

Investment Management
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Lecture - 29
Value Investing Using PV Models

Hello there. So, we are discussing about security analysis for the purpose of investment in portfolios. And we have seen how we can carry out fundamental analysis with the help of economic industry and company analysis. And also, we can use quantitative factors for the purpose of in security analysis.

In this session, we will talk about a couple of models where we will use present value models to understand the valuation of a security for the purpose of value investing.

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CONCEPTS COVERED

- Application of PV model for value investing
- How valuable a growing firm is?

The slide features a navigation bar at the bottom with various icons for navigation and a logo for NPTEL (National Programme on Technology Enhanced Learning) on the right side.

This is part of the security analysis and particularly we will talk about the application of present value models for value investing. And we will also see how valuable a growing firm is when it comes to doing the valuation for the purpose of security selection.

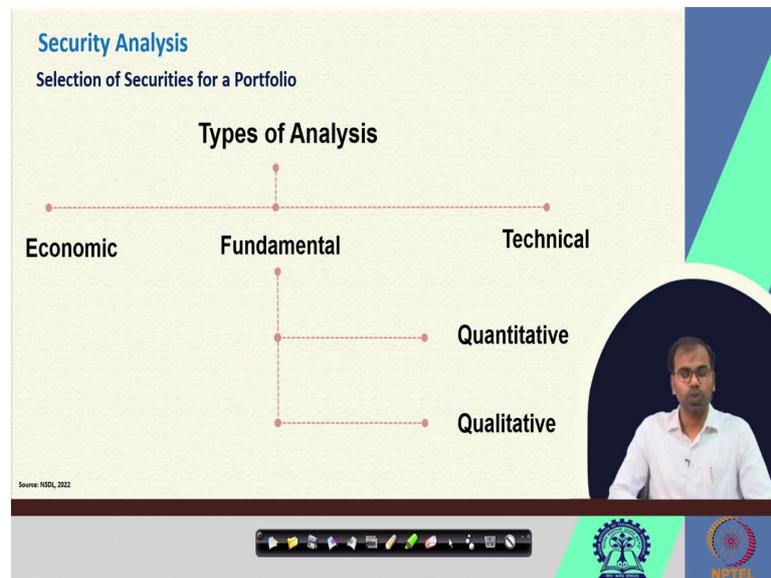
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KEYWORDS

- Value investing
- Present value model
- Constant growth model
- Growth in dividends

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When it comes to the security selection approach, we know that most of the time it is top down approach where we carry out different types of analysis. And these analysis include economic analysis wherein we identify certain economic indicators that gives us an idea of broad market perspective such as looking at the market benchmark index for example, Nifty or Sensex.

We can figure out where the overall market is growing and accordingly, we can make our judgment about future prospects of a company within that market. Next comes the technical analysis that is broadly based on the historical data or historical trends which we believe that historical trends are going to be repeated. So, if in the past it has followed certain trends or seasonality, we can expect that the same can be repeated next time as well and based on that we can figure out our investment strategies.

And then comes the fundamental analysis which is based on qualitative and quantitative factors. We look at qualitative factors such as management or governance and quantitative factors such as financial analysis or ratio analysis or analysis of financial statements in order to understand the right valuation or true economic value for a stock and based on that we can make a decision.

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The slide is titled "Value Investing and Fundamental Analysis" and has a subtitle "Fundamental Analysis through Financials". It contains the following text:

- The objective is to find securities considered to be temporarily undervalued or unpopular for various reasons (both justified as well as unjustified).
- The process involves:
 - a) Determining *economic value* of the firm using financial numbers (fundamental value), and
 - b) Compare it to current market price to assess the valuation

Handwritten notes in red ink are circled and read: $FV > CMP \Rightarrow \text{Buy}$ and $FV < CMP \Rightarrow \text{Sell}$. The slide also features a video inset of a presenter in the bottom right corner, a navigation bar at the bottom, and logos for IIT Bombay and NPTEL.

