Security Analysis & Portfolio Management
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Lecture 38
Balance Sheet Analysis V

Welcome back. So, let us continue where we left off, I was planning to discuss the concept of capitalization versus the concept of expensing. Suppose you have a fixed asset you have a plant comprising of various items of plant and machinery and you want to undertake or you have undertaken a certain type of repairs on the particular machinery.

Now, the question arises the expenditure that you have incurred on the repairing of the machinery, whether at party that particular item should be added to the cost of that machinery in which case it is called capitalization or whether that amount of repairs the expenditure that you have incurred on the repairs should be charged to the profit and loss account and not the value of the machinery the carrying amount of the machinery be left untouched.

Let me repeat if there is a certain amount of expenditure incurred in the context of a long-lived asset of a fixed asset, then the question arises, the question that needs to be addressed is whether that expenditure will be added to the cost of the machinery in which case it is called capitalization or whether the expenditure is to be debited to the profit and loss account in which case it is called expensing. So, what is the test to determine whether an item of expenditure in relation to a fixed asset is to be capitalized or it is to be expensed? The answer is here on this slide.

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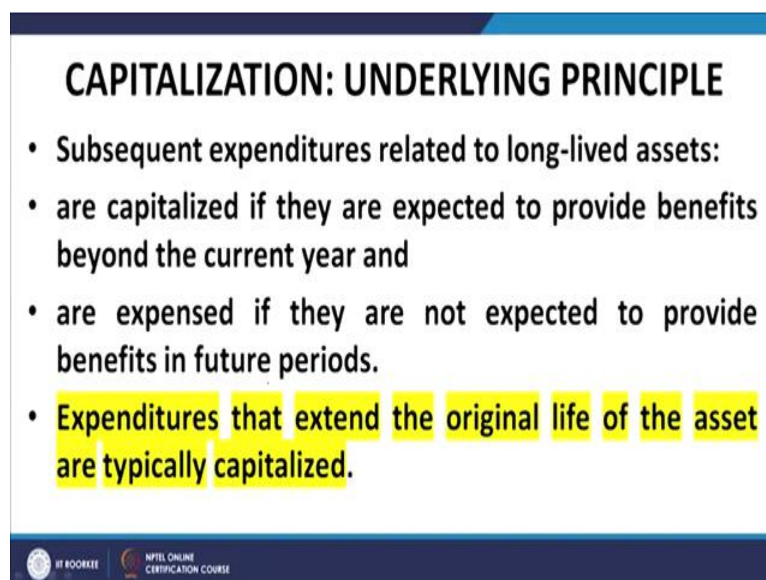

Subsequent expenditures relating to long lived assets are capitalized if they are expected to provide benefits beyond the current year. And expensed if they are not expected to provide benefits in future periods. Expenditures that extend the original life of the asset are usually capitalized. So, I repeat expenditures are to be capitalized, if they result in or if they are expected to yield benefits to the end entity for future years.

And if the expenses are such or the expenditure is such that it is required only to maintain the existing level of the machinery than it is to be expensed. What is the impact of capitalization versus the expensing? That is very interesting. In the year in which that capitalization takes place what happens, it increases the value of assets, it increases the value of the machinery, because you are adding it to the cost of the machinery.

So, it will increase the amount of assets on the balance sheet. It will increase the amount of depreciation if you are charging depreciation for the year in which the assets have been repaired or revitalized. It will increase the amount of income by removing that item as an expense from the profit and loss account. And then it will appear as an investing cash flow in the cash flow statement.

So, these are the four immediate impacts of capitalization number one, increase in the value of assets because you are adding that item of expenditure to the value of the assets, it will increase the amount of depreciation if you are charging depreciation for the year in which the expenditure is incurred, then it will increase the amount of income by removing that item as an expense and putting it as a part of the capital value of the asset and then it will appear as investing cash flow in the cash flow statement.

In subsequent years, what happens, in subsequent years the capitalized amount is allocated it is distributed it becomes a part of the value of the asset and therefore, it is distributed over the remaining life of the asset as depreciation. So, depreciation increases over the remaining life of the assets. And because depreciation is a non-cash item, apart from its impact on taxable income and tax liability, which I have already alluded to, it will have no impact on the cash flow statement.

An item which is expensed, in other words which is not capitalized, which is treated as a revenue expenditure on the premise and that it is not likely to yield any prolonged benefit to the entity. It will reduce net income by the net after tax effect of that expenditure. It is not recorded in the balance sheet in the sense that the asset value is not changed.

And therefore, the depreciation they are on is not change it the expense will not expense having been debited to the profit and loss account for the current year will not impact the carrying cost of the asset and the depreciation will also not change. Obviously, the income will decrease because you are charging the full amount to the profit and loss account and therefore, the net income decreases and it will be reflected in retained earnings in the balance sheet.

