

SECTION – 4B : FINANCIAL MANAGEMENT

Financial Management: An Overview

1. (a) Mr. Rohan invested Rs. 2,000 for four years. Calculate at what annual rate of compound interest the invested amount grows to Rs. 2,721 after four years.
- (b) Maha Bank adds interest monthly to investors' accounts even though interest rates are expressed in annual terms. The current rate of interest is 12%. Ram deposited Rs. 2,000 on 1st July, 2009. You are required to calculate the amount of interest he will have earned by 31st December, 2009?

Working Capital Management

2. (a) Ganpati Limited faces a fixed cost of Rs. 4,000 to obtain new funds. There is a requirement for Rs. 24,000 of cash over each period of one year for the foreseeable future. The interest cost of new funds is 12% per annum and the interest rate earned on short-term securities is 9% per annum. You are required to calculate the amount of finance Ganpati Limited should raise at a time.
- (b) Asin Limited is proposing to increase the credit period that it gives to its customers from one month to one and a half months in order to raise turnover from the present annual figure of Rs. 2.4 crores representing 40 lakhs of units per annum. The price of the product is Rs. 6 and it costs Rs. 5.40 to make it. The increase in the credit period is likely to generate an extra 1,50,000 unit sales. Advise whether this is enough to justify the extra costs given that Asin Limited's required rate of return is 20%? Assume no changes to stock levels, as Asin Limited is increasing its operating efficiency. Also assume that the existing debtors will take advantage of the new terms.

Working Capital Management

3. The details regarding the fixed assets and equities of Sona Limited are supplied for your consideration both at the beginning and at the end of the year 2008-2009:

	1.04.08	31.03.09
	Rs.	Rs.
Plant (Less: Depreciation)	63,500	1,42,500
Investment in Shares of Kanta Limited	1,32,000	2,90,000
Bonds Payable	2,50,000	70,000
Capital Stock	4,00,000	4,00,000
Retained Earnings	2,38,000	4,10,500

You are not in a position to have the complete Balance Sheet data or an income statement for the year in spite of the fact that you have obtained the following information:

- (a) Dividend of Rs. 37,500 was paid.
- (b) The net income included Rs. 13,000 as profit on sale of equipment. There has been an increase of Rs. 93,000 in the value of gross plant assets even though equipments worth Rs. 29,000 with a net book value of Rs. 19,000 were disposed off.

You are required to prepare a statement of sources and uses of net working capital.

Tools of Financial Analysis and Planning

4. Sandblast Limited is a manufacturer of products for the construction industry and its accounts are given for your consideration. You are required to calculate the liquidity and working capital ratios from the accounts and comment on the ratios.

	2009	2008
	Rs. (in lakhs)	Rs. (in lakhs)
Turnover	2,065.0	1,788.7
Cost of Sales	<u>1,478.6</u>	<u>1,304.0</u>
Gross Profit	<u>586.4</u>	<u>484.7</u>

	2009	2008
	Rs. (in lakhs)	Rs. (in lakhs)
<i>Current Assets</i>		
Stocks	119.0	109.0
Debtors (Refer Note A)	400.9	347.4
Short-term Investments	4.2	18.8
Cash at bank and in hand	<u>48.2</u>	<u>48.0</u>
	<u>572.3</u>	<u>523.2</u>

<i>Current Liabilities</i>		
Loans and Overdrafts	49.1	35.3
Taxes	62.0	46.7
Dividend	19.2	14.3
Creditors (Refer to Note B)	<u>370.7</u>	<u>324.0</u>
	<u>501.0</u>	<u>420.3</u>
Net Working Capital	71.3	102.9

Notes:

