Retirement Portfolios: Fears over Rising Rates are Overblown

By Joe Tomlinson
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The second quarter saw increases in interest rates, losses in every category of bonds and investors abandoning fixed-income markets. The distress has been particularly acute among retirement investors who considered bond funds to be safe. But are fears of bond losses overblown? I will make the case that the rise in interest rates is actually good for retirement portfolios. To see this, one has to look beyond the quarterly statement losses and focus on overall retirement outcomes.

Damage assessment

The 10-year Treasury yield rose from 1.87% to 2.5% during the second quarter. Most of the increase occurred after mid-May, when Federal Reserve Chairman Ben Bernanke mentioned moderating the Fed stimulus. The Merrill Lynch U.S. Broad Market Bond Index dropped 3.5% in the May-June period. As reported by TrimTabs, investors responded by pulling a record $43.4 billion out of bond mutual funds and bond exchange-traded funds in June.

This chart provides recent performance details for six of the largest bonds funds:

Six Large Bond Funds

Fund	Symbol	Assets $Billions	Second Quarter 2013 Return	Duration Years
PIMCO Total Return	PTTRX	$268	-3.60%	4.73
Vanguard Total Bond Market Index	VBMFX	$115	-2.45%	5.31
Templeton Global Bond	TPINX	$73	-2.78%	1.59
DoubleLine Total Return Bond Fund	DBLTX	$39	-1.59%	2.94
Vanguard Inflation-Protected Securities	VIPSX	$35	-7.34%	8.31
American Funds--Bond Fund of America	ABNDX	$32	-2.65%	4.55

Source: Morningstar®

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Investment performance during the second quarter was roughly similar for all the funds, except for the much bigger loss for Vanguard Inflation-Protected Securities. It is ironic that Treasury inflation-protected securities (TIPS), which make up this fund, are touted by many economists as the ideal retirement investment. During the quarter, interest rates rose and inflation expectations declined, both hurting TIPS performance.

This TIPS fund has a much longer duration than the other funds. Duration measures price sensitivity to changes in yield. For example, if interest rates increase by 2%, a fund with a duration of 8 years will lose 16% of its value (16% = 2% x 8). The relationship is most direct for Treasury securities, which have no credit risk, and less so for funds with corporate or global bonds where other factors influence price.

That's a quick overview of the recent bad news about bonds. I'll now show how this bad news is actually good news for retirement portfolios.

A retirement example

Let's consider a hypothetical couple who set aside $560,000 on March 31, 2013, to provide retirement withdrawals to supplement their Social Security income, with a goal of having that fund last 25 years. They decide to invest in the Vanguard TIPS fund and work with their advisor to develop projections to set up a withdrawal schedule. The projections use a yield after inflation of -0.84%, based on the March 31, 2013, 10-year TIPS yield of-0.64%, minus an additional 0.2% for expenses. They determine that pre-tax withdrawals of $20,000 annually with increases each year for inflation would last 25 years, based on the fund's composition.

Three months pass, interest rates increase and their quarterly statement shows they are off to a bad start. The fund has lost 7.34% (from the chart above), and their $560,000 has been reduced by $41,000 to $519,000. They decide to redo their projections and now use an updated yield of 0.28%. They are pleasantly surprised to discover that, even though they are starting with $41,000 less, they now have projected money left over after 25 years. They determine that an increase in withdrawals of 7.5% to $21,500 is now consistent with the fund lasting 25 years.

Incomplete accounting

Like thousands of others who have pulled money out of bond funds, this couple was initially alarmed by their quarterly results, but they were receiving misleading signals by focusing only on the asset side of their retirement balance sheet. There is also a liability side represented by the 25 years of planned retirement withdrawals. In this example, the duration for the liabilities is about 12 years. Because the liability duration exceeds the asset duration (8.31 years for the Vanguard TIPS fund), an increase in interest rates

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decreases liabilities more than it decreases assets. If the couple was treating the retirement balance sheet like a corporate pension plan, they would have been marking both assets and liabilities to market and the gain would have been apparent. The rush out of bond funds we have been witnessing reflects, to some extent, a combination of loss aversion and incomplete accounting.

Tactical strategies

In a world with perfect foresight, this couple would have obtained the services of a skilled tactical investment manager who would have advised waiting three months to invest their $560,000. They would then have been able to take withdrawals of $23,200, 16% more than the original $20,000. But, such tactical skill is more often touted than actually delivered, and active managers do not work for free. Even the best and brightest have messed up. In late 2010, stock maven Jeremy Siegel sounded the alarm that Treasury bonds were a "suckers bet" and individuals should move money to stocks. In early 2011, the Bond King, Bill Gross, with great fanfare, sold all Treasury bonds in the giant PIMCO Total Return Fund. Long-term government bonds returned 28% in 2011, while stocks produced a 2% return. Sometimes tactical moves work, but too often they don't.

