16TH AMENDMENT ADVISORS LLC℠

Municipal Market Primer – What is a Municipal Bond

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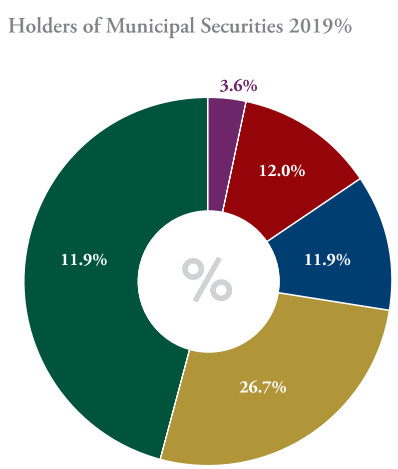
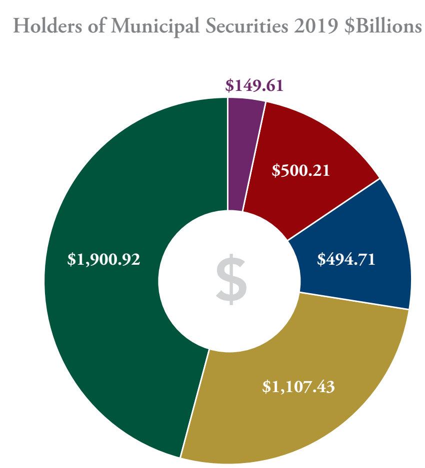
Overview

The municipal bond market is the central credit market for state and local governments in the United States and its territories. Municipal bonds are the debt obligations of US States, their political subdivisions, certain state agencies, and authorities. These debt obligations issued by the states, cities, counties, and other governmental entities fund day-to-day obligations and to help finance projects such as building schools, highways, bridges or water and sewer systems. When an investor purchases a municipal bond, you are loaning money to the issuer of the debt in exchange for a set number of interest payments over a set period. At the end of that loan period the bond reaches its maturity date, and the full amount of your original purchase is returned to you. Municipal bonds are attractive to investors because the interest collected on this debt is generally exempt from federal income taxes and are generally held by individuals. (**SEE CHART 1.**)

CHART 1: WHO OWNS MUNIS? U.S. MUNICIPAL SECURITIES 2019





Individuals
Mutual Funds
Banks
Insurance Companies
Other

Source: sifma.org

Features of a Municipal Bond

THE COUPON

A coupon or coupon payment is the annual interest rate paid to the investor on the bond. It is usually quoted as a percentage of face value and paid from the initial issue date until it is final maturity or end date. Coupons are typically paid semi-annually. For example, a bond with a 5% coupon would have two semi-annual payments of 2.5% of the face value of the bond. [1,2]

THE BOND YIELD TERMS

The term "bond yield" generally refers to the return of your capital on the investment in a bond. There are several definitions of yield that are important to understand when talking about bonds. Current yield, yield to maturity, yield to call and yield to worst are all important calculations when looking to value a bond. [1,2,3]

CURRENT YIELD

Yield = Coupon rate / Bond price. When the price changes on the bond, so does the yield. In the below chart you will see different current yield calculations based on the changes in the bond's price. (**SEE CHART 2.**)

CHART 2: CALCULATION OF CURRENT YIELD

PREMIUM BOND	PAR BOND	DISCOUNT BOND
5.00% X $100 = 4.85%	**5.00% X $100 = 5.00%**	**5.00% X $100 = 5.05%**
$103 *(or $1,030 per bond)*	**$100** *(or $1,000 per bond)*	**$99** *(or $990 per bond)*
5.00% X $100 = 4.95%		**5.00% X $100 = 5.10%**
$101 *(or $1,010 per bond)*		**$98** *(or $980 per bond)*

Source: sifma.org

Coupon and current yield are important concepts when estimating the return your bond will provide to you. However, they do not always provide you with the full picture. Coupon and current yield do not measure the value of reinvested interest for one, and they also do not help if your bond is called early, or if you want to know the lowest yield you can receive from a bond. These calculations need more advanced yield calculations. The good news for investors is that many of these calculations can be found on online calculators or calculated through financial calculators. [1,2,3]

YIELD TO MATURITY

Yield to maturity is the anticipated total return on a bond if the investor holds the security until maturity. It is the sum of all of it is remaining coupon payments. A bond's yield to maturity rises or falls depending on its market value and how many payments are left to be made. Yield to maturity is sometimes referred to as the internal rate of return (IRR) of a bond. The bond must be held until maturity and the proceeds must be reinvested at a constant rate. [1,2,3]

YIELD TO CALL

Yield to call refers to the return a bondholder receives if the bond is held until the call date, which is prior to the date of the bond's maturity. The call date is the date at which the issuer sets where they have the option of redeeming the bonds prior to maturity. A callable bond is sold so the issuer has the option of paying off their debt prior to maturity. An issuer may do this if interest rates fall and enough where it becomes advantageous for the municipality to pay off the outstanding debt and issue new debt at a lower cost. [1,2,3]

