Financial Management for Managers
Professor Anil K. Sharma
Department of Management Studies
Indian Institute of Technology, Roorkee
Lecture 32
Estimation of Project Cash Flows Part 4

Welcome all. So, in the process of learning about the basic principles of estimation of cash flows. I will be now taking you through the two more principles. That is the post-tax principle and the consistency principle. In the previous classes we learned about the separation principle and the incremental principle.

Incremental principle we discussed at length, because it is very, very, say critical, very, very important to learn about the incremental cash flow, because when we calculate the cash flows, we calculate the incremental cash flows, so all important incidental effects of the incremental cash flow have to be taken into account. So, we discussed that at length that particular principle in the previous class.

And now, these two remaining principles, post-tax principle and the consistency principle I will discuss with you in this present class. And after that I will do certain problems, practically we will learn that how to estimate the cash flows practically that if some projects are given, some say information about the inflow and outflow is given to us and some information about the taxes, depreciation, interest and all these working capital, fixed asset investment when all this different problems are, say given to us.

Practically how to calculate the say or estimate the cash flows that we will be learning or will be doing in the subsequent classes after this class. So, let us learn about the two remaining principles post-tax principle and the consistency principle.

Post-tax principle here says that whatever the cash flows, we work out, they should be worked out as post-tax cash flows, sometime we commit the mistake that we on the one side keep the say cash flows which are cash outflows because in the 0 period or maybe sometime in the subsequent years also whatever the cash outflows are going to occur or take place, we do that, we correctly work out those cash outflows.

But while calculating the cash inflows we sometime undermine the importance of the tax factor, we sometime undermine or ignore the tax factor. So, mind it, whatever the cash flows are going to be available to us, they should be calculated post-tax, I would say that not even post-tax, after taking into account all any kind of the cash outflows cost even after the

commissioning of the project, if any cash outflow is going to take place, then from the total cash inflows all cash outflows should be subtracted. After that, whatever the cash flow is left with us is called as the free cash flow.

So, we should calculate the free cash flow and for calculating the free cash flow, it will be very much imperative that you calculate the post-tax cash flows. And do not forget it that tax is something because if we are going to have, though tax is payable only when we have the profits, when we have the profits, cash flow will be some otherwise also there, cash flow will or otherwise will also be there, whether we have the profit or the loss, we have the cash flows, we do not have the profits.

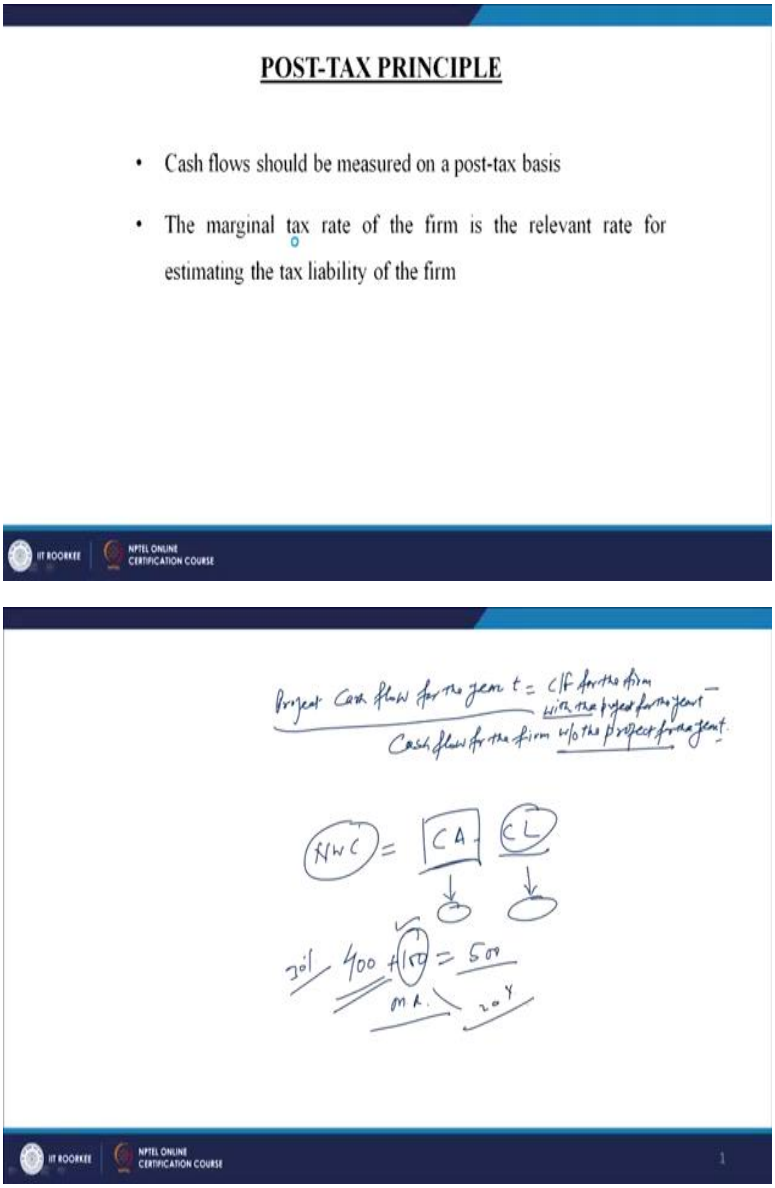
Profit means tax will be payable only in case the project starts giving the profits, cash flows will be there even without the profits. But if there is a profit in case of a project giving the profits or the profit making projects, we should calculate the cash flows after taking into account or giving the effect to the tax or subtracting the tax part from the total cash inflows coming to us.

