

MACROCOSM

Equity Risk Premiumania!

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The bull cases and bear cases based on the ERP are equally wrong.

We have received much comment from clients on last week's report about the equity risk premium (see ["What the ERP Isn't Telling Us"](#) May 15, 2013). It continues to be discussed in the media, with even the [New York Times](#) citing the [New York Fed's report](#) to which we linked last week. This report will dig deeper into the current position of the ERP, and also address the critique that its meaning is distorted now by artificially low interest rates.

- The first problem with the present *bull* case based on the ERP is that it uses a time period that is neither long-term enough nor short-term enough.
- The mean typically cited is arbitrary -- the New York Fed's work, for example, starts in 1962. That sample produces a mean

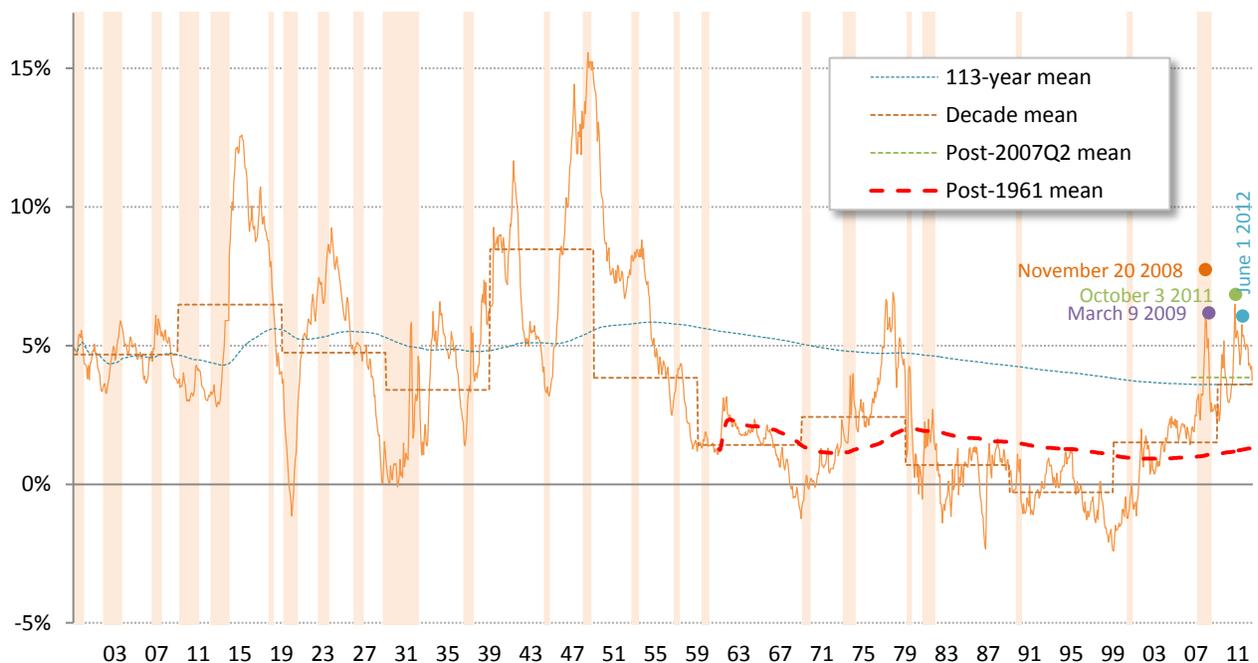
Update to strategic view

US STOCKS, US BONDS:
 The equity risk premium is the same whether you use our "crisis-era mean" or the ultra-long-term mean from 1900. We reject the bull case that stocks are very cheap, which relies on an arbitrary mean that puts excessive weight on the go-go years of the 1960s...

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— Monthly S&P 500 equity risk premium from 1900 ■ Recession

Consensus forward earnings yield minus 30-year Treasury yield, reconstructed inputs prior to 1985



Source: Various, NBER, TrendMacro calculations

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dominated by the 1960s, the 1980s and the 1990s. These were go-go years for stocks, generally speaking, when the risk premium was quite low. Today's ERP is far above *that* mean, and stocks should indeed be expected to rise quite a bit if the ERP mean-reverts to it.

