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# EQUITY MARKET OUTLOOK: A RATIONAL VIEW — 2010

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## EXECUTIVE SUMMARY

- Stock market returns consist of three components: dividends, earnings growth, and changes in the price/earnings (P/E) ratio. Over shorter periods of time (sometimes spanning many years), changes in the P/E ratio can have a substantial impact on stock market returns, but over longer periods of time, dividends and earnings growth drive returns.
- Earnings growth is affected by both sales growth and overall profit margins. Sales growth is highly correlated with the nominal growth of gross domestic product (GDP), which consists of real GDP growth plus inflation. Real GDP growth has been surprisingly consistent over rolling 10-year periods, typically ranging from 2% to 4%. Profit margins on the S&P 500 peaked in 2007 at 9%, significantly higher than the long-term average of 6%. Profit margins benefited from increasing use of leverage, low cost of capital, globalization, and deregulation, but these trends may now be reversing course. Changes in profit margins can have a significant impact on earnings, while sales growth is typically positive over long-term periods.
- Future P/E ratios will be affected by many factors, including anticipated growth rates, inflation, and interest rates.
- As of February 8, 2010, the price level of the S&P 500 was approximately 1056. If the next decade produces sales growth, profit margins, and price/earnings ratios that are similar to the long-term averages, then it is reasonable to expect that the total return for the S&P 500 would be below the long-term average (based on an approximate dividend yield of 2.0%).
- The direction of interest rates, taxes, regulation, and leverage will likely have a significant impact on future returns, given their effect on profit margins and GDP growth.

## INTRODUCTION

Reflecting on 2009, we are reminded of Benjamin Graham's insight, "In the short run, the stock market is a voting machine, but in the long run it's a weighing machine." Believe it or not, Graham's observations continued to hold true during 2009. The year was characterized by falling sales and earnings (the weighing machine) and rising price/earnings (P/E) ratios (the voting machine), which drove the S&P 500 Index up 26.46%. Throughout this paper, we will dissect these components and provide an outlook for their potential influence on long-term equity returns going forward.

Please refer to the May 2009 PMFA research paper, "[Equity Market Outlook: A Rational View \(May 2009\)](#)" for a detailed description of our process and philosophy.

## WHAT FACTORS DRIVE EQUITY MARKET RETURNS?

Before diving into the dynamics of the equity markets over the past few years, let us take a moment to recap the drivers of stock returns. Equity returns can be divided into three main components: dividend yield, earnings growth, and P/E expansion or contraction. Dividend yield is the "cash flow" return that investors receive from an equity investment, while earnings growth is the rate at which a company's income is expanding. P/E ratio expansion and contraction measures the change in the earnings multiple that market participants are willing to pay for each dollar of earnings. While there is some other short-term "noise" that makes its way into pricing, these are the three primary components of equity returns.

Over very long-term periods, Graham's "weighing machine" components of dividend yield and earnings growth account for a majority of total return, while P/E expansion or contraction has less of an impact (see the total return breakdown for the period December 1973 to September 2009). Yet, over shorter time periods, the rising or falling tide of investor sentiment, Graham's "voting machine," can have a substantial effect on the return of equity markets, as the price paid for a stock relative to its underlying earnings rises and falls. Over the long term, however, the influence of that driver of performance lessens, as short-term periods of fear or greed tend to be unsustainable.

### Changes in Price/Earnings Ratios and Profit Margins Can Significantly Impact Returns

S&P 500 Index				
	12/1973 – 9/2009	12/1973 – 12/1982	12/1982 – 12/1999	12/1999 – 9/2009
Average Dividend Yield	3.31%	5.05%	3.25%	1.74%
Change in Margin (M)	-1.03%	-4.25%	3.37%	-5.42%
Change in Sales (S)	5.56%	9.87%	4.85%	2.96%
Annualized Earnings Growth (M) x (S)	4.47%	5.20%	8.38%	-2.62%
Annualized P/E Expansion (Contraction)	2.32%	-1.00%	5.93%	-0.72%
Other	0.26%	0.19%	0.79%	0.03%
<b>Annualized Total Return</b>	<b>10.35%</b>	<b>9.44%</b>	<b>18.35%</b>	<b>-1.57%</b>