So, the post-tax principle cautious us that whatever the cash inflows because ultimately what we are going to do, we are going to calculate the NPV from the project net present value from the project. So, on the one side your going to keep the discounted value of the cash outflows if discounted means if in the subsequent years also the cash outflow is going to occur, if it is not the 0 period only then there is no discounting is required for the outflows. But when the inflows are occurring in the subsequent years, then they have to be discounted.

Now, when you have to discount it, so which cash flows you are going to discount, you are going to discount the pre-tax cash flows or post-tax cash flows because we can commit a major mistake if it is a pre-tax cash flow project can be say a taken as a very profitable preposition.

But if you subtract the tax part and tax is very very high in the developing economies in India also, early rate was 30 percent these days it is reduced to 22 percent but I think it is a temporary phenomena, and again it will go back to 30 percent. So, if the firm is profit making the project is profit making then for calculating the cash flows, we have to give the effect to the tax. So, cash flow should be the post-tax cash flows not the pre-tax cash flows.

(Refer Slide Time: 5:18)



So, it is clearly written here that cash flows should be measured on a post-tax basis. And second important point is that on which cash flow we should calculate the tax, on which cash flow, we should calculate the tax the marginal tax rate of the firm is the relevant rate for estimating the tax liability of the firm, marginal means the number one is the marginal revenue. Marginal revenue is that for example, we are already having the four products and those products are earning 400 crores and this product is going to add up 100 crores, so the total revenue of the firm is going to be how much rupees 500 crores.

So, you have to calculate the tax on this particular part and this is called as the marginal revenue. This is called as marginal revenue, margin revenue means that revenue will occur

only will come back to the firm only if the project is taken up otherwise the existing revenue of the firm is the 400 crores.

So, you have to take it up the tax number one, the tax on the marginal revenue. And second important consideration here is what is a tax rate? Tax rate is also the one which is applicable to this particular project, it may be possible that different activities are causing different kinds of the tax rates.

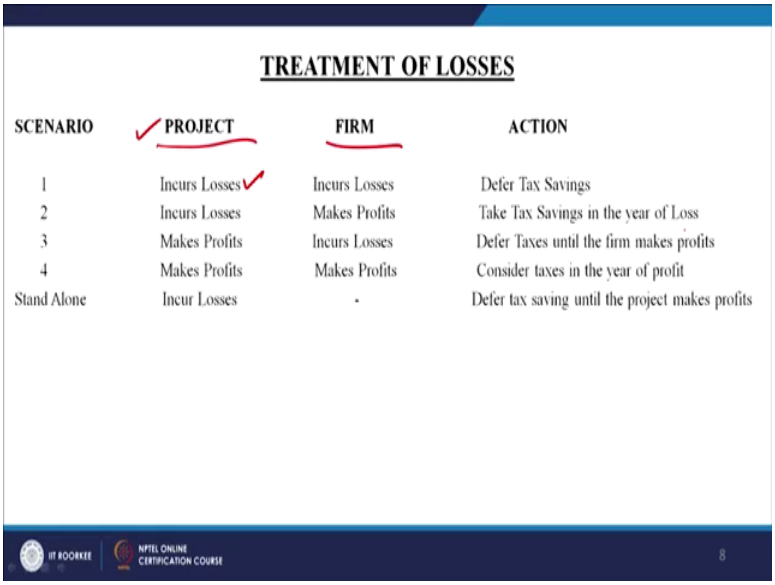
So, here we have the products, four products which we are manufacturing here the tax rate is say 30 percent existing rate, tax rate of the firm is 30 percent. But this may be because of some special announcements by the government or some special category product or some special special category of the item, the tax rate maybe not 30 percent but the 20 percent here.

