

## THE P/E REPORT:

### QUARTERLY REVIEW OF THE PRICE/EARNINGS RATIO

By Ed Easterling

June 30, 2010 Update

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<b>AS OF: JUNE 30, 2010</b>	<u>REPORTED</u>	<u>ADJUSTED<sup>1</sup></u>	<u>CRESTMONT<sup>2</sup></u>
<b>“P”</b> Closing Price (S&P 500 Index) <sup>3</sup>	1031	1031	1031
<b>“E”</b> Current Estimate (S&P 500 EPS) <sup>4</sup>	\$64	\$55	\$63
<b>P/E</b> Price/Earnings Ratio <sup>5</sup>	16.2	18.7	16.4

Notes:

(1) *adjusted using the methodology popularized by Robert Shiller (Yale; Irrational Exuberance), as modified for quarterly data*

(2) *based upon historical relationship of EPS and GDP as described in chapter 7 of Unexpected Returns: Understanding Secular Stock Market Cycles; useful for predicting future business cycle-adjusted EPS; Current and future values in process of update based upon 2009 GDP data and BEA historical revisions*

(3) *S&P 500 Index is the value at the date listed in the table*

(4) *‘Reported’ is based upon actual net income for the past year (trailing four quarters); ‘Adjusted’ is an inflation-adjusted multi-year average; ‘Crestmont’ see note 2*

(5) *P divided by E*

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#### CURRENT STATUS (Second Quarter-End 2010)

P/E has dipped to or just below the normalized valuation range and is now ‘somewhat undervalued’; the stock market remains positioned for above-average returns over the next year or two (assuming that the economy is not expected to enter a multi-year period of significant deflation or relatively high inflation). Notwithstanding the overall trend, remain aware that typical market volatility makes it likely that the recent significant short-term swings and market corrections may continue or occur again later this year.

*NOTE: Crestmont Research does not analyze the stock market or interest rates with a perspective about near-term direction or trends; Crestmont Research focuses on a longer-term, bigger picture view of market history and its fundamental drivers. Occasionally, the analysis indicates that a position has extended beyond the typical range of variation. In those, times, the view can have relatively shorter-term implications. Also in those times, however, markets can take a path that is longer and farther than most investors expect to ultimately be restored to a midrange position of balance of condition.*

*Details and descriptions about the Crestmont and Adjusted methodologies for P/E and its components are provided later in this report. In summary, the Adjusted methodology, popularized by Robert Shiller (Yale; Irrational Exuberance), uses the trailing ten-year average earnings adjusted for inflation; the Crestmont methodology uses earnings based upon its long-term trend with the economy.*

## RECENT STATUS

(First Quarter-End 2010)

P/E remains 'slightly undervalued' in the lower half of the normalized valuation range; the stock market remains positioned for nearer-term above-average returns (assuming that the economy is not expected to enter a multi-year period of significant deflation or relatively high inflation). Notwithstanding the nearer-term trend, remain aware that typical market volatility makes it increasingly likely that the market will experience significant short-term swings—recent market volatility has been unusually low.

(Year End 2009)

P/E remains 'slightly undervalued' toward the lower end of the normalized valuation range; the stock market remains positioned for nearer-term above-average returns (assuming that the economy is not expected to enter a multi-year period of significant deflation or relatively high inflation). Notwithstanding the nearer-term trend, remain aware that typical market volatility makes it increasingly likely that the market will experience significant short-term swings. The 'Reported' measure of EPS and P/E, reflecting the most recent four quarters, continues to become less distorted as earnings recover from the recession.

(Late Fourth Quarter 2009)

P/E, despite recent market gains, remains 'slightly undervalued'; the stock market remains positioned for nearer-term above-average returns (assuming that the economy is not expected to enter a multi-year period of significant deflation or relatively high inflation). Notwithstanding the nearer-term trend, remain aware that typical market volatility makes it likely that the market will experience significant short-term swings.

(Third Quarter-End 2009)

P/E, despite recent market gains, is 'slightly undervalued'; the stock market remains positioned for nearer-term above-average returns (assuming that the economy is not expected to enter a multi-year period of significant deflation or relatively high inflation). Notwithstanding the nearer-term trend, remain aware that typical market volatility makes it likely that the market will experience significant short-term swings.

(Early Third Quarter 2009)

P/E, despite recent market gains, remains 'somewhat undervalued'; the stock market remains positioned for nearer-term above-average returns (assuming that the economy is not expected to enter a multi-year period of significant deflation or relatively high inflation).

(Mid Second Quarter 2009)

The P/E has returned to near year-end 2008 levels and is 'somewhat undervalued'; the stock market remains positioned for nearer-term above-average returns (assuming that the economy is not expected to enter a multi-year period of significant deflation or relatively high inflation).

(Mid First Quarter 2009)

The 18.6% year-to-date decline has returned P/E to fairly undervalued (from 'somewhat undervalued') and has positioned the market for nearer-term above-average returns (assuming that the economy is not expected to enter a multi-year period of significant deflation or relatively high inflation).

(Year End 2008)

Despite a modest recovery in the stock market since the most recent report, P/E remains somewhat undervalued and positioned for nearer-term above-average returns (assuming that the economy is not expected to enter a multi-year period of significant deflation or relatively high inflation).

(Mid Fourth Quarter 2008-II)

The declines in the stock market that have continued during the fourth quarter have been significant enough to further change the status: P/E is now fairly undervalued and positioned for nearer-term above average returns (assuming that the economy is not expected to enter a multi-year period of significant deflation or relatively high inflation).

(Mid Fourth Quarter 2008)

The declines in the stock market during October have been significant enough to change the status: P/E is now relatively undervalued and positioned for nearer-term above average returns (assuming that the economy is not expected to enter a multi-year period of significant deflation or relatively high inflation).

(Late Third Quarter 2008)

The reported price/earnings ratio ("P/E") in recent years was distorted downward due to an interim peak in the earnings cycle. The reported P/E ratio has been restored to near normalized levels as the result of the reversion of earnings to near long-term trend levels. The normalized P/E is relatively-high in relation to historical averages, a reflection of relatively-low expected inflation (and long-term interest rates). But, P/E is now highly-vulnerable to decline due to expectations by some toward higher inflation and by others toward potential deflation. Low, stable inflation is required to sustain P/Es at or above 20.

