municipal bankruptcy petitions filed. Bankruptcy filings by larger municipalities have been rare. Limited-purpose districts account for the great majority of cases. Some tax-exempt borrowers such as non-profit hospitals are covered by other chapters of the U.S. Bankruptcy Code. Additional information can be found at *www.uscourts.gov/bankruptcycourts*. See "Bankruptcy Basics," Chapter 9.

Revenue bonds
If a bond is repaid by a specific stream of revenue and **not** by the full faith and credit of a municipal issuer, it is called a revenue bond. As an example, bond issue proceeds are used to build a toll bridge, and the tolls on the bridge are used to pay interest and eventually repay the principal of the bonds. In this example, the tolls form the revenue stream. A problem affecting the revenue stream of revenue bonds affects the credit rating of the bond.

Risks to revenue streams
General economic conditions (local economy downturn, recession), natural disasters (floods, earthquakes) or other unforeseeable conditions may affect the revenue stream. In some cases, private competition can affect a public revenue stream.

Municipal bond redemption features
Many municipal bonds can be redeemed (or "called") by the issuer prior to the maturity date. A bond that can be redeemed by the issuer before maturity is referred to as a callable bond. There are three different types of calls:

- **Optional call.** An optional call is a redemption feature on a bond issue that may be exercised by the issuer at its discretion. Municipal bonds are generally issued with 8- to 10-year call protection. (That is, they cannot be "called" away from the bondholder until the call date arrives.) A bond that is not subject to an optional call feature may be referred to as non-callable. (While a bond may be described as non-callable—that is, not subject to an optional call provision, most revenue bonds will be subject to extraordinary or mandatory Call provisions.)
- **Extraordinary call.** An extraordinary call is exercised because of some unforeseen or unusual event, such as: a calamity (destruction) or condemnation of the project whose revenues secures the bonds; declaration of taxability; act of God; tax law changes; and mortgage prepayments on housing bonds.
- **Mandatory call.** A mandatory call is exercised if a particular event takes place as required by statute or the bond indenture, e.g., when the mortgage loans that secure a housing bond are prepaid.

The circumstances that would trigger these calls are specified in the bond indenture. Investors should keep in mind that almost all revenue bonds have extraordinary or mandatory call features, and that housing bonds especially may be at greater risk of being called away due to an extraordinary or mandatory redemption. Most municipal securities that are secured from an annual appropriation are also subject to extraordinary call or default in the case of non-appropriation.

Put bonds, mandatory tender bonds and unexpected calls

Bonds with unusual call features (mandatory tenders, extraordinary calls) can be called away quite suddenly and sometimes with little or no warning. The bondholder receives the par value of the bonds (and sometimes a bit extra, known as a call premium), but may face reinvestment risk. Bonds with unusual call features may be harder to sell, particularly when they are trading near or above par. The offering document should disclose the possibility of these kinds of events. Issuers of bonds with puts or tenders can use a variety of means to provide funding to pay holders when bonds are "put" or "tendered." Investors should review the offering document to understand how the put or tender will be funded and what happens if that funding is not provided (and the put or tender is not honored).

Housing bonds

Housing bonds are bonds issued by a state or local agency which loans the proceeds to home buyers (possibly through in-state mortgage lenders). Single-family housing bond proceeds are loaned to buyers of individual homes. Multi-family housing bond proceeds are loaned to buyers or developers of multi-family dwellings. The collective pool of mortgage payments is then pledged to the bonds' interest and principal payments. Some home buyers or developers may default on their mortgage payments. In the case of widespread mortgage defaults, the credit rating and prices of the bonds are likely to be affected. Home buyers may also prepay their mortgages in whole or in part. The variability of prepayments (because of interest rate and economic fluctuations) creates some uncertainty for bondholders, since the issuer usually has the right (or even duty) to call bonds early when prepayments occur. An "early call" means that the issuer redeems (pays back) the principal before the stated maturity date. Such redemptions are driven by two basic factors: the rate of prepayment of the underlying mortgage loans and the issuer's policies in channeling those prepayments into the redemption of specific bonds. Because of this, bond investors should review the sections of the official statement which describe optional, extraordinary and mandatory redemptions.

Healthcare revenue bonds

Healthcare facility revenue bonds are bonds for which the issuer loans the proceeds to a health care facility or facility group (usually hospitals operated by non-profit corporations). Health facility revenues are often not as predictable or reliable as the sources of revenue for other municipal bonds, with the consequence that the market usually demands a higher yield for these bonds compared to other comparably rated bonds.