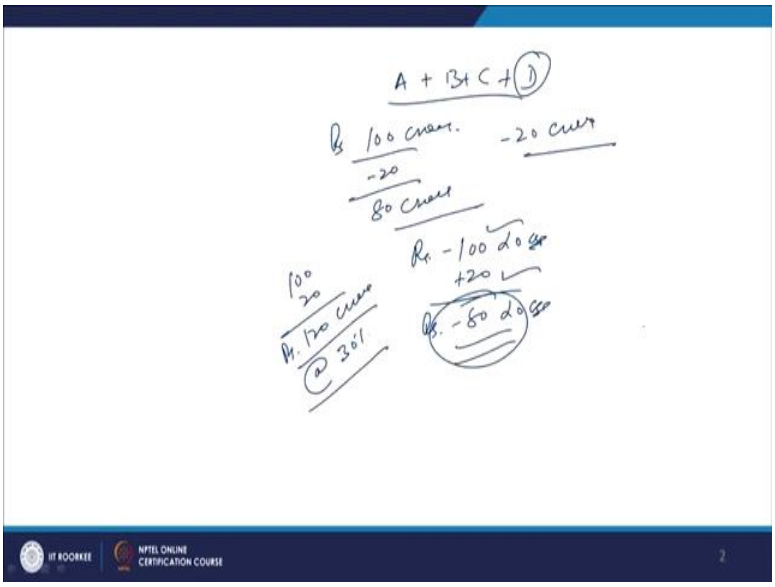
So, what is the tax applicable on the marginal revenue generated by the new project should be taken into account and that should be calculated on the marginal revenue at the marginal tax rate. So, it is clearly written here that marginal tax rate of the firm, is the relevant rate for estimating the tax liability of the firm.

So, means not to apply the flat tax rate, if the tax rate is flat for example, we are manufacturing the new product also which is in the same category of the existing products and the tax rate is 30 percent and fine then 30 percent is okay. But if it is the say say requiring, the lesser tax to be paid to the government of the rate of the tax is different, then sometimes we have to means apply the marginal rate of the tax on the marginal revenue which is coming out from the new project and not as the flat rate of the 30 percent or whatever the tax we are paying on the existing, the products or the existing revenue of the firm.

Here some important say considerations are to be borne in mind while talking about the post-tax principle, what are these considerations?

(Refer Slide Time: 8:01)





These considerations are given here in this table and this is regarding treatment of the losses, sometimes what happens that when a firm say starts a new product or manufacturing a new product or the new project. So, it might have different kind of situations and it might say means come up with, or the five different situations may emerge.

So the losses coming out, maybe from the firm as a whole or from the only the new project, we have to treat it means in a different way because sometimes what happen, that when there is any loss to the firm as a whole or maybe because of the new project, introduction of the new or taking up of the new project or introduction of the new product, the loss may be there, so the loss coming out from the new product or the new project maybe set off against the profits of the firm.

So, how that all has to be dealt with here, it is very clear, when you look at this particular slide and this talks about the treatment of losses, how we have to treat the losses. Now, for example if we are not clear about it, how can we calculate the true or the correct cash flow? We will not be able to do that. So, it is very important treatment of losses always first understand it.

After that, so that, after this when we start say practically calculating or estimating the cash flows in case of the practical problems, you remain very clear that how I have treated the losses and how we are normally going to take care of it. So, now, the first scenario can be right, there are the two things, one is the project and second is a firm. Firm is already existing ABC limited is a company, it is already existing in the market, they are manufacturing three products already and the fourth one is going to be introduced or it is already introduced.

So, now, the firm ABC limited manufactures four products. So, four products and the four different projects are there. For one product, one investment say facility has to be created. For the second you have to create the independent second facility, third independent facility, fourth independent facility and the fifth means if you go for the fifth one, then the fifth independent facility.

So, and each facility is treated as a independent project. So, scenario one can be project incurs loss, and it is quite natural that in the initial years of the commissioning of a new project, it incurs losses is quite unlikely that from the year one onwards, the project starts giving the profits it may be sometimes difficult. First year there is a loss, second year there is a loss, third year it may be possible that the project reaches at the or derives at the breakeven point and fourth year onwards we start earning the profits.

So, first year project is say the situation is scenario is project incurs a loss, and firm incurs a loss, both incur the losses it means no tax saving question is there, because we are incurring a losses, we are not going to pay any tax. So, from this (particular) any loss which is incurring here in this project cannot be a set off against the profit coming from the other products of the firm because all the projects are incurring the loss and the firm as a whole is in the loss.

So, what is there that the tax savings which can be availed from this project, by setting up say setting off the loss coming out of this project against the profits of the firm, so it can be deferred, because both are in the losses, firm is also in the losses, project is also in the losses and the firm as a whole is incurring the loss.

So, it will be setting up the losses the benefit of setting up of the losses against the profit of the firm will be done, when the firm will start incurring the, when the firm will start earning the profits, currently since they both are incurring losses, so you have to, the action you have to take is that is defer the tax savings.

Later on when the firm starts earning the profits, we can take the benefit of the tax, say losses of the project against the profits of the firm as a whole. Second scenario can be that project incurs losses and firms makes the profit. Existing firm ABC limited is incurring also earning the profits, but the new project is initially for the initially 1, 2 or 3 years is incurring the losses, what action you have to take? Take tax savings in the year of loss, take tax savings in the year of loss, because what will happen that say the profit of the firm.