*Future updates of The P/E Report may include new material, analysis, or charts, which will generally either be highlighted after the historical recap or included as an appendix.*

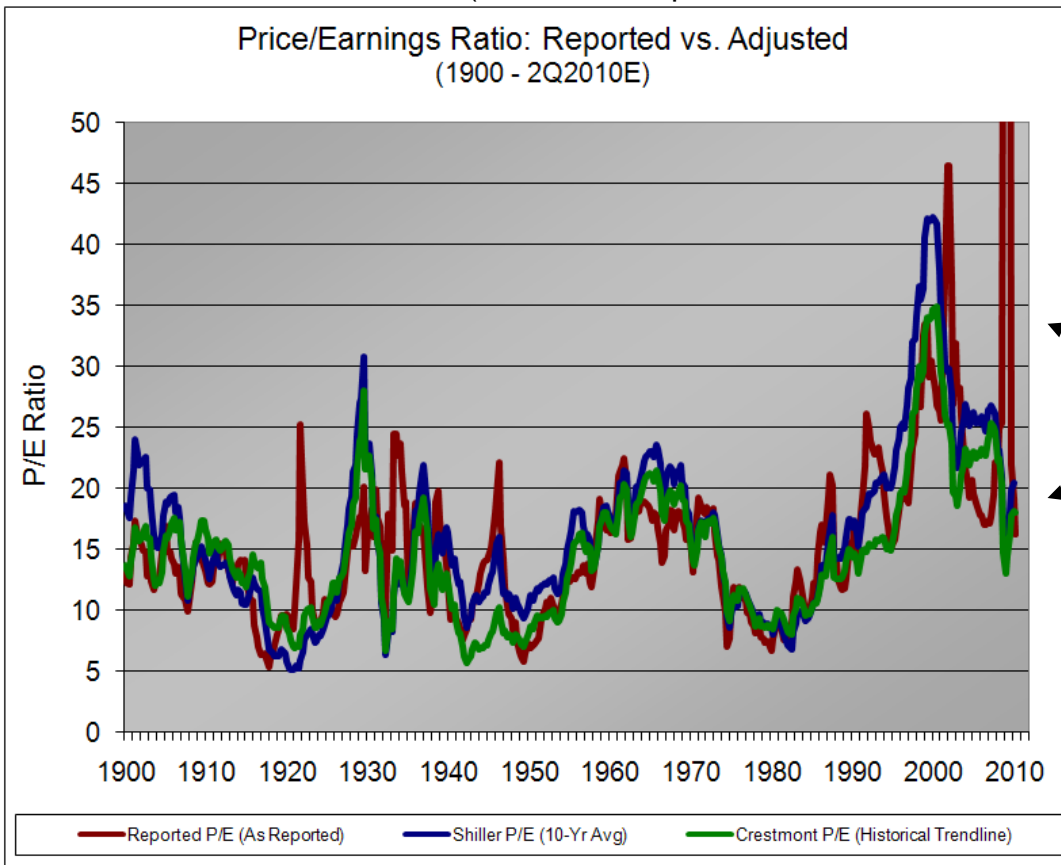
## THE BIG PICTURE

The P/E ratio can be a good measure of the level of stock market valuation when properly calculated and used. In effect, P/E represents the number of years worth of earnings that investors are willing to pay for stocks. Although we will discuss later the business cycle and its periodic distortion of 'reported' P/Es, most references to P/Es in this report will relate to the normalized P/E that has been adjusted for those periodic distortions.

Stocks are financial assets which provide a return through dividends and price appreciation. Both dividends and price appreciation are generally driven by increases in earnings. Earnings tend to increase at a similar rate to economic growth over time.

Historically (and based upon well-accepted financial and economic principles), the valuation level of the stock market has cycled from levels below 10 times earnings to levels above 20 times earnings. Except for bubble periods, the P/E tends to peak near 25 (the fundamental limitations to P/E are discussed in chapter 8 of *Unexpected Returns*). Figure 1 presents the historical values for all three versions of the P/E discussed in this report.

Figure 1. P/E Ratio: 1900-2Q2010E (2010 based upon EPS estimates from S&P)



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Note the significant business cycle divergence in P/E.

P/E can send a false signal of overvaluation, even when it is undervalued or fairly-valued.

With EPS near trend-line, reported and adjusted P/Es are currently similar.

What drives the P/E cycle? The answer is inflation—the loss of purchasing power of money and capital. During periods of higher inflation, investors want a higher rate of return. To get a higher rate of return from stocks, investors pay a lower price for the future earnings (i.e. lower P/Es). Therefore, higher inflation leads to lower P/Es and declining inflation leads to higher P/Es.

The peak for P/E generally occurs at very low and stable rates of inflation. When inflation falls into deflation, earnings (the denominator for P/E) begins to decline on a reported basis (deflation is the nominal decline in prices). At that point, with future earnings expected to decline from deflation, the value of stocks declines in response to reduced future earnings—thus, P/Es decline.

*Secular market cycles are not driven by time, but rather they are dependent upon distance.*

Therefore, for this discussion, assume that there are three basic scenarios for inflation: rising, low, and deflation. As discussed above, rising inflation or deflation that cause the P/E ratio to decline over an extended period creates a secular bear market. From periods of higher inflation or deflation, the return of inflation to a lower level that causes the P/E ratio to increase over an extended period creates a secular bull market.

Secular bull markets can only occur when P/E ratios get low enough to then double or triple as inflation returns to a low level. As a result, secular market cycles are not driven by time, but rather they are dependent upon distance—as measured by the decline in P/E to a low enough level to then enable a significant increase.

### **Cyclical vs. Secular: Jury Is Still Out**

The current P/E is 16.4—above the historical market average, yet at or below the range that would be expected in a low inflation financial environment. BUT, secular markets are driven by longer-term annual trends rather than momentary market disruptions.

The secular market P/E for the past year (2009) was near 15!... What!... Why!...

The secular analysis for each year relates to the average index across the year; so for 2009, the price (P) in P/E (price/earnings ratio) is the average index for all days of the year. The year 2009 started with the S&P 500 Index near 900, reached a daily-close low of 677, and ended with the Index at 1115; the average daily Index across the year is 948. As a result, the normalized P/E for 2009 is near 15.

