“Could US stocks be fairly-valued under the "new normal" paradigm?”

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ARTICLE INFO	Robert A. Weigand (2012). Could US stocks be fairly-valued under the "new normal" paradigm?. *Problems and Perspectives in Management*, *10*(4)
RELEASED ON	Saturday, 22 December 2012
JOURNAL	"Problems and Perspectives in Management"
FOUNDER	LLC “Consulting Publishing Company “Business Perspectives”

NUMBER OF REFERENCES
0

NUMBER OF FIGURES
0

NUMBER OF TABLES
0

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SECTION 1. Macroeconomic processes and regional economies management

Robert A. Weigand (USA)

Could US stocks be fairly-valued under the "new normal" paradigm?

Abstract

Investors have expressed concern over the US stocks persistent high valuations relative to fundamentals, and the accompanying forecasts of below-average stock returns. This issue is important, as both consumer and business spending is thought to rise and fall with the value of stocks. This paper shows that perceptions that high valuations and low returns are unusual or abnormal are based on an efficient markets-type of paradigm. When viewed through an alternative framework that allows for more of an adaptive or evolutionary expectations-setting process, and, in particular, economic agents tendency to overweight the short term, US stocks do not appear nearly as overvalued, and may indeed be priced for the lower expected return equilibrium described by Gross (2009) and El-Erian's (2009) "new normal" paradigm.

Keywords: stock valuation, P/E ratios, efficient markets hypothesis, adaptive markets hypothesis.
JEL Classification: C22, C53.

Introduction

Practitioners and scholars have expressed concern over US stocks tendency to trade at higher multiples of earnings and other fundamentals over the past two decades compared with values of these variables observed over longer-term historical horizons. This issue matters to investors, as high relative valuation implies future returns on equities well below their historical averages. For example, based on current P/E ratios in the US, Asness (2012) estimates the average annual real return to a 60/40 portfolio of equities and bonds for the next 10 years to be as low as +2.2%, less than half its long-term average of +5.0%. There are also wider economic implications, however, as both consumer confidence and spending and corporate research and development and capital expenditures are thought to rise and fall with the values of stocks.

This paper develops the idea that expectations of lower price to earnings ratios and higher expected returns on equities associated with past historical eras are grounded in an efficient market-based framework that may not be as applicable to financial markets as many scholars have asserted. When viewed through alternative paradigms, such as the adaptive expectations hypothesis of Farmer and Lo (1999) and Lo (2004), which recognizes economic agents' tendency for short-term decision-making, the persistently high P/E ratios and low realized returns earned since 2000 do not appear nearly as unusual or abnormal. I investigate alternative constructions of a "normal" market P/E ratio that overcome the short-term earnings volatility associated with steep recessions or recoveries while better conforming to the shorter-term horizons over which investors set their expectations of what constitutes a "normal" or "average" base case.

I find that stocks are indeed priced to deliver returns that are low in relation to their long-term average, but these returns are in line with Gross (2009) and El-Erian's (2009) "new normal" paradigm, which recognizes the slow global growth, high unemployment, increased role of governments in business, growing inflationary pressures, and below-average returns that characterize the current business and investment climate. Investors' acceptance of these low returns may not be all that abnormal when viewed through the lens of the adaptive expectations hypothesis, vs. the stricter standard of rationality imposed by the efficient markets hypothesis. Low expected returns are in line with investors' tendency to favor the short term over the long term, and this may indeed be the new paradigm going forward for an extended period of time. Investors should adjust their expectations to at least account for these possibilities, as any planning and budgeting that assumes lower valuations and higher equity returns is not supported by the data at this time. It does indeed appear that the business world continues to track towards the somewhat dismal "new normal" paradigm proposed by Gross (2009) and El-Erian (2009).

The remainder of the paper is organized as follows. Section 1 describes the data and methodology used in the study. Section 2 reviews the literature and motivates the study. Empirical findings regarding market P/E ratios and equity valuation are reported in section 3, with conclusions contained in the final section.

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1. Data and methodology

As this paper's motivation (presented in the following section) will utilize several tables and graphs, I will describe the data sources and key computations prior to motivating the study. The stock price index, dividend, earnings and interest rate data used in the study are taken from the database maintained and updated by Shiller (2012). These data are available for download from his website. At the time they were accessed for this study, the data spanned January 1871 to June 2012. All the observations in the database are used in the analysis. Long-horizon stock returns are reported in real terms, as the effects of inflation over long periods are often significant. Data regarding S&P 500 constituent profit margins is obtained from Standard & Poor's Capital IQ database, and a time series of US GDP is obtained from the Federal Reserve Economic Database (FRED2, Federal Reserve Bank of St. Louis).

The market price to earnings (P/E) ratio is based on the most recent value of the S&P 500 divided by a 10-year, 5-year, and 3-year moving average of aggregate earnings (the P/E10, P/E5 and P/E3 ratios, respectively). Market P/E ratios are also computed using exponential moving averages of earnings with 36 and 60 monthly lags (referred to as the P/EXP3 an P/EXP5 ratios, respectively).

