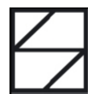
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EQUITY MARKET VALUATION SUMMARY - OCTOBER 2013

In this section, we explain why we believe stocks are overvalued, and how we determine the valuation of the stock market. We then discuss the implications of our findings.

In summary, we use several valuation methods that point to the same conclusion: US stocks are overvalued. However, positive momentum continues to push the market higher. Also, international stocks are much cheaper than domestic stocks.

We focus on valuation models that are predictive of long term stock returns. These predictive models use more stable measures of fundamentals. In contrast, the most common measure of valuation is a P/E (price/earnings) ratio based on either the past year's earnings or the expected earnings over the next year. This measure has shown no reliability, or predictive nature. The correlation between a one year P/E ratio and the next year's returns are virtually zero.

Shiller 10 Year P/E:

Also known as the CAPE (Cyclically Adjusted P/E Ratio), this version of the P/E ratio takes into account the past ten years of earnings and adjusts them for inflation. Using ten years of data smoothes out earnings and uses the entire business cycle. It was popularized by Robert Shiller, a professor at Yale, who maintains a historical database of stock information going back to 1871.

If we break out the historical P/E data into deciles, we see a clear pattern of lower P/E's leading to the highest returns, and higher P/E's leading to the lowest returns.

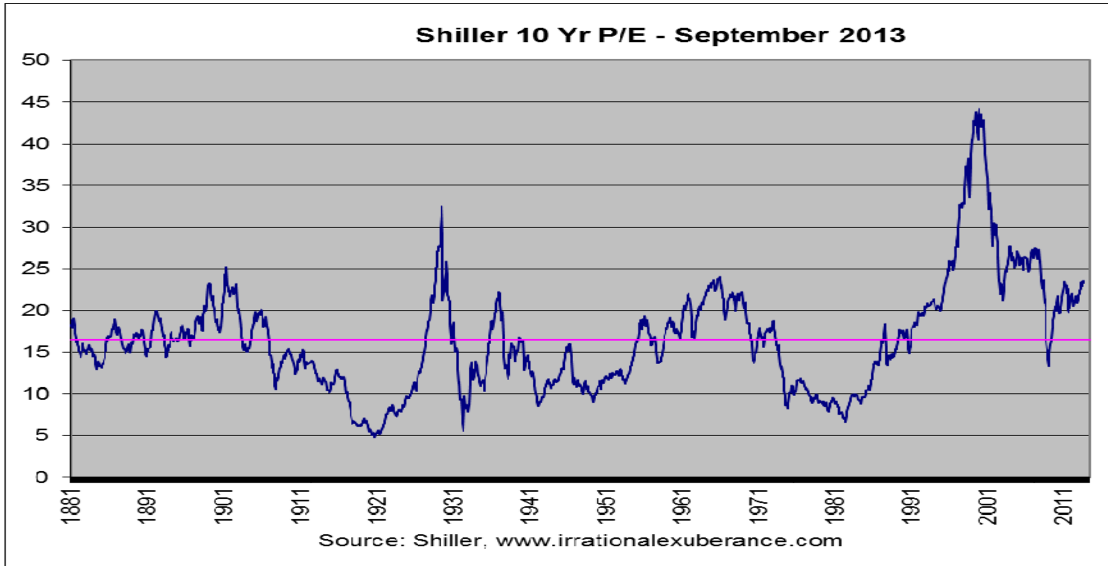
10 Year Average Real Returns based on Starting Valuation

PE10	Decile	Median	Maximum	Minimum
4.8-8.9	1	11.7%	20.0%	1.7%
8.9-10.7	2	10.0%	18.9%	1.6%
10.7-12.0	3	9.1%	16.7%	0.4%
12.0-13.7	4	7.1%	15.4%	-3.9%
13.7-15.2	5	6.1%	16.2%	-4.7%
15.2-16.5	6	6.6%	15.7%	-3.7%
16.6-17.8	7	6.1%	15.2%	-4.0%
17.8-19.4	8	5.4%	14.5%	-3.7%
19.4-21.8	9	4.4%	10.9%	-3.6%
21.8-44.2	10	0.9%	7.7%	-5.9%