If the stock market continues to recover most or all of its declines from late 2008 and early 2009, the average index for 2010 could present a P/E multiple near 20 or higher...making the period in late 2008 and early 2009 just a cyclical (short-term) bear market blip within a longer secular bear market. Of course, that would make most of 2009 and 2010 a typical cyclical bull market inside a secular bear market (it has happened many times before).

If the stock market does not recover further or cannot sustain recent gains due to significant inflation or deflation, the normalized P/E over the next few years would likely decline below the historical average and the foundation for a secular bull market would begin to be laid.

We're in a period with many daily (often hourly) pixels. Patience may be a virtue, yet extraordinary insights about the likely direction are the only way to predict the future course. Without extraordinary powers of clairvoyance, the best plan is a diversified, non-correlated portfolio with a few engines to counterbalance the weaker components of the portfolio.

## BACKGROUND & DETAILS

As described further in "[The Truth About P/Es](#)" in the Stock Market section at [www.CrestmontResearch.com](http://www.CrestmontResearch.com), P/E ratios can be based upon (a) trailing earnings or forecast earnings, (b) net earnings or operating earnings, and (c) reported earnings or business cycle-adjusted earnings.

(a) The historical average for the P/E is approximately 15 based upon reported trailing earnings. If forecast earnings is used, the average P/E is reduced by approximately one multiple point to 14.

(b) Substituting operating earnings for net earnings would further reduce the average by almost three points to 11.

(c) Although the effect of the business cycle is muted in longer-term averages, the currently-reported P/E varies significantly due to the business cycle (more later).

It is important to ensure relevant comparisons—that is, P/Es that are based upon trailing reported net earnings should only be compared to the historical average approximately 15. Too often, writers and analysts compare a P/E that is based upon forecast operating earnings to the average for trailing reported net earnings. Although long-term forward operating earnings data is not available, the appropriate P/E for that comparison would be closer to 11.

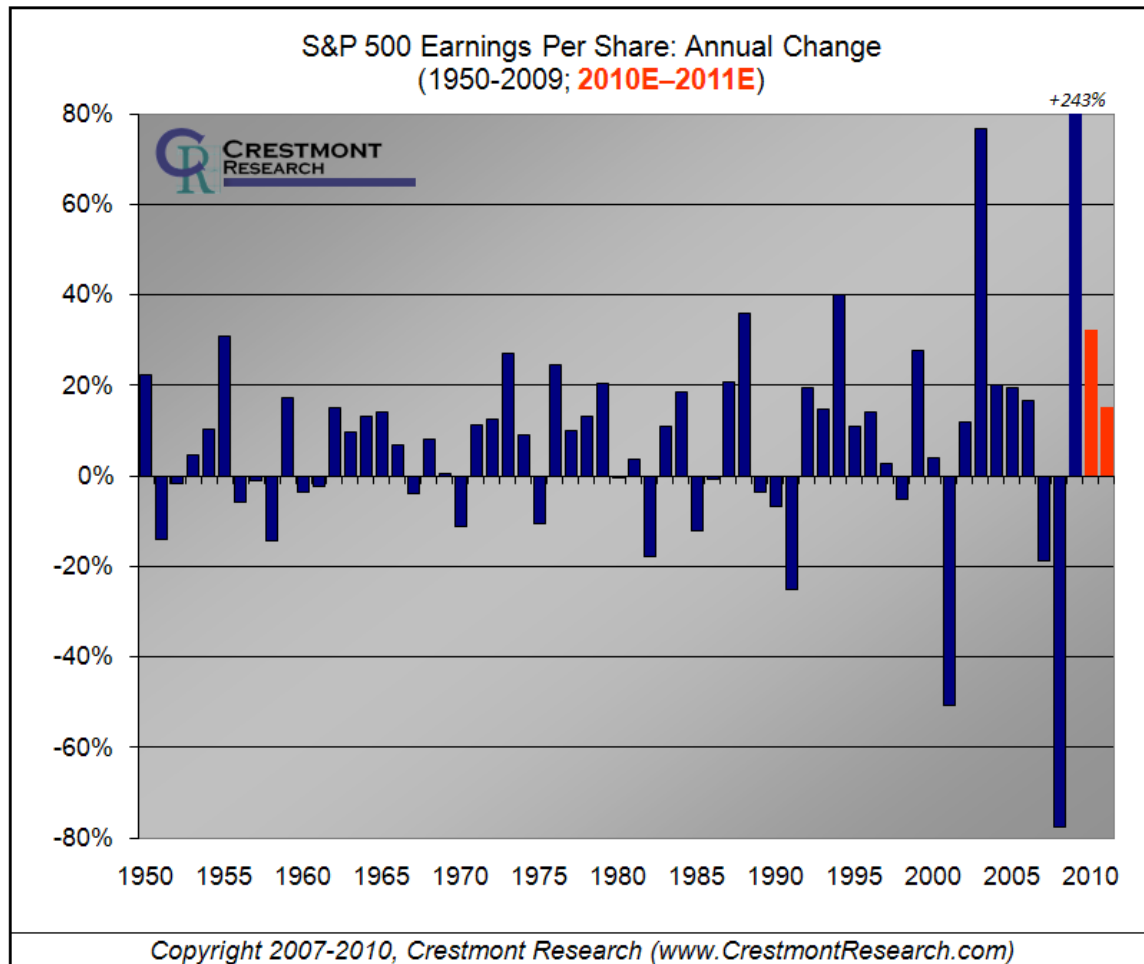
Yet the most significant distortion from quarter-to-quarter or year-to-year is due to the earnings cycle, or as some refer to it, the business cycle.

### **The Business Cycle**

As described further in "[Back To The Horizon](#)" and "[Beyond The Horizon](#)" in the Stock Market section at [www.CrestmontResearch.com](http://www.CrestmontResearch.com), corporate earnings progresses through periods of expansion that generally last three to five years followed by contractions of one to two years. The result of these business cycles is that earnings revolves around a

baseline relationship to the overall economy. Keep in mind that the business cycle is distinct from the economic cycle of expansions and recessions.

