

Investor's Guide to Treasury Zeros



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Zero In On Your Most Important Objectives

Individuals are constantly looking for effective ways to reach their investment goals, whether they are building a nest egg for retirement, funding a child's education or buying a vacation home.

One investment you may want to consider to help you accomplish your goals is Treasury zeros. Treasury zeros are an effective way for goal-oriented investors to invest a relatively modest amount today and know exactly how much they will receive at a specified date in the future.

What Are Treasury Zeros?

Treasury zeros represent ownership of a future interest payment on a U.S. Treasury bond or note. Unlike Treasury notes and bonds, Treasury zeros do not pay interest semiannually. Instead, they are sold at discounts to their par amount and accrete in value until maturity. The difference between what you pay for a zero coupon bond and what it pays at maturity is the amount of interest earned, assuming the zero coupon bond is held to maturity.

The Benefits of Investing in Treasury Zeros

The important benefits of Treasury zeros have earned them a place in many investment portfolios. Some of these benefits include:

- **Safety of Principal**—The most common Treasury zeros, known as STRIPS (Separate Trading of Registered Interest and Principal

Securities), are direct obligations of the U.S. Treasury, so your principal is well protected, assuming that the securities are held to maturity.

- **Compounding** – Since Treasury zeros are purchased at a discount to their maturity value, a relatively small amount today can grow to a larger amount in the future, assuming that the securities are held to maturity.
- **No reinvestment risk when held to maturity** – Unlike coupon bonds that pay semiannual interest which must be reinvested, a zero coupon bond enables an investor to “lock-in” a specific yield at the time of purchase. The Treasury zero coupon bond will continue to compound at the yield to maturity rate until it matures, assuming the bond is held to maturity.
- **Flexibility** – Treasury zeros are available in a variety of maturities to match your investment goals. For example, Treasury STRIPS mature four times a year for up to 30 years, making it easy to time investments to meet your individual needs.
- **Liquidity** – There is a very active secondary market for STRIP securities. UBS PaineWebber endeavors to maintain a secondary market. However, depending upon the level of interest rates at the time of sale, the price received may be less than the accreted value of the security.

Risks Associated With Treasury Zeros

There are certain risks associated with Treasury zeros, some of which are listed below:

- **Subject to market volatility** – Prices of zero coupon bonds, like most bonds, move in the

opposite direction of interest rates. Since Treasury zeros sold prior to maturity are sold at prices that are largely dependent on prevailing market interest rates, the real yield if sold prior to maturity may be lower than the yield if held to maturity, or even negative. In addition, zero coupon bonds are more volatile than coupon bearing bonds of similar maturity. This is because zeros don't produce a regular cash flow that can be reinvested at prevailing interest rates. For instance, in a period of falling interest rates, a Treasury zero will have a comparatively greater market value increase versus a coupon bond of similar maturity. However, during a rising interest-rate environment, the market value of the Treasury zero will experience proportionally greater market declines when compared to a coupon bearing bond of similar maturity.

- **Subject to taxation on their annual accretion** – You should be aware that zero coupon bonds accrete in value as they move closer to maturity. Based on current tax laws, the interest accreted each year (but unpaid) on Treasury zeros purchased in taxable accounts must be reported as ordinary income. However, when zeros are placed in a tax-advantaged account, the payment of taxes on the accreted value may be postponed until funds are withdrawn.

Although the Tax Reform Act of 1986 changed the rules regarding the taxation of unearned income for minors, the growth and quality that Treasury zeros provide will help you to build a secure source of funds for your children's and grandchildren's education. We recommend that you consult your tax advisor to determine whether Treasury zeros may be right for you.

There Are Several Treasury Zeros From Which to Choose

Included among the Treasury zeros available from UBS PaineWebber are STRIPS. These instruments are a book-entry form of a future coupon or principal payment from U.S. Treasury notes and bonds. The zero coupon Treasuries created under the STRIPS program are direct obligations of the U.S. government. STRIPS are popular, widely held securities for which there is a secondary market.