2. Efficient markets, mean reversion and adaptive expectations

Ever since Fama (1965) and Samuelson (1965) proposed the earliest forms of the efficient markets hypothesis (EMH), investors and academics have debated whether equities at a certain point in time are undervalued, fairly-valued or overvalued relative to companies' future prospects. Perceptions of market over- or undervaluation are important, as they influence investors' expectations regarding future stock returns, and thus their asset allocation decisions, which are a primary determinant of capital inflows and outflows in equity markets.

Stock price changes also influence consumer and business spending decisions. Consumer confidence and spending are thought to increase (decrease) with a rising (falling) stock market via the wealth effect (Garner, 1988; Case, Quigley and Shiller, 2005; Ferrer, Salaber and Zalewski, 2012). Stock prices send important signals to businesses regarding the likely profitability of long-term strategic initiatives. These initiatives are almost always supported by spending on research and development (R&D) and capital expenditures (CAPEX) that is vital for stimulating economic growth and creating jobs. Figure 1 depicts the cumulative real return to the S&P 500 and mean capitalization-weighted R&D/Sales and CAPEX/Sales during 1994-2011 (see Figure 1).

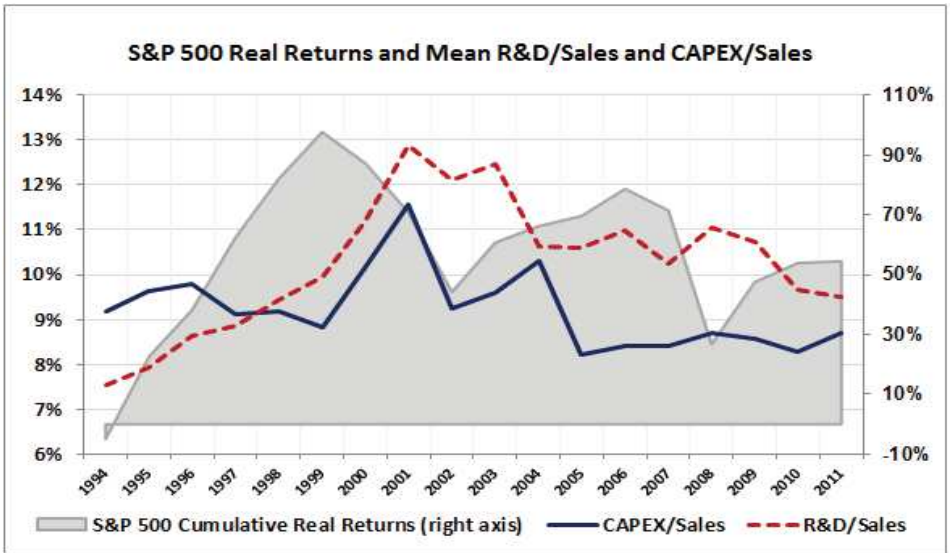

Fig. 1. S&P 500 cumulative real returns and mean R&D/sales and CAPEX/sales 1994-2011

Note: This figure depicts the cumulative real return to the S&P 500 and S&P 500 mean capitalization-weighted R&D/Sales and CAPEX/Sales 1994-2011.

The tendency for R&D and CAPEX spending to rise and fall with stock returns is evident in the figure. The negative real returns to US stocks from 2000-2011 have been associated with a general decline in companies' willingness to spend on R&D and CAPEX.

2.1. Mean reversion and the predictability of long-horizon stock returns. Although the strict form of the EMH holds that stock price changes should be completely random, researchers have documented that stock returns are at least partially predictable over long horizons.

For example, Campbell and Shiller (1998, 2001) show that an extremely high market P/E ratio and/or low dividend yield provide reliable forecasts of below-

average future stock returns over the following 10-year period. Most studies focus on the predictive power of stocks' mean P/E ratio, as firms' dividend payout ratios are influenced by a variety of other factors (Domian and Reichenstein, 2009). The high volatility of short-term earnings has led to widespread use of P/E ratios based on a 10-year moving average of earnings (the P/E10 ratio) to determine the relative valuation of stocks and predict future long-term returns, as originally proposed by Graham and Dodd (1934) and developed more extensively by Campbell and Shiller (1998, 2001) and Shiller (2002, 2005).

The P/E10 ratio is thought to be predictive of future returns because investors use the ratio's reciprocal (E10/P, or earnings yield) as an easily-observable proxy for the equity risk premium (Asness, 2012), and the ratio is thought to display mean-reverting properties (Domian and Reichenstein, 2009; and Buttonwood, 2011). Extreme values of the market P/E10 reliably predict future long-term returns because mean reversion of the market P/E10 occurs mainly via an adjustment of stock prices rather than earnings (Campbell and Shiller, 1998).

Coakley and Fuertes (2006) and He (2009) describe how a mean-reverting P/E10 ratio forecasts returns: at market tops (bottoms) the average P/E10 expands (compresses) due to inflated (depressed) stock prices. Thus, unusually high P/E10s predict below-average future returns as high stock prices subsequently correct downward, and unusually low P/E10s predict above-average future returns as stock prices recover from their depressed levels.

Practitioners and scholars have bemoaned US stocks' persistent overvaluation relative to the market P/E10 (Asness, 2012), which remains elevated at 22.6 (as of June 2012) compared with its historical average of 18.1 since the 1880s. Table 1 illustrates why an elevated P/E10 ratio matters to investors' perceptions of future stock returns over the next decade.

