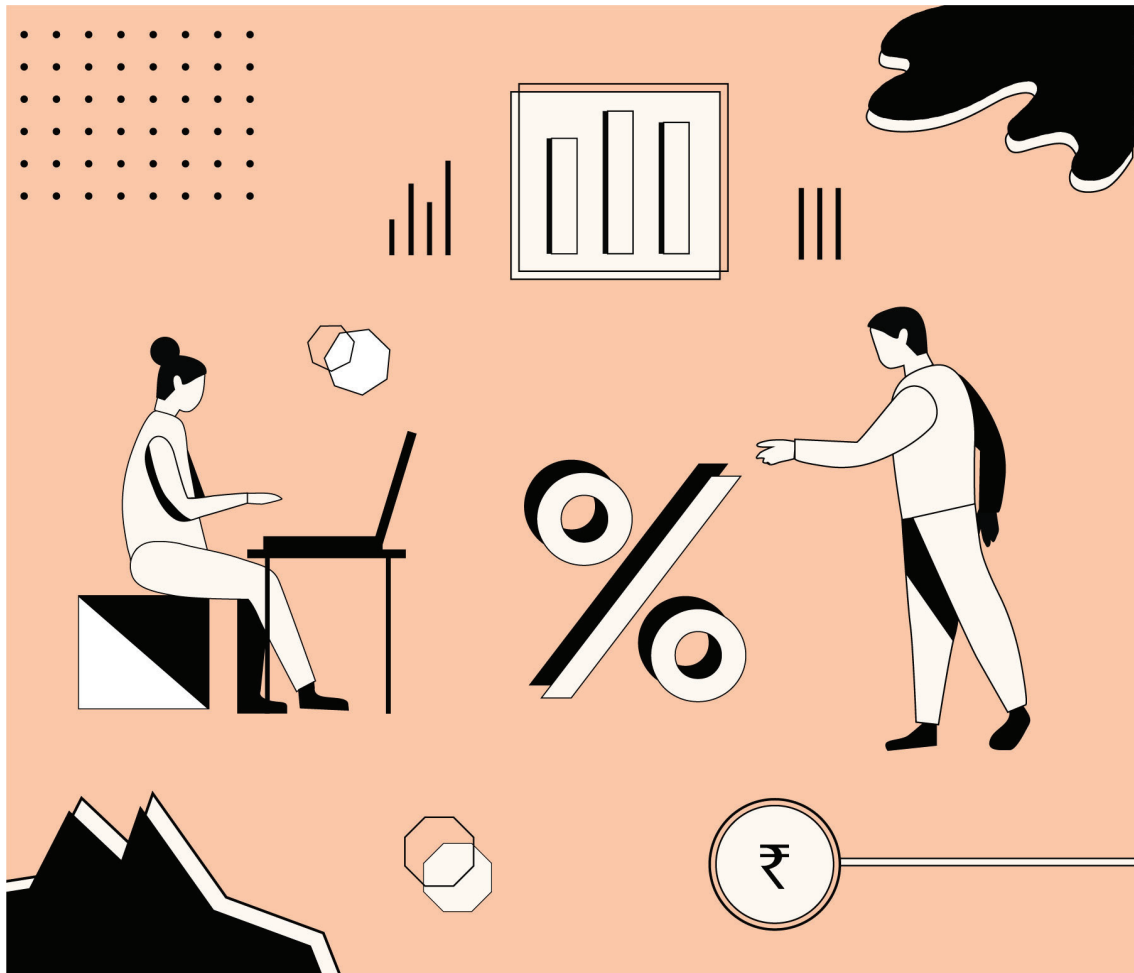


HOW TO TELL IF A STOCK IS EXPENSIVE

Know how to assess the actual value of a stock through various popular measures like P/E, P/B, PEG, etc.