Project revenue bonds

Project revenue bonds depend on the construction and operation of a specific project for the payment of bond interest and principal. The project operator is obliged to use some portion of the revenues from the completed project to pay interest and repay principal. For example, an issuer loans the bond proceeds to a stadium development company, which builds a stadium and pledges a portion of revenues from ticket sales and concession stand operations as the source of repayment for the bonds. The timely construction, successful operation and general economic conditions affecting the project are all conditions which can affect the credit rating and price of the bonds, as well as the actual payment of interest and repayment of principal. A bond purchaser should carefully review the disclosures made about the experience of the project's managers and any predictions about or studies made of the finances of the project, including underlying assumptions.

Corporate-backed bonds

A municipal issuer can sometimes choose to lend to a private or public for-profit corporation which is, for example, developing an industrial facility in a blighted location, opening a factory in a depressed area or otherwise taking actions that have a demonstrable public benefit. Payments of interest and principal on the bonds are the obligation of the corporation, not the municipal issuer.

Repayment of corporate-backed bonds

Although the bond purchasers own municipally issued debt instruments paying interest (sometimes taxable interest), they are exposed to some of the economic risks of a direct (equity) investor in such a company. The company may or may not be large and well-funded. If the company is less experienced or thinly funded, or the venture has a degree of risk, or begins to fail financially, this will likely affect the credit ratings and price of the bonds.

Double-barreled bonds

Bonds that are backed both by a revenue stream **and** by the full faith and credit of an issuer are called "double-barreled." A buyer of such bonds should examine both the factors affecting the revenue stream and the credit of the issuer itself to assess the likelihood of timely payment of interest and principal.

Build America Bonds

Build America Bonds ("BABs") may be issued by state and local governments until the end of 2010, unless Congress extends the time period for issuance. Unlike most ordinary municipal bonds, the interest paid to bondholders on these bonds is federally **taxable**. It is expected that the bonds will be treated as tax-exempt bonds for state law purposes. (Consult your own tax advisor on this question.) At the time of bond issuance, the issuer makes an irrevocable choice to have the BABs be one of two kinds: **Direct pay BABs** allow the issuer—not the bondholder—to receive an annual refund from the U.S. Treasury of 35% of the amount of interest paid out. A buyer of these bonds should consider the issuer's ability to make interest and principal payments if it should fail to comply with the statutory conditions for the use of proceeds and lose the refund payment. **Tax credit BABs** allow the bondholder to take a tax credit of 35% of the amount of interest payable for these bonds on his or her tax return (regardless of the bondholder's tax bracket.) Although provided for by law, so far no tax-credit BABs have been issued. A buyer should be sure to understand what kind of BABs are being purchased.

BABs often have a "make-whole call" that is standard in corporate finance. A make-whole call allows the issuer to call the securities at any time, but the redemption price is calculated by a formula which makes it quite expensive for the issuer—and advantageous to the bondholder—to do this early in the maturity period. The offering document fully describes this formula. Some BABs may provide the 10-year call protection that is often used in municipal finance. Each issue's offering document will spell out the applicable call provisions.

Political risk to BABs
It is possible that Congress could amend the statute creating BABs to reduce or even stop direct payments to issuers.

Defeased and refunded bonds
When bonds are issued, they have a maturity date, but they may have earlier call dates. The issuer may choose to borrow money at more favorable interest rates before that earliest call date and place the proceeds on deposit in an escrow account with a trustee. The escrow deposit, along with any earnings on it, will be used to redeem the older bonds either at maturity (Escrowed to Maturity) or at a call date (Pre-Refunded). Bonds for which the issuer has no further liability because of these actions are "defeased," or made void. The expression "All Calls Defeased" means that the issuer has specifically given up the right to exercise a call feature on a refunded issue. This is relevant only on issues that are Escrowed to Maturity or Pre-Refunded to a call date other than the first call date.

Refunded bonds carry less credit risk
Assuming all steps have been properly taken to defease them, these bonds have considerably less credit risk than ordinary municipal bonds; they may therefore trade at a premium.

Certainty as to the redemption date of refunded bonds
A bond purchaser should distinguish between Escrowed to Maturity and Pre-Refunded Bonds at the time of purchase, as the dates when the bonds will be redeemed are usually quite different. A purchaser should also understand that when older bonds have been **currently refunded** by new bonds which are sold very close to the time when the older bonds become callable, these currently refunded bonds have a very short time until the earliest call date.