Source: PMFA, Standard & Poor's Compustat

High interest rates and inflation held the economy captive from the December 1973 to December 1982 period. The inflationary environment supported strong nominal sales growth, but reduced P/E ratios and margins. The earnings growth and dividend yield more than offset this P/E contraction, supporting nominal equity returns similar to the long-term average (although real returns were substantially lower than the long-term average). Unlike the 1973 to 1982 period, the most recent decade was characterized by low inflation, with brief periods of deflation. Dividend yields were positive, but very low, and the negative growth in earnings and P/E contraction resulted in negative total returns from December 1999 to September 2009.

Despite the fact that dividend yield and earnings growth account for a majority of total return in the long run, the voting component, or P/E expansion (contraction), can have a significant influence on the total returns during shorter-term time periods, or during secular bull and bear markets. In other words, price matters. In the short run, recessions have a significant negative effect on profit margins and earnings (see discussion later in this paper), which is why stock market participants tend to react so negatively to a recession. During the secular bull market that lasted from December 1982 to December 1999, the S&P 500 Index annualized total return was 18.35% — well above the long-term average. This return was driven by both strong earnings growth and P/E expansion (see table above). During this period, P/E ratios based on operating earnings<sup>1</sup> expanded from a low of approximately 10 in 1982 to more than 28 in 1999. However, the P/E expansion tailwind turned into a strong headwind very quickly in 2000.

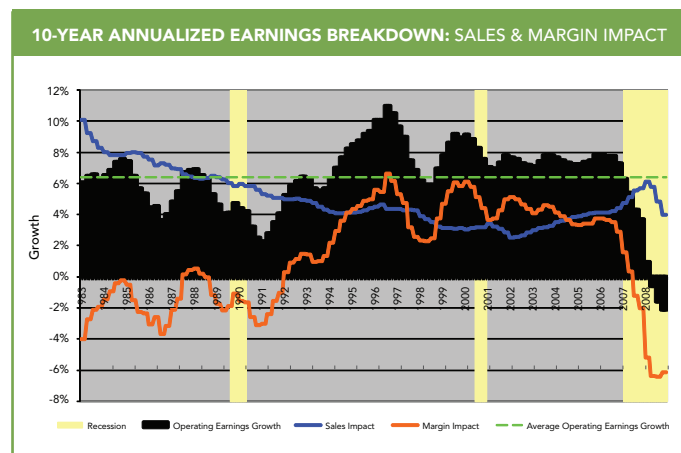
These periods illustrate the significant impact the voting and weighing machine can have on equity returns. While the potential return of the S&P 500 over the next 10 years will be largely affected by earnings and dividends, ultimately returns may also be dramatically impacted by changes in P/E ratios.

## DRIVERS OF EARNINGS GROWTH

The last decade was unique in that the S&P 500 experienced negative earnings growth. In December 1999, trailing 12-month operating earnings were \$51, compared to today's corporate earnings of only \$39 per share. How is it possible that the largest companies in the U.S. made less money than they did 10 years ago? Earnings growth is affected by two separate components: sales growth and profit margins. As the chart below shows, during every 10-year period since 1983, sales growth had a positive influence on earnings growth, including the last decade. However, changes in profit margins were extremely volatile, explaining most of the peaks and troughs in earnings growth. Therefore, to gauge the potential earnings growth over the next 10 years, we need to analyze the potential sales growth and profit margin impact.

<sup>1</sup>Operating earnings are defined as profits after subtracting expenses such as marketing, cost of goods sold, administration and general operating costs from revenue, but do not include income from non-core operations.

