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Laddering Logic

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For quite some time now, credit unions have been hindered by the fear of rising interest rates. To compound matters, some regulators and examiners have been critical of their choices to extend out the curve. As such, many investors have taken the path of least resistance, electing to hold low-yielding cash, rather than to buy longer maturity debt to enhance yield and income. In the months – *and possibly years* – to come, this approach could be quite damaging to income and margins.

How do credit unions achieve a respectable rate of return without experiencing the higher risk associated with the fluctuation of interest rates? For those who are perplexed and uncertain about the future, *keeping it simple* via the tried-and-true **bond ladder** may be one of the most effective, all-weather approaches for fixed income investing.

A bond ladder is a portfolio of bonds with a portion of the portfolio maturing each year (often equal amounts across each annual maturity). To maintain the ladder, money that comes in from currently maturing bonds is typically invested in bonds with longer maturities within the range of the bond ladder.

The ladder can range from two years to as long as 30 years. Shorter term ladders forgo the benefits of higher, long-term rates, but such ladders adjust more quickly to rising rates. Longer term ladders benefit from higher long-term rates, but such ladders adjust more slowly to rising rates.

It really doesn't matter which way interest rates move. With a laddering strategy, it's possible to get consistent returns.

The primary goal of a laddered bond portfolio is to achieve a total return over all interest rate cycles, that compare favorably to the total return of a long-term bond – with less market price and reinvestment risk.

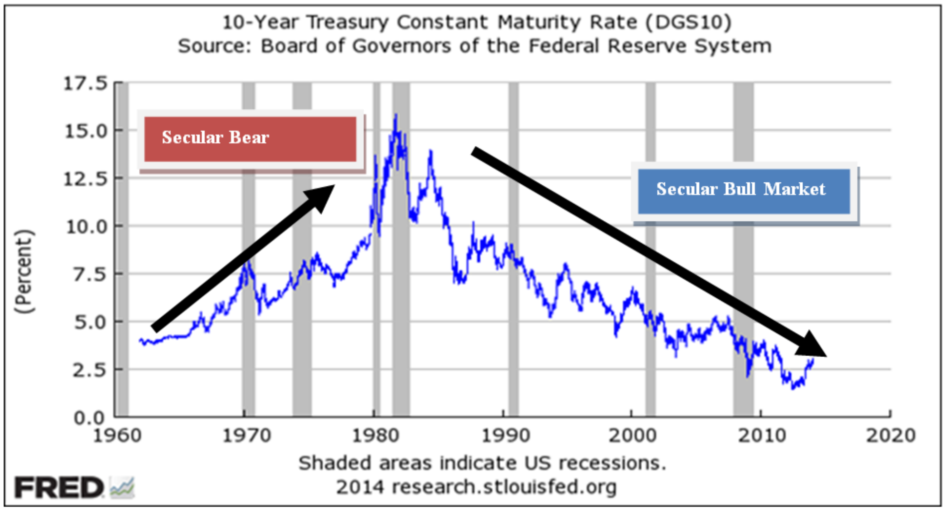
Historical Results

In the following graphs, we quantify how bond ladders of varying Treasury maturities would have performed in a long-term secular bear market, a long term bull market and over the full interest rate cycle (1965-2013).

Assumptions: The dataset is developed from Fed data for Treasuries and other sources for periods prior to the Fed data (adjusted to Treasury-equivalent). For terms that are not available from the Fed, yields are interpolated.

The starting ladder is spread equally across each annual maturity in the respective ladder. Each year, each bond rolls down the ladder one year. The principal value of the maturing bond is reinvested at the end of the ladder. Total return represents the current interest from each bond plus/minus the change in value that occurs. Changes are due to 1) the now shorter maturity for each bond and 2) the then-current "market" yield for each bond. The income from the ladder is reinvested equally across the ladder.

In the next image, we graph the full interest rate cycle for Treasury yields from 1960 to 2013.



So how would a ladder have performed in a steadily rising rate environment? Actually, surprisingly well! Take a look at the Secular Bear Market table (1965-1980), when rates rose from 4.5% to more than 15%. You will quickly notice that simple bond ladders generated average annualized returns ranging from 5% for five-year ladders to 3% for 20-year ladders. It should also be noted that ladders of 10-years or less did not experience a negative return for any one year, or the 25-year bear market cycle. Not surprisingly, during periods of rising rates, the short ladders generated the higher returns.

