

# Financial Management

6/2/25

The art and science of managing money is called  
finance.

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# Financial Management

10 marks

debt capital, equity capital

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} ② Capital Structuring

① Estimation of Financial Requirements

③ Investment Decisions

④ Portfolio Management

⑤ Management of Working Capital

→ Working Capital means the funds requires for the daily operations of the business.

⑥ Management of Retained Earnings

⑦ Management of Cost - Volume Profit —

Make or Buy — <sup>Make</sup> ~~Make~~ <sup>Buy</sup> ~~Buy~~ for the optimum expenditure.  
(choose)

⑧ Management of Liquidity —

Assets which are easily convertible to cash is liquid cash

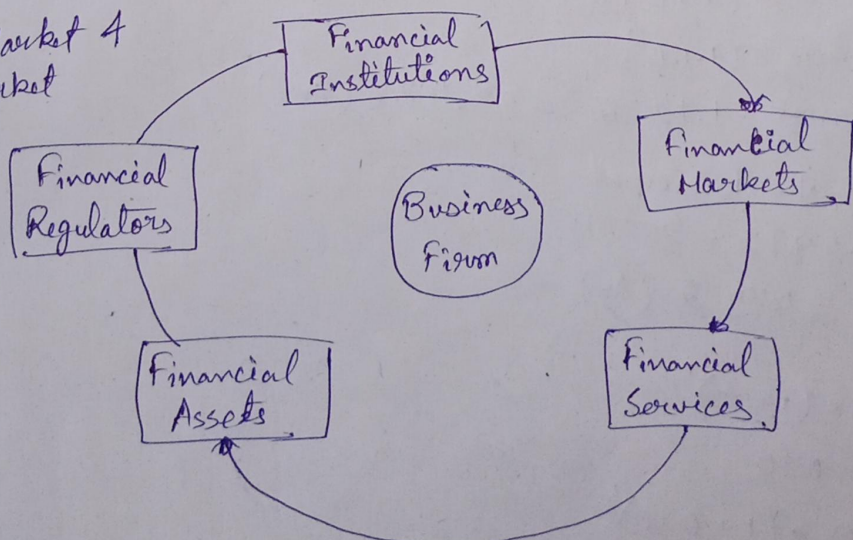
⑨ Management of fixed assets

⑩ Business Valuation and Corporate Restructuring

## Financial Environment

Capital Market & Money Market

Deals with which investment?





## Time Value of Money

$$FV = PV(1+r)^n \rightarrow \text{Compounded Annually}$$

$$FV = PV\left(1+\frac{r}{2}\right)^{2n} \rightarrow n \text{ Semi-annually}$$

$$FV = PV\left(1+\frac{r}{4}\right)^{4n} \rightarrow n \text{ Quarterly}$$

$$FV = PV\left(1+\frac{r}{12}\right)^{12n} \rightarrow n \text{ monthly}$$

FV = Future Value

PV = Present Value

$r$  = Rate of interest

$n$  = no. of years

$$\begin{aligned} \textcircled{1} \text{ Interest} &= \frac{P \times r \times t}{100} \text{ £} \\ &= \frac{50000 \times 10 \times 5}{100} \text{ £} \\ &= 25000 \text{ £ (Ans)} \end{aligned}$$

$$\begin{aligned} FV &= 50000 + 25000 \text{ £} \\ &= 75000 \text{ £ (Ans)} \end{aligned}$$

$$\textcircled{2} r = 12\% = 0.12$$

$$\therefore FV = P \times \left(1 + \frac{r}{n}\right)^{nT}$$

$$FV = 20000 \times \left(1 + \frac{0.12}{2}\right)^{2 \times 1}$$

$$= 20000 \times (1 + 0.06)^2$$

$$= 20000 \times (1.06)^2$$

$$= 20000 \times 1.1236 = 22,472 \text{ (Ans)}$$

$$\begin{aligned} \text{Interest} &= FV - \text{Principal} \\ &= 22472 - 20000 \\ &= 2472 \text{ £ (Ans)} \end{aligned}$$