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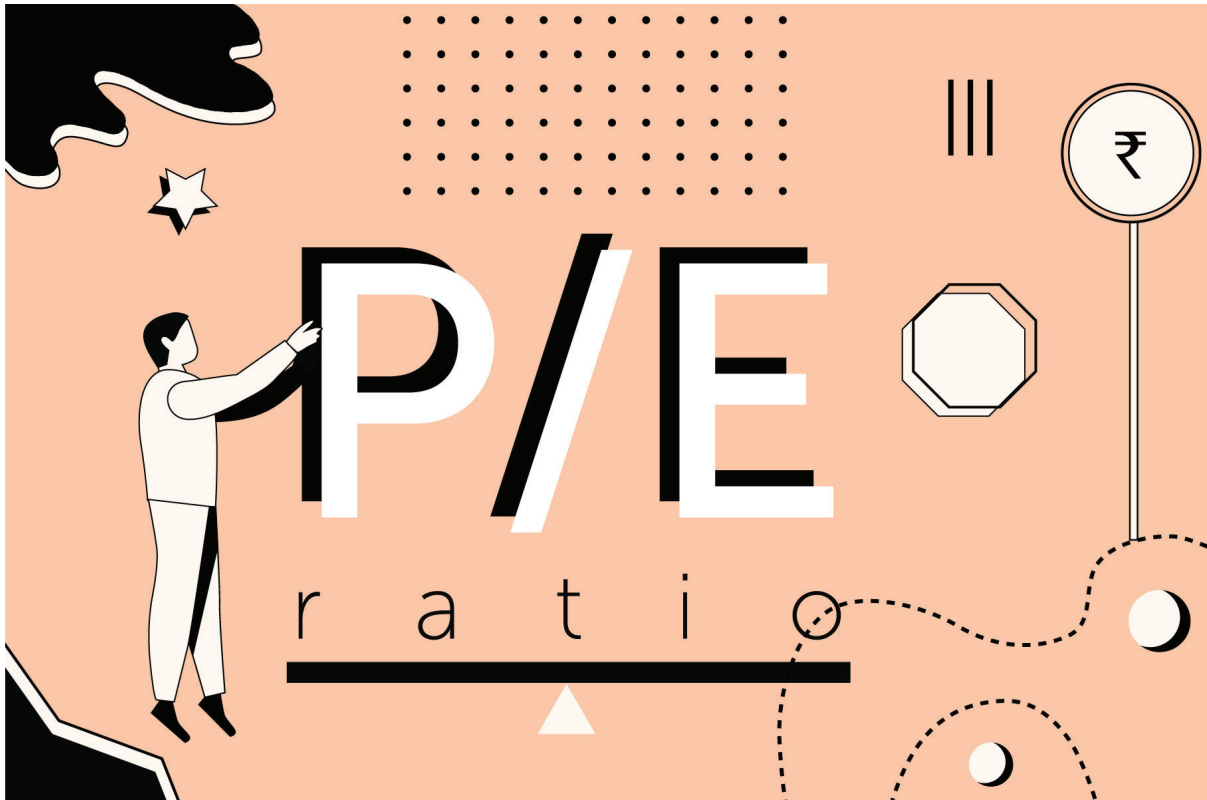
Introduction

If you think that you can make money by simply investing in a growth stock, then think again. Even if you buy a fabulous business that consistently grows its profits, you are unlikely to earn returns on your investments if you paid a fortune on purchasing the shares. This is precisely why it is important to purchase a business at a sensible price. And whether markets are rising or falling, the importance of understanding valuation will never fade away.

So, what is valuation? It is the science and art of estimating the true worth of an asset. While this may sound complicated, it is actually something that we regularly do in our daily lives. Just like how housewives fully know the value of a vegetable and will avoid purchasing expensive vegetables, retail shoppers are also more likely to purchase items when they are on sale. Every time a

purchase decision is made, a valuation exercise is carried out subconsciously. And things are not very different in the financial world.