## Stable Sales Growth Has Often Been Offset by Profit Margin Volatility



Source: PMFA, Standard & Poor's Compustat

## Nominal GDP and Sales

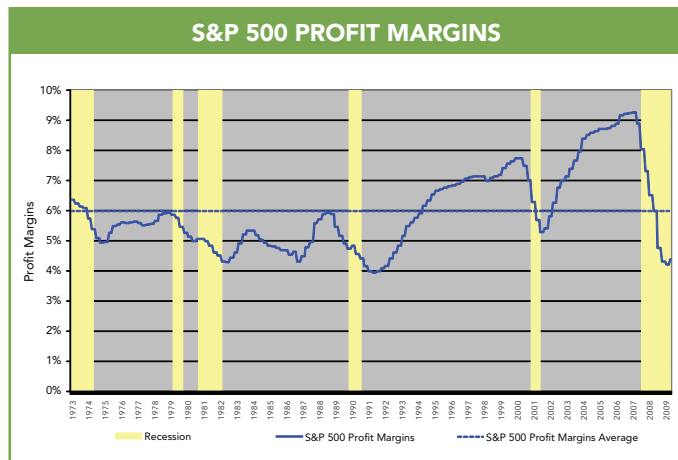
As we discussed in our [Equity Market Outlook: A Rational View \(May 2009\)](#), long-term historical sales growth and nominal GDP have been highly correlated. Both have exhibited volatility relative to their long-term average, which makes it nearly impossible to predict with precision. However, long-term real GDP growth has been relatively consistent, ranging from 2 to 3.5% since 1983. Assuming we continue to increase productivity, and continue to bring more of the world's population into capitalism, we can reasonably expect real GDP to grow within that historical range. However, real GDP does not include the impact of changing prices (inflation). As such, to appropriately estimate nominal GDP and sales growth, we must make an assumption about expected inflation.

The current spread between the 10-year U.S. Treasury and 10-year U.S. TIPS yield is approximately 2.30%, which falls within the range of the Federal Reserve's target inflation rate of 2 to 3%. This projection, which uses historical ranges of GDP and current market inflation expectations, suggests that nominal GDP growth may range between 4 to 6.5%. Long-term sales growth of the S&P 500 has historically been approximately 1% below long-term nominal growth in GDP, so it would be reasonable to assume that sales growth would approximate 3 to 5.5% if these conditions were to persist.

## PROFIT MARGINS AND THE ECONOMIC CYCLE

In order to determine earnings, we must also consider profit margins. During 2009, we experienced a substantial reduction in profit margins. However, a reduction in margins during a recession is rather common (see chart below). In the later part of an economic expansion, corporations are typically overproducing, maintaining high levels of inventory, raising capital expenditure budgets, and they tend to be overstaffed. As such, when the economy slips into recession and demand begins to wane, falling sales, accompanied by relatively fixed operating costs in the short run, can result in a rapid and significant reduction in profit margins. On the contrary, as demand troughs and sales begin to increase, companies typically have capacity, low levels of inventory, low capital expenditure budgets, and a lean staff. Therefore, in a recovery, a minimal increase in sales may result in a substantial increase in profit margins and operating earnings.

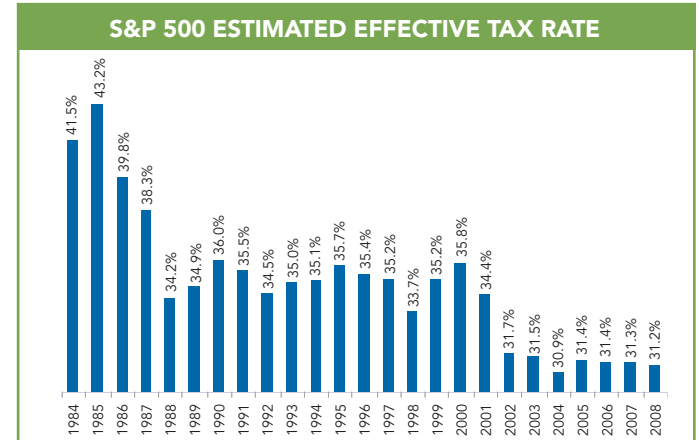
### Upward Trend in Profit Margins May Prove Unsustainable



