The Opportunity Cost Of Bad Forecasts

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Since the 2008–09 financial crisis caused bond yields to plunge to new lows, market forecasters have been predicting a rise in interest rates. And with the fear of rising rates comes a reluctance to invest in broad-based bond funds.

Recall that when interest rates go up, bond prices fall, and the longer the maturity the bigger the decline. So when investors think rates will increase they move to short-term bonds, or even cash. They may completely avoid funds that track the popular DEX Universe Bond Index, which covers the broad Canadian market and has an average maturity of about 9.5 years.

Indeed, many gurus have been recommending shortening bond maturities for more than three years now. I've lost count of the number of emails I've received from investors (and a few advisors) who think recommending the iShares DEX Universe Bond Index Fund (XBB) in my Couch Potato model portfolios is idiocy.

It's time for the forecasters to acknowledge that they were spectacularly wrong. Bond yields have fallen since the crisis: the rate on 10-year Canadas was 2.95% when the equity markets bottomed in March 2009, and it dipped below 2% by the end of 2011. Even high-interest savings accounts were paying 2.5% in early 2009, compared with 1.5% or less today. The result is that anyone who made a tactical move to short bonds or cash since 2009 did far worse than investors who simply held the whole bond market.

I thought it would be interesting to calculate the "opportunity cost" of that bad call on interest rates. This is a concept that many investors ignore: after all, if you've been sitting in cash or short-term bonds for three years, you haven't actually lost money. But if you made a conscious decision to move out of a broad-based bond fund, then you left a lot of money on the table. Over the long term, opportunity costs erode your returns just like losses.

Table 1 shows the returns for the three asset classes since 2009. To estimate cash returns, I used the average rate on a high-interest savings account from ING Direct. For short-term bonds, I used the iShares DEX Short-Term Bond Index Fund (XSB). As you can see, sticking to a broad-market bond fund would have delivered the best return in each of the three years by a wide margin. Overall, an investment in XBB would have grown by more than 22% during the period, compared with 12.4% for short-term bonds and less than 5% for cash. On a $10,000 investment, the opportunity cost of a bad call on interest rates was $985 if you moved to short bonds, and $1,755 if you sat in cash.

Table 1: Returns on cash and bonds 2009–11

	Cash	XSB	XBB
2009	1.8%	4.3%	5.0%
2010	1.4%	3.2%	6.4%
2011	1.4%	4.4%	9.4%
Annualized return	1.5%	4.0%	6.9%
Total three-year return	4.7%	12.4%	22.2%
Growth of $10,000	$10,467	$11,237	$12,222

The Next Three Years

With rates lower today than they were in 2009, the fear of rising yields is even more palpable, and the soothsayers may be proven right. But even if cash and short-term bonds outperform the broad market over the next few

years, they may not be able to make up the ground they've already lost.

To test this idea, I ran some hypothetical scenarios to see how things might shake down if rates move up over the next three years. I started by imagining that rates all along the yield curve (short, intermediate and long-term bonds) climbed 50 basis points, or 0.5%, each year. Then I asked BlackRock, provider of iShares ETFs, to estimate how that might affect XSB and XBB during the next three years. We obviously had to make several assumptions here:

- During the entire three-year period, the profile of the two bond indexes (their duration and average term to maturity, for example) remain approximately the same as they are today.
- Credit spreads (the difference between the yield on government bonds and corporate bonds of the same maturity) remain where they are now.
- The 50-basis-point rate increase occurs at the beginning of the year, resulting in an immediate decline in the value of the fund.
- Over the next 12 months, cash flows from coupon payments and maturing bonds are reinvested at the new higher rates.
- For the cash returns, I simply assumed that the rate on savings accounts increased by 50 basis points each year.

As **Table 2** shows, in this scenario a modest rate increase causes XBB to lose money in Year 1 and deliver barely positive returns in the two subsequent years. As expected, short-term bonds fare better, and cash does better still. Rate forecasters would be patting themselves on the back for their brilliant call.

But wait a minute. We need to look at the bigger picture and consider the opportunity cost incurred in the previous three years. Remember, from 2009 through 2011, XBB outperformed the other two options dramatically, so investors who stayed the course are working with a head start that can't be ignored. If the returns on cash and bonds are close to our estimates in Table 2, will they be enough to close the gap? The answer is no:

Table 2: Estimated returns if rates rise 50 bps in each of the next three years

	Cash	XSB	XBB
Year 1	1.9%	1.1%	-0.1%
Year 2	2.4%	1.6%	0.4%
Year 3	2.9%	2.0%	1.0%
Annualized return	2.4%	1.6%	0.4%
Total three-year return	7.4%	4.8%	1.3%

Source: BlackRock Asset Management Canada, Inc.

Table 3: Estimated six-year returns if rates rise 50 bps in each of next three years

	Cash	XSB	XBB
Value after first three years (2009–11)	$10,467	$11,237	$12,222
Estimated total return over next three years	7.4%	4.8%	1.3%
Final value after six years	$11,242	$11,776	$12,381

Table 3 reveals that XBB would still be comfortably ahead even after three years of lousy returns.

Upping The Ante

To make things more interesting, we ran the same simulation again, but this time we assumed that interest rates rise 100 basis points (1%) in each of the next three years. The estimated returns are presented in **Table 4**.

Table 4: Estimated returns if rates rise 100 bps each of the next three years

	Cash	XSB	XBB
Year 1	2.4%	0.3%	-2.8%
Year 2	3.4%	1.2%	-1.5%
Year 3	4.4%	2.2%	-0.3%
Annualized return	3.4%	1.2%	-1.5%
Total three-year return	10.5%	3.7%	-4.5%

Source: BlackRock Asset Management Canada, Inc.

Under this scenario, XBB gets ravaged: it loses 4.5% of its value over three years. Short-term bonds squeeze out 1.2% per year, and cash delivers relatively good performance at 3.4% annualized.

Now how would our results look over the full six-years? The answer can be found in **Table 5**. Hard as it is to believe, even in this scenario XBB is still ahead—albeit barely.

Our estimated bond returns are just ballpark numbers, and no one should take the precise dollar values seriously. But the point is that even if the broad bond market goes on to suffer three consecutive years of negative returns because of rising rates, the long-term investor would probably have still been better off ignoring all the forecasts.

Table 5: Estimated six-year returns if rates rise 100 bps in each of next three years

	Cash	XSB	XBB
Value after first three years (2009–11)	$10,467	$11,237	$12,222
Estimated total return over next three years	10.5%	3.7%	-4.5%
Final value after six years	$11,566	$11,653	$11,672

This exercise reveals the flaw in market predictions of all types. It's fine to say that "rates will rise in the future, and it's just a matter of when." But as I've tried to show, when makes all the difference. Even if you get the direction of the movement right (and you may not), you will almost certainly get the timing wrong, and the opportunity cost of a bad call can be huge.

Fixed income investors should accept that no one can predict interest rate movements, and it is expensive to try. Rather than making tactical shifts that amount to guessing, bondholders are likely do best when they choose a diversified fund with a duration appropriate to their time horizon and then hang on for the long term.

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