While the characteristics of the objects purchased are different, the fundamental requirements to conduct a valuation exercise remain the same. So, let's discuss some of the tools used by investors on a daily basis to make better investment decisions. There are broadly speaking two categories of valuation techniques: absolute and relative. Absolute valuation techniques, as the name implies, attempt to put a rupee value to a particular asset, whereas relative valuation techniques are used to compare prices of other assets to see which one is relatively overvalued or undervalued. Absolute valuation techniques include DCF, enterprise value etc., while relative valuation techniques include P/E, P/B, P/CF, etc.



Understanding the P/E ratio

The P/E ratio is the most common valuation tool. But it's not flawless. Here is all you must know about it.

"Price is what you pay, but value is what you get."

Warren Buffett

Price-to-earnings ratio (P/E) is one of the most widely used valuation methods. This ratio shows how expensive a company's share price is as compared to its earnings. In other words, it is the amount of money you

would pay for every rupee of profits earned by the company.

We can illustrate it with an example. For example, if a company's share price is Rs 1,500, with its earnings per share being Rs 100, then it can be said to be trading at a P/E ratio of 15. The numerator is either the price per share or the market capitalisation of the entire company and the denominator is either the earnings per share or the total earnings of the company.

(Kindly note that by earnings, we are referring to profits or bottom line instead of sales or top line). Besides, estimated earnings of the next year can also be used as an input.

Advantages

The P/E ratio gives a very quick and intuitive value that can be used to compare stocks across all sectors, market capitalisations and time periods. It is easy to compute and widely available on most financial websites.

Disadvantages

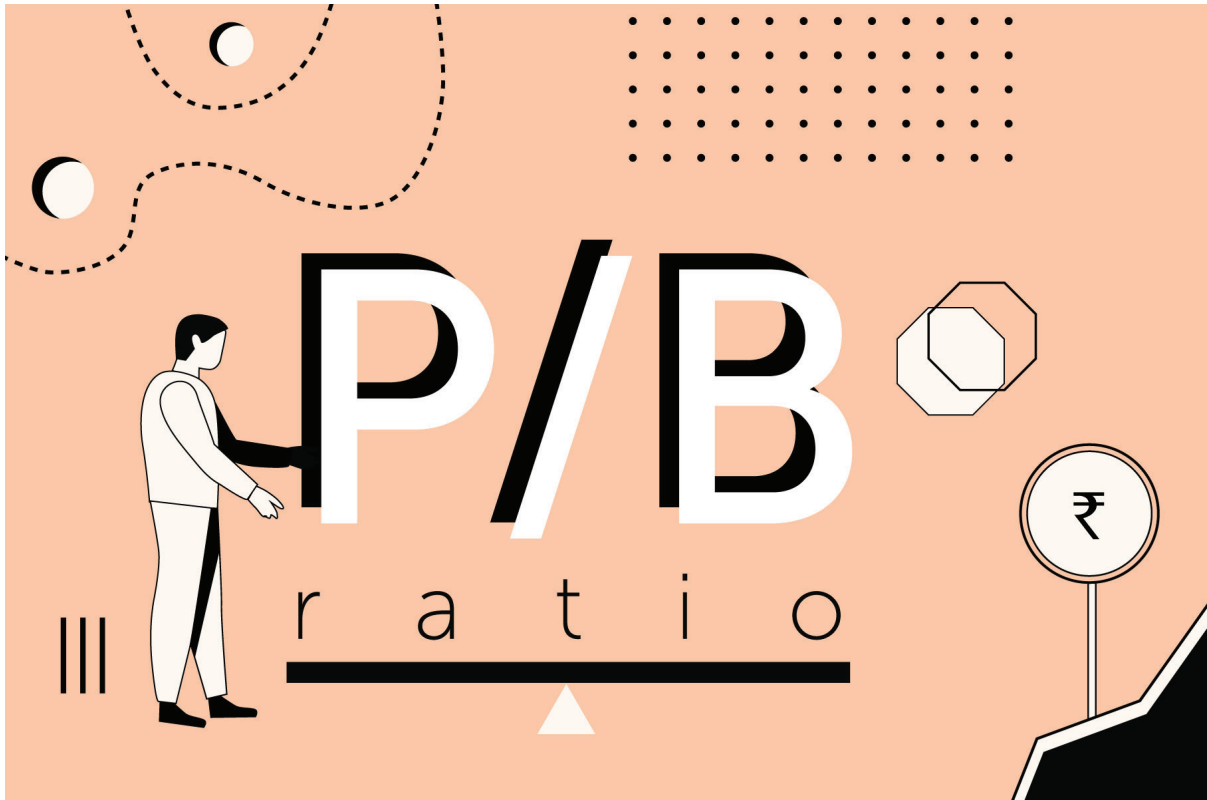
Even though the numerator, which is the share price, is easily understandable, there are different variations in the denominator i.e earnings. Since earnings is an accounting measure, it can be manipulated by the company's management in various ways.

