Dow 18,00: A Conversation

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Definition of major asset classes / indexes

- The source data on the return series for the major asset classes can be found in Professor Siegel's book *Stocks for the Long Run, 4th edition*. Professor Siegel compiled his own proprietary indexes on each asset class and updates each data series from the book to reflect most recent periods.

- Stocks: The total returns after inflation on the broadest index of stocks available at the time. (Stocks-real-total return index: 1802-2013)

- Bonds: The total returns on an index on U.S. government bonds after inflation. (Bonds-real-total return index: 1802-2013)


- Gold: The value of 1 dollar of gold bullion after inflation. (Gold-real-price index: 1802-2013)

- Dollar: The purchasing power of one US dollar. (Money: 1802-2013)

- Index performance assumes reinvestment of dividends, but does not reflect any management fees, transaction costs or other expenses that would be incurred by a portfolio or fund, or brokerage commissions on transactions in Fund shares.
Note: Stocks are typically subject to increased risks compared to U.S. Treasury Bills while bonds are subject to adverse consequences associated with rising interest rates that cause a decline in a bond’s price. A U.S. treasury bill has less risk than bonds because of its very short-term nature and the U.S. government is considered a good creditor. Gold is often invested in as a hedge for inflation, but there is market risk that gold prices fluctuate widely. The value of the U.S. dollar depreciates over time with inflation, so the primary risk is inflation risk.
Asset Returns
Total Real Return Indexes

January 1802 – December 2013

Stocks: 6.7% Real
Bonds: 3.5% Real
Bills: 2.7% Real
Gold: 0.6% Real
Dollar: -1.4% Real

Past performance is not indicative of future results.

Source: Siegel, Jeremy. *Future for Investors* (2005), With Updates to 2013
P-E Ratio on S&P 500, 1954-2014

Median PE over period = 16.57, latest 17.2

Avg PE when Interest Rates <8% = 19

Source: Bloomberg

Past performance is not indicative of future results.
What is the S&P500 worth today?

- 2013 top-down operating earnings of S&P 500 are estimated at $107.50. As of Jan 24th, S&P 500 at 1801, the market is selling at a Price to Earnings Ratio of 16.7 times 2013 earnings and 14.6 times 2014 earnings of $123.63.

- At 19 times 2013 earnings the S&P 500 is 2043, 13% higher than today.

- Current earnings yield on 2014 earnings as (E/P) projects a 6.8% real return, more than 6 percentage points over TIPS, almost twice the historical average.

Source: S&P

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Prof. Robert Shiller of Yale invented a “Cyclically Adjusted P-E ratio” to judge valuation of the market.

He averages past 10 years of Earnings to compute his PE ratio.

P-E ratio at year end 2013 was about 25, more than 50% above 130-year average.

CAPE implies that market considerably overvalued and forward looking real returns are 2-3% per year.
Shiller CAPE Ratio

Source: RobertShiller.com
Real Per Share Stock Earnings
1871 - 2012

Source: Standard and Poor’s and US Bureau of Economic Analysis
FASB Rulings Bias Earnings Downward

- Because of FASB Ruling 115 in 1993 and Rulings 142, and 144 in 2001, firms are required to write down any asset which loses value, whether it is sold or not.

- However, firms are not allowed to write-up values unless they sell the asset.

- In January 2000, Time Warner bought AOL for $214 billion. A huge capital gain for AOL shareholders but never put in S&P earnings, but in 2002, TW was required to write down its investment in AOL by $99b, producing the largest loss in US corporate history. This loss was in S&P earnings.

The “Aggregation Bias”

- The unprecedented $23.25 loss in reported earnings for S&P 500 firms in the fourth quarter of 2008 was primarily caused by the huge write-downs of three financial firms: AIG, Citigroup, and BankAmerica.

- AIG recorded a $61 billion fourth quarter 2008 loss.

- Although AIG had a weight of less than 0.2% in the S&P500 index at the time, its loss more than wiped out the total profits of the 30 most profitable firms in the S&P 500, firms whose market values comprised almost half the index.

The “Aggregation Bias”


- Assume healthy firm A:
  - $10 billion earnings; 15 P-E ratio
  - $150 b market Value

- Assume sick firm B:
  - $9 billion in losses;
  - $10 billion market value

- Cap-weighted Portfolio is 94% A and 6% B.

- P-E of Portfolio (A+B):
  - Earnings = +1 billion, Market Value $160b
  - P-E ratio 160.
  - Is this portfolio more than 1000% overvalued?
CAPE Ratios through September 2013

Reported, Operating, and NIPA CAPE Ratios
1987 - Sept 2013

Don’t put faith in the biased data of Cape crusaders

US stocks have risen more than 150 per cent from their bear market low, and many are asking whether they are overvalued. The S&P 500 Index is selling for between 15 and 16 times 2013 estimated earnings, close to its historical average. The bears claim that current earnings are unsustainably high and can be expected to fall. Bulls, including myself, believe earnings are unlikely to fall and higher price-to-earnings (P/E) ratios may propel stocks even higher.

Important support for the bear camp comes from the cyclically adjusted price-earnings (CAPE) ratio, developed by Robert Shiller of Yale University, which computes the p/e ratio on the average of the past 10 years of earnings. Its purpose is to smooth out temporary fluctuations in profits caused by business cycles.

The CAPE ratio has been a powerful predictor of long-term equity returns, forecasting strong returns in the early 1980s and poor returns from the market peak in 2000. But for many years its predictions have been very bearish. In fact, in all but nine
Margins on S&P 500 firms

Sources of Margin Increase

- Almost all the increased caused by:
  - Rising share of foreign profits
  - Increased weight of tech sector
  - Low leverage of firms

- Other bullish factors:
  - Since 1996, the ratio of corporate liquid assets to liabilities has nearly doubled.
  - The proportion of credit market debt that is long term has increased from 50% to 80%.

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Risks

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Important Information

You cannot invest directly in an Index. Index performance does not represent actual fund or portfolio performance. A fund or portfolio may differ significantly from the securities included in the Index. Index performance assumes reinvestment of dividends, but does not reflect any management fees, transaction costs or other expenses that would be incurred by a portfolio or fund, or brokerage commissions on transactions in Fund shares. Such fees, expenses and commissions could reduce returns.

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Basis points (BPS) is a unit that is equal to 1/100th of 1%, and is used to denote the change in a financial instrument. The basis point is commonly used for calculating changes in interest rates, equity indexes and the yield of a fixed-income security.

The S&P 500 Price/earnings ratio is defined as the S&P 500’s net income per share divided by its index level. The S&P 500 Index is a capitalization-weighted index of 500 stocks selected by the Standard & Poor's Index Committee designed to represent the performance of the leading industries in the United States economy.

NASDAQ is a computerized system established by the FINRA to facilitate trading by providing broker/dealers with current bid and ask price quotes on over-the-counter stocks and some listed stocks.

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Thank you.

Questions?
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