And as far as the cash flow statement is concerned this item being expensed in the profit and loss account will appear as an operating cash outflow and there is no effect on the financial statements or subsequent periods, because sorry, because it is completely absorbed in the profit and loss account of the year in which it is incurred. What is the effect and profitability ratios?

Now, the sum of the net income over the assets life is identical whether the asset is capitalized or not in the event that the asset is capitalized, the value of that expenditure is distributed over the remaining life of the asset and becomes combined with the depreciation and that is charged to the profit and loss account every year. So, it is amortized in a sense over the remaining life of the asset of the machinery on which it is incurred.

And although capitalization results in higher profitability compared to expensive in the year in which it is incurred or in which it is capitalized on the profitability ratios for subsequent periods would be lower. Effect on shareholders equity. Similarly, shareholders equity for a company that capitalizes the expenditure will be higher in the earlier years because the profit is more in the earlier years because you have not expense the item, you capitalize it and capitalizing means charging only a certain proportion of that in the form of depreciation in the form of amortization to the profit and loss account.

So, naturally, the shareholders equity would be lower, I am sorry will be higher in the earlier years and would be lower and subsequent in the subsequent years because of the higher retained earnings in the earlier years. Effect on cash flow operations, the expensing of an item is carried to the cash flow operations therefore, and the capitalizing of the item carries it to the cash from investing activities section of the cash flow statement.

Therefore, if you are expensing an item it will reduce your cash flow operations. If you are charging an item as a capital expenditure, then it would be taken to the cash from investing activities that could be treated as a cash flow from investing activities and it would reduce that section of the cash flow statement. So, compared to expensing an expenditure,

capitalizing the expenditure typically results in greater amounts reported in cash flow operations.

As I mentioned, the expensing will remove that amount from the cash from operations and will result in a higher generation or higher reporting of cash from operations. Capitalized expenses are typically treated as investment cash outflows, as I mentioned in the section of cash from investing activities, and it will not reduce cash from operations.

However, as far as the valuation is concerned, if we use the free cash flow model that accounts for both the cash from operations as well as the cash from investing activities, well while working out the free cash flow of the firm, so as far as the free cash flow based valuation models are concerned, and the issue of capitalization or expensing may not impact the overall valuation, although there are certain models which are based on operating cash flow and the value on the basis of such models which use operating cash flow criterion may be different or maybe higher, if you capitalize an expenditure.

Now, we talk about deferred revenue expenditure. Having addressed the issue of capital versus expensing or capitalization versus expenses, this is more or less a similar proposition. Now, let us take the case of a typical example which is usually alluded to when we talk about deferred revenue expenditure, although there are many expense examples. The most common example we talk about is capital advertising.

Capital advertising means advertising that is done in the context of the launch of a new product or a new product line by a company when a company proposes to launch a new product in the market, it is usually an indulgence in a massive advertisement to enhance or to create an awareness about the product among the possible potential end users. So, that advertising may be very significantly costly to the company. In other words, it may entail a significant outlay of funds.

Now, this kind of expense, which is not really tangible, not really creating any physical asset, but at the same time, it is likely to benefit the company over a sustained period, usually in the middle term, usually more than 1 year and extending up to maybe say 5 years or so. But the basic point is that the benefit of this expenditure is likely to extend beyond the year in which it is incurred, that is the fundamental proposition.

So, the test of it being an asset is satisfied in the sense that the future economic benefit is probable and the measurement of that benefit is also in terms of monetary values is also a

reliable. Therefore, it is usual to recognize this item and not expense it in the year in which it is incurred, because it is likely on the premise rather that it is likely it is probable to a future economic benefit over a reasonable middle term period of time.

And accordingly, this particular expenditure is treated as deferred revenue expenditure and it is amortized over the expected useful life or expected utility period to the entity that it expects to derive by the incurring of this expenditure and therefore it is called a deferred revenue expenditure. So, to define a deferred revenue expenditure, a deferred revenue expenditure is a significant expenditure incurred in a particular year, which does not result in the creation of a tangible asset, is not likely to create future economic benefit over a sustained period of time like fixed assets.

But at the same time, it is likely to create benefit to the company over a reasonably greater period of time than the current year. And as a result of it, we do not amortize it, we do not expense it entirely in the year in which it is incurred. We distribute it, we amortize it over a reasonable estimated period of time over which the company is expected to get benefit out of this particular expenditure.

So, let me read it out. Deferred revenue expenditure is an expenditure, which is a revenue in nature. In other words, it is not creating an asset is not creating a fixed asset, so which is revenue in nature and incurred during the accounting period, but its benefits are to be derived over a number of following accounting periods over the medium term. So, that is deferred revenue expenditure.

Now, we talk about deferred taxation, which is very important. And this deferred taxation has found its way into the statute books quite recently. If you look at this situation about 3 decades back, we did not have this concept of deferred taxation in India at least, the origin is relatively recent, in so far as incorporation of deferred taxation in the balance sheet and the profit and loss account is concerned.

