

MAY 2009

EQUITY MARKET OUTLOOK: A RATIONAL VIEW

plante moran
FINANCIAL ADVISORS

EXECUTIVE SUMMARY: A RATIONAL VIEW

- 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 effect 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). Nominal GDP growth has averaged approximately 6–7% per year over the long term, and 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%.
- Earnings are also affected by profit margins. Profit margins on the S&P 500 peaked in 2006 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 — trends which may now be in retreat.
- Future P/E ratios will be affected by many factors, including anticipated growth rates, inflation, and interest rates.
- As of December 31, 2008, the price level of the S&P 500 was approximately 900, resulting in a P/E ratio of approximately 18 (slightly above the long-term average). 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 may approximate 8-10% per year (based on an approximate current dividend yield of 2.6%).
- GDP growth, profit margins, or price/earnings ratios that are substantially above or below their long-term averages, could have a significant effect on future returns.

“Most of the time common stocks are subject to irrational and excessive price fluctuations in both directions as the consequence of the ingrained tendency of most people to speculate or gamble... to give way to hope, fear and greed.” — Benjamin Graham

Benjamin Graham, long considered the father of value investing, provides important advice for a long-term investor — rational pricing of stocks is not always the norm, and this irrationality can take place both on the upside and the downside. Therefore, consistently gauging the potential or projected returns of the stock market in the short term is very difficult. However, what about over longer-term periods? Why have stocks tended to provide positive returns over most 10-year time frames (the most recent 10 years being an exception)? What is a reasonable expectation for the next 10 years? In considering these questions, we are reminded of yet another one of Graham’s insights: “In the short run, the stock market is a voting machine, but in the long run it’s a weighing machine.”

In the following paper, we will break down the components of equity returns and how those components may play out over the next decade using historical and current macroeconomic trends. Using this framework, we will assess the potential returns of the S&P 500 Index over that time frame to determine if broad based equities are positioned to perform above, below, or in line with long-term historical average returns. Through this exercise, the reader should get a sense of just how difficult it is to be accurate with short-term forecasts of the stock market, while longer-term forecasts may land in a much more predictable range.

WHAT FACTORS DRIVE EQUITY MARKET RETURNS?

Equity returns can be divided into three main components: dividend yield and earnings growth (the “weighing” components), and price/earnings (P/E) expansion, or contraction (the “voting” component). 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 or 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, dividend yield and earnings growth account for the majority of total return, as P/E expansion or contraction tends to become diluted over time (see the total return breakdown for the period 1974-2008 shown in the chart below). This suggests that the rising or falling tide of consumer sentiment over shorter periods can have a substantial effect on the return of a stock or the equity market, as the price they will pay 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 Significantly Impact Returns

S&P 500 Index			
	12/1973 – 12/2008	12/1982 – 12/1999	12/1999 – 12/2003
Average Dividend Yield	3.33%	3.25%	1.38%
Annualized Earnings Growth	5.24%	8.38%	1.52%
Annualized P/E Expansion (Contraction)	1.26%	5.93%	(8.13%)
Other	0.20%	0.80%	(0.11%)
Annualized Total Return	10.03%	18.35%	(5.34%)

Source: PMFA, Standard & Poor’s Compustat, Callan Associates, “Perspectives on 2004 and Beyond,” Ron Surz, The Monitor, Jan/Feb.

While the “voting” component of P/E expansion (contraction) gets diluted in the long run, it can have a significant influence on total returns during shorter-term time periods, or during secular bull and bear markets. During the secular bull market that lasted from December 1982 through 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 chart above). During this period, P/E ratios based on operating earnings 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.

Although earnings growth and dividend yield were positive from December 1999 through December 2003, the growth in earnings was not strong enough to justify the P/E of 28 in 1999. P/E contraction drove total returns severely negative for the next few years. These time periods illustrate the significant impact changes in P/E ratios can have on equity returns during bull and bear markets. To gauge the potential returns of the S&P 500 over the next 10 years, a forecast of earnings and dividends is required (the “weighing” component). However, the ultimate returns may also be dramatically impacted by changes in P/E ratios (the “voting” component).