		2009	2008
		Rs.	Rs.
A	Trade Debtors	329.8	285.4
B	Trade Creditors	236.2	210.8

Tools of Financial Analysis and Planning

5. Mahalaxmi Limited's balance sheets as on 31st March, 2008 and 2009 were as follows:

<i>Liabilities</i>	<i>31.3.08</i>	<i>31.3.09</i>	<i>Assets</i>	<i>31.3.08</i>	<i>31.3.09</i>
	<i>Rs.</i>	<i>Rs.</i>		<i>Rs.</i>	<i>Rs.</i>
Equity Share Capital	10,00,000	10,00,000	Goodwill	1,00,000	80,000
8% P.S. Capital	2,00,000	3,00,000	Land and Building	7,00,000	6,50,000
General Reserve	1,20,000	1,45,000	Plant and Machinery	6,00,000	6,60,000
Securities Premium	—	25,000			
Profit and Loss A/c	2,10,000	3,00,000	Investments		
11% Debentures	5,00,000	3,00,000	(non-trading)	2,40,000	2,20,000
Creditors	1,85,000	2,15,000	Stock	4,00,000	3,85,000
Provision for tax	80,000	1,05,000	Debtors	2,88,000	4,15,000
Proposed Dividend	1,36,000	1,44,000	Cash and Bank	88,000	93,000
			Prepaid Expenses	15,000	11,000
			Premium on Redemption of Debentures	—	20,000
	<u>24,31,000</u>	<u>25,34,000</u>		<u>24,31,000</u>	<u>25,34,000</u>

Additional Information:

- Investments were sold during the year at a profit of Rs. 15,000.
- During the year an old machine costing Rs. 80,000 was sold for Rs. 36,000. Its written down value was Rs. 45,000.
- Depreciation charged on Plants and Machinery @ 20 per cent on the opening balance.

- (d) There was no purchase or sale of Land and Building.
- (e) Provision for tax made during the year was Rs. 96,000.
- (f) Preference shares were issued for consideration of cash during the year.
- (g) Debentures are redeemed at the beginning of the year.

You are required to prepare Cash flow statement as per Accounting Standard 3 (revised).

Capital Budgeting and Project Planning

6. (a) Felco Limited manufactures a product which it sells for Rs. 5 per unit. Variable costs of production are currently Rs. 3 per unit, and fixed costs 50 paise per unit. A new machine is available which would cost Rs. 90,000 but which could be used to make the product for a variable cost of only Rs. 2.50 per unit. Fixed costs, however, would increase by Rs. 7,500 per annum as a direct result of purchasing the machine. The machine would have an expected life of 4 years and a resale value after that time of Rs. 10,000. Sales of the product are estimated to be 75,000 units per annum. Felco Limited expects to earn at least 12% per annum from its investments. Ignore taxation. You are required to advise whether Felco Limited should purchase the machine.
- (b) You are required to compute the internal rate of return (IRR) of the project given below and advise whether the project should be accepted if the company requires a minimum return of 17%.

Time	Rs.
0	(4,000)
1	1,200
2	1,410
3	1,875
4	1,150

Leverage

7. Satvik Limited has sales of Rs. 40 lakhs; variable cost of Rs. 25 lakhs; fixed cost of Rs. 6 lakhs; 10% debt of Rs. 30 lakhs; and equity capital of Rs. 45 lakhs. You are required to calculate the operating, financial and combined leverage of Satvik Limited.

Capital Structure and Cost of Capital

8. Goodbuy Company's capital structure is given as under:

9% Debentures	Rs. 2,75,000
11% Preference Shares	Rs. 2,25,000
Equity Shares (face value : Rs. 10 per share)	<u>Rs. 5,00,000</u>
	<u>Rs. 10,00,000</u>

Additional information:

- (i) Rs. 100 per debenture redeemable at par has 2% floatation cost and 10 years of maturity. The market price per debenture is Rs. 105.
- (ii) Rs. 100 per preference share redeemable at par has 3% floatation cost and 10 years of maturity. The market price per preference share is Rs. 106.
- (iii) Equity share has Rs. 4 floatation cost and market price per share of Rs. 24. The next year expected dividend is Rs. 2 per share with annual growth of 5%. The firm has a practice of paying all earnings in the form of dividends.
- (iv) Corporate Income-tax rate is 35%.