Another problem is that the P/E ratio does not

The P/E ratio can be used to compare stocks across all sectors, market capitalisations and time periods.

differentiate between one-time earnings (such as the sale of a factory) and regular earnings (operational profit which is likely to recur in the future). Also, this ratio varies in companies which are operating in cyclical industries. Since the earnings of these companies follow a cycle, the P/E ratio looks optically lower during up-market phases of the cycle and seemingly high during down-market phases of the cycle.

Last but not least, this ratio is not applicable when a company does not make profits. Since a negative P/E is meaningless (no conclusion can be drawn from the magnitude of the negative P/E), this metric cannot be used to value startups (which generally make losses for quite some time before they start making profits) or mature companies which made losses due to one-time events such as the write-down of a goodwill or inventory losses.



Understanding the P/B ratio

The P/B ratio is a classic tool to assess valuations, especially when the P/E ratio is not useful. Here is all that you need to know about it

Valuation metrics refer to the tools used to evaluate the financial strength of companies and are computed by making calculations using the data disclosed in the balance sheet, income statement and cash-flow statement. These ratios assess companies' profitability, liquidity, operational efficiency and stability, thereby providing investors with in-depth information on companies. By leveraging the power of ratio analysis, investors

can make well-informed decisions.

The price-to-book ratio (P/B ratio) is a commonly used tool by value investors. Unlike the P/E ratio which mainly focuses on a company's earnings, the P/B ratio looks at how expensive a company is as compared to its assets (after paying off its liabilities). It is computed by dividing the price per share (or the company's market capitalisation) with the book value per share (or the company's net worth).

Let's illustrate this with the example of company A, which has a share price of Rs 2000 and a book value of Rs 800. So, its P/B ratio is 2.5. This means that investors are ready to pay Rs 2.5 for every rupee of net assets owned by A. If a company is trading at a P/B of less than one, this implies that investors can buy one rupee worth of assets for less than a rupee.

The P/B ratio gives an easily understandable picture of the company's valuation in relation to its net worth.

ideas, human capital, distribution networks and hard-to-value intellectual property. While book value might have been extremely relevant in the past when physical and tangible assets such as land, factory, equipment and buildings were the primary assets required for running a business, its relevance is decreasing in the modern era when the proportion of intangible assets is increasing(ex: e-commerce firms).

Advantages

Similar to the P/E ratio, the P/B ratio gives an easily understandable picture of the company's valuation in relation to its net worth. It is more stable (since asset prices are not as volatile as earnings) and can also be used to value companies which have not earned profits (start-ups and companies going through liquidation).