Now, when it comes to financial analysis through fundamental analysis through financial data or financial statements, we know that the objective of carrying out fundamental analysis is to find securities that are considered to be temporarily undervalued or unpopular for various reasons and these reasons can be justified cannot be justified by the numbers or current scenario.

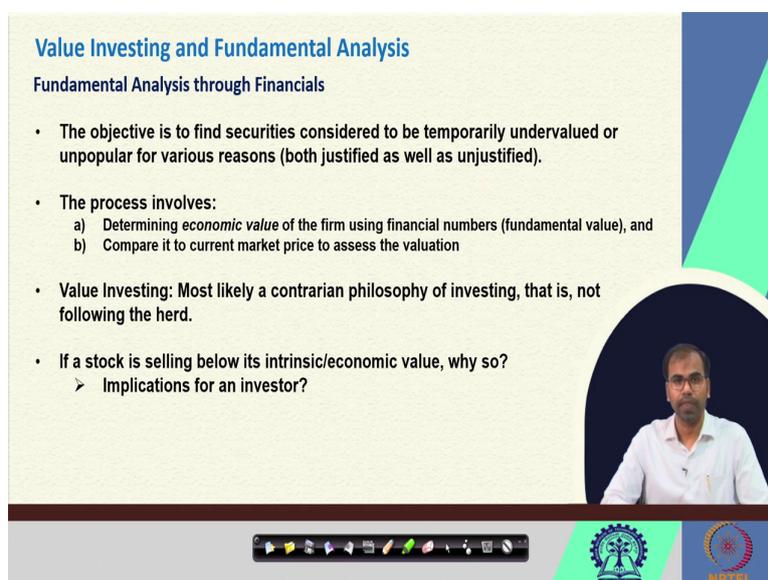
So, the investor would want to know whether there are any undervalued or overvalued companies for which the decision of buy or sell can be taken based on the fundamental analysis. So, the process of carrying out fundamental analysis includes determining the economic value of the firm using financial numbers that we call as fundamental value and then compare this fundamental value to the current market price to assess the valuation.

As we know when it comes to fundamental value, we compare it with the current market price and if fundamental value is greater than current market price, then we go for a buy decision and if fundamental value is less than current market price, then we recommend a sell decision. This is the basic rule for comparing this fundamental analysis or carrying out this fundamental analysis for the purpose of security selection.

We know that if fundamental value of a stock is higher than current market price, we believe that the prices will go on to its equilibrium and in future the current market price will achieve or be equal to the fundamental value sooner. So, if we buy right now, we will be better off because we will buy cheaper and in future it will become expensive.

And in other scenario where fundamental value is less than current market price, then we believe that it is an overvalued company. So, if we sell right now, we will sell at a higher price because tomorrow or in future this current market price is going to be equal to the fundamental value which is less currently. So, we are going to make money in the process.

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Value Investing and Fundamental Analysis

Fundamental Analysis through Financials

- The objective is to find securities considered to be temporarily undervalued or unpopular for various reasons (both justified as well as unjustified).
- The process involves:
 - a) Determining *economic value* of the firm using financial numbers (fundamental value), and
 - b) Compare it to current market price to assess the valuation
- Value Investing: Most likely a contrarian philosophy of investing, that is, not following the herd.
- If a stock is selling below its intrinsic/economic value, why so?
 - > Implications for an investor?

The slide features a video feed of a male speaker in a white shirt in the bottom right corner. At the bottom of the slide, there is a navigation bar with various icons and logos, including the NIFTA logo.

Now, with this the value investing approach or value investing philosophy comes in the picture. Here, the value investing is most likely a contrarian philosophy of investing that suggest of not following the herd when it comes to making an investment decision. So, if a stock is selling below its intrinsic value or when we know that the fundamental value of a stock is less than the current market price, then it is overvalued and if fundamental value is higher than the current market price, then it is selling below its intrinsic or economic value.

We do not know why or at least why such a situation is there when the stock is selling below its economic value, but we need to know we need to understand what could be the right economic value and justify that right economic value in order to make a recommendation.

