Economics, Management and Entrepreneurship
Prof. Pratap K. J. Mohapatra
Department of Industrial Engineering & Management
Indian Institute of Technology - Kharagpur

Lecture - 18
Financial Statements (Contd.)

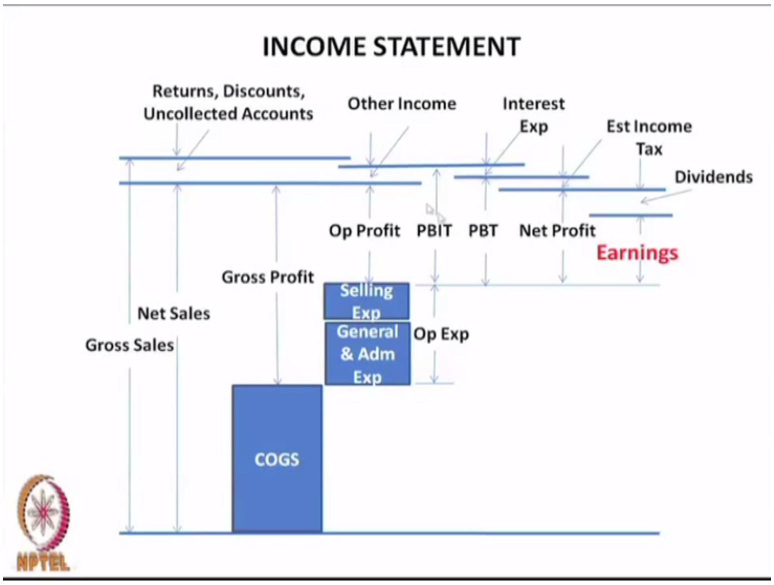
Good morning. Welcome to the 18th lecture on economics, management and entrepreneurship. In our last lecture, we introduced the subject of financial statements. In that we said that there are mainly 2 financial statements, one is balance sheet and the other is income statement or profit and loss statement. In the balance sheet, we basically say the financial status of an organization on a particular debt.

And income statement says how a company or an organization has performed in the last year usually a last year. Now we had spent considerable time in discussing various items that appear in the balance sheet. In particular, we group those items under 2 headings, one assets and the other the liabilities and we had discussed in detail fixed assets and current assets under the assets heading.

And under liabilities, we had considered 2 types of liabilities, one the liability to the owners is known as owner's equity and the liability to outsiders such as suppliers or from the financial institutes or others from whom the company might have borrowed money. Now these things we had discussed in great detail in the last lecture. Towards the end of the lecture, we had initiated the discussion on income statement.

Today, we shall discuss all the items that come under the income statement. First, let us see once again the picture that we had shown in the last lecture on income statement.

(Refer Slide Time: 02:38)



If we look at this picture once again, this says how the earnings that is retained by the company are calculated. First, this let us say is the gross sales line, this is something like a datum line and this is the gross sales. So this is gross sales-returns, discounts or bad debts. If we subtract from gross sales, we get net sales. From net sales if we subtract cost of goods sold, we are left with gross profit.

From the gross profit if we subtract general and administrative expenses and selling expenses, which together constitute the operating expense then what we get is the profit out of the operations are also known as operating profit and on operating profit there can be we add to it income from various other sources recall that the company might have interested idle cash in certain other companies that are not this company's job in particular.

Therefore, it is not part of the operations of this particular company but nevertheless it say income from other investments that the company might have made, so this is added to the operating profit, what we get is profit before interest and taxes. If we subtract the interest expense, then we get profit before tax and then from this if we subtract the estimated income tax, we get profit after tax or which is also known as net profit.

And from net profit, the company might decide to pay dividends to its shareholders and therefore what is retained is the earnings that are retained in the company for reinvestment. Now let us understand the dividends are usually a decision to be taken by the board of directors of the company. Even though normally when the net profit is high, the dividends paid are high and when the net profit is low dividends paid are low.

However, it is not always so, even when a company may have a loss in a particular year, the company may still decide to pay dividends to its shareholders. Similarly, if the net profit is very high even then the company may not proportionately increase its dividends that are given to its shareholders because it may decide to retain much of its profit for reinvestment in its own company.

Earnings therefore in fact this net profit the owners of the company they own this amount this amount they get but this amount which the profit to the company they are basically the shareholders are the real owners of this earnings. Therefore, paid in capital by the shareholders towards this retained earning which is the profit for the reinvestment in the company is actually the total amount that is called the owner's equity.