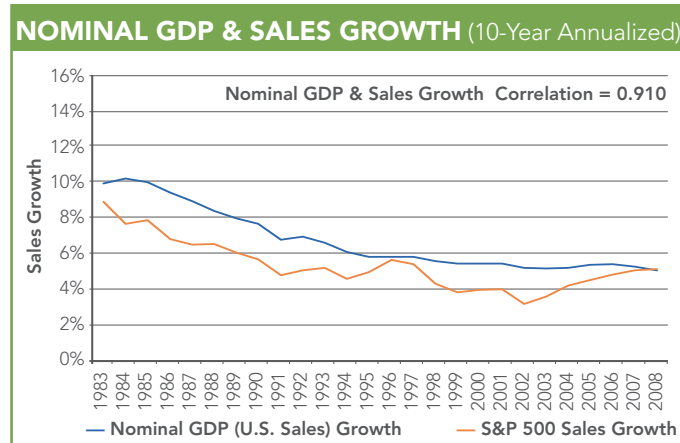
AN EXPANDING ECONOMY: DRIVING CORPORATE TOP-LINE GROWTH

As indicated above, earnings growth has been a key driver of long-term equity returns. As such, to assess expected earnings growth, we must analyze the two components that drive earnings: revenue growth and profit margins. Revenue (or sales) represents the amount of goods and services sold by a corporation, while profit margins represent the percentage of earnings recognized for every dollar of sales. These factors are generally volatile in the short term, but have exhibited strong long-term relationships with broad macroeconomic statistics that are tracked by the Congressional Budget Office (CBO). Sales growth has closely tracked the Nominal GDP Growth statistic, while profit margins

have the been highly correlated to the Economic Profits as a Percentage of GDP Statistic.

For the period December 1973 through December 2008, the 10-year rolling average S&P 500 sales growth and nominal GDP growth has been highly correlated (see chart below). During this time frame, average annual nominal GDP growth averaged 7.0%, while S&P 500 sales growth averaged 6.7%. This relationship should not come as a surprise given that nominal GDP and S&P 500 sales represent the market value of goods and services produced by the constituents of each. The S&P 500 is a sample set of the companies included in the U.S. economy and, therefore, represents a portion of nominal GDP growth.

Corporate Revenue Growth Is Closely Tied to the Growth of the Economy



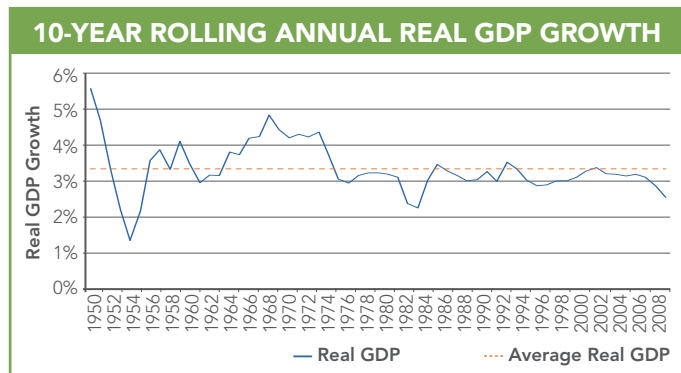
Source: PMFA, Standard & Poor's Compustat, Congressional Budget Office

Notice in the chart above that 10-year rolling annualized nominal GDP and S&P 500 sales growth have slowed significantly since the early 1980s. These figures were higher during the '80s due to the inflation early in the decade and in the latter portion of the 1970s. In the early 1980s, the Federal Reserve made it an explicit goal to combat inflation, which they have done successfully over the past two decades (thereby leading to lower nominal GDP and sales growth).

While we cannot predict nominal GDP growth with any certainty, the United States has had a relatively stable track record of real GDP growth, typically ranging between 2% and 4% over 10-year rolling periods

(see chart below). To get an estimate of nominal GDP, an assumed rate of inflation must be added. Currently, the breakeven inflation rate between 10-year U.S. Treasuries and 10-year Treasury Inflation-Protected Securities (TIPS) is approximately 1.60%. This is one method of estimating the annualized inflation expectation of market participants over the next 10 years. This is slightly below the Federal Reserve's target inflation rate of 2–3%. A projection that uses historical ranges of real GDP, as well as current market inflation expectations, suggests that nominal GDP growth may range between 4–7% per year over the next 10 years. If either deflation or higher-than-average inflation takes hold over this period, then both nominal GDP and sales growth would be affected.

