

## FM

## # Income Statement: -

- 1] Sales → Cash + Credit (Sales/revenue from business)
- 1] Cost of sales (Employee cost, machine cost, labor cost, electricity bill of factory)
- 2] Gross Profit = Sales - Cost of Sales
- 2] Operating Expenses (Electricity bill of office, marketing, selling, Admin)
- 3] Operating Profit = Gross Profit - Operating Expenses
- 3] Non-operating expenses (Interest, rent (lease))
- 4] Profit before taxes (PBT) = Operating Profit - Non-operating expense
- 4] Taxes
- 5] Profit after taxes (PAT) = PBT - Taxes
- 5] Preference Shareholders (getting fixed % of dividend) (Suppose 10%)  
→ 10% of PAT → dividend to preference shareholders  
90% of PAT → Net profit available to equity shareholders

Dividend to equity shareholders      Retain Earnings (Growth)

E.g.: Sales = 100 Rs

100

a] Cost of sales = 50 Rs

- 50

50 → Gross Profit

b] Operating Expenses = 10 Rs

- 10

40 → Operating Profit

c] Non-operating expenses = 10 Rs

- 10

30 → Profit before taxes (PBT)

d] Taxes (@ 30%)

- 9

21 → Profit after taxes (PAT)

c] Preference Shareholders (10% dividend)  $\frac{21}{-2} \underline{19}$

f] Dividend to equity shareholders (10% dividend) =  $10\% \text{ of } 19 = 2$   
 g] Hence Retain Earnings  $\frac{19}{-2} \underline{17}$

Q.1. Sales = 1,00,000 Rs

Machine Cost = 5,000 Rs

Labor Cost = 100 Rs

Electricity bill of factory = 100 Rs

Electricity bill from office = 50 Rs

Admin Salary = 10 Rs

Bank loan - 1000 @ 5%

Bond of 1000Rs @ 5%

Taxes - 30%

Preference Share Dividend - 10%

a) Calculate Retain Earnings b) Net profit available to equity shareholders c) If the company is planning to give 15% dividend to equity shareholders then what will be the retain earnings

$\Rightarrow$  Sales = 1,00,000 Rs

1] Cost of Sales = Machine Cost + Labor Cost + Electricity bill of factory  
 $= 5,000 + 100 + 100$   
 $= 5,200 \text{ Rs}$

Gross Profit = Sales - Cost of Sales  
 $= 1,00,000 - 5,200 \text{ @}$   
 $= 94,800 \text{ Rs}$

2] Operational Expenses = Electricity bill from office + Admin Salary  
 Expenses  $= 50 + 10$   
 $= 60 \text{ Rs}$

$$\text{Operational Profit} = \text{Gross Profit} - \text{Operational Expenses}$$

$$= 94800 - 60$$

$$= 94740 \text{ Rs}$$

3] Non-operating expenses = Bank loan + Bond

$$= \frac{5}{100} \times 1000 + \frac{5}{100} \times 1000$$

$$= 50 + 50 = 100 \text{ Rs}$$

$$\text{PBT} = \text{Operational Profit} - \text{Non-operating expenses}$$

$$= 94740 - 100$$

$$= 94640$$

4] Taxes =  $\frac{30}{100} \times \text{PBT} = \frac{30}{100} \times 94640 = 28382 \text{ Rs}$

∴ PAT = PBT - Taxes =  $94640 - 28382 = 66248 \text{ Rs}$

5] Preference Share Dividend (10%) =  $\frac{10}{100} \times \text{PAT} = \frac{10}{100} \times 66248 = 6624.8 \text{ Rs}$

Retain Earnings = PAT - Preference Share Dividend  
 $= 59623.2 \rightarrow \text{Net Profit available to equity share}$

6] Equity Shares Dividend (15%) =  $\frac{15}{100} \times 59623.2 = 8943.48 \text{ Rs}$

∴ Retain Earnings =  $59623.2 - \text{Equity Shares Dividend}$   
 $= 59623.2 - 8943.48$   
 $= 50679.72 \text{ Rs}$

Q.2 Sales/Revenue from business = 5,00,000 Rs

Machine Cost = 10,000 Rs; Labor cost = 20,000 Rs; Factory cost = 30,000 Rs;  
 Electricity bill of office = 5,000 Rs; Admin salary = 50,000 Rs;

Marketing/Selling = 50,000 Rs; Bank loan (18,000 @ 5%); Bond (15,000 @ 5%); Taxes @ 30%; Preference dividend (12%)

$\Rightarrow \text{Sales} = 5,00,000 \text{ Rs}$

1] Cost of Sales = Machine Cost + Labor Cost + Factory Cost  
 $= 10,000 + 20,000 + 30,000$   
 $= 60,000 \text{ Rs}$