Prior to the government's creation of the STRIPS program, several brokerage firms created synthetic zero coupon Treasury receipts by purchasing Treasury bonds and depositing them in a custody account. The firms then issued receipts, which represented an ownership interest in either each coupon payment on the underlying Treasury bond, or the Treasury bond's maturity value. Firms that participated in this coupon stripping process included Merrill Lynch, which issued Treasury Income Growth Receipts (TIGRSSM), and Salomon Brothers,¹ which issued Certificates of Accrual on Treasury Securities (CATSSM), among others.

Although the receipts that were created from this process are not obligations of the U.S. Treasury, the underlying bonds deposited in the custodial account are obligations of the U.S. Treasury. While the introduction of the STRIPS program effectively put an end to the issuance of synthetic zero coupon Treasury receipts issued by proprietary firms, they are still actively traded in the secondary market. Keep in mind that such receipts are comparatively less liquid than STRIPS. However, to compensate for this decreased liquidity, such zeros typically offer higher yields when compared with STRIPS.

¹ Now Salomon Smith Barney

Federally related institutions have also issued zero coupon bonds. Called Government Sponsored Entities (GSEs), these bonds are not direct obligations of the U.S. government. The securities, and any interest thereon, are not guaranteed by the full faith and credit of the U.S. government and are therefore subject to potential credit risk. To compensate for the exposure to this perceived risk, zero coupon bonds issued by GSEs offer additional yield spreads versus similarly maturing STRIPS securities.

While the secondary market for GSE zeros is actively traded, their liquidity is comparatively less than STRIPS. This relatively less liquid market is partially due to the fact that GSEs are not active issuers of zero coupon bonds. In fact, the two most frequently traded GSE zeros resulted from recapitalization activity that occurred during the late 1980s.

Two such GSE zero issuers include the Financing Corporation (FICO) and the Resolution Trust Corporation (REFCORP). FICO was originally created to recapitalize the Federal Savings and Loan Insurance Corporation (FSLIC) as a result of the passage of the Competitive Equality and Banking Act in 1987. FICO receives its financing from deposit insurance premiums paid by banks and thrifts. Members of the Bank Insurance Fund (BIF) and the Savings Association Insurance Fund (SAIF) both contribute to the financing of FICO. The REFCORP was created in 1989 when Congress passed The Financial Institutions Reform, Recovery and Enforcement Act (FIRREA).

*CATS is a service mark of Salomon Smith Barney.
TIGRS is a service mark of Merrill Lynch.*

How Treasury Zeros Are Valued

The two most important influences on the current value of a Treasury zero are the maturity date and market conditions at the time of purchase. In general, the longer the time to maturity, the greater the discount to the bond's par value. Use the table on pages 8 and 9 to find current values for various yields and maturities (we use a zero with an original yield of 7.00% and 20 years left to maturity in the example below):

Find the original stated yield of your Treasury zero (the 7.00% column). Find the number of years remaining until your Treasury zero matures (the 20-year row), then follow across to find its compound accreted current value (\$244 per \$1,000 maturity value).

You can use the table to calculate the approximate effect of a move in interest rates on your zero holdings. Using the previous example above, if rates (the bid yield) were to fall from 7.00% to 5.00% in two years, move to the appropriate Yield to Maturity column (5.00% in our example) and then across to the Years to Maturity column (now 18 years). The current value would now be approximately \$401 per \$1,000.

Put Treasury Zeros to Work For You

If you wish to build wealth for the future, Treasury zeros are:

- **Suitable for IRAs.** Few other securities can offer a fixed rate of return secured by the U.S. government with the flexibility to match maturities to your personal retirement calendar. And since your IRA offers deferral of taxation on income, your accreted interest is not taxed until funds are withdrawn.
- **A great way to fund a college education.** A relatively small investment today can help you meet rising tuition costs.
- **Appropriate for pension and profit sharing plans.** Because interest is constantly compounding, Treasury zeros can turn a relatively small investment into a substantial lump-sum distribution at a specific future date if held to maturity.