(Refer Slide Time: 07:02)

Income Statement of XYZ Company for the Year Ended March 31, 2000

Gross Sales			7,300,000
Less: Returns & Allowances	300,000		
Cash Discounts	250,000		
Estimated Loss on Uncollectible Accounts	250,000	800,000	
Net Sales			6,500,000
Cost of Goods Sold			5,300,000
Stocks	900,000		
Wages & Salaries	3,000,000		
Depreciation	900,000		
Other Manufacturing Expenses	500,000		
Gross Profit (Margin)			1,200,000
Operating Expenses			500,000
General & Administrative Expenses	300,000		
Selling Expenses	200,000		
Operating Profit			700,000

Now we take a particular example for XYZ Company for the year ended March 31. In this case, gross sales are taken as 7,300,000 rupees and from here this is to be subtracted returns and allowances, discounts and estimated loss on uncollectible accounts together amount to something like 800,000 rupees which we subtract from the gross sales. So gross sales are actually the unit price * the number of units sold.

But if we subtract this then we get the net sales at 6,500,000 rupees. From this we subtract cost of goods sold, the various elements that are taken here are the direct material written here as stocks 900,000, the direct labour wages and salaries is 3,000,000 rupees, total depreciation this is shown separately but it could have been added with the overall expenses but it is shown separately because this is quite considerable this is 900,000.

Other manufacturing expenses basically other factory overhead expenses FOH amount to 500,000, this total to 5,300,000 rupees that is the COGS cost of goods sold. Therefore, subtracting cost of goods sold from net sales we get gross profit also known as gross margin as 1,200,000 rupees. From here we subtract the expenses that are not incurred in the factory. These are the expenses incurred in the factor and these are expenses incurred outside the factory by the administration and the marketing or the selling department.

Here G and A expenses general and administrative expenses amount to nearly 300,000 rupees, selling expenses amount to 200,000 rupees, these are called the operating expenses. This total 500,000 rupees, therefore from out of the operations that is production and selling the profit amount to subtracting this 500,000 from 1,200,000 we get 700,000 rupees as operating profit.

(Refer Slide Time: 10:38)

Contd. From the previous page

Operating Profit			700,000
Non-Operating Surplus			
Interest & Dividends on Investments		110,000	110,000
Profit Before Interest & Tax			810,000
Interest Expenses			135,000
Bank Borrowings	100,000		
Debentures	35,000		
Profit Before Tax			675,000
Estimated Income Tax			350,000
Profit After Tax (***Net Profit*** or ***Net Margin***)			325,000

So this is written down here and here what we have done is adding other income from other sources so if the company has invested in fixed deposits, it will get interests and if it has invested in other companies shares, it will get dividends. These are surpluses which are not out of its own operations. Therefore, they are called non-operating surplus. Here these added together, interests and dividends are added together and they amount to 110,000 rupees.

And this is to be added with the operating profit out of its own operations. Therefore, profit before interest and tax amount to 810,000 rupees. From out of this the interest expenses are first of all subtracted. One is if the company has borrowed money from financial institution such as bank it pays interests plus if it has got money by bonds or debentures then it has to pay also interests to the bond holders or debenture holders.

This amount is 35,000 and this amounts to 100,000. Together this comes to 135,000 rupees that is the interest expenses. Therefore, from PBIT profit before interest and tax if we subtract the interest expenses, then we are left with profit before tax that is 675,000 rupees. Hence this is the PBT profit before tax on this the income tax is actually paid. The income tax let us say in this case is 350,000 rupees.

Then subtracting the income tax from profit before tax we get what is called net profit or net margin or profit after tax 325,000 rupees is what the company is left with.

(Refer Slide Time: 13:33)

Accumulated Retained Earnings

Retained Earning (End of last year)			1,525,000
Profit After Tax			325,000
Dividends			150,000
Equity	100,000		
Preference	50,000		
Retained Earning (End of the present year)			1,700,000

Now from out of this if you remember we have to subtract dividends, so profit after tax was 325,000 rupees and from out of this the company may decide to pay dividends. We call that it has to pay the preference dividends first let us say that this amounts to 50,000 rupees and the equity holders, the common stock holders let us say that they get 100,000 rupees therefore the total dividends could be 150,000 rupees.

Now if we subtract 150,000 rupees from profit after tax, this amount comes to something like 325,000-150,000 is 175,000, 175,000 rupees is actually the earnings for the company that is retained in this year. Now let us say from the last year financial statements let us say the retained earnings was 1,525,000 rupees. To this we add this year's earning which comes to difference of this which is 175,000 rupees.

