

# Market Analysis, Research & Education

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## Is the U.S. Stock Market Cheap?

*Assessing valuations using the price-to-earnings ratio*

Whether the steep price declines in the U.S. equity market in recent months have made U.S. stocks a bargain is a question on the mind of many investors. The following article takes a look at a key metric—the price-to-earnings (P/E) multiple—that investors use to help gauge stock valuations, provides perspective on the various interpretations and applications of this valuation measurement, and offers an assessment of the stock market's valuation using comparative historical analysis.

### Valuation: A Relative Earnings Game

The P/E ratio, the price of a stock divided by a company's earnings per share, has long been a common metric for assessing valuation (see *Understanding the Price-to-Earnings Ratio*, page 2). When using the

P/E ratio, it's important to recognize that there are several different methods for determining the earnings of companies, each of which will lead to different P/E calculations. Some of the most common differences in corporate earnings methodologies are:

- **Operating vs. Reported:** Operating earnings exclude "write-offs" (e.g. non-recurring charges) while reported earnings include them. Some analysts prefer to use operating earnings because they tend to reflect the longer-term trends in the underlying performance of a company's operations. Reported earnings are more inclusive, but can be extremely volatile.<sup>i</sup>
- **Trailing vs. Forward:** Trailing earnings incorporate the past four quarters of actual earnings, while forward earnings incorporate analysts' projected earnings for the next four quarters. Forward earnings estimates have the benefit of providing an expectation of future business and earnings trends, but they have often proved to be inaccurate during periods of economic uncertainty. Trailing earnings only tell an investor what has already happened, but as a result they are more stable as a basis for historical comparisons.<sup>ii</sup>
- **Current vs. Normalized:** The long-term business prospects of companies generally change much less dramatically than short-term earnings cycles. As the economic cycle moves toward a peak or trough, the profit cycle of companies tends to follow, meaning a valuation measured at one earnings extreme or the other may deviate significantly from the long-term potential of the overall market. Incorporating an average earnings figure over time—referred to as a normalized P/E—can be appropriate because it includes periods long enough to incorporate both peaks and troughs of activity (usually five to 10 years of history).

### KEY TAKEAWAYS

- The stock market's significant price decline in recent months likely caused many investors to question whether stock valuations are inexpensive.
- One way to gauge stock valuations is by evaluating a stock's (or an index's) price-to-earnings (P/E) ratio, but it's important to note that P/E calculations can vary widely based on which underlying measurement of corporate earnings is utilized.
- Using normalized earnings, as of November 13, 2008, the stock market was inexpensive relative to its recent and long-term averages.
- Stocks, however, are not as cheap as the trough levels experienced during the worst economic times in the 1930s and 1970s.
- Historically, a below-average P/E ratio for the stock market often has been an indicator of above-average future performance.

## Understanding the Price-to-Earnings (P/E) Ratio

Price multiples are the most common and oft-cited metrics of fundamental stock analysis, where stock price is expressed relative to some underlying factor related to a company's business, such as its earnings, sales, or book value. Expressing prices based on these factors allows investors to easily compare different stocks on the same scale regardless of a stock's nominal price, and they provide context on how much (profits, etc.) they are purchasing. The price-to-earnings multiple (or P/E ratio) is one of the most well-known of these multiples, and its basic derivation is straightforward: Price per share divided by earnings per share. For instance, if Company A's stock is trading at \$100 and they have \$10 of earnings per share, Company A would have a P/E ratio of 10. When trying to evaluate the broader market in general, assessing the P/E of a broad index, such as the S&P 500 Index, can help provide investors with perspective on valuation.

There is no magic valuation method that is inherently better than another; they all offer different perspectives. For example, operating earnings may be most helpful in gauging the long-term trends in a company's operations, but they may underestimate losses to investors during periods when companies realize a large amount of non-recurring charges. P/E ratios based on forward earnings estimates may be more appropriate as a proxy for investor expectations, but at times when investor estimates end up being well off the mark, they may deviate significantly from reality and distort the P/E as a result.

The wide variety of earnings metrics available for interpretation can lead to a wide range of valuation conclusions. For instance, the calculation of the current P/E ratio for the U.S. stock market is anywhere from 9.2 to 17.4 depending on which earnings measurement is utilized (see Exhibit 1). Essentially, it's possible to make the case that the same stock or group of stocks is expensive, cheap, or fairly valued depending on which earnings measure is used.