So, that is why I felt it appropriate to devote some time to the discussion of this valuable, this interesting, and intriguing concept. To motivate the discussion what I will do is, I will start with an example. You see, before I get into this example, let me explain the backdrop. The backdrop is that when we work out the amount of taxation or the amount of income tax that is to be paid by a company, or any business entity for that matter, to the government exchequer, it is based on the provisions of the tax law, the taxation legislations prevailing in the country.

In India, we have the Income Tax Act of 1961. So, we need to determine the taxable income as per the provisions contained in the Income Tax Act 1961. In order to arrive at the figure of income on which the tax rate is to be impacted or on the basis of which the taxes to be calculated. Now, the issue here is, the issue here is that the provisions of the Income Tax Act that we have are not in absolute conjunction with the provisions of the accounting standards and the provisions of the Companies Act 2013 under which accounts are prepared, under which the accounting profit is calculated at accounts are prepared for the end users which form the part of financial reporting apparatus of the company.

So, there are a huge amount of differences, deviations or divergences rather, between the provisions of the Companies Act and the accounting standards issued there under and the provisions of the Income Tax Act under which we need to work out the income tax liability of the company.

So, that being the case, the tax that would be provided, the tax that would be provided on the basis of the accounting profit that is worked out on the basis of the accounting standards and companies, companies act provisions would be different than the actual tax liability of the company more often than not, the deviations or the differences may be classified into two types of differences or the factors or the issues that create differences between these two values, that is the tax calculated on the basis of the Companies Act and the tax calculated on the basis of the law of taxation the Income Tax Act, which is to be actually paid may arise due to two types or types of differences between the provisions of the Companies Act and accounting standards, which is the provisions of the Income Tax Act, that is one type of differences may be of temporary nature.

This issue will become more clear as we progress, but one type of difference never temp of temporary nature that result in the timing differences between the taxation, company law taxation and income tax taxation. It may so happen that this example will illustrate this, but it may so happen that as per company law, we need to account for the depreciation in a particular manner as per the Income Tax Act, we need to account for depreciation in another manner, but the total depreciation that is to be charged is the value of the asset in both cases.

So, what by having these different methods as I alluded to you earlier also, by having these two different methods, the tax amount as per company law will be different, the tax amount as per income tax would be different, but as time passes, the differences will reverse each other. And at the end of the day, if you work out the tax liability on account of this factor,

that is depreciation alone as per the company law, and as per the Income Tax Act, the over the life of the asset, you will come to the same figure, because the total amount of depreciation that needs to be debited at support is the same in both cases. So, this is called a temporary difference.

Then we have certain permanent differences. For example, the government has allowed a certain investment allowance to boost investment climate in the country, that is allowed when you work out the tax liability, but that is obviously not allowed, when you work out the company law or the company's profit. So, now this difference is allowed in a particular year and this would never be reversed because this particular amount is a one-time entitlement to a company on the basis of what it is investing in a particular asset.

And because the accounting standards may not recognize this as part of the cost of the asset or value of the asset, this difference in the carrying value as per the accounting provisions and as per the tax provisions may sustain over the remaining life of the company. These are called permanent differences. So, there are two types of differences which contribute to the difference between the tax as per the accounting standards and tax as per the tax effect.

Now, as far as permanent differences are concerned because they would never reverse themselves, they are not accounted for, and while contributing deferred taxation we do not consider I repeat, I reiterate, we do not consider permanent differences which are not likely to reverse over the remaining life of the company while calculating deferred taxation. However, as far as temporary differences are concerned, we do account for the differences in taxation due to these temporary differences.

And depending on whether the tax law or the amount of tax paid is less or more compared to the accounting profit tax, we generate a deferred tax liability or asset as the case may be. And this is carried to the balance sheet and gradually as time passes, this deferred tax liability or asset will gradually be amortized will be absorbed as the timing differences neutralize each other.

And at the end of the day, you end up with this deferred tax liability or asset is completely absorbed. Let me take an example to illustrate what I have just been speaking about. XYZ Limited has started business at t equal to 0, it has reported an EBDIT of rupees 1 million for the first year, it has no interest-bearing funds. If depreciable assets at t equal to 0 are valued at rupees 2 million, and the life of the assets is 5 years after which they command a salvage value of rupees 200,000.

The company uses SLM Straight Line Method depreciation for its financial accounts. The tax laws allows WDV depreciation with the same parameters, that is the same purchase price, same salvage value and same useful life. The tax rate is 30 percent, calculate the amount that XYZ Limited will show as deferred tax liability in the balance sheet at the end of the first year.

