

# Municipal Bond Basics





**Taxable or tax free?**  
**Determining whether a tax-free bond provides a better yield requires looking at both your federal and state tax liabilities. For example, Fred is in the 33% federal tax bracket, pays 5% in state taxes, and needs to decide between a tax-free bond that yields 3.75% and a taxable bond with a 4.5% yield. Fred subtracts 0.38 (33% + 5%) from 1 to get 0.62, then divides 3.75% by 0.62. The result is 6.04%. Since the taxable bond's yield is only 4.5%, the tax-free bond could be a better deal for Fred, since its tax advantages give it a tax-equivalent yield of just over 6%. (This hypothetical example is not intended to represent the performance of any specific security.)**



## Municipal Bonds and Their Tax Advantages

State and local governments often borrow money to supplement tax revenues and to finance projects such as new highways, buildings, or public works improvements. Such bonds are known as municipal bonds ("munis") or tax-exempt bonds.

Most municipal bonds and short-term notes are issued in denominations of \$5,000 or multiples of \$5,000. Bond interest typically is paid every six months (though some types of bonds work differently); interest on notes is usually paid at maturity.

Municipal bonds are subject to the uncertainties associated with any fixed income security, including interest rate risk, credit risk, and reinvestment risk. However, the tax advantages associated with munis and their potential ability to provide an ongoing income stream have traditionally made munis an important part of a portfolio, especially for retirees.

### Why invest in munis?

Municipal bonds have historically appealed to investors in higher tax brackets. Unlike interest on corporate bonds, the interest from municipal bonds is usually (but not always) tax exempt on your federal income tax return. Because of their favorable tax treatment, tax-exempt bonds typically have a coupon rate that is lower than that of a corporate debt instrument with an identical maturity period.

Also, municipal bond interest from a given state typically isn't taxed by governmental bodies within that state, though state and local

governments typically do tax munis from other states. However, regulations vary from state to state.

Some states tax both in-state and out-of-state munis, and some tax neither. Consult a tax professional before investing to make sure you understand how your state treats municipal bonds.

The tax advantages of municipal bonds mean that even though a muni's coupon rate may be lower than that of a taxable bond, its after-tax yield could actually be higher, depending on your tax bracket. Generally, the higher your tax bracket, the higher a muni's tax-equivalent yield will be.

### Think about what you keep

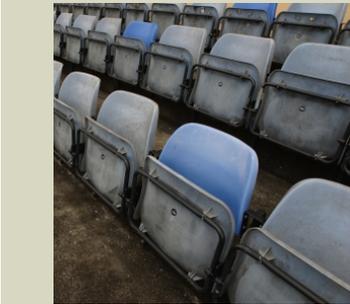
To accurately compare a tax-free bond to a taxable bond, you'll need to look at its tax-equivalent yield. To do that, you apply a simple formula that involves your federal marginal tax rate--the income tax rate you pay on the last dollar of your yearly income--and any state and local taxes.

To calculate the yield a taxable bond needs to equal that of a tax-free bond, use the following formula: Add your state and local tax rate to your federal tax percentage. Subtract the result from 1. Divide the tax-free bond's annual yield by the result of Step 2. The answer represents the yield a taxable bond would need to offer to equal that of a tax-free bond that is not subject to federal, state, or local taxes.

## Federal Tax Bracket Table

Federal Tax Bracket

	15%	25%	28%	33%	35%
<b>Taxable yield</b>	Equivalent Tax-Free Yield				
<b>2%</b>	1.70	1.50	1.44	1.34	1.30
<b>2.5%</b>	2.13	1.88	1.80	1.68	1.63
<b>3%</b>	2.55	2.25	2.16	2.01	1.95
<b>3.5%</b>	2.98	2.63	2.52	2.35	2.28
<b>4%</b>	3.40	3.00	2.88	2.68	2.60
<b>4.5%</b>	3.83	3.38	3.24	3.02	2.93



