How to hedge safe haven duration risk with ultra-long short strategies

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In articulating its exit-plan from the QE programme in October, the ECB delivered a clear message: the eurozone economic recovery is self-sustaining and no longer in need of exceptionally loose stimulus. Deflationary risks are increasingly remote.

As a result, a precedent may have been set for the eurozone's safe haven assets to come under pressure in the near future, in the same way that US Treasuries were affected during the Fed's taper talk in 2013. Most at risk are German Bunds, as aside from having benefited disproportionately from the vast quantities of fixed-income securities purchased by the ECB, their yields remain well below inflation. For instance, it was as recently as October 2016, that the yield on 10Y Bunds broke out of negative territory. Investors mandated with targeting income in Europe's high-grade bond market have been forced to take significant duration risk to do so.

Those investors that have allocated to long-dated high-grade debt in Europe in the search for yield look particularly vulnerable against a backdrop of inflationary pressures building from structurally-led demand forces underpinning the eurozone recovery. These emerging pressures on consumer prices look stickier and longer lasting than the short-lived supply shocks resulting from volatile euro and commodity price pass-through effects.

If now is the time to consider hedging the downside risks to eurozone long-dated fixed-income portfolios, then leveraged short ETPs tracking ultra-long German Bunds can serve as capital efficient hedging tools for investors seeking to protect their high grade, high-duration portfolios from these risks.

Leveraged short ETPs are simple yet effective hedging instruments and in this article we explore their usefulness in greater detail using the concept of beta. Leveraged short ETPs are instruments that magnify the performance of their underlying exposure by a leverage factor, whilst limiting downside risk to the initial investment.

Beta hedging factors to consider

The capital required to set up a hedge can be approximated by beta, or the sensitivity of the leveraged short ETP to the long investment. With beta hedging, the following factors should be considered:

1) Leverage factor

The higher the short ETP's leverage factor, the higher its beta to the underlying index, and to the fixed-income portfolio benchmarked to it. For instance, if the underlying index (e.g. 10Y German Bunds) falls 0.5% in one day, a 3x short ETP and a 5x short ETP tracking the underlying index will rise 1.5% and 2.5% respectively. Higher leverage factors can increase the hedge instrument's capital efficiency, since less initial capital is required to set up the hedge. Put simply, if an investment worth $100 is hedged using a 3x short ETP, the initial capital required to do so is 1/3rd of the investment, or $33.3. If using a 5x short ETP, the required initial amount would fall to 1/5th of the investment, or $20. This example ignores compounding and rebalancing.

2) Holding period

The effect of daily compounding on the cumulative returns of leveraged short ETPs can, in the case of directional, trending markets, magnify their performance over time. Similarly, in directionless and volatile markets, performance can be eroded. The former implies that the beta of the leveraged short ETP to the fixed-income investment can be greater than the leverage factor, the latter implies that the beta can be less than the leverage factor. As a result, when leveraged short ETPs are used as hedge overlays on fixed-income investments, the hedged position can veer off the initial set up, or targeted hedged position, if held over a period of weeks or months. Hence, investors must monitor and rebalance their hedged position to prevent their investments from progressively becoming over-or under-hedged. Rebalancing the hedged position will not only control the hedge ratio, but will also work to maintain beta.