When you however, you have to treat it, say for example, the firm is there and without the project, if the there is no introduction of the fourth product or the not taking up the fourth project, firm's profit is how much? Rupees 100 crores, we have taken firm is earning 100 crores profit and, and this is from the three A, B and C, three products we are manufacturing currently. So, total product profile or the portfolio of the firm is three products A, B and C. And after selling, manufacturing and selling these products, the firm is incurring a, sorry earning a profit of 100 crores.

But when you add up here the D, that gives you the loss of say, 20 crores, that gives you the loss of the 20 crores. So, it means this is a loss, this is a profit. So, how can you do it, total profit of the firm will be, when will be calculated. So, this is coming up as the 100 and this is minus 20, so the net profit of the firm will come down to 80 crores. So, what will happen?

The tax liability of the firm will come down. So, what is written here? If you look at here, incurs losses makes profit, take tax savings in the year of loss from the losses which are happening in this project can be set off, the benefit can be taken off the tax savings, the benefit of tax savings can be taken against the profits coming out from the firm. Then three, project makes profits and firm makes the losses, project makes the profits and the firm makes the losses.

So defer taxes until the firm makes a profit, because only one project when we are seeing here, the three (proj) products here A, B and C are incurring losses firm as a whole, without the fourth one, the firm is incurring the loss, only the fourth one is giving you the profit or is earning the profits. So, what will happen while you are calculating the total, now you reverse

the situation, so what will happen here that 100 crore is the loss now, it is not a profit, rupees 100 crores is the loss and this project is giving you the profit of the 20, so what will happen here?

Minus 100 plus 20, so your net loss will come down to 80, so it means taking the tax savings or the benefit of tax savings is not this question does not arise and because net result of the firm's operations from all the four projects, means net result is the loss and the loss is 80 crores rupees.

So, it means there is no question of say taking the benefit of the tax savings in case the project makes profits and the firm makes losses. So, what is written here regarding the tax savings, the action to be taken here is defer taxes until the firm makes the profit, we have not to pay any tax because net result is you are not going to pay any tax, this is 20, this is 100.

So, it means, what is the net result of the firm? It is a loss of 80 crore rupees. So, there is no tax liability and partly because of the profit coming out of the project D, the existing losses of the 100 crores coming out of the three existing projects have come down by the amount of the profit coming out of the product D or the project D or the project number 4.

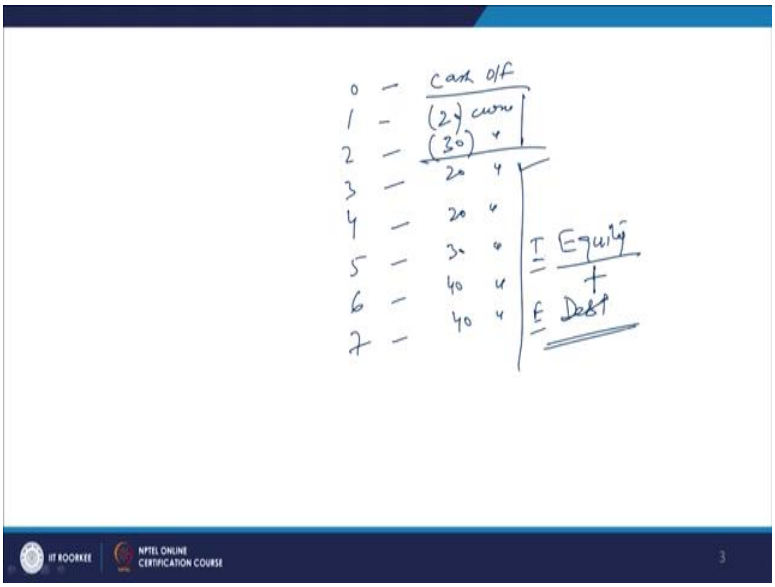
So, net law means net result for the firm is a loss, there is no profit. So, there is no question of paying any kind of the tax on the total losses of the, or net losses of the firm, fourth scenario can be project makes profit, firm makes profit, then what action is required? Consider taxes in the year of the profit, because there is no loss to be taken the benefit of, it cannot be set off with a loss from the project cannot be set off against the profits of the firm because both are giving you the profits, project is also, new project is also giving you the profit, firm is also giving you the profit.