$$\textcircled{3} FV = P \times (1+r)^T$$

$$r = 10\% = 0.10$$

$$FV = 50000 \times (1 + 0.10)^5$$

$$= 50000 \times 1.61051 = 80,525.50 \text{ £ (Ans)}$$

$$(4) \quad FV = PV \times (1+r)^T$$

$$PV = \frac{FV}{(1+r)^T}$$

$$r = 10\% = 0.10$$

$$PV = \frac{40000}{(1.10)^{10}}$$

$$\therefore PV = \frac{40000}{2.59374}$$

$$\Rightarrow PV = 15,420.40 \quad (\text{Ans})$$



### Net Present Value:

$$NPV = -C_0 + \frac{C_1}{1+r} + \frac{C_2}{(1+r)^2} + \dots + \frac{C_T}{(1+r)^T}$$

where,

$-C_0$  = initial investment

$C$  = Cash flow

$r$  = Discount Rate

$T$  = Time

If,  $NPV > 0 \rightarrow \text{Accept}$   
 $NPV \leq 0 \rightarrow \text{Reject}$

### Project 1:

$$C_1 = 5000, \quad C_0 = 10000, \quad C_2 = 4000, \quad C_3 = 3000, \\ C_4 = 1000, \quad r = 10\% = 0.1$$

$$\begin{aligned} NPV &= -C_0 + \frac{C_1}{1+r} + \frac{C_2}{(1+r)^2} + \dots + \frac{C_T}{(1+r)^T} \\ &= -10000 + \frac{5000}{1+0.1} + \frac{4000}{(1+0.1)^2} + \frac{3000}{(1+0.1)^3} + \frac{1000}{(1+0.1)^4} \\ &= -10000 + [4545.45 + 3305.78 + 2253.94 + 683.01] \\ &= -10000 + 10788.18 \\ &= 788.18 \end{aligned}$$

### Project 2:

$$C_1 = 1000, \quad C_2 = 3000, \quad C_3 = 4000, \quad C_4 = 6750, \quad C_0 = 10000 \\ r = 10\% = 0.1$$

$$\begin{aligned} NPV &= -C_0 + \frac{C_1}{1+r} + \frac{C_2}{(1+r)^2} + \dots + \frac{C_T}{(1+r)^T} \\ &= -10000 + \frac{1000}{1+0.1} + \frac{3000}{(1+0.1)^2} + \frac{4000}{(1+0.1)^3} + \frac{6750}{(1+0.1)^4} \\ &= -10000 + 909.09 + 2479.33 + 3005.25 + 4610.34 \\ &= 1004.01 \end{aligned}$$



$$2) C_0 = 750000, C_1 = 990000, r = 5\% = 0.05, t = 1$$

$$\begin{aligned} NPV &= -C_0 + \frac{C_1}{1+r} \\ &= -750000 + \frac{990000}{1+0.05} \\ &= -750000 + 942857.14 = 192857.14 \end{aligned}$$

3) 1st

$$C_0 = 600, C_1 = 680, r = 10\% = 0.1$$

$$NPV = -600 + \frac{680}{1+0.1} = 18.18$$

2nd

$$C_1 = 600$$

$$C_1 = 600 + 600 \times 10\% = 660$$

$$r = 0.1$$

$NPV_{1st} > NPV_{2nd}$ . So, 1st option is better.

▣ Weighted Average Cost of Capital:

Formula:

$$WACC = [E/N * R_e] + D/N * [R_d(1-T)]$$

where,

$E$  = Market value of the firm's equity (market cap)

$D$  = Market value of the firm's debt

$N$  = Total value of capital (equity plus debt)

$E/N$  = Percentage of capital that is equity

$D/N$  = Percentage of capital that is debt

$R_e$  = Cost of equity

$R_d$  = Cost of debt

$T$  = Tax Rate

Q1 Equity

$$1. \text{ Equity Capital} = \frac{3L}{10L} \times 15\% = 4.5\%$$

$$2. \text{ Retained Savings} = \frac{2L}{10L} \times 13\% = 2.6\%$$

$$3. \text{ Pre. Capital} = \frac{1.5}{10} \times 16\% = 2.4\%$$

$$4. \text{ Debtation} = \frac{3.5}{10} \times 12\% (1-30\%)$$

$$= 0.35 \times 0.12 \times 0.7$$

$$= 0.0294 = 2.94\%$$

Now,

$$12\% = 0.12$$

$$\frac{3.5L}{10L} = 0.35$$

$$\left. \begin{array}{l} 30\% = 0.3 \\ = 1 - 0.3 \\ = 0.7 \end{array} \right\} \therefore 12.44\%$$

(P2)  $\frac{D}{V} = 50\% = 0.5$  ,  $\frac{E}{V} = 50\% = 0.5$

$$R_d = 12\% = 0.12$$
 ,  $R_e = 20\% = 0.2$

$$t = 40\% = 0.4$$

$$WACC = 0.5 \times 0.12 + [0.5 \times 0.2 \times 0.6] \rightarrow 1 - 0.6$$

$$= 13.6\%$$

(\*) Optimum Capital Structure

A capital structure having minimum cost of capital means more returns

Assignment  
83.

