Investors looking to preserve their principal investment and make an attractive after-tax income may find that turning to tax-exempt municipal bonds is a good solution. Long thought of as appropriate only for higher-net-worth investors, these bonds may be good for those in lower tax brackets as well since the benefits apply across the income spectrum.

One key advantage is the tax savings, which includes federal, state, and local taxes for many bonds. Another advantage is that many municipal bonds offer better yields than corporate or other fixed income investments of similar credit quality.
Executive Summary

- Income tax rates are likely as low as they will ever be. If tax rates rise, the tax-exempt yields offered in the municipal bond market become more attractive.

- We believe muni bonds are attractive compared to Treasuries for investors looking to maximize the after-tax yield in existing bond portfolios. This applies also for investors in lower tax brackets.

- The frequency of defaults remains below the level for corporate bonds even if you take into account municipal bonds that defaulted during the financial crisis and afterward.

- To reduce the already low historical risk of default, stick with highly rated general obligation and essential service revenue bonds. Pay particular attention to the quality of other types of bonds. Poor choices can result in credit problems, and lower quality bonds may be more difficult to sell due to limited secondary market appeal.

- Make sure you get a fair price when buying and selling municipals. Given the low level of interest rates and our expectation that they may stay low for some time, every penny in return counts when investing in individual bonds.

Many types of bonds are available. Why should investors look at municipal bonds?

The prevailing wisdom is that income tax rates are going to rise—and are as low as they will be for a while. In part that is because the government needs to raise revenue to pay its debt bill. If that thinking is right—and tax rates rise—then the tax-exempt yields offered in the municipal bond arena become more attractive relative to other investments.
What does Schwab suggest?

We advise that clients look at adding municipal bonds to their portfolios—and purchasing those in one's home state offers the added benefit of state and local tax exemption. Given the low-interest-rate environment, relatively lower default rates, and the ability to generate yield, municipal bonds are an appropriate part of every fixed income investor's portfolio.

Is that recommendation for all investors? Do tax-exempt bonds make sense for investors with lower incomes?

Yes, tax-exempt bonds can make sense even for investors with lower incomes for investments made in taxable accounts.

We looked at four factors to answer this question:

1. The after-tax returns for tax-exempt municipal bonds compared to Treasuries and corporate bonds;
2. The credit quality of municipal bonds historically as well as in the years following the Great Recession;
3. The yields available on other fixed income investments, including U.S. Treasuries in a near zero-interest-rate environment; and
4. The effect on price and efficient execution in a low-interest-rate environment.

We found there are benefits to consider for all fixed income investors. This starts with the tax exemption, but doesn't stop there. The interest earned on most municipal bonds is exempt from federal and, in many cases, state and local income taxes as well. These bonds also offer a history of strong credit quality and attractive yields when compared to taxable fixed income investments of similar credit quality.
Could you explain in more detail how the tax benefit works?

The main benefit to purchasing a municipal bond is that interest is generally exempt from federal income taxes. Currently, all investors can take advantage of the exemption from federal income taxes as well as state and local taxes for bonds purchased in their home state. Interest earned on taxable fixed income investments, such as Treasuries and corporate bonds, is taxed at the investor’s ordinary income tax rate. For those with income from wages or other sources, every extra dollar made from taxable fixed income investments would be taxed at the marginal income tax rate.

Other taxes may apply. Some types of municipal bonds are not tax-exempt, for example, and some investors may be subject to the Alternative Minimum Tax (AMT) for interest paid on certain types of municipal bonds.

While a bigger consideration for investors in higher income tax brackets, taxes add up for everyone—especially if compounded over time. In addition they reduce income for investors living off interest payments. Every dollar is important, especially in a low-interest-rate environment.

Historically, municipal bonds have traded at much lower yields than other types of bonds, such as corporate or U.S. government bonds. That isn't the case right now. Highly rated municipal bonds have offered better yields than corporate or other fixed income investments of similar credit quality.

Investors in the 28% federal income tax bracket, for example, would need to earn 28% more interest from a Treasury or corporate bond to break even, if invested in a taxable account. If yields on munis are identical or even slightly lower than what a Treasury or corporate bond offers, the investor may be better off. And those benefits compound if the interest payments are reinvested.
This chart shows the yield on an AAA-rated municipal bond with a 10-year maturity relative to a U.S. Treasury bond of the same maturity before taking into account the tax effects.

Source: Bloomberg. The Municipal Market Advisors (MMA) yield spread measures the difference between the MMA AAA median municipal benchmark (10-year maturity) compared to the yield on a 10-year U.S. Treasury bond. Data as of May 3, 2013.

Is it safe to assume that tax rates will remain the same?