If we add 175,000 rupees to 1,525,000 rupees then we get 1,700,000 rupees, which is the retained earning at the end of the present year. In fact, one more row could have shown here had just earning this year which is 325,000-150,000 rupees. Let me do that to make it clear.

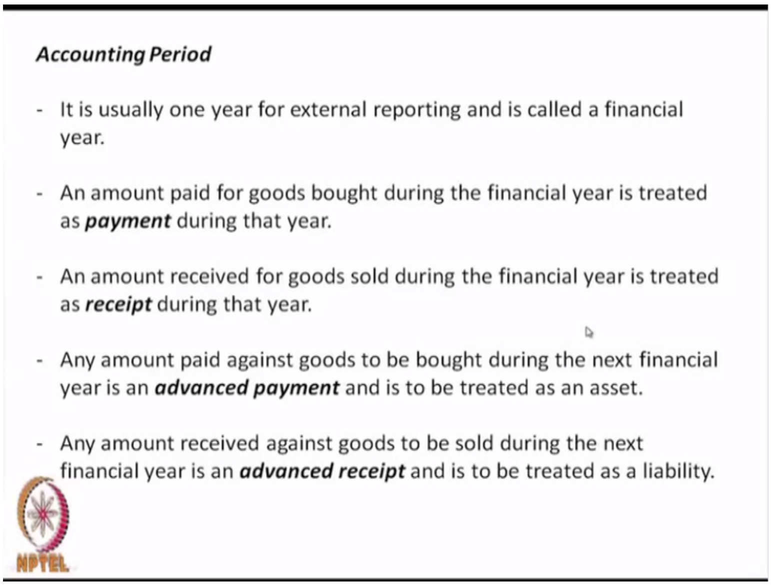
(Refer Slide Time: 16:51)

Accumulated Retained Earnings

Retained Earning (End of last year)		1,525,000
Profit After Tax		325,000
Dividends		150,000
Equity	100,000	
Preference	50,000	
Earnings		175,000
Retained Earning (End of the present year)		1,700,000

Now you see earnings is basically the difference if we subtract dividends from profit after tax. So 150,000 to be subtracted from 325,000 we are left with 175,000 rupees. This 175,000 rupees is added to 1,525,000 rupees which was the retained earning at the end of the last year. So the retained earnings at the end of this year becomes 1,700,000 rupees. This is called accumulated retained earnings statement.

(Refer Slide Time: 17:38)



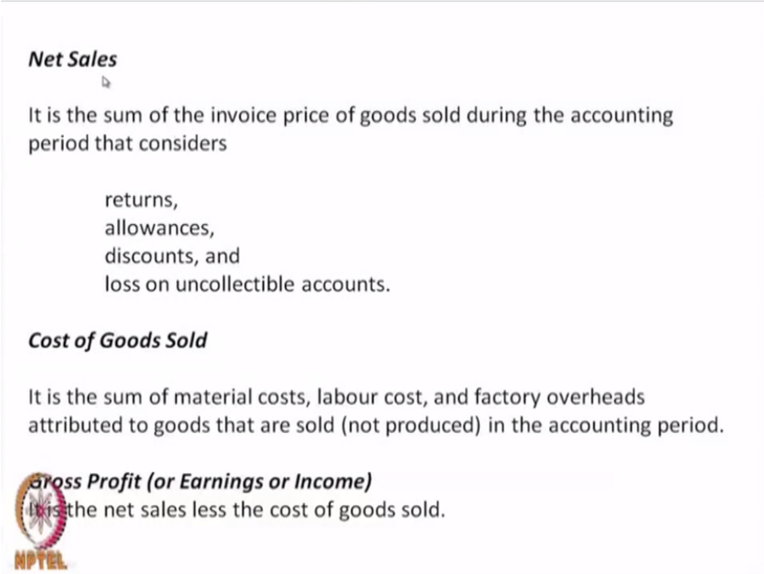
Now let us talk about different items and how these items are defined, just understand that financial statements are prepared for an accounting period and that period could be a year, could be half a year or it could even be a quarter of a year. So we define here the meaning of an accounting period, it is usually one year for external reporting and is called a financial year.

An amount paid for goods bought during the financial year is treated as payment during that year and similarly the reverse is to for receipt. An amount received for goods sold during the financial year is treated as receipt during that year and an amount paid against goods to be bought during the next financial year is an advanced payment and is to be treated as an asset.

