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A Beginner's Guide to Municipal Bonds¹

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Introduction

This document introduces municipal bonds to potential investors and individuals who want to know a little about them.

What Are Municipal Bonds?

A municipal bond (muni) is simply an "IOU" that is issued by a local or state government that needs money for a specific project and is prepared to pay interest to those who purchase the bonds. For example, a city may need to fund a library, a county to expand a local airport, or a state to raise cash for education or power plants. The purchasers may be financial institutions, corporations, or individual investors. The buyers lend their money and receive par value of the bond when the loan time is up, as well as a fixed interest rate based on the par value during the life of the bond. They may also gain additional monies if the bond appreciates in value.

Municipalities have to compete with other public and private entities to get investors' monies. Consequently, their bonds must have competitive interest rates. Because of fears concerning bankruptcy, munis are graded like other bonds. In the

past, Orange County, California has declared bankruptcy, and both New York City and Miami have considered making the same declaration.

Terminology

There are lots of terms associated with municipal bonds. The most common terms include the following:

- *Par Value*. This is what the bond is worth at issue and at maturity. Bonds are generally sold in the primary market at issue in units of \$1,000. This \$1,000 is its par value, and regardless of what we paid for the bond in the secondary market, we will receive \$1,000 when it matures. Par value is also known as face or face value. For traditional reasons, par value and price are listed as 100 units rather than as \$1,000. So if the financial press records that a bond was issued at 100, its monetary par value is \$1,000.
- *Maturity*: This represents the end of the bond's life. Munis usually run from 10 to 30 years, although some are issued for much shorter periods. At maturity the bond expires, and we receive par value from the municipality.

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- *Coupon Rate.* This is the interest rate paid by the municipality to the investor. It is fixed for the life of the bond, unless the bond is floating or callable. This rate is normally paid in six-month intervals. For example, if the coupon is 8%, then we will get 4% every six months. The rate is always on the par value of the bond, not the price that we paid for the bond. If, for example, we paid \$1,100 for a \$1,000 bond with an 8% coupon, we would receive 8% of \$1,000 (4% semi-annually), not 8% of \$1,100. The riskier the bond, the higher the coupon must be to attract investors. So bonds issued by solid municipalities have lower coupons than shaky ones, or those that are desperate for cash.
- *Primary and secondary markets.* We can buy bonds when they are first issued in what is called the primary market. This is essentially a broker-controlled market of underwriters and is listed in media such as *The Wall Street Journal* or *The Investors' Business Daily*. In the primary market, we generally pay par value, and the municipality receives our money. In the secondary market, we buy bonds from people who already own the bond (exchange money with the previous owner of the bond, not the municipality), and the municipality pays interest to us. The secondary market is where buyers and sellers transact business, not where issuers sell. For example the New York Stock Exchange is a secondary market for both stocks and bonds.
- *Price.* There is considerable confusion about the price of a bond. Bond prices in the secondary market vary just like stock prices, which rise and fall with changes in supply and demand. The only price that is fixed in a bond is its par value in the primary market. Therefore, it is possible to pay a premium price for a bond in the secondary market if a lot of investors want that bond, or pay a discount price if there are few purchasers in the market. Bond prices are conventionally recorded in the financial press in terms of 100, where 100 equals par value and is the equivalent of the typical \$1,000 bond. Thus a bond priced at 101 is considered a premium bond because it is greater than 100 and actually costs \$1,010 (101 x

10). On the other hand, a bond priced at 98 is considered a discounted bond because the price is less than 100 and actually costs \$980 (98 x 10).

- *Yield.* This is what we will get if we buy the bond at today's price and hold it to maturity. It is probably the most important number for a bond investor. It is calculated using the coupon rate, the price, and the time to maturity. These are complicated calculations and generally require a financial calculator. Simply accept what the financial press says the current yield is and compare this yield with other investment alternatives.

Price and yield vary inversely. If the price goes up, the yield goes down. This is because we always get par value at maturity, regardless of what we paid for the bond. Thus if we buy at 98, we will receive 100 at maturity. So we continually receive our 8% coupon on 100 while we hold the bond and 100 - 98, or \$20 (i.e., \$1,000 - \$980) plus the 100 (i.e., \$1,000) at maturity. In other words, we receive \$1,020 and the interest. Since we bought a discounted bond, our yield is greater than the coupon because we also get the \$20.

If we bought a premium 8% bond at 103, our yield will be less than the coupon because we only get the \$1,000 par at maturity although it cost us \$1,030. Which means that our total return is reduced by \$30. Thus as prices rise, yields fall, and vice versa.

Tax Advantages of Municipal Bonds

The interest on municipal bonds (munis) generally has no federal tax and often no local and state income tax. This tax savings is the main reason that muni coupon rates are lower than most bond coupon rates. Table 1 shows that their equivalence to other types of bonds.

Munis are not exempt from capital gain or losses. If we make a profit, we will be taxed. The typical long-term capital gains tax rate is 20%. So if we buy a muni for \$1,000 and two years later sell it for \$1,200, we owe a capital gains tax on the profit of \$200, or \$40.

Types of Municipal Bonds

The two general types of municipal bonds are revenue bonds and general obligation bonds. Revenue bonds are financed by revenues derived from tolls or rent paid by users of facilities built using the bond's proceeds for such projects as toll roads, bridges, airports, water and sewage treatment facilities, hospitals, and housing for the poor. General obligation bonds are bonds backed by the general credit of the issuing organization and, in most cases, supported by the issuer's taxing power.