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Value Investing and Fundamental Analysis
Fundamental Analysis through Financials

- The Present Value Model:
The value of a security that receives a dividend and next year's price is:

$$P_0 = \frac{D_1 + P_1}{1+k}$$

where, k is the risk-adjusted discount rate.
Cost of Capital / Discount Rate

Dividend at time 1
Price of the stock at time t

t_0 t_1

$P_0 = \frac{D_1 + P_1}{1+k}$

$\frac{D_1}{1+k}$ $\frac{P_1}{1+k}$

$CMP > P_0$
 $CMP < P_0$

Because it has implication for the investor and investor needs to make a decision about the selling or buying or holding a particular stock based on the calculated intrinsic value for a stock. And for that purpose, we use couple of models. Here, we are going to discuss those models where fundamental analysis can be carried out with the help of financial numbers and one of those models is the present value model.

We know that most of the time the value of a security that receives a dividend and next year price can be indicated as D 1 plus P 1 divided by 1 plus k. Here, just to recall, we know that this D 1 is basically the dividend that the stock intends to pay at time t time 1 and P 1 is the price of the stock at time t. Here, k essentially indicates the risk adjusted discount rate or also known as cost of capital or discount rate. Now, it is based on the basic philosophy.

Let say, if we have two period model where we have t_0 and t_1 and we know that in this particular period, the investor is expected to receive a dividend and it is also expected to sell the stock for a price P_1 . And we know that the argument of present value or time value of money suggest that we need to understand the present value of this dividend as well as the present value of this future price that the investor expects to receive.

Now, we know that the rule for discounting is D by $1 + k$ which is basically the discounting rate and similarly for price also we will use this the same argument $1 + k$ where k is the discounting rate. So, P_0 should naturally be D_1 plus P_1 divided by $1 + k$. So, based on the time value of money, we argue that the price of the stock today should be equal to the present value of the dividend and the future price combined together in today's term. And based on that, we can decide about the value of security.

If the price of security today is anything, but P_0 or P_0 , then we can say it is not correctly valued. So, if current market price is higher than P_0 that we have calculated here, then we can call this security as overvalued and we do not want to buy such a security because according to our assumption, this should be security should be valued at P_0 and anything other than P_0 is not a correct valuation.

Similarly, if current market price is less than P_0 , we can call it undervalued and eventually it will achieve an equilibrium to equal to P_0 . So, we call it undervalued and, in this case, we would want to buy such a security. So, that in future, the value of the security goes up and we will be better off as an investor.

This is about a situation where there is only one period where dividend is being received and price is being expected in that sense.

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Value Investing and Fundamental Analysis
Fundamental Analysis through Financials

- The Present Value Model:
The value of a security that receives a dividend and next year's price is:
$$P_0 = \frac{D_1 + P_1}{1+k}$$
 where, k is the risk-adjusted discount rate.
- What about next year's price?
$$P_1 = \frac{D_2 + P_2}{1+k}$$

Timeline diagram showing time points t_0 , t_1 , and t_2 . At t_0 , the value is $P_0 = \frac{D_1 + P_1}{(1+k)}$. At t_1 , the value is $P_1 = \frac{D_2}{(1+k)} + \frac{P_2}{(1+k)}$. At t_2 , the value is $D_2 + P_2$.

Logos for IITM and NIFTA are visible at the bottom right of the slide.

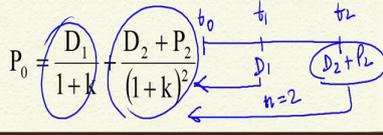
What about next year's price? If you want to calculate the next year price, we will follow the same argument, we will go by the same logic. So, if it is t_0 and t_1 and t_2 . So, in t_1 , if we have D_1 plus P_1 . So, it will have D_2 plus P_2 . So, when we want to calculate the price at P_1 , it is basically D_2 divided by $1 + k$, which is discounting rate plus P_2 divided by $1 + k$.