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YEAR	1.00
EBDIT	1.00
LESS SLM	0.36
PBT	0.64
EBDIT	1.00
LESS WDV	0.74
TAX PROFIT	0.26
IT PAYABLE	0.08
DTL	0.11
DTL C/F	0.11
IT EXPENSE	0.19

Now, EBDIT is 1 million, SLM depreciation is 0.36, you can work it out, it is elementary. And the profit before taxation is 0.64. This is the company law profit. This is the accounting profit. So, profit before tax is 0.64. And if you multiply it by 0.3, you get the at profit the tax payable on account of accounting profit, but we wait for the rest of it. We know work out the tax liability, the EBDIT is 1 million, WDB depreciation turns out to be 0.74 million. This is again, easy to work out, you are given the opening balance, closing balance, and remaining life.

So, you can work out the rate of depreciation and on that basis of rate of depreciation you can work out the depreciation for the first year. So, the tax profit is 0.26. The tax payable, the actual tax payable is 0.08. What is the deferred tax liability? Now, how do we work out the deferred tax liability asset, I will explained the step by step methodology, but basically it is a difference in the method of depreciation which is contributing to different taxation as per the accounting profit, which is 0.64 and as per the taxable profit, which is 0.26.

So, if you work out the difference 0.64 minus 0.26, that is 0.38, 0.38 into 0.3, that comes through 0.11, I think it comes to. So, this is due to rounding off, but the deferred tax liability turns out to be 0.11. So, if you work out the taxation by using this figure of 0.64, you come to

0.19. So, 0.19 is the tax that you would have paid, you would have paid if tax was to be levied on the basis of accounting profit, but it is the tax liability that is actually there is 0.08 on the basis of the tax provisions and therefore the difference between them is carried forward as a deferred tax liability of 0.11.

So, that is what is the explanation of this figure. Let us go back, deferred tax liabilities and deferred tax assets result from temporary differences between a company's income as reported for tax purposes, that is taxable income that is computed under the provisions of the Income Tax Act and income as reported for financial statement purposes that is reported income that is accounting income, that is income on the basis of the provisions of the company law and the accounting standards that are issued there under.

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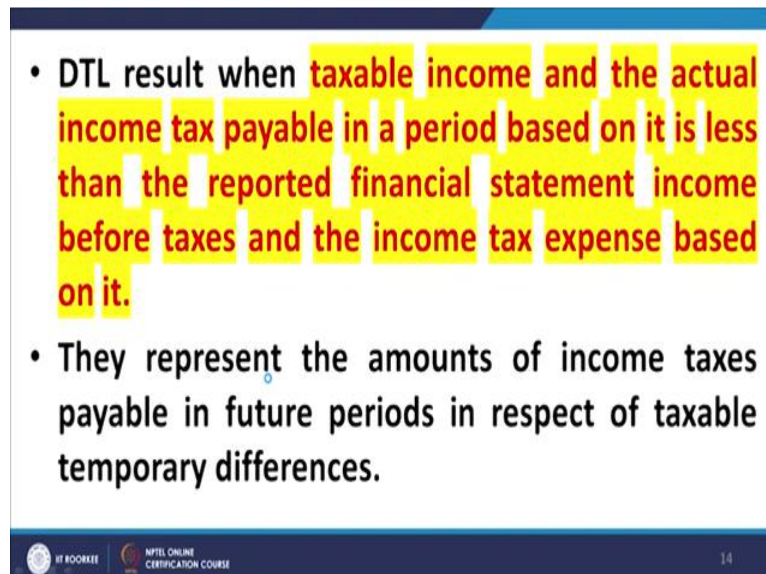

Direct tax liabilities, sorry deferred tax liabilities result when taxable income and the actual income tax payable in a period based on it is less than the reported financial statement income before taxes and the income tax expense based on it. So, when the amount of tax that you are actually liable to pay under the Income Tax Act is less and when the amount of tax that is worked out on the basis of accounting profit is more.

That means you are paid less and therefore, deferred tax liability is recorded which will obviously be neutralized in future years because as the amount of depreciation under the WDV will decrease, it will come below this straight-line depreciation and therefore in subsequent years, we will have a situation where the accounting profit would be less than the taxable profit would be more and you would be paying more tax on the basis of the taxable

profit then the accounting profit. So, they represent amount of income taxes payable in future periods in respect of taxable temporary differences.

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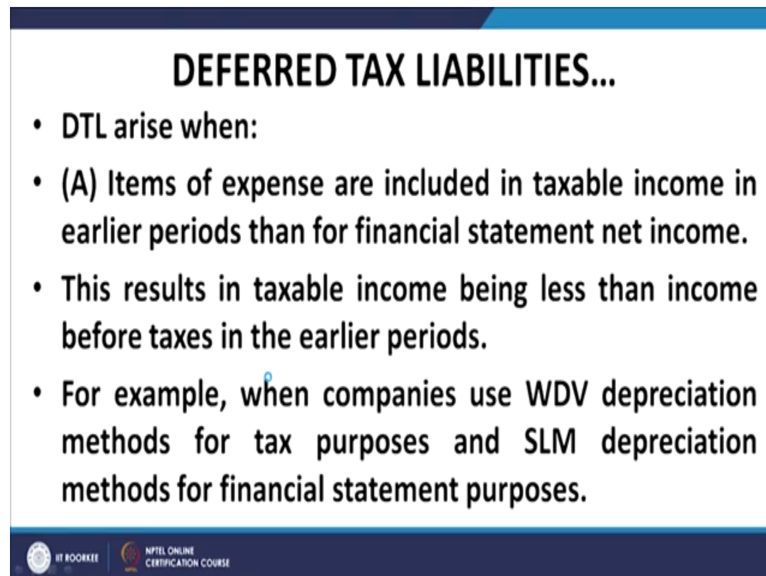