These types of bonds often have several different features. They can be insured municipal bonds, floating-rate bonds, variable-rate bonds, zero-coupon bonds, compound-interest bonds, multiplier bonds, or put bonds. The Insured munis are backed by a municipal bond insurance that is specifically designed to reduce the risk of the bond. In the case of default of the bond by the issuer, the insurance company will pay the coupon rate and par value of the remaining balance. Floating-rate and variable-rate bonds are bonds with a coupon rate that is periodically recalculated based on a percentage of treasury bills or other interest rates. These types of bonds are preferred during times when interest rates are rising to help hold the bond's value.

Zero-coupon bonds, compound-interest bonds, and multiplier bonds are all bought at a deep discount, and we receive the face value of the bond at maturity (there is no coupon). For example, if we could buy a \$10,000 zero-coupon bond that matures in 18 years for about \$3,200 in today's market, we would receive \$10,000 at maturity. These types of bonds are especially attractive for retirement funds and higher education funds

Put bonds are bonds that can be redeemed at par value on a specified date long before maturity. We could therefore redeem it before maturity and buy a higher interest-rate bond if interest rates are rising.

Some municipal bonds come with a callable provision. These bonds can be recalled by the issuer at a specified time(s) before the maturity date. When a bond is called, we will get the muni's face or par value. Bonds are called because interest rates may have decreased in the time since the bonds were

issued. So to avoid paying the now high coupon rate, the bond can be reissued at a lower coupon rate. A good example would be the refinancing of a home as interest rates drop.

Buying and Selling Municipal Bonds

Bonds can be bought and sold through brokers in the secondary market. They can be purchased at a discount or a premium, depending mainly on the current interest rate in comparison to the rate when the muni was issued. For example, if a muni were issued five years ago with a coupon of 5% while the interest rate was 4%, but now the interest rate is 9%, the muni will be less valuable because of its lower coupon (5%) compared to munis issued today (9%). In other words, it will only pay 5% even though the current rate is 9%.

A bond's coupon rate also depends on the amount of risk associated with the investment and the time of issue. Companies such as Standard & Poor's and Moody's grade the bonds by considering the financial stability of the individual municipalities and the risk associated with the purchase of individual bonds.

Investment-grade bonds range from AAA to BBB. These bonds are generally low risk and consequently have low coupon rates. Junk bonds are bonds with a grade below BBB, running through C to D. Because the majority of bonds are graded below BBB, it seems that "junk" is probably a misnomer since many B and C bonds are often fairly good investments.

How to Read a Municipal Bond

Table 2 is an example of how to read a tax-exempted municipal bond's daily activity. In examining item 1, we note that following:

- Allegh PortAuth PA is the abbreviated name of the issuer.
- 5% is the yearly coupon rate.
- The bond expires on March 1, 2029 (03-01-29). Because the majority of bonds sell for \$1,000 face value, this means that we will receive 5% of \$1,000 a year, or \$50 annually, which is usually paid in semi-annual payments.

- The price is at 95 1/2 (95 1/2%) of the par value, or \$955.
- Change represents a change from the previous day's closing price quoted as a percentage of the par value. Thus, if the change was + 1/2, then the previous day closed at 95, or \$950, which is \$5 below today's closing price.
- A bid yield of 5.31% represents the yield to maturity. In other words, if we bought the bond today for \$955 and held it to maturity, we would receive a 5.31% return.

How to Follow the Performance of Municipal Bonds

There are several different ways to follow muni performance, but unfortunately, none as simple as with stocks. The Internet is the probably the best way via www.cnnfn.com, www.yahoo.com, or www.fool.com. Also, in the printed media, *The Wall Street Journal* is good, and *The Investor's Business Daily* is better.

An interesting way to learn about munis might be by watching the new issues that California is putting out to help finance their power crisis. California will float \$12.5 billion in bonds, besides what they have already floated trying to help Southern California Edison and Pacific Gas & Electric Company with their cash flow problems. This is the biggest muni issue in U.S. history. Bond traders are apparently skeptical because of the large outstanding debts that California already has and because the ratepayers are third in line to get paid. Last month, Moody's downgraded more than \$25.5 billion in general obligation debt and public works debt issued by California. The process will be interesting.

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Table 1. Effect of Federal Income Taxes on Yields of Tax-Exempt and Taxable Instruments.

Category	5% Tax-Exempt Bond	7.5% Taxable Investment
Cash Investment	\$30,000	\$30,000
Interest	\$1,500	\$2,250
Federal income in the 35.5% Margin Tax Bracket	\$0	\$799
Net Return	\$1,500	\$1,451
Yield on Investment After Taxes	5.0%	4.8%

Source: *An Investor's Guide to Municipal Bonds: The Advantages of Tax Exemptions.*
<http://www.investinginbonds.com>

Table 2. Tax-Exempt Bonds

Item #	Issuer	Coupon Rate	Maturity Date	Price	Change	Bid Yield
1	Allegh PortAuth PA	5.000	03-01-29	95 1/2	...	5.31
2	Allegh PortAuth PA	5.000	03-01-25	96	...	5.28
3	AustTXwater&waterwaste	5.250	05-15-31	97	...	5.45
4	BetterJacksonville	5.000	10-01-30	95	...	5.33
5	BrowardCo FI	5.250	10-01-26	97	+	5.42
6	CapProjectsFinAuthFI	5.000	10-01-31	94	...	5.39

Source: *The Wall Street Journal*. Tuesday, July 3, 2001. p C-20.