Long-Term Real GDP Growth in U.S. Has Been Relatively Stable



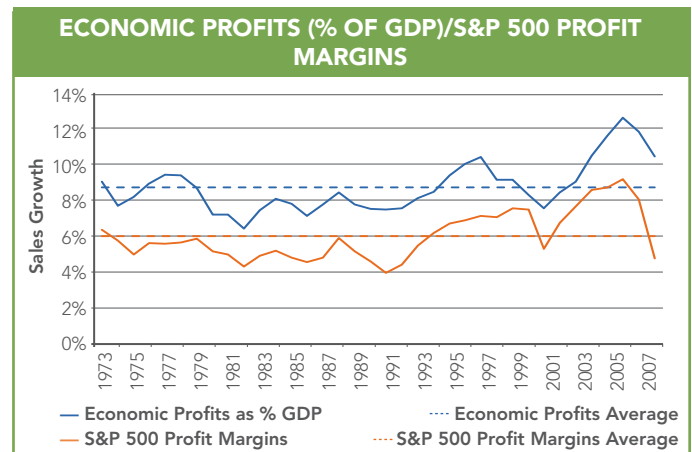
Source: PMFA, Congressional Budget Office

THE BOTTOM LINE: EARNINGS GROWTH TO BE CHALLENGED BY A LESS FRIENDLY ENVIRONMENT

In order to determine earnings, one must also consider profit margins. From December 1973 to December 2008, the average of Economic Profits as a Percentage of GDP was approximately 9% (similar to the average since 1929, according to Crestmont Research), while profit margins on the S&P 500 averaged 6%. S&P 500 profit margins have been consistently less than Economic Profits as a Percentage of GDP (see chart below). The Congressional Budget Office, responsible for producing the economic profits estimate, defines these as corporate profits adjusted for depreciation and inflation effects on inventories, which differs from operating profits on the S&P 500 that include depreciation and do not make adjustments

for inflation. As such, S&P 500 profit margins will be consistently lower than Economic Profits as a Percentage of GDP as reported by the Congressional Budget Office.

Recent Corporate Profit Levels May Prove Unsustainable



Source: PMFA, Standard & Poor's Compustat, Congressional Budget Office

Looking back to 2006, both economic profits as a percentage of GDP and S&P 500 profit margins reached peak levels. In that year, the S&P 500 operating earnings reached approximately \$87.72 per share. The profit margin chart above illustrates that margins started to move consistently above the long-term average in the early 1990s and have stayed there for more than a decade (excluding the 2001 and 2008 recessions). Globalization, cheap capital sources, leverage, and deregulation over the past two decades have driven down corporate costs, raising profit margins to above-average levels. The impact of those tailwinds was substantial. The most recent recession has knocked down these margins considerably, and there is some concern as to whether or not profit margins can return to their 2006 levels in the foreseeable future.

In our opinion, it is unlikely that profit margins will return to the peak levels experienced in 2006 anytime soon. The same trends that supported higher profit margins from 1993–2006 are now destabilizing or even unwinding, potentially creating headwinds going forward. Policy actions and proposals are reflecting regulation trends within financial institutions and the capital markets, specifically, securitized lending, hedge funds, and "over the counter" (OTC) derivatives. Capital costs are on the rise due

to tightening lending standards, wider corporate bond spreads, and investor risk aversion. Perhaps most importantly, the world is in the process of deleveraging. These forces are not supportive of a return to the profit margins witnessed in the last five years. When reflecting on these matters, investors must consider this: if S&P 500 profit margins in 2006 were merely equal to the long-term average of 6% (rather than 9%), earnings would have been \$57.15, approximately 35% below the earnings actually reported. The following chart shows the potential earnings of the S&P 500 given different levels of sales growth and profit margins over the next 10 years. Applying this earnings estimate to an ending P/E ratio, one can approximate the level of the S&P 500. For example, if profit margins and sales growth are 6%, then earnings will be approximately \$112. A P/E ratio of 15x would result in an S&P 500 price level of 1,680 on December 31, 2018.

Muted Sales Growth and Profit Margins Would Limit Earnings Growth

ESTIMATED EARNINGS				
10-Year Annualized S&P 500 Sales Growth		S&P 500 Profit Margins on 12/31/2018		
		4.0%	6.0%	8.0%
		0.0%	\$ 41.7	\$ 62.5
2.0%	\$ 50.8	\$ 76.2	\$ 101.7	
4.0%	\$ 61.7	\$ 92.6	\$ 123.4	
6.0%	\$ 74.7	\$ 112.0	\$ 149.4	
8.0%	\$ 90.0	\$ 135.0	\$ 180.0	

Source: PMFA

THE OUTLOOK: FUNDAMENTAL HEADWINDS MAY CONSTRAIN STOCK RETURNS

We have reviewed the historical data regarding the effect of real GDP growth, inflation, and profit margins on long-term corporate earnings. While the future absolute level of these measures is uncertain, it appears as though a range of potential outcomes for long-term earnings is

reasonably predictable. Unfortunately, that's not the entire story behind stock market returns. As discussed earlier, P/E ratio expansion or contraction (the "voting" machine) can have a material effect on returns over shorter time periods, bringing us back to Benjamin Graham's observation noted at the beginning of this paper. We believe this P/E movement to be largely unpredictable, as it is influenced by human behavior. However, we do know that lower P/E ratio environments have historically occurred during periods of substantially above-average inflation or deflation.