	15%	25%	28%	33%	35%
<b>Taxable yield</b>	Equivalent Tax-Free Yield				
<b>5%</b>	4.25	3.75	3.60	3.35	3.25
<b>5.5%</b>	4.68	4.13	3.96	3.69	3.58
<b>6%</b>	5.10	4.50	4.32	4.02	3.90
<b>6.5%</b>	5.53	4.88	4.68	4.36	4.23
<b>7%</b>	5.95	5.25	5.04	4.69	4.55

## Types of Municipal Bonds

There are many different types of municipal bonds, though a single bond may fall into several of the following overlapping categories:

### General obligation/revenue bonds

General obligation, or GO, bonds are backed by the issuer's taxing power; the issuing body may raise taxes to cover the interest payments if necessary. However, some municipal bonds make their payments from the revenue derived from the project that a specific bond funds--for example, a power plant or a turnpike that collects tolls. Such bonds are known as revenue bonds, and are generally considered slightly less secure than GO bonds.

### Private-activity bonds

As is true of almost anything that's related to taxes, munis can get complicated. Specific municipal issues may be subject to federal income tax, depending on how the bond issuer will use the proceeds. If a bond finances a project that offers a substantial benefit to private interests, it generally is taxable at the federal level unless specifically exempted.

For example, even though a new football stadium may serve a public purpose locally, it will provide little benefit to federal taxpayers. As a result, a muni bond that finances it is considered a so-called private-activity or private-purpose bond and may be taxable at the federal level.

Other examples of publicly financed projects whose bonds may be federally taxable include:

- Housing
- Student loans
- Industrial development

- Airports

In some cases, a private-activity bond may be specifically exempted from regular federal tax. However, even if a bond is exempt from federal income tax, the interest may still have to be considered when calculating whether the alternative minimum tax (AMT) applies to you (see "Municipal Bonds and Tax Planning").

### Zero-coupon bonds

While most municipal bonds pay periodic interest, a zero-coupon bond makes a single payment at maturity. You buy zeros at a discount, meaning the purchase price is lower than the bond's face value. When a zero matures, the difference between the purchase price and the face value is the return on your investment.

A bond's interest and principal also can be divided, or stripped, into separate components, each of which can be sold individually. For example, a 20-year bond could be sold as 41 different investments, each of which becomes known as a zero-coupon bond, or zero. One, based on the principal, pays the bond's full face value on the bond's maturity date. The other 40 represent the 40 semiannual interest payments, each of which matures on the specific date when that interest payment is scheduled to be made.

Zeros do not have to be held until maturity; they can be traded on the open market just as any other bond can. In general, the further away a zero's maturity date is, the less you will pay for it. Because they are bought at a discount, you may be able to buy more zero-coupon bonds for your money than other types of bonds. A zero also offers the opportunity to lock in a particular rate of return as long as you hold it to maturity. However, you should be aware that the prices of zeros go up and down in the opposite direction from interest rates more dramatically than any other type of bond. When interest rates rise, a zero's



price will tend to fall more rapidly than other bonds because its single payment is fixed and cannot rise over time. When interest rates fall, a zero's price will rise because that single payment will stay the same instead of dropping.

Though zero-coupon bonds pay no return until they mature, they are taxed as if you receive a portion of the return each year; that is known as imputed interest. However, that is less of a concern with municipal-bond zeros because they are generally exempt from federal tax.

### Floating-rate bonds

The interest on some municipal bonds, informally called floaters, is adjusted periodically based on the performance of another security or interest rate index. For example, a floating-rate note might specify an interest rate that equals the current Treasury bill rate plus a certain number of basis points (a basis point equals 1/100th of a percentage point).

Floating-rate munis offer an investor the ability to adjust to changing interest rates without having to pay the transaction costs of constantly reinvesting in short-term debt instruments. A variation on a floating-rate bond is what's called a step-up bond, which pays one coupon rate until a specified date (usually the call date). If the bond is not called by then, the coupon rate is increased, thus stepping up the interest payments.