For More Information

This guide has been provided for educational purposes and is not an offer to sell or a solicitation to buy any particular security. For more information on Treasury Zeros, contact a UBS PaineWebber Financial Advisor.

Zero Coupon Value Matrix

Years to Maturity	Yield to Maturity												
	5.00%	5.50%	6.00%	6.50%	7.00%	7.50%	8.00%	8.50%	9.00%	9.50%	10.00%	10.50%	11.00%
26	\$269	\$237	\$208	\$183	\$161	\$142	\$125	\$110	\$96	\$85	\$75	\$66	\$58
25	\$283	\$250	\$221	\$195	\$172	\$153	\$135	\$119	\$105	\$94	\$82	\$73	\$65
24	\$298	\$264	\$235	\$208	\$185	\$164	\$146	\$130	\$115	\$103	\$91	\$81	\$72
23	\$313	\$279	\$249	\$222	\$198	\$177	\$158	\$141	\$126	\$113	\$101	\$90	\$81
22	\$329	\$295	\$264	\$237	\$212	\$190	\$171	\$153	\$138	\$124	\$111	\$100	\$90
21	\$345	\$311	\$280	\$252	\$227	\$205	\$185	\$167	\$150	\$136	\$122	\$111	\$100
20	\$363	\$328	\$297	\$269	\$244	\$221	\$200	\$181	\$164	\$149	\$135	\$122	\$111
19	\$381	\$347	\$315	\$287	\$261	\$238	\$216	\$197	\$179	\$163	\$149	\$136	\$124
18	\$401	\$366	\$335	\$306	\$280	\$256	\$234	\$214	\$196	\$179	\$164	\$150	\$138
17	\$421	\$386	\$355	\$326	\$299	\$275	\$253	\$233	\$214	\$197	\$181	\$166	\$153
16	\$442	\$408	\$377	\$348	\$328	\$296	\$274	\$253	\$234	\$216	\$199	\$184	\$170
15	\$465	\$431	\$399	\$371	\$344	\$319	\$296	\$275	\$255	\$237	\$220	\$204	\$190
14	\$488	\$455	\$424	\$395	\$368	\$343	\$320	\$299	\$278	\$260	\$242	\$226	\$211
13	\$513	\$480	\$450	\$421	\$394	\$370	\$346	\$324	\$304	\$285	\$267	\$251	\$235
12	\$539	\$507	\$477	\$449	\$423	\$398	\$374	\$353	\$332	\$313	\$295	\$278	\$262
11	\$566	\$535	\$506	\$479	\$453	\$428	\$405	\$383	\$363	\$343	\$325	\$308	\$291
10	\$595	\$565	\$537	\$510	\$485	\$461	\$438	\$416	\$396	\$377	\$358	\$341	\$324
9	\$625	\$597	\$570	\$544	\$519	\$496	\$474	\$453	\$432	\$413	\$395	\$377	\$361
8	\$656	\$630	\$604	\$580	\$556	\$534	\$512	\$492	\$472	\$453	\$435	\$418	\$401
7	\$690	\$665	\$641	\$618	\$596	\$575	\$554	\$535	\$516	\$498	\$480	\$463	\$447
6	\$725	\$702	\$680	\$659	\$638	\$619	\$600	\$581	\$563	\$546	\$529	\$513	\$497
5	\$761	\$741	\$721	\$702	\$684	\$666	\$648	\$631	\$615	\$599	\$583	\$568	\$554
4	\$800	\$782	\$765	\$749	\$733	\$717	\$701	\$686	\$672	\$657	\$643	\$630	\$616
3	\$840	\$826	\$812	\$798	\$785	\$772	\$759	\$746	\$733	\$721	\$709	\$697	\$686
2	\$883	\$872	\$861	\$851	\$841	\$831	\$821	\$811	\$801	\$791	\$782	\$773	\$763
1	\$928	\$921	\$914	\$907	\$901	\$894	\$887	\$881	\$875	\$868	\$862	\$856	\$850
0	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000

Note: The current values shown on the table are approximations. To obtain current pricing information, please contact your UBS PaineWebber Financial Advisor.

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