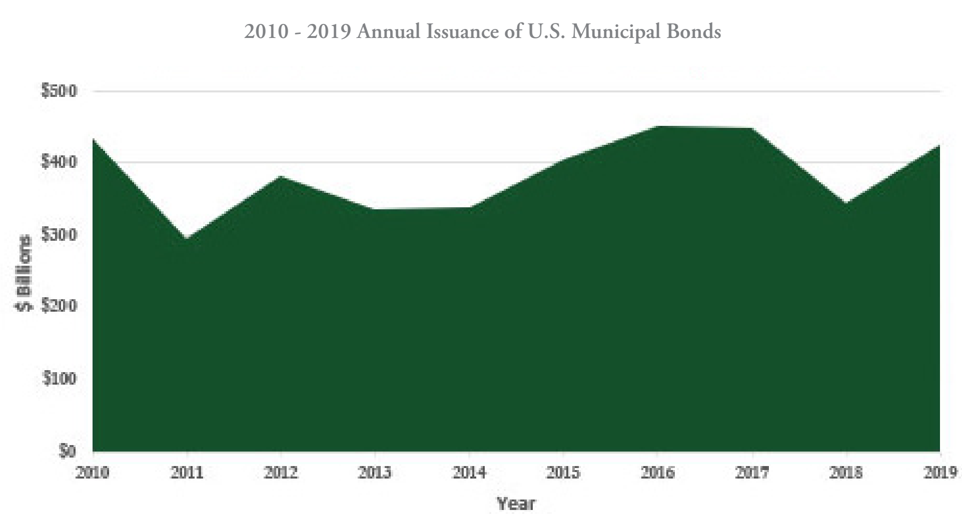
YIELD TO WORST

Yield to worst is a measure of the lowest possible yield that an investor will receive. The yield to worst calculation is used to evaluate the worst-case-scenario for yield at the earliest allowable call or retirement date. [1,2,3]

The Municipal Bond Market by the Numbers

During the past decade, annual municipal bond issuance has steadily held above $250 billion per year. (**SEE CHART 3**) Issuance is strongly affected by the level of interest rates. Municipal bond issuance tends to rise when interest rates are low, as state and local governments try to lock in low financing costs.

CHART 3: MUNI BOND ISSUANCE BY YEAR



Source: sifma.org

Municipal Bond Ratings

There are three major rating agencies that evaluate thousands of issuers and their municipal bonds. Moody's, Standard and Poor's (S&P) and Fitch. The largest two ratings are Moody's and S&P. These rating agencies analyze several factors to determine an issuer's rating. Rating agencies take into account all the economic characteristics of an issuer in order to determine its credit rating. Some of these factors include the issuer's general financial condition and the amount of outstanding debt compared to the revenues they expect to receive either in taxes or fees. Each rating agency produces their own ratings scale. Investors should understand what each rating means before you purchase a municipal bond. Generally speaking, bonds with the highest rating AAA/Aaa are considered the saftest and carry the lowest yield, while bonds with lower ratings Baa3/BBB- are higher risk and therefore carry a higher yield.

MOODY'S	S&P	FITCH	RATING DESCRIPTION
Aaa	AAA	AAA	Prime
Aa1 Aa2 Aa3	AA+ AA AA-	AA+ AA AA-	High Grade
A1 A2 A3	A+ A A-	A+ A A-	Upper Medium Grade
Baa1 Baa2 Baa3	BBB+ BBB BBB-	BBB+ BBB BBB-	Lower Medium Grade
Ba1 Ba2 Ba3	BB+ BB BB-	BB+ BB BB-	Non-Investment Grade / Speculative
B1 B2 B3	B+ B B-	B+ B B-	Highly Speculative
Caa1 Caa2 Caa3	CCC+ CCC CCC-	CCC+ CCC CCC-	Substantial Risks
Ca	CC	CC	Extremely Speculative
	C	C	Default Imminent
C / /	RD SD D	RD SD D	In Default

Source: Moody's, Standard & Poors & Fitch

The highest quality issuers are rated Aaa or AAA by Moody's and S&P. Investors should remember that ratings are not perfect and cannot tell you if your investment will go up or down in value. Ratings of an issuer is only one factor in the municipal bond investment process.

Conclusion

As an investor in municipal bonds, you are helping finance a particular need of a state and local government. These funds can be used for a wide variety of purposes, such as building schools, highways, bridges or water and sewer systems. Municipal bonds have some unique features and credit qualities. Municipal bond investors are attracted to municipal securities because they are generally high in credit quality, and their interest is usually exempt from federal taxation making them an appealing investment choice for many.

We are happy to answer any questions you may have.

Note [1,2,3] Investopedia.com, Investor.gov US Securities and Exchange Commission, Finra.org./msrb/learn-to-invest