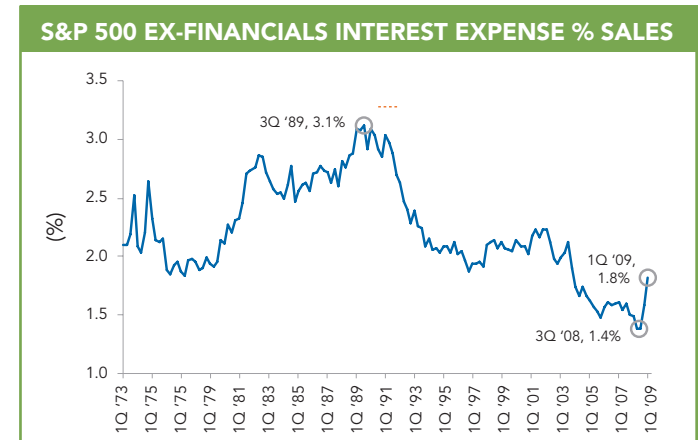
Source: PMFA, Standard & Poor's Compustat

As illustrated above, profit margins peaked in August 2007, slightly above 9%. Although margins contracted significantly during the 2001 recession, they have generally been on an upward trend since the early 1990s. During that period, U.S. corporations experienced generally decreasing tax rates, increasing availability of leverage at ever lower interest rates, increased globalization, and significant industry deregulation, specifically within the financial sector (see charts to follow).

## Lower Effective Tax Rates and Lower Interest Expense Have Improved Profit Margins



Source: Morgan Stanley



Source: Morgan Stanley

All of these forces lowered operating costs, supporting higher profit margins. However, when the fallout of the subprime market hit Wall Street, and then ultimately Main Street, profit margins were crushed under the weight of the recession.

In response to the economic crisis, the Federal Reserve and Congress enacted several monetary and fiscal policy responses to support the U.S. economy. This support came at the expense of the U.S. Government and Federal Reserve expanding their own balance sheets through the issuance of trillions of dollars of debt or money creation. This expansion in the liability side of both the U.S. Government and Federal Reserve balance sheets may ultimately lead to higher taxes, higher interest rates, or both. Furthermore, the U.S. Government has proactively implemented new regulations that encourage banks to raise capital, rather than increase leverage.

In the next few years, if recovery takes hold, it is likely that profit margins will increase and may even exceed the recent prior peaks, as margins tend to increase sharply at the beginning of recoveries. However, over a longer time horizon, if debt levels, tax rates, regulation, and/or interest rates reverse the trends that have occurred in the last 25 years, it is likely that longer-term margins would ultimately end up being below the elevated levels of the mid-2000s.

## VALUATIONS: PEAK, TROUGH, AND OUTLOOK

Given our understanding of the drivers of stock market returns, as well as the major factors influencing corporate profitability, let us try to understand how the volatility in the markets may have created opportunity over the past few years. The tables below summarize the potential outcomes of the market, 10 years hence, based on the beginning market price, sales level, and P/E ratio along with a range of potential outcomes for ending sales growth, profit margins, and P/E ratios. We first review two recent historical periods to make a point, and then look at the potential returns from today's levels.

Investors today, and for years to come, will always remember October 2007 and March 2009, but for very different reasons. On October 11, 2007, the S&P 500 peaked at an intraday price of 1576.09, only to experience a 57.7% decline to 666.79 on March 6, 2009. We have created two tables below that show the "potential" price returns<sup>2</sup> based on those starting conditions, and a range of potential outcomes as described above.

