

Price to Earnings Ratios

What is a Price to Earnings Ratio?

Essentially, the Price to Earnings (P/E) ratio of a stock expresses the amount of money investors are willing to pay for each dollar of a company's profits (or earnings). Formally, it is equal to a stock's price divided by its earnings-per-share (EPS) over a 12-month period. More specifically, it is given by:

$$\text{P/E Ratio} = \frac{\text{Stock Price}}{\text{EPS}}$$

The ratio can also be determined by dividing the company's total market capitalisation by its total earnings. A company's market capitalisation is given by the total value of shares it currently has on issue. More specifically, the P/E ratio can be calculated on a company basis:

$$\text{P/E Ratio} = \frac{\text{Market Capitalisation}}{\text{Total Earnings}}$$

Some newspapers such as *The Australian Financial Review* publish daily historical P/E ratios, so there is little need for investors to work these out themselves. However, these historical P/E ratios are **less** relevant for investors than future (or forward) P/E ratios. We will expand on this point further below.

What determines Price to Earnings Ratios?

Stock Price

The stock price of a company is determined by a multitude of factors, but it is essentially determined by what the market is willing to pay for it. The market generally looks to the future prospects of a company when determining its stock price. Hence, if the market expects a company to be very profitable in the future, it will generally have a higher stock price and hence higher P/E ratio to reflect this. The higher ratio reflects the growth prospects of the company.

Earnings

A company's earnings, or profit, is given by the revenue it generates minus the cost of sales, operating expenses, depreciation/amortisation costs and taxes, over a given period of time. The earnings of a company are also commonly referred to as the company's net income. Earnings are important to investors because they give an indication of a company's fundamental strength, likelihood of future dividends and potential for growth. However, this does not necessarily mean that low or negative earnings always indicate a bad stock. For example, many young companies report negative earnings as they attempt to grow. That is, they spend more than they earn in their infancy, for the benefit of long term growth.

Economic Conditions

The market's general sentiment in relation to domestic and international economic conditions will also affect stock prices and hence P/E ratios. Bearish sentiment will see lower stock prices and hence lower P/E ratios than bullish sentiment. Low inflation and therefore interest rates will also assist P/E growth. This is because in a low interest rate environment, stocks will be relatively more attractive than bonds as an investment. Hence the market can sustain the higher P/E ratios.

What are they used for?

Investors

The P/E ratio is one of the most common measures used to judge how expensive or cheap a stock is. As already mentioned, the P/E ratio of a stock expresses the amount of money investors are willing to pay for each dollar of a company's profits. The ratio allows investors to compare stock prices of different companies with widely different profits. The higher the P/E ratio, the more the market is willing to pay for each dollar of a company's profits. Conversely, the lower the P/E ratio, the less the market is willing to pay for each dollar of a company's profits.

Additionally, the inverse of the P/E ratio is known as a company's Earnings Yield (ie. the rate of return a company is earning per share). For example, a P/E ratio of 15 means that investors are willing to pay the current stock price for an earnings yield of 6.66%. The stock's earnings yield could then be compared to risk-free bond alternatives, for example, a Government bond yielding 4%. Similarly, the dividend yield is another measure used for this purpose by investors, but many companies pay little or nothing in the way of dividends.¹

Historical vs Future Earnings

When calculating the P/E ratio, one may use either historical earnings (eg. the actual profits that the company has earned over the last 12 months) or future earnings (eg. the profits the company is expected to earn over the next 12 months). Future P/E ratios based on future earnings are more relevant for investors than historical P/E ratios based on past earnings. The reason for this is that the P/E ratio is used to judge whether a stock is expensive or cheap. The stock market in general, looks to a company's future outlook rather than its past performance when setting prices. Hence, the P/E ratio that a stock is trading at is based on what the general market believes the future earnings of a company will be.

Whether or not an investor believes that a stock is overpriced or underpriced, depends on their individual estimate of a company's future profits compared to what the general market believes the company will earn in the future. For example, suppose an industrial stock is trading at a P/E ratio of 15, which may be similar to the industry average. However, suppose an investor is more optimistic on the company's future earnings and estimates that the company is really trading on a P/E ratio of 10. Based on the investor's assumptions, it could be concluded that the stock is underpriced and hence represents an attractive buying opportunity.

Unfortunately, private investors in general do not have the expertise and/or the resources to accurately calculate a company's future earnings on which the P/E ratio is based. Investment professionals such as analysts employed by stockbrokers and institutional investors are generally in a better position to estimate a company's future earnings.

¹ For more information regarding Dividend Yields, please refer to the document titled "Guide To...Dividend Yields".

“Low” and “High” P/E ratios

It is generally accepted that ‘value’ stocks will tend to have lower P/E ratios, reflecting their undervaluation by the market, and ‘growth’ stocks will tend to have higher P/E ratios, reflecting their greater growth potential. However, P/E ratios vary from company to company depending on factors such as industry and type of business. Hence there is no concrete classification of a “low” or “high” P/E ratio. A stock may exhibit comparatively low or high P/E ratios for sustained periods for valid reasons. These reasons are sometimes far from clear and possibly may be obtained from analysing company reports. One may also compare a company’s P/E ratio to the industry average to get an idea of whether it is “low” or “high”, but there are many company-specific factors that cause P/E ratios to differ from the industry average.

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