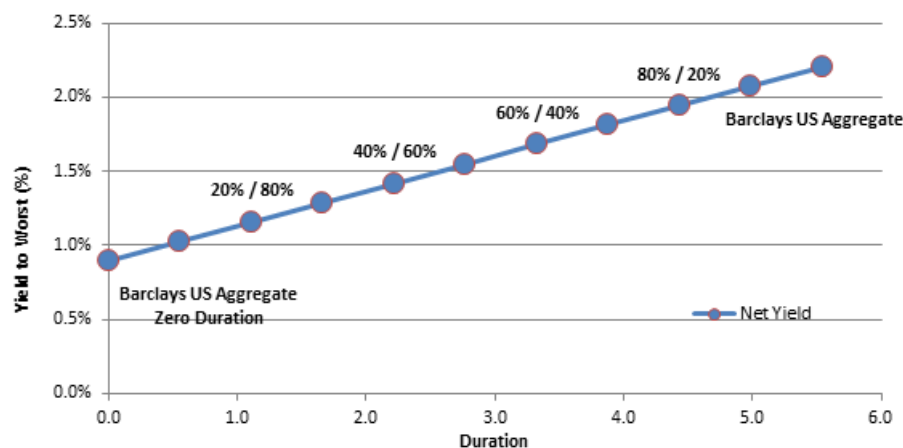


# HOW ZERO AND NEGATIVE DURATION STRATEGIES CAN ENHANCE ADVISOR FLEXIBILITY

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With the [Federal Reserve \(Fed\)](#) about to lose its patience for a [zero interest rate policy](#) and the market possibly largely unprepared for this shift, it is important for investors to develop a plan for their portfolios when [interest rates](#) inevitably rise. In our view, zero and negative duration strategies provide notable alternatives that portfolio managers should consider as a way to refine a portfolio's sensitivity to changes in interest rates. In previous tightening cycles, many investors have reduced their [interest rate risk](#) by: 1) increasing allocations to cash; 2) investing in shorter-maturity securities; or 3) swapping [fixed rate coupon bonds](#) for [floating rate notes](#). However, we find the current market environment particularly problematic, given that interest rates are starting to rise from some of the lowest levels in history. Cash currently entails a very large [yield](#) sacrifice. Short-maturity securities usually involve less yield sacrifice but are typically at maturities that are very sensitive to changes in Fed policy. Floating rate securities can offer tradeoffs somewhere between the two other options, but these will likely depend nearly exclusively on changes in short-term rates. However, the biggest issue we see with these approaches is that they all represent a dramatic shift from the traditional composition and exposure of the starting portfolio. As an alternative, institutional portfolio managers often source the [liquidity](#) of the [U.S. Treasury futures](#) market to adjust the interest rate exposure of their portfolios. With many advisors facing operational obstacles in using Treasury futures across their accounts, exchange-traded funds (ETFs) employing zero and negative [duration](#) strategies can enable these investors to pursue similar objectives and exposures. Through our collaboration with Barclays and Bank of America Merrill Lynch, [WisdomTree has packaged](#) zero<sup>1</sup> and negative<sup>2</sup> duration strategies on common core fixed-income strategies that maintain exposure to traditional holdings but seek to [hedge](#) interest rate risk. In figure 1, we show the impact of blending exposures to the [Barclays U.S. Aggregate Bond Index \(Agg\)](#) and the [Barclays Rate Hedged U.S. Aggregate Index, Zero Duration](#). **Figure 1: Barclays Agg: A Blended Approach to Interest Rate Risk Management Core Bond Portfolio Blends: [Yield to Worst](#) vs. Duration**



Agg Exposure	Zero Duration Agg Exposure	Net Yield	Duration	Cost of Hedging	Reduction in Duration
100%	0%	2.20%	5.54		
80%	20%	1.94%	4.43	0.26%	-20%
60%	40%	1.68%	3.32	0.52%	-40%
40%	60%	1.42%	2.22	0.78%	-60%
20%	80%	1.16%	1.11	1.04%	-80%
0%	100%	0.90%	0.00	1.30%	-100%

Sources: Barclays, WisdomTree, 3/13/15.

For illustrative purposes only. Past performance is not indicative of future results. You cannot invest directly in an index.