- But why pick *that* mean?
- If we want to think long-term, why throw out the high-quality data that is available before 1962, in fact all the way back to 1900 (please see the chart on the previous page). Such truly long-term data includes periods like the modern go-go years -- such as the 1920s. But it also includes periods of great economic stress when the ERP was far higher than it is today -- such as the World War years. And it includes many periods such as the 1900s, the 1910s and the 1930s when the ERP was much the same as it is today.
- But then again, of what real relevance to today's decision making is the level of the ERP more than a century ago?
- As we explained last week (again see "[What the ERP Isn't Telling Us](#)"), our use over the last 26 years of the ERP for tactical asset allocation decisions has been based on our conviction that *the relevant mean is non-stationary*, moving in the intermediate term through various metastable regimes. We think the long-term history of the model shows clearly that this is the case (again, please see the chart on the previous page).
- Today we are using what we call the "crisis-era mean," that is, the mean since the global financial crisis began in Q3-2007 -- an intermediate-term regime now established for almost six years.
- *Amazingly, the six-year crisis-era mean we prefer is substantially identical to the ultra-long-term 113-year mean from 1900* (please see the chart below, a magnification of post-2000 period from the chart on the previous page). At that mean, stocks today are almost exactly fair-valued -- to be exact, they are 2.2% over-valued.
- The *odd mean out* is the post-1961 mean used in the New York Fed's research. To be sure, if it turns out that this is indeed the

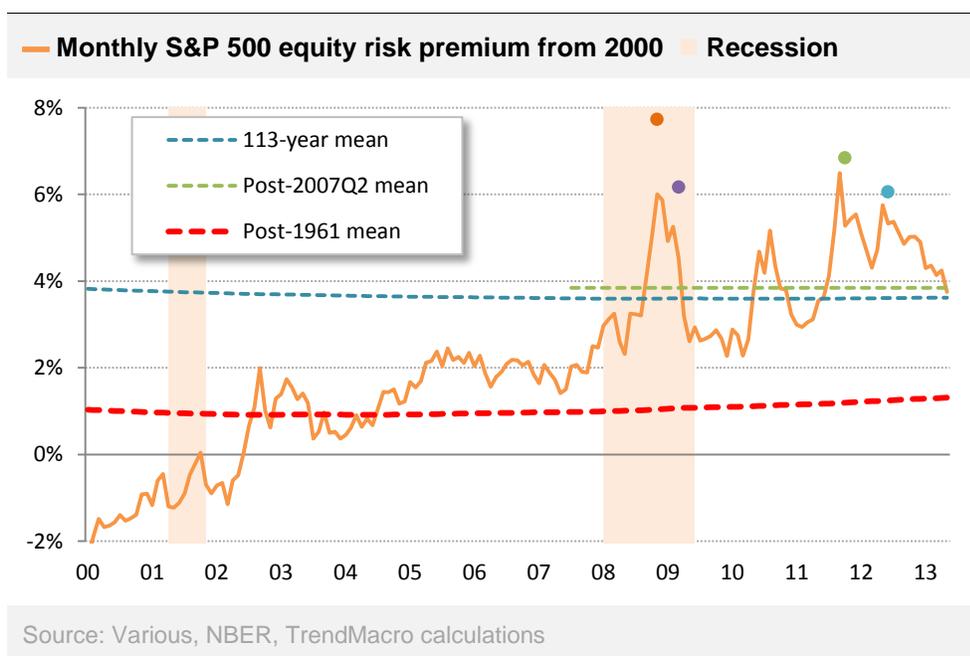
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... the 1980s and the 1990s. But we also reject the bear case that bond yields, suppressed by the Fed, make the ERP artificially high. It can't be proven that the Fed is actually suppressing yields, and even if it were, they are a reality faced by investors that should not be ignored by the model. We believe the ERP, in fact, is now neutral on stocks.

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For your information...

TrendMacro's ERP model is simply the 365-day forward earnings yield of the S&P 500 minus the yield of the 30-year Treasury. It is a close cousin of [William F. Sharpe's](#) groundbreaking version from the mid-1970s. *It can be conceived as the spread between expected returns for stocks and expected returns for bonds.* Sharpe's original idea was that this spread could be input to a [Markowitz](#)-type portfolio construction model to produce an optimal 2-way portfolio of stocks and bonds.



relevant mean for decisions made today, then all else equal we should expect stocks to rise 53% from here.