You are required to calculate Weighted Average Cost of Capital (WACC) using market value weights.

9. Differentiate between the following:

- (a) Traditional Phase and Modern Phase of Financial Management
- (b) Debt Financing and Equity Financing
- (c) Investment Decisions and Dividend Decisions
- (d) Funds Flow Analysis and Cash Flow Analysis.

10. Write short notes on the following:

- (a) Composition of ROE using Du Pont
- (b) Trading on Equity
- (c) Seed Capital Assistance
- (d) Capital Budgeting Process.

SUGGESTED ANSWERS/HINTS

1. (a) **Calculation of Annual Rate of Compound Interest**

Using the formula for compound interest, we get

$$2,721 = 2,000 \times (1+r)^4$$

$$(1+r)^4 = 2,721/2,000 = 1.3605$$

$$1+r = \sqrt[4]{1.3605} = 1.08$$

$$r = 0.08 = 8\%$$

(b) **Calculation of Interest**

The nominal rate of interest is 12% per annum payable monthly

$$\therefore \text{The effective rate} = \frac{12\%}{12 \text{ months}} = 1\% \text{ compound monthly.}$$

$\therefore$ In the six months from July to December, the interest earned is:

$$[\text{Rs. } 2,000 \times (1.01)^6] - \text{Rs. } 2,000$$

$$2,123.04 - 2,000 = \text{Rs. } 123.04$$

2. (a) **Calculation of Amount of Finance to be Raised**

Cost of holding cash = 12% - 9% = 3%

Optimum level of the re-order quantity is:

$$\sqrt{\frac{2 \times 4,000 \times 24,000}{0.03}}$$

$$\sqrt{\frac{19,20,00,000}{0.03}} = \sqrt{6,40,00,00,000}$$

$$= 80,000$$

The optimum amount of new funds to be raised = Rs. 80,000

This amount is raised every $80,000 \div 24,000 = 3 \frac{1}{3}$ years.

(b) **Advise to the Management**

Existing value of debtors is:

$$\frac{\text{Rs. } 2,40,00,000}{12 \text{ months}} = \text{Rs. } 20,00,000$$

If sales increased by 1,50,000 units, the value of debtors would be:

$$1\frac{1}{2} \times \frac{[\text{Rs. } 2,40,00,000 + (1,50,000 \times \text{Rs. } 6)]}{12 \text{ months}}$$

$$\frac{3}{2} \times \frac{[\text{Rs. } 2,40,00,000 + 9,00,000]}{12 \text{ months}}$$

$$\frac{3}{2} \times \frac{\text{Rs. } 2,49,00,000}{12 \text{ months}} = \text{Rs. } 31,12,500$$

The debtors have to be financed somehow, and the additional Rs. 11,12,500 (i.e. 31,12,500 – 20,00,000) will cost Rs. 11,12,500 × 20% = Rs. 2,22,500 in financing costs.

The profit on the extra sales is:

$$1,50,000 \text{ units} \times (\text{Rs. } 6 - \text{Rs. } 5.40) = \text{Rs. } 90,000$$

Advise: The new credit policy is not worthwhile, mainly because existing customers would also take advantage of it.

