Welcome students. Today in our session will study financial management paper. The title of the unit is cost of capital and its measurement and the module name is cost of equity share capital and cost of retained earnings. Outline. Is to study the concept of equity share capital and computation of its cost. Second concept of retained earnings and computation of its cost.

Learning outcomes. It explains the concept of equity share capital and cost computation under 4 methods. Explains the concept of retained earnings and their cost computation. Every company raises funds from external sources. We have two external sources over here equity share capital and retained earnings. The cost of equity share capital can be calculated using any of the four methods which you see in the chart over here. The dividend divided by price ratio, that is DP ratio method dividend, divided by price plus growth ratio that is DP plus G method, earnings divided by price ratio. That is EP ratio method and realized yield method.

Equity share capital - equity shareholders are the owners of the company. They are the last people to receive a share in the profits of the company in the form of dividend. They do not receive dividend every year. It's not compulsory also that they are to be paid dividend every year. The rate is not fixed. The date also is not fixed. They may or may not be paid dividend. That is the reason they are called as risk bearers of the company. But being the owners of the company they have voting rights and they have a right to participate and attend the annual General Meeting of the company. Equity share capital can be issued at par,premium or discount.

There are four methods to calculate the cost of equity share capital. The first method is our dividend divided by price that is DP ratio method. This method assumes that investors are giving a lot of importance to dividend and risks in the firm remains unchanged, But this method does not consider that in future dividend can grow. Future earnings can increase retained earnings. Also capital gains can also exist. So the growth, future earnings, retained earnings capital gains are not considered in the formula for DP ratio. This method is suitable for those companies who have stable earnings or stable dividend policy.

This is the formula for the first method, that is DP ratio.

Method K = D / N P or D / MP where K is the cost of equity capital., D is the expected dividend per share, NP is the net proceeds and MP is the market price per share.

The first formula D upon NPS to be used when you calculate the cost of new equity shares. But when you're calculating the cost of existing equity share capital, you can use the formula D upon MP.

Consider this first problem in this problem. This company has issued 1000 equity shares of rupees 100

each at a premium of 2%. The company has been paying 20% dividend to the equity shareholders

for the past five years and they expect to maintain the same in the future. Compute the cost of equity capital. Will it make any difference if the market price of the equity share is ₹160.00?

So, in this problem is made up of two parts you will not only have to calculate the cost of equity capital, but if the market price is given as ₹60.00 then what will be the cost of equity capital?

So, in the solution, first you calculate the components of the formula. So, NP is equals to 1000 shares multiplied by ₹100 per share. That gives you rupees one lakh to this one,You add 10% premium. Ten % is to be calculated on one lakh which is a face value or nominal value. So, NP answer comes to rupees 1,10,000

D. That is, dividend is 20% on one lakh so you get rupees 20,000. And MP is 1000 shares in ₹60.00 per share, so it gives you one Rs. 60,000. Once you get these three components you write the formula. K is equal to D upon NP that is 20,000 / 1,10,000, and the answer comes to 18.18%. When you are calculating with MP, the formula is K=D upon MP that is rupees 20,000 / 1,46,000. This answer comes to 12.5%. The second method of calculating equity share capital costs is DP plus G method, that is dividend price plus growth method. This method assumes that dividends are going to grow at a constant rate, so the formula is there are two formulas which we see here.

DO is last year's data We don't know previous years dividend. NP is the net proceeds of the market price

per share and G means the growth rate. In case of existing equity share n capital, the formula will be K=D1 upon MP plus G where KE, D1, MP remains the same. Growth rate also is the same.

In the second problem, there are two parts in this problem. A part is where a company plans to issue rupees one lakh equity share capital at par. The floatation cost is 5%. This company wants to pay a dividend of 10 plus ₹10 per share initially and the growth in the dividend is expected to be 5%.

Compute the cost of new issue of equity shares in the B part. If the current market price of an equity share is rupees 150, then calculate the cost of existing equity share capital in both A&B. We have to consider 1000 shares which are issued. So when you're solving the A part, first you calculate the component. So D1 that is dividend for the end of the year is ₹10 per share multiplied by 1000 shares, which gives you rupees 10,000

NP =rupees one lakh minus the floatation cost. That is 5% on one lakh. That is rupees 95,000. Growth rate G is given as 5%, so you put in decimal 0.05. MP is a market price per share, so you multiply 1000 shares with ₹150 per share. That is rupees 1,50,000. Now, having received these data, you would write the formula K = D1 upon NP plus G. You put the data 10,000 / 94,000 + 0.05 and the answer comes to 15.52%.