Figure 2. EPS: S&P 500 Companies (1950 to 2011E)



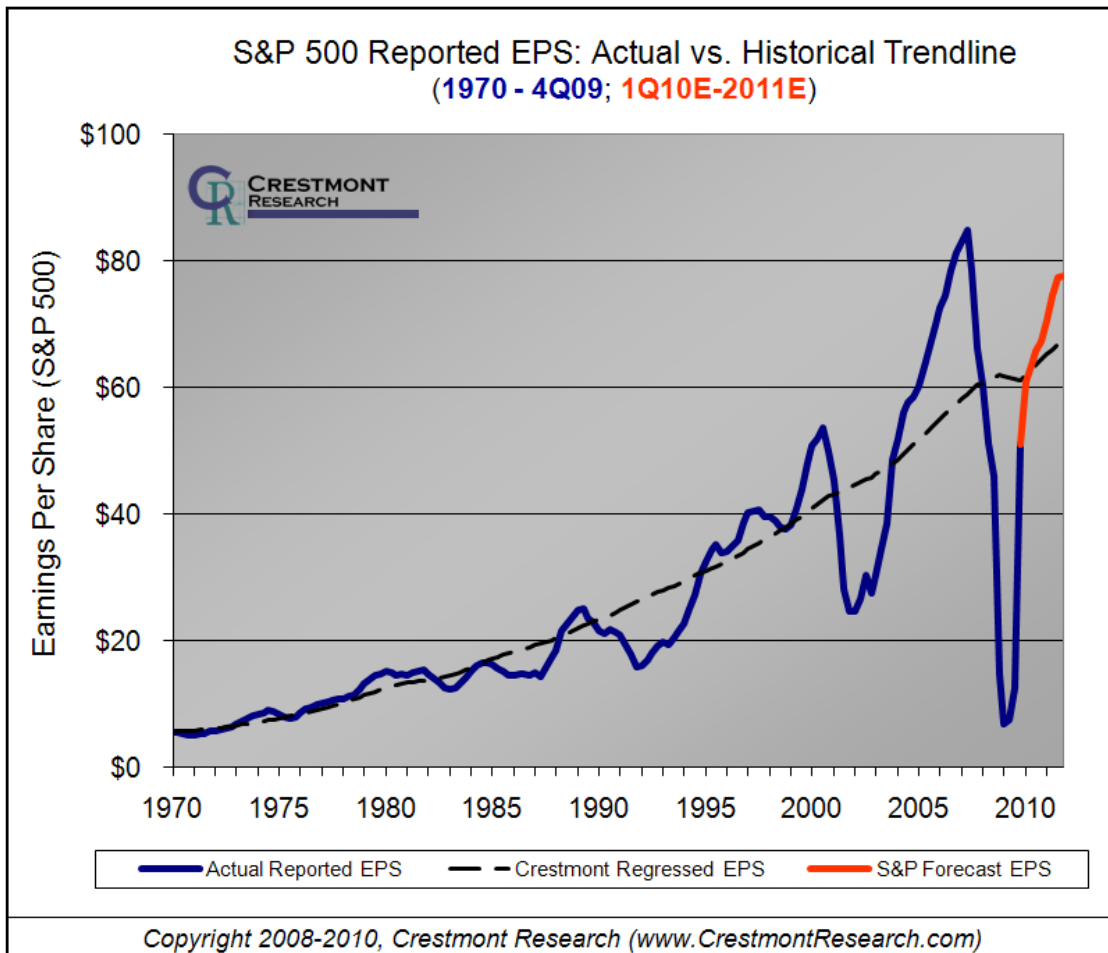
Note how the pattern of the earnings cycle—three to five years up followed by one or two of declines—appears to again be repeating...

The business cycle is not dead yet.

For example, looking back over the past six decades, Figure 2 presents the annual change in earnings historically reported by the S&P 500 companies and forecasted by Standard & Poors. This graph highlights the surge and decline cycle of earnings growth that is driven by the business cycle.

When the reported amount of earnings is viewed on a graph, the result is a generally upward sloping cycle of earnings growth. Since earnings (“E”) grows in a relatively close relationship to economic growth (GDP) over time, there is a longer-term earnings baseline (as discussed in chapter 7 of *Unexpected Returns*) that reflects the business cycle-adjusted relationship of earnings to economic growth (GDP). Figure 3 presents actually reported E for the S&P 500 over the past four decades compared to the longer-term baseline.

Figure 3. EPS: Reported vs. Trend Baseline (1970 to 2011E)



The past few legs of the cycle have swung more dramatically than it has in the past; will that accentuation continue? Or, will we finally get back on track?

The EPS forecast for 2011 is now above the trend-line; history again appears to be repeating the patterns of the business cycle.

Why does this matter? Because if you only look at the P/E ratio reported for any quarter or year, the ratio (with such a volatile “E” as the denominator) will be quite distorted during peaks and troughs when compared to the more stable long-term average. About every five years or so, the reported P/E will reflect the opposite signal rather than a more rational view of P/E valuations. For example, the reported value for P/E in early 2003 reflected a fairly high value of 32 just as the S&P 500 Index had plunged to 800 (E had cycled to a trough of \$25 per share). A P/E of 32 generally screams “sell” to most investment professionals; yet, in early 2003, that was a false signal! A more rational view using one of the business cycle-adjusted methods reflected a more modest 18. In a relatively low inflation and low interest rate environment, the scream should have been “Buy”...

Several years later, in 2006 (after an unusually-strong run in earnings growth), E peaked at \$82 per share as the S&P 500 Index was hesitating at 1500. Most market pundits were recommending a strong “buy” due to a calculated P/E of *only* 17. Yet, using the rational business cycle-adjusted methodologies, the true message was “STOP”—P/E’s were saying sell, with P/E more than 25.

Well the pundits were actually (sort of) right—P/Es did expand... Yet it was due to (what should have been expected) the normal down-cycle in E rather than the pundit-promoted increase in the stock market. So when investors' stock market accounts were down almost 50%, they were handed explanations that the earnings decline was unexpected and the fault of the financial sector...

Many of the same pundits are bewildered by current market conditions and unsure about the future of E. The latest craze to extrapolate current conditions into the indefinite future has been named "The New Normal." Slow economic growth, high saving rates, and unstable financial conditions—all fairly typical at the end of a recession—are now basic assumptions for years into the recovery expansion. Maybe this time will actually be different...or maybe not...