### Return Potential for Stocks October 2007 — Outsized Returns Unlikely

S&P 500 COMP-LTD		
Level	1576.09	Oct. 2007
EPS	89.31	Oct. 2007
Sales	1005.12	Oct. 2007
Dividend Yield	1.98%	Oct. 2007
Current PE	17.65	
Profit Margin	8.89%	

ESTIMATED PRICE RETURNS FOR 10 YEARS ENDED 10/30/2017									
10-Year Annualized S&P 500 Sales Growth	Ending P/E Ratio: 10			Ending P/E Ratio: 16			Ending P/E Ratio: 22		
	S&P 500 Profit Margin			S&P 500 Profit Margin			S&P 500 Profit Margin		
	4.0%	6.0%	8.0%	4.0%	6.0%	8.0%	4.0%	6.0%	8.0%
	0.0%	-12.8%	-9.2%	-6.5%	-8.6%	-4.8%	-2.0%	-5.6%	-1.7%
2.0%	-11.0%	-7.3%	-4.6%	-6.7%	-2.9%	0.0%	-3.7%	0.3%	3.2%
4.0%	-9.3%	-5.5%	-2.8%	-4.9%	-1.0%	1.9%	-1.8%	2.2%	5.2%
6.0%	-7.5%	-3.7%	-0.9%	-3.1%	0.9%	3.9%	0.1%	4.2%	7.2%
8.0%	-5.8%	-1.9%	1.0%	-1.3%	2.8%	5.8%	1.9%	6.2%	9.3%

Source: PMFA, Standard & Poor's Compustat

On October 11, 2007, the stock market appeared to be reasonably priced according to a P/E ratio of 17.65, which is only slightly above the long-term average of 16. However, profit margins were at historically high levels. From these levels, in order to generate 10% total returns (price return and dividend yield) over the next 10 years, sales growth, profit margins, or P/E ratios would have needed to significantly exceed long-term averages (as highlighted in green in the table above).

<sup>2</sup>The values represented in the estimated price return tables indicate price returns. Price return is a measure of capital appreciation, which ignores the impact of dividends. Total returns, which includes the impact of dividends, is highlighted in red for negative total returns and green for total returns greater than 10.0%.

## Return Potential for Stocks March 2009 — Significant Downside Protection Built Into Prices

S&P 500 COMP-LTD		
Level	666.79	Mar. 2009
EPS	43.00	Mar. 2009
Sales	998.54	Mar. 2009
Dividend Yield	2.06%	Mar. 2009
Current PE	15.51	
Profit Margin	4.31%	

ESTIMATED PRICE RETURNS FOR 10 YEARS ENDED 3/31/2019									
10-Year Annualized S&P 500 Sales Growth	Ending P/E Ratio: 10			Ending P/E Ratio: 16			Ending P/E Ratio: 22		
	S&P 500 Profit Margin			S&P 500 Profit Margin			S&P 500 Profit Margin		
	4.0%	6.0%	8.0%	4.0%	6.0%	8.0%	4.0%	6.0%	8.0%
	0.0%	-5.0%	-1.1%	1.8%	-0.4%	3.7%	6.7%	2.8%	7.1%
2.0%	-3.1%	0.9%	3.9%	1.6%	5.8%	8.9%	4.9%	9.2%	12.4%
4.0%	-1.2%	2.9%	5.9%	3.6%	7.8%	11.0%	6.9%	11.3%	14.6%
6.0%	0.7%	4.9%	7.9%	5.6%	9.9%	13.1%	9.0%	13.5%	16.8%
8.0%	2.6%	6.9%	10.0%	7.5%	12.0%	15.3%	11.0%	15.6%	19.0%

Source: PMFA, Standard & Poor's Compustat

Characteristics on March 6, 2009, were quite different from those of the October 11, 2007, peak. To generate a 10-year total return of 10% would have required only average ending P/Es, profit margins, and sales growth (reflected in green). More importantly, while the chance of earning 10% was significantly higher based on March 2009 pricing, the chance of loss over the next 10 years was also significantly reduced (as highlighted in red).

Market participants seem to have realized that once the economy started to stabilize, a return to higher profitability for corporations was not likely far behind. This turn in the economy led to a surge in buying that drove the S&P 500 to a level of 1056.74 on February 8, 2010, a rally of approximately 58% off of the lows of March 6, 2009.

