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Bond Strategies for Rising Interest Rates

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With bond yields falling sharply since the 2008 credit crisis and remaining near record lows, fixed income investors have been rewarded for venturing into longer-term, more risky sectors in an effort to boost income and returns. While that may remain a viable strategy for now, they should be aware of the potential risk when interest rates rise, as they did suddenly and sharply in May.

Rising rates generally result in principal declines in bond securities and that risk is exacerbated when rates are relatively low because investors have less of a yield cushion to help counter a period of rising rates. Indeed, in May, bonds generally suffered one of their worst monthly performances in years as yields spiked higher. The U.S. 10-year Treasury bond had a total return of -3.68% in May as the yield rose from 1.63% to 2.16%. The broader Barclays U.S. Aggregate Bond Index lost 1.78%—the worst monthly decline since October 2008.

The Federal Reserve's unprecedented monetary policy has driven short-term yields to virtually zero and the Fed intends to keep rates there as long as inflation remains contained and until the unemployment rate gets to 6.5%, which the Fed says could be reached as early as next year. However, Alan Levenson, the firm's chief economist, does not expect the Fed to begin raising rates until late 2014.

At the same time, there are indications that the Fed may begin to pull back on its monthly $85 billion investments in Treasury and agency mortgage-backed securities—intended to keep longer-term rates in check and bolster the economy as the labor market improves. Levenson expects the Fed to begin winding down this program of "quantitative easing" in the second half of this year, assuming monthly employment gains of about 150,000. Rates could rise further in anticipation of any change in Fed policy.

"We do not believe that a 'bond bubble' is about to burst or that investors should sell all of their fixed income investments before rates move higher," says Mike Gitlin, director of Fixed Income. "It's possible that rates could stay low for some time, but with the economy recovering and Fed officials considering when the central bank should curtail and stop its asset purchases, it is only a matter of time before interest rates rise from ultra-low levels, which will weigh on bond prices."

Investors concerned about possible additional principal declines in a rising rate environment might consider the pros and cons of these strategies for their fixed income portfolios.

How Rising Interest Rates Affect Treasury Bond Prices
(Change in principal value of bonds with $1,000 face value)

Bond Maturity	Coupon	Rates Increased by			
		25 Basis Points	50 Basis Points	75 Basis Points	100 Basis Points
2 Years	0.24%	-0.5%	-1.0%	-1.5%	-2.0%
5 Years	0.76	-1.2	-2.4	-3.7	-4.9
10 Years	1.85	-2.3	-4.5	-6.8	-9.1
30 Years	3.10	-4.9	-9.7	-14.6	-19.4

Coupons reflect yields on Treasury securities as of 3/29/13. Price changes are apart from fluctuations caused by other market conditions or factors. 100 basis points equals one percentage point. The table may not be representative of price changes for mortgage-backed securities because of prepayments. This is an illustration and does not represent expected yields or share price changes of any T. Rowe Price fund.
Source: T. Rowe Price.

(1) Focus on Shorter-Term Bonds: Investors willing to accept some principal fluctuation and relatively lower yields, and those with shorter time horizons such as two to three years, might consider reducing their portfolio's maturity structure to minimize interest rate risk.

Typically, short-term bonds are less sensitive to rising rates than longer-term bonds. For example, an intermediate-term bond fund with a duration of five years would fall about 5% if rates suddenly rose by one percentage point. A bond or bond fund with a 10-year duration would decline about 10%. (Duration measures a bond's sensitivity to interest rates. The longer the duration, the more the principal declines as rates rise.)

Of course, shorter-term bonds usually yield less than longer-term bonds, a factor that must be considered if the investor needs current income. Also, with current yields so low, even a modest rise in rates could result in a negative total return.

The "Market Performance During Periods of Rising Rates" table below shows how various bond indices have performed during prior periods of rising rates. Shorter-term bonds have withstood rising rates far better than either longer-term investment-grade corporate or Treasury bonds, which have generally performed the worst in rising rate environments.

While the historical record is worth noting, Gitlin cautions that it may not be a useful guide because today's fixed income environment is unique. "We are in a once-in-a-lifetime Fed adjustment period. What the Fed has been doing is unprecedented, and interest rates and interest rate spreads are very different now than in the past."