As for the market and P/E, it's understandable that conservative investors and market spectators have watched the past two years with awe. Yet the current P/E remains slightly undervalued and further gains are more likely; nonetheless, it is important to remain aware that typical market volatility makes it also likely that the market will experience significant short-term swings.

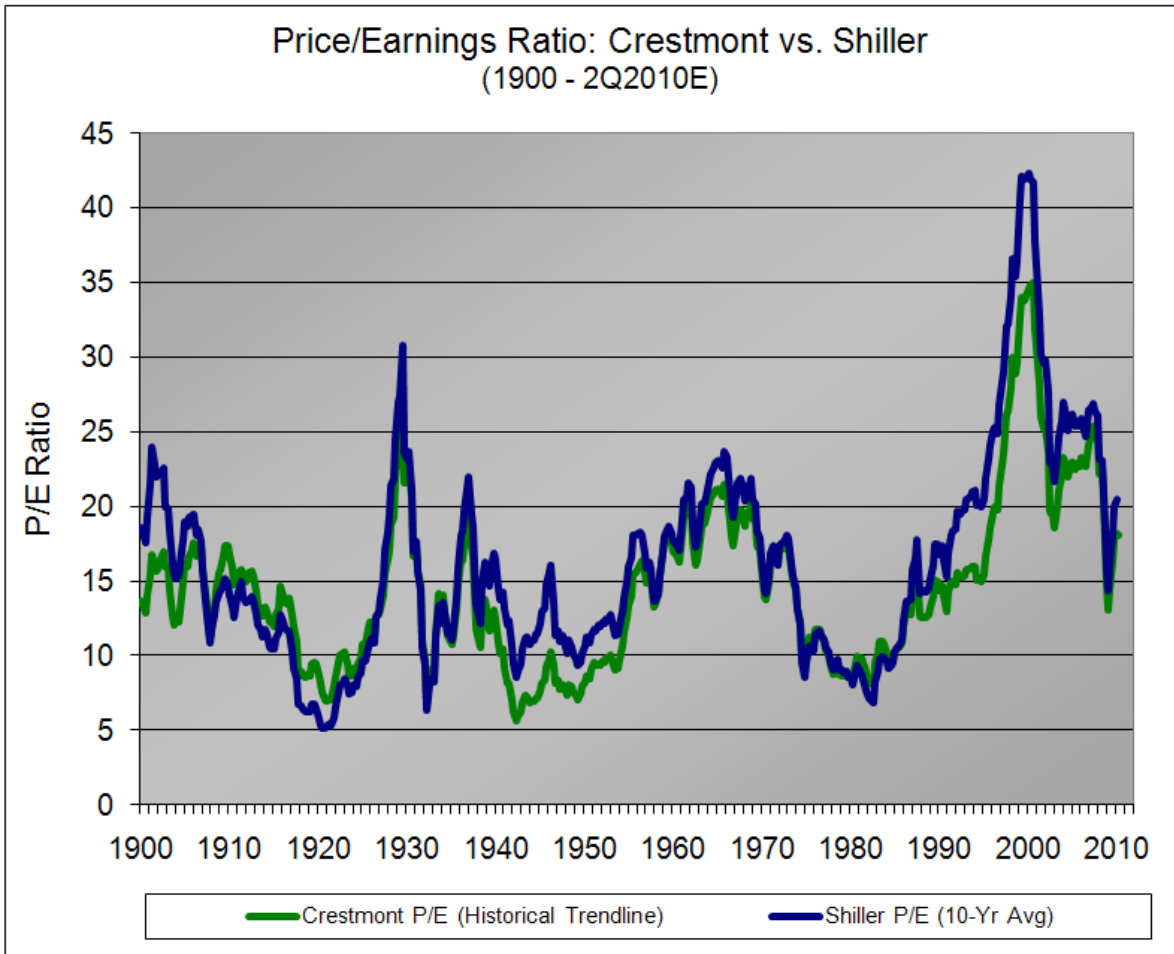
## METHODS

To adjust for the variability of earnings across business cycles, a rational methodology is needed to reduce distortions and provide a normalized reading about the long-term level and trend in earnings. The most recognized methodology is the one popularized by Robert Shiller (Yale) in *Irrational Exuberance* and on his website. To smooth the ups and downs in earnings, his methodology creates an average of the reported earnings for the past ten years. To eliminate the effect of inflation, all earnings values are adjusted-forward and increased by the impact of inflation. The result is a ten-year average for E. Using the current stock market index value, we have a more rational view of the current P/E valuation of the stock market.

For historical values, whether it relates to a month or a year in the past, Shiller also adjusts the stock index value by averaging the closing price for each day during the period. The stock index adjustment reduces historical distortions caused by significant intra-period swings by the market.

Crestmont has developed a complementary methodology—one that is fundamentally-based—that produces similar results, yet also provides forward-looking insights. The approach is explained further in Chapter 7 of *Unexpected Returns*, yet in summary, it uses the close and fundamental (not coincidental) relationship between earnings per share ("E") and gross domestic product (GDP) to adjust for the business cycles. The baseline E for each period essentially is based upon mid-point values for E across the business cycle—peak and trough periods of actual earnings reports are adjusted back to the underlying trend line to reduce the intra-cycle distortions.

Figure 4. P/E Ratio Methodologies: Crestmont vs. Shiller



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The historical relationship between Crestmont and Shiller is similar, as reflected in Figure 4, yet the Crestmont approach enables analysts to estimate an expected level of E based upon future economic growth (which is fairly consistent over time). Also, by comparing reported E to baseline E, analysts and investors have a better understanding of the current position in the business cycle and magnitude of divergence above or below the long-term trend.

#### DISTANCE, NOT TIME

Secular bull markets can only occur when P/E ratios get low enough (due to high inflation or significant deflation) to then double or triple as inflation returns to a low level. As a result, secular market cycles are not driven by time, but rather they are dependent upon distance—as measured by the decline in P/E to a low enough level to then enable it to have a significant increase.

The table that follows in Figure 5 provides a representation of the ‘distance’ that would be required to reposition for a secular bull market. The scenario presents the typical historical starting point for secular bulls (i.e. P/Es below 10).