- But that is to say that the analytically relevant mean is the same one that obtained in 2003 and 2004. In those years forward earnings were growing, on average, at 12% per annum -- today they are growing at less than 4%. In those years real GDP was growing, on average, at 3.4% -- today it is growing at only 2.5%.

Setting aside the matter of the appropriate mean -- which is an important issue, but fundamentally only a technical one of model calibration -- there is another entirely separate matter that cuts to the heart of the basic logic of the ERP. That is the question of whether the model is giving false information now, in this relatively unusual period in which the Federal Reserve is deliberately attempting to suppress long-term bond yields.

- This is of fundamental importance to the model because long-term bond yields are one of the model's key inputs. The New York Fed's research argues that it is currently *the* critical factor that explains today's unusually high ERP.
- The higher bond yields are, the less any given measure of the expected return of stocks will exceed the expected return of bonds.
- If bond yields are being artificially administered by the Fed, then yields aren't really as *low* as they seem. If investors are looking through the veil of Fed interference, and valuing stocks according to some estimate of a higher *natural* bond yield, then the ERP isn't really as *high* as it seems.
- The New York Fed research raises this issue, but it's hardly the first time we've heard it. Many clients have raised it with us over these years of very low interest rates and Fed intervention. The issue came up most intensely whenever we drew clients' attention to extremely high ERPs -- far higher than today's -- to argue that panicky stock market corrections had run their course (see "[Europe Fails, US Stocks Flail](#)" October 4, 2011, and "[Time Is Our Frenemy](#)" May 24, 2012).
- We do have one historical precedent for the Fed attempting to control long-term yields. Starting in April 1942, to help control US borrowing costs in World War Two -- but then continuing through March 1951 -- the Fed capped long-term Treasury yields at 2.5% (see "[The Treasury-Fed Accord: A New Narrative Account](#)" by Robert L. Hetzel and Ralph F. Leach, Federal Reserve Bank of Richmond *Economic Quarterly*, Volume 87/1, Winter 2001).
- It so happens that this period of almost nine years had about the highest mean of any period of similar length in the history of the data since 1900 (please see the chart at the top of the following page).
- Correlation isn't causation -- [but it is a hint](#). We think it's a reach to think that the Fed's yield cap was the only thing affecting the premium investors attached to equity risk then -- after all, World War Two was surely a *very* systemic event. That said, the highest levels for the ERP in the era of Fed yield-capping came *after* the war ended, when the Fed nevertheless kept the policy in place.

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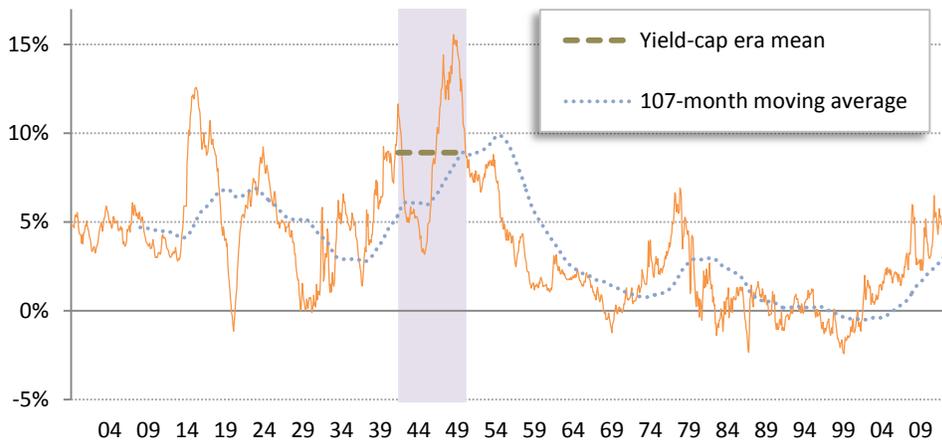
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[Are Stocks Cheap? A Review of the Evidence](#)