And here, we have already seen that P_0 is going to be D_1 plus P_1 divided by $1 + k$. If we understand this argument where the price at any point of time is basically the present value of future dividend and future price, then we can simply keep this logic.

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Value Investing and Fundamental Analysis
Fundamental Analysis through Financials

- The Present Value Model:
The value of a security that receives a dividend and next year's price is:
$$P_0 = \frac{D_1 + P_1}{1+k}$$
 where, k is the risk-adjusted discount rate.
- What about next year's price?
$$P_1 = \frac{D_2 + P_2}{1+k}$$
- So, today's price is:
$$P_0 = \frac{D_1}{1+k} + \frac{D_2 + P_2}{(1+k)^2}$$



So, today's price will be D_1 divided by $1+k$ plus $D_2 + P_2$, which is basically, the future dividend at time 2 divided by $1+k$ to the power 2, because it is a two period model where t_0 , t_1 and t_2 . So, at t_2 , we are getting dividend 2 plus P_2 . And here, we are getting dividend 1. So, dividend 1 will be discounted and then dividend 2 and P_2 will be discounted for n is equal to 2. So, we will discounted for two periods and we get the price today. Right

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Value Investing and Fundamental Analysis
Fundamental Analysis through Financials

- The Present Value Model:
Continuing with the substitution, the model leads to the generalized PV equation as following:

$$P_0 = \frac{D_1}{1+k} + \frac{D_2}{(1+k)^2} + \dots + \frac{D_n + P_n}{(1+k)^n}$$

Value Investing and Fundamental Analysis
Fundamental Analysis through Financials

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Value Investing and Fundamental Analysis
Fundamental Analysis through Financials

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Value Investing and Fundamental Analysis
Fundamental Analysis through Financials

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Value Investing and Fundamental Analysis
Fundamental Analysis through Financials

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Value Investing and Fundamental Analysis
Fundamental Analysis through Financials

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$$P_0 = \frac{D_1}{1+k} + \frac{D_2}{(1+k)^2} + \dots + \frac{D_n + P_n}{(1+k)^n}$$

With this understanding of price, if we follow the substitution, if we continue with the substitution, the model leads to a generalized present value equation as following. So, it tells us that P_0 , which is the price of the security today, is nothing but all the cash flows that the security is expected to generate in future time and the final terminal value that the security is expected to give to the holder or to the investor.

If you could recall, we know that when we discussed time value of money, we discussed about how do we discount a series of cash flows, particularly when it comes to constant cash flows. So, if we have n periods, investor is expecting dividend at every period and at the end of the day, the selling price of the security will also be used.

So, we will bring it back. So, all future cash flows will be discounted and this will be used for D_1 divided by $1 + k$, D_2 divided by $1 + k$ to the power 2, because this is for 2 years.

Similarly, D_3 divided by $1 + k$ to the power 3, because it is for 3 years and $D_n + P_n$ divided by $1 + k$ to the power n . Period and then we sum it all to understand the P_0 .

So, in this approach, we can calculate the present value of any security by discounting the future cash flows in this case in the form of dividends to be received by the investor and also the selling price or the terminal value that the investor is expecting to receive at the end of the period. And when we sum all the present value, the present the P_0 that is price today can be found out.

Again, the logic would remain same if the present value that is P_0 is anything, but current market price or current selling price of the security, then we would not call it rightly valued or correctly valued and subsequently we will try to take a decision of buy or sell accordingly.

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Value Investing and Fundamental Analysis
Fundamental Analysis through Financials

- The Present Value Model:
Continuing with the substitution, the model leads to the generalized PV equation as following:

$$P_0 = \frac{D_1}{1+k} + \frac{D_2}{(1+k)^2} + \dots + \frac{D_n + P_n}{(1+k)^n}$$

- What about estimation of P_n ?
One method is to use the Price-Earnings (P/E) ratio:

$$P_n = \left(\frac{P}{E}\right) \times E_n$$

$$= \left(\frac{P}{E}\right) \times E_0 \times (1+g)^n$$

g = Growth in earnings

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So, if we want to estimate price for n that is future price of the security, we can just use another method that is using the price to earnings ratio to understand the price at time n for any given security. So, price at time n would be price earning ratio for earnings at time n and accordingly we can use this argument of future growth where g is the growth in earning.