Note that this analysis does not include the dynamic of ‘time’. As we continue forward in time, the normalized level of earnings (“E”) will increase and naturally close the gap without the declines presented below.

This is not a prediction—I hope that we avoid a move to lower P/Es and keep this secular bear in hibernation. The result, after recovering from the recent cyclical bear market, would be approximately 6% total returns from the stock market including inflation; yet, it would avoid the devastatingly-low returns marked by full secular bear markets (see [“Waiting For Average”](http://www.CrestmontResearch.com) at [www.CrestmontResearch.com](http://www.CrestmontResearch.com) for a tally of the future expected return).

Nonetheless, since one of the most common questions is “when will this secular bear market end,” the table in Figure 5 seeks to answer that question and to highlight that secular market cycles are determined by ‘distance’ and not by ‘time’.

Figure 5. Distance To The Next Secular Bull?

<b>AS OF: JUN 30, 2010</b>		<u>ADJUSTED</u> <sup>1</sup>	<u>CRESTMONT</u> <sup>2</sup>
<b>“P”</b>	Closing Price (S&P 500 Index) <sup>3</sup>	1031	1031
<b>“E”</b>	Current Estimate (S&P 500 EPS) <sup>4</sup>	\$55	\$63
<b>P/E</b>	Price/Earnings Ratio <sup>5</sup>	18.7	16.4
	<u>Historical Secular Bull Start</u>	10.0	
	Implied S&P 500 Index	550	630
	Distance Away	-47%	-39%
<i>Notes 1-5: see footnotes in Figure 1</i>			
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## POTENTIAL DISTANCE

As reflected in Figure 6, the current level of the stock market valuation, as reflected in the P/E, provides the potential for relatively-attractive gains if financial markets stabilize, economic growth continues on average at historical growth rates, and inflation remains

relatively low. A P/E of 22.5 is used as a mid-range for P/Es in low inflation and low interest rate environments.

Figure 6. Stock Market Gain/Loss To Low Inflation P/E Levels

<b>AS OF: JUN 30, 2010</b>			<u>CRESTMONT<sup>2</sup></u>
<b>“P”</b>	Closing Price (S&P 500 Index) <sup>3</sup>		1031
<b>“E”</b>	Current Estimate (S&P 500 EPS) <sup>4</sup>		\$63
<b>P/E</b>	Price/Earnings Ratio <sup>5</sup>		16.4
		<u>P/E</u>	
	<u>3-Year Restoration (2Q2013)</u>	22.5	
	Projected Normalized EPS <sup>2</sup>		\$73
	Implied S&P 500 Index		1641
	Annual Compounded Gain		16.8%
	<u>5-Year Restoration (2Q2015)</u>	22.5	
	Projected Normalized EPS <sup>2</sup>		\$81
	Implied S&P 500 Index		1814
	Annual Compounded Gain		12.0%
<i>Notes 1-5: see footnotes in Figure 1</i>			
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## CONCLUSION

Although today’s P/E is approximately 16.4, the stock market remains in secular bear market territory—yet somewhat undervalued assuming a relatively low inflation and low interest rate environment. It is historically consistent for secular bear markets to present shorter-term periods of strong returns (*cyclical* bull markets) followed by periods of market declines (*cyclical* bear markets).

The only way to reposition into a secular bull market is to experience a decline in the stock market due to significant inflation or deflation. This can occur either by a significant decline over a short period of time (e.g. the early 1930s secular bear market) or by minimal decline over a longer period of time (e.g. the 1960s-1970s secular bear market).

This report assesses the current valuation level in the context of the longer-term market environment. The goal is to help investors and market spectators to assess more quickly the current conditions. For the full year 2009, the annual P/E (based upon the average

index across the year) was 15. This reflects a lower average stock market index level across the past year. Annual values are used for longer-term secular market analysis; the current normalized P/E is more relevant for investors' shorter-term analysis.

If the market stayed at current levels for the full year 2010, the annual P/E for 2010 would be closer to 17. Therefore, it's becoming more apparent that 2009 reflected the impact of a significant cyclical bear market rather than a trend toward lower valuations in a secular bear market.

In this environment, as described in chapter 10 of *Unexpected Returns*, investors should take a more active "rowing" approach (i.e. diversified, actively managed investment portfolio) rather than the secular bull market "sailing" approach (i.e. passive, buy-and-hold investment portfolio over-weighted in stocks).

*Ed Easterling is the author of Unexpected Returns: Understanding Secular Stock Market Cycles, President of an investment management and research firm, and a Senior Fellow with the Alternative Investment Center at SMU's Cox School of Business where he previously served on the adjunct faculty and taught the course on alternative investments and hedge funds for MBA students. Mr. Easterling publishes provocative research and graphical analyses on the financial markets at [www.CrestmontResearch.com](http://www.CrestmontResearch.com).*

## APPENDIX A EARNINGS HISTORY & FORECASTS

Why does the version of “earnings” matter?

Stockholders generally value the stocks of publicly-traded companies based upon their future cash flows, which is largely based upon future dividends (academics employ the principles of the so-called Dividend Discount Model). To grow, companies need to retain a certain amount of their earnings; the remainder of the earnings is available to pay dividends. Dividends are paid from net earnings—net earnings are also the basis of historical P/E ratios.

History confirms the basic economic principles: Earnings go through a cycle of above-average growth followed by short-term declines. Some of the short-term declines occur due to one-time charges, yet other factors also impact profit margins. Analysts have been pressured to develop a measure of earnings that is less volatile than reported earnings—a measure that is now known as ‘operating earnings per share’. Although ‘as reported’ earnings are based upon detailed accounting principles (known as GAAP), ‘operating earnings’ is a measure of profits that is developed by adding-back subjectively determined charges that reduced earnings. There are agreed standards for ‘as reported’ earnings; there is not a standard for ‘operating earnings’.

As reflected in Figure 7, there are several measures of earnings. Two of them vary significantly; one of them is fairly stable.

“As Reported” earnings reflects the past and projected (by S&P analysts) net income from the five hundred large companies in the S&P 500 Index. This measure is based upon Generally Accepted Accounting Principles (GAAP) and is the measure that historical averages are based upon.