The B part is if the current market price of an equity share is rupees 150 per share. The formula is K = D1 upon MP plus G. So you write 10,000 upon 1,50,000 + 0.05 and the answer is 11.67%.
In this third problem, the shares of the company are selling at ₹40 per share, and it hasn't paid a dividend of ₹4.00 per share last year. The investors Market expects a growth rate of 5% per year, so in A part you have to calculate the company's equity cost of capital and in the B part. If the growth rate increases from 5% to 7% per annum, then you have to calculate the market price per share. The data which is given his MP ₹40 per share. The D1 last year's dividend is ₹4.00 per share and the growth rate is 0.05. When you put this data in this formula, K =D0(1 + G / M P) plus G. So you put the data that is 4 in bracket 1 + 0.05 close bracket divided by 40 + 0.05. Your final answer comes to 15.5%.
Now in the B part, they're asking us to calculate the market price per share and the growth rate is given to be 7% in the previous solution. We have already got the Ke to be. 15.5%. Sso you use the same formula, only that MP has to be written the same. That is a variable which we have to calculate.
So your final answer of MP that is market price is rupees 27.68.
The third method of calculating equity share capital costs is EP ratio method. In this method it equates the present value of the expected future earnings per share with the net proceeds or the current market price per share. That is what will be the EPS of the company in future that is discounted to the present value and it is compared or equated with the net proceeds of one share or the current market price of a share.
But this method is to be used when

1) the earnings per share is expected to remain constant
2) The companies paying entire earnings in the form of dividend They're not retaining anything, so the DP ratio is 100% and the retention ratio is zero.
3) the company expects to earn an amount that is profit equal to the current rate of earnings on new equity share capital,
4) the market price of the share is to be influenced or it will be affected only by the earnings per share.

The formula is EP= EPS divided by NP, that is earnings per share divided by net proceeds. If you're calculating the cost for existing capital, then you have to replace the denominator with MP or NP. You have to write MP that is market price per share. How do you calculate earnings per share? You have to divide profit after tax with the number of equity shares. So, in this third problem, this company is considering an expenditure rupees 60 lakhs. The information they are given, his number of existing equity shares, 10 lakhs the market value of each equity share is ₹60.00 per share. Their net earnings are 90 lakhs and they want to calculate the cost of existing

equity share capital and new equity share capital. Assuming that the new shares will be issued at a price of ₹52 per share and the cost of the issue will be ₹2 per share. So, to solve the computing, the cost of existing equity share capital, first you calculate the answer of EPS -earnings per share. Profit after tax divided by number of equity shares. 90 lakhs is divided with ten lakhs So you get ₹9 per share. This ₹9 per share is to be put in this formula K = earnings per share divided by MP. 9 / 60 rupees. When you divide this, you get the answer 15%. Now, if you want to calculate the cost of new equity share capital. NP= issue price minus floatation costs. So, 52 -- 2 = rupees ₹50 and in the formula the denominator will not be MP. Now it will be NP that is ₹50. EPS remains the same so the cost of equity becomes 18%.

Next is the 4th method of calculating the cost of equity share capital. This method came in existence because the earlier three methods that is dividend yield method, EPS method had drawbacks. The investors they feel that the future dividends and the future earnings should be predicted to them and it should be told to them. So, this is the expectations of the investors, but it is not possible to estimate future dividend and earnings of a company accurately or correctly. Both of these future dividends and future earnings of a company depend upon many uncertain factors. To remove this drawback, the realized yield method was introduced. It takes into account the actual average rate of return realized in the past. To calculate the cost of equity share capital, average rate of return we don't realize and the sales gain realized in the past, so the cost of equity capital is a realized rate of return by the shareholders.

Retained earnings- This is the second specific source of finance. Retained earnings are Profits which are retained by the company. Every company give some money to the shareholders in the form of dividends.

What they don't pay to the shareholders as dividend, they retain it with them. So, it is a sacrifice which is made by the shareholders. They actually do not involve any cost because the company is not supposed to pay dividends on them. However, shareholders expect a return on them, so the cost of retained earnings is the rate of return which a shareholder would have earned if the money was invested elsewhere. Thus, it is an opportunity cost.

The formula is $Kr = Ke (1 – t)(1 – b)$ where

Kr is cost of retained earnings. Ke is the cost of equity capital, T is the tax rate and b is brokerage.

In this problem they have given you the equity capital tax rate and brokerage. The data is already given, so when you put it in the formula you get the answer of Kr = 8.82%.

These are my references.

Thank you.