



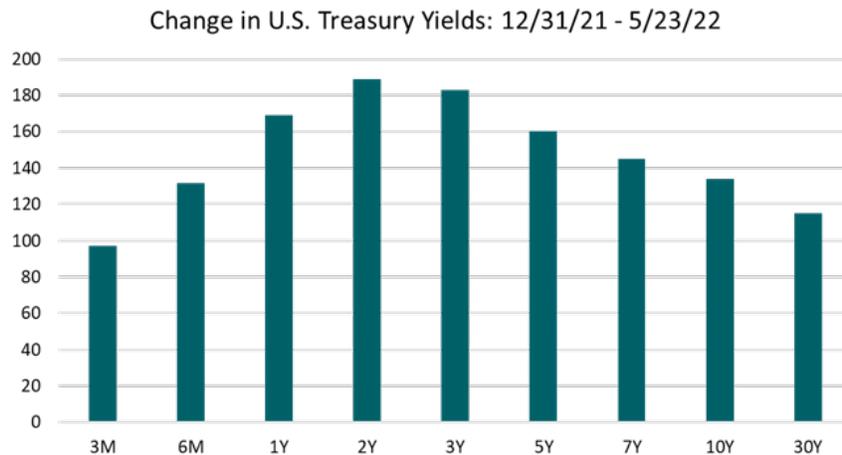
Higher Yields, Higher Returns:

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The combination of persistently high inflation and the resulting changes in Federal Reserve policy has driven a sharp increase in interest rates.



Source: Bloomberg, 5.23.22

The inverse relationship between bond prices and yields has resulted in historic drawdowns for bond markets. The broad-based Bloomberg U.S. Aggregate index has declined by over 9.5%, its worst start to a year since its inception in 1973.



Source: Bloomberg, 5.23.22

However, while price declines are unwelcome in the near-term, higher interest rates are very beneficial to an investor’s total return over time. This is because income from coupon payments and maturities can be reinvested at higher yields meaning a bond portfolio would generate more income than it would have if rates had remained unchanged. The simple example below highlights this point.

Suppose an investor owns a laddered bond portfolio that has a 2% yield-to-maturity and an interest rate sensitivity – or duration – of 5 years. Duration is an approximate measure of the percentage change in price for a 100 basis point (bps) change in yield. For a bond portfolio with a duration of 5 years, a 1% increase in rates would result in a 5% decline in price (conversely, a 1% decline in rates would result in a 5% increase in price).

The tables below outline three scenarios:

- A: Interest rates remain flat at 2% for ten years;
- B: Interest rates move 100 bps (1%) higher in the first year;
- C: Interest rates move 200 bps (2%) higher in the first year.

In scenario A, the price of the bond would remain unchanged over time and the investor would realize a 2.0% annualized return.

In scenario B, the price of the bond would decline by 5% in the first year. The total return for the year would be negative 2% (-5% + 2.0% + 1.0% = price decline + original yield of 2% + addition 1% of yield). The total yield of the hypothetical portfolio increases to 3% per year following the move higher in interest rates.

In scenario C, the price of the bond would decline by 10% in the first year. The total return for the year would be negative 6% (-10% + 2.0% + 2.0% = price decline + original yield of 2% + addition 2% of yield). The total yield of the hypothetical portfolio increases to 4% per year following the move higher in interest rates.

		Estimated Annual Returns									
Scenario	Change in yield scenarios	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
A	No Change	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
B	+100 bps instantaneously	-2.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
C	+200 bps instantaneously	-6.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%

		Estimated Annualized Cumulative Returns									
Scenario	Change in yield scenarios	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
A	No Change	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
B	+100 bps instantaneously	-2.0%	0.5%	1.3%	1.7%	2.0%	2.1%	2.3%	2.4%	2.4%	2.5%
C	+200 bps instantaneously	-6.0%	-1.1%	0.6%	1.4%	1.9%	2.3%	2.5%	2.7%	2.8%	3.0%

Despite the initial price declines in scenarios B and C, an investor is back to a 2% annualized cumulative return after 5 years.

A few observations:

- The amount of time until an investor breaks even with a scenario where interest rates do not change is tied directly to the duration of the portfolio.
- This offsetting effect works regardless of the size of the “rate shock”.
- If an investor’s time horizon is longer than the initial duration of the bond portfolio, then they will achieve a better total return following a move higher in rates than if rates had stayed constant since the increase in yield more than offsets the negative price effect.

In summary, although it may be unsettling to see negative returns in fixed income portfolios as rates have increased, these simplistic, hypothetical, scenarios illustrate the longer-term benefit to an investor’s total return of higher interest rates.

*Please note this is an example based on a hypothetical portfolio and excludes certain subtleties in an effort to simplify.

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