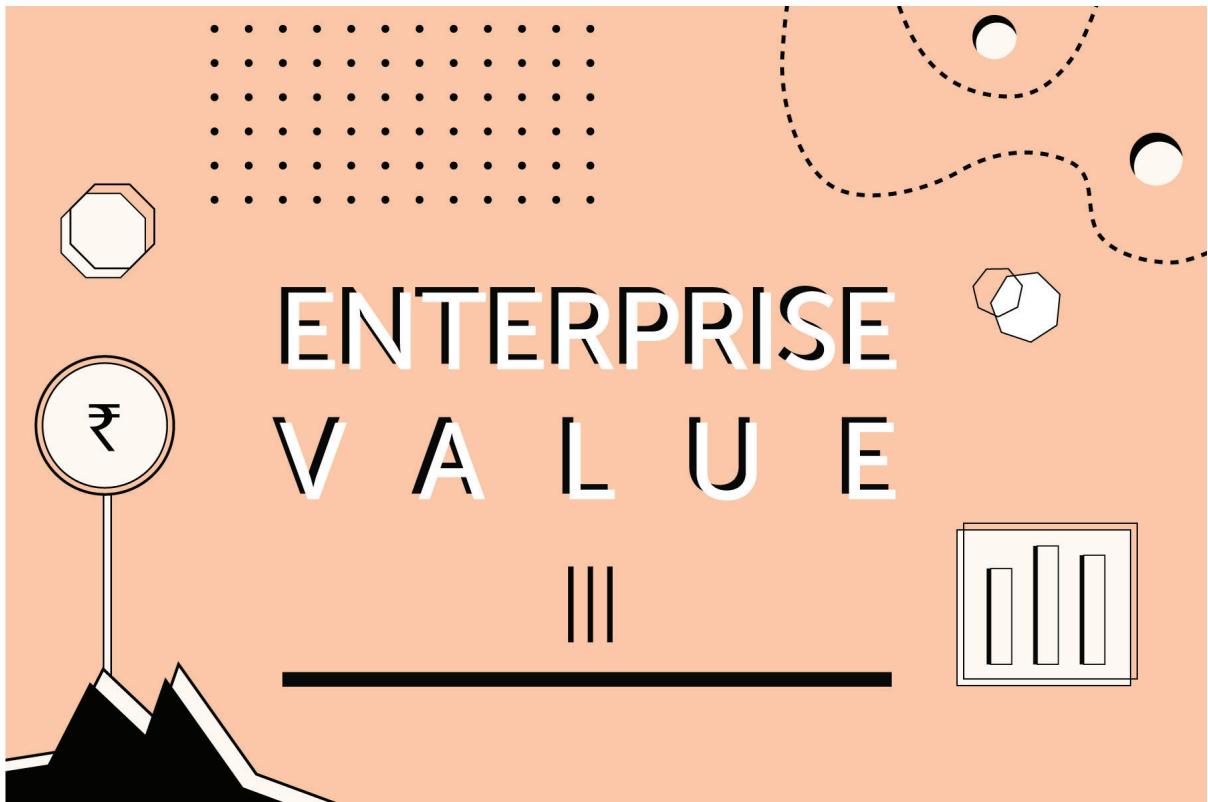
Disadvantages

However, this metric is based on the accounting recognition of assets and therefore, does not capture the true value of all the company's assets because the accounting system has not yet evolved to value intangible assets such as

Therefore, the P/B ratio of companies having a greater proportion of intangible assets will seem optically higher than those having equal amounts of tangible assets.

Another drawback of this metric is that the value of assets is subject to management's discretion because entries like depreciation and goodwill can be manipulated to either increase or decrease the book value of assets.

Also, this metric cannot be applied to companies having negative net worth. For example, many airline companies in India have a negative net worth. And this could happen with startups as well as mature companies going through a difficult phase.



Understanding enterprise value

Commonly used during mergers and acquisitions, enterprise value gives a complete picture of the true ownership cost of a company. However, it has its own limitations.

Valuation metrics are used to determine the true worth of a company. Shedding light on the context of a company's share price, they help in assessing the company's investment potential.

In the previous parts, we have discussed two relative valuation metrics, P/E and P/B. Unlike those two, the enterprise value approach is an absolute valuation metric and is based on the

premise that both equity and debt capital of a company should be taken into account for valuing a company appropriately.