### Refunded and pre-refunded bonds

Bond issuers sometimes choose to issue new bonds to pay off the obligations of older bonds, in somewhat the same way that a homeowner might refinance a home mortgage to obtain a lower interest rate. The proceeds of the new bond or bonds can be used to replace a specific revenue source that was pledged to repay the interest and principal of older bonds (for example, a tax collected by the issuer or the revenues of a bond-funded project).

The money obtained from issuing the newer bond is generally put into escrow and paid out over time as the older bond's obligations come due. Because the older bond no longer relies on its original funding source but on the escrowed proceeds, the older bond is then considered a refunded bond.

Bonds that are refunded through their maturity dates are said to be "escrowed to maturity."

The escrowed money is typically invested in or collateralized by U.S. Treasury securities that are scheduled to mature as the refunded bond's interest and principal payments become due. If a refunded bond's original documents include a call provision that allows the issuer to pay off the bond before its maturity date, the bond is referred to as a pre-refunded bond.

### Other Ways to Classify Bonds

By maturity	Long-term (10+ years); intermediate (1-10 years); short-term (less than 1 year)
By quality	Investment-grade, high-yield ("junk")
By date of issuance	Newly issued, previously issued and traded on the secondary market

Because refunding typically occurs after interest rates have fallen, refunded bonds generally offer a higher coupon rate than equivalent newer issues and sell at a premium. Also, because they are backed by escrowed money invested in or collateralized by Treasury securities, they generally are considered to be of similar high quality, though a refunded bond itself is not backed by the full faith and credit of the U.S. Treasury as to the timely payment of principal and interest.

### Build America Bonds

A Build America Bond (BAB) is a special type of municipal bond issued by local and state governments before December 31, 2010. Though BABs are taxable bonds, they may provide a federal tax credit directly to the bondholder equal to 35% of the total coupon interest on the bond. (However, the value of the tax credit must be included in the bondholder's income for tax purposes.)

The question of whether a BAB makes more sense for you depends not only on the coupon rate offered but on your tax bracket. In general, if your tax bracket is less than 35% or if you are subject to the AMT, a BAB might be of more benefit than a tax-free bond. A financial professional can help you decide whether a BAB is suitable for you.



**Bond ratings can be modified with a plus or minus or a number to indicate relative standing within that letter grade. For example, Aa1 would be only one notch below Moody's highest rating, while BBB- would mean that S&P considers a bond only one step from not having an investment-grade rating.**

**Investments seeking to achieve higher returns also involve a higher degree of risk.**

## Munis and Credit Quality

### Bond Credit Quality Ratings

	S&P	Moody's	Fitch
<b>INVESTMENT GRADE</b>			
Highest quality; minimal credit risk	AAA	Aaa	AAA
High quality; very low credit risk	AA	Aa	AA
Good quality; low credit risk	A	A	A
Moderate credit risk; may be vulnerable to changes in economic conditions	BBB	Baa	BBB
<b>NOT INVESTMENT GRADE</b>			
Facing uncertainties; substantial credit risk	BB	Ba	BB
Speculative; has ability to pay debts but is vulnerable	B	B	B
Dependent on favorable conditions to meet payments; very high credit risk	CCC	Caa	CCC
Highly speculative and vulnerable to nonpayment	CC	Ca	CC
Bankruptcy petition filed, but payments being made (S&P); in default (Moody's)	C	C	C
In default	D	C	D

Just as individuals have credit ratings, bonds also have credit ratings that represent a way to gauge the likelihood that the debt will be repaid. Bonds are rated for their creditworthiness by an independent rating agency, which issues a letter grade that indicates its opinion of the bond's quality. (Some bonds are ungraded, not necessarily because they are unsound investments but because the bond issuer feels the offering is too small to justify the cost of having it rated.)

Issuers of investment-grade bonds are considered likely to make all payments in full and on time. By contrast, bonds that are less than investment grade are seen as at least somewhat speculative. Because of that greater risk, such bonds generally must pay a higher yield to attract investors.