## Using P/E's in historical context

Comparing a stock's (or an index's) P/E to other time periods or key historical reference points can help determine a clearer assessment of valuation. History can provide a contextual basis for which to determine whether stocks are expensive or inexpensive. Historical comparisons, however, also have a number of complicating factors. First, there are limitations on the amount of history available for different earnings measurements. For instance, reported earnings metrics have the longest history available, while operating and forward earnings are typically only accessible for the past three or four decades. Second, the changing economic environment, particularly the level of interest and inflation rates, can impact the level of valuations. P/E ratios tend to be lower during periods of high inflation and interest rates, in part because these high rates make future earnings less valuable in the present. Third, demographics and changes in the investor base for stocks may affect valuations. For instance, the degree to which new and different types of investors enter and participate in the stock market may affect the overall market valuation. All of these factors underscore the challenge to assessing P/E valuations in historical context.

## Examining the Market's Current Valuation

In assessing the valuation of today's equity market as a whole, using normalized trailing reported earnings may provide the most effective analysis for comparisons because the earnings data is available over a long-term period, and historically this type of earnings has been a good long-term in-

### EXHIBIT 1: P/E ratios can vary widely based on the measurement of corporate earnings that is used in the calculation.

S&P 500 Index P/E Ratios by Earnings Type	
Trailing (Reported)	17.4
Forward	9.2
Operating	12.8
Normalized Reported	13.0
Normalized Operating	11.3

P/E levels use closing 11/13/08 S&P 500 Index level. Forward earnings from I/B/E/S. All other earnings measures from Standard and Poor's. Source: Standard and Poor's, FactSet, I/B/E/S, FMRCO (MARE) as of 11/13/08.

indicator of future performance. Using normalized (five-year trailing) reported earnings, the following conclusions can be reached about the valuation of the stock market as of November 13, 2008:

**Stocks Are Relatively Cheap vs. Recent History**

The current P/E ratio of 13.0 for the S&P 500 Index is well below the recent average valuation levels (see Exhibit 2, below) over the past two decades. Comparisons to recent history may be useful from the standpoint that the constant changes in the composition of the U.S. economy and stock market ownership make comparisons with the distant past less relevant over time. However, it's important to note that average valuations for the stock market during the past 20 years were significantly higher than the market's long-term historical average (24.9 vs. 17.2).

**Stocks Not Cheap vs. Troughs in Worst Bear Markets**

The stock market's P/E today is not as low as the trough levels reached during previous bear markets that accompanied the worst economic downturns in the 1930s, 1970s and early 1980s (see Exhibit 2, below). During these times, P/E ratios fell into single digits. With the U.S. economy facing its toughest economic environment in at least two decades, comparisons to other periods of extreme pain may be somewhat appropriate.

However, each economic cycle is different, and there are many differences between today's conditions and those of previous downturns that may impact valuation considerations. For instance, stock

ownership during the 1930s was concentrated in the hands of relatively few individuals, while today many Americans own shares through retirement accounts, and institutional investors such as pension and mutual funds are among the largest investors. Broader-based stock ownership, coupled with more sophisticated, longer-term perspective may put a higher floor under valuations than during the 1930s. In the 1970s and early 1980s, inflation and interest rates reached double-digit levels — typically a major hindrance to valuations — while today these rates are relatively low and declining. So while every bear market has coincided with some reduction in P/E levels, previous historical troughs may not be an exact guide for present conditions.

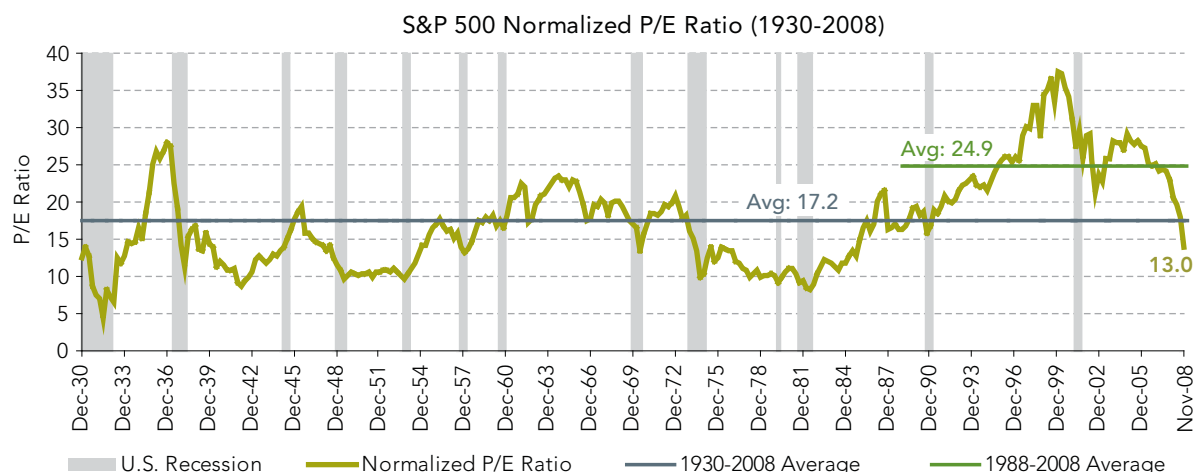
**Inexpensive on a Long-Term Basis**

The 13.0 P/E ratio for the U.S. stock market is inexpensive relative to its long-term historical average of 17.2 dating back to 1930 (see Exhibit 2). P/E ratios can deviate from the long-term average for significant periods of time and to a large degree (from a low of 4.2 in 1932 to an all-time high of 37.1 in 1999). However, today's valuation is below average compared to its long-term historical norm.

