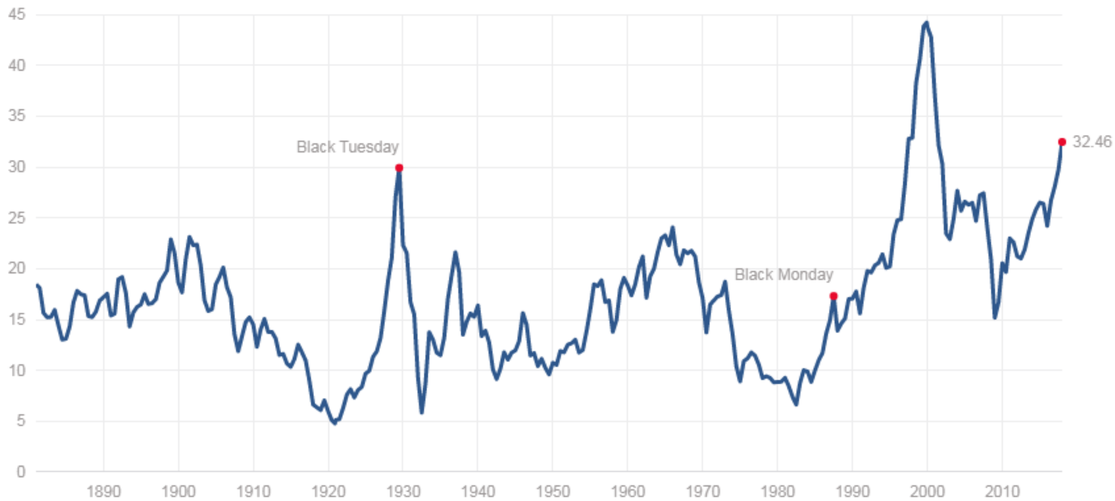
DK Analytics, Post #24: Stock & bond markets are "reversion *beyond* the mean machines" 12/31/17

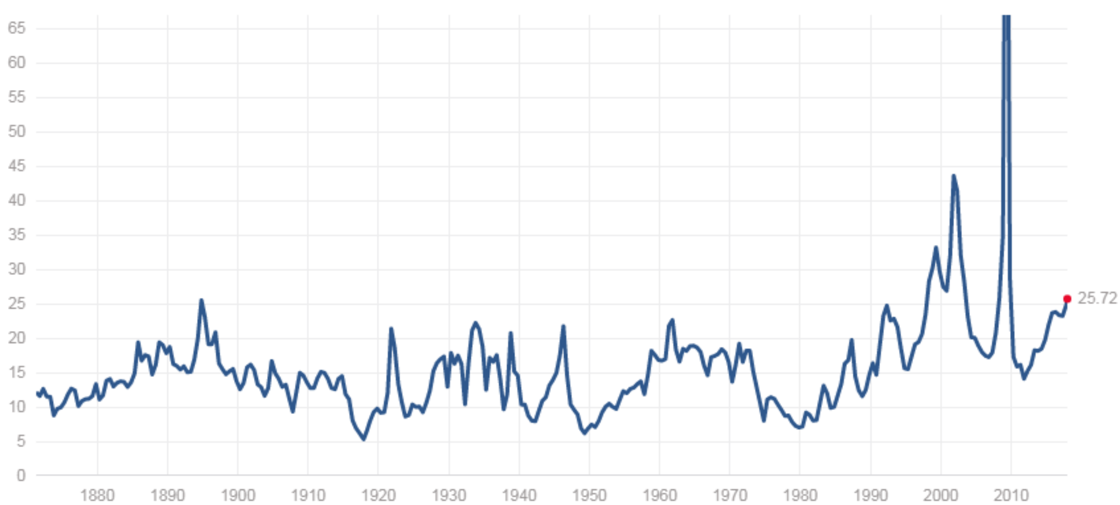
Trade weighted US$: 88.74; US 10-yr: 2.41%; S&P 500: 2,674; Oil: $60.42; Gold: $1,309; Silver: $17.15