3. Working Notes:

(i) Purchase of Plant	Rs.
Net increase in Gross Value	93,000
Add: Gross Value of Plant Sold	<u>29,000</u>
	<u>1,22,000</u>

(ii) Depreciation on Plant and Machinery

Plant and Machinery Account

	Rs.		Rs.
To Balance b/d	63,500	By Sale of Plant & Machinery A/c	19,000
To Purchases	1,22,000	By Depreciation (balancing figure)	24,000
	<u>1,85,500</u>	By Balance c/d	<u>1,42,500</u>
			<u>1,85,500</u>

(iii) Funds from Operations	Rs.
Increase in Retained Earnings	1,72,500
[4,10,500 – 2,38,000]	
Add: Dividend Paid	37,500
Add: Depreciation on Plant	<u>24,000</u>
	2,34,000
Less: Gain on Sale of Equipment	<u>13,000</u>
	<u>2,21,000</u>

Statement of Sources and Uses of Fund

<i>Sources</i>	<i>Rs.</i>	<i>Uses</i>	<i>Rs.</i>
Funds from Operation	2,21,000	Purchase of plant	1,22,000
Sale of Equipment	32,000	Purchase of Investments	1,58,000
		(2,90,000 – 1,32,000)	
Decrease in Net Working Capital (Balancing figure)	2,44,500	Payment of Bonds	1,80,000
		Dividends	<u>37,500</u>
	<u>4,97,500</u>		<u>4,97,500</u>

4. Computation of Liquidity and Working Capital Ratios for Sandblast Limited

	2009	2008
Current Ratio	$\frac{572.3}{501.0} = 1.14$	$\frac{523.2}{420.3} = 1.24$
Quick Ratio	$\frac{453.3}{501.0} = 0.90$	$\frac{414.2}{420.3} = 0.99$
Debtors' Payment Period	$\frac{329.8}{2,065.0} \times 365 = 58 \text{ days}$	$\frac{285.4}{1,788.7} \times 365 = 58 \text{ days}$
Stock Turnover Period	$\frac{119.0}{1,478.6} \times 365 = 29 \text{ days}$	$\frac{109.0}{1,304.0} \times 365 = 31 \text{ days}$
Creditors' Turnover Period	$\frac{236.2}{1,478.6} \times 365 = 58 \text{ days}$	$\frac{210.8}{1,304.0} \times 365 = 59 \text{ days}$

Analysis: Sandblast Limited is a manufacturing group serving the construction industry, and so would be expected to have comparatively lengthy debtors' turnover period, because of the relatively poor cash flow in the construction industry. It is clear that the company compensates for this by ensuring that they do not pay for raw materials and other costs before they have sold their stocks of finished goods (hence the similarity of debtors' and creditors' turnover periods.)

Sandblast Limited's current ratio is a little lower than average but its quick ratio is better than average and very little less than the current ratio. This suggests that the stock levels are strictly controlled, which is reinforced by the low stock turnover period. It would seem

that working capital is tightly managed, to avoid the poor liquidity which could be caused by a high debtors' turnover period and comparatively high creditors.

5.

Cash Flow Statement
for the year ending 31st March, 2009

	<i>Rs.</i>	<i>Rs.</i>
A. Cash flow from Operating Activities		
Profit and Loss A/c as on 31.3.2009		3,00,000
Less: Profit and Loss A/c as on 31.3.2008		<u>2,10,000</u>
		90,000
<i>Add:</i> Transfer to General Reserve	25,000	
Provision for Tax	96,000	
Proposed Dividend	<u>1,44,000</u>	<u>2,65,000</u>
Profit before Tax		3,55,000
Adjustment for Depreciation:		
Land and Building	50,000	
Plant and Machinery	<u>1,20,000</u>	1,70,000
Profit on Sale of Investments		(15,000)
Loss on Sale of Plant and Machinery		9,000
Goodwill written off		20,000
Interest Expenses		<u>33,000</u>
Operating Profit before Working Capital Changes		5,72,000
Adjustment for Working Capital Changes:		
Decrease in Prepaid Expenses		4,000
Decrease in Stock		15,000
Increase in Debtors		(1,27,000)
Increase in Creditors		<u>30,000</u>
Cash generated from Operations		4,94,000
Income tax paid		<u>(71,000)</u>
Net Cash Inflow from Operating Activities (a)		<u>4,23,000</u>
B. Cash flow from Investing Activities		
Sale of Investment		35,000