(2) Invest in Higher-Yielding Sectors: Bonds with relatively higher yields tend to withstand the impact of rising rates better than lower-yielding securities.

Investors willing to assume more credit risk might consider high yield or below investment-grade bonds, which typically offer higher yields than investment-grade corporates, have a shorter duration on average, and have historically performed relatively well when rates rise. This is because a rise in rates may reflect an improving economy, which is supportive for lower-quality debt issuers and, also, the higher yield can help offset principal losses.

However, junk bond yields have been near historic lows, and the yield spread relative to Treasuries and investment-grade bonds has narrowed significantly, indicating greater potential risk in this sector. In addition, high yield bonds have performed exceptionally well with an annualized return of 20% for the four-year period ended March 31, 2013, and this level of performance is unlikely to be sustained.

Companies issuing high yield bonds are not as strong financially as those with higher credit ratings, so such bonds are typically considered speculative investments.

While this sector continued to outperform high-grade bonds in the May sell-off, a rise in rates caused a total return of -0.59% for the month in the JP Morgan Domestic High Yield Index.

An alternative to high yield bonds are floating rate loans—also known as bank loans or leveraged loans—because they offer attractive yields with less interest rate risk than high yield bonds. Such loans are typically issued by below investment-grade companies, but their duration is very short because coupons reset every three months, making them less sensitive to changes in longer-term interest rates. Leveraged loans typically appreciate in a rising rate environment as long as credit quality is not adversely affected.

Moreover, bank loans are higher in the issuer capital structure and collateralized by underlying assets, which implies greater recovery rates in the event of default. However, floating rate loans are subject to significant credit, valuation, and liquidity risk. So such loans are usually considered speculative and involve a greater risk of default and price declines than higher-rated bonds.

Investors also should consider diversifying with international and emerging market bonds, in particular, which offer relatively attractive yields and improving credit quality. Of course, investing in international bonds is subject to unique risks, such as unfavorable currency exchange rates and political or economic uncertainty abroad. And investments in emerging markets are subject to abrupt and severe price declines.

Market Performance During Periods of Rising Rates

		10-Year Treasury Yield			Average Annualized Returns					
Begin Date	End Date	Start of Period	End of Period	Change Basis Points[1]	Investment-Grade Bonds	Short-Term Gov't. Credit	High Yield Bonds	Long-Term Treasury Bonds	Mortgage-Backed Securities	Treasury Bills
4/30/83	6/30/84	10.27%	13.84%	357	-2.89%	6.78%	-1.07%	-8.30%	-0.63%	10.09%
8/31/86	9/30/87	6.92	9.59	267	0.01	3.67	5.60	-10.48	2.31	5.75
10/31/93	11/30/94	5.43	7.91	248	-4.94	0.73	-0.05	-10.28	-1.66	3.96
9/30/98	1/31/00	4.42	6.67	225	-1.29	2.97	3.07	-6.32	1.33	4.76
5/30/03	6/30/06	3.37	5.14	177	1.83	1.66	9.39	1.12	2.87	2.27

Past performance cannot guarantee future results.

[1] 100 basis points equals one percentage point. Treasury rates are 10-Year Constant Maturity Treasury yield. Short-Term Government Credit is Barclays 1-3 Year Government/Credit Index. High Yield Bonds for the 1983-84 period is from Ibbotson Associates High-Yield Index; for other periods it is Barclays US High Yield Index. Long-Term Treasury Bonds is the Barclays US Treasury Long Index. Investment Grade Bonds and Mortgaged-Backed Securities are Barclays' indices. Treasury Bills are Citigroup 3-Month Treasury Bill Index. Past performance cannot guarantee future results.
Sources: T. Rowe Price, Barclays, Ibbotson Associates, and Citigroup.

(3) Stay Diversified and Review Your Fixed Income Portfolio: Gitlin suggests that investors "should be cautious about making any sudden or dramatic shifts in their portfolios into or out of bonds, stocks, or any asset class."