Shiller S&P 500 P/E ratio (CAPE ratio)



Source: www.multpl.com/shiller-pe Mean P/E: 16.81 Median P/E: 16.15 Min P/E: 4.78 (Dec 1920) Max P/E: 44.19 (Dec 1999)
Definition: P/E based on avg. inflation-adjusted GAAP earnings from prior 10 years, known as the cyclically adjusted P/E ratio (CAPE ratio)

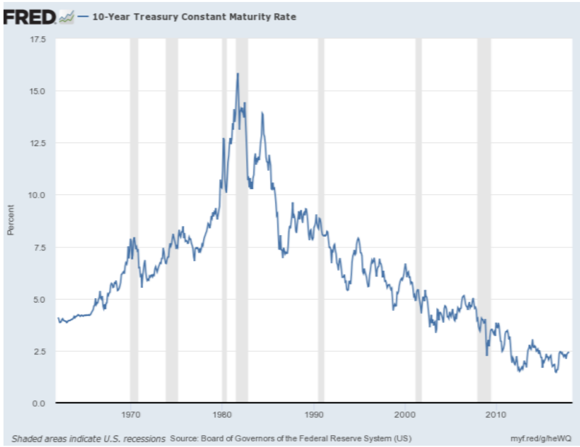
S&P 500 P/E ratio

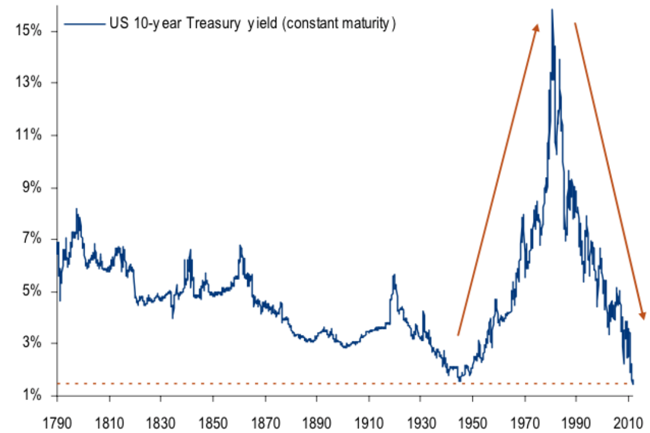


Source: www.multpl.com Mean P/E: 15.68 Median P/E: 14.68 Min P/E: 5.31 (Dec 1917) Max P/E: 123.73 (May 2009)
Definition: P/E, or Price to earnings ratio, based on trailing twelve month "as reported" (GAAP) earnings.

Introduction:

Let us refer to our title: markets are "reversion *beyond* the mean machines." Translation: the stock (and the bond) market spends little time at the mean; Mr. Market is more of a "manic-depressive." Just look at the nearly 147-year chart directly above. How often is the P/E at 15.68? The P/E is usually significantly higher or significantly lower. Which is precisely the point. Currently, we are at a historically elevated valuation (P/E). In fact, we've been at historically elevated valuations, which have been getting more elevated, on balance, for most of the past three decades! This is thanks mainly to a globally unprecedented, massive 36-year bull market in bonds, which has resulted in record low interest rates. Stock market manias -- valuations divorced from constructive return, inflation protection, and capital preservation "prospects" -- are the progeny of a protracted decline in benchmark interest rates. Manias have surprising little to do with the vigor of either GDP growth or EPS growth. Upshot: speculators are "hanging their hats" on sustained low interest rates despite "declining prospects." Good luck. For more detail, please turn the page.