Gross Profit = Sales - Cost of Sales =  $5,00,000 - 60,000$   
 $= 4,40,000 \text{ Rs}$

2] Operating Expenses = Electricity bill of office + Admin Salary + Marketing  
 $= 5,000 + 50,000 + 50,000$   
 $= 1,05,000 \text{ Rs}$

Operational Profit = Operating Gross Profit - Operating Expenses  
 $= 4,40,000 - 1,05,000 = 335,000 \text{ Rs}$

3] Non-operating expenses = Bank loan + Bond  
 $= \frac{5}{100} \times 18,000 + \frac{5}{100} \times 15,000$   
 $= 900 + 750 = 1,650 \text{ Rs}$

PBT = Operational Profit - Non operating expenses  
 $= 335,000 - 1,650 = 333,350 \text{ Rs}$

4] Taxes =  $\frac{30}{100} \times PBT = \frac{30}{100} \times 333,350 = 1,00,005 \text{ Rs}$

PBT PAT = PBT - Taxes =  $333,350 - 1,00,005 = 2,33,345$

5] Preference Share Dividend (12%) =  $\frac{12}{100} \times PAT = \frac{12}{100} \times 2,33,345 = 280 \text{ d. 4 Rs}$

Retain Earnings = PAT - Preference Shares Dividend

$= 2,33,345 - 280 \text{ d. 4} = 205,343.6 \rightarrow \text{Net profit available to equity shareholders}$

6] Equity Shares Dividend (20%) =  $\frac{20}{100} \times 205,343.6 = 41,068.72 \text{ Rs}$

Retain Earnings =  $205,343.6 - 41,068.72$   
 $= 1,64,274.88 \text{ Rs}$

## # Ratio:

1] Gross Profit Margin =  $\frac{\text{Gross Profit}}{\text{Sales}} \times 100$

2] OP Profit =  $\frac{\text{Operating Profit}}{\text{Sales}} \times 100$

3] Net Profit Margin =  $\frac{\text{Net profit available to equity shareholders}}{\text{Sales}} \times 100$

4] Earning per share =  $\frac{\text{Net profit available to equity shareholders}}{\text{Total outstanding shares}}$   
 depends on number of outstanding shares

5] P/E ratio =  $\frac{\text{Market price per share}}{\text{Earning per share}}$

6] EBIT = PBT + Interest  
 (Earnings Before Interest & Taxes)

7] EBITDA = PBT + Interest + Depreciation + Amortization  
 (Earnings Before Interest, Taxes, Depreciation, Amortization)  
 (Tangible) (Intangible)

## # Unit - 3 : Capital Budgeting &amp; Cash Flow

## Capital Budgeting

## Discounting cash-flow

a] NPV (Net Present Value)

b] IRR (Internal Rate of Return)

## Non-discounting cash flow

a] Payback Period

b] ARR [Average Rate of Return]

## ★ Non-discounting cash flow:-

a] Payback Period

Initial Investment = Rs 5,00,000 Cumulative cash Cumulative cash

Q. Year	A	B	flow of project A	flow of project B
0			-5,00,000	-5,00,000
1	1,00,000	70,000	-4,00,000	-4,30,000
2	80,000	1,20,000	-3,20,000	-3,10,000
3	2,50,000	2,50,000	-70,000	-60,000
4	4,50,000	3,80,000	3,80,000	3,20,000
	3.156 yrs	3.158 yrs		

Payback  
Period

$$\text{For A; } 4,50,000 - 1 \\ \text{ } 70,000 - x$$

$$\text{then } x = \frac{70,000}{4,50,000} = 0.156$$

$$\text{Payback Period} = 3 + 0.156 = 3.156 \text{ years}$$

$$\text{For B; } 3,80,000 - 1$$

$$60,000 - x$$

$$x = \frac{60,000}{3,80,000} = 0.158$$

$$\text{Payback Period} = 3 + 0.158 = 3.158 \text{ years}$$

Payback Period of project A is less than project B.  
Hence we will accept Project A.

b) ARR (Average Rate of Return).-

$$\text{ARR} = \frac{\text{Average Profit}}{\text{Average Investment}} \times 100$$

