CFA Institute
Equity Research and Valuation 2013

Jeremy Siegel, professor of finance at The Wharton School, University of Pennsylvania and author of *Stocks for the Long Run* and *The Future for Investors*, spoke on the "Outlook for Stock and Bond Returns" at the CFA Institute's Equity Research and Valuation 2013 Conference in New York City held November 21 and 22. Below are our notes from his talk.

In a 2/11/2012 Barron's interview when the DJIA stood at 12,890, Professor Siegel stated, "Based on cyclical patterns of market history, the odds are better than two chances in three that the Dow Jones Industrial Average will reach 15,000 or higher over the next two years. Based on the same cyclical patterns, there's about a 50-50 chance that the Dow could hit 17,000 or more." This, even though he knew better than to give a prediction and a date at the same time. He has decided to quit with date specific stock market predictions now that he is ahead.

His best call ever was an in a 3/14/2000 *Wall Street Journal* editorial titled *Big-Cap Tech Stocks Are a Suckers Bet* a few days after the Nasdaq hit its peak of 5,048.62 on March 10th. In the interest of full disclosure, Professor Siegel pointed to his not-so-good call which came in November 2007 when he posted a blog to his web, "Despite Short-term Malaise, Big Picture Supports Stocks at these Levels". The S&P 500 Index dropped from 1,614 to its closing low of 683.38 on 3/6/09.

Stocks, according to Professor Siegel, are the most volatile asset class in the short run but the most stable in the long run. Despite short-term volatility, annual returns for stocks revert to the long-term mean of 6.6%. This compares favorably to other asset classes as shown below.

Asset Class	**Current Value of $1 Invested in 1802**	**Average Annual Real Rate of Return**
Stocks	$802,326	6.6%
Bonds	$1,552	3.5%
Treasury Bills	$281	2.7%
Gold	$3.44	0.6%
Dollar	$0.052	-1.4%

Stock Market Returns

Updated through June 2013		**Real Returns**
Long-Term	**1802-2013**	**6.6%**
Major Sub-Periods	1. 1802-1870	6.7%
	2. 1871-1925	6.6%
	3. 1926 - 2013	6.6%
Post-War Periods	1946-2013	6.6%
	1946-1965	10.0%
	1966-1981	-0.4%
	1982-1999	13.6%
	2000-2013	1.3%

Drilling down further into sub-periods of stock market returns and updating returns for 2013, drives home the point that while short-term stock market returns are volatile, they revert to the mean of 6.6% real returns. On average, wealth in stocks has just about doubled in purchasing power every decade.

"On average" are the key words. For example, during the bull market from 1982-1999 the average annual real rate of return was 13.6%, more than double the long-term average. Yet, during that period investors suffered through periods of below trend-line returns.

Siegel Rebuts Bond King's Proclamation

In his August 2012 investment letter, Bill Gross proclaimed that "the cult of equity is dying" and named Jeremy Siegel as the leader of that cult. The Dow Jones Industrial Average traded around 13,000 at the time the "Bond King" made his proclamation. Since then, the stock market has gained more than 20%. In his monthly letter, Bill Gross took issue with Jeremy Siegel's belief that stocks earned real returns of 6.6% during the past two centuries. Bill Gross argued that it is unsustainable for real stock market wealth to increase at 6.6% while GDP is growing at 3% to 4%. Siegel's counter argument is that capital has to give you a return above growth, which includes dividends and interest. Even in no-growth economies, investors get some return in capital.

Professor Siegel recounted another prediction by Bill Gross. In his September 2002 investment letter, Bill Gross states that the Dow Jones Industrial Average was fairly valued at 5,000 when it was trading around 8,000. The Bond King's prediction of a cataclysmic stock market decline was made three months before the market began its two-fold rise.

Triumph of the Optimists

In 2002, three economics professors — Elroy Dimson, Paul Marsh and Mike Staunton — published *Triumph of the Optimists*, an exhaustive look at a century's worth of worldwide investment returns from stocks, bonds and bills. Stocks consistently and significantly outperformed both bonds and bills. Stock returns in Australia and South Africa outperformed U.S. returns. This fact causes Professor Siegel to declare, "The equity premium is alive and well!"

Bond Market Returns

Updated through June 2013		**Real Returns**
Long-Term	**1802-2013**	**3.5%**
Major Sub-Periods	1. 1802-1870	4.8%
	2. 1871-1925	3.7%
	3. 1926 - 2013	2.4%
Post-War Periods	1946-2013	1.8%
	1946-1965	-1.2%
	1966-1981	-4.2%
	1982-1999	8.5%
	2000-2013	5.1%

Long-term, bonds return an average 3.5% real return. Post WWII financial repression led to negative bond returns. The latest period from 2000 to 2013 marks the first time since the Civil War that bond returns were higher than stocks returns, albeit only a bit. Professor Siegel expects stocks will outperform bonds in future decades.

Looking ahead, Professor Siegel sees a triple whammy for bond returns, which may cause future returns to parallel bond returns from 1946 to 1981.