**Low P/E's Have Been an Indicator of Above-Average Stock Performance**

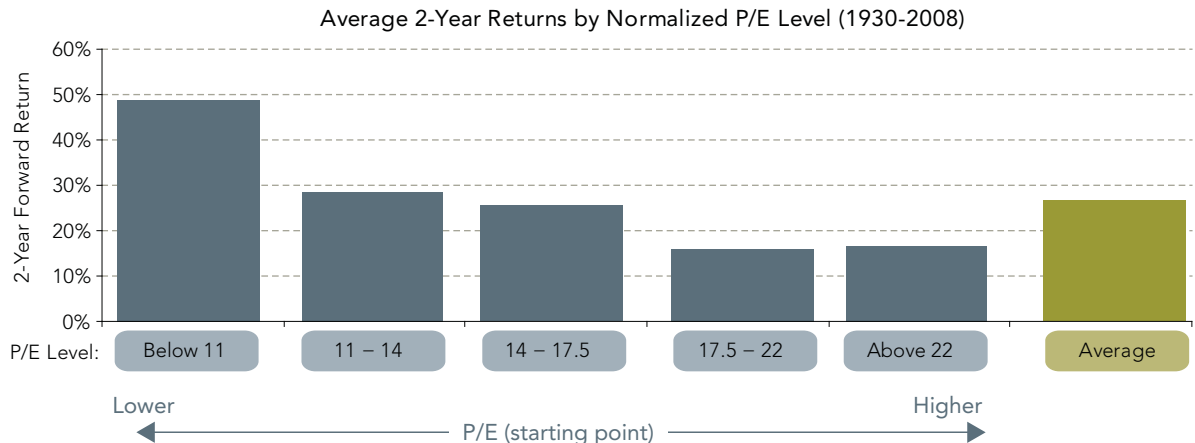
Exhibit 3 (next page) divides up historical market valuations (since 1926) into five groups, from lowest to highest P/E ratios, and illustrates the subsequent 2-year performance of the five different valuation categories. Low P/E ratios historically have often times been an indicator of above-average future perfor-

**EXHIBIT 2:**  
Using normalized earnings, as of November 13 the P/E ratio of the stock market was low (stocks were cheap) relative to recent and long-term averages.



Normalized P/E Ratio uses 5-year average annual reported earnings. November 2008 P/E level incorporates Standard & Poor's earnings estimates with 83% actual earnings. Recessions defined by National Bureau of Economic Research. Source: Standard & Poor's, National Bureau of Economic Research, Haver Analytics, FMRCo (MARE) as of 11/13/08.

**EXHIBIT 3:**  
Historically, below-average P/E ratios (using normalized earnings) have preceded above-average stock performance.



Groupings represent approximate even quintiles of historical normalized P/E ratios. Two-year returns are calculated from starting point of P/E ratio value. Source: Standard & Poor's, FMRCo (MARE) as of 9/30/2008.

mance for the stock market. Conversely, when the stock market has a high P/E ratio, it tends to subsequently experience below-average returns. Current P/E valuation levels place stocks in the second-lowest valuation quintile, which in the past has preceded a period of above-average stock returns. While past performance never guarantees future results, stock valuations today are below historical averages and are at levels that historically have met or outperformed the market's long-term average rate of return.

### Investment Implications

The many different earnings metrics that can be used to calculate the P/E ratios of stocks inevitably lead to different valuation calculations and thus to

varying opinions on whether or not stocks are cheap or expensive at any given time. As is always the case during both upturns and downturns, the performance of the stock market will likely depend on whether future corporate earnings growth exceeds or disappoints the collective expectations of investors. However, with the profit outlook uncertain (as it always is), valuation analysis can provide a framework for stock investors. Current P/E levels are below their long-term historical averages on a normalized earnings basis. While that is no guarantee of future returns, data demonstrates historical stock market performance has tended to be above-average after reaching below-average P/E valuation levels. ■

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*Investment decisions should be based on an individual's own goals, time horizon, and tolerance for risk.*  
Past performance is no guarantee of future results.

[i] Operating earnings exclude various one time or special charges that are not expected to recur and which do not reflect the on-going business of corporations.

[ii] Earnings also are reported quarterly and many companies have different reporting dates. As a result, the timing of a P/E assessment can be rather important. In particular, by the end of a quarter, most "actual" earnings reports are close to three months old, and therefore some analysts suggest estimates of imminent earnings may be more important.

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