Deferred tax arise when items of expense are included in taxable income in earlier periods, than for financial statements net income. This results in taxable income being less than the income before taxes in the earlier periods. So, if an item of expense is recorded in the taxable income as per the tax provisions in an earlier year, and as per the accounting profit in a later year, obviously, you will pay a lesser tax in the earlier year, then the tax as per the accounting income.

And as a result of which your tax liability is generated, which have been neutralized in the future year when that item of expense is accounted for in the financial accounts. So, that is called a deferred tax liabilities. So, that illustration, typical illustration is the case of WDV depreciation.

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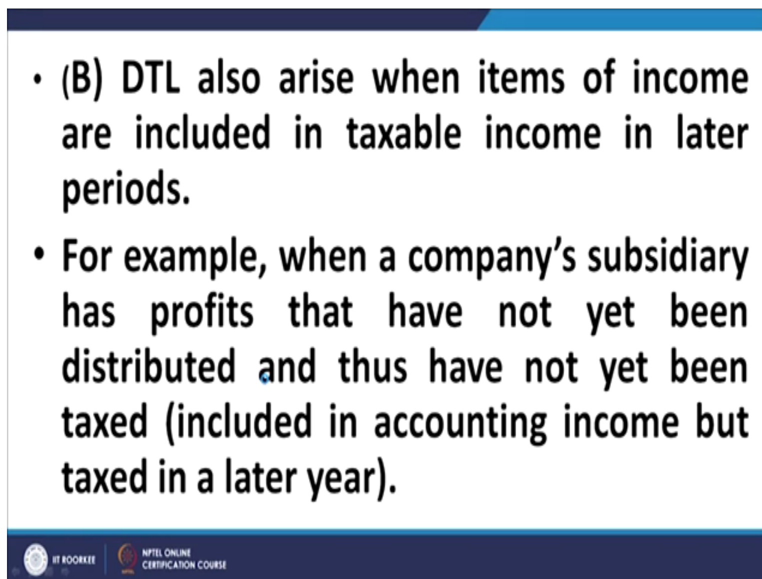

The direct tax liabilities also arise when items of income are included in taxable income in later periods. Direct tax liabilities also arise when items of income are included in taxable income in later periods. For example, when a company's subsidiary has profits that have not yet been distributed, and thus have not yet been taxed included in accounting income but taxed in a later year.

So, this is another example where the direct check liabilities will arise when the income is generated or is recognized as far as the accounting is concerned in an earlier year. And as far as taxation is concerned, it is recognized in a later year. Now, converse to that we have talked about asset and direct or deferred tax liabilities we have talked about, deferred tax assets can also be generated on account of certain situations.

Let us look at the situation also. Deferred tax assets arise when the actual income tax payable based on taxable income in a period exceeds the amount of income tax expense based on the financial statement income. Deferred tax assets may arise when a company may be required to include certain income for tax purposes in the current period, for example, income to be recognized for taxation on cash basis.

The example, typical example is that of the receipt of lease rent for example, which may be required under the income tax law to be recognized on received or accrual, whichever is earlier. And if the company receives the rent in advance of the period to which it pertains, then it may be possible that the company would be required to pay tax on that in the earlier year in which it is receiving that rent however, it would be accounted for in the financial accounts in a subsequent year. And as a result of which it would have paid more tax in terms

of the taxable income compared to the tax as per the accounting income. And as a result of which a deferred tax asset would be generated.

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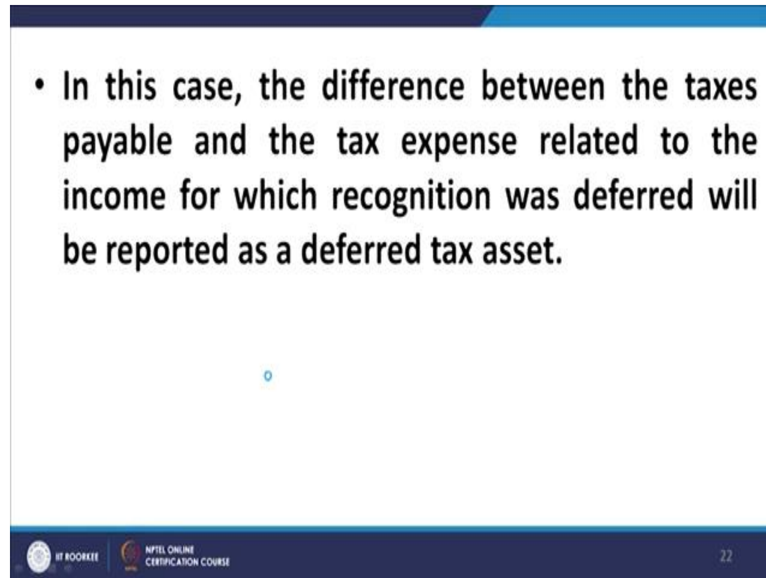

