May 15th, 2014
Volume 13, Issue 3

Intelligent Money

Current thinking from Haven Financial Advisors

Louis Kokernak CFP, CFA
Haven Financial Advisors

voice 512 791 4335
toll-free 800 898 5480
fax 800 888 5480
louis@havenfinancial.com

Special Notes of Interest:

Last month, wages increased only 1.9% relative to a year earlier.

According to Deutsche Bank, it has become cheaper to rent than to buy in Austin, TX. See the methodology and results for 54 metro areas here..

Corporate Profits and Stock Market Valuation

The US Stock market has passed the 5th anniversary of its bull run. Since the nadir of the subprime crisis, the S&P 500 has tripled its value. Even as equities soar to new heights, there is a persistent chorus of opinion that the stock market is overpriced relative to its fundamental value.

One of the most cited bearish voices has been Robert Shiller, professor of economics at Yale University. He developed a stock market valuation model based on the popular price/earnings ratio. The innovation here is that many years of earnings are smoothed to arrive at a more stable measure of value. It is also known as the cyclically adjusted priced earnings or CAPE.

Shiller has an intellectual combatant. Jeremy Siegel of the Wharton School of business agrees that the price/earnings ratio has some forecast value. However, he believes that Shiller's model is misspecified. When corrected, the CAPE ratio reveals a stock market that is more fairly priced.

This edition of Intelligent Money will weigh the pros and cons of the CAPE ratio. We'll rely in part on some distillation of Shiller and Siegel's research. There will also be observations on the economy as a whole and its effect on stock valuation.

Origins of the Shiller P/E Multiple

The intellectual roots of the Shiller's CAPE reach back to the early 1930s with the famous value investors Benjamin Graham and David Dodd. Their classic text, *Security Analysis*, argued that a single year's earnings would be too volatile to evaluate a company's real value in the marketplace. To control for cyclical effects, Graham and Dodd recommended dividing price by a multi-year average of earnings and suggested periods of five, seven or ten years.

Robert Shiller and his colleague, John Campbell, ultimately selected ten years of earnings data and adjusted each observation upward for observed inflation. Their CAPE ratio gained public attention when the authors presented their findings to the Board of Governors of the Federal Reserve on December 3, 1996. There, they warned that recent earnings levels could not support prevailing stock prices. Shiller and Campbell's research found a negative correlation between the CAPE ratio and the stock market performance over the next ten years. A high current CAPE ratio portended poor future stock returns.

Critiques of the Shiller P/E

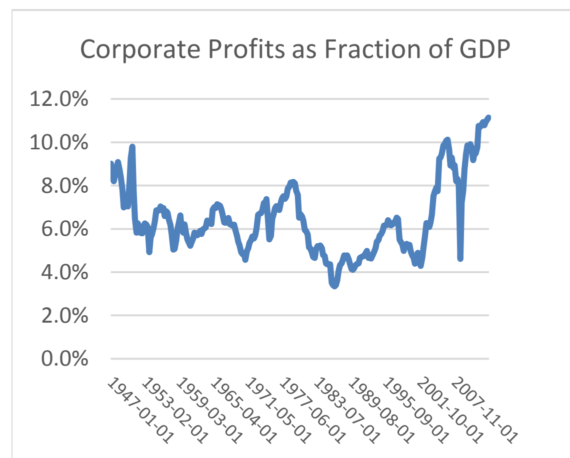
One of the most common criticisms of the Shiller findings is the persistence of high CAPE ratios over the past quarter century. Since 1988, there have been only 7 months when the CAPE ratio fell below its historical average to that point. This is hardly behavior one would expect to find in a mean reverting measure, especially when our economy has experienced such deep cycles over that time frame.

There have been three recessions in the last 26 years, interspersed with economic growth that has driven stock prices upward at a rate of 10.5% per year. Yet the CAPE metric has stubbornly flashed a bearish signal. That just doesn't feel right.

When Shiller and Campbell spoke to the Board of Governors, the signaling properties of the CAPE seemed more symmetric. It spent about the same amount of time in bullish and bearish ranges from 1881 through 1996. Since their paper was published, the CAPE has been pretty much stuck as a sell indicator except for a brief period at the depths of the subprime crisis. That invites a couple of questions.