The good news is that P/E ratios have moved down from their peak earlier this decade to a level that would be considered "average" based on the long-term earnings trends. With earnings on the S&P 500 of approximately \$50 per share as of December 31, 2008, the P/E ratio was approximately 18x earnings, which is slightly above the long-term average. Given a starting price level of 903 on the S&P 500 as of December 31, 2008, the following chart summarizes the annualized compounded price return on the S&P 500 (excluding dividends) assuming various P/E, profit margin, and sales-growth scenarios.

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

ESTIMATED PRICE RETURNS FOR 10 YEARS ENDED 12/31/2018										
10-Year Annualized S&P 500 Sales Growth	Ending P/E Ratio: 10			Ending P/E Ratio: 15			Ending P/E Ratio: 20			
	S&P 500 Profit Margins			S&P 500 Profit Margins			S&P 500 Profit Margins			
	4.0%	6.0%	8.0%	4.0%	6.0%	8.0%	4.0%	6.0%	8.0%	
	0.0%	-7.4%	-3.6%	-0.8%	-3.6%	0.4%	3.3%	-0.8%	3.3%	6.3%
2.0%	-5.6%	-1.7%	1.2%	-1.7%	2.4%	5.4%	1.2%	5.4%	8.5%	
4.0%	-3.7%	0.2%	3.2%	0.2%	4.4%	7.4%	3.2%	7.4%	10.6%	
6.0%	-1.9%	2.2%	5.2%	2.2%	6.4%	9.5%	5.2%	9.5%	12.7%	
8.0%	0.0%	4.1%	7.1%	4.1%	8.4%	11.6%	7.1%	11.6%	14.8%	

Source: PMFA

If sales growth is 6% per year over the next decade, and profit margins revert to their long-term average of 6%, annualized price returns assuming an ending P/E ratio of 10 would be approximately 2.2% per year. If the P/E ratio rises to 20 over that same period, the return would be 9.5% per year. The chart also provides price returns for sales growth and profit margin figures that are higher or lower than those long-term averages.

As mentioned earlier, it is possible that sales growth and profit margins will be lower than those of the last decade. The U.S. consumer, who has recently accounted for as much as 70% of GDP, is likely to remain under pressure. Increasing unemployment, slowing wage growth, falling home prices, and rising savings rates are all pressuring current consumption. In addition, profit margins may suffer from items described earlier, such as deglobalization, higher costs of capital, tighter lending requirements, regulation, and deleveraging. Factors that may counteract these issues and provide support to profit margins include continued productivity enhancements, available operating capacity, and lower wage increases.

The longer investors hold equities, the more likely that the returns from those investments will be positive, assuming that the economy continues to grow at its potential rate.

While this is true, it is clear that the point-to-point change in P/E ratios has a significant influence on equity returns over certain time periods. While a rational approach to reviewing the likely level of corporate earnings has been assessed in this paper, the ultimate return to equity investors may also be significantly determined by the future P/E ratio. If either strong deflation or inflation takes hold over the next few years, P/E ratios are likely to decline further, placing a drag on stock returns. However, if policy makers can manufacture a recovery accompanied by low and stable inflation, it's very possible that returns over the next 10 years could be average to above average, as P/E ratios may be very supportive in such an environment.

A return to average growth, profit margins, and P/E ratios over the next decade would likely lead to price returns of approximately 6.4% on the S&P 500 (highlighted on the chart above). When adding the current dividend rate of 2.6%, this would provide investors in the S&P 500 with a return of approximately 9.0% per year. This is close to the long-term average for equities but also very close to the current yield on lower-grade corporate bonds. While taxes must be considered, we believe that with volatility still very high, diversification of a client's risk assets into non-equity positions is prudent, as long as those positions offer returns that may be comparable to equities.

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.

Plante Moran Financial Advisors (PMFA) publishes this update to convey general information about market conditions and not for the purpose of providing investment advice. Investment in any of the companies or sectors mentioned herein may not be appropriate for you. You should consult a representative from PMFA for investment advice regarding your own situation.