1. 10-year TIPS real yield is now 0.40%, one-third its historic average.
2. Observers expect higher future bond yields because of the stronger economy, higher inflation, and the loss of “safe haven status” for bonds as an asset class.
3. The correlation between bond and stock returns, negative for quite some time, will likely turn positive.

Don’t Sell Stocks When Rates Rise

There is a 50% probability that the Fed will hike the fed funds rate by 50 basis points by 2015. In 1994 when the Fed began tightening, it was the worst year for the bond market, but stocks didn’t peak until 1997 – 1999.

When the Fed increased the Fed funds rate in June 2004, the stock market peaked three and a half years later. Bull markets last 9 months to 3.5 years after the Fed starts tightening. If the Fed raises rates in September 2015, the bull market in stocks could last another 3.5 years.

Global Stock Market Valuation

Over the life of the S&P 500 Index, it has traded at a median of 16.52 times earnings. Today, the market is trading below the average. Furthermore, when interest rates are less than 8%, the average P/E multiple is 19. Historically, P/E ratios drop to 10 and below during periods of double-digit interest rates.

With almost everyone calling this a bubble, Professor Siegel asks, “How can that be if the market sells at an average multiple?” Professor Siegel joked that a bubble exists when an asset class is going up in price that you don’t own. If you own the asset class, then prices are going up on the fundamentals.

What is the S&P 500 Worth Today?

2013 top-down operating earnings of the S&P 500 are estimated at $107.28. At the November 7 level of 1,761 on the S&P 500 , the market is selling at a P/E ratio of 16.4 times 2013 earnings and 14.5 times projected 2014 earnings of $121.09.

At 19 times earnings, this year’s earnings puts the S&P 500 at 2,038, 16% higher than today. At 19 times expected 2014 earnings, it puts the S&P 500 Index at 2,300, 31% above November 7 prices.

Current earnings yield projects a 6.1% real return, nearly 6 percentage points over TIPS, about twice the historic average. Therefore, the equity risk premium is alive and well.

Clash of the CAPE Crusaders

In his 8/20/13 *Financial Times* op-ed, Professor Siegel admonished investors not to put faith in the biased data of the Shiller CAPE ratio. Professor Shiller of Yale invented a ‘cyclically adjusted P/E ratio’ to judge valuation of the market. He averages the past 10 years of earnings to compute his P/E ratio. On September 30, the CAPE ratio stood at 23.31, 46.3% above 15.93, its 140-year median, indicating that the market is considerably overvalued. Further, the CAPE methodology forecasts forward 10-year real returns for stocks of only 2.9%, 3.7 percentage points below the long-run average of 6.6%.

Professor Siegel argues that the Shiller CAPE ratio is too bearish. There have been only nine months since January 1991 when the CAPE ratio has been below its mean, but in 380 of the last 384 months from 1981 through 2012, the actual 10-year real returns in the market have exceeded forecasts using the CAPE model.

Professor Siegel contends that the CAPE is too bearish because of the downward bias in reported earnings. Huge write-offs like Time Warner’s $99 billion write-off of the $214 billion AOL acquisition depressed reported S&P 500 earnings.

The unprecedented $23.25 loss in reported earnings for the S&P 500 in the fourth quarter of 2008 resulted primarily from huge write-downs of three financial firms, namely AIG, Citigroup and Bank of America. In the 4Q of 2008, AIG recorded a $61 billion write-down. Although AIG had a weight of less than 0.2% in the S&P 500 Index at the time, its loss more than wiped out the total profits of the 30 most profitable firms in the index, firms whose market values comprised almost half of the index.

Professor Siegel also points to the “Aggregation Bias” that distorts aggregate earnings for the S&P 500. It does not make sense to take two firms, one healthy and one unhealthy. Add their two market values together and net the losses of unhealthy firms against profits of the healthy firms. This results in an aggregation bias to the P/E ratio, as losses do not reach across firms. Bondholders and taxpayers take the hit, not shareholders of other firms.

Professor Siegel contends that investors should focus on the CAPE ratio substituting the Bureau of Economic Analysis (BEA) National Income and Product Accounts (NIPA) figure for GAAP earnings. By this measure, CAPE Ratios are currently trading only slightly above the median.

Margins on the S&P 500

Bears also contend that S&P 500 earnings will decline as profit margins, currently at historic highs, revert to the mean. Professor Siegel presented compelling reasons why profit margins may stay high. Almost all the increases in margins are caused by the following three sources:

- Rising share of foreign profits that are taxed at a lower rate than U.S. statutory rates
- Increased weight of the high-margin technology sector
- Low leverage of firms with 80% of fixed rates locked in at historically low interest rates

In addition, since 1996, the ratio of corporate liquid assets to liabilities has nearly doubled.

Conclusion

In a subsequent interview with CNBC, Professor Siegel said, “The current projections for future earnings put the fair market value at 18,000 for the Dow Jones Industrial Average. It doesn't mean that we're going to get there right away or we're going to get there in a straight line. We've had a long time without even a 10 percent correction.” But he added: "I don't think this bull market is over yet. I still think there are good gains to come."