The three primary bond rating agencies--Standard & Poor's, Moody's, and Fitch--use slightly different designations, but the systems are somewhat comparable. The rating agencies may upgrade or downgrade the credit rating of a bond issuer at any time. They may also issue a negative outlook, indicating that the rating agency believes there is a strong possibility of a downgrade in the future.

Bond issuers pay the cost of obtaining a bond rating, but since the 2008 financial crisis, the

Securities and Exchange Commission has taken steps to try to ensure that rating agencies do not have a conflict of interest and that ratings are objective and consistently reliable over time.

In the past, municipal bond defaults have been comparatively rare compared with corporate bonds. However, they're by no means impossible, as the 2012 bankruptcies of several California local governments made clear, and it's important to remember that past performance is no guarantee of future results.

Financial pressures coupled with low tax revenues during economic hard times and taxpayer opposition to tax increases could ultimately affect the security of municipal bond payments by particularly hard-hit state and local governments. However, problems in one region do not necessarily affect all municipal issuers.

That's why it's important to ensure that you are aware of the risk-reward ratio and credit rating of any muni you're contemplating. And though diversification can't guarantee a profit or insure against the possibility of loss, you may be able to use it to spread your risk among not only various governmental entities but also different types of munis with varying credit quality ratings and yields.



## Evaluating a Municipal Bond

When choosing investments, many bond investors focus only on yield and the creditworthiness of the borrower. However, there are many other factors to consider when deciding whether and how to invest in municipal bonds.

### Hold to maturity or trade?

If you hold a bond until it matures and the issuer doesn't default on it, you know what you'll receive: the interest owed on the bond from the date of purchase plus the principal. However, if you sell it before maturity, your return is less certain. You may not get the price you paid for it, or you could profit if bond prices rise and you're able to sell your bond for more than you paid for it.

If you want to hold a bond to maturity, check to see if it has call protection that would prevent early repayment of the bond, which would end your income from it. Also, be realistic about whether you'll be able to hold a 20- or 30-year bond to maturity. The longer the term, the greater the risk that you might have to sell it prematurely, even if it is worth less than you paid for it.

### New issue or existing bond?

With a new issue priced at par (face value), you'll be assured of getting back your entire investment, assuming you hold it to maturity and the issuer doesn't default. Also, the costs of buying a new issue may be lower. On the other hand, depending on when a bond is issued, interest rates and yields on some older bonds might be higher than current rates. In that case, such a bond would trade at a premium to par; at maturity an investor would receive only the bond's par value, not any premium paid at purchase.

### Interest-rate risk

If you hold your bond until it matures, the direction of interest rates won't affect you. However, if you sell it before maturity, changes in interest rates will affect your return. The interest rate a bond pays (its coupon rate) may be fixed, but its price isn't. Neither is its yield, which takes into account both the coupon rate and the bond's price.

Bond prices move in the opposite direction

from interest rates. When rates are rising, bond prices tend to drop, and you could receive less than your original investment. That's because investors aren't as interested in buying a bond with, say, a 5% interest rate if they can buy a newer bond issue that offers 6%. If interest rates fall and new bonds are being issued with a 4% interest rate, an older bond that pays 5% becomes more valuable.

To estimate how much impact interest rate changes will have on a specific bond, you should consider:

- Its coupon rate: generally, the lower its coupon rate, the more volatile a bond will be
- The time to maturity: generally, prices on long-term bonds will fluctuate more than those for short-term bonds
- Whether it is callable: a callable bond's price may not appreciate as much as that of an equivalent noncallable bond when interest rates fall

### Call risk

If you're relying on income from a bond, you'll probably want to know how long you'll receive that income. You should find out if it's callable (i.e., if it includes a provision that lets the issuer retire the bond early by repaying the loan in full). Call risk means that with a callable bond, you can't be sure how long your income stream will last. Because of call risk, callable bonds may offer a higher yield or a call premium that will be paid only if the bond is called. When estimating a callable bond's yield, you should know not only its yield to maturity but its yield to call (the yield based on the earliest date the bond could be called). A period of falling interest rates often increases the odds of a bond being called, because the issuer may be able to refinance the debt at a lower rate.