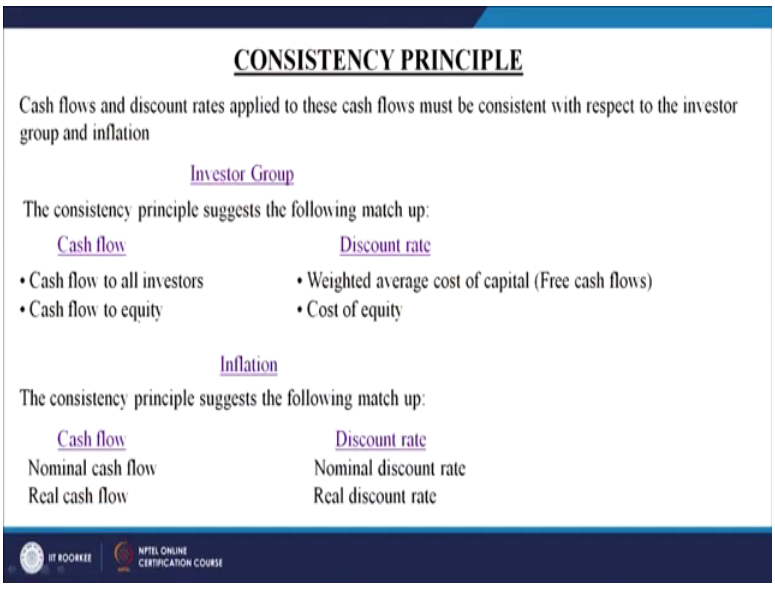
So, both are profit making, so what will happen? The situation here will be something like this, that for example, you are incurring the 100 crore profit and then 20 crores addition, so total profit of the firm will become how much? Rupees 20 crores, and in this case, you have to pay at the rate of for example, 30 percent you have to pay the tax, so that will be paid on the entire profit of the firm.

So, you have to look at these four situations and the fifth situation is like stand alone, the firm is new. It is not existing, already existing in the market. For the first time the firm has been say formed, it has come into existence and this is the first project of the firm, this is the first project of the firm, which we are writing here is as the stand-alone and that incurs losses, that

incurs losses, what action is required here? Defer tax savings until the project makes profits until the project makes profits. So, what we do in that case, we do follow different kind of situations.

(Refer Slide Time: 17:25)





For example, you right here as the year 1, this is 0, then 1, 2, 3, 4, 5, 6, 7 this is the 7 years foreseeable life of a project. New project, in this case what is going to be there? Cash outflow, we are going to make investment in the 0 period, and here we are going to have the loss of 20 crores, then we are going to have a loss of 30 crores, then we are going to have a loss of again 20, crores, and this year we have the profit of 20 crores, then we have the profit of 30 crores then we have the profit of 40 crores, then we have the profit of again 40 crores.

So, what is there it is a loss here and it is again a loss here and here we have started earning the profits. So, whatever the losses are coming up in the first 2 years, total loss of how much that is of the 50 crore rupees 20 plus 30, 50 crore rupees of the loss can be the benefit of this loss can be means this loss can be set off against the profit coming up in the future years, and when the profit starts coming up to the firm or the firm start earning the profit from the third year onwards, then this the benefit of tax savings on account of the losses incurred in the initial years of the firm can be taken or can be treated.

So, it means this this is permissible, this is allowed, this benefit can be taken, this is allowed. So, it means whatever the loss has been incurred in the initial years that can be done away for the, say tax savings on this particular part can be taken, from the profit coming out in the subsequent years. But till the firm start earning the profit, there is no question of paying any kind of the tax because firm is not earning the profit rather the firm is incurring a loss and on the loss mean every any kind of the taxes.

So, this is how in the 5 different situations when the firm is into existence, and the new project is added first 4 situations talk about that, and when if the firm is a new as a whole, the firm as a whole is new, and this is going to be the first project of the firm, then how to take care of the losses and profits that I have already discussed with you.

More, means it will be clear to you, when we will do the practical problems and we will estimate the cash flows in the different situations, then the things will be more clear to you. But currently you have to means a deal with the taxes this way.

And finally, that total tax liability of the firm has to be calculated by taking the benefit of any kind of the loss coming out of the project against profits of the firm maybe or maybe setting off the loss setting of the loss against the profits of the firm as a whole.

Next thing is now I am going to discuss with you is the consistency principle. Consistency principle talks about here is that is the say, we should be consistent in terms of calculating the cash flows and discounting of the cash flows, calculating the cash flows and discounting of the cash flows means, there is a difference in the discount rate.

If you change the methodology of calculating the cash flows, then certainly the methodology of change say calculating the discount rate or applying the discount rate should also be changed. So, consistency demands that how you are calculating the cash flows same way you apply the discount rate.

Another important requirement under consistency principle is with regard to the inflation because when you say, calculate the cash flows, when we grow over a period of time in the 0 year we are making investment that is a cash outflow. But for the next 5, 7 or 10 years, which is a foreseeable life of the project, projects start giving the profits or the cash flow start coming up.

So, what will happen? Our selling price is not consistent or is not going to remain the constant, selling price of our product is something means different today, but over a period of time we are going to increase the selling price and at the same time, the cost of inputs is also going to increase.

So, it means why there is increase in the cost of inputs as well as the selling price of the firm because of the inflation, so how to treat that inflation factor? Because when you are estimating the cash flows, mind it practically we are not getting the cash flows. This is only the projection, estimation means only the projection of the cash flows over the foreseeable life of the project.