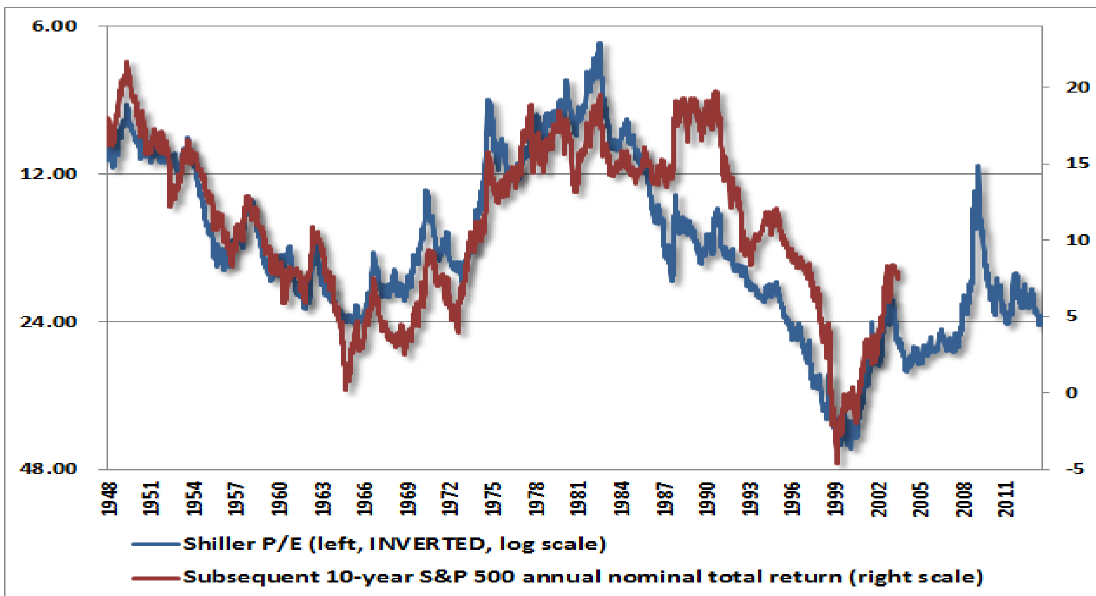
The higher P/E ratios also tend to come with higher volatility, and a higher chance of a large downturn. Importantly, this model helps predict returns over the next 10 years, but does not help predict short term market movements.

So where does the Shiller P/E ratio stand now? It is currently 23.4, which places it in the

decile with the highest P/E ratios, and the lowest prospective returns. The average ratio is 16.4, meaning that it is currently 42% above the average, a valuation level exceeded only by the market bubble of 2000 and the 1929 crash. To get back to an average P/E ratio, the S&P 500 would have to decline to about 1200 (vs. 1700 now), or about a 30% decline.



John Hussman, of Hussman Funds, uses the Shiller model to estimate the annual returns over the next 10 years. The chart below shows that his model has closely correlated with forward returns:



The current estimate for the next decade is 4.4% per year, before inflation. This is well below the average of about 7% per year. And these lower returns often come with more volatility.