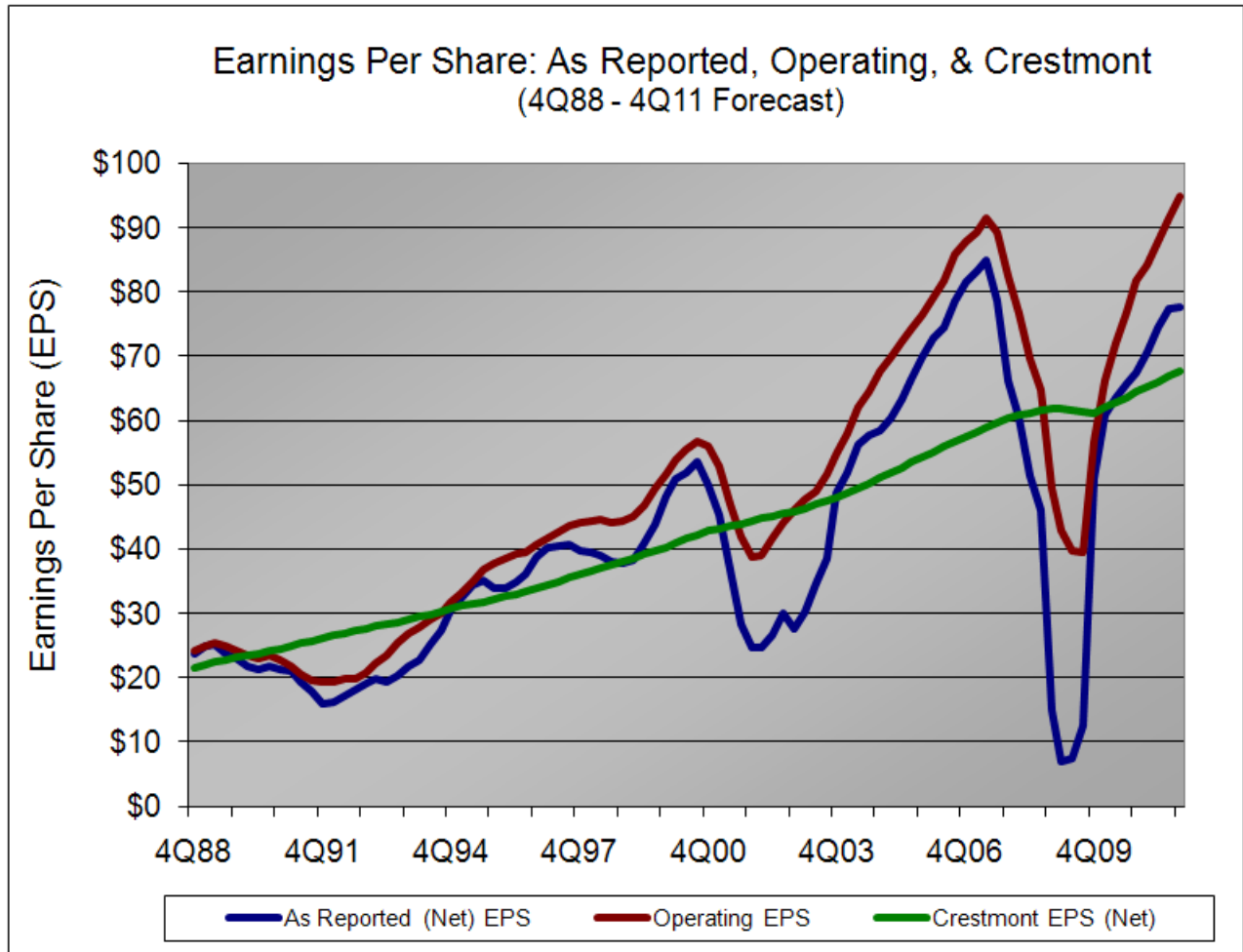
“Operating” earnings reflects a subjective measure of earnings (by other S&P analysts) that adds back certain costs and charges. It attempts to reduce the impact of the business cycle and one-time charges, yet it is generally considered to be an optimistic view of earnings. *This measure of earnings per share (EPS) is NOT comparable to the long-term average P/E, since operating earnings excludes a variety of costs and charges that reduce the funds available for dividends.* On average, ‘Operating EPS’ is almost 20% more than ‘As Reported EPS’. Since operating earnings is often viewed on a projected basis, the historical average price/earnings ratio (P/E) based upon “Operating EPS” is closer to 10. This contrasts to the historical average P/E based upon ‘As Reported EPS’ of 15.

“Crestmont” earnings is based upon the long-term relationship of earnings to economic growth. As described in *Unexpected Returns*, the relationship is fairly consistent over time and is a good measure of the baseline for earnings. ‘As Reported EPS’ has for decades varied around the Crestmont baseline. Crestmont has found that the market tends to anticipate the long-term trend and the market resists the temptation to fully-adjust to the

short-term business cycle of earnings. In other words, the market tends to stall at the highs in the earnings cycle (e.g. 2007) and tends to resist declining when earnings are near cycle lows (e.g. 2002).

Figure 7 presents EPS from Standard And Poor's for "As Reported" and "Operating" (actual prior to 1Q10; forecast for the balance of 2010 and 2011) and from Crestmont through 2011.

Figure 7. Earnings Per Share: As Reported, Operating EPS, & Crestmont EPS



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NOTE: On an annual basis, the historically-consistent value for the P/E in 2009 is near 15 (i.e. average daily index of 948 and annual earnings of \$61). Although the long-term charts will reflect a P/E below the level that would be expected for the current economic (expected inflation) conditions, the current level of the stock market suggests a valuation that is somewhat attractive for long-term investors in the stock market.