So this is a payment made by the company in advance in anticipation of getting goods from its supplier. So goods have not reached us but we have paid advance payment. So this is an advance payment. Similarly, if we get an advance amount for supplying goods to the customers for selling goods to the customers but we have really not sold the goods to the customers then it is called an advanced receipt.

An amount received against goods to be sold during the next financial year is an advanced receipt and is to be treated as a liability.

(Refer Slide Time: 19:45)

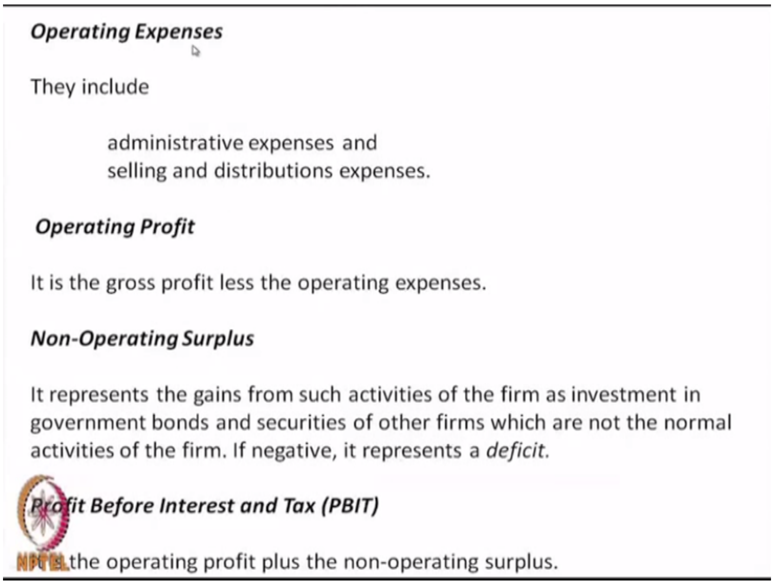


Next will be the various items that appear in the income statement we have now given definitions of each. It is the sum of the invoice price of goods sold during the accounting period that considers returns, allowances, discounts, and bad debts. Invoice meaning whenever certain items are sold pro forma invoice is also sent to the customer that says this is the unit price and this is the amount sold.

Therefore, the gross sales is this and if there are discounts given or other things given, they have to be subtracted from the gross sales to find out net sales. Next, COGS we have already discussed in detail which is sum of direct material, direct labour and factory overheads that are attributed to goods that are sold in the accounting period. Remember this we are talking about cost of goods sold and not cost of goods manufactured.

Therefore, we might have manufactured 100 items in a particular accounting year but if we sale only 50 then we have to consider the cost of making those goods making only 50 items that is the cost of goods sold. Then, the net sales-the cost of goods sold is gross profit or gross earnings or gross income.

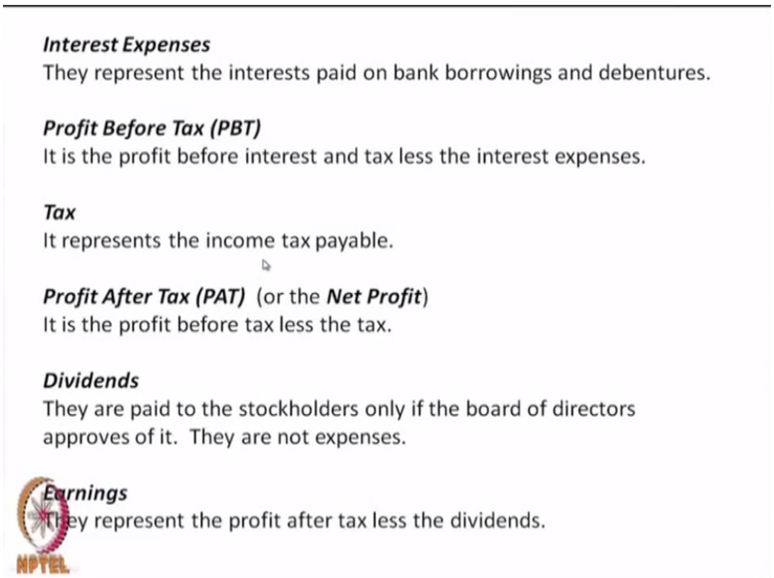
(Refer Slide Time: 21:36)



Next, operating expenses means both general and administrative expenses and selling and distribution expenses. Both include other than the factory expenses, which are known as operating expenses. Now if we subtract the operating expenses from gross profit, we get operating profit. Then, the term non-operating surplus it represents the gains from such activities of the firm as investment in government bonds and securities of other firms that are not the normal activities of the firm.