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Carlo Rosa
New York Fed *Liberty Street Economics*
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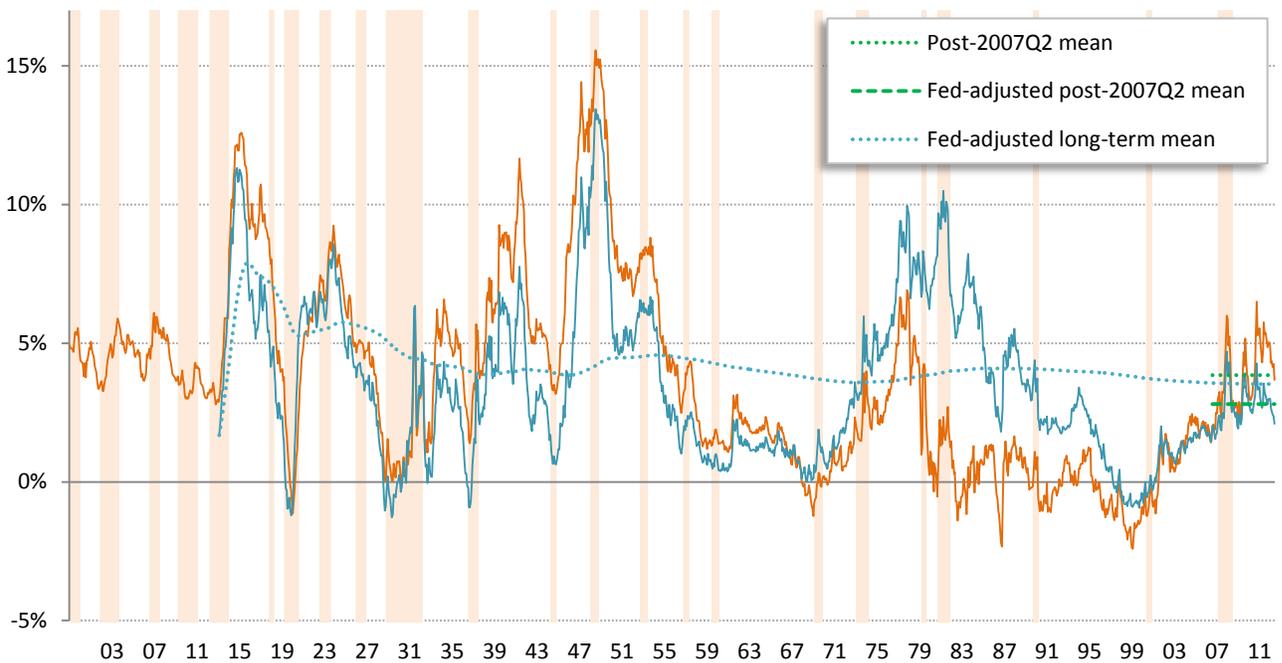
— Monthly S&P 500 ERP — WW2 era of Fed long-term yield cap



