Treasuries Still an Effective Hedge for Credit Risk

30-year bonds have room to appreciate in a major risk downturn.

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KEY INSIGHTS

- We believe that U.S. Treasuries are still an effective diversifier and hedge against major selling pressure on risk assets such as corporate bonds.
- We favor maintaining exposure to 30-year Treasuries as a form of downside risk management against a steep sell-off that causes credit spreads to widen quickly.
- Our quantitative research team has examined the relationship between the level of credit spreads and the appropriate size of a Treasury hedge.

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There has recently been a fervent debate among investors and in the financial media about the efficacy of U.S. Treasuries as a risk hedge in the current environment of historically low yields. We believe that U.S. Treasuries are still an effective diversifier and hedge against major selling pressure on risk assets such as corporate bonds and equities, although the utility of Treasuries as a hedge may be more limited in a modest downturn in risk markets. We favor maintaining exposure to 30-year Treasuries as a form of downside risk management against a steep sell-off that causes credit spreads[1] to widen quickly along the lines of the downturn triggered by the onset of the coronavirus pandemic in March.

"Safe-Haven" Status for Treasuries

U.S. government debt benefits from its "safe-haven" status in times of risk aversion, so Treasuries have historically provided a solid hedge against selling pressure on risk assets. When Standard & Poor's cut its credit rating on the U.S. government to AA+ from AAA in 2011, stocks sold off and credit spreads widened, while Treasuries rallied—the opposite of what many would have expected from downgraded debt.

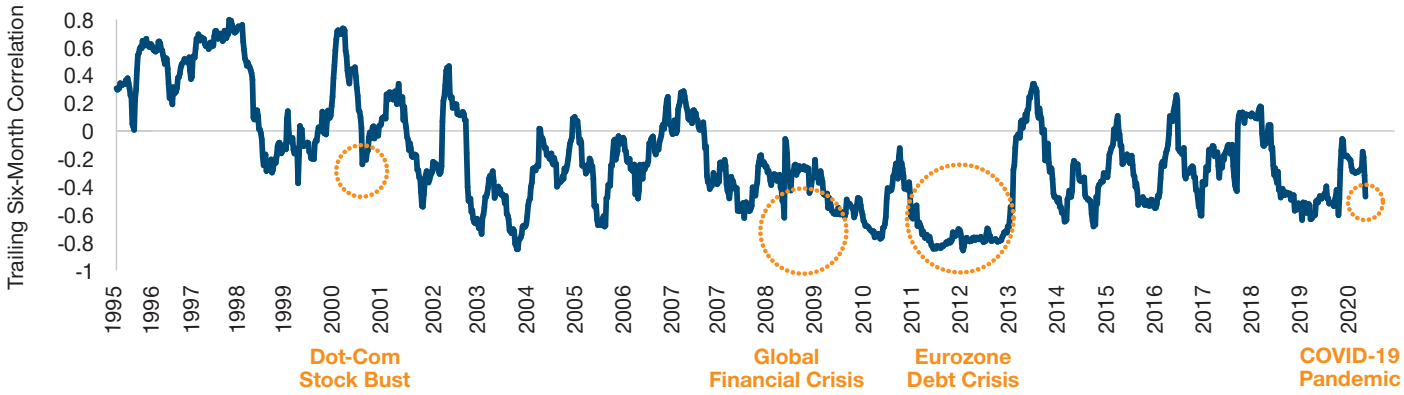
In addition, Treasuries benefit from the U.S. dollar's status as the world's reserve currency, supporting demand over the long term. Treasury bonds also provide regular income. This gives them an advantage over a hedging instrument such as gold that does not pay interest.

High-quality government bonds from other countries have been useful in the past as a credit risk hedge. However, the long-standing, aggressive quantitative easing programs of the European Central Bank and the Bank of Japan have limited

[1] Credit spreads measure the additional yield that investors demand for holding a bond with credit risk over a similar-maturity, high-quality government security.

Historical Negative Correlations

(Fig. 1) Correlations between Treasuries and U.S. stocks



As of September 18, 2020.
Sources: Bloomberg Finance L.P. and T. Rowe Price.
Treasury returns represented by the S&P 30-Year U.S. Treasury Bond Futures Total Return Index (weekly data), U.S. stocks represented by S&P 500 Index (weekly data). See Additional Disclosures. Correlations are over the trailing 6-month period; correlation calculations by T. Rowe Price.

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the amount of German and Japanese government debt available to investors and driven yields below zero. While the low yields on shorter-maturity Treasuries have limited carry and room for further appreciation, longer-term Treasuries still have an advantage over high-quality non-U.S. government debt in terms of income and appreciation potential.

Correlation and Price Volatility Are Important Considerations

Relatively low yields may limit the effectiveness of Treasuries as a hedge in a modest downturn in risk sentiment, but we expect the historical negative correlation[2] between Treasuries and risk assets in major risk-off environments to continue.

