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# The Eight Best Predictors of the Long-Term Market

Here are the stock indicators with the enviable track records—and the cautionary tale that they tell



Robert Shiller of Yale says he isn't aware of any indicator that currently is forecasting above-average stock returns over the next decade. ILLUSTRATION: ALEX NABAUM FOR THE WALL STREET JOURNAL

By *Mark Hulbert*

Aug. 5, 2018 10:12 p.m. ET

The stock market's return over the next decade is likely to be well below historical norms.

That is the unanimous conclusion of eight stock-market indicators with what I consider the most impressive track records over the past six decades. The only real difference between them is the extent of their bearishness. (See chart below.)

Of course, it is impossible to say that there aren't other indicators with even better long-term records than these eight. But I'm not aware of any.

To illustrate the bearish story told by each of these indicators, consider the projected 10-year returns to which these indicators' current levels translate. The most bearish projection of any of them was that the S&P 500 would produce a 10-year total return of 3.9 percentage points annualized below inflation. The most bullish was 3.6 points above inflation.

Even the bullish end of that range is more than 3 annualized percentage points below the stock market's inflation-adjusted return over the past 200 years.

The most accurate of the indicators I studied was created by the anonymous author of the blog Philosophical Economics. It is now as bearish as it was right before the 2008 financial crisis, projecting an inflation-adjusted S&P 500 total return of just 0.8 percentage point above inflation. Ten-year Treasuries can promise you that return with far less risk.

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## Bubble flashbacks

The only other time it was more bearish (during the period since 1951 for which data are available) was at the top of the internet-stock bubble.

The blog's indicator is based on the percentage of household financial assets—stocks, bonds and cash—that is allocated to stocks. This proportion tends to be highest at market tops and lowest at market bottoms.

According to data collected by Ned Davis Research from the Federal Reserve, this percentage currently looks to be at 56.3%, more than 10 percentage points higher than its historical average of 45.3%. At the top

of the bull market in 2007, it stood at 56.8%.

Ned Davis, the eponymous founder of Ned Davis Research, calls the indicator's record "remarkable." I can confirm that its record is superior to seven other well-known valuation indicators analyzed by my firm, Hulbert Ratings.

To figure out how accurate an indicator has been, we calculated a statistic known as the R-squared, which ranges from 0% to 100% and measures the degree to which one data series explains or predicts another.

In this case, zero means that the indicator has no meaningful ability to predict the stock market's returns after inflation over the next 10 years. On the other hand, a reading of 100% would mean that the indicator is a perfect predictor.

Since 1954, according to our analysis, the Philosophical Economics indicator had an R-squared of 61%. In the messy world of stock-market prognostication, that is statistically significant. Our analysis begins in that year because that is the earliest date for which data are available for all of the other indicators that we studied.

## The other seven

So, here's a look at those other indicators back to the 1950s, listed in descending order of their R-squareds:

- **The Q ratio**, with an R-squared of 46%. This ratio—which is calculated by dividing market value by the replacement cost of assets—was the outgrowth of research conducted by the late James Tobin, the 1981 Nobel laureate in economics.
- **The price/sales ratio**, with an R-squared of 44%, is calculated by dividing the S&P 500's price by total per-share sales of its 500 component companies.
- **The Buffett indicator** was the next-highest, with an R-squared of 39%. This indicator, which is the ratio of the total value of equities in the U.S. to gross domestic product, is so named because Berkshire Hathaway Inc.'s Warren Buffett suggested in 2001 that it "probably the best single measure of where valuations stand at any given moment."
- **CAPE**, the cyclically adjusted price/earnings ratio, came next in the ranking, with an R-squared of 35%. This is also known as the Shiller P/E, after Robert Shiller, the Yale finance professor and 2012 Nobel laureate in economics, who made it famous in his 1990s book "Irrational Exuberance."

The CAPE is similar to the traditional P/E except the denominator is based on 10-year average inflation-adjusted earnings instead of focusing on trailing one-year earnings.

- **Dividend yield**, the percentage that dividends represent of the S&P 500 index, sports an R-squared of 26%.
- **Traditional price/earnings ratio** has an R-squared of 24%.
- **Price/book ratio**—calculated by dividing the S&P 500's price by total per-share book value of its 500 component companies—has an R-squared of 21%.

According to various tests of statistical significance, each of these indicators' track records is significant at the 95% confidence level that statisticians often use when assessing whether a pattern is genuine.

However, the differences between the R-squareds of the top four or five indicators I studied probably aren't statistically significant, I was told by Prof. Shiller. That means you're overreaching if you argue that you should pay more attention to, say, the average household equity allocation than the price/sales ratio.

### The bulls' response

What do the bulls say about all this? To find out, I turned to Jeremy Siegel, a finance professor at the Wharton School of the University of Pennsylvania.

Prof. Siegel is perhaps best known as the author of "Stocks for the Long Run," in which he argues that buying and holding equities for the long term is the best advice for most investors.

In an interview, Prof. Siegel questioned the strength of these indicators' statistical foundation. He says their historical records contain peculiarities that traditional statistical tests don't adequately correct for. Once corrected, Prof. Siegel suspects that their R-squareds would be significantly lower.

Prof. Siegel also questions whether these indicators are really as bearish as they seem. Among the theoretical objections he lodged against these indicators:

- Accounting-rule changes in the 1990s. After those changes, he says, readings from the traditional P/E and the Shiller P/E were higher than before, so their recent levels aren't particularly comparable to those from previous decades.
- The Buffett indicator has lost any relevance it may have once had because of the increasing proportion of U.S. corporate sales coming from overseas. That dynamic also artificially inflates the indicator and makes it appear more bearish than it should be, Prof. Siegel says.
- The Q ratio provided insight at a time when our economy was dominated by capital-intensive manufacturing companies, but not when it is dominated by high-tech information-age firms.

"What is the replacement cost for a Google or a Facebook [FB +3.29% ▲](#)?" Prof. Siegel asks rhetorically.

It can't be determined, however, whether correcting for these issues would transform the message of any of these indicators from bearish to outright bullish. Prof. Shiller of Yale, for one, says he isn't aware of any indicator that currently is forecasting above-average returns over the next decade and sports a statistically significant record back to at least the 1950s.

Regardless, it is important to emphasize that, no matter how impressive the statistics underlying the indicators may be, they don't amount to a guarantee that the stock market will struggle over the next decade.

After all, as Prof. Siegel reminds us, most of these indicators have been bearish for years now, even as stocks have enjoyed one of the most powerful bull markets in history.

Furthermore, even if stocks turn out to be lower in a decade's time, none of these indicators tells us anything about the path that the market takes along the way. It might immediately head south from here, or it could enter a blowoff phase of sharply higher prices before succumbing to a severe bear market.

### **A leaf in a hurricane**

Calling short-term trends is difficult, if not impossible. For instance, when it comes to calling one-year returns, Prof. Shiller said in an interview that he doesn't know of any valuation indicator with a record extending as far back as the 1950s whose predictive power is significantly better than zero.

Ben Inker, head of the asset-allocation team at GMO, draws an analogy to a leaf in a hurricane: "You have no idea where the leaf will be a minute or an hour from now. But eventually gravity will win out, and it will land on the ground."

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*Appeared in the August 6, 2018, print edition as 'The Eight Best Predictors Of the Long-Term Market Indicators.'*

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