

FM & Economics for Finance

Time Allowed: 1 hour 30 min.

Test-3

Total Marks = 50 Marks

Answer to Question No.: 1**FACTOR TO BE CONSIDERED BY A VENTURE CAPITALIST BEFORE FINANCING A NEW PROJECT**

Venture capital financing may require huge amount of investment. Hence, it is advised to evaluate all the positive and negative factors before coming to any final conclusion regarding investment in new project. Following factors must be kept in mind:-

- 1) Level of expertise of promoters in production, management & marketing.
- 2) The experience of promoters in related field or any other field concerning the new project.
- 3) Technical or financial viability of new products to be introduced or new projects to be launched.
- 4) Future earning capacity must be evaluated taking into consideration the market conditions, favorable or unfavorable.
- 5) Various types of risks associated with new adventure and steps to be taken by the promoters to overcome it.
- 6) The exit route must also be fixed with mutual consent of all the concerned parties.

Answer to Question No.: 2**RELATIONSHIP BETWEEN FINANCIAL MANAGEMENT AND OTHER AREAS OF MANAGEMENT**

- 1) Finance is life and blood of the business. It is the common thread which binds all the functions in the organizations. There is close relationship between finance function on one hand and production, purchase, marketing and other functions on the other hands.
- 2) **Finance and Production along with Purchases:-** During day-to-day life of business activities, many decisions are taken like investment in inventories, stock-levels, purchase policies, make or buy, retain or replace the existing machine, etc.. All these decisions involved financial implications.
- 3) **Finance and Marketing:-** Maximum sales level is the ultimate objective of each business house. Accordingly, the marketing decisions and strategies are established such as credit granting, acceptance or rejection of new orders, aggressive pricing, etc. such decisions are taken after considering the financial impact.
- 4) **Finance and Personnel:-** Personnel Department has to take the decisions regarding recruitment and promotion of staff, voluntary retirement schemes, sweat equity etc. such decision must be favorable to the employer and the employees. Finance is important in deciding the pay packages, drafting of voluntary retirement schemes, etc.

Answer to Question No.: 3**Project X**

Cash inflow = ₹ 5,000 per annum for 4 years

PVAF @ 10% for 4 years = 3.170

Total PV of Cash Inflows = $5,000 \times 3.170 = ₹ 15,850$

Initial Cash Outflow = ₹ 10,000

NPV = $15,850 - 10,000 = ₹ 5,850$ **Project Y**

Cash inflow = ₹ 3,000 per annum for 3 years

PVAF @ 10% for 3 years = 2.487

Total PV of Cash Inflows = $3,000 \times 2.487 = ₹ 7,461$

Initial Cash Outflow = ₹ 2,500

NPV = $7,461 - 2,500 = ₹ 4,961$ **Decision:-**

Since Projects X and Y have different lives, the evaluation is to be done by computing Equalised Annuity Value.

Now, Equalised Annuity Value = $\frac{NPV}{PVAF}$

$$\text{Project X} = \frac{5,850}{3.170} = ₹ 1,845; \text{Project Y} = \frac{₹ 4,961}{2.487} = ₹ 1,995$$

Project Y is recommended because its Equalised Annuity Value is more.

Answer to Question No.: 4

Balance Sheet as on.....

Liabilities	(₹)	Assets	(₹)
Equity Capital	18,00,000	Fixed Assets	16,00,000
Reserve & surplus	6,00,000	<u>Current Assets:</u>	
Share Holder Fund's (Net Worth)	24,00,000	Stock 6,00,000	
Long Term debentures	-	Debtors 7,00,000	
Capital Employed	24,00,000	Cash 3,00,000	16,00,000
Current Liabilities	8,00,000		
	32,00,000		32,00,000

Note no.1: Current Ratio = 2:1, $\frac{CA}{CL} = 2$, CA = 2CL

Working Capital = 8,00,000

CA – CL = 8,00,000

2 CL – CL = 8,00,000, CL = 8,00,000

Current Assets = 2CL = 2 × 8,00,000 = 16,00,000 Current Assets = 16,00,000

Note no.2: Liquid Ratio = 1.25, $\frac{CA - \text{Stock}}{CL} = 1.25$

$$= \frac{16,00,000 - \text{Stock}}{8,00,000} = 1.25,$$

Stock = 6,00,000

Note no.3: Stock Turnover Ratio = 7 Times

$$\frac{\text{COGS}}{\text{Closing Stock}} = 7$$

$$\frac{\text{COGS}}{6,00,000} = 7$$

COGS = 42,00,000

Sales – G.P. = COGS

Sales – 25% of sales = 42,00,000

Sales = 56,00,000 (all credit)

