MUNICIPAL BONDS

Municipal bonds have played an important role in American history by enabling the building of large infrastructure projects. The first official municipal bond in the U.S. was issued in 1812 by New York City to pay for the construction of the Erie Canal. Seven million was raised to help build canals from the Hudson River to Lake Erie and Lake Champlain. The canals opened up trading routes and had a significant impact on the growth of the city and the expansion of the state's economy. Following the completion of the canals, other cities and states began issuing municipal bonds of their own to support infrastructure development and construction. By 1840, the municipal bond market had grown to $200 million and increased over the next four decades. By 1880, there were approximately $1 billion outstanding muni bond issues.

After the Great Depression hit in the 1930's, municipal bonds were issued to create jobs and re-start the economy. In California, workers began construction on the Golden Gate Bridge, an effort funded primarily through the sale of municipal bonds. Despite the unfavorable economic conditions the country was facing during that time, voters in the Golden Gate Bridge and Highway District approved a $35 million bond issue for which they offered up their homes, farms, and businesses as collateral. The bridge opened in 1937, and the bonds were ultimately paid back in full. As the U.S. economy started to rebound following the Great Depression, bond issues quickly became more prominent. In fact, bond issuances picked up following World War II, as many cities and states sought to raise funds to cover a wider array of projects, from housing to roads to private hospitals to roads and transportation.

How Municipal Bonds Work

Municipal bonds are debt offerings issued by states, counties cities or other government entities to finance public projects like building schools, highways or sewer systems. The interest rate on municipal bonds is usually lower than on taxable bonds. However, the payments to the buyer of the bonds are exempt from federal and state income taxes (for in-state residents). The tax-free yield can make the lower yield on a municipal bond attractive to individuals in a high tax bracket. For example, a municipal bond yielding 4% will have a taxable equivalent yield of 6.35%, for a buyer whose federal marginal tax rate is 37%. To calculate the tax equivalent yield use the following equation:

$$\text{Tax Equivalent Yield} = \frac{\text{Tax Free Yield}}{(1\text{-Tax Rate})}$$

Marginal	**If The Tax-Exempt Yield Is:**					
Fed Tax	**1%**	**2%**	**3%**	**4%**	**5%**	**6%**
Bracket	**The Taxable Equivalent Yield (%) Is:**					
10%	1.11	2.22	3.33	4.44	5.56	6.67
12%	1.14	2.27	3.41	4.55	5.68	6.82
22%	1.28	2.56	3.85	5.13	6.41	7.69
24%	1.32	2.63	3.95	5.26	6.58	7.89
32%	1.47	2.94	4.41	5.88	7.35	8.82
35%	1.54	3.08	4.62	6.15	7.69	9.23
37%	1.59	3.17	4.76	6.35	7.94	9.52

545 MIDDLEFIELD ROAD SUITE 200
MENLO PARK, CA 94025

650-322-4000
INVEST@NELSONROBERTS.COM

MUNICIPAL BONDS

Types of Municipal Bonds

Muni bonds generally fall under three types of debt obligations:

- General Obligation (GO) Bonds are backed by the credit and taxing power of the issuing jurisdiction and are the most secure type of bond. If the government entity runs into problems paying back the debt, they are authorized to raise taxes to generate more revenue.

- Revenue Bonds issued by a municipality are backed by a specific stream of revenue. If a county wants to build a hospital, cash generated from ongoing operations will be used to pay back the bonds.

- Assessment Bonds are used to back special development projects like building sewer systems. The municipality can put a tax on the property owners in the district where the new sewer system is built.

Pricing

When new municipal bonds are issued there are two methods that the underwriter can use to bring the bonds to market. After bonds are brought to the market, they trade in a secondary market.

Competitive Deal

In a competitive bond sale, the issuer of the bond publishes a notice of sale describing how the bonds will be structured, including the number of maturities, if the bonds are callable and any legal provisions. On a set day, the issuer receives written bids from each underwriter indicating the issuer's total interest rates for what underwriter believes is necessary to sell the bonds to the public. The issuer awards the bonds to the underwriter offering the lowest total interest costs.

Negotiated Deal

In a negotiated bond sale, the issuer asks underwriters through a request for proposal, to submit potential structures for the bonds and explain how they would sell the bonds to investors. After the proposals are reviewed, an underwriter is selected and exclusive agreement is signed. The underwriter then works with the issuer, bond brokers and investment advisors to determine an appropriate price and interest rate. Once the issuer gives its approval, the underwriter can start taking orders for the bonds. Based on demand for the bonds, the underwriter can adjust the pricing of maturities. For example, if there is high demand for the bonds, the underwriter can increase the bond price or lower its yield.

545 MIDDLEFIELD ROAD SUITE 200
MENLO PARK, CA 94025
650-322-4000
INVEST@NELSONROBERTS.COM

MUNICIPAL BONDS

Secondary Market

After municipal bonds are issued they begin trading in the secondary market. The secondary market is similar to shopping for a used car. The only way to know you are receiving a fair deal is to shop around. The municipal bond market has very little transparency compared to other capital markets. Unlike the stock market, muni bonds do not trade on an exchange, but rather through bond desks at brokerage firms. The brokers make money by marking bonds up and selling them to investors. The spread between what a broker buys a bond for and what it is sold for is typically not disclosed.

Default Rates

Municipal bonds have historically low default rates when compared to corporate bonds of equivalent credit ratings. Although defaults are infrequent they can happen. In 2016, Puerto Rico defaulted on general obligation bonds, the first such default by an American state or commonwealth since the Great Depression. In 2013, Detroit became the largest city to default on its debt. Prior to Detroit, Stockton, CA was largest city to file for insolvency in 2012. In all three cases, local governments ran into financial problems due to generous pension plans promised to government employees and by borrowing more money than they could pay back, a trend that continues today.

545 MIDDLEFIELD ROAD SUITE 200
MENLO PARK, CA 94025
650-322-4000
INVEST@NELSONROBERTS.COM