So, when you are going for the projections always keep into consideration the inflation factor and consistency in the inflation is also equally important, consideration of the, consistency in the inflation is also equally important that how are you including the inflation while calculating the cash flows, that we have to be very careful and carefully or consistently, we should given the effect to the cash flows, whether it is a cash outflow or the cash inflow.

It may be possible that in the subsequent years, it is not only the cash inflow, even the cash outflow is also required. So, there the inflation is going to play the role, so we have to factor the inflation principle, but consistently. So, in this case, when you talk about the consistency in the say, calculating the cash flows or means working out the cash flows, we have to look at the different it from the different angles.

But first look at what is the say meaning of the consistency principle? Cash flows and discount rates applied to these cash flows must be consistent with respect investor group and inflation, cash flows and discount rates, cash flows and discount rates apply to these cash flows must be consistent with respect to the investor group and inflation.

So, when you talk about the investor group, first important thing we talk about is the investor group from where the funds have come while say, building of this project. There are the two sources, one source is the internal sources of funds, second is external sources of funds.

When you talk about the internal sources of the funds, this is called as equity capital, this is called as equity capital and this is called as equity capital and then we go for borrowing some funds which is called as debt.

So it means, this is the internal source of funds, this is the external source of funds and once you are going to have the funds from these two sources, then what is there we have to apply the discount rate also which is applicable on the both. Consistency demands because if you look at here, that investor group we have identified here that as an investor groups, the consistency principle suggests the falling match ups.

One is cash flow, from where the cash is coming in, what is a source of cash which we are going to invest in the business and which you call it as a cash outflow. Cash flow to all investors means, first is cash flow is coming from all the investors. It is written here cash flow to all investors but first, how do you return the cash flow to all investors? First we have to receive the cash to be invested in the business from all the investors and what are the sources of say having the cash or the investment in the business?

Two sources, one is the equity which comes from the promoters or from the shareholders or from the owners of the business, second is the borrowing which comes in the form of the debt from the market. So, when the borrowing has come means cash outflow, which invested in the business called as a cash outflow in the 0 period has come from the 2 sources debt and equity, same way the cash flow going back to the different interest groups or different investor groups should be treated like that.

So, it means cash flow when you are calculating the cash flow will be the sum total of cash flow going to the equity shareholders back as a result of making investment into the business plus the cash flow you are returning back to the source of debt.

So, when you are taking it together the cash flow returned back for lending money or investing money in the business, so it means you are calculating cash flow which has now say distributable to both the stakeholders or investors internal owners as well as the lenders, then the discount rate has to be the weighted average cost of capital WACC.

And normally in this discussion also here for this particular subject, whereas in the practical life also, we apply the weighted average cost of capital as a discount rate for discounting of the cash inflows. For this discussion also and otherwise also, we do not segregate it, but there can be another way, another situation also.

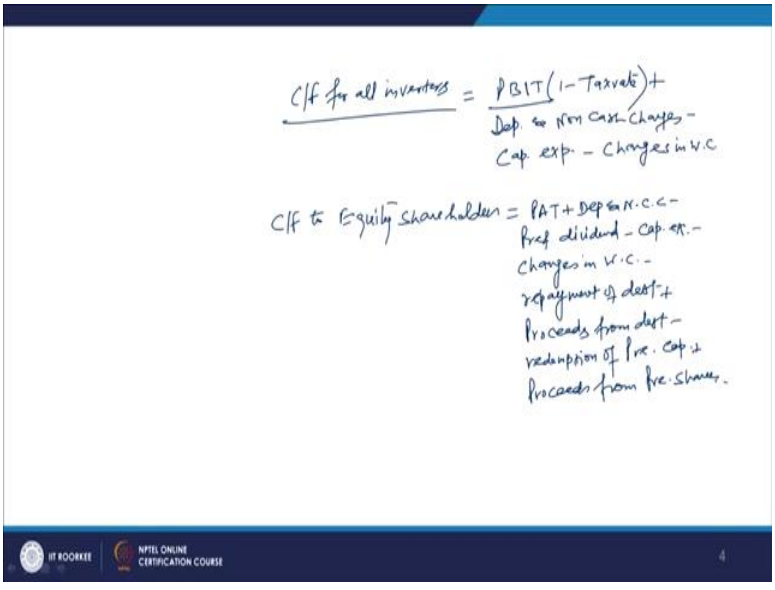
Another situation can be that, for example, the cash flow we are working out only for the equity shareholders, that we have already paid off the interest cost of the borrowing, we have already paid the principal component of the borrowing and after that whatever the cash flow left with us is that is called as a free cash flow and that is only available to the equity shareholders if that way you are calculating the cash flow, then what you are going to do, only the discount rate has to be the cost of equity and not the weighted average cost of capital, so remain consistent.

What is the source of cash inflow or this is attributable to or distributable to both the stakeholders or both the investors then weighted average cost capital has to be used, but if only to the equity shareholders the cash flow has to be calculated, then the discount rate has to be used as the cost of equity, which can be calculated with the help of CAPM - Capital Asset Pricing Model.