Premium bonds
A premium bond is a bond that is trading for more than its face (maturity) value. A bond may be issued at a premium, or it may become a premium bond because of changes in interest rates. Since premium bonds frequently offer a higher yield to maturity than comparable at-par or discount bonds, investors may find them attractive. However, premium bonds will only return their par value at maturity; that is less than was paid for them.

Investor resistance to premium bonds
There is general investor resistance to paying more at the time of purchase than the amount to be returned at maturity. This may affect an investor's ability to sell a premium bond.

Zero coupon bonds
Zero coupon municipal bonds are sold at a discount to their face (par) value and do not pay periodic interest. Instead the interest earned is retained by the trustee, compounded semiannually and paid to the investor at maturity. The difference between the purchase price and the maturity value is the interest earned on the bond. All risk of nonpayment of interest is therefore concentrated at maturity. If zero coupon bonds are called before maturity, bondholders receive the compound accreted value and sometimes more than that amount.

Insured bonds
An issuer with a lower credit rating may choose to enhance that rating. One kind of credit enhancement for bonds is a bond insurance policy, under which an insurance company agrees to make the timely payment of interest and principal (when due), if the issuer is unable to do so. Payment by an insurance company does not "accelerate" or require a call of the bonds.

Insurer credit rating downgrades
Like other entities, bond insurers are credit-rated and their credit ratings may move down (or up) over time.

Effect of insurer credit rating
The downgrade of a municipal bond insurer will negatively affect the price and possibly the liquidity of the bonds insured by it.

Extreme events affecting insured bonds
Many municipal bond insurance companies suffered extreme credit rating volatility in 2007-2009. An insured bond which has **no underlying rating** is more seriously affected by changes in the credit rating of the bond insurer. A bond with an underlying credit rating that was originally lower but is now higher than that of its insurer will also be affected. Because of uncertainty surrounding the credit rating of insured bonds when the bond insurer has been seriously downgraded, these bonds may become highly illiquid.

Insurer credit rating volatility
After a decline, it may be impossible for a bond insurer to regain its original credit rating. Or a sudden infusion of capital may result in its credit rating improving. In either case, price volatility for the insured bond may result.

Events linked to insurer credit ratings
In some cases, the credit rating of the bond insurer may act as a "trigger" that can force unwelcome obligations and financial consequences on the issuer of the bonds (for instance, it may trigger issuer payments under related hedging contracts called swaps.)

Variable rate debt
A variable rate demand obligation (VRDO) is a long-term security (20 to 30 or even 40 years) with short-term interest rates that are periodically reset (daily, weekly or monthly), subject to the terms and conditions set forth in the security's offering document. VRDOs have a "put" feature which creates a specific liquidity potential. Holders are permitted to "put back" their securities to the issuer's liquidity provider (typically, a bank or other entity) at par plus accrued interest at certain stated times. Interest rates typically are reset by a dealer acting as the remarketing agent for the issuer. The minimum investment is $100,000. A purchaser of these bonds should read the offering document to learn what kind of liquidity is provided, which party or entity is the provider, whether liquidity can be cancelled without warning and what rates will be paid should that occur.

Variable interest rates may diverge from those expected
Generally, VRDO rates are reset at a market rate, but this rate may diverge from a holder's expectations when short-term rates are generally volatile. If a liquidity provider fails to pay for the bonds (for whatever reason), the rate may become fixed for the long term, as set forth in the program document for the security. This fixed rate may be higher or lower than market rates for similar long-term bonds.

Liquidity provider risks
The liquidity ("put") feature of VRDOs depends on the existence of a liquidity provider and on its ability to perform. (A liquidity provider is usually a third party, often a large bank; some issuers act as their own liquidity providers.) Liquidity is provided in two ways: either through a **letter of credit** (considered safer for the VRDO owner) or by a **standby bond purchase agreement**, which may have clauses allowing the liquidity provider **not** to buy the bonds back under certain circumstances. A VRDO purchaser should obtain and read the offering document and be sure to understand what kind of liquidity is being provided, the length of time for which it's provided and what events may cause it to be terminated without notice.

No replacement liquidity provider
Liquidity providers are often contracted for **less than the full life** of the bond, with provisions for renewal or replacement, but there is no guarantee that these events will occur. It is possible that no replacement liquidity provider can be obtained when the contract of the current liquidity is about to expire and it does not wish to renew.