## Return Potential for Stocks February 2010 — Below the Long-Term Average?

S&P 500 COMP-LTD		
Level	1056.74	Feb. 8, 2010
EPS	39.62	Sept. 30, 2009
Sales	902.59	Sept. 30, 2009
Dividend Yield	2.05%	Sept. 30, 2009
Current PE	26.67	
Profit Margin	4.39%	

ESTIMATED PRICE RETURNS FOR 10 YEARS ENDED 9/30/2019									
10-Year Annualized S&P 500 Sales Growth	Ending P/E Ratio: 10			Ending P/E Ratio: 16			Ending P/E Ratio: 22		
	S&P 500 Profit Margin			S&P 500 Profit Margin			S&P 500 Profit Margin		
	4.0%	6.0%	8.0%	4.0%	6.0%	8.0%	4.0%	6.0%	8.0%
	0.0%	-10.2%	-6.5%	-3.7%	-5.9%	-2.0%	0.9%	-2.8%	1.2%
2.0%	-8.4%	-4.6%	-1.8%	-4.0%	0.0%	2.9%	-0.9%	3.2%	6.2%
4.0%	-6.6%	-2.7%	0.1%	-2.1%	2.0%	4.9%	1.1%	5.3%	8.3%
6.0%	-4.8%	-0.9%	2.0%	-0.2%	3.9%	6.9%	3.0%	7.3%	10.4%
8.0%	-3.0%	1.0%	4.0%	1.7%	5.9%	9.0%	5.0%	9.3%	12.5%

Source: PMFA, Standard & Poor's Compustat

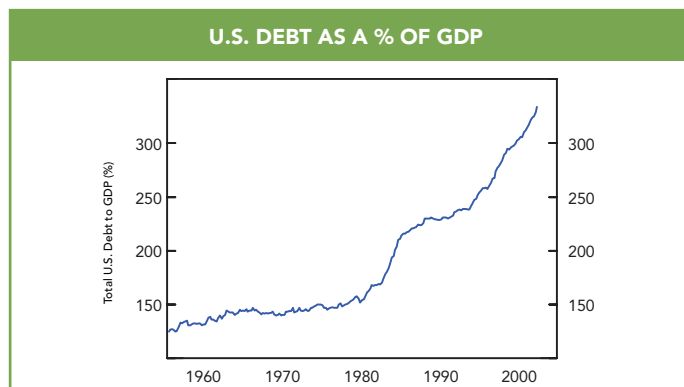
Benjamin Graham's voting machine was back to work, as the P/E ratio expanded from 15.51 times earnings as of February 8, 2010. Although current valuations are well above long-term average, current profit margins remain at relatively low levels, depressed by the recession and write-downs in the financial sector. As such, it is clear that the market is anticipating a snap-back in profit margins, driving operating earnings back to normalized levels, and market participants have increased the P/E ratio in anticipation of this occurrence. From current levels, achieving a 10% rate of return in

the S&P 500 over the next 10 years would require profit margins, sales growth, and/or P/E ratios to be above the long-term average levels over the next decade. Although this is possible, especially in the short run, the potential long-term headwinds that developed economies of the world are facing may ultimately pressure margins and/or sales growth to be below long-term averages over the next 10 years.

We view these tables not as a forecast, but as a rational way of reviewing potential returns. No one knows what the future may hold, and we are not attempting to make a prediction as to the price levels of the stock market in 2019. We do believe, however, that these tables can be viewed in a historical context to assist investors in reviewing a range of potential outcomes for what many would view as a long-term holding period of 10 years. The short-term outcomes could be significantly different from those viewed here (as the tables of October 2007 and March 2009 should clearly illustrate).

The monetary policies currently in place around the world have historically been very supportive for the pricing of risk assets. Very low interest rates (including a zero percent rate in the U.S.) encourage people to extend risk in order to generate returns. Authorities are clearly now focused on the revival of asset prices and supporting the banks through these policies. While these conditions last, there is the potential that risk asset returns could continue to surprise to the upside, and may do so for a number of years, not just months. Another positive aspect of the world economy that could be highly supportive in the next few years is the potential growth in the personal consumption of emerging economies, which would likely be beneficial for sales growth all over the world.