- Have profits stayed too high for too long?
- Are today's profits calculated differently?

Here's data on profits and the size of the economy:



Stock market bears believe that overall profit levels in the corporate sector have moved well above their long term equilibrium. Inevitably, so the story goes, these profits will revert to the mean and take the stock market down with them. Indeed, corporate profits as a fraction of the GDP are as high as they have been since records were kept.

A longer term view of the country's profit picture reveals, however, that the early postwar economy had profit levels similar to today. It's hard to claim we are in uncharted territory.

As a next step, we explored the relationship between the profit/GDP ratio and the market return of the S&P 500 in the following year. The correlation was almost exactly zero! High corporate profits neither portended good or bad stock market returns.

That takes us back to Shiller's smoothed P/E ratio. Its current value is 25.3, about 50% higher than its long term average as compiled since the late 19th century. The research assembled by Dr. Shiller suggests that the S&P 500 returns over the next ten years should be below par. In recent decades, however, the realized returns of the S&P 500 have consistently outperformed the forecasts of the CAPE ratio.

That said, very high CAPE ratios (above 30) have coincided with some significant selloffs. This most notably occurred before the Great Depression in 1929 and the dotcom bust in 1999. Extreme values of the CAPE seem to be good harbingers of the stocks market's fate.

Dr. Jeremy Siegel acknowledges that Shiller's underlying model has some merit but fails to account for changes in earnings measurement and corporate policy over the past 140 years. Most of the problems with the CAPE's predictive power have been concentrated in the modern era. Siegel has identified some key changes in the way earnings are measured that suggest that recent price earnings ratios are overstated relative to historical norms.

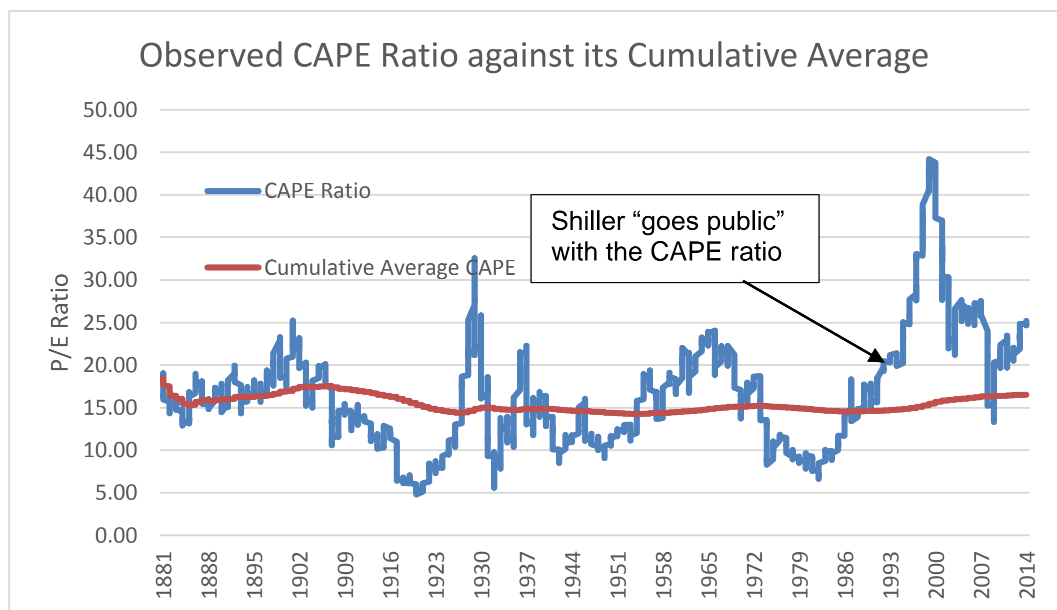
A key departure for earnings measurement was the adoption of FAS 142 in 2001. This new accounting rule required companies to write down intangible assets immediately as opposed to amortizing them over 40 years. We won't get too far into the financial weeds here but it suffices to say that new accounting rules have depressed reported earnings relative to those tallied in the 20th century.

