

## **Explain Financial Ratio**

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RES500-Fundamental of Quantities Analysis

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## Learning Outcomes

1. Explain and calculate earnings per share and diluted earnings per share.
2. Explain and calculate the price-to-earnings ratio.
3. Explain and calculate book value per share.
4. Explain and calculate the dividend payout ratio.
5. Explain and calculate rates of return on equity and assets.
6. Explain and calculate liquidity and financial leverage ratios.

I want to share my feelings about this week's topic. Accounting is like an ocean, and a financial statement has many blobs to create an ocean. The first week is the first level of the sea, and we are going deeper this week. The first blobs for this week are Earnings per share (EPS) and diluted EPS is a financial ratio that indicates a company's ability to produce how much net profits per common share. The EPS formula only includes common shares, but diluted EPS considers all convertible securities, employee stock options, and secondary offerings. Let's compare the company's share price; we have two companies in the same industry and same period with the same number of shares outstanding at 11,000,000 one has a net income of \$1M in the second quarter with dividends of \$350,000 and another one has a net income of \$2M with dividends of \$750,000. Which is better profitability. [Diluted earnings per share formula — AccountingTools](#)

EPS= (Net Income – Preferred Dividends) / End of period Shares Outstanding

$$\text{First company's EPS} = \frac{\$1,000,000 - \$350,000}{11,000,000}$$

Second company's

$$\text{EPS} = \frac{\$2,000,000 - \$750,000}{11,000,000}$$

$$\text{EPS} = \$0.059$$

$$\text{EPS} = \$0.11$$

These equations show higher EPS indicates better profitability. Also, if the company has more shares to investors, then increases the number of shares outstanding and decreases the company's EPS. This is the other reason for investors. Let's keep working with two companies to calculate diluted EPS. The first company grants employee stock options that could be converted to 2M additional common shares and convertible preferred shares that could be converted to 1M common shares. Second company; other information; unexercised employee stock options: 1M, convertible preferred stocks: 3M, convertible debt: 10,000, warrants: 4000.

[Earnings Per Share Formula - Examples, How to Calculate EPS \(corporatefinanceinstitute.com\)](http://corporatefinanceinstitute.com)

Diluted EPS =

$$\frac{\text{Net Income} - \text{Preferred Dividends}}{\text{Weighted Average Number of Shares Outstanding during the period} + \text{All dilutive potential common shares}}$$

$$\text{First company's Diluted EPS} = \frac{\$1,000,000 - \$350,000}{11,000,000 + 2,000,000 + \$1,000,000} = \$0.046$$

$$\text{Second company's Diluted EPS} = \frac{\$2,000,000 - \$750,000}{11,000,000 + 1,000,000 + 3,000,000 + 10,000 + 4000}$$

Diluted EPS= \$0.08

The price-to-earnings (P/E) ratio measures a company's current stock price and earnings per share, which helps to understand the company's value better. Also, the ratio shows the price or earnings multiple, which means the company's stock is overvalued or that investors expect high growth rates in the future. Investors want to buy financially effective companies with a high P/E that indicates a positive future performance and a higher expectation for future earnings growth. Should carefully stock with high P/E can also be seen as risky. Let's look at an example.

Company A's stock price closed at \$100, and the company's earnings per share for the year ended at \$3.75. • [Price to Earnings \(P/E\) Ratio Formula and Definition - Business Quant](#)

$$\text{Price to Earning} = \frac{(\text{Stock Share Per Price})}{\text{Earning per Share}} \quad \text{or} \quad \text{P/E} = \frac{(\text{Market Capitalization})}{(\text{Total Net Earnings})}$$

$$\text{P/E ration} = \frac{\$100}{\$3.75} = 26.67$$

Additional ratios are book value shows the difference between a company's total assets and the total liability, and book value per share(BVPS), which helps to understand how a company's stock is valued.

## References

[Diluted earnings per share formula — AccountingTools](#)

[Earnings Per Share Formula - Examples, How to Calculate EPS \(corporatefinanceinstitute.com\)](#)

[Earnings Per Share \(EPS\) vs. Diluted EPS: What's the Difference? \(investopedia.com\)](#)

[Diluted Earnings Per Share \(Diluted EPS\) - Formula, Calculate \(wallstreetmojo.com\)](#)

[Price-to-Earnings \(P/E\) Ratio Definition \(investopedia.com\)](#)

[Price Earnings Ratio - Formula, Examples and Guide to P/E Ratio \(corporatefinanceinstitute.com\)](#)

[Price to Earnings \(P/E\) Ratio Formula and Definition - Business Quant](#)