



Strategies for Building a Laddered Retirement Portfolio

Description:

A look at different types of bond laddering strategies for how they can be used to reach specific portfolio management objectives, such as creating a long-term income stream.

Synopsis:

Retirement investors seeking to generate a long-term income stream often need to rely on a number of strategies and tools to achieve their objectives. One such strategy that uses fixed-income investments is bond laddering.

A bond ladder is a portfolio of bonds with maturity dates that are evenly staggered so that a constant proportion of the bonds can be redeemed at par value each year. As a portfolio management strategy, bond laddering may potentially help you maintain a relatively consistent stream of income while limiting your exposure to risk. It may also help manage exposure to losses caused by interest rate volatility and market inefficiency.

Body:

If the goal of saving for retirement is to provide financial security, then a key objective of retirement portfolio management should be generating a stable stream of income while preserving investment principal. Bond laddering is a strategy that may address both aspects of that key objective.

What Is Laddering?

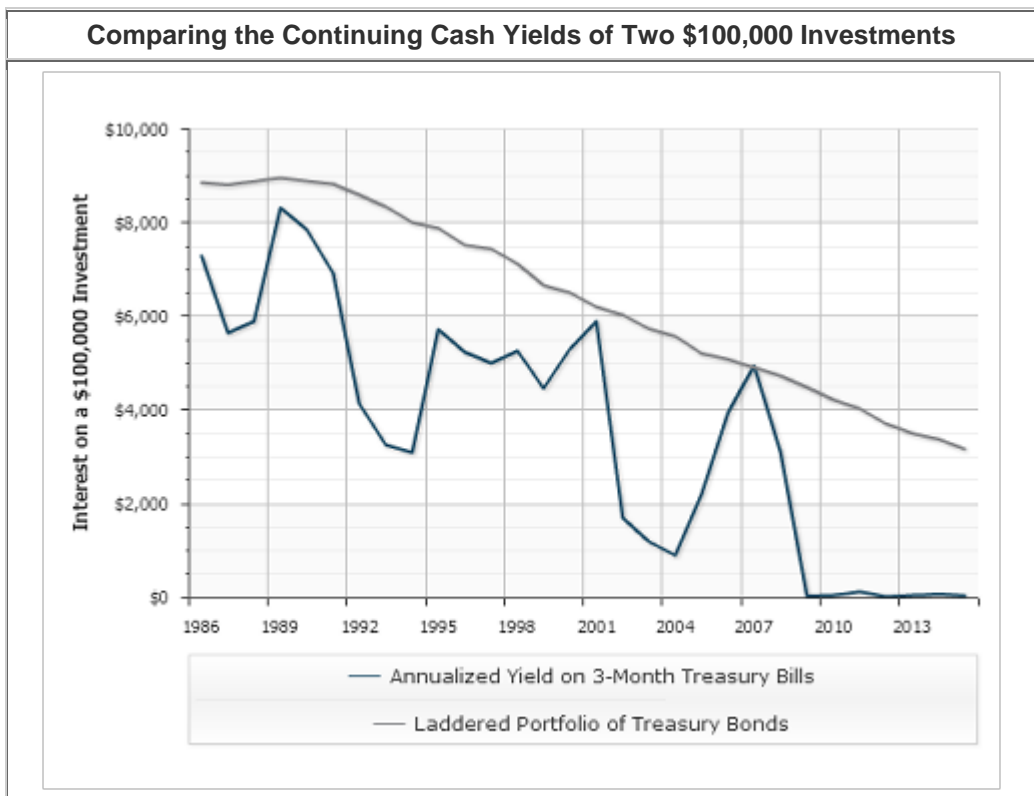
A bond ladder is a portfolio of bonds with maturity dates that are evenly staggered so that a constant proportion of the bonds can be redeemed at par value each year. By holding bonds to maturity rather than trying to buy and sell them in the secondary market, investors may minimize the potential for losses caused by interest rate volatility and market inefficiency. These losses and transaction costs can be considerable.

Generally speaking, there are two broad types of bond ladders. One can be implemented more or less perpetually for trusts, endowments, and other applications with extended planning horizons. Another form of bond ladder can be implemented for individuals whose personal financial plans might have a definite end-point in mind. Both types of ladders can potentially play a role in reducing some bond market risks.

Perpetual Bond Laddering

This bond laddering strategy is most useful for an investor who plans to conserve investment capital indefinitely and whose need for cash flow is predictable. A typical ladder might be constructed from Treasury bonds, with one-tenth of the portfolio being redeemed and reinvested each year. As the following chart shows, such a structure would have been significantly more productive and less volatile over the past four decades than a strategy of simply buying and rolling over short-term notes, such as three-month Treasury bills. Keep in mind, however, that the long bond ladder is significantly less liquid than a short bill portfolio. Virtually all of the assets in the short portfolio can be liquidated at face value within three months. In contrast, only 10% of the long portfolio can be liquidated at face value in any given

year; the remaining 90% might be exposed to considerable market and interest rate risk if it were sold in the secondary market rather than held to maturity.