In this case, the difference between the taxes payable and the tax expense related to the income for which the recognition was deferred will be reported as a deferred tax asset. So, this is a typical example where the taxable income and the tax payable there on is more and the accounting income is less.

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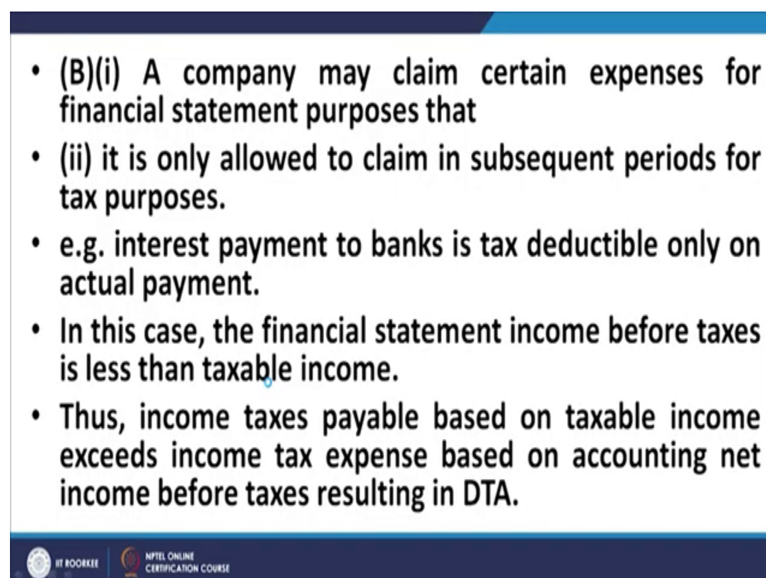

Then we can have a situation of creation of deferred tax assets, when a company may claim certain expenses for financial statement purposes, that it is only allowed to claim in subsequent periods for tax purposes. Therefore, you will again create a deferred tax asset

because you had claim certain expenses as per the accounting law, not as per the tax law and that reduces your accounting income under the tax law those expenses will not be accounted for in that particular year, but in a subsequent year.

So, deferred tax assets may also arise from carry forward of unused losses and credits. This is another situation in which deferred tax assets can arise. So, tax base versus carrying amount just as we have the carrying amount in the context of various accounts various assets and liabilities that appear in the accounts, carrying amount is the amount at which that asset or liability appears in the books of accounts.

Similarly, the tax base of an asset or liability is the amount at which the asset or liability is valued for tax purposes. So, it is parallel, the concept of tax base is parallel to the concept of carrying amount in the context of tax legislation. Tax legislations relate to tax basis on the basis of which your tax liabilities are calculated, carrying amount relate to the assets and liabilities as per the company law and the accounting standards on the basis of which accounting profit is calculated.

So, the carrying amount is the amount at which asset or liability is valued accounting as per accounting principle. So, let me repeat the tax base of an asset or liability is the amount at which the asset or liability is valued for tax purposes. Now, the differences between the tax bases and the carrying amount result in differences between accounting profit and taxable profit.

And therefore, the amount of cash which is payable as per the Income Tax Act and the amount of tax which is computed as per the accounting profit, it is the difference between the tax bases and the carrying amounts restated formally. And now, these differences can result in either temporary differences or permanent differences. If these differences are reversible, in essence in future years, they are called temporary differences.

And we recognize deferred tax assets or liabilities in the context of these temporary differences. However, if the differences are permanent, and would carry on indefinitely over the life of the entity, then we do not consider these permanent differences for the purpose of computing deferred tax assets and deferred tax liabilities. So, that is what I mentioned about permanent differences.

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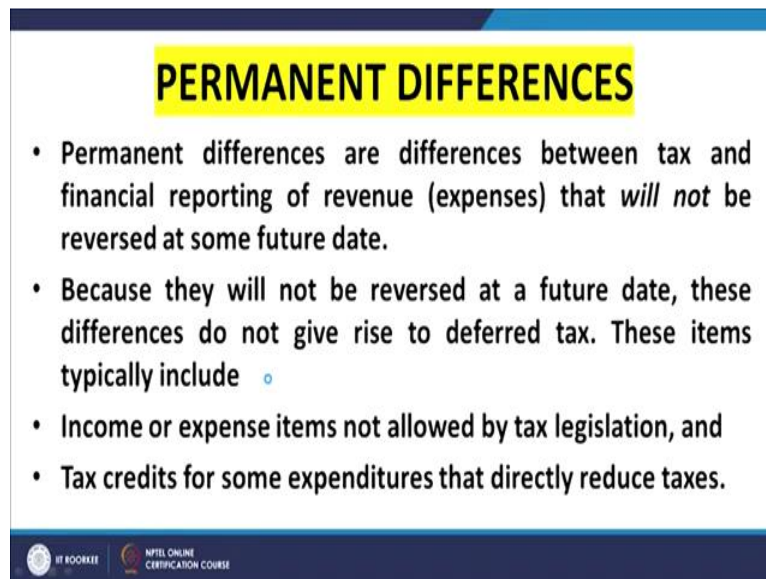