And this model where price to earning for the stock is used to understand the impact of future price and if we know that earnings has certain growth as well which means earnings will grow at the rate of g for n number of years, then we can use this formula to understand the future price or at least expected future price of the security. Let us try to understand this formula with the help of an example.

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Value Investing and Fundamental Analysis
Fundamental Analysis through Financials

Illustration: According to information obtained from a financial database, FreshFood, Inc. (FRE) has a current price of \$64 per share, an expected dividend per share of \$1.40, an EPS of \$7.50, expected EPS growth of 6% per year, and a typical P/E ratio of 12.

According to the Present Value Model, what is the present value of FRE using a discount rate of 14% and a five years analysis period? Is it undervalued or overvalued?

Given that, P/E Ratio: 12, EPS: \$7.50, g: 6%, and n: 5 years

Earnings per share

The slide includes a video feed of a presenter in the bottom right corner and a navigation bar at the bottom with various icons and logos.

Suppose we want to understand the financial fundamental value of a stock using financial data or financial information. Suppose that there is a company Freshfood corporation or

Freshfood Inc that has a current price of 64 dollar per share, it has an expected dividend per share of 1 dollar 40 cents and earnings per share EPS of 7 dollar 50 cents and expected EPS growth of 6 percent per year and a typical price to earnings ratio of 12.

According to the present value model, what should be the present value of this company using a discount rate of 14 percent and a 5 year of time horizon or investment horizon? We know that we are given price to equity ratio of 12. So, we can just take a look at the numbers here price to equity ratio of 12. We have earnings per share of 7 dollar 50 cents EPS is earnings per share. We have growth in earnings per share at 6 percent and time horizon is n is equal to 5 years.

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Value Investing and Fundamental Analysis
Fundamental Analysis through Financials

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According to the Present Value Model, what is the present value of FRE using a discount rate of 14% and a five years analysis period? **Is it undervalued or overvalued?**

Given that, P/E Ratio: 12, EPS: \$7.50, g: 6%, and n: 5 years

Estimated price in five years: $P_5 = \left(\frac{P}{E}\right)_5 \times E_0 \times (1+g)^5$

If we use this these numbers, the expected estimated price in 5 years should be nothing, but the argument of the previous formula that we have just discussed. Here we have this formula

which will tell us about the future price of the stock using this earnings and growth in earnings.

So, if we are given this these data, we can use this estimated price in 5 years using this formula where price at the time n 5 n is equal to 5 price to earnings into earnings at time 0 and growth in earnings for 5 years because this basically if it is earnings today that is earnings per share and it earnings has a growth of 6 percent for 5 years.

By arguing the same time value of money if earnings today is E, then we know that when it goes to future fifth year t 5 then earnings should be 1 plus g to the power n where n is equal to 5. So, we use this formula for calculating the estimated price at fifth year.

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Value Investing and Fundamental Analysis
Fundamental Analysis through Financials

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Given that, P/E Ratio: 12, EPS: \$7.50, g: 6% and n: 5 years

Estimated price in five years: $P_5 = \left(\frac{P}{E}\right)_5 \times E_0 \times (1+g)^5$

$$P_5 = 12 \times \$7.50 \times 1.06^5 = \$120.44$$

Timeline diagram showing cash flows from t₀ to t₅. At t₀, there is a question mark 'P=?'. At t₁, there is a dividend of \$1.40. At t₂, there is a dividend of \$1.40(1+g). At t₃, there is a dividend of \$1.40(1+g)². At t₅, there is a price P₅ = \$120.44.

So, the formula is given here we see that the P by E ratio is 12. So, we use 12 into earnings today is 7.5. So, we multiply this with price to earnings ratio and we have this $1 + g$ that is g where g is 6 percent and to the power n where n is 5 years and this gives us of expected price of the security in t_5 that is in fifth year is 120 dollar 44 cents.