Comparative Performance Over Various Long-Term Horizons						
	10 years ended December 31, 2015		25 years ended December 31, 2015		40 years ended December 31, 2015	
	Treasury bond ladder	3- month T-bills	Treasury bond ladder	3- month T-bills	Treasury bond ladder	3- month T-bills
Average annual income from a \$100,000 laddered bond portfolio:	\$4,122	\$1,237	\$5,982	\$2,906	\$7,264	\$4,984
Compounded annualized yield:	4.3%	1.2%	7.0%	3.3%	8.7%	7.0%

Source: ChartSource®, DST Systems, Inc. For the period from January 1, 1986, through December 31, 2015. Assumes all bonds mature on December 31 of the given year, and that interest payments are not reinvested. Yields are based on yield data published by the Federal Reserve, and are imputed for maturities that the Federal Reserve does not report (generally, 4-, 6-, 8-, and 9-year bonds). Using a bond ladder strategy does not guarantee superior results. Past performance is not a guarantee of future results. Copyright © 2016, DST Systems, Inc. All rights reserved. Not responsible for any errors or omissions. (CS000224)

Laddering With a Fixed Term in Mind

Another type of bond ladder is one built to provide a steady cash flow for a predetermined number of years. This can be done with a zero-coupon bond, a type of bond that pays all of its interest in one lump sum at maturity. Generally speaking, the further in the future that one expects to receive the redemption value, the less one needs to spend today for the bond.

Here is how the principal of a fixed-term bond ladder can be applied to the needs of a retirement investor. In this hypothetical example, the retirement portfolio is worth \$250,000 at retirement and the presumed withdrawal rate is 4% of assets per year, or \$10,000. Based on the interest rates that prevailed at the end of 2015, an investor could buy a series of 20 zero-coupon Treasury bonds, one of which would become redeemable in each of the next 20 years. The total discounted cost of those 20 bonds would be approximately \$158,000. The balance of the original \$250,000 could be allocated to equities for growth potential, creating a portfolio that still holds more than 30% equities. The core income of \$10,000 would be stable, and the value of the equity portfolio should be available to help augment income as needed to compensate for inflation or provide extra latitude for spending. Equity value could also be available to extend the term of the plan if needed. Planning horizons of greater than 20 years can also be addressed at the outset, albeit at somewhat greater cost. Note also that bonds in the ladder will have value during the course of the plan, even though their value may be subject to fluctuations caused by interest rate volatility.

Investment Needed to Create \$10,000 Per Year	
Term	Immediate total investment needed
20 years	\$158,000
25 years	\$185,000
30 years	\$207,000

Source: DST Systems, Inc. Indicated costs assume the initial amounts are invested in zero-coupon U.S. Treasury bonds maturing on the anniversary dates of the investment and yielding the market rate for that maturity that prevailed on December 31, 2015. Estimated investment needs for similar ladders created on other dates will vary -- increasing as prevailing market yields fall and decreasing as prevailing yields rise. This hypothetical example does not account for potential custody expenses, transaction costs, or tax liabilities, if any. The value of Treasury bonds can be assured only when they are held to maturity and redeemed by the U.S. government. Until redemption time, the market value of Treasury securities varies as prevailing interest rates rise and fall. Past performance is not a guarantee of future results.

Work With a Professional

An investment portfolio that has some of its assets allocated to bonds may produce stronger cash flow with less volatility than a portfolio allocated solely to equity investments such as common stock shares. As such, a bond ladder offers investors a formula for allocating their fixed-income holdings to potentially reduce the unique risks of bond holdings and to achieve the results they seek from their bond investments. Your financial advisor can help you determine whether bond laddering is an efficient solution for your needs.

The Language of Bonds

- **Par value** is the face value of the bond (i.e., the value the bond was assigned when the issuer created it).
- **Market value** is the price for which a bond can be bought or sold at any give time after it is issued and before it is redeemed in the process known as secondary market trading. The prices of

bonds in the secondary market depend on the overall level of interest rates. Prices of existing bonds rise when the general level of interest rates falls, and prices fall when the general level of interest rates rises. Individual bond prices can rise relative to their peers in the secondary market if the creditworthiness of the borrower improves, or they can lose ground relatively if the creditworthiness of the borrower deteriorates.

- **Redemption value** is the amount of money that the issuer will return to the investor on the specified maturity date. Redemption value is generally not affected by changes in the secondary market price.
- **Maturity date** is the date set for repayment of the bond's principal; it is normally established at the time the bond is issued. A **conventional bond** is issued for a fixed period. A **callable bond** can be redeemed at the initiative of the issuer whenever the call conditions specified in the bond are met. A **puttable bond** can be redeemed at the initiative of the investor whenever the specified put conditions are met. A **convertible bond** is one that can be exchanged for common stock at specified times.
- **Coupon value** is the cash amount of the interest payment made to the investor each year. In most cases, the coupon value never changes throughout the life of the bond, regardless of any changes in secondary market value of the bond.
- **Coupon yield** is the value of the interest payment given to the investor each year expressed as a percentage of the original par value of the bond. This figure does not change during the life of the bond.
- **Current yield** is the value of a bond's interest payment expressed as a percentage of its current trading price in the secondary market. Current yield is actually the primary basis for defining a bond's trading price in the secondary market because current yields on existing bonds need to maintain their relationships with market averages. To keep yields synchronized with the market, trading prices are adjusted. Lowering a bond's price has the effect of increasing its current yield because the coupon payment would be divided into a smaller market value. Increasing a bond's price has the effect of lowering the current yield because the coupon payment would be divided into a larger market value.

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