APPENDIX B  
ALTERNATE ECONOMIC SCENARIOS

**Consternation [con-ster-na-tion]**

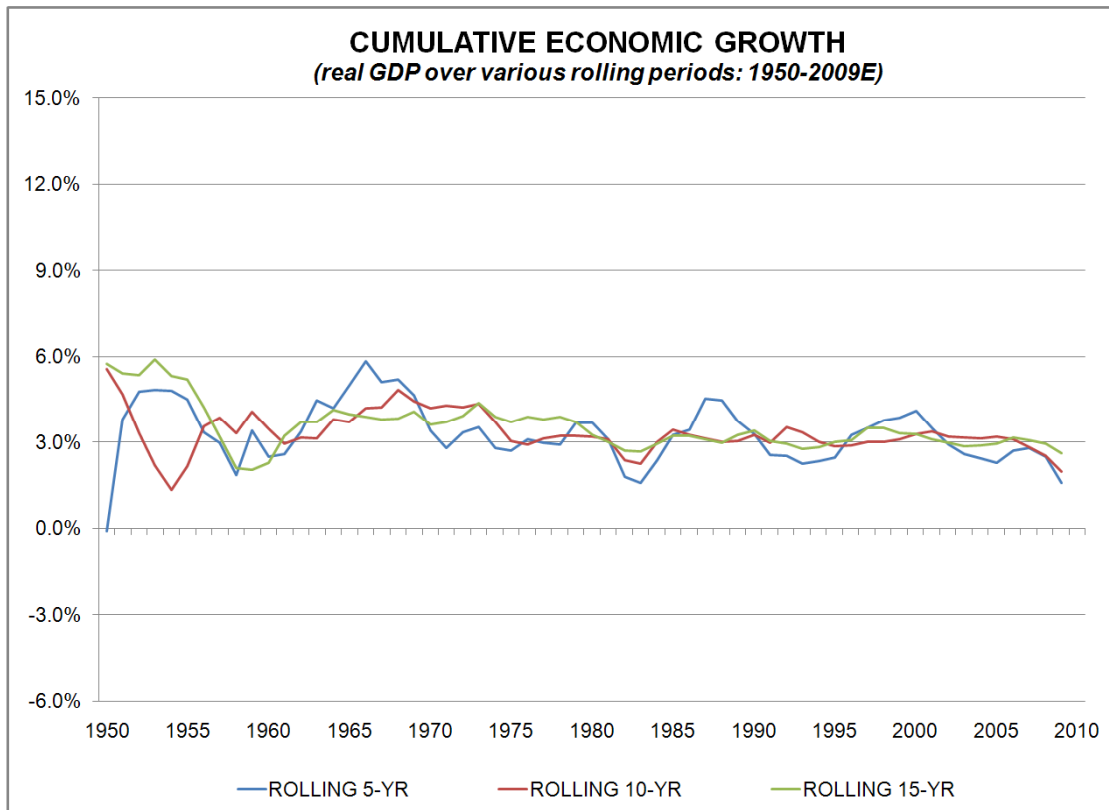
*A sudden overwhelming fear and alarm resulting from the awareness of danger that results in confusion and dismay...*

And so it was for Alice falling through the looking glass, now we confront a new frontier of uncertainties. One is an outlook that leads to high clouds; the other explains our current circumstance and may lead to further declines in the financial markets (particularly the stock market).

IS A PRIOR 'GIVEN' UNCERTAIN NOW?

During the last century, real economic growth averaged near 3%. The last three completed decades delivered 3.2%, 3.0%, and 3.2% respectively. Yet, the soon-to-be-completed decade (2000-2009) is likely to post real economic growth just below 2%. Is this an aberration or a new trend?

Figure B1: Rolling Periods: GDP-R 1950-2009E



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### Aberration

*Aberration* is our first scenario. Numerous economists were consulted and various data were evaluated—there do not appear to be generally-recognized reasons that explain the sudden shift in real economic growth during the current decade to near two-thirds of both the historical average and prior three decades. The most reasonable explanation is that the decade of 2000 includes two recessions that coincidentally bookend the period. A graphical review (Figure B1) of economic growth history using 5, 10, and 15-year rolling periods (through the estimated trough of 2009) reflects a common pattern. Thus, the decade of 2000-2009 could be a statistical anomaly.

### Trend

*Trend* is our second scenario. Trends don't require an explanation to be valid...maybe the reason will be known some day in the future. What are the implications IF 2% is the new trend growth rate?

Stocks are simply financial instruments—a payment today for the right to future cash flows. It sounds hard and cold, yet that's it. We invest in financial instruments to get a return. The level of return is determined based upon market rates (driven by expected inflation) and the probability of losses. For this discussion, let's eliminate the impact of a change in inflation and the probability of losses...so it only leaves the future cash flows. For stocks, the future cash flow stream (over the longer-term) is driven by economic growth. Therefore, if economic growth slows, the future cash flows (i.e. dividends from earnings) from stocks also are reduced.

So to get the same level of investment return, an investor must pay a lower initial price for the reduced cash flows to produce the same expected return. What? ...to get similar returns, an investor must pay less if there are lower cash flows to make the same return?

Yes. The impact on stock market valuations—if we have down-shifted to 2% real economic growth—is a drop in the average P/E of about 6 points. As a result, the average would decline below 10 rather than the historical 15 (assuming a repeat of historical inflation cycles). The natural peak during periods of low inflation would be below 20 rather than near the mid-20s.

Few economists, financial analysts, nor this author conclude that this has occurred, yet with the uncertainty of the expected future real economic growth rate, this issue should be better understood.

### Reversion

*Reversion* is our third and final scenario. Hope springs eternal...

Maybe the long-term trend is not lost. This scenario assumes that the factors of economic growth will continue at nearly the same rate: working population growth may not decline

due to delayed baby boomer retirements and productivity won't show a proclivity to fall. As a result, we may be due for a surge in economic growth (typical of post-recession periods) that restores the long term average to average. That would portend a period (maybe a full decade) when quite a few years deliver real economic growth that exceeds the historical average 3% rate (maybe more than 4%, to restore the long-term average to the average).

## CONCLUSION

Has the decade of the 2000s been an aberration...thus the long-term trend growth rate (and next decade's growth rate) for the economy will return to 3%? The implication for P/E is an average near 15 and peak near 25...

Has the economic growth rate down-shifted to near 2%...thus the long-term trend growth rate for the economy would be significantly below 3%? The implication for P/E is an average below 10 and peak below 20...

Is the decade of the 2000s a coincidental period with two recessions...positioning for an upcoming period for above-average growth that restores the long-term average to average? Since the long-term growth rate of 3% would remain intact, P/E should average 15 and peak near 25, yet the psychological impact on the market of such rapid growth could drive a near-term overshooting of the fair value level...