Debtors Velocity = 1.5 months

Debtors = 1.5 month Credit Sales

$$= 56,00,000 \times \frac{1.5}{12} = 7,00,000$$

Debtors = 7,00,000

Note no.4:

$$\frac{\text{Sales}}{\text{Fixed Assets}} = 3.5 \text{ times} = \text{Fixed Assets} \frac{\text{Sales}}{3.5}$$

$$\frac{56,00,000}{3.5} = 16,00,000$$

Fixed Assets = 16,00,000

Note no.5: Reserves = 0.25 × Net Worth

$$= 0.25 \times 24,00,000 = 6,00,000$$

Reserves = 6,00,000

Answer to Question No.: 5**1. Projected Sales for next year ended on 31-03-2017**

$$\frac{\text{Cost of Fixed Assets}}{\text{Sales}} = 1.4 \quad \text{Sales} = \frac{\text{Cost fixed assets (at historical cost)}}{1.4}$$

$$= \frac{1,62,50,000 + 30,00,000}{1.4} = ₹ 1,37,50,000$$

2. Projected Profit & Loss Statement for year ended on 31-03-2017

Particulars	(₹)
Projected Sales	1,37,50,000
Less: Cost of goods sold	
Material (40% of sales) 55,00,000	
Labour (45% of sales) 61,87,500	
Dep. (5% of sales) 6,87,500	<u>1,23,75,000</u>
Operating Profit	13,75,000
Less: Interest (19,50,000 × 10%)	(1,95,000)
New (5,50,000 × 11%)	(60,500)
PBT	11,19,500
Less: Tax @ 30%	<u>(3,35,850)</u>
PAT	7,83,650
Less: Preference Dividend (32,50,000 × 8%)	<u>(2,60,000)</u>
Earnings to Equity Shareholders	5,23,650
Less: Equity Dividend (60,00,000 × 7%)	<u>(4,20,000)</u>
Retained Earnings	1,03,650

3. Projected Balance Sheet as on 31-03-2017

Liabilities	(₹)	Assets	(₹)
Equity Capital (60,00,000+30,00,000)	90,00,000	Fixed Assets(1,62,50,000+30,00,000)	1,92,50,000
8 % pref. Capital	32,50,000	Less: Acc. Dep.(52,00,000+6,87,500)	<u>(58,87,500)</u>
Reserve & surplus (14,00,000+1,03,650)	15,03,650		1,33,62,500
10% Debentures	19,50,000	<u>Current Assets:</u>	
11 % Debentures	5,50,000	Stock 21,75,000	
Sundry Creditors (25% of Material consumed)	13,75,000	Debtors 13,75,000(10% of Sales)	
		Cash 7,16,150	42,66,150
	1,76,28,650		1,76,28,650

Stock Turnover Ratio = 6 times

$$\frac{\text{Cogs}}{\text{Avg.stock}} = 6 \quad \text{Average Stock} = \frac{1,23,75,000}{6} = 20,62,500.$$

$$\frac{\text{Opening stock} + \text{Closing Stock}}{2} = \text{Average Stock}$$

$$\frac{19,50,000 + \text{Closing Stock}}{2} = 20,62,500, \quad \text{Closing Stock } ₹ 21,75,000.$$

Answer to Question No.: 6**Initial Cash Outflow**

	Amount (₹)
Cost of the project	60,00,000
Working Capital requirement	<u>15,00,000</u>
	75,00,000

Computation of Annual Cash Inflow

Year	PAT	Depreciation	Total Cash Inflow
1	7,50,000	10,50,000	18,00,000
2	12,00,000	10,50,000	22,50,000
3	15,00,000	10,50,000	25,50,000
4	9,00,000	10,50,000	19,50,000
5	7,50,000	10,50,000	18,00,000

Total Cash Inflow in 5th year

	Amount (₹)
Cash Inflow as computed above	1,00,000
Salvage Value	7,50,000
Working capital released	15,00,000
	40,50,000

Computation of NPV

Year	Cash Inflow	PV @ 12% ₹ 1	Total
1	18,00,000	0.8929	16,07,220
2	22,50,000	0.7972	17,93,700
3	25,50,000	0.7118	18,15,090
4	19,50,000	0.6355	12,39,225
5	40,50,000	0.5674	22,97,970
Total PV of Cash Inflows			87,53,205
(-) Initial Cash Outflow			(75,00,000)
NPV			12,53,205

Conclusion: -

Since NPV is a positive amount, the investment in the project is financially viable.