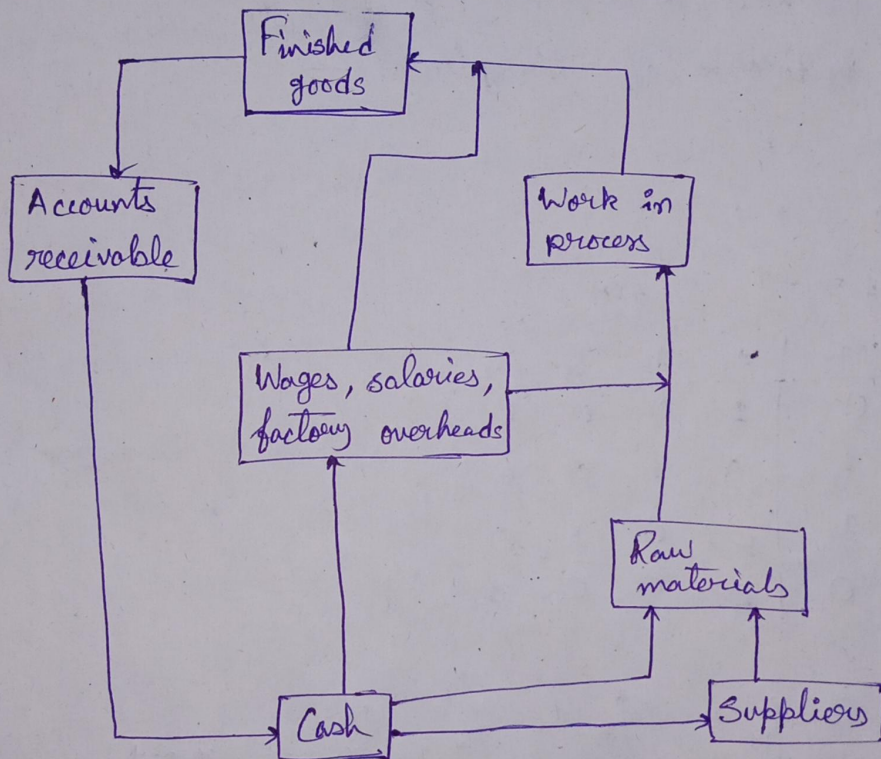
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Assignment

last date: 27-3-25

- Qn: 1) Discuss the three strategies of working capital management along with diagrammatic representation. (10)
- 2) Discuss the five factors influencing working capital management requirements. (10)

Current Assets Cycle

- i) For the very beginning some amount of cash is needed.
- ii) By using ~~the~~ <sup>the</sup> cash, raw materials can be sold.
- iii) Using the raw materials we can make goods.
- iv) Then the goods are sold on credit that converted in to accounts receivable.
- v) It generates the cash again.



FM

27/3/25

# Capital Asset Pricing Model

$$E(R) = R_f + \beta(R_m - R_f)$$

↑                      ↑                      ↑                      ↑  
expected              risk              Beta              return from  
return of the          factor                      the market  
security

Risk Premium  
( $R_m - R_f$ )

Q.1  $R_f = 3\% = 0.03$   
 $R_m = 15\% = 0.15$   
 $\beta = 0.89$   
 $E(R) = ?$

Soln:

$$\begin{aligned} E(R) &= 0.03 + 0.89 \times (0.15 - 0.03) \\ &= 0.1368 \\ &= 13.68\% \end{aligned}$$

The expected return for Z limited based on its <sup>level of</sup> systematic risk is 13.68%. The company is currently priced to return 14%. As this return, i.e. 14% is higher than the would be expected return for the level of systematic risk, Z limited is underpriced. Since, Z limited is underpriced, one should buy the shares of Z limited and earn a return higher than would be expected return for the level of systematic risk.

$$\begin{aligned}\underline{Q.2)} \quad E(R) &= R_f + \beta(R_m - R_f) \\ &= 8.2 + 1.35(13.5 - 8.2) \\ &= 8.2 + 1.35 \times 5.3 \\ &= 8.2 + 7.155 \\ &= 15.355\%\end{aligned}$$