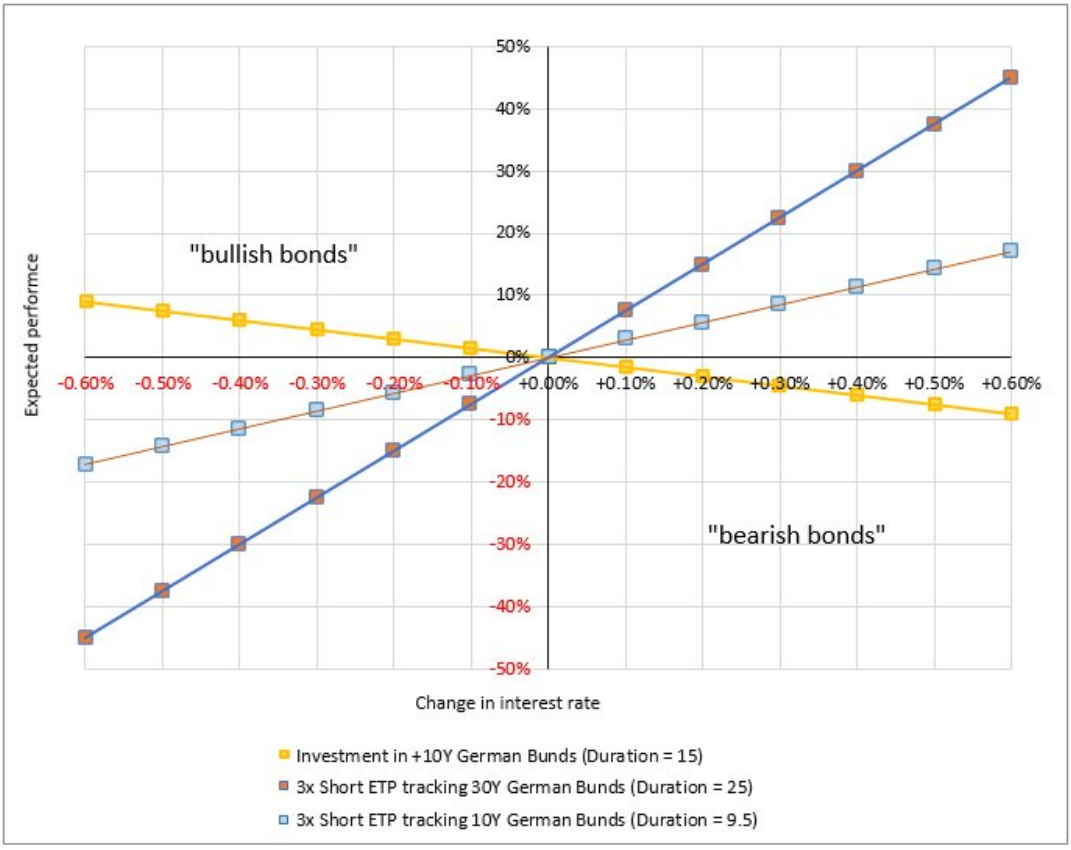
3) Duration risk

Duration approximates a fixed-income portfolio's sensitivity to interest rate changes. Efficiently hedging interest rate risk with leveraged short ETPs requires the underlying index's duration to match the portfolio's duration. Because of the short ETP's inverse exposure to the underlying fixed-income index, the short ETP's duration will be negative and will therefore offset the interest rate risk of the portfolio, acting as a hedge.

Leveraged short ETPs tracking fixed income are highly sensitive to small changes in interest rates. Using the concept of duration in estimating sensitivity, if interest rates rise by 20 bps, the value of a hypothetical portfolio benchmarked to a +10Y German Bund index with a duration of 15 may fall by approximately 3% (0.20% x 15)[1], as shown by the red line in Chart 1.

For a leveraged short ETP, the sensitivity to interest rate changes increases by a multiple approximately equal to its leverage factor. Shown by the blue lines, for a 20 bps rise in interest rates, a 3x short ETP with 10Y German Bunds as the underlying exposure and a duration of 9.5 could rise approximately 5.7% (0.20% x 9.5 x -3). A 3x short ETP with 30Y Bunds as the underlying exposure and a duration of 25 could rise approximately 15% (0.20% x 25 x -3).

Chart 1. How leverage and duration 'gear-up' performance for short ETPs tracking fixed income. Example shows the sensitivity of short ETPs' vs a fixed-income investment to different interest rate scenarios



Source: WisdomTree. Expected performance is only indicative and may not reflect actual returns.

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1) Duration is only accurate for small changes in interest rates. It conceptually understates the impact fundamental variables affecting interest rates have on bond prices.

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