



BUILDING THE LADDERED PORTFOLIO



RBC
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Predictability, liquidity, and adaptability

Too often investors are preoccupied with being right. They view the investment process as one in which each decision will be judged in hindsight as having been correct or incorrect. Nowhere is this more evident than in the fixed-income area where investors, battered by a changing interest rate environment and discouraged by the low returns currently available, have come to believe that their next move has to be the right one. In our view this is dangerous thinking, which in all likelihood will lead to disappointment and more frustration.

There is a better way – one that provides higher current income, greater safety through diversification, built-in liquidity, dramatically improved predictability of future income, and the ability to automatically adapt to a changing interest rate environment, usually on the very best terms available. The ladder portfolio approach does all this, without requiring the investor to forecast future interest rates or to make complicated reinvestment decisions.

What is a laddered portfolio?

As its name suggests, the laddered portfolio is one made up of several fixed-income holdings, each having a successively longer term to maturity. Typically each position in the portfolio would be the same size as the next, and there would be a roughly equal time interval between each maturity (see “How to construct a laddered portfolio” on page 7).

As time passes, such a portfolio would gradually liquidate itself over a number of years. But if instead when each position, as it matured, was reinvested back out at the long end (i.e. at the top of the “ladder”), then the portfolio would acquire some remarkable properties that make it an ideal solution for the fixed-income investor.

Higher current income now...

For 20 years (1973 to 1993) interest rates were always above the highest levels that had ever prevailed over the previous 200 years. The high-water mark reached in 1981 was almost exactly twice as high as at any prior peak. The experience of living through this prolonged period of sky-high interest rates shaped investor expectations so much that, in the more than two decades since rates set their highs, investors have kept their fixed-income capital invested in short-term instruments for fear that a move to higher rates was just around the corner.

Since long-term interest rates have been higher than short-term rates almost all of that time, the decision to keep reinvesting in short-term instruments has meant that investors have consistently accepted less current income than has been available.

Even though the simple decision to extend term would have almost always provided an immediate boost to income, most investors have been and continue to be reluctant to commit to a longer term for fear that rates will rise, leaving them obliged to accept a sub-par income for the full term of the bond or term deposit.

In our view, this tendency to reduce the investment process to an all-or-nothing choice between short or long term is not far different from moving your chips from one number on the roulette table to another – the payoff, if you are right, can be big, but the cost of being wrong is always too high. In effect you are gambling that your forecast of future interest rates will be right.

The “laddered approach” removes the necessity for you to forecast where rates are headed and focuses instead on the factors that are of most concern to the fixed-income investor – safety, high current income, predictability of future income, and adaptability to changing conditions.

A bond ladder today			
Years to Maturity	Principal Amount	Interest Rate	Annual Income
1 Year	\$100,000	3.00%	\$3,000
3 Years	\$100,000	3.20%	\$3,200
5 Years	\$100,000	3.90%	\$3,900
7 Years	\$100,000	4.15%	\$4,150
9 Years	\$100,000	4.40%	\$4,400
5-Year Avg. Term	\$500,000	3.73%	\$18,650

The “laddered approach” spreads out your fixed-income capital over a range of maturities, which, on average, are appropriate to your financial circumstances. In the example on the previous page, this would immediately boost portfolio income for the coming year by 24% (or by \$3,650 in a \$500,000 portfolio) over the \$15,000 that reliance on a one-year Treasury Bill would provide.

... and later

A bond ladder four years later			
Years to Maturity	Principal Amount	Interest Rate	Annual Income
1 Year	\$100,000	3.90%	\$3,900
3 Years	\$100,000	4.15%	\$4,150
5 Years	\$100,000	4.40%	\$4,400
7 Years	\$100,000	4.40%	\$4,400
9 Years	\$100,000	4.40%	\$4,400
5-Year Avg. Term	\$500,000	4.25%	\$21,250

What’s more, by following this approach, your income in all likelihood will go on rising for several years because the shorter-term, lower-yielding issues in the initial portfolio will gradually be replaced by longer-term, higher-yielding issues (see table above). This comes about because, at any given moment, long-term rates are almost always higher than short-term ones. Indeed, over the past 51 years, long rates were higher than short-term rates 92% of the time.

And within another three years all the issues would be yielding the nine-year rate of 4.40%

and yet the portfolio would still have an average term to maturity of only five years!

Built-in liquidity and safety

It's true that such a portfolio does not offer the "next-day-100-cents-on-the-dollar" liquidity that some bank accounts or T-Bills come close to providing. But it does offer a high level of liquidity, consistent with the real needs of most investors, with part of the portfolio maturing at regular intervals. At all events, each instrument in the portfolio could be sold any time at short notice. And while the price realized might be more or less than the cost the investor had originally incurred, depending on what interest rates had done in the interval, that sort of "emergency" liquidity is always available on the rare occasion it is required.

Safety is usually also high on the fixed-income investor's list of priorities. Here too the ladder portfolio offers great scope for lowering risk through diversification. In an era when political uncertainty, the changing opinions of rating agencies, and fluctuations in global currencies can all affect the ultimate worth of even the most conservative securities and savings vehicles, it just makes good sense not to put all your eggs in one basket. A well-chosen portfolio can substantially mitigate all such risks that your capital is inevitably exposed to.