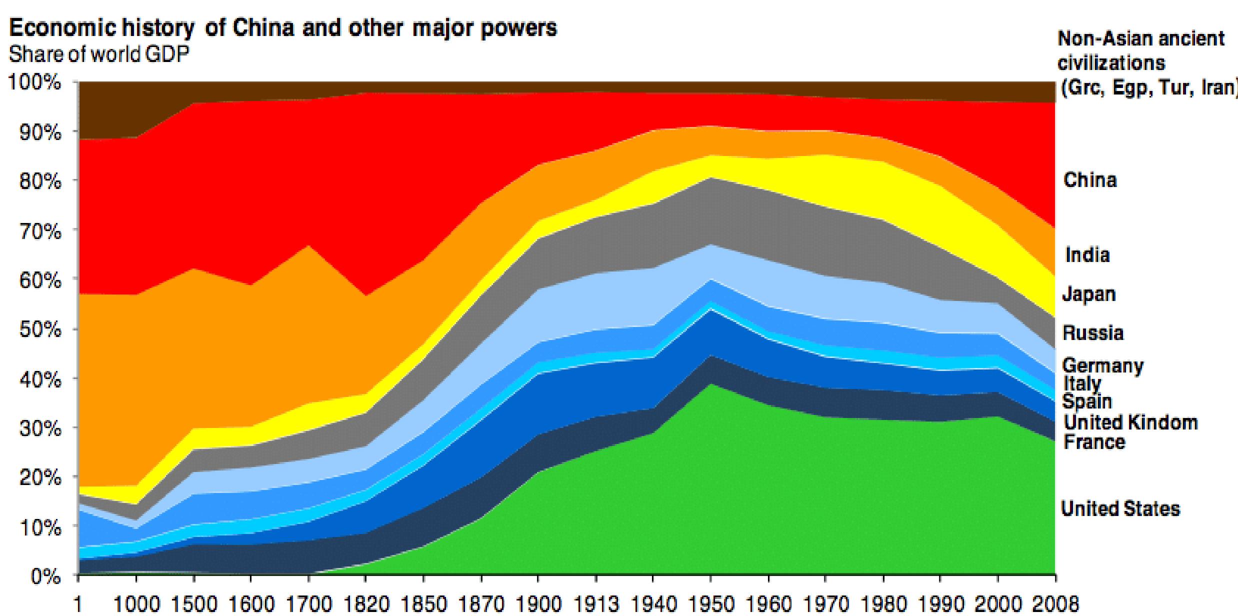




Sources: https://fred.stlouisfed.org/series/DGS10 & BoA Merrill Lynch Global Equity Strategy, Global Financial Data, Bloomberg

What determines P/Es and, to a very significant degree, stock prices?

The short answer: P/Es are highly inversely correlated to "benchmark" interest rates (Treasury bond yields) and P/E expansions or contractions extensively determine stock prices. Allow us a historical decomposition. Over time, real or inflation-adjusted GDP growth is determined by demographics (an increase or decrease in the working age population) and by productivity (more or less output per hour of labor). Since fossil fuels have been exploited and harnessed in machinery to generate hugely leveraged ag, economic, and (thus) population growth starting roughly 220 years ago, real *average* global GDP growth of 2%, even 3% plus, especially in the nineteenth century, became possible. And, as inflation rates in the Keynesian era that we've been in for roughly 80 years have averaged about 2% - 3%, it makes sense that nominal GDP growth (non-inflation adjusted economic growth) has averaged 4% - 6%. Nominal GDP growth of 4% to 6% over the past two centuries or so was applicable to capitalist OECD economies that industrialized well ahead of the very Asian giants, China and India, that had long (prior to the Industrial Revolution) dominated global economic output, together accounting for well over 50% of the world's GDP for some 1,800 years:

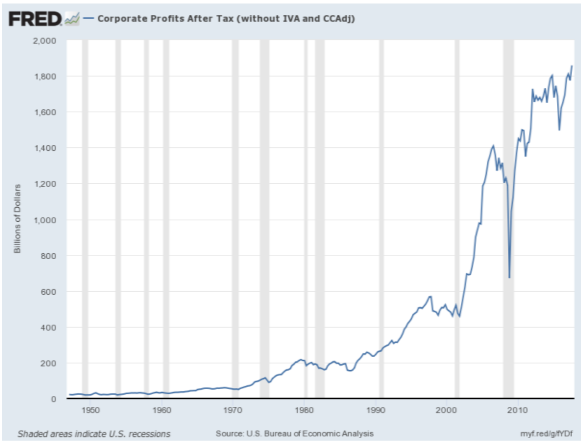


Sources: "Statistics on World Population, GDP and Per Capita GDP, 1 – 2008 AD," Angus Maddison, University of Groningen, NL; www.ggdc.net/maddison/oriindex.htm
Chart source: https://cdn.theatlantic.com/static/mt/assets/business/Screen%20Shot%202012-06-20%20at%209.37.55%20AM.png

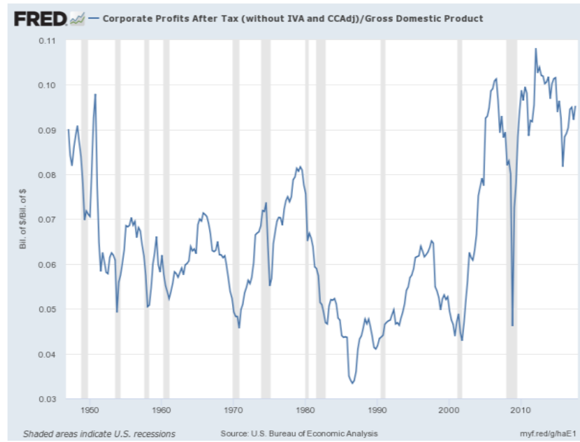
Let us get back to Industrial Age statistics, the backbone of our current "traditional" asset classes, stocks, bonds, and cash. "Traditional" assets are themselves derivatives of the foundational assets also known as commodities. Yet nowadays commodities are strangely (absurdly?) considered to be part of the "alternative" asset class universe.

In any event, let's examine, "sliced" by decades, nominal GDP growth juxtaposed against S&P 500 EPS growth and total S&P 500 returns (capital gains/losses plus dividends). The S&P 500 is a proxy for the OECD world; it is also *the* major stock index that wasn't shut down for a protracted period during WWII. But let's first look at three tenants:

1. Neither shareholders, employees, nor governments can "extract" an outsized slice of nominal GDP on a sustained basis without the under-endowed constituency/constituencies using political means to carve out a bigger slice or to wrest more of GDP back into its beneficiary pool at the expense of the "over-endowed." Dear shareholders:



Source: https://fred.stlouisfed.org/series/CPATAX



Source: https://fred.stlouisfed.org/graph/?g=fPLQ

2. Equally intuitive and related to the aforesaid: nominal EPS growth p.a. cannot outstrip nominal GDP growth p.a. on a sustained basis. Based on 80 years of history below, nominal S&P 500 EPS growth (4.7%) and nominal US GDP growth (4.8%) are virtually identical. It follows that ultra-long-term stock returns can't eclipse GDP growth.
3. Finally, valuation of EPS, i.e., the P/E or the earnings multiple, cannot sustainably exceed earnings growth. In other words, P/E expansion (or contraction) is a "self-correcting," reversion beyond the mean story. P/E expansion is nourished and sustained by a bull market in bonds (falling yields, higher NPVs). P/E contraction happens when bonds fall in price from high levels (today's low yields). This is how it all comes together:

Long term nominal equity returns examined

- Long-term nominal equity returns p.a., whether in the US or other OECD nations, typically mirror nominal GDP growth p.a.
- As such, S&P 500 *bull market* decades were not GDP growth or earnings growth driven, rather they resulted principally from P/E or multiple expansions in the '50s, '80s, and '90s -- the '80s and '90s valuation "bubble" was substantially deflated in the '00 years (the teens have seen that bubble expand again, fueled by "financial repression," which extended and deepened bond rallies):