In 2012, tax rates on ordinary income as well as investments were near post-war lows. These rates have changed over time, but they had been falling steadily until Congress increased tax rates for higher earners in early 2013. We can’t know future tax rates with certainty, but given the U.S. federal deficit, it seems more likely that tax rates will rise in the future. If ordinary income taxes rise, the appeal for tax-exempt investments in the market rises assuming other factors remain equal.
**Tax rates are near post-war lows**

<table>
<thead>
<tr>
<th>Years</th>
<th>Top Ordinary Rate</th>
<th>Top Long-Term Capital Gain Rate</th>
<th>Top Dividend Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970s</td>
<td>50.0%</td>
<td>39.9%</td>
<td>70.0%</td>
</tr>
<tr>
<td>1982–1986</td>
<td>50.0%</td>
<td>20.0%</td>
<td>50.0%</td>
</tr>
<tr>
<td>1987</td>
<td>38.5%</td>
<td>28.0%</td>
<td>38.5%</td>
</tr>
<tr>
<td>1988–1990</td>
<td>28.0%</td>
<td>28.0%</td>
<td>28.0%</td>
</tr>
<tr>
<td>1991–1992</td>
<td>31.0%</td>
<td>28.0%</td>
<td>31.0%</td>
</tr>
<tr>
<td>1993–1996</td>
<td>39.6%</td>
<td>28.0%</td>
<td>39.6%</td>
</tr>
<tr>
<td>1997–2001</td>
<td>39.6%</td>
<td>20.0%</td>
<td>39.6%</td>
</tr>
<tr>
<td>2002</td>
<td>38.6%</td>
<td>20.0%</td>
<td>38.6%</td>
</tr>
<tr>
<td>2003–2012</td>
<td>35.0%</td>
<td>15.0%</td>
<td>15.0%</td>
</tr>
<tr>
<td>2013</td>
<td>39.6%</td>
<td>20.0%</td>
<td>20.0%</td>
</tr>
</tbody>
</table>

Source: Internal Revenue Service.

We know for certain that tax rates will rise on unearned investment income for taxable fixed income investments and on capital gains for high-income earners. The 2010 Affordable Care Act increased the tax rate by 3.8% for investors with adjusted gross income (AGI) of more than $200,000 (singles) and $250,000 (married filing jointly). In addition, the marginal tax rate and tax rate on capital gains and dividends was increased in early 2013 for those making the most money.

While this change in tax law does not increase taxes on investors at lower income levels, it does increase the appeal of tax-exempt muni bonds. All else being equal, higher demand leads to higher prices—though it also likely keeps yields on muni bonds lower for all investors.

For reference, current federal and state tax rates and brackets are shown below.

**Federal tax brackets in 2013**

<table>
<thead>
<tr>
<th>Tax Bracket</th>
<th>Single</th>
<th>Married Filing Jointly</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>$0–$8,925</td>
<td>$0–$17,850</td>
</tr>
<tr>
<td>15%</td>
<td>$8,926–$36,250</td>
<td>$17,851–$72,500</td>
</tr>
<tr>
<td>25%</td>
<td>$36,251–$87,850</td>
<td>$72,501–$146,400</td>
</tr>
<tr>
<td>28%</td>
<td>$87,851–$183,250</td>
<td>$146,401–$223,050</td>
</tr>
<tr>
<td>33%</td>
<td>$183,251–$398,350</td>
<td>$223,051–$398,350</td>
</tr>
<tr>
<td>35%</td>
<td>$398,351–$400,000</td>
<td>$398,351–$450,000</td>
</tr>
<tr>
<td>39.6%</td>
<td>Over $400,001</td>
<td>Over $450,001</td>
</tr>
</tbody>
</table>

Source: Internal Revenue Service.
Are there other tax benefits to purchasing municipal bonds for those in lower tax brackets?

In states with higher taxes, investors actually reach the higher income tax brackets for the state at a lower income level than they do for the highest federal income tax brackets. The tax benefit of municipal bonds may be reaped sooner for investors in a lower tax bracket if they buy bonds that are exempt from their home state income taxes.

### Sample 2013 state tax rates

<table>
<thead>
<tr>
<th>State</th>
<th>Single</th>
<th>Married Filing Jointly</th>
<th>Tax Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>Over $46,766</td>
<td>Over $93,532</td>
<td>9.3%</td>
</tr>
<tr>
<td>Illinois</td>
<td>Over $0</td>
<td>Over $0</td>
<td>5.0%</td>
</tr>
<tr>
<td>New Jersey</td>
<td>Over $75,000</td>
<td>Over $80,000</td>
<td>6.4%</td>
</tr>
<tr>
<td>New York</td>
<td>Over $20,000</td>
<td>Over $40,000</td>
<td>6.9%</td>
</tr>
</tbody>
</table>

Source: Internal Revenue Service.