Secular Bear Market (1965-1980)					
	Bond Ladders				
	5-year	7-year	10-year	15-year	20-year
Average Return	5.5%	5.1%	4.6%	3.7%	3.0%
Minimum Return	3.2%	2.2%	1.7%	-0.3%	-1.9%
Maximum Return	9.6%	10.3%	9.9%	11.0%	11.0%

Source: Crestmont Research

Now let's look at the same analysis over the Secular Bull Market (1981-2013). During this time, interest rates declined from 15% to 3%. Obviously, bond ladders performed much better over this period with average annualized returns ranging from 7% for five-year ladders to 9.3% for 20-year ladders. Again, as was the case with the secular bear market, ladders with maturities of 10-years or less did not experience a single year of losses. Given the secular decline in rate, long ladders generated the highest returns.

Secular Bull Market (1981-2013)					
	Bond Ladders				
	5-year	7-year	10-year	15-year	20-year
Average Return	7.0%	7.5%	8.1%	8.8%	9.3%
Minimum Return	0.5%	0.5%	0.8%	-0.1%	-0.4%
Maximum Return	15.5%	15.7%	16.2%	19.3%	21.0%

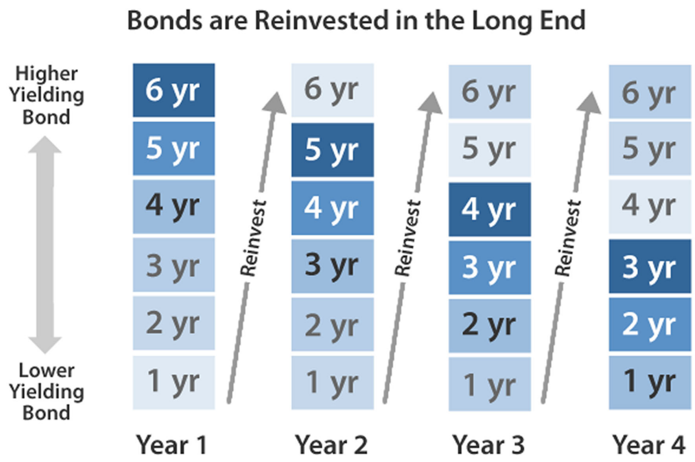
Source: Crestmont Research

Finally, when combining the full interest rate cycle of rising and declining interest rates, over the combined measurement period, it is quite noteworthy that ladders of all maturities (ranging from five years to 20 years) generated average annualized returns of 6.5% to 7.3%. Needless to say, credit unions could have done much worse over this time!

Modern History (1965 -2013)					
	Bond Ladders				
	5-year	7-year	10-year	15-year	20-year
Average Return	6.5%	6.7%	7.00%	7.1%	7.3%
Minimum Return	0.5%	0.5%	0.8%	-.03	-1.9%
Maximum Return	15.5%	15.7%	16.2%	19.3%	21.0%

Source: Crestmont Research

Key Observation: Laddering short-term and intermediate-term bonds captures most of the return of longer-term bonds – with less volatility. For example for the total measurement period (1965-2013) the five-year ladder provides 89%, 93%, 93% and 97% of the return of the longer ladders (20-, 15-, 10- and 7-year, respectively) Thus, a five-year ladder would have generated returns close to those of long-term bonds, but with substantially less risk.



The Bottom Line

Bond laddering tends to perform very well against other bond strategies over the long term because it simultaneously accomplishes two goals:

- Laddering captures price appreciation as the bonds age, and their remaining life shortens. (See the related article, Rolling Down the Curve)
- Laddering reinvests principal from maturing limited-term bonds (low-yielding bonds) into new longer-term bonds (higher-yielding bonds).

It really doesn't matter which way interest rates move. With a laddering strategy, it's possible to get consistent returns. This gives laddering investors a competitive advantage, knowing any time is a good time to build (or buy into) a laddered portfolio. Ladders are the smart way to increase a fixed income portfolio return, while minimizing both market and reinvestment risk

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More Information

For more information about credit union investment strategy, portfolio allocation and security selection, please contact the author at *tom.slefinger@balancesheetsolutions.org* or 800-782-2431, ext. 2753.

Tom Slefinger, Senior Vice President, Director of Institutional Fixed Income Sales, and Registered Representative of ISI, has more than 30 years of fixed income portfolio management experience. He has developed and successfully managed various high profile domestic and global fixed income mutual funds. Tom has extensive expertise in trading and managing virtually all types of domestic and foreign fixed income securities, foreign exchange and derivatives in institutional environments.

At Balance Sheet Solutions, Tom is responsible for developing and managing operations associated with institutional fixed income sales. In addition to providing strategic direction, Tom is heavily involved in analyzing portfolios, developing investment portfolio strategies and identifying appropriate sectors and securities with the ultimate goal of optimizing investment portfolio performance at the credit union level.