Table 1. Average 10-year real stock returns from various P/E10 starting values during 1926-2012

Starting level of the P/E10		Average real	Worst real	Best real
Low	High	10-year return	10-year return	10-year return
5.2	9.6	10.3%	4.8%	17.5%
9.6	10.8	10.4%	3.8%	17.0%
10.8	11.9	10.4%	2.8%	15.1%
11.9	13.8	9.1%	1.2%	14.3%
13.8	15.7	8.0%	-0.9%	15.1%
15.7	17.3	5.6%	-2.3%	15.1%
17.3	18.9	5.3%	-3.9%	13.8%
18.9	21.1	3.9%	-3.2%	9.9%
21.1	25.1	0.9%	-4.4%	8.3%
25.1	46.1	0.5%	-6.1%	6.3%

Note: This table shows the average annual real return to the S&P 500 for the 10 years following various P/E10 starting values during 1926-2012.

The table divides the time periods 1926-2012 into deciles based on the starting value of the market P/E10 ratio, and reports stock returns over the next 10-year period (ending in June 2012). The results show that future 10-year returns decline nearly monotonically with the value of the P/E10 at the start of the 10-year period. Historically, starting from P/E10s in the 9th decile (21.1 to 25.1, the current situation for US equities), 10-year real returns have averaged only 0.9%, with the worst 10 years delivering real returns of −4.4% (the past decade), and the best 10 year real returns equal to 8.3%.

Based on the P/E10's current value of 22.6, Asness (2012) estimates the average annual real return to a 60/40 portfolio of equities and bonds for the next 10 years to be as low as +2.2%, which presents significant problems for pension funds and other entities budgeting for real portfolio returns closer to their long-term average of +5.0% (Asness and Ilmanen, 2012).

Several factors have led many investors to believe that the current market P/E10 of 22.6 is unsustainably high. One such factor is the currently high level of US profit margins, which are known to revert to the mean over time (Lim, 2012; and Buttonwood, 2011). Figure 2 shows the mean capitalization-weighted operating and net profit margins in the US from 1994-2011. Both margins are currently at all-time highs. Mean reversion in profit margins from these currently elevated levels would put downward pressure on the denominator of the P/E10, making stocks look even more expensive relative to the long-term trend in earnings. In an efficient market, this would lead to further downward adjustments in stock prices.

Some analysts assert that a long-term equilibrium also exists between corporate profits and wages and salaries as a percentage of GDP. This view holds that when an economy produces too much of one

type of wealth at the expense of the other, the forces of mean reversion rebalance the relation between profits and wages and salaries. According to influential author and money manager Robert Arnott, the US Federal Reserve's policy of prolonged monetary easing has given an artificial boost to US corporate profits that is unsustainable, setting up significant mean reversion in profits later in this decade. "Corporate earnings are the largest share of GDP since 1929, while wages are the smallest share of GDP since 1937. These trends are unlikely to continue forever. Profit margins will eventually come down as the economy improves and companies begin hiring more aggressively" (Lim, 2012).

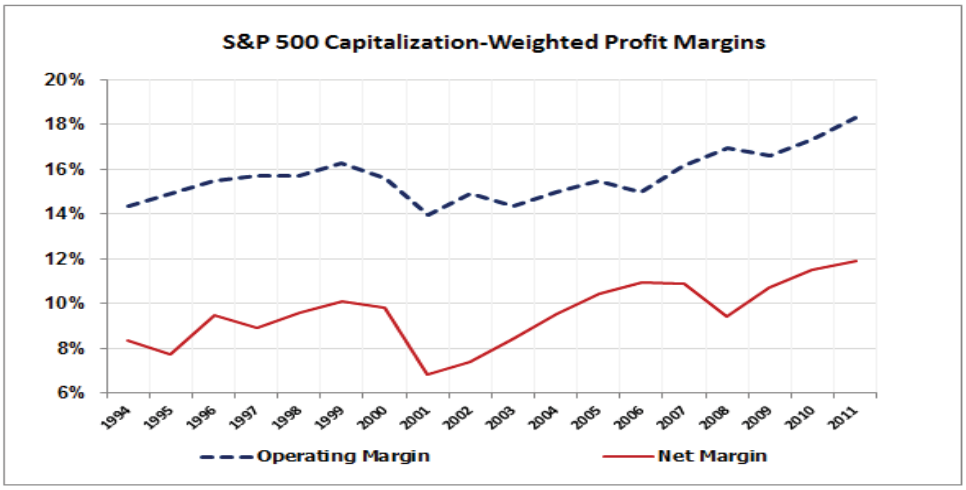

Fig. 2. Mean US capitalization-weighted operating and net profit margins during 1994-2011

Note: This figure depicts mean US capitalization-weighted operating and net profit margins during 1994-2011.

Figure 3 shows after-tax corporate profits and total wages and salaries in the US as a percentage of US GDP since 1947. Corporate profits are indeed at a 65-year high relative to GDP, and wages and salaries at a 65-year low. This provides further support for the viewpoint that earnings growth is overdue to revert to a more average, sustainable trajectory, which will make US stock valuations appear even more expensive relative to earnings.