Though I may benefit from the tax exemption, should I be concerned about defaults?

Historically, defaults on municipal bonds have been far lower than defaults on similarly rated corporate bonds.

The chart on the next page shows the default rate from 1970 to 2011 for bonds rated at the level shown on the x-axis by Moody’s and then held for 10 years. The rates rise significantly, to a nearly 1-in-20 historical frequency of default for corporate bonds rated Baa in the ten years following issuance. Note that Moody's has recently recalibrated its ratings on municipal bonds to reflect this difference in historical defaults, raising the ratings on many existing municipal bonds.
Muni default rates have been much lower than corporates

![Bar chart showing average cumulative 10-year default rate (%)]


Moody’s cumulative default rates calculated from marginal default rates, which represent the probability that an issuer that has survived through a particular date will default over the next time interval (one year in this case). Default rates only include bonds rated by Moody’s. Past performance is no indication of future results.

Aren’t municipal bonds risky in today’s environment?

From 2008 to 2012, the credit risk to muni bonds has been well publicized, though defaults have remained low as a proportion of the $3.7 trillion market.

The chart on the next page shows the volume and number of issuers in the municipal bond market currently in default using data from Municipal Market Advisors. While the number of defaults has risen, the vast majority of debt currently in default is in initially unrated and uninsured securities. It’s also concentrated in a handful of high-risk sectors, including industrial development bonds, land-secured financings, and other riskier sectors (retirement homes, hospitals, hotels, toll roads and transit, etc.).
The data show that as of December 18, 2012, municipal bonds in default totaled 0.32% of the $3.7 trillion total market. Only 0.043% of the market was in default and initially carried a bond rating of any kind, including noninvestment (sub-investment-grade) bond ratings, when issued. Only 0.002% was in what MMA (and we) consider to be “safe” sector bonds. This includes state and local government general obligation and general fund revenue bonds as well as revenue bonds secured by essential services such as water or sewer fees.

What about municipalities declaring bankruptcy?

Municipalities, excluding states, can file for Chapter 9 bankruptcy where it is allowed under state law. Corporations can file for Chapter 7 bankruptcy, which results in liquidation (rather than restructuring). Municipal issuers do not have a Chapter 7 bankruptcy option and cannot liquidate. In cases where municipal issuers have filed for municipal bankruptcy, it has not automatically led to default. In fact, in most cases, bankruptcy has not resulted in a loss of principal or interest payments to bondholders, according to reports from Bloomberg and Moody’s.¹

While none of these statistics or facts is a guarantee of future performance, they provide context on the historical resilience and high credit quality of most muni bonds. There are other factors that states and municipalities must confront going forward, such as underfunded pension obligations and rising service costs.
The chart below shows the distribution of credit quality by rating for corporate bonds versus tax-exempt municipal bonds. The amount of highly rated corporate debt is lower, while the ratings for the tax-exempt municipal market are tilted more toward the higher rating categories.

How can I compare municipal bond yields with those on corporate bonds?

The lower the yield on corporates of similar credit quality, and the higher the investor's marginal tax bracket, the more attractive municipal bonds would be compared to a taxable fixed income investment.

These calculations can help investors decide—depending on their tax bracket—whether to choose a highly rated municipal bond versus Treasury or corporate bonds. As long as yields are held down by the Federal Reserve’s zero-interest-rate policy, munis may remain attractive for investors looking to combine yield with credit quality on an after-tax basis.
What’s the importance of receiving a “fair” price when I buy my bond?

When buying individual bonds, the price you pay for your investment is important. Unlike with the U.S. stock market, however, there is no single exchange for corporate or municipal bonds. So pricing and the value you receive when you purchase an individual bond are less transparent. The chart below shows how the price can impact the yield on an individual bond. What you pay matters.

Bond prices may vary by seller, affecting the bond’s yield. Transaction costs may push yields even lower.

<table>
<thead>
<tr>
<th>Dealer</th>
<th>Price</th>
<th>Yield to Maturity</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$100.00</td>
<td>4.00%</td>
</tr>
<tr>
<td>B</td>
<td>$100.50</td>
<td>3.94%</td>
</tr>
<tr>
<td>C</td>
<td>$101.25</td>
<td>3.85%</td>
</tr>
</tbody>
</table>

Source: Schwab Center for Financial Research and Bloomberg. Assumes semi-annual coupon payments. For illustrative purposes only.

Transparency—the ability to compare prices between municipal bonds—is improving. Because of the size and breadth of the municipal market, however, many bonds may not trade regularly and prices can vary widely.

Should I worry about getting a good price if I need to sell?