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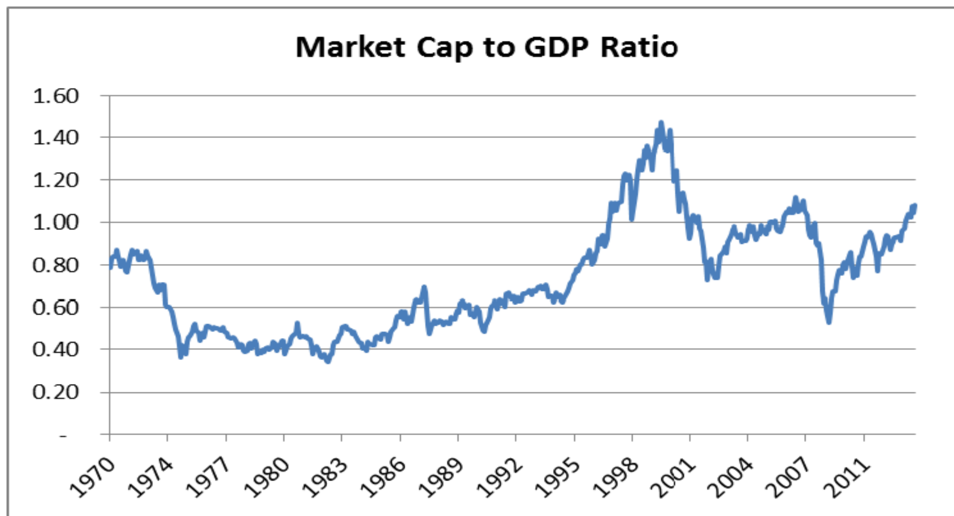
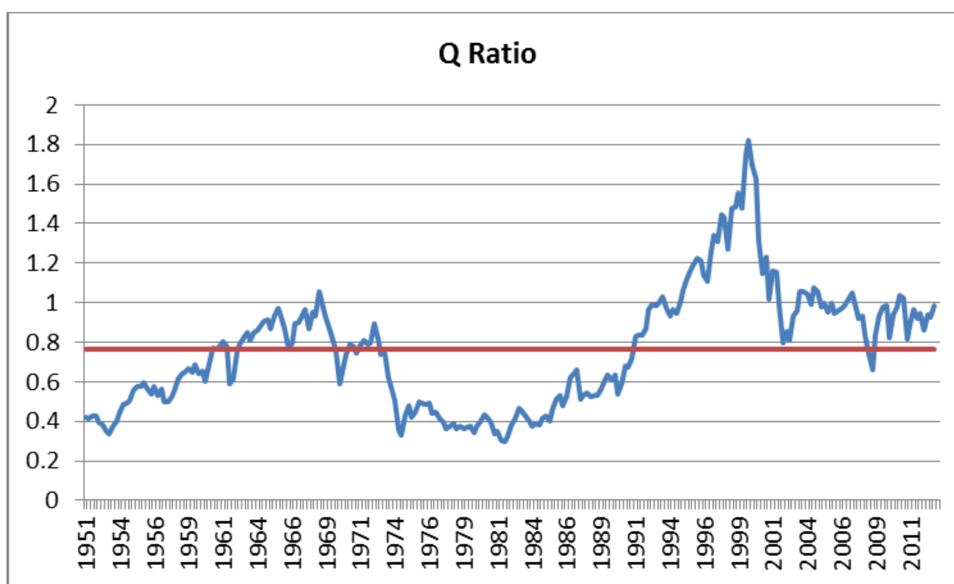
Market Capitalization to GDP Ratio:

Another valuation model we look at is the Market Cap to GDP Ratio. It measures the total market capitalization of all domestic companies compared to the total level of GDP. Using data back to 1970, the chart shows that the current ratio of 1.08 is 47% above the average level. It is also currently at the highest level since the previous peak in October 2007. Only the 2000 bubble showed a higher valuation.



Q Ratio:

Also known as Tobin's Q (named after a Nobel prize winner from Yale), the Q Ratio measures the total market valuation of all companies relative to their replacement cost. The historical average has been 0.76, while the current value is 0.98, or 29% above average.