He also reminds investors that even through a period of rising rates, bonds continue to play an important role, generating income on a regular basis that can help offset losses or augment positive returns and providing portfolio diversification since fixed income securities are typically less volatile than equities.

At the same time, however, Gitlin notes that investors have flooded into fixed income securities in recent years while fleeing equities. As a result, "investors should review their overall portfolio strategy to make sure they are appropriately diversified consistent with their risk tolerance and their financial goals."

"If their exposure to fixed income has become greater than they feel comfortable with in the current environment, they might consider making modest adjustments gradually, especially if they have a lot of exposure to longer-term bonds."

Investors with a long-term time horizon, however, who invest in bonds mainly for their diversification benefits and to reduce their risk exposure to equities, could be better off over time by simply looking past interest rate moves in the shorter run.

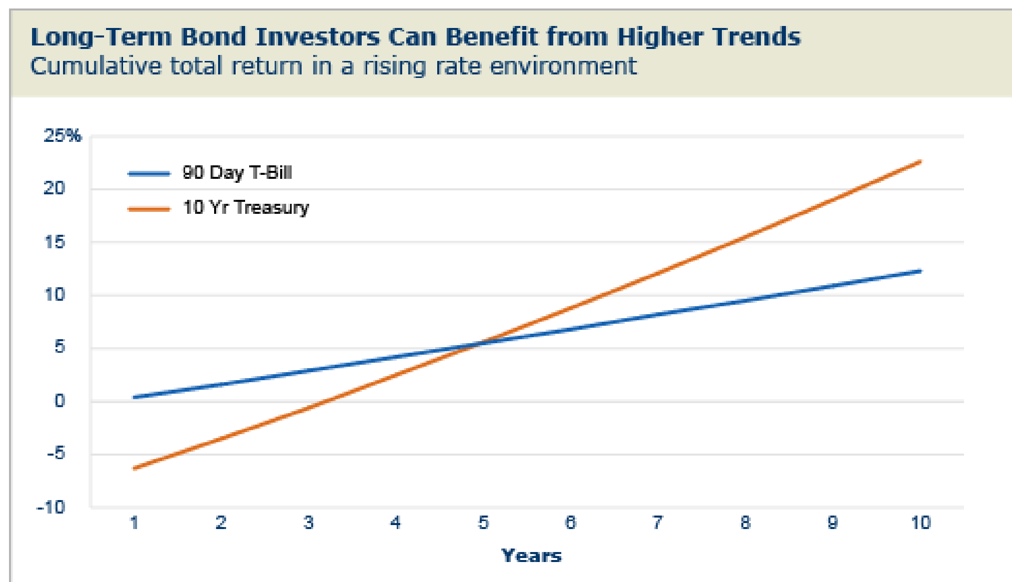
Although bond investors may incur some principal erosion as rates rise, the interest payments can be reinvested at the higher yields that become available. Over time, this can prove more rewarding than investing in short-term instruments that offer more principal protection but lower yields.

For example, the line graph shows the returns over time for a 10-year Treasury note with a 2% current yield and a 90-day Treasury bill yielding 0.25%, assuming rates for both rise by one percentage point gradually over the next year and then remain at those levels.

Initially, the rising rates cause a decline in principal value for the note and a negative total return, while the Treasury bill incurs no loss of principal and benefits from the rise in rates. But after a few years, the note's loss of principal is more than offset by the additional income earned, assuming monthly coupon payments are reinvested at the higher yields that become available.

In this example, the compound total return for both investments would be nearly the same after five years. Over 10 years, however, the total return for the 10-year Treasury note would be 22.6% compared with 12.6% for the Treasury bill.

Of course, the Treasury note investor had to remain invested through several years of losses before the compounding of the higher yields overcame this initial setback. Also, in this example, if short-term rates rose more than long-term rates, it would take longer for the note to outperform, and diversification cannot assure a profit or protect against loss in a declining market.



While T. Rowe Price bond managers expect rates to move higher over the next year, Rich Whitney, the firm's director of Asset Allocation, adds, "There is certainly no guarantee of that. Rates could hang out at these levels a long time and could even go lower. If the risks around the world bear out, we could see another flight to quality and a lot of demand for safer investments [driving rates down] even if they yield a negative real return."

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