Auction rate bonds
Auction rate bonds are long-term bonds whose rates "float" at short-term rates **if auctions, which determine those rates, are successful.** The auction rate market was seriously impacted in 2008 by the credit crisis in the general economy and many auctions were unsuccessful. Many auction rate securities became illiquid. Rates following an unsuccessful auction are determined by the program documents for that specific set of securities. The size of the auction rate market has diminished greatly since 2008. A purchaser of auction rate securities should read the offering documents to learn what happens if auctions fail or if no securities are put into an auction (an all-hold auction).

Auction rate bonds may not be liquid
Unlike variable rate debt obligations, **there is no liquidity provider for auction rate bonds**. If auctions fail, the owners of such bonds may be unable to sell their holdings, and will receive, on a long-term basis, the failed auction rate set by the program documents until the bonds mature or the issuer chooses to redeem them. UBS does not regularly make a secondary market for these securities (i.e., buy them outside of the auction process) and is **not** obligated to do so.

Auction rate market distorted and unpredictable
Since early 2008, the market for auction rate bonds has operated very differently than it had prior to that time. For a given security, a period of successful auctions may be followed by failed auctions, then auctions may again be successful but at quite different auction clearing rates. In some cases, issuers following specific SEC rules are bidding in auctions for their own debt. This is likely to dramatically affect the auction clearing rates for those auctions. Persons buying or holding auction rate bonds should be aware of these facts, be familiar with the program documents for the particular bonds and be aware that unpredictable outcomes of auctions may occur.

High-yield municipal bonds
High-yield municipal debt is usually also **higher risk** debt. In many cases, the yield on such bonds is very high because the credit of the issuer or obligor is either already below (or nearly below) investment grade or is not rated by any rating agency. Such bonds often have a considerable amount of price volatility because of the distressed situation of the issuer or obligor.

Increased risk of tax status change for high-yield municipal debt
Because the issuers and/or obligors of high-yield debt are often in distress, they may be less able to comply with tax covenants in the bond indenture, which can result in an IRS determination that interest on the bonds is taxable.

High-yield municipal debt may be hard to sell
The market for high-yield municipal debt is much smaller than that of investment grade. High-yield debt may be very illiquid.

Bond insurance on high-yield municipal debt may be challenged
If such debt is insured, the insurance policy may have "escape" clauses related to the failure of the issuer to keep its covenants.

Remedies for issuer defaults are complex
If high-yield municipal debt goes into default, the bond owners typically must act jointly through the indenture trustee to enforce their rights against the issuer or obligor.

Municipal bond statement pricing
Municipal bonds do not trade on an exchange; therefore, no centrally quoted marketplace exists for individual municipal securities. Adding to the challenge of providing daily evaluations for municipal bonds is the large number of outstanding securities and the relative infrequency with which most of them trade. (According to data from the Municipal Securities Rulemaking Board (MSRB), of the approximately 1.5 million different municipal bonds outstanding, less than 1% of them traded on an average day in 2009.) Recently, the downgrading of the municipal bond insurance companies has obscured the market, further complicating the evaluation process. Also, supply and demand imbalances in particular states or sectors can distort the relationship between statement evaluations and actual prices available in the market.

Actual prices of municipal bonds available in the open marketplace will be affected by the unique characteristics of each type of bond, as well as the size of each transaction, and may be significantly different than the prices investors see on account statements.

Credit rating agencies

The three principal U.S. credit rating agencies:

Moody's Investors Service
www.moodys.com

Standard & Poor's
www.standardandpoors.com

Fitch
www.fitchratings.com

Each rating agency uses its own criteria to rate an issue, but generally speaking, a rating reflects the rating agency's opinion of the ability of the bond issuer to pay the debt and the margin of protection that is provided to bondholders, should the issuer experience adverse financial conditions.

The lower the rating, the more speculative elements there may be in an issuer's financial condition.

An investment grade bond is a bond whose credit qualities are at least adequate to maintain debt service, but which may also have some speculative qualities as well. Investment grade ratings are "Baa" and higher from Moody's Investors Service and "BBB" and higher from Standard & Poor's and Fitch.

Below investment grade ratings suggest a primarily speculative credit quality, with the potential of credit risk developing due to major exposure to adverse events. The ratings on bonds may change over time. If the issuer's ability to make interest and principal payments changes after the bond is first issued, the rating agencies may reevaluate the bond and change their ratings as necessary.

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