So these are surplus money that the company invests, short-term investments for which it gets interests and that increases its profit. If it is negative, it represents a deficit. When we add operating profit with the surplus, we get PBIT profit before interest and tax.

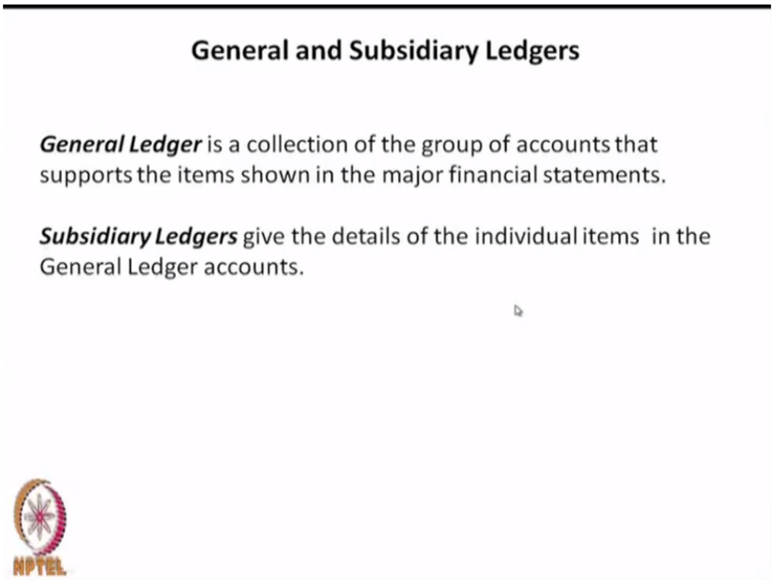
(Refer Slide Time: 23:00)



As I already said, interest expenses are the interests paid by the company to banks and debenture holders or bond holders. Profit before tax is profit before interest and tax PBIT-the interest paid. Taxes are calculated following the government rules income tax rules. If we subtract income tax from PBT profit before tax, we get profit after tax or net profit. Dividends are paid to stockholders only if the board of directors approves of it.

And they are not expenses. Expenses are those that are subtracted from sales to find out profit but dividends are subtracted from profit to find out the earnings. Therefore, dividends are not to be confused with expenses. Earnings are profit after tax less the dividends that are ploughed back by the company in its own investment for growth and sustenance of the company's activities.

(Refer Slide Time: 24:36)



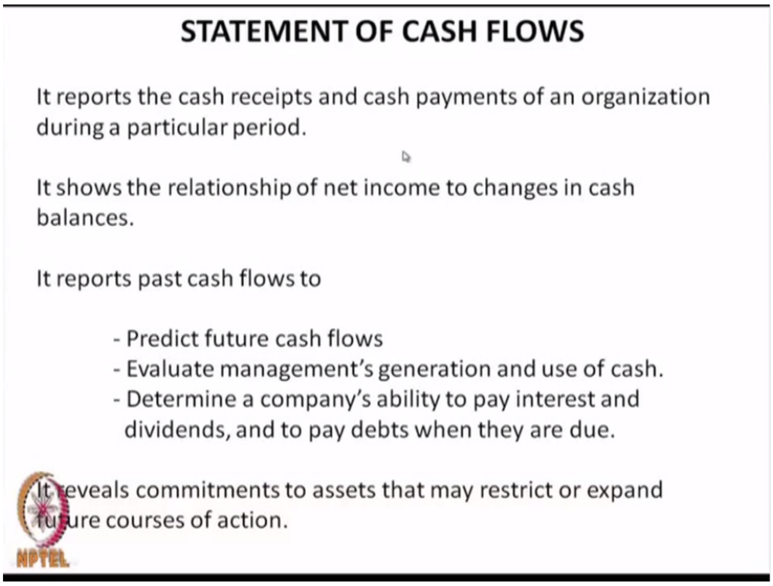
Now we have discussed the 2 major financial statements, the balance sheet and the income statement. Now as I already told you different ledger accounts are kept for each and every item of a company but financial statements such as balance sheet and profit and loss statement they are basically summaries of all those accounts. Now when we say direct material one is not going to go into the details of which worker is working (()) (25:22) being manufactured.