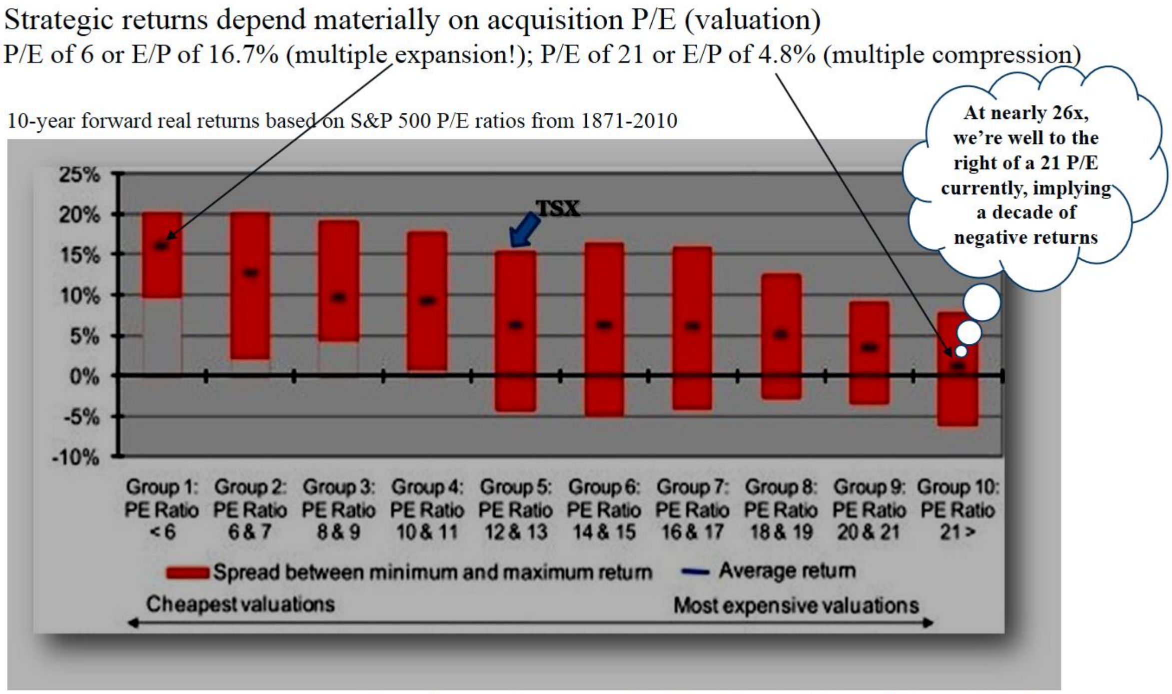
Decade	Nominal Gross Domestic Product	S&P 500 EPS	Inflation (Deflation)	S&P 500 Total Return
1930-1940	-1.4%	-5.0%	-1.9%	0.0%
1940-1950	11.2%	7.7%	5.0%	8.9%
1950-1960	6.3%	5.4%	2.1%	19.3%
1960-1970	6.6%	5.6%	1.9%	7.8%
1970-1980	9.7%	7.9%	6.3%	5.8%
1980-1990	8.3%	5.5%	6.3%	17.3%
1990-2000	5.6%	7.1%	3.4%	18.0%
2000-2010	4.0%	4.5%	2.4%	1.4%