Q.	Year	A	B	Implementation
	1	1,00,000	70,000	= $\Theta$ Initial Investment
	2	80,000	1,20,000	= Rs 60,000
	3	2,50,000	2,50,000	
	4	4,50,000	3,80,000	

$$\Rightarrow ARR = \frac{\text{Average Profit}}{\text{Average Investm.}}$$

Average Profit = Sum of returns every year

No. of years

$$\text{Average Investment} = \frac{\text{Initial Investment}}{2}$$

a] For A, Average Profit =  $\frac{1,00,000 + 80,000 + 2,50,000 + 4,50,000}{4}$

$$= 2,20,000 \text{ Rs}$$

$$\text{Average Investment} = \frac{5,00,000}{2} = 2,50,000 \text{ Rs}$$

$$ARR = \frac{2,20,000}{2,50,000} \times 100 = 88\%$$

b] For B, Average Profit =  $\frac{70,000 + 1,20,000 + 2,50,000 + 3,80,000}{4}$

$$= 2,05,000 \text{ Rs}$$

$$\text{Average Investment} = \frac{5,00,000}{2} = 2,50,000 \text{ Rs}$$

$$ARR = \frac{2,05,000}{2,50,000} = 82\%$$

ARR of company A is more than ARR of company B.  
Hence we will choose project A.

Note: - If scrap value is given then add it in average investment  
 Average Scrap Value = 50,000 Rs  
 Average Investment =  $\frac{500,000 + 50,000}{2} = \frac{550,000}{2} = 275,000$  Rs

If expenses are given then subtract it in average profit  
 Expenses = 80,000 Rs  
 Average Profit =  $\frac{8,80000 - 80000}{4} = \frac{8,00000}{4} = 2,00,000$  Rs (For A)

## ★ Discounting Cash Flow:-

~~imp~~  
a) NPV (Net Present Value):

Q. Year

	A	B
1	1,00,000	70,000
2	80,000	1,20,000
3	2,50,000	2,50,000
4	4,50,000	3,80,000

Initial investment = Rs 5,00,000  
 Rate @ 10%

$$\Rightarrow FV = R \times PV (1+r)^t \Rightarrow PV = \frac{FV}{(1+r)^t}$$

Present value of future cash flows of project A

$$= \frac{1,00,000}{(1+10\%)} + \frac{80,000}{(1+10\%)^2} + \frac{2,50,000}{(1+10\%)^3} + \frac{4,50,000}{(1+10\%)^4}$$

$$= 652209.55$$

NPV = Present value of future cash flows of project A - Initial Investment

$$= 652,209.55 - 5,00,000 = 1,52,209.55 \text{ Rs}$$

Present value of future cash flows of project B

$$\begin{aligned}
 &= \frac{70,000}{(1+10\%)} + \frac{1,20,000}{(1+10\%)^2} + \frac{2,50,000}{(1+10\%)^3} + \frac{3,80,000}{(1+10\%)^4} \\
 &= 610,183.73 \text{ Rs}
 \end{aligned}$$

NPV = Present value of future cash flows of project B - Initial investment  
 $= 610,183.73 - 5,00,000 = 1,10,183.73 \text{ Rs}$

FM

Numerical

Unit - 3

a) Capital Budgeting  
 b) Cash Flow

Unit - 4

- a) Balance Sheet → Theoretical
- b) Income Statement → Numerical
- c) Cashflow Statement → Theoretical
- d) Ratios → Numerical

Theoretical

→ Period is less than 1 year

- For balance sheet →
  - 1] Current assets: a) Cash in hand  
 b) Cash at bank c) Short-term investment d) Receivables e) Inventory
  - 2] Non-current assets: a) Property, Plant & Equipment  
 b) Long-Term Investments c) Goodwill & Intangibles
  - 3] All assets come on debit side

Span 1 year  
 3] Current liabilities - a) Accounts Payable b) Deferred Revenue  
 c) Current Debt

Span 1 year  
 4] Long-term Liabilities

All liabilities come on credit side

Total assets of any company = Total liabilities + Shareholders Equity

Reserve and Surplus is the asset which is ring every day and belongs to the shareholders of the company. It cannot be treated as an asset, it is treated as a liability because the profit belongs to the shareholders of the company.

1]

For cashflow statement →

1] Net income

2] Cash flow from investing activities - Capital investment, purchase of asset, sell of asset

3] Cash flow from financing activities - related to Loans and returns, shares, debentures, dividend.

Cash flow statement is dependent on income statement. Net income from income statement is carry forwarded to Cash flow statement. Reserves in Balance sheet come from retain earning.

## # Balance Sheet:

- 1] A balance sheet is a financial document or statement that provides a complete overview of a firm's assets, liabilities and shareholders' equity for a particular period.
- 2] Preparing this document helps people understand the current capital structure of a firm.
- 3] In addition, the clear information from the balance sheet lets investors decide whether to spend on the company's assets.