Permanent differences are differences between tax and financial reporting of revenue that will not be reversed in future years, that will not be reversed. So, if the differences are to be reversed in future and resulting in reversing of the taxation liabilities as well, then it is a temporary difference and that will lead to a recognition of deferred tax assets or liabilities. And because they would not be reversed in a future date, these differences do not give rise to deferred taxation that is permanent differences are not considered while can put in the deferred tax assets or liabilities.

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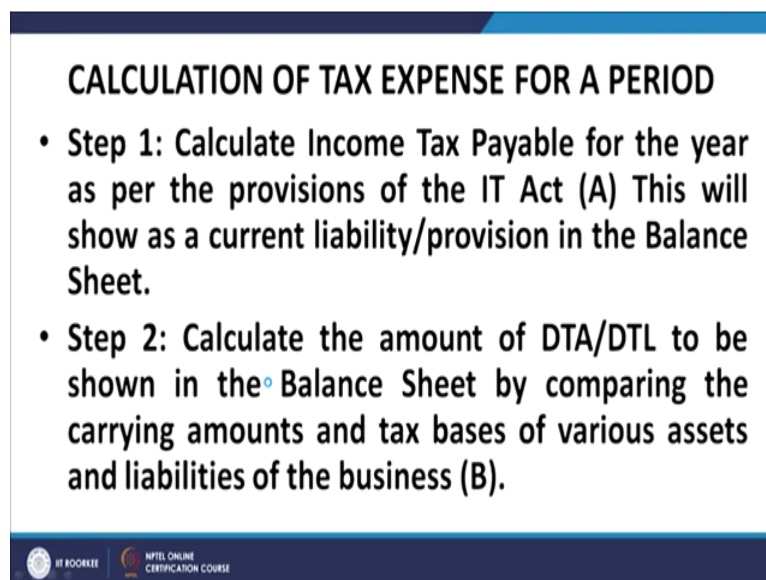

A calculation of tax expense for a period. The first step is we calculate income tax payable for the year as per the provisions. Now, please note this one point before I get into this,

income tax expense is the amount that is to be debited to the profit and loss account. Taxable profit or income tax payable is the tax that is payable as per the tax provisions. Income tax expense is the amount that is to be debited in the profit and loss account prepared as per the company law.

So, step one is calculate income tax payable for the year as per the provisions of the Income Tax Act, let us call it A, this will be shown as a current liability as income tax payable or provision for income tax as the case may be in the liabilities and provisions section of the balance sheet. I repeat, the first step is you can use the entire provisions of the taxation laws and apply them to the various items of income and expenditure of the relevant year.

And on that basis, you arrive at the tax liability, the actual tax liability, the tax that has to be paid to the government on the basis of the tax provisions, so that is the income tax payable. Step two, calculate the amount of deferred tax asset or liability by comparing the tax basis and the carrying amounts of various assets and liabilities, relevant assets and liabilities that are likely to give rise to deferred tax assets or liabilities.

Because they are likely to be reversed or they are likely to influence the future tax liability of the company. In other words, which are going to contribute or which are going to provide in some sense, positive or negative future economic benefit to determine this test of future economic benefit must be satisfied when you recognize an asset or liability as a deferred tax asset or liability. So, calculate the amount of deferred tax asset or, deferred tax liability to be shown in the balance sheet by comparing the carrying amount and tax bases have various assets and liabilities of the business, let us call it B.

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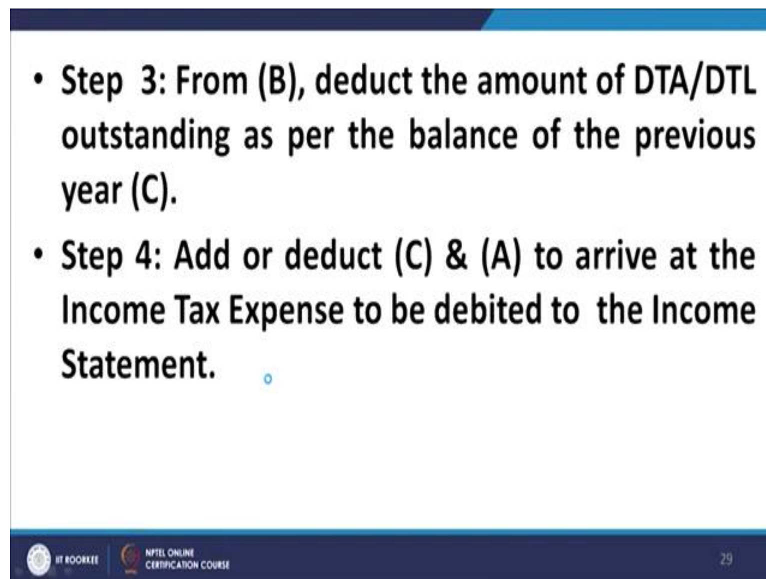