All table statistics are nominal p.a. growth rates

Sources: S&P, Bureau of Labor Statistics, Ibbotson, Crestmont Research

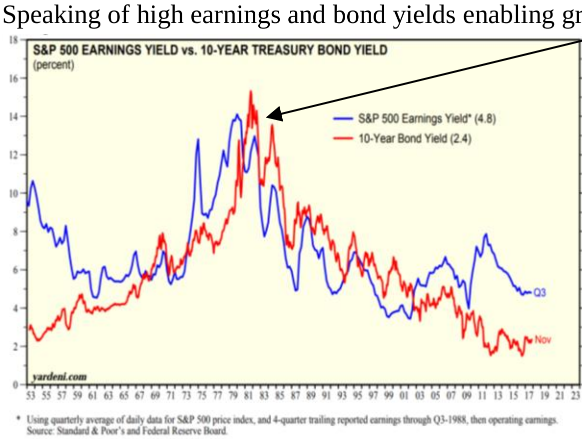
When are return prospects for stocks best? (And remember, stocks and bonds "travel together")

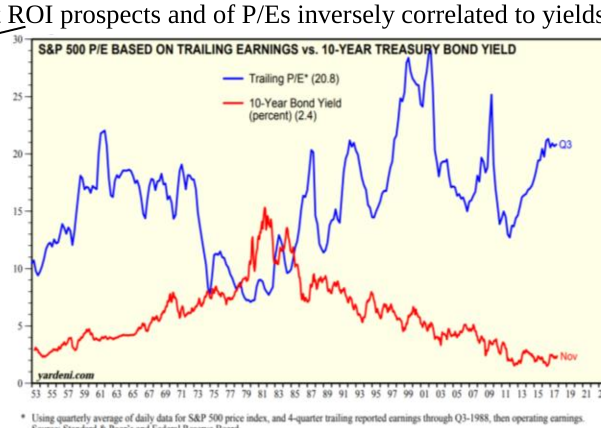
The short answer: when P/E valuations are modest, and both stock earnings yields ("E/Ps") and bond yields are high. *In other words, not currently*. Which businessman or landlord buys assets because they have exploded in value? Returns are hugely determined by what investors pay for investment grade, normalized earnings streams or payments to maturity. Finally, let the math work for you. A P/E of 6 is a 16.7% earnings yield with marked P/E or "multiple expansion" potential. A P/E of 25.7 is a paltry 3.9% earnings yield with pronounced multiple compression risk!



Sources: Plexus Asset Management (based on data from Prof Robert Shiller and I-Net Bridge per 9/30/2011)

Speaking of high earnings and bond yields enabling great ROI prospects and of P/Es inversely correlated to yields:





Source: www.yardeni.com/pub/sp500trailpe.pdf

Noteworthy: The S&P 500 earnings yield as of '89 is "pre-cont. biz charges puffed-up" (would be 3.9% currently); the above 20.8 P/E should be 25.7 (page 1)!

Risks:

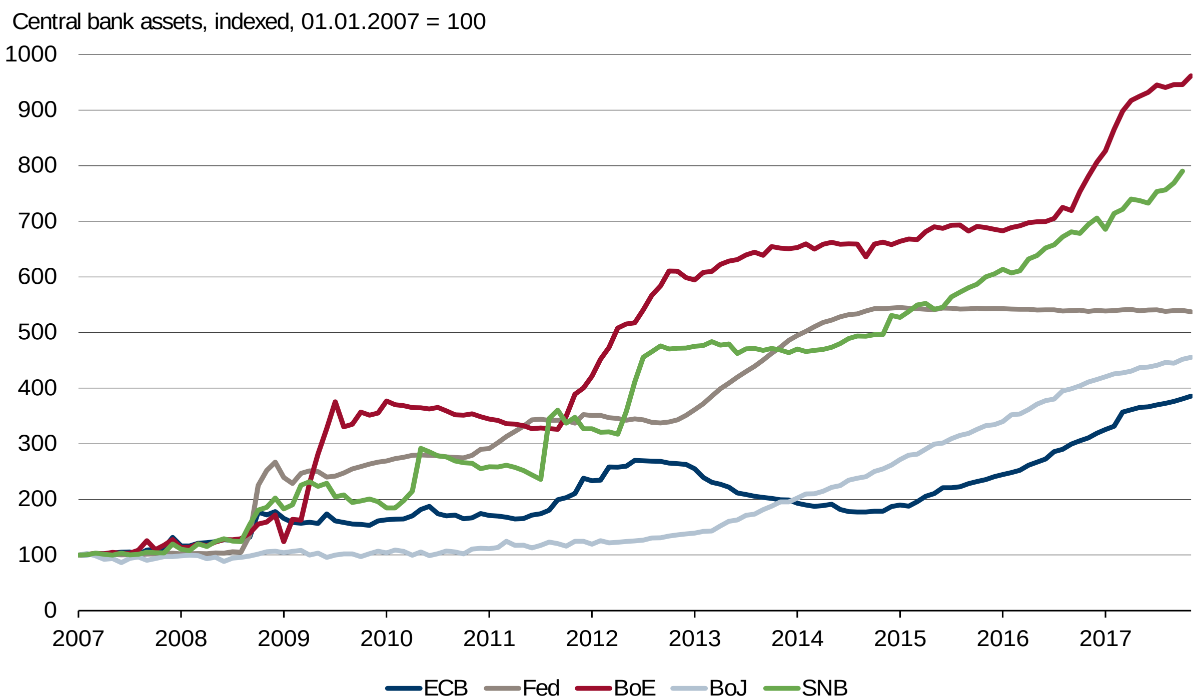
"There is nothing so disastrous as a rational investment policy in an irrational world." And a (repeated) confession: we were convinced that stocks, and especially bonds, were overvalued at lower valuations (lower P/Es and higher yields, respectively) as our publications history and our hypothetical model portfolio ("the portfolio") clearly show. Specifically, the portfolio has been underweighted in equities, has been overweighted in precious metals and safe cash (41.6% of portfolio value at outset), has had "fat" exposure to vital, scarce commodities (energy and ag picks comprised 41.6% of portfolio value at outset), and has held short position ETFs on the NASDAQ and in junk bonds (16.7% of portfolio value at outset). Not surprisingly, our hypothetical model portfolio has materially underperformed global stock markets over the past two years while holding its own against bonds.

This underperformance may continue. More germane: stock and bond valuations may become even more "irrational," meaning those investors that sell "bubble assets" (assets trading at valuations that seriously risk the loss of committed funds while inferring subpar or negative returns from same) may lose the opportunity to sell them at even higher prices. This is a real risk, as our model portfolio underperformance attests. But, we continue to believe that the downside risks are much, much more substantial than the upside potential in overvalued stocks and bonds. Commensurately, investors should determine whether they want to continue to speculate in overvalued long positions, or use the global central banking financial repression gift to "get while the getting is good," i.e., to reduce exposure/sell. We view the former as a much bigger risk than the latter, especially when considering the degree to which invested capital is at risk currently in so-called "traditional" assets.

Conclusion:

Great purchasing opportunities, i.e., much higher earnings yields (lower P/Es) and much higher bond yields are in the wings for those that capitalize on financial repression to reduce exposure to currently overvalued stocks and bonds. The reasons that stocks and bonds are likely to offer "reversion beyond the mean" bargains (low P/Es and much higher bond yields) are varied, based on ROI sense (economics), and "stock and bond interlocked." A shortlist includes:

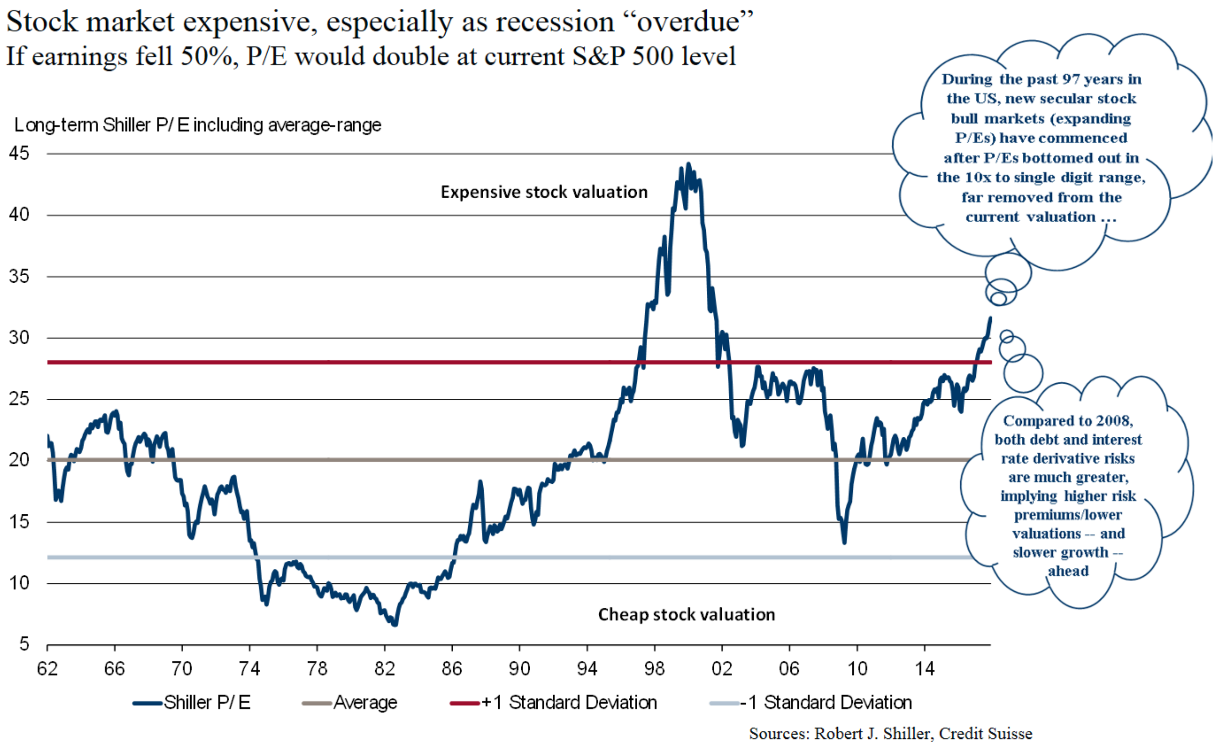
- The solvency threatening, unprecentended increase in global debt relative to GDP (which will require more QE!)
- The monetary inflation threatening, incomparably massive expansion in the major central bank balance sheets:



Sources: Bloomberg, Datastream, Credit Suisse

- Unprecedented misallocations, a potentially material reduction in affordable dense energy, drooping productivity, and declining property right protections (our toxic policy) threaten leveraged output, EPS, solvency, and freedom.
- Poor earnings quality (page 5): stock buyback-based, debt-fueled EPS growth in the US: real sales per share prior to buybacks are negative! This is shareholder and creditor (bondholder) negative.
- A geriatric (old and weak) business "upcycle." During an average recession, EPS tank by 30% – 50%. Our upcoming recession is likely to be much more punishing. S&P 500 EPS could decline well in excess of 50%.
- Vastly over-rated repatriation-based stock price support! Given high P/Es and the liquid overseas capital that could be repatriated (we've generously estimated 50% would), we see a 3% – 4% one-time stock price boost.

- An outsized EPS contraction combined with an outsized P/E contraction born of rising interest rates would pummel stock market caps/leading stock indices well in excess of 50% -- 70% or more, could easily be in the cards:



Sometimes it takes guts and rational thinking to make sound decisions. Sometimes it takes a contrarian ...

Happy New Year, everybody, and great health, great relationships, great fulfillment, and great investing in 2018!

Sincerely,
Dan Kurz, CFA
DK Analytics (www.dkanalytics.com)