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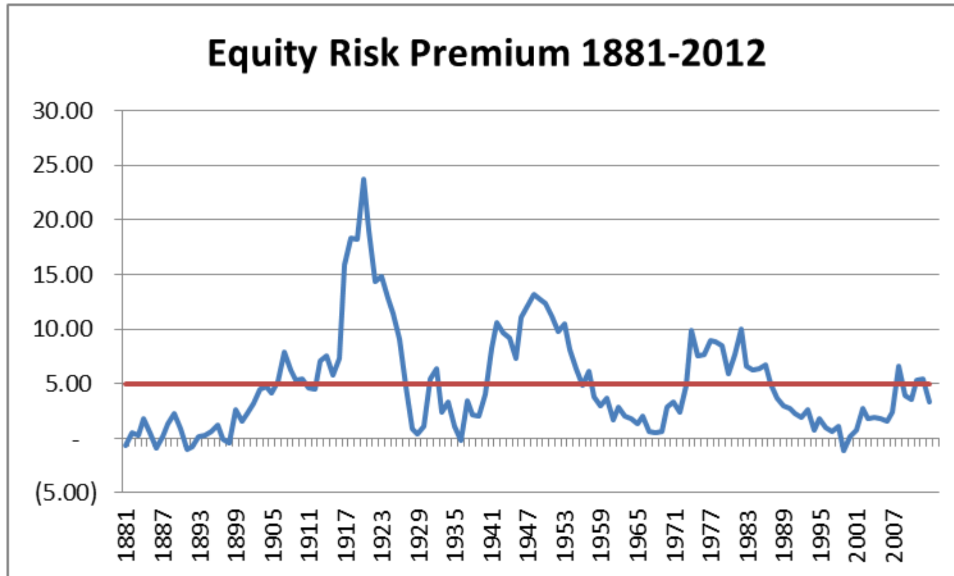
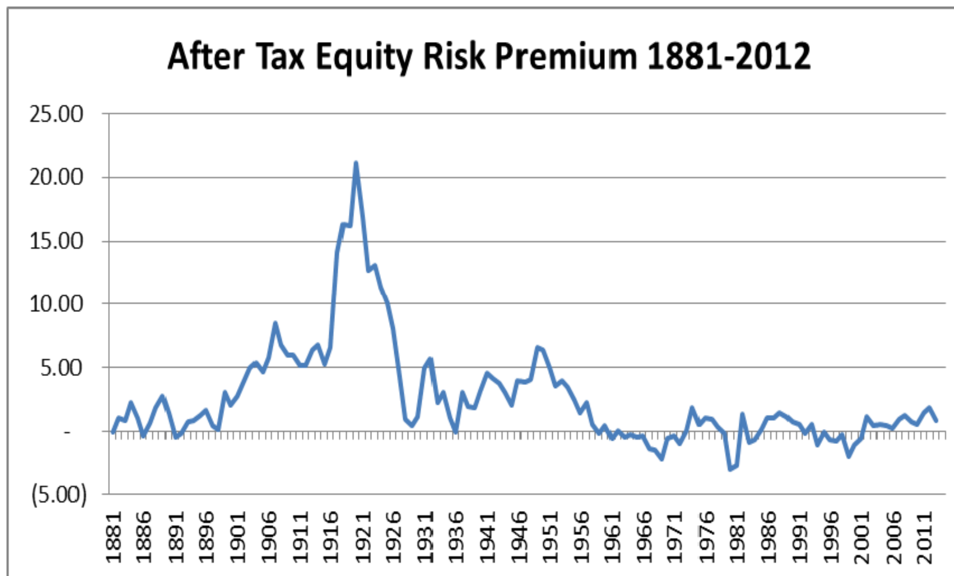
Equity Risk Premium