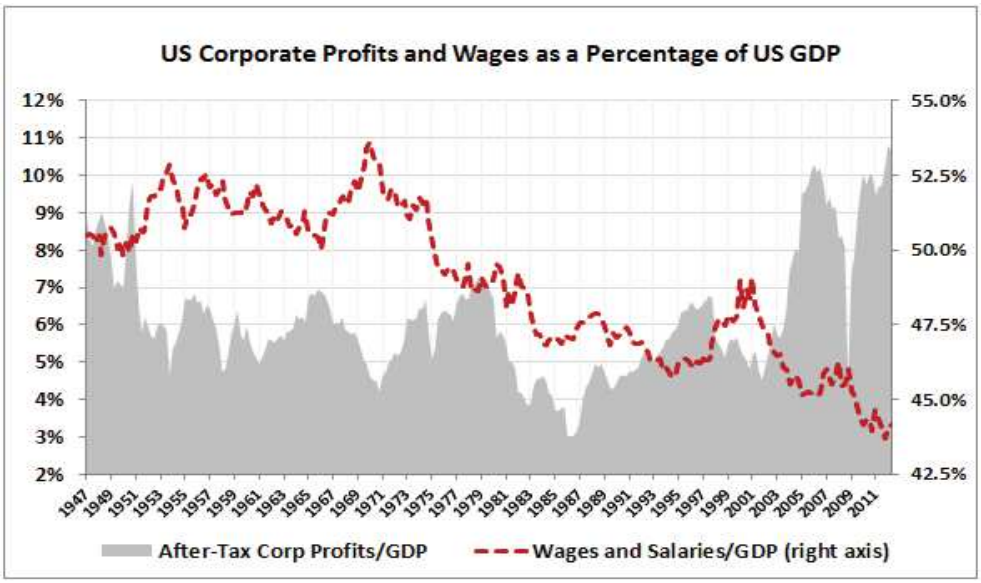

Fig. 3. US corporate profits and wages as a percentage of GDP during 1947-2012

Note: This figure depicts after-tax corporate profits and total wages and salaries in the US as a percentage of US GDP during 1947-2012.

2.2. Is mean reversion inevitable? It is important to remember that a prediction of mean reversion in stock prices, earnings and/or profit margins is based on a framework in which markets are rational and efficient, at least over long horizons. Coakley and Fuertes (2006) find that investor sentiment is also an important factor that can cause stock prices to deviate from fundamental values, however. In particular, they find that sentiment-based positive shocks have "more pronounced and long-lasting effects than similar

shocks in bear markets" (p. 2327). These authors conclude that stock prices become increasingly disconnected from fundamentals during bull markets, but "valuation ratios and prices move toward their equilibrium levels during bear markets" (p. 2325).

Coakley and Fuertes' (2006) finding that stock valuations become increasingly disconnected from fundamentals due to fluctuations in investor sentiment (a behavioral factor) makes valuation-based predictability driven by mean reversion a potentially transitory effect. Kim, Nelson and Starz (1991) and He (2009) present evidence that the mean-reverting properties of stock returns and the market P/E10 ratio have been inconsistent through time. Kim et al. (1991) find no mean reversion in stocks' valuation ratios post-World War II, while He (2009) reports that the ratio is only mean-reverting before and after the 1942-1989 period. Similar results can be found in the work of other researchers, including Carlson, Pelz and Wohar (2002), who find that the average market P/E ratio shifted to a higher mean in recent decades; Manzan (2007), who documents a structural break in the equity premium around 1950; Siegel (2007), who rationalizes that stocks' dividend yield permanently falling below the yield on the 10-year T-note in 1958 did not indicate overvaluation in equities; and Weigand and Irons (2008), who report that stock prices and earnings are no longer cointegrated post-1960, implying that a linear combination of prices and earnings, such as the market P/E10 ratio, will no longer revert to the mean. All of these studies raise doubts about whether stocks' relative valuation, as measured by the market average P/E10 ratio, is consistently mean-reverting.

The extent to which equity valuations rationally reflect fundamental information has been further questioned in a recent paper by Lucca and Moench (2012), who find that "… stocks in the US and several other major economies have experienced large abnormal returns right before US monetary policy announcements since 1994" (p. 10), and that "… 80% of the US equity premium since 1994 was earned in the 24 hours before FOMC announcements" (p. 1). These findings imply that most of the gains to US stocks since 1994 have been driven by the US Federal Reserve Bank's prolonged efforts to keep market interest rates unnaturally low (including the zero-interest rate policy (ZIRP) and various "quantitative easing" programs), with fundamental information regarding revenues, earnings, cash flows and dividends having a secondary (and possibly insignificant) effect on equity valuations over the past two decades.