For definitions of terms in the chart, visit our [glossary](#). As the chart shows, blending a 20% position in a zero duration strategy into a traditional [long-only](#) portfolio<sup>3</sup> would result in a portfolio with similar characteristics but a 20% reduction in sensitivity to changes in interest rates. This comes at a cost of approximately 26 [basis points \(bps\)](#) per year.<sup>4</sup> Investors can think about the zero duration and long-only strategies as a continuum. On one side, there is full interest rate risk and income potential. On the other side, zero duration, but reduced income potential due to the costs of hedging. However, since the strategy hedges its exposure via U.S. Treasury futures, the income earned on the long bond portion of the portfolio can be distributed as income. The cost of the hedge drips out of the market value of the strategy. Hypothetically, if interest rates stay static over the course of the year, the hedged strategy would underperform the unhedged strategy by the cost of the hedge. Conversely, if interest rates rise, the value of the hedge could help offset losses from the long bond portfolio. For an advisor concerned about rising rates, this blended approach could provide increased flexibility in managing risk versus reward across a portfolio. **Changes in Rates Driving Volatility and Returns** According to Barclays Research, changes in interest rates have accounted for 88% of the overall volatility of the Barclays U.S. Aggregate Index over the last ten years.<sup>5</sup> While this volatility ultimately generated positive returns for investors as interest rates fell, what happens when rates begin to rise? To manage a portfolio's interest rate risk, we believe that negative duration strategies can help investors navigate the upcoming shift in Fed policy. Negative duration strategies will likely have a more significant impact on overall duration, but at a higher cost from hedging via longer-maturity, higher-yielding securities. Additionally, investors may also have greater sensitivity to shifts in the shape of the [yield curve](#), due to the mismatch between the maturity of the holdings and the hedges. In figure 2, we re-create the analysis from figure 1 but blend exposure to the [Barclays Rate Hedged U.S. Aggregate Index, Negative Five Duration](#).

#### Figure 2: Blending Negative Duration into Traditional Portfolios Core Bond Portfolio Blends: Yield to Worst vs. Duration

When viewed as a complement to an unhedged portfolio, each 20% allocation to the negative duration strategy could generate a reduction of over two years of duration, but sacrifice 40 bps in yield relative to the Agg. A 48% allocation to the negative duration strategy could bring the duration of the overall portfolio to zero and retain a net yield of 1.05% (48% of the Agg's yield). While this portfolio has a similar duration profile to the zero duration strategy, the yield is marginally higher in order to compensate investors for the potential hedge mismatch and shifts in the yield curve. In our view, zero and negative duration strategies offer investors a more intuitive way to manage interest rate risk in their portfolio relative to traditional

approaches. Given that we may be heading into a particularly uncertain period in markets, we believe that investors should consider reducing interest rate risk in advance of any change in Fed policy. In our view, interest-rate-hedged strategies allow investors to maintain exposure to fixed income sectors they currently hold while reducing the risk of rising interest rates.

<sup>1</sup>These are: Barclays Rate Hedged U.S. Aggregate Bond Index, Zero Duration and BofA Merrill Lynch 0-5 Year U.S. High Yield Constrained, Zero Duration Index. <sup>2</sup>These are: Barclays Rate Hedged U.S. Aggregate Bond Index, Negative Five Duration and BofA Merrill Lynch 0-5 Year U.S. High Yield Constrained, Negative Seven Duration Index. <sup>3</sup>As proxied by the Barclays U.S. Aggregate Index. <sup>4</sup>Source: Barclays, as of 3/13/15. <sup>5</sup>Source: Barclays, as of 2/28/15.

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## DEFINITIONS

**Federal Reserve** : The Federal Reserve System is the central banking system of the United States.

**Zero-bound policy rates** : central bank policy rates close to the 0% level.

**Real interest rate** : Interest rate accounting for the impact of inflation. From the nominal interest rate, which does not account for the impact of inflation, the rate of inflation is subtracted to get to the real interest rate.

**Interest rate risk** : The risk that an investment's value will decline due to an increase in interest rates.

**Fixed rate coupon bonds** : debt securities maturing in more than one year which pay a fixed rate of interest.

**Floating Rate Treasury Note** : a debt instrument issued by the U.S. government whose coupon payments are linked to the 13-week Treasury bill auction rate.

**Yield** : The income return on an investment. Refers to the interest or dividends received from a security that is typically expressed annually as a percentage of the market or face value.

**Maturity** : The amount of time until a loan is repaid.

**Liquidity** : The degree to which an asset or security can be bought or sold in the market without affecting the asset's price. Liquidity is characterized by a high level of trading activity. Assets that can be easily bought or sold are known as liquid assets.

**U.S. Treasury futures contract** : A standardized contract to buy or sell a Treasury security on a specified date at a predetermined price.

**Hedge** : Making an investment to reduce the risk of adverse price movements in an asset. Normally, a hedge consists of taking an offsetting position in a related security, such as a futures contract.

**Barclays U.S. Aggregate Bond Index, 1-3 Year** : This index is the 1-3 Yr component of the U.S. Aggregate index.

**Barclays Rate Hedged U.S. Aggregate Index, Zero Duration** : Combines long positions in the Barclays U.S. Aggregate Bond Index with short positions in U.S. Treasury Bonds to provide a duration exposure of 0 years. Market values of long and short positions are rebalanced at month-end.

**Yield to worst** : The rate of return generated assuming a bond is redeemed by the issuer on the least desirable date for the investor.

**Long-only bond strategy** : a traditional approach to fixed income portfolio management.

**Basis point** : 1/100th of 1 percent.

**Volatility** : A measure of the dispersion of actual returns around a particular average level.

**Yield curve** : Graphical Depiction of interest rates on government bonds, with the current yield on the vertical axis and the years to maturity on the horizontal axis.

**Barclays Rate Hedged U.S. Aggregate Index, Negative Five Duration** : Combines long positions in the Barclays U.S. Aggregate Bond Index with short positions in U.S. Treasury Bonds to provide a duration exposure of -5 years. Market values of long and short positions are rebalanced at month-end.