So, detailed discussion upon the cost of capital I will have separately because it is independent topic cost of capital. There we will talk about the weighted average cost of capital also and the cost of equity also.

So, this is with regard to the cash flows and the discount rates. Now, let us understand how to calculate the cash flows for the say different interest groups. When we are talking about the cash flows for all the investors how to calculate it?

(Refer Slide Time: 27:45)



We will calculate it cash flow for all the investors' cash flow for all investors. Cash flow for all investors, how would you calculate it? You will calculate it like this PBIT - Profit Before

Interest in Tax into 1 minus tax rate, into 1 minus tax rate. This is the profit after tax available with us plus in this case plus depreciation and non-cash charges, depreciation and non-cash charges, minus all kind of capital expenditure, cap exp, all kind of the capital expenditure minus changes or increase in the working capital requirements or increase in the working capital requirements or increase in the working capital.

So, increase in the changes, or change in the working capital, so we have to any kind of changes in the working capital, we have to write here, changes in working capital. So, it means whatever now the cash flow comes up is we are starting with a profit before interest and tax.

This is that total means cash flow left with us this is a total cash flow left with us, profit before interest and tax which is coming up here, and then 1 minus tax rate if you subtract the tax part from this profit before interest and tax, so that will be left with us is, what will be that part that will be called as PAT - Profit After Tax.

So, into that profit after tax for calculating now the cash flow available to all the investors will be that is the profit after tax it means in a case, PAT that PBIT into 1 minus tax rate will become now the profit after tax plus in that depreciation plus any other non-cash charge which we have already subtracted before calculating this PBIT, that will be added back.

Because that is a non-cash charge, we have only considered as at an expense, but it is a non-cash expense that will be added back because that will be the source of cash flow and any kind of the capital expenditure, now we are going to incur in the current year that has to be done from this cash flow only.

So, that will be subtracted including the investment we are going to make here in the, for the working capital requirement. So, these two have to be subtracted, and these two have to be added. So, profit after tax plus depreciation plus non-cash charges minus any kind of the cap exp, we are going to do in the current year and minus any kind of investment we are going to do on account of the working capital changes or any increase in the working capital.

So, from the total cash flow, you have to subtract the capital expenditure and the revenue expenditure on account of working capital. Remaining cash flow will be called as the cash flow for all investors, cash flow for all investors.

This is the case, if you are calculating the cash flow for all investors and on this cash flow the discount rate to be applied will be the WACC - Weighted Average Cost of Capital, so where you will calculate the cost of debt which is given to us which is a borrowing rate plus you have to calculate the cost of equity with the help of CAPM - Capital Asset Pricing Model.

Then you have to take the equal means the weightage, depending upon the contribution from these two sources, you have to calculate the weighted cost of capital, weighted average cost of capital and that will become the discount rate in case of the cash flow to all the investors. And in case of the cash flow only to the equity shareholders, cash flow only to the equity shareholders.

So, it will be little complex cash flow for, to equity shareholders, cash flow to equity shareholders, how to calculate it? Again now we have to start with Profit After Tax - PAT, Profit After Tax plus same thing depreciation and non-cash charges, NCC, I am writing, Non-Cash Charges you have to add back here and then you have to subtract here something minus the preference dividend, preference dividend minus preference dividend minus, if there is any kind of the Cap exp,

Capital Expenditure we are going to do you have to it has to be subtracted minus changes, minus changes in working capital, any kind of changes in the working capital are there minus repayment of debt minus repayment of debt, if you are going to pay the debt also, plus fresh proceeds from the debt, if any debt is raised proceeds from that part of the debt is repaid and new debt is borrowed.

So, proceeds from debt has to be added back because that will become the source of cash inflow, and then is minus redemption of, redemption of, redemption of preference capital, redemption of the preference shares or the preference capital and any fresh issue of the plus proceeds from preference shares or the preference capital. So, this will become the cash flow only to the equity shareholders.

So, it means all the claims belonging to the outsiders, lenders are also outsiders and preference shareholders are also for this purpose are considered as outsiders though, though the preference capital is called as a capital, share capital, but since it is only for a limited period of time, and after that it has to be redeemed. So, it is also treated as same as the debt borrowed from the some particular source.