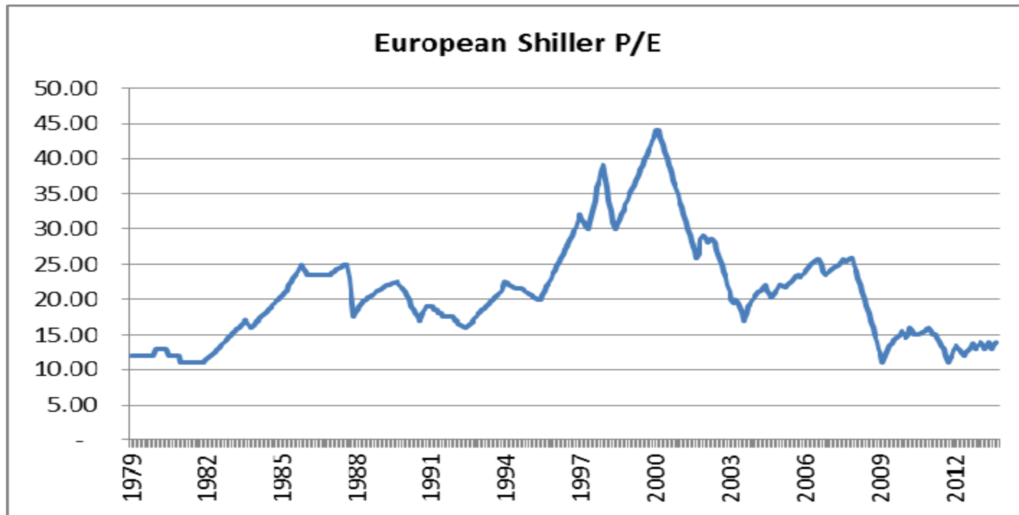
Another way to evaluate the attractiveness of stocks is by analyzing them relative to bonds. The difference between expected returns of stocks and bonds is called the equity risk premium (ERP). When we last updated this metric, the ERP was about 4%, and 2% on an after tax basis. Currently, the ERP has declined to 3.3%, due to the rise in interest rates, and 0.9% on an after tax basis. These measures are both below the historical average, indicating that despite low interest rates, stocks are not offering enough of a premium over bonds to be particularly attractive.



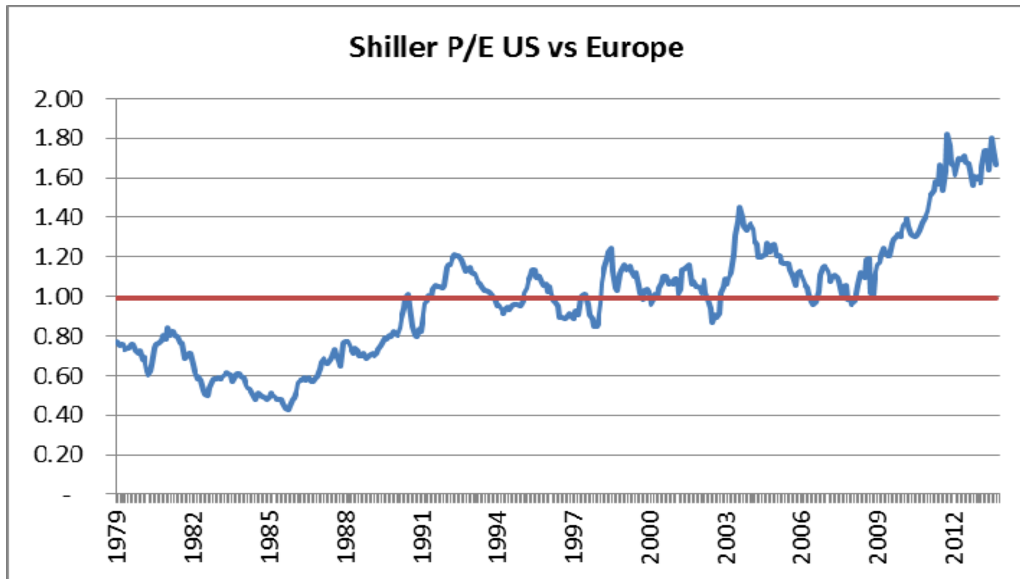


European Valuations:

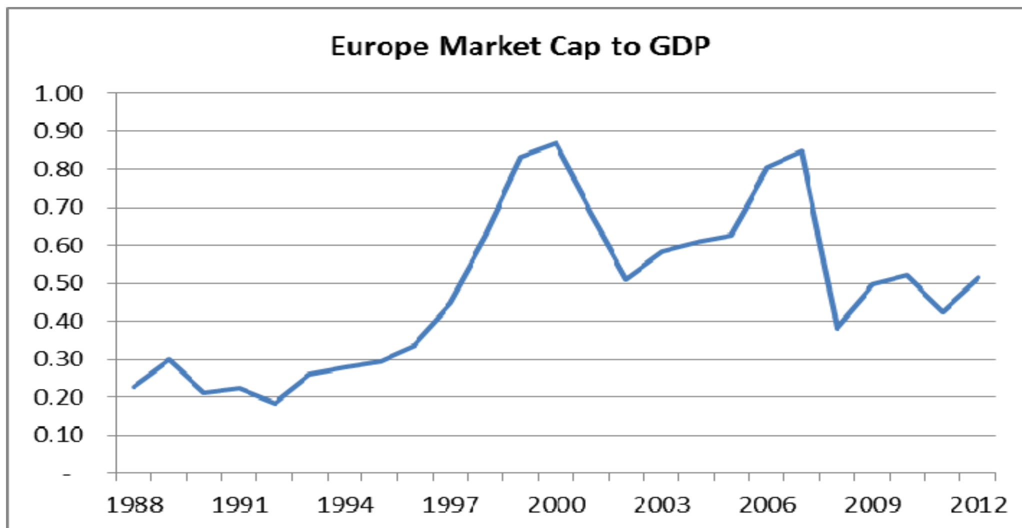
While the previous data helps explain the US stock market, looking at international markets presents a different picture. While we don’t have as long of a data history, the following chart shows the Shiller P/E for European stocks going back to 1979. While the valuation of these stocks also surged in the late 1990’s, the current valuation is quite low based on historical standards. It currently stands at 14, considerably lower than the average of 21, and the US market of 23. Importantly, this valuation measure has predictive power across all countries.



The following chart shows the Shiller P/E of the US relative to that of Europe. In the early 1980’s, the US market was significantly cheaper than European stocks. Today we see the opposite, as the US has been seen as a global safe haven and Europe has been struggling to rebound from its financial crisis. Similarly, the US valuation is higher than all other developed nations. Many emerging markets, however, have very high valuations at this time, although it varies widely between countries.



The European Market Cap/GDP Ratio paints a similar picture. The ratio is 0.52, compared to the US ratio of 1.08. Although our data only goes back to 1988, it shows a similar pattern to the Shiller P/E.



Most individual countries in Europe have a low Market Cap/GDP ratio. The exception is the UK, which has a ratio similar to that of the US. Also, China's Market Cap/GDP Ratio is about 0.45, although that measure has been extremely volatile, ranging from nearly 0 to 1.8.

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Summary:

Most valuation models that have long term predictive power indicate that the US market is significantly overvalued. However, technical indicators show that the market still has some positive momentum propelling prices higher. Perhaps this is the case because central banks around the world are doing everything in their power to support financial markets. The concern is that if they do not unwind the stimulus in an efficient manner, the overvalued markets can suffer a sharp decline. Markets can stay over or under-valued for long periods of time, although ultimately they move back toward equilibrium.

Also, international stocks are much cheaper than domestic stocks. While there are fundamental factors, such as the ongoing financial crisis in Europe and currency issues, that are keeping us from increasing our weighting of international stocks, the underpinning of low valuations will eventually lead us to add to our international allocation.

These models do not predict short term market movements. Rather, they help us position portfolios for long term trends. This is particularly important for our retirement analyses, which often project out 30 years or so. In other words, returns over the next decade should be expected to be below the long term historical average, as higher returns in the short term essentially borrow from returns in the long term. Therefore, we continue to invest fairly conservatively, and we continue to use conservative forecasts in our retirement analyses.