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A Decade After a Big Warning

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HULBERT ON MARKETS

By MARK HULBERT

JEREMY SIEGEL EARLIER THIS WEEK precipitated quite a debate among market theoreticians.

In an op-ed article in the Wall Street Journal, Siegel -- who is a professor of finance at the University of Pennsylvania's Wharton School -- declared that we now have enough evidence to pass judgment on former Fed chairman Alan Greenspan's famous "irrational exuberance" speech.

In that speech, which occurred ten years ago this month, Greenspan expressed anxiety that "irrational exuberance has unduly escalated asset values."

Was Greenspan right to worry? Professor Siegel writes that "the answer is decidedly no."

Consider the data. Over the last ten years, the Dow Jones Wilshire 5000 index has produced an annualized total return of 8.4%, notwithstanding the 2000-2002 bear market. Though in nominal terms this is slightly below the stock market's long-term average return, it's important to note that inflation also has been low over the last decade. In real, or inflation-adjusted terms, therefore, the stock market's return since late 1996 has been right in line with historical norms.

As you might have expected, however, the matter is not quite so easily settled as that. There turns out to be no shortage of market theoreticians who disagree with Professor Siegel's interpretation of what has happened over the last decade. And it's important to understand the source of their disagreement, since the bull market over the last four years has brought the stock market's valuation today back to where it stood when Greenspan voiced his anxiety one decade ago.

What was the source of Greenspan's anxiety? There no doubt were many factors, but it is widely assumed that one of them was a talk that Yale University finance professor Robert Shiller gave at the Fed a few days prior to Greenspan's "irrational exuberance" speech. Professor Shiller reportedly argued that, over the previous 125 years, the stock market's subsequent ten-year returns were well below-average for investors entering the market whenever valuations were as high as they were in late 1996.

Professor Shiller's research, much of which was conducted with Harvard economics professor John

Campbell, did not focus on a single valuation measure. But one prominent measure that the two professors employed was a particular form of the price/earnings ratio -- one in which the earnings portion of the ratio represented the average of the previous ten year's inflation-adjusted earnings.

Why did Professors Shiller and Campbell focus on ten-year earnings, rather than the one-year earnings which price/earnings ratios traditionally use? For starters, it turns out that year-over-year earnings are incredibly volatile; another reason, not unrelated, is that P/E ratios based on one-year earnings have only weak predictive power at best in forecasting the stock market's subsequent returns.

But when P/E ratios based on ten-year trailing earnings are used to forecast the stock market's return over the subsequent decade, Professors Shiller and Campbell found an admirable success rate.

Consider a statistic known as the "r-squared," which reflects the degree to which fluctuations in one factor predicts or explains changes in another. The r-squared ranges between 0 and 1, with 1 indicating the highest degree of predictive power and 0 meaning that there is no detectable relationship.

Few of the indicators that the financial press obsesses about have an r-squared that is statistically different than zero, and even among those that are statistically significant, it is rare to find an r-squared above 0.1 or 0.2.

In contrast, the r-squared is around 0.5 when relating P/E ratios based on ten-year earnings and the market's subsequent ten-year return. No wonder that Alan Greenspan was worried in December 1996, since at that time the P/E based on ten-year earnings was higher than 95% of the time since the 1870s.

Note carefully, however, what an r-squared of 0.5 signifies. It means in this case that the P/E ratio based on trailing ten-year earnings explains 50% of the market's return over the subsequent decade. Though fifty percent is a lot better than nothing, it still means that half of the market's ten-year returns can not be explained in terms of where the P/E ratio stood at the beginning of that ten-year period.

It's important to keep this in mind when interpreting the stock market's strength over the last decade. Because no one was claiming that the P/E ratio based on ten year earnings had an r-squared of 1 when predicting ten-year returns, the last ten years strictly speaking don't constitute a disproof of the original analysis.

This was stressed by Professor Shiller in an interview: "We have only one observation of ten-year returns since 1996. One observation is not overwhelming evidence."

To be sure, the stock market over the last ten years was stronger than Shiller and Campbell's model would have led us to expect. So to that extent, the last ten years lessens the r-squared that emerges from the analysis. According to calculations conducted by Clifford S. Asness, managing and founding principal at AQR Capital Management, a Greenwich, CT-based quantitative research firm, the r-squared falls to around 0.32 in the wake of the last decade. That still is higher than the r-squareds that prevail for the vast majority of other stock market models, and is still highly significant.

What does all this mean for the bottom line? It means that we have learned something from the last ten years' experience, but not a lot. On the one hand, if you believed 10 years ago that the stock market is almost always a good ten-year bet, as did Professor Siegel, then you will -- like him -- reach the same conclusion today.

But if you thought the stock market was irrationally exuberant ten years ago, then the last decade is not enough reason to keep you from reaching a similar conclusion now.

As Mr. Asness put it in an interview, "Professor Siegel concludes that, because the market was strong over the last ten years, stocks were not overvalued in 1996. But you could just as easily, if not more easily, argue that valuations were high then, became insanely so in 2000, and are now back to being just as overvalued today as then.

"Unfortunately, in this case, 10 years is way too short a period to draw strong statistical conclusions, and I am surprised Professor Siegel does so."

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