## ★ Components of a Balance Sheet:

### ◎ Assets:

- 1] Accounts within this segment are listed from top to bottom in order of their liquidity. This is the ease with which they can be converted into cash.
- 2] They are divided into current assets, which can be converted to cash in 1 year or less; and non-current or long-term assets, which cannot.

### ○ Current Assets:

- a] Cash and cash equivalents are the most liquid assets and can include T-bills and short-term certificates of deposit, as well as hard currency.
- b] Marketable securities are equity and debt securities for which there is a liquid market.
- c] Accounts receivable (AR) refer to money that customers owe the company.
- d] Inventory refers to any goods available for sale, valued at the lower of the cost or market price.

## ① Non-current assets:

- a) Long-term investments are securities that will not or cannot be liquidated in the next year.
- b) Fixed assets include land, equipment, machinery, buildings and other durable, generally capital-intensive assets.
- c) Intangible assets include intellectual property and goodwill.

## ② Liabilities:

- 1) A liability is any money that a company owes to outside parties, from bills it has to pay suppliers to interest on bonds issued to creditors to rent, utilities and salaries.
- 2) Current liabilities are due within 1 year and are listed in order of their due date. Long-term liabilities, on the other hand, are due at any point after 1 year.

## ③ Current Liabilities:

- a) Current portion of long-term debt is the portion of a long term debt due within the next 12 months.
- b) Dividends payable is dividends that have been authorized for payment but have not yet been issued.
- c) Accounts payable is debt obligations on invoices processed as part of the operation of a business that are often due within 30 days of receipt.

## ④ Long-term liabilities:

- 1) Long-term debt includes any interest and principal on bonds issued.

- b] Pension fund liability refers to the money a company is required to pay into its employees' retirement accounts.
- c] Deferred tax liability is the amount of taxes that accrued but will not be paid for another year.

### ④ Shareholders Equity:

$$(\text{Net Assets}) = \text{Total assets} - \text{Total liabilities}$$

- 1] Shareholder equity is the money attributable to the owners of business or its shareholders. It is also known as net asset since it is equivalent to the total assets of a company minus its liabilities or the debt it owes to non-shareholders.
- 2] Retained earnings are the net earnings a company either reinvests in the business or uses to pay off debt. The remaining amount is distributed to shareholders in the form of dividends.
- 3] Treasury stock is the stock a company has repurchased. It can be sold at a later date to raise cash or reserved to repel a hostile takeover.

## # Cash Flow Statement:

(CFS)

- 1] The CFS is a financial statement that summarizes the movement of cash and cash equivalents (CCE) that come in and go out of a company.
- 2] The CFS measures how well a company manages its cash position, meaning how well the company generates cash to pay its debt obligations and fund its operating expenses.

## ★ Structure of the Cash Flow Statement:

- The main components of the cash flow statement are:
- 1] Cash Flow from operating activities
  - 2] investing activities
  - 3] financing activities

## ★ (a) Cash from Operating activities:

- 1] The operating activities on the CFS include any sources and uses of cash from business activities. In other words, it reflects how much cash is generated from a company's products or services.
- 2] These operating activities might include:
  - a] Receipts from sales of goods and services.
  - b] Interest payments.
  - c] Income tax payments.
  - d] Payments made to suppliers of goods and services used in production.
  - e] Salary and wage payments to employees.
  - f] Bakery and wage payments to employees.
  - g] Rent payments.
  - h] Any other type of operating expenses.
- 3] In the case of a trading portfolio or an investment company, receipt from the sale of loans, debt or equity instruments are also included because it's a business activity.

★ (b) Cash from ~~Operating~~ activities:

Investing

- 1] Investing activities include any sources and uses of cash from a company's investments.
- 2] Purchases or sales of assets, loans made to vendors or received from customers, or any payments related to mergers and acquisitions (M&A) are included in this category.
- 3] In short, changes in equipment, assets or investments relate to cash from investing.
- 4] Changes in cash from investing are usually considered cash-out items because cash is used to buy new equipment, buildings or short-term assets such as marketable securities.
- 5] But when a company divides an asset, the transaction is considered cash-in for calculating cash from investing.

### ★ Ⓛ Cash from financing activities:

- 1] Cash from financing activities includes the sources of cash from investors and banks, as well as the way cash is paid to shareholders.
- 2] This include any dividends, payments for stock repurchases, and repayment of debt principal (bonds) that are made by the company.
- 3] Changes in cash from financing are cash-in when capital is raised and cash-out when dividends are paid.
- 4] Thus, if a company issues a bond to the public, the company receives cash financing.
- 5] However, when interest is paid to bondholders, the company is reducing its cash.
- 6] And remember, although interest is a cash-out expense, it is reported as an operating activity—not a financing activity.