

Compounding Advantages of Zero Coupon Municipal Bonds

INTRODUCTION

Municipal bonds have traditionally been issued with one of two debt retirement structures, or a combination of both. Typically, a bond issue has either a “serial” maturity (wherein a portion of the outstanding principal balance matures each year) or a “term” maturity (wherein the outstanding principal balance is repaid on a final date). However, an innovative alternative debt structure exists in tax-exempt zero coupon municipal bonds, which provides investors with an additional vehicle to meet their investment needs.

WHAT ARE TAX-EXEMPT ZEROS?

Tax-exempt zero coupon municipal bonds (zeros) are intermediate- to long-term municipal bonds which do not make periodic coupon interest payments, but rather make a single lump sum payment at maturity. Generally speaking, this lump sum payment is treated as tax-exempt interest and is equal to the principal invested plus the interest earned compounded semiannually at a stated yield. Zeros are sold at a deep discount from their face value with the investor receiving the full face amount of the bond at maturity. The interest earned is accrued over the life of the bond and also earns interest at the original yield. It is the “interest on interest” feature, sometimes referred to as compounding, that investors benefit from the most.

For example, an initial investment of \$5,521 in a 4.00% zero would allow the investor to almost double their investment in only 15 years. The following table lists initial investment amounts needed in order to receive \$10,000 at maturity for various maturities and yields.

Years to Maturity	Initial Investment Needed for \$10,000 at Maturity				
	3.00%	3.50%	4.00%	4.50%	5.00%
5 Years	\$8,617	\$8,407	\$8,203	\$8,005	\$7,812
10 Years	7,425	7,068	6,730	6,408	6,103
15 Years	6,398	5,942	5,521	5,130	4,767
20 Years	5,513	4,996	4,529	4,106	3,724
25 Years	4,750	4,200	3,715	3,287	2,909
30 Years	4,093	3,531	3,048	2,631	2,273

TAX CONSEQUENCES

Overview — Due to recent changes in tax laws, figuring the tax consequences of municipal zeros has become more complicated. It is important to remember, however, that if you purchase a tax-exempt zero in the primary market at the original issue price and hold it to maturity, there are no federal income tax consequences for individuals. The tax issues come into play for those purchasers who buy their securities in the secondary market and for those who sell their securities prior to maturity. In these cases, bondholders may find that a portion of their gains is taxed as either ordinary income, as capital gains, or a combination of both.

Discussion — When a tax-exempt zero is purchased at its original public offering price, it is referred to as original issue discount (OID). Tax-exempt zeros may also be purchased after their original issuance in the secondary market. If the tax-exempt zero is purchased in the secondary market at a price below the “adjusted issue price,” this additional discount is referred to as market discount. The adjusted issue price is the original public offering price increased by an accrual, using the original public offering price increased by an accrual, using the original issue yield to maturity. In this instance, the tax-exempt zero will have both market discount and original issue discount.



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There are no federal income tax consequences for individuals who purchase a tax-exempt zero with original issue discount (but without market discount) and hold it to maturity. However, if a tax-exempt zero is purchased with market discount, there will be tax effects to consider. Upon disposition of the bond, either through sale or maturity, the gain or loss will equal the proceeds received less the adjusted basis in the tax-exempt zero. The bond's adjusted basis is equal to the purchase price plus the accreted total discount.

The character of the gain recognized in a taxable sale or at maturity will depend on when the tax-exempt zero was purchased and whether or not it was purchased with market discount. If the tax-exempt zero was purchased with no market discount, then all of the gain (as defined above) will be taxed as a capital gain at the maximum 15% capital gains tax rate, regardless of the date it was purchased. If the tax-exempt zero was purchased with market discount and was purchased on or before April 30, 1993 — here, too, the entire gain will be capital and taxed at the maximum 15% capital gains tax rate. However, if the tax-exempt zero was purchased with market discount and was purchased after April 30, 1993, then the “gain” will be treated as ordinary income up to the extent of accreted market discount, reduced by the amount of the OID accrual and taxed at the taxpayer's regular tax rate. Any remaining gain will be treated as a capital gain and taxed at the maximum 15% capital gains tax rate. Any loss is treated as a capital loss.

For example, suppose Investor 1 buys a 20-year tax-exempt zero coupon bond at original issue at a price of 50 sometime after April 30, 1993. After 10 years, suppose the adjusted basis of the bond is 70 and Investor 1 sells the bond. Investor 2 buys the bond in the secondary market at a price of 60. When the

bond matures, Investor 2 must include as ordinary, taxable income, 10 points of gain (the adjusted basis of 70 at acquisition, less the purchase price of 60). The remaining gain of 30 points is attributable to the difference in the face amount (100), less the adjusted basis cost (70), is not taxed.

The above discussion on tax consequences is only general, and additional tax consequences exist which may affect the tax treatment of municipal zeros. Your tax advisor should be consulted for specific tax questions.

ADVANTAGES TO YOU — THE INVESTOR

Protection From Reinvestment Risk — A zero coupon bond's interest is compounded semi-annually at the bond's original yield over the life of the bond. There are no concerns about reinvesting periodic coupon interest payments.

Compounding Tax-Exempt Interest — Generally, interest on the initial investment compounds semi-annually, and all earnings are exempt from federal income taxation. In some states, the earnings are also free from state income taxation for residents of the state of issuance.

Financial Planning — For investors less interested in current income, zeros are an excellent way to accumulate funds. Retirement planning, child education funding, or caring for and supporting an elderly parent are some of the reasons for investing in zeros. Investors can time the maturity of their investment to meet future financial needs. Investors can also stagger maturities of several bonds if they are uncertain of what their future cash flow needs to be.

Since zero coupon municipals are available with maturities as long as 20 or 30 years, they are excellent for meeting future financial goals. There are also

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different types and grades of bonds from which to choose. The type an investor selects will depend on their return objectives, risk tolerances, and investment conditions.

INVESTMENT CONSIDERATION

Call Features — Although the majority of zeros are issued as non-callable, there are some zeros that can be called. If called, the investor will receive the accreted value (based on original issue discount) to the call date plus any applicable premium. Since the yield to maturity is based on interest compounding to maturity, much of the interest accrues near the maturity date. Therefore, the investor should evaluate the bond in terms of its compounded annual yield to both the call date and the maturity date.

Price Volatility — Bonds selling at a discount are more responsive to changes in market interest rates, all other factors being equal, than bonds selling at or above par. Moreover, the deeper the discount, the greater the responsiveness or volatility of the bond's price to changes in market interest rates. However, as a bond nears maturity, its price volatility is reduced.

The Issuer — Since investors do not receive any payments prior to maturity, sale, or early redemption, they should carefully consider the quality and credit rating of the issuer. For further information on tax-exempt zeros, please contact your RBC Wealth Management® Financial Advisor.

RBC Wealth Management is not a Tax Advisor. All decisions regarding the tax implications of your investments should be made in connection with your independent tax advisor.

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