2.3. Are investor expectation long-term efficient or short-term adaptive? Investors' perceptions regarding market over- and undervaluation are always formed relative to some expectation of what constitutes a rational or "normal" base case. Asness (2012) insightfully observes that the use of a 10-year moving average of earnings is essentially ad hoc: "… there is no 'magic' to 10 years" (p. 5). While gauging market valuation using a 10-year moving average of earnings in the P/E10 ratio overcomes a statistical problem – short-term earnings volatility can make stocks look unrealistically cheap or expensive over short horizons – findings from the rapidly-growing field of behavioral finance suggest that investors most likely do not benchmark their expectations to a full 10 years of information, but are rather motivated by more short-term considerations. If investors set their expectations based on shorter-horizon information, the P/E10 ratio, although statistically desirable, may be poorly matched with investors' actual expectations-setting process. It seems reasonable to assert that the market P/E ratio should be constructed so that it not only smooths out excessive earnings volatility, but also reflects the manner in which investors actually form their expectations. After giving further consideration to the way investors set their expectations below, the next section of this study will consider whether use of the P/E10 ratio is still applicable today, and examine alternative constructions of the market P/E ratio and the implications for equity returns in the 21st century capital markets.

One of the earliest references to investors' tendency to base their decisions on short-term considerations comes from Keynes' General Theory (1936). In his classic Chapter 12, Keynes informs us that investors set their expectations by "… assuming that the existing state of affairs will continue indefinitely …" Keynes goes on to describe investing as "... a battle of wits to anticipate short-term changes in valuation ...", and in the chapter's concluding paragraphs, Keynes further observes that "human nature desires quick results; people find a peculiar zest in making money quickly".

While largely rejected by the EMH, human nature's proclivity for short-term satisfaction has been increasingly recognized by the field of behavioral finance, which views capital markets from more of a biological or evolutionary perspective. Keynes' observations regarding human nature are now considered tenets of behavioral finance, including the "status quo trap" and/or "anchoring bias", defined as investors and analysts making predictions that are too highly influenced by recent observations (Nofsinger, 2010).

In his analysis of the behavioral finance approach to markets Lo (2007) concludes: "Clearly the time is

now ripe for an evolutionary alternative to market efficiency" (p. 20). An alternative perspective to the EMH has arisen in recent years, most commonly referred to as the "Adaptive Expectations Hypothesis". In this framework, interactions among institutions, instruments and investors result in a dynamic evolution that proceeds according to the laws of "economic selection". From this more behavioral perspective, financial agents compete and adapt, but may not do so as optimally as predicted by the EMH, given its much higher requirement of rationality (Farmer and Lo, 1999; Farmer, 2002; Lo, 2002, 2004, and 2005).

Analysts' forecasts and predictions increasingly reflect the perspectives of the adaptive expectations hypothesis. In particular, Gross (2009) and El-Erian (2009) have defined a "new normal" that is more in line with the slow global growth, high unemployment, increased role of governments in business, growing inflationary pressures, and below-average returns that characterize the current business and investment climate. In particular, note that below-average returns result from assets trading at valuations that are higher relative to fundamentals than is considered "normal" or "average" over the longer-term history of investments often studied by scholars such as Shiller (2002) and Siegel (2007).

In the following section I therefore examine alternative constructions of the market P/E ratio that span at least one full business cycle, thus avoiding the short-term earnings volatility associated with steep recessions or recoveries, but are more compatible with the shorter-term horizons over which investors form their expectations of what constitutes a "normal" or "average" base case. The implications of these alternative measures for market valuation and future returns are also analyzed and discussed.

3. Market valuation using alternative P/E ratios

Figure 4 depicts the S&P 500 P/E10 ratio from December 1994 to June 2012 compared with accumulative mean P/E10 ratios computed over various horizons. The horizons correspond to different assumptions regarding the way investors set their expectations. The most conservative accumulative mean begins in 1881, which assumes investors benchmark their expectations to the longest historical time series possible.

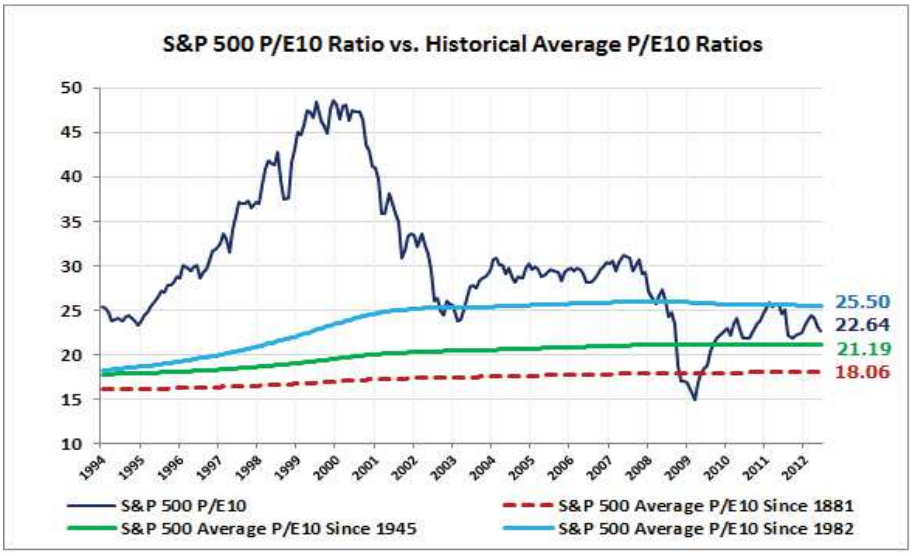

Fig. 4. S&P 500 P/E10 ratio and mean P/E10 ratios

Note: This figure depicts the S&P 500 P/E10 ratio and the accumulative mean P/E10 starting from 1881, 1945 and 1982.