### Inflation risk

If the payment amount on a municipal bond is fixed but inflation pushes prices higher, not only does the purchasing power of those interest payments fall, but the bond's value also drops as a result. The greater the rate of inflation, the less valuable fixed payments become.



#### **Market discount**

- **Applies to any bond bought at a discount in the secondary market**
- **Taxed as ordinary income (for bonds bought after April 30, 1993) or capital gains (for bonds bought prior to that date)**
- **Taxable regardless of whether a bond's interest is tax exempt**

#### **Original issue discount (OID)**

- **Represents the difference between a bond's issue price (if below its par value) and its redemption value**
- **For tax purposes, OID represents interest paid by the issuer**
- **For tax-exempt bonds, OID is generally treated as tax-exempt interest, and must be reported in the same way as other tax-exempt interest**

## **Municipal Bonds and Tax Planning**

Even though the interest from municipal bonds is generally exempt from federal income tax, there are other tax issues you need to keep in mind when considering whether to purchase a muni.

### **Only interest is tax exempt**

A bond's tax-exempt status applies only to the interest paid on the bond; any increase in the bond's value is taxable if and when the bond is sold.

### **Don't forget the AMT**

Earning tax-exempt interest income from certain municipal bonds may require you to determine if you're liable for the alternative minimum tax (AMT). This income, which is excluded when determining your adjusted gross income (AGI), may have to be included when determining your alternative minimum taxable income.

Even if the interest from a private-purpose bond is specifically exempted from regular federal income tax, it still may have to be considered when calculating whether the AMT applies to you. And even if you are not subject to the AMT when you purchase a bond, more people are feeling its impact each year, and the interest from a bond could change your AMT status.

### **Use your tax advantage where it counts**

Be careful not to make a mistake that is common among people who invest through a tax-deferred account, such as an IRA. Because those accounts automatically provide a tax advantage, you receive no additional benefit by investing in tax-free bonds within them. By doing so, you may be needlessly forgoing a higher yield from taxable bonds. Tax-free munis are best held in taxable accounts.

### **Understanding market discount and original issue discount**

Taxation of bonds sold at a discount to their

face value can be confusing. There are two concepts that apply: market discount and original issue discount (OID). After a bond is issued, it may be resold on the secondary market for a price that's below par (par being the value of the bond at maturity). The difference between that below-par purchase price and the bond's stated redemption price is known as market discount. Accreted market discount is taxed as ordinary income when the bond is redeemed or sold.

However, some bonds are issued at a price that's below their par value. For example, zero-coupon bonds are issued at a discount; the difference between the issue price and the redemption price takes the place of periodic interest payments on the zero. When you buy a bond that was originally issued at a discount, the difference between that issue price and the redemption value is known not as market discount but as original issue discount (OID).

Why is the difference important? Because market discount and OID are treated differently by the tax code. The IRS taxes market discount as ordinary income (in the case of bonds bought after April 30, 1993; for bonds bought prior to that date, market discount is treated and taxed as a capital gain). For muni bonds that have tax-exempt status, OID income also is considered tax-exempt (though as with interest on other tax-exempt bonds, it must be reported). However, accrued OID might still be considered when determining your AMT status.

To make the matter even more complex, a muni bond could have both market discount and OID. For example, a muni that was issued at a below-par price might later be resold at an even lower price. The difference between that market price and the issue price (adjusted for accrued OID) would be subject to taxation as market discount. (Market discount is taxable regardless of whether a bond's interest is tax exempt.)

As you can see, even tax-exempt muni bonds can still raise tax questions that may require help from a tax professional.

## IMPORTANT DISCLOSURES

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