They are available in detail form in different ledger accounts, what is normally done is that all those accounts are summarized and in the summary form they appear in what is called a general ledger. A general ledger is a set up accounts, which can be directly looked into or directly analyzed to prepare the main 2 financial statements and each such general ledger is supported by a set of subsidiary ledgers.

Subsidiary ledgers contain actually the details of each item of a general ledger account. Therefore, we define a general ledger as a collection of the group of accounts that supports the items shown in the major financial statements. So if one likes to see how wages and salaries have been paid, they go first of all to the general ledger and then from the general ledger they go to the supporting ledgers.

Even for more greater details subsidiary ledgers give the details of the individual items in the general ledger accounts. So subsidiary ledgers actually give in much greater detail the different accounts. They are summarized and/or made into accounts of general ledger from out of which the financial statements are prepared.

(Refer Slide Time: 27:10)



Now we already know that there are 2 important financial statements, one is balance sheet and the other is income or profit or loss statement. Now there is of late a demand for another financial statements, it is called a statement of cash flows, although not mandatory the various companies also published a statement of cash flows. It is not mandatory by the company's act.

Company's act says that only the balance sheet and the financial statements need to be published and given to the shareholders. Statement of cash flows is although not mandatory is very popular and it shows how cash have been received or cash has been disbursed and what is the initial cash position and the final cash position of the company and how or what is the liquidity condition of the company.

Now therefore statement of cash flows is also gaining ground in recent days. It reports the cash receipts and cash payments of an organization during a particular period. So you can see the emphasis is on cash receipts and on cash payments or cash disbursements during a particular period. It shows the relationship of net income to changes in cash balances. It reports past cash flows to predict future cash flows.

If you know the way we have been spending our cash on different activities, we can predict the future cash flows as well. We can evaluate management’s generation and use of cash. We can determine a company’s ability to pay interest and dividends and to pay debts when they are due. This is very important because unless the liquidity position of a company is high, the banks may not be ready to extend or to lend any money to the company for meeting their sub term financial or working capital needs.

Similarly, if debts are not paid in time then the suppliers may not be interested or ready to sell their products on credit. Therefore, materials for example may not be easily available to the company. So it also reveals commitments to assets that may restrict or expand future courses of action. Basically, cash flows if a company has got good volume of cash, it means that it can meet short-term obligations.

It can pay money to its own employees in time, it can pay money to the suppliers from whom material may have been purchased, it may not be a defaulter in paying interests to the banks or even paying taxes, so all these will depend on the cash position of a company. A company may be doing very good profit but yet it may not have sufficient cash because it might have invested all its money in various other activities not having enough cash to meet its short-term obligations what we say the working capital need.

Working capital means if you remember current assets-current liabilities. Particularly, it means paying for buying materials, paying for making the payments or interests, taxes, insurances and other such important things. Therefore, the liquidity position of a company which is determined by the position of its cash is quite important and therefore the statement of cash flows is quite important.

(Refer Slide Time: 32:45)

TYPICAL ACTIVITIES AFFECTING CASH

Operating Activities

Cash Inflows	Cash Outflows
Collections from customers	Cash payments to suppliers
Interest and dividends collected	Cash payments to employees
Other operating receipts	Interest paid
	Taxes paid
	Other operating cash payments

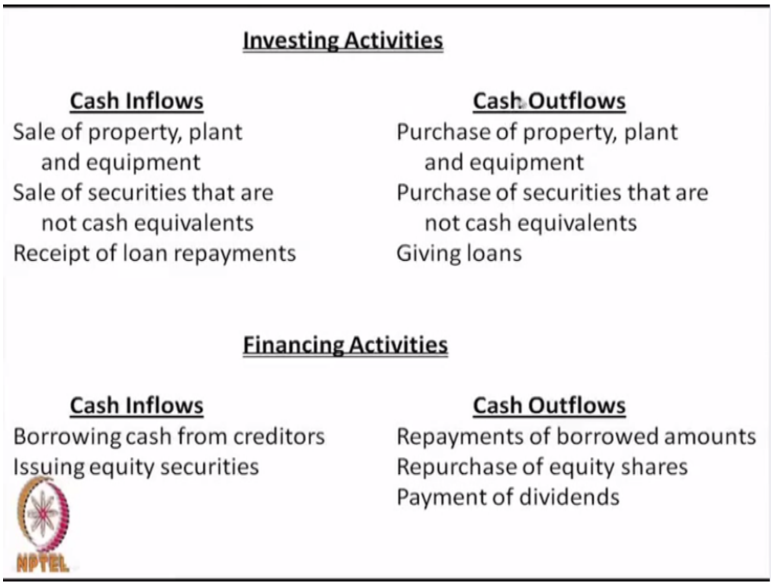
Now what are the typical activities that influence the position of cash? First is the operating activities and every time we find out cash inflows and cash outflows. One, collections from the customers, interest and dividends collected. If the company has invested in certain bonds or in shares of certain other companies, it gets dividends. If it has bought bonds it gets interests and other operating receipts.