The second begins in 1945, assuming investors divide the financial world into pre- and post-World War II eras. The third begins in 1982, which assumes investors' expectations are benchmarked to the period spanning the last secular bull market (spanning 1982-1999) and the most recent secular bear market (spanning 2000-present). The accumulative mean P/E10 ratios in Figure 4 correspond to the fair value calculations of the S&P 500 depicted in Figure 5. From 1994-2012, the fair value of the S&P 500 is calculated by multiplying actual S&P 500 earnings times one of the 3 accumulative mean P/E10 ratios, thus estimating the level of the S&P 500 if stocks traded at each multiple. The accumulative mean P/E10 ratio calculated from 1881-2012 equaled 18.06 as of June 2012 (see Figure 4), corresponding to the S&P 500 fair value of 1056 (see Figure 5).

The S&P 500 traded at a P/E10 of 22.64, however, suggesting that US stocks remain overvalued relative to their average P/E10 over the past 133 years.

With the most recent level of the index equal to 1323, vs. a fair value of 1056 based on a P/E10 of 18.06, this comparison makes US stocks appear

overvalued by as much as 25% vs. their long-term relation with earnings. The accumulative mean P/E10 beginning in 1945 equals 21.19, however, which provides a fair value estimate of 1239, suggesting that US stocks are only overvalued by 6-7%. But the accumulative mean calculated since 1982 equals 25.50, suggesting that, from the perspective of an investor basing his/her expectations of what constitutes normal to the 1982-2012 period, US stocks are undervalued, as fair value at this P/E10 multiple equals 1491. To such an investor, US stocks are trading 12.7% below fair value.

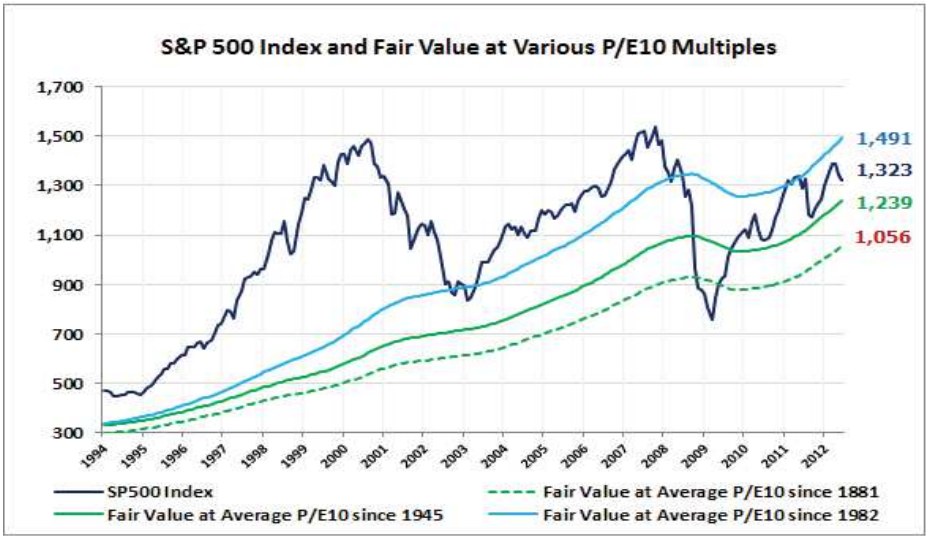

Fig. 5. S&P 500 and fair value at various P/E10 ratios (1994-2012)

Note: This figure depicts the S&P 500 index and the fair value index assuming stocks sell for the accumulative mean P/E10 multiple calculated starting from 1881, 1945, and 1982, respectively.

The key point from the above analysis is that any conclusion regarding stocks' relative valuation and possible over- or undervaluation depends on the assumptions underlying investors' expectations-setting process. If investors' behavior conforms more to the adaptive expectations paradigm originally described by Keynes (1936), and developed more formally by Farmer and Lo (1999), Farmer (2002), Lo (2002, 2004, and 2005) and Nofsinger (2010), it is easier to understand how investors have accepted the prolonged elevation of the P/E10 ratio that has characterized the last several decades of equity investing. When expectations are adaptive and evolutionary, what was once considered unusual or abnormal can gradually become the "new normal".

None of the concerns regarding future stock returns as presented in Table 1 are invalidated by these calculations, of course. If the US stocks continue trading at P/E10 ratios in the low 20s, the implication is that future stock returns will remain well below average, with a likely estimate of 1% per year real capital appreciation plus a 2% real dividend yield, for a total real return of approximately 3%. Notice that these estimates conform with the "new normal" paradigm proposed by Gross (2009) and El-Erian (2009). With inflation currently running between 2-3%, the forecast for nominal US stock returns over the next decade based on the current level of the P/E10 equals 5-6% per year, approximately half stocks' long-term average.

In addition to varying the horizon over which expectations are set, I also vary the length and computation of the moving average of earnings in the following figures. First, addressing Asness's observation that a 10-year moving average of earnings is chosen arbitrarily, and that investors are more likely motivated by shorter-term concerns, Figure 6 depicts S&P 500 fair value re-estimated based on a market P/E ratio using a 5-year moving average of earnings in the denominator (the P/E5). Now the fair value estimates on the S&P 500 range from 971-1322, suggesting that the US stocks are, at best, fairly-valued (based on a mean P/E5 of 22.28 since 1982), and may be, at worst, overvalued by as much as 36% (based on a mean P/E5 of 22.26 since 1881) – a more negative result than the findings based on fair value estimates using the P/E10. Notice what drives this result.