The enterprise value of a company is calculated by adding the company's market capitalisation with the book value of all its debts and then, subtracting the cash available with the company. This is done in view of the option available with an acquirer wherein the cash can

be used to pay off the company's debts to that extent. For example, if a company has a market capitalisation of 1,000 crore and a debt of 5,000 crore, along with cash amounting to 600 crore, then its enterprise value is 5,400 crore.

Advantages

By taking a company's debt burden into consideration, enterprise value gives a complete picture of the true ownership cost of the company to a potential acquirer. Hence, this metric is commonly used during mergers and acquisitions.

Another advantage is that this metric can be used for both loss-making companies and companies with a negative net worth (major shortcomings of P/E and P/B ratios, respectively).

By taking a company's debt burden into consideration, enterprise value gives a complete picture of the company's true ownership cost.

And finally, in this metric, there is very little scope for the management's accounting manipulation, as the book value of debt and the cash on hand is easily verifiable.

Disadvantages

A shortcoming of this approach is that it does not consider the earnings potential of capital investments, thereby making it difficult to compare companies in industries which have different margins or companies in different phases of growth.

Also, since it fails to recognise the realisable value of assets, it is an inappropriate metric for companies which are going to be liquidated (these companies tend to have assets that are very small in proportion to their debts).



Understanding discounted cash flow (DCF)

DCF, which is an indispensable tool to evaluate debt instruments, is also useful in the equity world. Here is what it means.

Valuation metrics are used to comprehensively assess a company's performance, financial health and future prospects. Not surprisingly, both shareholders and creditors hold much interest in these metrics. Like enterprise value, the DCF or discounted cash flow is an absolute valuation method, which means that the end goal is to arrive at a specific rupee valuation.

The DCF method is based on one of the

strongest and easily understandable principles of finance - the time value of money. In simple words, this principle asserts that the worth of one rupee is more today than tomorrow. Let's take the example of a regular household investment product, the ubiquitous fixed deposit (FD). If you deposit Rs 10 lakh in your FD today at an interest rate of 6 per cent, then the worth of your FD tomorrow would be Rs. 10,00,164. This extra Rs 164 is the additional amount that

you have earned in one day. While this is normally called 'interest' and typically thought of only in the context of debt investments, the underlying principle of growth in the expected value of money is equally valid (with some modifications) in the world of equity investments.

The DCF method is, in essence, a reverse-engineering process, which considers a share as nothing but a stream of future cash flows. To put a value on this 'stream', investors begin with estimating both the quantum and the timing of these expected future cash flows. These include intermediary payments (dividends, buybacks etc) and a terminal payment (when finally disposing of the shares). After choosing a specific time frame, all that investors have to do is to 'discount' these future cash flows by using an acceptable discount rate to arrive at a present value.

For example, let's take a situation where the investment time frame is three years, the company is expected to pay Rs 10 per year as dividends and the share price at the end of three years is expected to be Rs 300. Now if our expected rate of return is 18 per cent, then the DCF method would give a current share price of Rs 204.3. This means that in order for us to achieve the targeted return of 18 per cent (provided all our assumptions turn out true), we shouldn't pay a price more than Rs 204.3. Paying anything more would decrease our returns and vice versa.

Interestingly, when it comes to implementing the DCF method, different routes can be followed. To begin with, investors can decide which payment to discount. Dividends and free cash flows are the usual favourites here. The next step is to estimate the discount rate. There

This method is more suitable to value stable, mature companies which are likely to pay a steady stream of cash flows.

are sophisticated ways (CAPM, WACC, Historical etc.) but one can even use a (reasonably) desirable rate of return. And finally, when it comes to estimating the terminal value, investors again have a choice between using a complex method (Gordon Growth Model) or the same multiple as what the stock is currently being traded at.