So these are the main cash inflows, collections from the customers is the main thing. Remember that if most of the sales take place on credit then cash sales are less, then cash inflow may be less but those who have bought goods last year or many days ago, they should pay the money back to the company. Therefore, cash inflow may take place not just because of current sales but because of credit sales that have taken place sometime in the past.

So cash collection could be out of cash sales in the present year and credit sales in the past year or even in the present year if the cash collection time is < a year, which it should be. Now these are different sources of cash inflows. Now let us see where the cash flows out of the company? Cash flows out of the company to the suppliers from whom the company might have purchased materials or even to utility supplier.

Cash payments to its own employees in the form of wages and salaries, taxes paid as interest to financial institutions, cash paid as income tax and other operating cash payments. So out of the business of operating activities in the factory basically these are from its own operations, these are the cash inflow and outflow. Now consider the investing activities.

(Refer Slide Time: 35:44)



Cash inflow may take place because of sale of property, plant and equipment. If the company decides to sell its land or buildings or some of its equipment, then also there is a cash inflow. If the company sells its securities or shares that it selling or securities of other companies that also is a cash inflow and also cash inflow takes place when suppose that it has given a loan in the form of bond to others and they pay back so you get cash inflow.

Now on the outflow side, we have if you buy land or buy buildings and other plant equipments, machines then also cash flows out of the company. If you buy shares of other companies, then also cash flows out and not take loans it should be giving loans rather than taking loan. If you give loans, then also cash flow out.

So out of the investing activities, which is not part of your own operations but nevertheless here cash inflows or outflows take place then these are the various reasons. Apart from that there are also other activities such as financing activities. Here you borrow cash from creditors, issue equity shares then in both occasions cash inflows take place and here cash outflow will take place for just opposite reasons, repayment of borrowed amount, repurchased of equity shares and payment of dividends.

So broadly we can see that cash inflows and outflows take place on 3 headings, operating activities, investing activities and financing activities.

(Refer Slide Time: 39:21)

Statement of Cash Flows for the Year Ended March 31, 2000

Cash Flows form Operating Activities		
Cash collections from customers		XXX
Cash payments		
To suppliers	XX	
To employees	XX	
For interest	X	
For taxes	XX	
Total cash payments		(XXX)
Net cash provided by operating activities		XX
Cash Flows from Investing Activities		
Purchase of fixed assets	(XXX)	
Proceeds from sale of fixed assets	XX	
Net cash used in investing activities		(XXX)

Now here we give an example of statement of cash flows for the year ended March 31, 2000 but of course we have not given the actual values but we are expecting the values will be here. Whatever we have written earlier we are now tabulating them in a structured fashion. Cash flows from operating activities, cash collection from customers-all these payments to suppliers, payments to employees, payment for interest, for taxes and all these add up to total cash payment of this, total of these 4 is this and if this is within parenthesis indicating that this is negative so it to be subtracted from the inflow.

So inflow-outflow gives the net cash provided by operating activities. So this-this is equal to this. Next, we look at cash flows from financing activities. Here we have purchased our fixed assets, proceed from sale of fixed assets, this is negative if we purchase we pay out cash therefore this is within parenthesis meaning that this is a negative thing, proceed from sale of fixed assets if we sale some of our own assets this is positive.

Therefore, net cash used in investing activities could be either positive or negative. I am assuming here that we purchased more amount of fixed assets and sell less amount of fixed assets. Therefore, the net is a purchase for which we pay out cash. Therefore, it is a cash outflow which means it is negative and therefore it is within the parenthesis, so this is a cash outflow, this is a cash inflow.

So net cash inflow from operating activity is positive, net cash flows from financing activities is however negative.