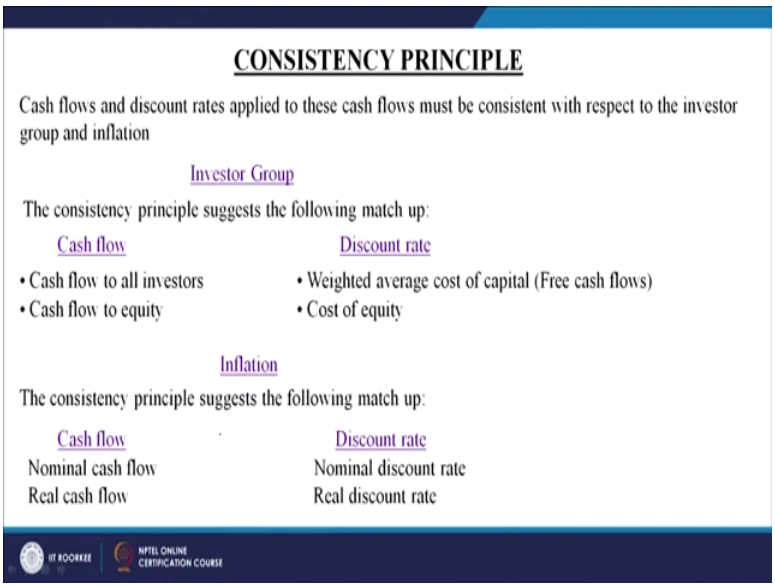
So, same way it has to be treated, so here, you have to now calculate that cash flow only to the equity shareholders in this process. And for say, calculating this means the process is little bit different here. So, when you calculate this cash flow for all the shareholders and cash flow for the equity shareholders, calculating the cash flow for all the shareholders is different and calculating the cash flow for the equity shareholders is different.

So, it means, once you follow the second method second approach for calculating the cash flow for the equity shareholder, shareholders only then the claims of all outsiders have to be settled first and then whatever is left now, the as a cash inflow final figure, which is called as a Free Cash Flow - FCF that will be only admissible to payable to the equity shareholders.

Whereas in the first case, we are only talking about the capital expenditure and the working capital increase as the cash outflow, remaining whatever the cash flow we are working out is that is payable or that belongs to all the investors both internal and external and from this cash flow we will settle the claims of the debt suppliers, preference shareholders.

So, if you are following the first approach first method, then the say "Weighted Average Cost of Capital" will be used as a discount rate whereas, in the second case only the costs of equity, but for our discussion and in the general discussion while calculating the cash flows, we follow the first approach always and cash flows are always calculated, which are known as the cash flow for all the investors for all the important, say fund suppliers both internal and the external. This is the one part of the consistency principle.

(Refer Slide Time: 36:11)



And the second important component of the consistency principle is that when you calculate this here now, the inflation factor we have to, because we have to provide for the inflation part also. So, the consistency principle suggests here, that the following match up should be means observed. So, it means cash flow is nominal cash flow and nominal discount rate and real cash flow means the say, real discount rate.

So, when you talk about the nominal cash flow in this nominal cash flow what we do is, we include the say, (deprecia) or inflation also we provide the allowance because when your selling price will increase over a period of time not because of any other factor just because of the inflation your cash inflow will also increase.

So, when you will calculate the, or you will discount those cash flows, that discount rates should also be the nominal discount rate means it should be the inflated discount rate or the present discount rate expected to be present in the market at that time, not the discount rate which you are say taking the nominal discount rate minus inflation or the effect of the inflation that has not to be done.

So, you means because when we predict, when we estimate the cash flows, we do not only say estimate it at the same level for example, say we are saying that every year we are going to get back the 100 crores over the next 5 or 7 years it may be possible in the first year we are going to get back 100 crores, next year 120 then is 130. So, that is not because we are selling additional number of units, total production and sales will remain the same, but because selling price will change because of the inflation factor.

So, our cash flow will also increase. So, it means when you are calculating the cash flows by taking the inflation factor into account, your discount rate has to be consistent like that and discount rate also has to be anticipated or maybe say estimated, which is expected to be there in the market at that point of time.

So, consistency in case of the inflation remains that nominal cash flow, inclusive of inflation, discount rates should also be nominal inclusive of inflation, but when the real cash flow means you are subtracting now the say the effect of inflation, then the discount rate also has to be real in the discount rate also, you have to say take the nominal discount rate expected to be existing at that time minus the effect of inflation and then that will become the real discount rate.

But normally, we do not follow the real cash flow or the real discount rates, we always for our estimation and analysis, we always follow and for this analysis, here also, we always follow the process of nominal cash flows and the nominal discount rates. So, these are the four important say principles, which are very important before you start working out the cash flows or estimating the cash flows, you should be very clear in your mind that what is the separation principle, what is the incremental principle, what is the post-tax principle, and what is the consistency principle.

If these 4 principles are clearly means established in your mind, then estimating the cash flows for the firm any kind of say, future investment proposal or future investment project will not be difficult for us. So here, I will stop with this discussion theoretical discussion or the fundamental discussion, which is important to be borne in mind, before we start knowing about or learning about how we practically say estimated estimate the cash flows, it was very important, I could do it.

And you also follow any good book, for example, which I am falling here is "The Financial Management" by "Prasanna Chandra" you can follow that book, and you can see in that book in very detailed manner, detailed form all these principles are discussed.

So, first you understand the fundamental theoretical portion and later on you start understanding how the cash flows have been estimated here by me for the different practical problems, which I will be doing from the next class onwards. Till then, I will stop here, and I will see you in the next class. Thank you very much.