Source: Various, TrendMacro calculations

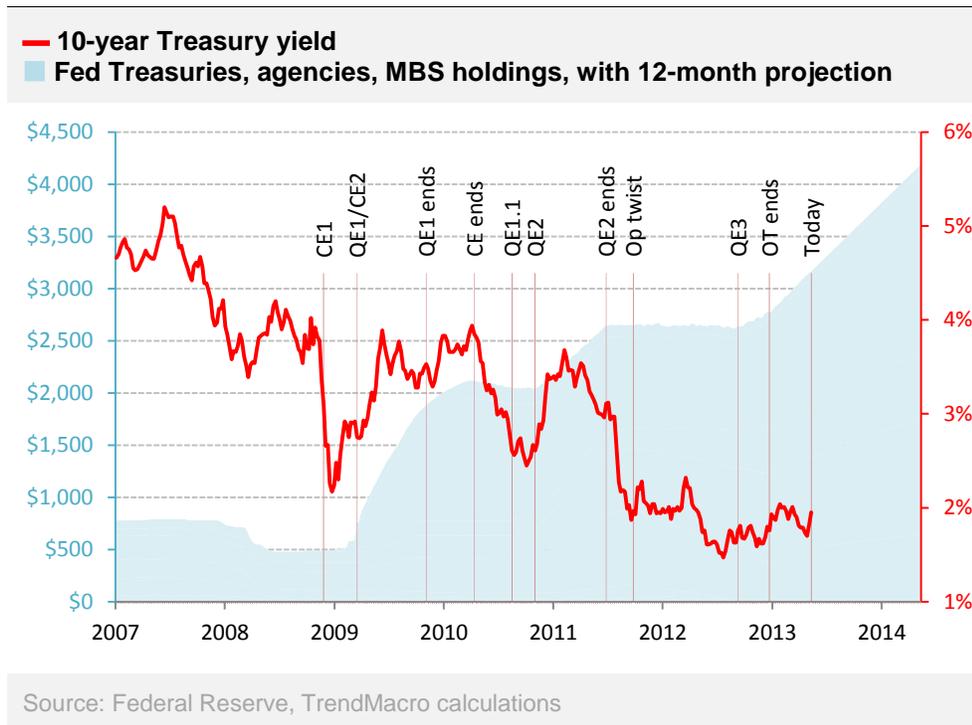
- One way to filter for the possibility that the Fed is, in fact, suppressing long-term yields today -- a method suggested by a client -- is to replace the yield in the ERP model with a proxy driven by historical relationships between yields and inflation.
- One such study produces a proxy 30-year yield today of 4.76% -- which is 1.58% above the actual market yield of 3.18%.
- Because our ERP is calculated by subtracting the 30-year Treasury yield from the S&P 500 forward earnings yield, using the proxy reduces the ERP by 1.58% (please see the chart below).

— Monthly S&P 500 equity risk premium from 1900 — Fed-adjusted ERP
 Adjusted 30-year yield when Fed was active = $(.14 * CPI + 4.6)$



Source: Various, NBER, TrendMacro calculations

- But the absolute level of this "Fed-adjusted ERP" isn't the important thing for investment decision-making -- what counts is the relationship of the present level to some historical mean to which it can be expected to revert.
- For the Fed-adjusted ERP, the crisis-era mean is considerably lower than the normally-calculated ERP. But the Fed-adjusted ERP is considerably below it (again, please see the chart on the previous page). Were it to mean-revert, all else equal stock prices would fall by 9.5%.
- The ultra-long-term means of the Fed-adjusted ERP and the normal ERP are substantially identical. But the Fed-adjusted ERP is farther below them (again, please see the chart on the previous page). Were it to mean-revert, all else equal stock prices would fall by 17.3%.
- But this exercise really only tells us what we already knew -- that bond yields are unusually low today, and if we raise them in the calculation of the ERP, we will get a lower ERP. It leaves open the question of whether the Fed is, in fact, suppressing rates.
- How do we *really* know that all the Fed's various interventions are making interests rates any lower than they would be otherwise? After all, short-term market interest rates went to zero in 2008 before the Fed took the funds rate there. And throughout the era of quantitative easing, it seems generally that long-term yields go *up* when the Fed is buying assets to supposedly lower them, and *down* when it is not (please see the chart below).



- Even granting that the Fed is suppressing yields, we've never been convinced that it would really be important to the reliability of the ERP. We've always conceived of the model as assessing the opportunity set that investors actually face when they choose

between stocks and bonds. We've never thought it should matter whether the bond yields in that set are natural or administered by the Fed -- they are nevertheless reality.

So we are inclined to reject both the bull case and the bear case for stocks based on the ERP. Like any investment decision-making tool, its construction, calibration and utilization are subject to legitimate debate, and in the end it is perhaps as much art as science. Over 26 years of using the ERP in real-time to make tactical asset allocation decisions, we're comfortable with our own approach to it. We think today that it is making neither a bull case nor a bear case -- it is making a neutral case. Asset allocation decisions that take portfolios outside their normal position will have to be made on other grounds.

Bottom line

The equity risk premium is the same whether you use our "crisis-era mean" or the ultra-long-term mean from 1900. We reject the bull case that stocks are very cheap, which relies on an arbitrary mean that puts excessive weight on the go-go years of the 1960s, the 1980s and the 1990s. But we also reject the bear case that bond yields, suppressed by the Fed, make the ERP artificially high. It can't be proven that the Fed is actually suppressing yields, and even if it were, they are a reality faced by investors that should not be ignored by the model. We believe the ERP, in fact, is now neutral on stocks. ▶