Sale of Plant and Machinery	36,000
Purchase of Plant and Machinery	<u>(2,25,000)</u>
Net Cash Outflow from Investing Activities (b)	<u>(1,54,000)</u>
C. Cash Flow from Financing Activities	
Issue of Preference Shares	1,00,000
Premium received on Issue of Securities	25,000
Redemption of Debentures at premium	<u>(2,20,000)</u>
Dividend Paid	<u>(1,36,000)</u>
Interest paid to Debenture holders	<u>(33,000)</u>
Net Cash Outflow from Financing Activities (c)	<u>(2,64,000)</u>
Net increase in Cash and Cash Equivalents during the year (a + b + c)	5,000
Cash and Cash Equivalents at the beginning of the year	<u>88,000</u>
Cash and Cash Equivalents at the end of the year	<u>93,000</u>

Working Notes:

1.	Provision for the Tax Account			
	Rs.			Rs.
To Bank (paid)	71,000	By Balance b/d		80,000
To Balance c/d	<u>1,05,000</u>	By Profit and Loss a/c		<u>96,000</u>
	<u>1,76,000</u>			<u>1,76,000</u>
2.	Investment Account			
	Rs.			Rs.
To Balance b/d	2,40,000	By Bank a/c (b/f)		35,000
To Profit and Loss (profit on sale)	<u>15,000</u>	By Balance c/d		<u>2,20,000</u>
	<u>2,55,000</u>			<u>2,55,000</u>
3.	Plant and Machinery Account			
	Rs.			Rs.
To Balance b/d	6,00,000	By Bank (sale)		36,000
To Bank a/c (Purchase b/f)	2,25,000	By Profit and Loss a/c		9,000
		(Loss on sale)		
		By Depreciation		1,20,000
		By Balance c/d		<u>6,60,000</u>
	<u>8,25,000</u>			<u>8,25,000</u>

6. (a) Calculation of Net Present Value (NPV)

Savings are $75,000 \times (\text{Rs. } 3 - \text{Rs. } 2.50) = \text{Rs. } 37,500$ per annum.

Additional costs are Rs. 7,500 per annum.

Net cash savings = $37,500 - 7,500 = \text{Rs. } 30,000$ per annum.

The first step in calculating NPV is to establish the relevant costs year by year. All future cash flows arising as direct result of the decision should be taken into consideration. It is assumed that the machine will be sold for Rs. 10,000 at the end of fourth year.

Year	Cash flow Rs.	PV factor 12%	PV of Cash flow Rs.
0	(90,000)	1.000	(90,000)
1	30,000	0.893	26,790
2	30,000	0.797	23,910
3	30,000	0.712	21,360
4	40,000	0.636	<u>25,440</u>
		NPV	<u>7,500</u>

Advise: The project is acceptable since the net present value is positive, and the project is expected to earn more than 12% per annum.

(b) Calculation of Internal Rate of Return (IRR)

Total receipts are Rs. 5,635 giving a total profit of Rs. 1,635 and average profit of Rs. 409. The average investment is Rs. 2,000. The ARR is $\text{Rs. } 409 \div \text{Rs. } 2,000 = 20\%$. Two thirds of the ARR is approximately 14%. The initial estimate of the IRR that we will take is 14%.

Time	Cash flow Rs.	Discount factor at 14%	PV Rs.	Discount factor at 16%	PV Rs.
0	(4,000)	1.000	(4,000)	1.000	(4,000)
1	1,200	0.877	1,052	0.862	1,034
2	1,410	0.769	1,084	0.743	1,048
3	1,875	0.675	1,266	0.641	1,202
4	1,150	0.592	<u>681</u>	0.552	<u>635</u>
		NPV	<u>83</u>	NPV	<u>(81)</u>

The IRR must be less than 16%, but higher than 14%. The NPVs at these two costs of capital will be used to estimate the IRR.