Part of the problem with trying to be tactical and moving to short-term bonds in anticipation of interest rate increases is that market expectations for future interest rates are already baked into the yields on longer-term bonds. The strategy doesn't necessarily succeed if interest rates increase – it only succeeds if they increase by more than the market expects. And it turns out to be even more of a challenge than that. The yield premium that long-term bonds offer reflects not only market expectations for interest rates but also the duration risk on Treasury bonds. Corporate bonds also offer a premium for longer-duration credit risk and illiquidity. (These components of the bond risk premium are well-described and analyzed in chapter 9 of Antti Ilmanen's 2011 book *Expected Returns: An Investor's Guide to Harvesting Market Rewards*.)

Going short as a tactical strategy sacrifices all those components of extra yield.

Let's consider an investor who shifts his or her Treasury bond allocation from a 5-year duration typical of intermediate-term bond funds to a 2-year duration typical of short-term funds. Based on zero-coupon or Treasury STRIP rates reported in the *Wall Street Journal*, a 2-year STRIP yields about 0.4% as of July 1, and a 5-year STRIP yields 1.45%. If one invests in a 2-year STRIP now and reinvests in a 3-year STRIP in two years, that 3-year STRIP would need to yield 2.15% for this strategy to beat investing in a 5-year STRIP now. Currently, 3-year STRIPS yield only 0.7%.

We are left with the question of whether future rate increases would indeed justify a go-short-and-wait strategy. The picture is far from clear. As reported in this Bloomberg News

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article, opinion leaders Bill Gross and Jeffrey Gundlach viewed the recent increase as mostly a one-time reset. Others who are less well known viewed the increase as the first leg of a trip to bond Armageddon. With all that is given up by going short, trying to time interest-rate movements will likely do more damage to retirement outcomes than staying the course.

Owning individual bonds versus bond funds

It has often been argued that investors can avoid losses when interest rates rise by owning individual bonds instead of bond funds. This July 2 *Advisor Perspectives* article is the most recent example. My view is that despite accounting differences, there is no substantive difference in the financial impact on investors.

Let's take a 5-year zero-coupon bond priced to earn 2% annually and compare outcomes depending on individual ownership versus fund ownership, assuming that interest rates increase from 2% to 4% immediately following purchase. If the maturity value is $1,000, the purchase price will be $905.73 ($1,000 discounted at 2% for 5 years). An individual investor purchasing the bond will pay the $905.73, collect $1,000 five years later and record no loss from the interest-rate increase. A fund purchasing the same bond and doing mark-to-market accounting will be forced to take an immediate loss by writing the bond down to $821.93 ($1,000 discounted at 4% for 5 years). On the accounting books, however, the $821.93 will earn an annual 4% return, instead of 2%, and end up at the same $1,000 maturity value five years hence. The accounting doesn't change the cash flow from the bond, and it's the cash flow that financially impacts the investor.

Another argument for individual bonds is that they can be used to set up bond ladders to match the retirement withdrawal needs, thus avoiding interest rate risk. Bond ladders require structured duration-matching to eliminate interest-rate risk. If we go back to the earlier example in which the retirement withdrawals have a duration of 12, a bond ladder will also have a duration of 12, because it is set up to exactly match the withdrawals. Unlike the earlier example, in which the duration of assets was less than the duration of liabilities and an increase in interest rates improved retirement outcomes, an interest-rate increase has zero impact in the bond ladder example.

I am not personally a fan of owning individual bonds or setting up bond ladders. There is a false precision in laddering, because retirement expenses can never be predicted with certainty. Individual longevity, of course, can also not be predicted. I prefer to rely on bond index funds for diversification and low expenses. Bond index funds also avoid the risk of active manager strategies that may backfire if they try to make up for a stretch of bad performance.

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Conclusion

Recent trends have seen fixed-income investors seeking the perceived safety of lower durations. For retirement portfolios, however, investors should avoid a narrow focus on short-term asset accounting and take a broader view that considers both the assets and the liabilities. There are advantages that one earns from longer-term investing, which will contribute substantially to long-term retirement wellbeing.

Joe Tomlinson, an actuary and financial planner, is managing director of Tomlinson Financial Planning, LLC in Greenville, Maine. His practice focuses on retirement planning. He also does research and writing on financial planning and investment topics.

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