Predictability versus uncertainty

Another great virtue of the ladder approach is the high degree of predictability of future income that it affords. Many investors' savings

roll over every year or two. That means the income provided by these savings can and does fluctuate unpredictably from year to year. For example, in 2000, a retired couple, depending on a \$500,000 portfolio for supplementary income, invested (as most were and still are) in short-term notes and deposits averaging about one year in term, enjoyed a pre-tax income of about \$30,000. But just four years later in 2004 their income had fallen by two-thirds to just \$10,000. It goes without saying that it is very hard to plan a retirement when your income from one year to the next is a completely unknown quantity.

While the income generated by a ladder portfolio would also change in line with the overall direction taken by interest rates, it would do so gradually since only a fraction of the portfolio would roll over every year or so. Your income would inevitably rise or fall over time, but not in a way that would force you to change your lifestyle dramatically in the short run, as has happened to so many investors over the past few years.

Perhaps the greatest attribute of the ladder portfolio is its implicit acknowledgement that each individual's ability to forecast interest rates is imperfect at best. Of course, if we knew exactly where interest rates were headed next then we would always be in 30-day T-Bills when rates were rising and in 30-year bonds when they were falling. But the reality is that even the wisest or luckiest of us is going to be wrong sufficiently often that our investment

strategy must build in a large margin for error. Investing exclusively in one-year bills or deposits does not provide that margin as many of us have learned painfully over the past several years.

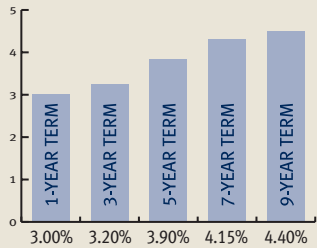
The laddered approach allows us to roll with the interest rate punches, while diversifying away many of the risks that lay seen or unseen in today's complex investment environment. As such it represents the best and most conservative strategy for the fixed-income investor.

How to construct a laddered portfolio – step by step

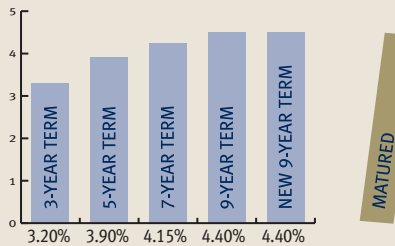
1. Choose an appropriate average term.

This should be the length of time over which the income from your portfolio needs to be highly predictable. Most investors in 2000 had an average term of one year or less. As a result, four years later, their annual incomes had fallen by as much as short-term interest rates had, i.e. by almost two-thirds. Contrast this with the position of the couple who had a laddered portfolio with a five-year average term: by the beginning of 2004 their income had fallen by less than 5%. Their income will still move in the same direction as interest rates over time, but never so abruptly as to force changes in lifestyle without warning. In our view, most individuals are best served by an average term of between four and seven years.

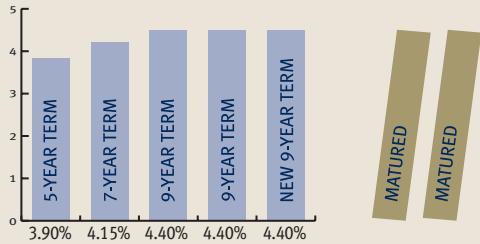
Climbing a laddered portfolio



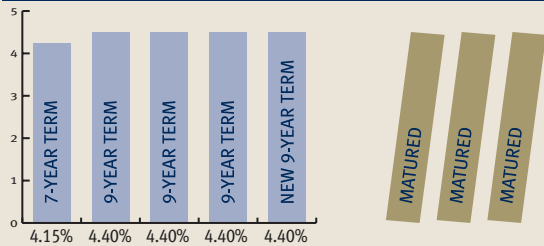
First Year



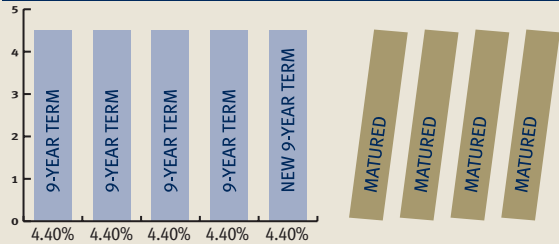
Third Year



Fifth Year



Seventh Year



Ninth Year

2. Calculate the longest maturity to be used in the portfolio.

In a portfolio where each individual position will be approximately equal in size and spaced at even intervals apart, the longest term instrument to be included would be roughly twice as long as the average term. For example, if an investor had decided that an average term of five years was appropriate, then the longest term to be included in the portfolio would be about 10 years (2 x 5).

3. Determine how many positions to use (i.e. how many steps on the ladder).

The more positions to be used, the shorter the interval between each maturity date, and hence the smoother the transition from one interest rate environment to the next. On the other hand too many positions can make it difficult to reinvest interest in a timely and efficient fashion. Our recommendation for most portfolios is one maturity per year of the ladder. For example, in a 10-year ladder, we would suggest 10 positions, each maturing one year apart.

4. Adhere to a reinvestment rule.

In order to ensure that the ladder portfolio retains the same average term over time, each time an issue matures the proceeds should be reinvested out at the longest acceptable term as determined in Step 2 (i.e. at the top of the ladder).

Please contact us for more information.



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