Using interpolation, we calculate IRR :

$$\text{IRR} = 14\% + \left[\frac{83}{(83 + 81)} \times (16\% - 14\%) \right]$$

$$= 14\% + \left[\frac{83}{164} \times 2\% \right]$$

$$= 14\% + 1.01\% = 15.01\%$$

Advise: The IRR is 15%. The project should be rejected as the IRR is less than the minimum return required by the company.

7. Calculation of Operating, Financial and Combined Leverage

	Rs.
Sales	40,00,000
Less: Variable Cost	<u>25,00,000</u>
Contribution (C)	15,00,000
Less: Fixed Cost	<u>6,00,000</u>
EBIT	9,00,000
Less: Interest	<u>3,00,000</u>
EBT	<u>6,00,000</u>

$$\text{Operating leverage} = \frac{C}{\text{EBIT}} = \frac{15,00,000}{9,00,000} = 1.67$$

$$\text{Financial leverage} = \frac{\text{EBIT}}{\text{EBT}} = \frac{9,00,000}{6,00,000} = 1.50$$

$$\begin{aligned} \text{Combined leverage} &= \text{Operating leverage} \times \text{Financial leverage} \\ &= 1.67 \times 1.50 \\ &= 2.505 = 2.51 \end{aligned}$$

8. Computation of Weighted Average Cost of Capital using Market Value Weights Cost of Equity (k_e)

$$\begin{aligned} K_e &= \frac{D_1}{P_0} + g \\ &= \frac{\text{Rs. } 2}{\text{Rs. } 24 - \text{Rs. } 4} + 5\% = 15\% \end{aligned}$$

Cost of Debt (k_d)

$$\begin{aligned}
K_d &= \frac{I(1-T) + (RV - NP)/N}{(RV + NP)/2} \\
&= \frac{9(1-0.35) + (100-98)/10}{(100+98)/2} \\
&= \frac{5.85 + 0.20}{99} = 6.11\%
\end{aligned}$$

Cost of Preference Shares (k_p)

$$\begin{aligned}
K_p &= \frac{PD + (RV - NP)/N}{(RV + NP)/2} \\
&= \frac{11 + (100-97)/10}{(100+97)/2} = \frac{11.30}{98.5} = 11.47\%
\end{aligned}$$

Calculation of WACC using Market Value Weights

<i>Source of Capital</i>	<i>Market Value (Rs.)</i>	<i>Weights to Total Capital</i>	<i>Specific Cost</i>	<i>Total Cost</i>
Debtentures (Rs. 105 per debtenture)	2,88,750	0.1672	0.0611	0.0102
Preference Shares (Rs. 106 per preference share)	2,38,500	0.1381	0.1147	0.0158
Equity Shares (Rs. 24 per share)	<u>12,00,000</u>	<u>0.6947</u>	0.1500	<u>0.1042</u>
	<u>17,27,250</u>	<u>1.00</u>		<u>0.1302</u>

WACC using market value weights = 13.02%

9. (a) Traditional Phase and Modern Phase of Financial Management

During the **Traditional Phase**, financial management was considered necessary only during occasional events such as takeovers, mergers, expansion, liquidation, etc. Also, when taking financial decisions in the organisation, the needs of outsiders (investment bankers, people who lend money to the business and other such people) to the business was kept in mind.

Whereas, on the other hand, the **Modern Phase** is still going on. The scope of financial management has greatly increased now. It is important to carry out financial analysis for a company. This analysis helps in decision-making. During this phase, many theories have been developed regarding efficient markets, capital

budgeting, option pricing, valuation models and also in several other important fields in financial management.