(Refer Slide Time: 42:13)

Cash Flows form Financing Activities

Proceeds from issue of long-term debt	XXX	
Proceeds from issue of common stock	XX	
Dividends paid	(XX)	
Net cash provided by financing activities		XXX
Net decrease in cash		(X)
Cash, March 31,1999		XX
Cash, March 31, 2000		XX

Now cash flows from financing activities proceeds from issue of long-term debt when you are receiving then cash is coming in so it is a cash inflow, it is positive. Proceeds from issue of common stock, this also is positive, the common stock is issued to the market. So cash comes in. Dividends paid however is negative, therefore it is within parenthesis and the sum of all these 3 is net cash provided by financing activities is cash coming in through issue of long-term debt and issue of common stock less the dividends paid and that is positive.

So the sum of this net cash provided by operating activities, the net cash used in investing activities. Cash from investing activities, net cash is this, net cash for operating activities is this, net cash in investing activities is negative is this and then the net cash provided by financing activities is this. So if you add all the 3, then it may be negative or it may even be positive.

So all the 3 in this case would be negative therefore it is put within parenthesis. So this is the net decrease in cash. Now look at your balance sheet of March 1999, find out from the assets the cash position. So that is the cash position and the net decrease in cash in this case is this. Therefore, if you subtract this amount from the cash position held in end of 1999 then what you get is the cash position at the end of March 2000 here.

And this amount should match with the cash position of March 2000.

(Refer Slide Time: 45:32)

Current Assets, Loans, and Advances			4,650,000
Cash and bank		950,000	
Net receivables		2,000,000	
Receivables (Debtors)	2,100,000		
Less: discounts and bad debts	100,000		
Inventories		1,500,000	
Finished Products	600,000		
Work in Process	400,000		
Raw materials & Supplies	500,000		
Prepaid expenses, Loans, & Advances		200,000	
			9,700,000 Rs.

For example, in our case, end of March 31, 2000 cash on bank is 950,000. So we expect that if you have a statement of cash flows then 99 figure + or – the net increase or decrease in cash these 2 should give the 2000 March 31 figure that appears in the balance sheet of 2000. If it does not match it means that conciliation has been made or ledger accounts must be once again scrutinized to see where the mistake is occurring.

(Refer Slide Time: 46:25)

Relating Cash Flows to Balance Sheet and Income Statement

Examples

Cash collected from customers
= Sales + Beginning A/C Receivables – Ending A/C Receivables
= Sales + Decrease (increase) in A/C Receivables

Payments to suppliers
= COGS + Increase (decrease) in inventory
+ Decrease (increase) in A/C Payable

Cash payments to employees
= Wages and salaries expense + Decrease (increase) in wages and salaries payable

Now cash flows or statement of cash flows are related to the balance sheet and the income statement. Now I am giving here just 3 examples to show how they are related. Let us say that the cash collected from customers in this year, what would be its value, its value will be sales that have taken place+beginning account receivables whatever amount was due to be received from the customers-the ending accounts receivables+the sales would give the cash collected from customers.

This is same as sales+the difference between these 2 which is decrease or increase in account receivables. So these 2 will be equal to cash collected from customers, therefore one can actually if we maintain balance sheet find out the accounts receivables last year's and this year's or to it the sales that appears in the income statement, these 2 appears in the asset side of the financial statements, then we get cash collected from customers.

Similarly, if we look at payment to suppliers, payment to suppliers similarly can be shown as cost of goods sold+increase or decrease in inventory+decrease or increase in accounts payable. So accounts payable and inventory these values inventory is an asset side of the balance sheet, accounts payable is in the liability side of the balance sheet and increase.

And decrease means that we have to consult last year's balance sheet and this year's balance sheet or to it the COGS, which is available in the income statement of this year to find out the payment that has been made to the suppliers in this year and in the similar fashion, we can find out cash payments to employees which is basically wages and salaries of this year+decrease or increase in the accrued salaries payable all wages payable.

That means you have to consider last year's liability in the balance sheet liability side of the balance sheet, find out the difference and that you add to this year's expense then you get how much payment has been made to employees. So friends what we have done in course of our discussion on financial statements is that a company must publish its financial statements in the form of balance sheet and a profit and loss statement.

In addition, it can also decide to also prepare and publish a summary cash flow statement. Cash flow statements as I have just now showed, they are related to both balance sheet and the profit and loss statement of last year and this year and also the income statement. So if we are maintaining accounts properly then we shall see that they more or less match. There can be occasions where they do not match.

In such situations, it is necessary that we look into our accounts and see whether any gross mistake has taken place during the accounting stage. So we have discussed in detail various items, their ramifications, their meanings giving particular examples. In our next lecture, we shall show how to make analysis of the financial statements and how to draw meaningful conclusions from this analysis. Thank you for today.