Advantages

The DCF is very strongly grounded in theoretical finance. The principle of time value of money is widely accepted across the world and can be applied for valuing both companies (based on dividends, free cash flows etc.) and individual projects. Further, this method is more suitable to value stable, mature companies which are likely to pay a steady stream of cash flows.

Disadvantages

The primary disadvantage is the number of inputs that go into the model. All the three inputs - discount rate, intermediary cash flows and terminal value - are subject to different underlying assumptions.

Another disadvantage is that the valuation calculated through this method is predominantly based on the terminal value, which is very difficult to predict. The actual terminal value, which is only realised at the end of the investment period, will be heavily subject to the prevailing market conditions at that time, making it even more difficult to predict than the intermediary cash flows, which are themselves uncertain.

But investors need to understand that investing is ultimately based on faith and the expectation that a brighter future awaits those who are brave enough to take the risk today.



Understanding the PEG ratio

The PEG ratio assesses companies having different growth rates and gives a better picture of which company is more expensive

If there are two identical companies which are similar in every regard except that one company is projected to grow at a higher rate than the other, then isn't it natural for a rational investor to pay more for the high-growth company?

This analogy underscores an important shortcoming of the P/E metric i.e it ignores expected growth rates. The P/E ratio values all companies based only on its historical earnings

and this is inappropriate for comparing companies which are in different stages of their life cycles. If two companies have the same P/E ratio, it is likely that many people will reach a very cursory (but incorrect) conclusion that both these companies are trading at the same relative valuation. But we know that a declining company is not likely to repeat its earnings, while the company in its growth phase is likely to increase its earnings in the future.

To rectify this shortcoming of the P/E ratio, the PEG or 'price-earnings to growth' ratio was devised. This metric adjusts a company's P/E by dividing the P/E with the company's expected growth rate. In a sense, the metric tells us what the P/E is per unit of expected growth. For example, a company trading at a P/E of 15 and having an expected earnings growth of 20 per cent would have a PEG of 0.75.

If a company has a higher PEG ratio, it means that even after accounting for its expected growth, it is more expensive than the one with a lower PEG. So, when used for companies having different growth rates, the PEG ratio gives a better picture of which company is more expensive. The generally accepted thumb rule is that a PEG of 1 implies that a company is fairly valued. Anything less than that is considered to be undervalued and vice versa.

Advantages

Apart from being more refined than the P/E ratio, the PEG ratio is also fairly straightforward to calculate and is available on many websites. It is also intuitively understandable and gives investors a quick way to value companies

The PEG ratio is intuitively understandable and gives investors a quick way to value companies having different growth rates.

having different growth rates. PEG is also more appropriate when a company's future is unlikely to resemble its past. For example, Reliance Industries is evolving: from being a pure-play petrochemical refiner in the past, it is more likely to be a technology/retailing giant in the future.

Disadvantages

The fundamental problem with this metric is the same that is inherently embedded in every forward-looking estimate i.e the predictability (or the lack thereof) of the future. The PEG ratio is highly dependent on the estimates of earnings growth and we all know that predictions about a company's future earnings, even those of experts/analysts/super-smart people etc., are anything but accurate.

Another limitation of this metric is that it is not very useful for those companies whose valuations are not driven by earnings growth. For example, the book value would be more relevant for companies that are going to be liquidated, real estate investment trusts etc. Investors also have to be careful while relying upon the PEG ratios from different sources, as there could be different values, with each having different underlying assumptions.

Conclusion

The above-mentioned metrics are not, by any stretch, exhaustive. But regardless of which valuation method an investor decides to use, one must not forget that it is still an estimate. Estimates are, by their very nature, imprecise and vary from person to person, depending on their underlying assumptions and biases. Rather than

fretting over how precise their estimation is, investors should focus on having a broad understanding of whether a share is overvalued or undervalued. As written by Benjamin Graham in his seminal book, *Security Analysis*, you don't need to know the exact weight of a person to come to the conclusion that they are obese!

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