(b) Debt Financing and Equity Financing

Financing a business through borrowing is cheaper than using equity. This is because:

- ◆ Lenders require a lower rate of return than ordinary shareholders. Debt financial securities present a lower risk than shares for the finance providers because they have prior claims on annual income and liquidation.
- ◆ A profitable business effectively pays less for debt capital than equity for another reason: the debt interest can be offset against pre-tax profits before the calculation of the corporate tax, thus reducing the tax paid.
- ◆ Issuing and transaction costs associated with raising and servicing debt are generally less than for ordinary shares.

(c) Investment Decisions and Dividend Decisions

Investment decisions are those decisions that determine how scarce resources in terms of funds available are committed to projects which can range from acquiring a piece of plant to the acquisition of another company. Funds procured from different sources have to be invested in various kinds of assets. Long-term funds are used in a project for various fixed assets and also for current assets. The investment of funds in a project has to be made after careful assessment of the various projects through capital budgeting. A part of long-term funds is also to be kept for financing the working capital requirements. Asset management policies are to be laid down regarding various items of current assets. The inventory policy would be determined by the production manager and the finance manager keeping in view the requirement of production and the future price estimates of raw materials and the availability of funds.

Whereas, on the other hand, **Dividend decisions** are those decisions that relate to the determination as to how much and how frequently cash can be paid out of the profits of an organisation as income for its owners/shareholders. The owner of any profit-making organization looks for reward for his investment in two ways, the growth of the capital invested and the cash paid out as income; for a sole trader this income would be termed as drawings and for a limited liability company the term is *dividends*.

The dividend decisions thus have two elements – the amount to be paid out and the amount to be retained to support the growth of the organisation, the latter being also a financing decision; the level and regular growth of dividends represent a significant factor in determining a profit-making company's market value, i.e. the value placed on its shares by the stock market.

(d) Funds Flow Analysis and Cash Flow Analysis

- (i) Funds flow statement is based on the accrual accounting system. In case of preparation of cash flow statements all transactions effecting the cash or cash equivalents only is taken into consideration.
- (ii) Funds flow statement analyses the sources and application of funds of long-term nature and the net increase or decrease in long-term funds will be reflected on the working capital of the firm. The cash flow statement will only consider the increase or decrease in current assets and current liabilities in calculating the cash flow of funds from operations.
- (iii) Funds Flow analysis is more useful for long range financial planning. Cash flow analysis is more useful for identifying and correcting the current liquidity problems of the firm.
- (iv) Funds flow statement tallies the funds generated from various sources with various uses to which they are put. Cash flow statement starts with the opening balance of cash and reaches to the closing balance of cash by proceeding through sources and uses.

10. (a) Composition of ROE using DuPont

There are three components in the calculation of return on equity using the traditional DuPont model- the net profit margin, asset turnover, and the equity multiplier. By examining each input individually, the sources of a company's return on equity can be discovered and compared to its competitors.

- (i) *Net Profit Margin*: The net profit margin is simply the after-tax profit a company generates for each rupee of revenue.

$$\text{Net profit margin} = \text{Net Income} \div \text{Revenue}$$

Net profit margin is a safety cushion; the lower the margin, lesser the room for error.

- (ii) *Asset Turnover*: The asset turnover ratio is a measure of how effectively a company converts its assets into sales. It is calculated as follows:

$$\text{Asset Turnover} = \text{Revenue} \div \text{Assets}$$

The asset turnover ratio tends to be inversely related to the net profit margin; i.e., the higher the net profit margin, the lower the asset turnover.

- (iii) *Equity Multiplier*: It is possible for a company with bad sales and margins to take on excessive debt and artificially increase its return on equity. The equity multiplier, a measure of financial leverage, allows the investor to see what portion of the return on equity is the result of debt. The equity multiplier is

calculated as follows:

$$\text{Equity Multiplier} = \text{Assets} \div \text{Shareholders' Equity}.$$

Calculation of Return on Equity

To calculate the return on equity using the DuPont model, simply multiply the three components (net profit margin, asset turnover, and equity multiplier.)

$$\text{Return on Equity} = \text{Net profit margin} \times \text{Asset turnover} \times \text{Equity multiplier}$$