Siegel goes on to point out that corporate dividend policy has shifted dramatically towards share buybacks rather than cash payouts. Share buybacks tend to increase the growth rates of earnings per share and thereby justify higher price/earnings ratios.

In a nutshell, earnings reported today for S&P 500 companies are not really comparable to those reported for most of the period when Shiller and Campbell did their original research. Is there a way to adjust for some of these changes over time?

"A longer term view of the country's profit picture reveals that the early postwar economy had profit levels similar to today. It's hard to claim we are in uncharted territory."

"The realized returns of the S&P 500 have consistently outperformed the forecasts of the CAPE ratio."



"A bearish stock signal does not mean "sell" in this kind of low interest rate bond environment."

"Stock markets have considerable underlying volatility. It is a mathematical likelihood that if you hold stocks long enough, you'll have a couple years that see selloffs of 20% or more."

The Bureau of Economic Analysis (BEA) compiles earnings data in a manner somewhat different from that reported by public companies under generally accepted accounting principles (GAAP). The BEA calculates earnings based on current production only. Long term gains and losses are excluded. Even depreciation is restated to reflect real economic wear and tear rather than a schedule mandated by GAAP.

The data compiled by the BEA may or may not be more accurate than that compiled under GAAP. However, these earnings are smoother over time and less susceptible to accounting and corporate policy changes. Siegel used the BEA earnings rather than GAAP earnings to compute the CAPE ratio. There were two interesting results. The first is that the BEA's earnings did a better job of explaining actual stock market performance. And secondly, the stock market seems more fairly valued under the alternative earnings measure. Using data available through early 2014, the US stock market is 10% to 20% overvalued rather than 50% according to the GAAP earnings inputs in Shiller's original model.

General Observations

Of course, that is not the end of the story. Both sides rebut one another. One could certainly contend that the BEA's operating earnings systematically exclude bad long term investments that are necessarily part of the business cycle. Companies have clever ways to include "good" investments as part of their operating model while dismissing bad long term investments as extraordinary events. After all, AIG was recognizing all their ill-conceived profits from derivative securities in the early 2000s. Why shouldn't we take into account their write off of $61 billion in assets in 2008?

On the other hand, stock price/earnings multiples have long been associated with interest rates. Rates have been very low for almost six years and the Fed has virtually guaranteed that they will remain so for another 18 months. Low interest rates drive price/earnings multiple up for two reasons. Future corporate earnings are discounted back to the present at lower rates thereby giving rise to higher prices. Low rates in the bond market also drive investors towards riskier assets to capture returns. Bottom line is that our low interest rate environment has simply created higher equilibrium stock prices. The CAPE ratio does not account for changing interest rate levels.

Shiller's P/E model, even today, is merely forecasting subpar stock market returns. Currently, it predicts that the ten year return on the S&P 500 will be about 4% after adjusting for inflation. That is a subpar forecast but one that still offers better returns than bonds. The fixed income market is yielding expected returns of about 0% after inflation. A bearish stock signal should *not* mean "sell" in this kind of low interest rate bond environment.

It's unlikely that any single tool can reliably predict stock market returns. The drivers of financial prices are just too varied and complex. Most, if not all, information relevant to stock prices is rapidly factored into the market. Financial markets are capable of dramatic selloffs. It's natural to think they are attributable to some fundamental explanation, often with a conspiratorial flavor.

The truth is that stock markets have considerable underlying volatility. Basic statistical inference says that if you hold stocks long enough, you'll have a couple years with selloffs of 20% or more. That's just the law of averages in action.

Suggestions for additional reading

John Campbell and Robert Shiller, Valuation Ratios and the Long Run Stock Market Outlook, ***Journal of Portfolio Management***, Winter 1998

Andrew Hodge, Comparing NIPA Profits with S&P 500 Profits, ***Bureau of Economic Analysis Briefing***, March 2011

Jeremy Siegel, The Shiller CAPE Ratio: A New Look, Preliminary Paper, May 2013

Laurence B. Siegel, CAPE Crusaders: The Shiller-Siegel Shootout at the Q Group Corral, ***Advisor Perspectives***, February 18, 2014

William Baldwin, Irrational Exuberance: The Sequel, ***Forbes***, May 5, 2014