The most recent P/E10 calculation includes a long period of rising valuations (2003-2007), which makes the current market P/E10 appear more normal. The P/E5, on the other hand, places equal weight on a long period of lower market P/E5 ratios (2008-2010), which makes current market valuations appear more expensive. The conclusion here is that simply shortening the length of the earnings moving average does not always result in less strict market valuations. The US stocks currently appear more overvalued based on the P/E5 ratio than they do based on the P/E10 ratio.

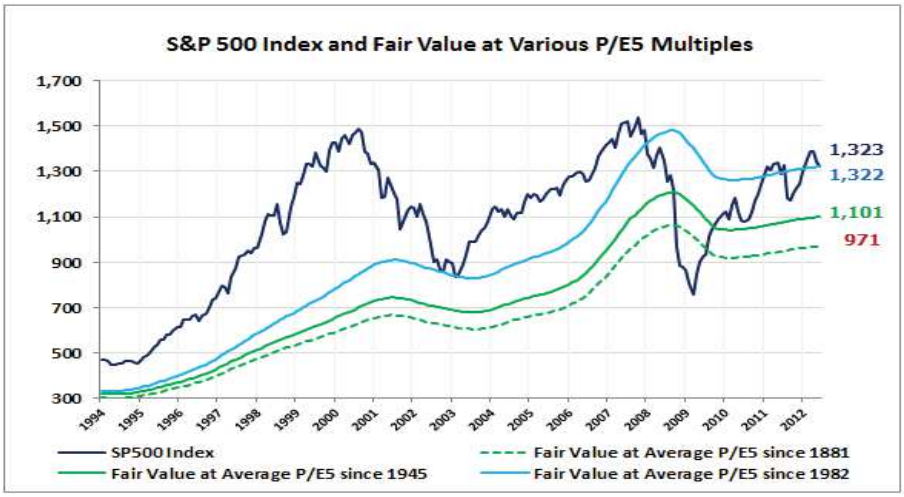

Fig. 6. S&P 500 and fair value at various P/E5 ratios (1994-2012)

Note: This figure depicts the S&P 500 index and the fair value index assuming stocks sell for the accumulative mean P/E5 multiple calculated starting from 1881, 1945, and 1982, respectively.

In Figures 7 and 8, I present fair value calculations based on P/E ratios using exponential moving averages of earnings. An exponential moving average places more weight on the most recent observations in the series. Looking back 3 and 5 years requires use of 36 and 60 lags of aggregate monthly earnings (the P/EXP3 and P/EXP5, respectively). These constructions of the market P/E ratio further conform to investor tendencies to overweight recent events as described by the status quo trap and anchoring bias. As shown in Figure 7, the more responsive P/EXP5 fair value estimates range between 1034 (based on a mean P/EXP5 of 17.42 since 1881) and 1481 (based on a mean P/EXP5 of 24.93 since 1982). These results imply that the US stocks are trading somewhere between 12% undervalued and 28% overvalued.

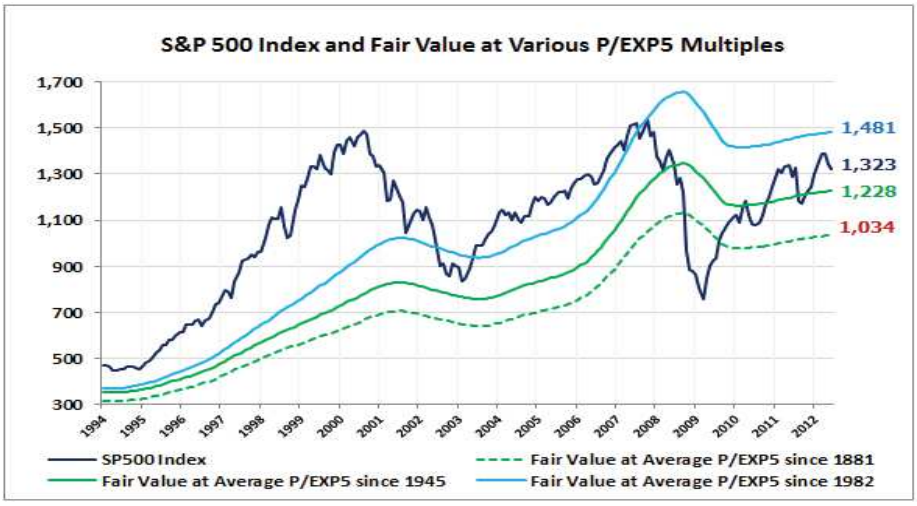

Fig. 7. S&P 500 and fair value at various P/EXP5 ratios (1994-2012)

Note: This figure depicts the S&P 500 index and the index fair value assuming stocks sell for the accumulative mean P/EXP5 multiple (using an exponential moving average of earnings based on 60 monthly lags) calculated starting from 1881, 1945, and 1982, respectively.