Now, if we plot this on a timeline, we know that t_3 4 4 and t_5 . So, here price 5 is 120 dollar 44 cents and then we have dividend 1 is to 4 of dividend and we need to find the intrinsic value today. But remember when there is a growth in earnings it is assumed that there will be there will be a growth in dividend as well which means if t_1 dividend is 1.4 dollars, then t_2 dividend should be 1.4 into $1 + g$.

Similarly, in t_3 the dividend will be 1.4 into $1 + g$ to the power 2 and so on. So, it is believed that if it is company companies earnings are growing then dividend should also be growing at the same growth rate which is 6 percent here.

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Value Investing and Fundamental Analysis

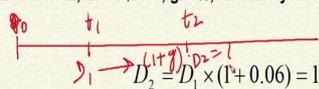
Fundamental Analysis through Financials

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According to the Present Value Model, what is the present value of FRE using a discount rate of 14% and a five years analysis period? **Is it undervalued or overvalued?**

Given that, P/E Ratio: 12, EPS: \$7.50, g: 6%, and n: 5 years

Future dividends:??



$D_1 = 1.40$

$D_2 = D_1 \times (1 + 0.06) = 1.48$

$D_3 = D_2 \times (1 + 0.06) = 1.57$ $D_4 = D_3 \times (1 + 0.06) = 1.67$

$D_5 = D_4 \times (1 + 0.06) = 1.77$



We follow the same argument here and the future dividend can be calculated like this. So, first year dividend will be 1.4 dollar, second dividend will be 1.4 dollar into 1 into 6 percent 1 plus 6 percent. So, this will be 1.48 second year it will be D_2 into 1.1 plus g that is 1.57, fourth it will be D_3 into 1 plus g and finally, it will be D_4 into 1 plus g.

So, what we are doing here is whatever dividend we are this is t_0 this is t_1 . So, whatever dividend we are getting it is growing at 1 plus g to get the t_2 or that is D_2 and this is how we calculated the dividend for future period. Now, that we know the dividend for future period and future prices then we can calculate the intrinsic value today.

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Value Investing and Fundamental Analysis

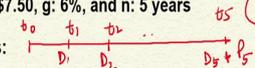
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According to the Present Value Model, what is the present value of FRE using a discount rate of 14% and a five years analysis period? Is it undervalued or overvalued?

Given that, P/E Ratio: 12, EPS: \$7.50, g: 6%, and n: 5 years $K=14\%$

Present Value of these future dividends is:


$$P_0 = \frac{1.40}{1+0.14} + \frac{1.48}{(1+0.14)^2} + \frac{1.57}{(1+0.14)^3} + \frac{1.67}{(1+0.14)^4} + \frac{1.77+120.44}{(1+0.14)^5}$$


So, the present value of these future dividend and the future price is the same as highlighted earlier if we have t_0, t_1, t_2, t_5 we know that we have dividend 1, dividend 2, dividend 3, dividend 4, dividend 5 plus P_5 and we need to bring all these to the present time by discounting with discount rate where discount rate is the discount rate is 14 percent it says the discount rate is 14 percent.

(Refer Slide Time: 23:16)

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Fundamental Analysis through Financials