Then from B, we deduct the amount of deferred tax liability or deferred tax assets which are outstanding as per the balance of the previous year, let us call it C. So, you calculate you work out the amount of deferred tax assets and deferred tax liabilities that had to be carried forward at the end of the year. By comparing the various tax bases and carrying amounts at the end of the year. And from that amount, you deduct the opening balance of deferred tax assets or deferred tax labilities.

Now, the difference between them. The difference between them is the amount of deferred tax asset or liability that needs to be created during the year and this will be added or subtracted as the case may be to be to be to the income tax payable to arrive at the total amount that would be transferred to the profit and loss account the accounting statement, accounting based income statement as income tax expense for the year. So, let us recapitulate all the steps. Step one, calculate income tax payable on the basis of tax provisions.

Step two, calculate the deferred tax liability or asset by comparing the carrying amounts and tax bases of the various assets and liabilities, excluding permanent differences, reconciling temporary differences, identifying those differences which are likely to influence tax effects, to have tax effects in the future to generate future economic benefits to the entity on that basis arrive at a figure of deferred tax assets or liabilities that is to be carried forward to the next year. From this amount, deduct the amount of opening balance of deferred tax assets and liabilities. This is the additional amount that needs to be created in terms of asset or liability. And this amount is added to the income tax payable to arrive at the total amount that is to be shown as the income tax expense for the year.

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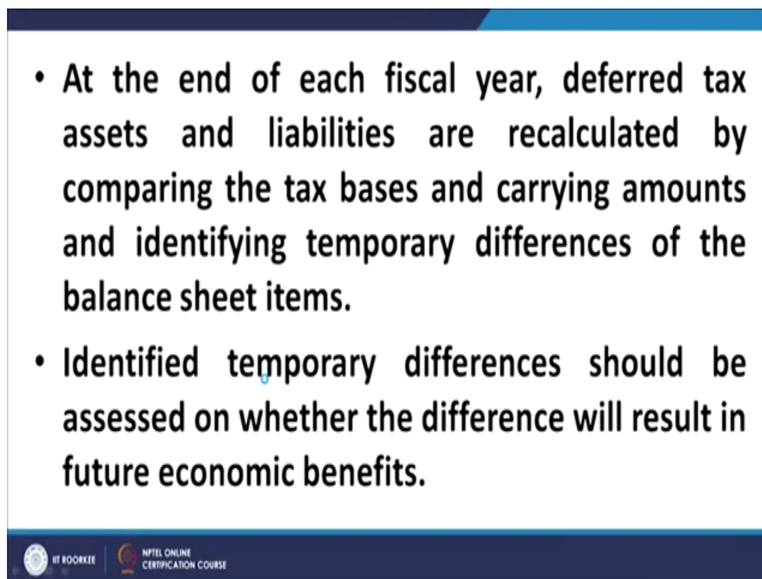

Now, at the end of each fiscal year, deferred tax assets and liabilities are recalculated. By comparing the tax bases and carrying amounts and identifying temporary differences of the balance sheet items. Identified temporary differences should be assessed on whether the difference will result in future economic benefits. This is important, let me repeat. Identified temporary differences should be assessed on whether the difference will result in future economic benefits.

I repeat again important, deferred tax assets are only to be recognized if there is an expectation that there will be taxable income in the future against which temporary differences are carried forward. Tax losses or credits can be applied to reduce taxes payable. In other words, you can create deferred tax assets or liabilities only on the premise that probably, there is a probability, there is a significant probability of those differences resulting in future economic benefits in terms of the tax liabilities that the company is likely to pay in the future, there should be adequate profits.

And these temporary differences should result in the influencing the tax liability for the future. And there should be profit to absorb these temporary differences and thereby influence the overall tax liability. Thus, a deferred tax asset or liability is to be recognized when the difference between the carrying amount and tax base will affect future tax payments by either increasing or reducing the taxable profit.

There are two issues number one, the difference between the carrying amount and the tax base, which needs to be temporary I may add and number two the relevance of the difference on future taxation and thus future profits and losses. The relevance of the difference, these

two fundamental features are cardinal tests on whether and the amount of deferred taxation that needs to be provided at the end of the year. We shall continue with that in the next lecture. Thank you.