Figure 8 depicts estimates of fair value for the S&P 500 based on accumulative mean P/EXP3 ratios calculated over various horizons. The fair value estimates now range from 1109 to 1534, based on mean P/EXP3 ratios between 16.42-22.72 (since 1881 and 1982, respectively), vs. the current market P/EXP3 of 20.11. If investors set their expectations based on the mean P/EXP3 of 16.42 since 1881, and the US stocks are currently trading at a P/EXP3 multiple of 20.11, then stocks are overvalued by approximately 19%, and it would take an official bear market (a full − 20% decline) to reset stock prices to fair value. If, however, investors benchmark their expectations to an accumulative mean P/EXP3 multiple of 22.72 (since 1982), the US stocks may be undervalued by as much as 16%. Once again, conclusions regarding under- and overvaluation depend on investors' expectations-setting process, which is ultimately unobservable and can only be inferred by applying the most relevant theoretical framework.

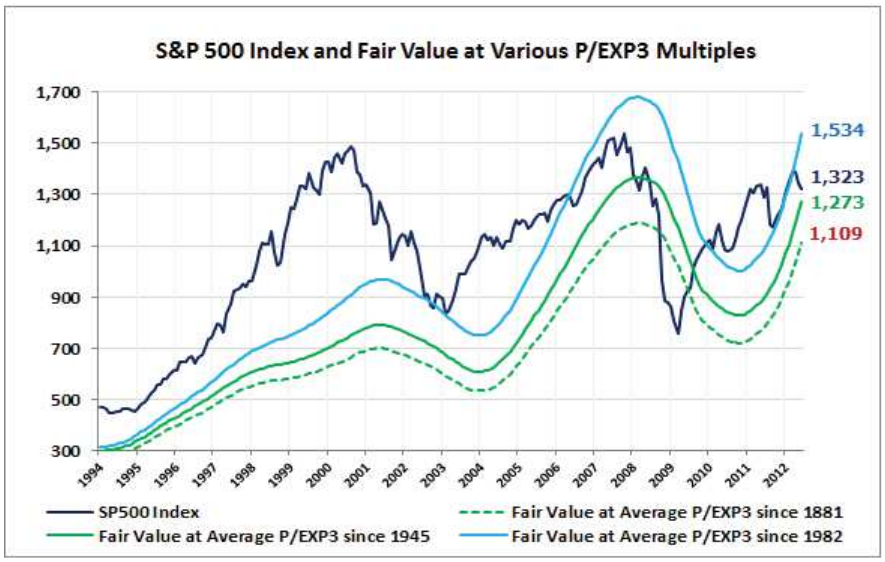

Fig. 8. S&P 500 and fair value at various P/EXP3 ratios (1994-2012)

Note: This figure depicts the S&P 500 index and the fair value index assuming stocks sell for the accumulative mean P/EXP3 multiple (using an exponential moving average of earnings based on 36 monthly lags) calculated starting from 1881, 1945, and 1982, respectively.

Summary and conclusions

Practitioners and scholars have expressed concern over US stocks' tendency to trade at higher multiples of earnings and other fundamentals over the past two decades compared with values of these variables observed over longer-term historical horizons. This issue matters to investors, as high relative valuation implies future returns on equities well below their historical averages. For example, based on current P/E ratios in the US, Asness (2012) estimates the average annual real return to a 60/40 portfolio of equities and bonds for the next 10 years to be as low as +2.2%, less than half its long-term average of +5.0%. There are also wider economic implications, however, as both consumer confidence and spending, as well as corporate capital expenditures and spending on research and development, are thought to rise and fall with the values of stocks.

This paper develops the idea that expectations of lower price to earnings ratios and higher expected returns on equities associated with past historical eras are grounded in an efficient markets-based framework may not be as applicable to financial markets as many scholars have asserted. When viewed through alternative paradigms, such as the adaptive expectations hypothesis of Farmer and Lo (1999) and Lo (2004), which recognizes economic agents' tendency for short-term decision-making, the persistently high P/E ratios and low realized returns earned since 2000 do not appear nearly as unusual or abnormal. I investigate alternative constructions of a "normal" market P/E ratio that overcome the short-term earnings volatility associated with steep recessions or recoveries while better conforming to the shorter-term horizons over which investors form their expectations of what constitutes a "normal" or "average" base case.

I find that stocks are indeed priced to deliver returns that are low in relation to their long-term average, but that these returns are in line with Gross (2009) and El-Erian's (2009) "new normal" paradigm, which recognizes the slow global growth, high unemployment, increased role of governments in business, growing inflationary pressures, and below-average returns that characterize the current business and investment climate. Investors' acceptance of these low returns may not be all that abnormal when viewed through the lens of the adaptive expectations hypothesis, vs. the stricter standard of rationality imposed by the efficient markets hypothesis. Low expected returns are in line with investors' tendency to favor the short term over the long term, and this may indeed be the new paradigm going forward for an extended period of time. Investors should adjust their expectations to at least account for these possibilities, as any planning and budgeting that assumes lower valuations and higher equity returns is not supported by the data at this time. It does indeed appear that the business world continues to track towards the somewhat dismal "new normal" paradigm proposed by Gross (2009) and El-Erian (2009).

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