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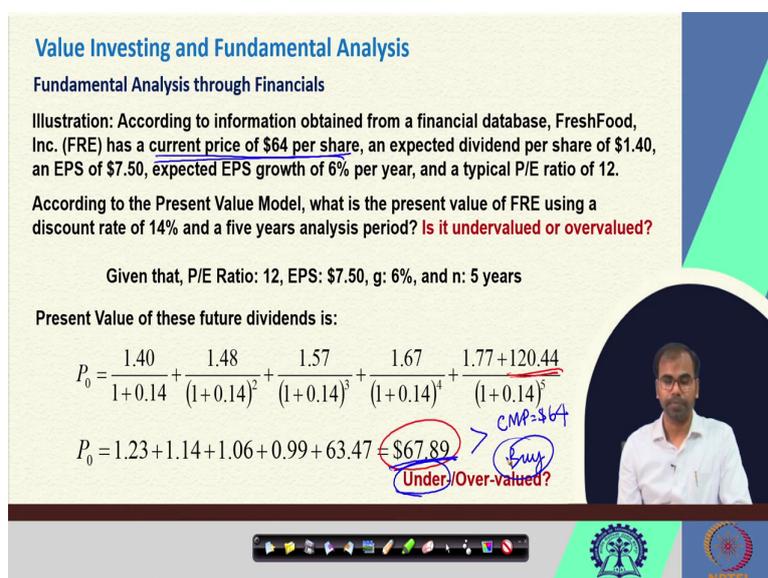
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$$P_0 = 1.23 + 1.14 + 1.06 + 0.99 + 63.47 = \$67.89$$

Handwritten notes on the slide: "CMP = \$64" and "Under/Over-valued?" with an arrow pointing to the calculated value.



So, we use the 14 percent discount rate to bring all the future dividend and future selling price to present time and when we do this, we basically calculate the present value of all future dividend and this future dividend present value of future dividend and future price in today's term in P 0 term is 67 dollar 89 cents.

So, if we are able to calculate the future present value of all the future dividend that are expected on this stock can we consider this undervalued or overvalued that we can simply decide on the basis of current price. So, current market price is current market price is 64 dollar per share which means current market price is less than the fundamental value or the present value that we have calculated on the basis of future dividends.

So, we can consider this as an undervalued stock where it is assumed that the price will eventually go to the true level or intrinsic level and achieve 67 dollar 89 cents and it is if it is

undervalued the recommendation is buy because if you buy today we can buy it for 64 dollars and in 5 years the value should go to 120.44 and in the same time will also earn a dividend that is growing at the same rate at which earnings are growing.

So, since this is undervalued, we can invest in this stock right away and will be better off. So, in another words we can say that this price the price of the stock should have been 67 dollar 89 cents instead of 64 dollars that is at which currently it is trading. So, with this example we can understand the fundamental analysis using financial numbers or the financial data related to a stock that can be used for understanding or identifying an undervalued or overvalued stock and based on that a decision can be made.

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Value Investing and Fundamental Analysis
Fundamental Analysis through Financials

- The Constant Growth Model:
 - Also known as Gordon's Growth Model: The present value model depends on growth of profits and dividends, hence, incorporated as following.

$$P_0 = \frac{D_0(1+g)}{k-g} = \frac{D_1}{k-g}$$

- Gordon's Growth Model holds only for $k > g$.
 - Assumption: the future growth (g) of the company is constant.

In a similar fashion if we assume that the present the dividends and profits of the company are growing then we need to adopt this Gordon's growth model or constant growth model which

incorporates the growth rate in terms of g and uses the discount rate of k to determine the present value of future cash flows.

So, if we believe that dividend is also growing at D so, dividend is also growing at the rate of g and discount rate is k then present value of future dividend will be discounted using this present value of growing perpetuity cash flow where we know that the present value is given by cash flow divided by discounting rate minus growth rate.

So, we follow this formula of Gordon's growth model or constant growth model. However, a word of caution is this model this Gordon's growth model holds true only for situations where cost of capital or discounting rate being greater than g which means if the growth rate is less than the cost of capital or discounting rate then only this model holds true and it is also assumed that the future growth of the company is constant that is at the rate of g .

So, earnings as well as dividends are growing at the rate of g and it this g is constant in future.

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Value Investing and Fundamental Analysis
Fundamental Analysis through Financials

- The Constant Growth Model: Illustration

A company paid a \$0.75 per share dividend this year and it is expected to grow at 5%.
If the required rate of return for this firm is 10%, what is its fundamental value?

$$P_0 = \frac{D_0(1+g)}{k-g} = \frac{\$0.75 \times (1+0.05)}{0.10-0.05} = \$15.75 \neq \text{CMP}$$

- If the stock is a preferred stock (that pays a constant dividend), then $g = 0\%$

The slide includes a video feed of a presenter in the bottom right corner, a navigation bar at the bottom, and logos for IITM and NPTEL.