Important Notes: -

- Total cost of project including initial expenditure is ₹ 60,00,000 and working capital required is ₹15,00,000. Therefore, total initial cash outflow will be ₹ 75,00,000.
- Since salvage value is ₹ 7,50,000 and machine having economic life of 5 year hence per year depreciation will ₹ 10,50,000 [(60,00,00 – 7,50,000)/5 years].
- In the given case, PAT is given so we have to add the amount of depreciation to find out the annual cash inflow.
- Salvage value of ₹ 7,50,000 and working capital taken back of ₹ 15,00,000 should be added in inflow of 5th year.

Answer to Question No.: 7**Neo Classical Approach**

- This theory was presented by Cambridge economists – A.C. Pigou, D.H Robertson & others.
- In early 1900s, Cambridge economist etc. put forward a fundamentally different approach to QTM/Cambridge.
- This approach is also known as cash balance approach/Neo Classical Approach.
- Demand of Money also involves a precautionary motive in this approach. [Only transaction motive is considered in QTM].
- Demand of money depends partly on income and partly on other factor example: Wealth, Interest Rate etc.
- Higher the income, the greater the quantity of purchase and as a result grater will be need for money to overcome transaction cost.

7) Computation:

Demand = Proportion of Income that people want to hold as cash (K) × Nominal Income (P.Y)

Where:

$$M^d = kPY$$

Y = Real National Income

P = Average price level of currently produced goods and services

PY = Nominal Income

K = Proportion of PY that people want hold as cash balance.

Answer to Question No.: 8 Repo Rate v/s Bank Rate

Repo Rate: Repo rate is the rate at which the Countries Central Bank lends money to commercial banks during financial crisis. In other works commercial banks borrow money from RBI by selling securities or bonds with an agreement to repurchase the securities with an agreement on certain date. Ex.: If Repo rate is 10% and the loan amount borrowed by a commercial bank is ₹10,000 then interest paid to the RBI will be ₹1,000.

Bank Rate: The rate of interest charged by Central bank on the loans they have extended to commercial banks and other financial institutions is called bank rate.

Bank Rate is usually higher than the repo rate.

- 1) Though Repo Rate and bank Rate has few similarities like both is fixed by the central bank and used to monitor and control the cash flow in the market.
 - 2) Bank rate is charged against loans offered by central bank to commercial bank whereas repo rate is charged for repurchasing the securities sold by the commercial banks to the central bank.
 - 3) No, collateral is involved while charging bank rates but they are needed in Repo rate.
- Repo Rate is always lower than the Bank rate.

Answer to Question No.: 9 Limitations / Difficulties in Measurement of National Income

- 1) Data related problems (incomplete, late availability, lack of reliability)
- 2) Omission related problems (unorganized sector, non- monetary transactions etc.)
- 3) Double counting in exceptional cases.
- 4) Very difficult to make valuation of government services and transaction.
- 5) Self- consumption (Difficulty in identification and valuation)
- 6) Conceptual Difficulties
 - a) No uniformity in definition of National Income.
 - b) Impact of Parallel Cash Economy
 - c) Impact of Price Rise, i.e., increase in National Income due to prices without increase in output.
 - d) Ignorance of Qualitative factors.
 - e) Focus on "Monetary Welfare" rather than "Real Welfare". E.g. leisure time, community feeling, etc.

Answer to Question No.:10 Investment Multiplier:-

- a) **Formula :-** Investment Multiplier = $\frac{\Delta Y}{\Delta I}$
 ΔY = Change in Income
 ΔI = Change in Investment

b) **Example:-**

If change in Investment of ₹ 400 crores leads to change in National Income of ₹ 2,000 Crores, in such a case,

$$\text{Investment Multiplier} = \frac{\Delta Y}{\Delta I} = \frac{2,000}{400} = 5 \text{ times}$$

- c) **Meaning:** Investment Multiplier explains how much times the Aggregate Income increases as a result of increase in Investment.

d) **Another Formula of calculating the Investment Multiplier:**

$$\text{Formula} = \frac{1}{1-MPC} = \frac{1}{MPS}$$

- e) The Investment Multiplier can be compared with "Ripple Effect" of water. Hence, small change in the Investment will lead to high level of change in the aggregate income.
- f) Impact of Multiplier On National Income

