November 2018

Tail Risk Report

An outlook on asset classes based on potential tail gains and losses

As of 10/31/18

For Professional Investors Only | For Promotional Purposes

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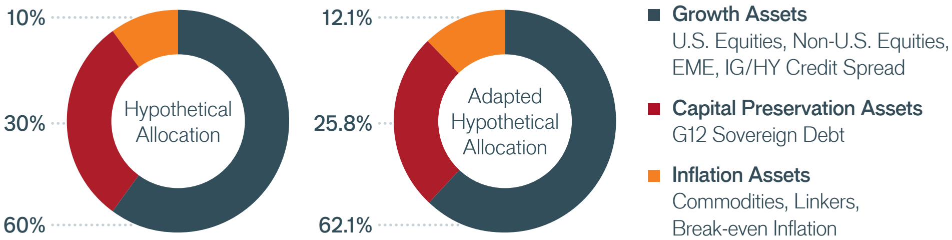
We see softness ahead ...

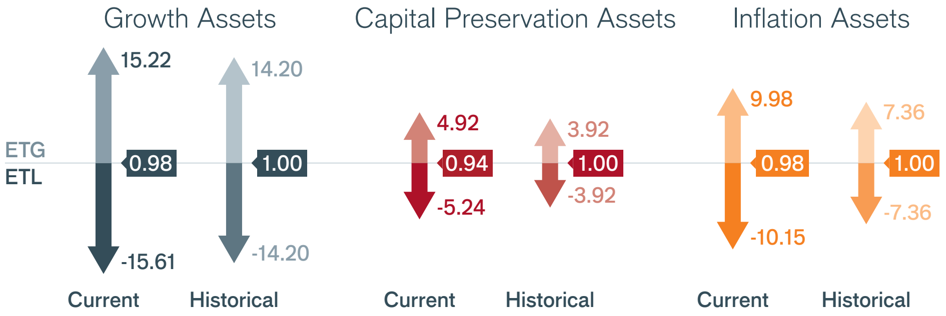
While the attractiveness of growth assets has remained relatively stable year-to-date, we are beginning to witness some softness. Growth assets' expected tail loss continues to rise and the ratio of expected tail gain-to-loss ratio has fallen to below-average levels. While the shift is somewhat concerning, the downside risk to stocks today, while above the long-term average, is still much lower than what one would expect in a recessionary environment when drawdowns do not self-correct. Rather, the expected tail loss levels are moving towards their longer-term averages and the so-called "great moderation" may be a thing of the past.

Impact of Tail Risk Signals on Hypothetical Asset Allocation

Using proprietary technology, Janus Henderson's Adaptive Multi-Asset Solutions Team derives tail risk signals from options market prices on three broad asset classes. Given our current estimates of tail risks, we illustrate how those signals would impact a 60/30/10 allocation.



Current Tail-Based Sharpe Ratios (ETG*/ETL*)



We arrive at our monthly outlook using options market prices to infer expected tail gains (ETG) and expected tail losses (ETL) for each asset class. The ratio of these two (ETG/ETL) provides signals about the risk-adjusted attractiveness of each asset class. We view this ratio as a "Tail-Based Sharpe Ratio." These tables summarize the current Tail-Based Sharpe Ratios of three broad asset classes.

Beginning in August 2016, the "Tail-Based Sharpe Ratios" have been normalized to 1.00 to allow for easier comparison across the three macroeconomic asset categories.
*We define ETG and ETL as the 1-in-10 expected best and worst two-month return for an asset class.

Tail Risk Report (as of 10/31/18)

We have been steadfast in reiterating time and time again that real rates represent a key driver of risk today. Increasing real rates put pressure on all assets, and how much pressure they exert is a function of how fast they rise. We do not observe signs of rapidly ascending real rates, as both equities and bonds exhibit expected tail loss levels within normal ranges. But, we do see real rates continuing to rise, albeit gradually, with the corresponding headwind in store. Should real rates start moving further towards, and beyond, normalized U.S. real GDP growth rate, which we believe is in the range of 150 to 200 basis points, this headwind could turn into a squall. And a potential catalyst for this is inflation, as a shock in inflation will force the Fed to tighten faster.

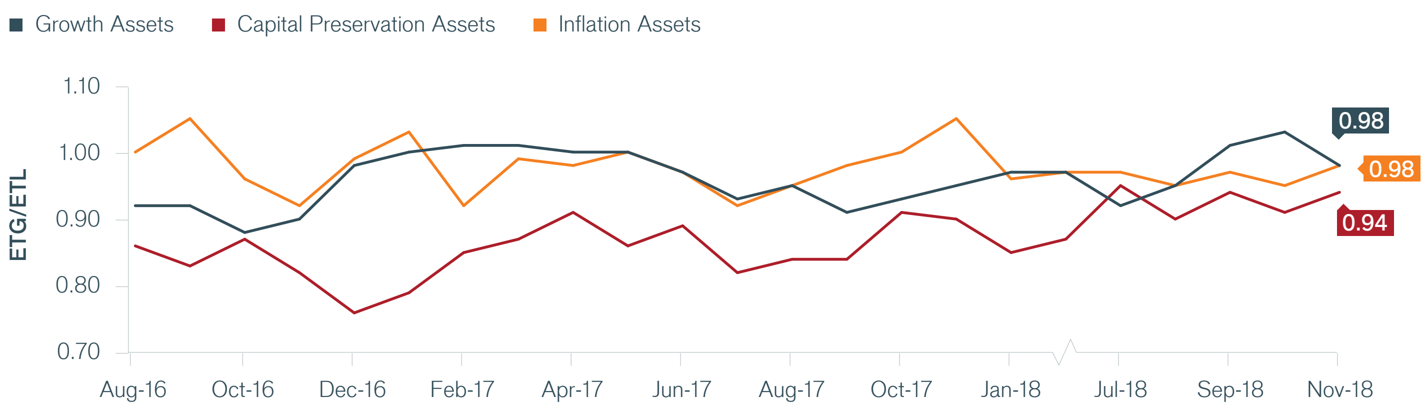
We are keeping our eyes on real rates and inflation and, of course, options prices – all of which are good barometers to help understand how close we are to a "tipping" point. The outcome of the mid-term election may also play a role in the trajectory of U.S. real rates. If the outcome of the election poses a greater hurdle for President Trump and his administration to pass a second round of tax cuts, then inflation expectations should fall and with it rate hike expectations, which will dampen upward movement in real rates.

In addition to our outlook on broad asset classes, our Adaptive Multi-Asset Solutions Team relies on the options market to provide insights into specific equity, fixed income and commodity markets. The following developments have recently caught our attention:

- **Growth:** U.S. equity attractiveness has sharply risen post the October sell-off, and as a result, U.S. stocks are now the most attractive region globally compared to last month when non-U.S. equities looked more attractive. Further, both the upside and downside risks to equities increased sharply from last month. We are not overly concerned by the speed at which this happened as (1) we believe that the uncertainty clouding the U.S. mid-term elections drove this, particularly given the tail events that have hit the political arena over the recent years and (2) the risk levels are not flashing a "recessionary/structural" type of drawdown that does not self-correct.
- **Capital Preservation:** Signals continue to point to a rising rate environment globally.
- **Inflation Assets:** The euro continues to show weakness and the yen strength. Natural gas looks particularly attractive ahead of upcoming colder months, while crude oil does not.

Historical Monthly Tail-Based Sharpe Ratios

(Expected Tail Gain* / Expected Tail Loss*)



Data was not calculated for all months.

For more information, please visit **janushenderson.com.**

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