### Highest Debt Levels in History a Result of Low Interest Rates and Easy Credit



Source: BCA Research

Conversely, given current debt levels that exist in developed economies, the potential for lower growth rates in these nations is very possible. As the “U.S. Debt as a % of GDP” chart above shows, a substantial amount of indebtedness has been added to both private and federal balance sheets relative to GDP over the last 30 years. At the end of the third quarter of 2009, total debt was approximately 370% of GDP. According to some sources, prior to this most recent explosion in debt levels, this ratio’s prior peak occurred in 1933 when total debt was approximately 299.8% of GDP. This increase in debt has helped to fuel the growth of many economies. If deleveraging becomes a focus of individuals over the course of the next decade, this will likely have a negative influence on GDP growth. If this lower growth rate is ultimately accompanied by low inflation, then sales growth will be below long-term averages. If this lower growth rate is accompanied by high inflation, then higher interest rates could affect margins and P/E ratios negatively. Higher tax rates would do the same.

By mentioning these items, we are not attempting to “sound alarm bells” or suggest that investing in the stock market will not be a rewarding endeavor over the next 10 years. However, we do believe that despite the negative returns delivered by the S&P 500 over the 10 years ended September 30, 2009, the potential for below-average nominal returns from stocks over the next 10 years still exists. Given current interest rate levels, however, we also think it is likely that the next 10 years for stocks will be better than the last, and that stocks are likely to outperform cash and government bonds. That is not necessarily a forecast, but rather simply “playing the odds.”

We do expect that the short-term volatility of stocks will continue to be higher than either cash or bonds, as that equation rarely changes. Therefore, investors must consider their tolerance for short-term losses when developing their long-term investment plan, as we have discussed with clients for years. As no investor shall soon forget, it is hard to buy at the point of maximum pessimism, as Warren Buffett suggests. However, it is there that stocks offer the highest rewards and least amount of risk. We have little doubt that the market will once again offer another opportunity of this nature sometime in the next 10 years. We just hope that it is not quite as pessimistic as the October 2008 to March 2009 time frame.

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#### **Past performance does not guarantee future results.**

All investments include risk and have the potential for loss as well as gain.

Data sources for peer group comparisons, returns, and standard statistical data are provided by the sources referenced and are based on data obtained from recognized statistical services or other sources believed to be reliable. However, some or all information has not been verified prior to the analysis, and we do not make any representations as to its accuracy or completeness. Any analysis non-factual in nature constitutes only current opinions, which are subject to change. Benchmarks or indices are included for information purposes only to reflect the current market environment; no index is a directly tradable investment. There may be instances when consultant opinions regarding any fundamental or quantitative analysis may not agree.

The “Estimated Earnings” and “Estimated 10-Year Price Returns for the S&P 500” charts indicate expected levels based on various sales growth, profit margins, and price/earnings ratio combinations. No guarantee is made or should be implied that such levels and returns can be achieved. The expected returns are hypothetical.

As such, any performance results have many inherent limitations. No representation is being made that any account will or is likely to achieve performance similar to those shown. In fact, there are frequently sharp differences between hypothetical performance results and the actual results subsequently achieved. One of the limitations of hypothetical performance results is that they are generally prepared with the benefit of hindsight. In addition, hypothetical performance does not involve financial risk, and no hypothetical calculation can completely account for the impact of financial risk in actual trading. For example, the ability to withstand losses (and incur account drawdowns) or to adhere to a particular investment position in spite of trading losses are important issues which can also adversely affect actual results. There are numerous other factors related to the markets in general or to the implementation of any specific trading program, method, or system, which cannot be completely taken into consideration with hypothetical performance results.

The average dividend yield was calculated using actual monthly dividend yields for the time periods specified. “Other” includes the affect of reinvestment of dividends and compounding of this reinvestment.

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