While clearly important, correlation is not the only metric that needs to be considered when evaluating the efficacy of hedges. Price volatility is an additional major consideration. A hedge should be very reactive to market stress—it should have ample volatility. When it comes to government bonds, the product of two factors—duration[3] and yield volatility—can adequately capture price volatility. Both factors are positively correlated to overall price volatility (the higher, the more volatile). By definition, 30-year Treasuries have a high duration. And while it's true that the Federal Reserve's various policy responses to the Covid-19 crisis have dampened yield volatility for most maturities, the 30-year Treasury's yield volatility has remained more elevated than usual.

30-Year Treasury Still an Effective Hedge

For this reason, in addition to leveraging the insights gleaned from the work of our fixed income quant team, we have adapted our strategies for hedging with Treasuries to focus on 30-year bonds, which have room to appreciate meaningfully if credit spreads rapidly widen. As an example, with the 30-year yielding about 1.45% in mid-September, a rally creating a 100 basis point (bp)[4]

[2] Correlation measures how one asset class, style, or individual group may be related to another. A perfect positive correlation means that the correlation coefficient is exactly 1. This implies that as one security moves, either up or down, the other security moves in lockstep, in the same direction. A perfect negative correlation means that two assets move in opposite directions, while a zero correlation implies no relationship at all.
[3] Duration measures a bond's sensitivity to changes in interest rates.
[4] A basis point is 0.01 percentage points.

yield decrease—which is possible should we experience another severe sell-off in risk assets—could potentially provide a return well over 20%, generating a meaningful offset to losses on credit exposure.

Quantitative Analysis Considers Income, Price Appreciation Potential, and Correlation

This analysis incorporates the income component of the Treasury hedge as well as the potential for price appreciation over time as a result of a positively sloped yield curve, known as "roll down" return (for example, after a year, a 30-year bond would become a 29-year security at a lower yield and higher price). Most importantly, it considers the empirical correlation between the Treasury position and the portfolio's credit exposure.

An ideal portfolio construction would combine assets that have a modestly negative correlation as opposed to exactly -1, which would indicate that the changes in value of the Treasury security and the credit position perfectly offset each other by moving the same amount in opposite directions. A correlation between 0 and -1 would potentially help dampen downside volatility in the portfolio as credit spreads widen while maintaining upside potential in a credit rally. Correlations between Treasuries and risk assets have recently been in this modestly negative range.

Some observers are concerned that correlations between Treasuries and risk assets may turn positive in today's low-yield environment. However, history suggests that Fed policy tightening, not low yields alone, is often the trigger for short periods of positive correlation. As shown in the chart, Fed tightening in 2006–2007 and 2017–2018, as well as the "taper tantrum" in 2014 (when the central bank prepared the market for slowing asset purchases), preceded times of positive correlations between Treasuries and risk assets. We expect the Fed to maintain its extremely accommodative monetary policy for an extended period, giving us confidence that correlations will stay negative.

Credit Spreads Factor Into Hedge Duration

Our quantitative research team has also examined the relationship between the level of credit spreads and the appropriate size of a Treasury hedge, which allows us to dynamically manage the portfolio's overall risk profile in different parts of the credit cycle. In an environment of persistent narrower spreads, which is typical during an economic expansion, corporate credit tends to experience less credit risk as well as lower spread volatility. Therefore, the optimal risk hedge position should be sized to have a lower duration contribution than when credit spreads are wide. Given the typically strong liquidity of Treasury bonds, we can nimbly adjust the sizes of the Treasury hedges in our taxable bond portfolios in response to rapidly changing credit spreads.

Duration Risk if Rates Increase

The flip side of the beneficial hedging properties of 30-year Treasuries in a credit sell-off is their likely losses if risk appetite strengthens. A meaningful increase in the 30-year Treasury yield would generate a sizable loss, weighing heavily on the gains from the credit exposure in the portfolio. While we don't think this scenario is likely in the near term, given subdued inflation pressures, we collaborate closely with our quantitative analysis team when determining the appropriate size of Treasury hedges in relation to the portfolio's credit risk level.

WHAT WE'RE WATCHING NEXT

We are closely monitoring the effects of the Fed's new average inflation targeting framework for monetary policy, which is likely to allow the central bank to keep its benchmark federal funds lending rate at its current near-zero level for several years. We expect this to keep short- and intermediate-term Treasury yields anchored at low levels for the foreseeable future, with the 30-year yield fluctuating to some degree in response to growth and inflation outlooks.

Key Risks—Debt securities could suffer an adverse change in financial condition due to ratings downgrade or default, which may affect the value of an investment. Fixed income securities are subject to credit risk, liquidity risk, call risk, and interest rate risk. As interest rates rise, bond prices generally fall.

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