(b) Trading on Equity

The term 'trading on equity' is derived from the fact that debts are contracted and loans are raised mainly on the basis of equity capital. Those who provide debt have a limited share in the firm's earnings and hence want to be protected in terms of earnings and values represented by equity capital. Since fixed charges do not vary with the firm's earnings before interest and tax, a magnified effect is produced on earnings per share. Whether the leverage is favourable in the sense increase in earnings per share more proportionately to the increased earnings before interest and tax depends on the profitability of investment proposals. If the rate of return on investment exceeds their explicit cost financial leverage is said to be positive.

In other words, it can be stated that trading on equity means using borrowed funds to generate returns in anticipation that the return would be more than the interest paid on those funds. Therefore, trading on equity occurs when a company uses bonds, preference shares or any other type of debt to increase its earnings on equity shares. For example, a company may use long-term debt to purchase assets that are expected to generate earnings more than the interest on the debt. The earnings in excess of the interest on the debt will increase the earnings of the company's equity shareholders. This increase in earnings indicates that the company was successful in trading on equity.

(c) Seed Capital Assistance

The Seed capital assistance scheme is designed by IDBI for professionally or technically qualified entrepreneurs and/or persons possessing relevant experience, skills and entrepreneurial traits. All the projects eligible for financial assistance from IDBI, directly or indirectly through refinance are eligible under the scheme. The project cost should not exceed Rs. 2 crores and the maximum assistance under the project will be restricted to 50% of the required promoter's contribution or Rs. 15 lacs whichever is lower.

The Seed Capital Assistance is interest-free but carries a service charge of one per cent per annum for the first five years and at increasing rate thereafter. However, IDBI will have the option to charge interest at such rate as may be determined by IDBI on the loan if the financial position and profitability of the company so permits

during the currency of the loan. The repayment schedule is fixed depending upon the repaying capacity of the unit with an initial moratorium upto five years.

For projects with a project cost exceeding Rs. 200 lacs, seed capital may be obtained from the Risk Capital and Technology Corporation Ltd. (RCTC). For small projects costing upto Rs. 5 lacs, assistance under the National Equity Fund of the SIDBI may be availed.

(d) Capital Budgeting Process

The extent to which the capital budgeting process needs to be formalised and systematic procedures established depends on the size of the organisation; number of projects to be considered; direct financial benefit of each project considered by itself; the composition of the firm's existing assets and management's desire to change that composition; timing of expenditures associated with the projects that are finally accepted.

- (i) **Planning:** The capital budgeting process begins with the identification of potential investment opportunities. The opportunity then enters the planning phase when the potential effect on the firm's fortunes is assessed and the ability of the management of the firm to exploit the opportunity is determined. Opportunities having little merit are rejected and promising opportunities are advanced in the form of a proposal to enter the evaluation phase.
- (ii) **Evaluation:** This phase involves the determination of proposal and its investments, inflows and outflows. Investment appraisal techniques, ranging from the simple payback method and accounting rate of return to the more sophisticated discounted cash flow techniques, are used to appraise the proposals. The technique selected should be the one that enables the manager to make the best decision in the light of prevailing circumstances.
- (iii) **Selection:** Considering the returns and risks associated with the individual projects as well as the cost of capital to the organisation, the organisation will choose among projects so as to maximise shareholders' wealth.
- (iv) **Implementation:** When the final selection has been made, the firm must acquire the necessary funds, purchase the assets, and begin the implementation of the project.
- (v) **Control:** The progress of the project is monitored with the aid of feedback reports. These reports will include capital expenditure progress reports, performance reports comparing actual performance against plans set and post completion audits.

- (vi) **Review:** When a project terminates, or even before, the organisation should review the entire project to explain its success or failure. This phase may have implication for firms planning and evaluation procedures. Further, the review may produce ideas for new proposals to be undertaken in the future.