Using this formula, we can also calculate the value of a company for example, let say a company paid 75 cents per share dividend this year and it this dividend is expected to grow at 5 percent. If the required rate of return or discounting rate is 10 percent what should be the fundamental value?

So, we use the same formula where we have dividend today that is 0.75 dollars it is growing at 5 percent. So, into 1 plus 0.05 divided by the cost of capital or required rate of return or discounting rate being 10 percent and growth rate is 5 percent. So, the present value of this share should be 15 dollar 75 cents.

And if if the current market price is anything, but this present value P 0 then we need to take a decision accordingly if current market price is lesser than the P 0 that we have calculated then

we consider this as an undervalued stock and we buy if current market price is higher than the present value that we have calculated then we need to take a decision about selling.

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Value Investing and Fundamental Analysis
Fundamental Analysis through Financials

- The Constant Growth Model: Illustration
A company paid a \$0.75 per share dividend this year and it is expected to grow at 5%.
If the required rate of return for this firm is 10%, what is its fundamental value?
$$P_0 = \frac{D_0(1+g)}{k-g} = \frac{\$0.75 \times (1+0.05)}{0.10-0.05} = \$15.75$$
- If the stock is a preferred stock (that pays a constant dividend), then $g = 0\%$
$$P_0 = \frac{D_0(1+0)}{k-0} = \frac{\$0.75}{0.10} = \$7.50$$

See how much more valuable a growing firm is!

Here if we believe that the stock is a preferred stock that pays a constant dividend then growth in dividend is going to be 0 and in that case the formula will be revised accordingly. So, it will be dividend divided by discounting rate or required rate of return that is 10 percent. So, the present value of the future dividend will be 7.5.

So, you can see here that a firm that is growing has intrinsic value of 15 dollar 75 cents, but a firm that is not growing in terms of dividend in terms of growth in earnings then the present value of the future dividend is just 7.5 dollar. So, in that sense we can see how much more valuable a growing firm is and accordingly we can take a decision to invest in firms or in stocks or firms that are growing.

With this example we are able to understand that we can carry out fundamental analysis using financial data or financial numbers coming from financial statements and the market and accordingly we can do the valuation and decide whether to buy or sell or hold a particular stock on the basis of the intrinsic value that we have calculated and comparing it with the current market price.

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CONCLUSIONS

- The objective of fundamental analysis is to find securities considered to be temporarily undervalued or unpopular for various reasons (both justified as well as unjustified).
- We can use the present value model or constant growth model to arrive at the justified economic/intrinsic value of a security that pays constant or growing dividends.
- The decision to buy or sell should depend on the undervaluation or overvaluation (of the security).

The slide features a video inset of a man in a white shirt speaking. At the bottom, there is a navigation bar with various icons and logos for IIT Bombay and NPTEL.

So, with this I would like to conclude this session and we understand that fundamental analysis is one of the tools that are used for understanding the true value of a security and once we understand the fundamental value then we can compare it with the current market price to decide whether to buy sell or hold that stock.

And we know that if the current market price is higher than the fundamental value that we have calculated then we call it overvalued stock and we do not want to buy rather we would

want to sell and if the current market price is lesser than that fundamental value that we have calculated then we can consider it undervalued stock and accordingly we decide to buy.

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REFERENCES

- Investments, Bodie, Marcus, Ken (McGraw Hill, 2020)
- Investments Analysis and Behavior, Hirschey and Nofsinger (2018)

The slide is presented in a video format. A circular inset on the right side shows a male presenter with glasses and a white shirt. At the bottom of the slide, there is a control bar with various navigation icons. On the right side of the control bar, there are two logos: the logo of a university (likely Anna University) and the NPTEL logo.

With this I end this session.

Thank you very much.