



# P/E Ratios

By Paul Woods

## The Equation

Like most professions, investing is littered with jargon. However, most of this jargon leads to a deceptively simple equation. The primary job of the stock market is to place a value on businesses. The value of a business, as measured by the stock price, is expected earnings (per share) multiplied by valuation.

The term p/e ratio is a synonym for valuation. In this equation, p is the price of the stock and e is the earnings per share. P/E ratio is price of the stock divided by earnings per share. This is also known as a multiple (of earnings). In this equation, the price of the stock is pretty straightforward and is the current or last price of the stock. The earnings per share side of the equation is a bit more interesting.

## Discounting the Future

One of the things the stock market is supposed to do is to discount the future, and it does this with varying degrees of success. As one pundit said, “the stock market has predicted 7 of the last 3 recessions”. Be that as it may, professional investors still mostly use expected earnings when they evaluate stock prices.

Ah, but which expected earnings? And how do you compare companies on calendar years with companies on fiscal years? (Note: calendar year earnings are reported as of the end of December. Companies on a fiscal year report 12-month earnings as of the end of any month except December.)

To make all companies comparable, our answer is to adjust earnings estimates to put all companies on a calendar year basis. For example, assume a company has a June fiscal year and reported earnings per share of 1.00 in June 2004. For June 2005, the estimate is 1.20. The expectation for calendar 2004 would be 1.10. This adjustment allows us to compare apples with apples, but we’re still faced with the question of which estimates to use.

For most of 2004, we look at expected earnings for the calendar year and this is the basis for most of our decisions on valuation. However, sometime early in the fourth quarter, once we have a pretty good handle on earnings for the current year, we begin to shift our focus to the next year. Our valuations are now based upon calendar estimates for 2004 and 2005.

## Historic Ranges

Since 1970, p/e ratios for the S&P 500 have ranged from a low of just under 7X to a high of just over 29X. The median has been about 16X, so we’ll consider that to be average valuation. However, before jumping to the conclusion that the stock market is cheap at 7X and overvalued at 29X, there are a few other things to keep in mind.

## The Competition

The stock market is in constant competition with bonds and real estate for investor attention. Investors know that, depending upon the time period measured, the long-term return on stocks is around 10-11%, which is similar to the long-term return on unleveraged real estate. Investors also know that bonds with an average maturity of about 5 years have about half the risk of stocks.

As a result, when bond yields are high and approach the long-term return on common stocks, the rational response is to sell stocks and buy bonds. When Treasury bonds have a yield of 10% or higher, it's hard for investors to find a good reason to put up with the aggravation of owning stocks. The result is that money flows out of stocks and into bonds and stock valuations decline. As a result, the periods of low valuations in stocks invariably correspond with high bond yields.

This works in the other direction also. When bond yields are low, more investors are willing to consider stocks. If you check the data, you'll see that periods of high valuations in stocks generally correspond with low and relatively unattractive bond yields.

## The Present

Which brings us to the present. Right now, bond yields are near their historic lows. However, The S&P 500 is trading at about 18X its 2004 earnings per share estimate, which places the valuation close to the middle of its historic range. Given current bond yields, stock valuations should be about 15% higher, and stocks look cheap as a result. What's going on?

The answer is that stocks appear to be losing ground to real estate in the battle for the affections of long-term investors. Not only have stock investors had to endure the perfect storm of 2000-2002, but the equity market is now becoming overrun with hot money halfwits exempt from SEC regulation. In some segments of the stock market, relatively minor changes in company expectations can produce a 25-50% drop in the underlying stock price. Only short sellers and hedge funds view this as a positive.

Following is a comparison of the volatility of the S&P 500 and Nasdaq for the last four decades:

<u>Std. Deviation of Monthly Returns</u>	<u>S&amp;P 500 Index</u>	<u>Nasdaq Index</u>
1970s	0.0447	0.0545
1980s	0.0474	0.0564
1990s	0.0387	0.0596
2000s	0.0475	0.0960
Average	0.0446	0.0666
2000s vs Avg.	+6.53%	+44.11%

The standard deviation of monthly returns measures the amount of fluctuation in returns. A higher number indicates more volatility, which is one proxy for risk. For the S&P 500, risk in

this decade is about 6.5% more than average. However, S&P 500 stocks are mostly too boring for short sellers and hedge funds, so they focus their attention on Nasdaq stocks. Here, volatility has increased a staggering 44% from average.

As risk and volatility increase in some segments of the stock market, we come back to the same consideration. In this case, there are two asset classes (real estate and stocks) with similar returns over time. However, as one has become riskier, investors are shifting funds to the other. Money that should have gone into stocks has instead gone into real estate, and this has kept p/e ratios in the equity market relatively low.

### **A Few More Considerations**

At this point, you're probably wondering what else influences p/e ratios? The answer is just about everything. A proper answer to this question would make War and Peace look like a short story. However, here are a few more rules of thumb:

The higher a company's growth rate, the higher the valuation  
Consistent earnings produce higher valuations than companies with unpredictable earnings  
Companies with proven managements have higher valuations  
Companies gaining market share have higher valuations than companies losing share  
Clean balance sheets produce higher valuations than companies with a lot of debt

The gist is that uncertainty in any form produces lower valuations. From this, it's tempting to conclude that the ideal investment is a company with an above-average growth rate, consistent earnings, a proven management, and a clean balance sheet. That's what a lot of professionals have concluded, and an explanation of why this makes most of them unable to produce even average returns will be the subject of an upcoming article.

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