As with other types of asset classes, bond investors should select their purchases with some thought about a potential exit strategy. There are a variety of factors that can affect prices for bonds sold in the secondary market before maturity. While most individual investors tend to hold their bonds to maturity, we continue to encourage a focus on high credit quality bonds in order to reduce liquidity risks should a holder decide to sell prior to maturity.
How can I invest in municipal bonds without buying individual bonds?

There are several options for investors looking for some exposure to municipal bonds without actually purchasing them individually. One way is through an exchange-traded fund (ETF), but these do not generally provide active management or credit selection. There are also no-load and low-fee mutual funds that may be actively managed, but it is important to examine the fees carefully since they decrease returns.

Schwab takes fees into consideration when developing the ETF Select List™ and the Income Mutual Fund Select List®, concise lists of carefully prescreened funds. A good place to start is a muni national intermediate term fund. These funds invest in municipal bonds issued by various state and local governments. To lower risk, these funds spread their assets across many states and sectors.

Funds on these lists tend to have lower trading costs and may offer good diversification.

What are some of the risks of investing in municipal bonds?

There are several risks, including:

- **After-tax returns.** In January 2013, Congress agreed to raise the tax rate on high-income earners. One risk is that Congress will choose to cap or eliminate the tax exemption on municipal bonds for those in the highest tax brackets. While this likely won’t apply to those in lower tax brackets, it could drive down prices and increase yields for the entire market, affecting everyone with current holdings in municipal bonds.

- **Credit quality.** Defaults on municipal bonds have occurred far less frequently than defaults on similarly rated corporate bonds, though investors should be aware that the risk of default does exist and is meaningful. State and local governments face increased credit challenges, including a weak economic environment, rising employment costs, and underfunded pensions and health care benefits. Overall, we expect that the bulk of investment-grade issuers will remain resilient and able to pay interest and principal to bondholders.
• **Yield.** While yields relative to U.S. Treasuries and highly rated corporate bonds may be attractive in relative terms, on an absolute basis rates are near post-war lows. A significant risk to investors in any fixed income investment is the risk to the value of an investment purchased at a low yield if interest rates rise. The lower the yield, the higher the price, and the greater the risk if interest rates rise. Investors can help manage interest rate risk by investing in bonds with short- to intermediate-term (usually 1- to 10-year) maturities. Bond ladders or short- and intermediate-term bond funds are two possible ways to make such investments. Schwab recommends choosing maturities based on risk tolerance and time horizon, and remaining aware that some level of interest rate risk exists regardless of the time to maturity.

• **Liquidity, price, and execution.** The U.S. municipal bond market is large and diverse, with more than 50,000 eligible issuers and millions of individual securities. Many of these issuers do not borrow regularly. When they do, the size of their bond offerings may be smaller than the average corporate bond issue. As a result, investors may not be able to get the price they want if they need to sell, depending on demand and market conditions.

Based on our analysis, we believe that tax-exempt municipal bonds offer tax savings for all investors who hold municipal bonds or bond funds in taxable accounts. In addition, municipal bonds offer high credit quality, on average, and attractive yields relative to U.S. Treasuries and corporate bonds of similar credit quality.

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We believe that tax-exempt municipal bonds offer tax savings for all investors who hold municipal bonds or bond funds in taxable accounts.
Endnotes

1Bloomberg, “Stockton Threatens to Be First City to Stiff Bondholders,” June 29, 2012; Moody’s, “Key Considerations for Municipal Governments in Bankruptcy,” January 19, 2012.


Important Disclosures

Investors should carefully consider information contained in the prospectus, including investment objectives, risks, charges, and expenses. You can request a prospectus by visiting Schwab.com or calling Schwab at 1-800-435-4000. Please read the prospectus carefully before investing.

Fixed income securities are subject to increased loss of principal during periods of rising interest rates. Fixed income investments are subject to various other risks, including changes in credit quality, market valuations, liquidity, prepayments, early redemption, corporate events, tax ramifications, and other factors.

Tax-exempt bonds are not necessarily a suitable investment for all persons. Information related to a security’s tax-exempt status (federal and state) is obtained from third parties, and Schwab does not guarantee its accuracy. Tax-exempt income may be subject to the Alternative Minimum Tax (AMT). Capital appreciation from bond funds and discounted bonds may be subject to state or local taxes. Capital gains are not exempt from federal income tax.

All ETFs are subject to management fees and expenses. Some specialized ETFs can be subject to additional market risks.

Investment returns will fluctuate and are subject to market volatility, so that an investor’s shares, when redeemed or sold, may be worth more or less than their original cost. Shares are bought and sold at market price, which may be higher or lower than the net asset value (NAV). Unlike mutual funds, shares of ETFs are not individually redeemable directly with the ETF.

Examples provided are for illustrative purposes only and not intended to be reflective of results you should expect to attain.

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