

FINANCING DECISIONS

Introduction

What is Finance?

- **‘Financing’ is a word used synonymously with Loan/borrowing**

Eg: Purchase of a car, the general question that someone asks is

“Is the car purchased on finance?”

“How much Finance did you get for the purchase?”

“What is the rate of Interest at which you got the finance?”

The understanding in this case (Personal Finance) is that there may be a down payment for the car (Equity Contribution) which is implicit and assumed at no cost.

Only the **loan component** is recognized as a liability and the metrics of the decision are looked at?

What is Financing Decision?

- **Financing decisions** are the **decisions** related to **borrowing and allocation** of funds required for the investment decisions.
- It involves identification of **various sources of finance** and the **quantum of finance** to be raised from long-term and short-term sources.
- Taking a decision on raising **long term finance** either through **shareholders' funds** or **borrowed capital**.
- The objective of financial decision is to maintain an **optimum capital structure**, i.e. a proper mix of debt and equity, to ensure the trade-off between the risk and return to the shareholders

Standalone Balance Sheet as at 31 March 2018

(All amounts in ₹ lakhs, except share data and where otherwise stated)

	Note	As at		
		31 March 2018	31 March 2017	1 April 2016
ASSETS				
Non-current assets				
(a) Property, plant and equipment	6	39,353.75	27,817.97	30,785.62
(b) Capital work-in-progress		872.71	750.43	958.80
(c) Investment property	8	397.21	124.15	121.00
(d) Other intangible assets	7	1,847.64	48.40	164.12
(e) Investment in subsidiaries, joint venture and associate	9	1,695.68	101.20	72.69
(f) Financial assets				
(i) Investments	10	100,115.41	47,744.57	3112
(ii) Loans	16	394.72	1,449.59	2,200.05
(iii) Other financial assets	11	75.22	72.53	63.07
(g) Other non-current assets	12	402.66	208.76	176.76
Total non-current assets		145,155.00	78,317.60	34,573.23
Current assets				
(a) Inventories	13	15,051.89	11,648.50	14,491.11
(b) Financial Assets				
(i) Investments	10	0.42	117	165
(ii) Trade receivables	14	1,010.40	1,129.47	2,871.06
(iii) Cash and cash equivalents	15(i)	5,985.69	4,485.57	4,440.19
(iv) Bank balances other than (iii) above	15(ii)	116.91	111.34	82.52
(v) Loans	16	436.15	448.89	458.30
(vi) Other financial assets	11	17.47	11.35	13.39
(c) Current tax assets (net)		46.45	109.09	-
(d) Other current assets	12	721.17	329.65	429.33
Total current assets		23,386.55	18,275.03	22,787.55
Total assets		168,541.55	96,592.63	57,360.78
EQUITY AND LIABILITIES				
Equity				
(a) Equity share capital	17	2,319.90	2,319.90	2,319.90
(b) Other equity	18	75,480.76	57,002.43	22,434.05
Total equity		77,800.66	59,322.33	24,753.95
Liabilities				
Non-current liabilities				
(a) Financial liabilities				
(i) Borrowings	19	13,830.74	6,877.05	6,527.86
(ii) Other financial liabilities	20	42,611.74	3,854.86	-
(b) Provisions	21	584.30	489.58	551.54
(c) Government grant		8.76	37.67	44.85
(d) Deferred tax liabilities (net)	22	1,820.75	1,878.00	1,837.91
Total non-current liabilities		58,856.29	13,137.16	8,962.16
Current liabilities				
(a) Financial liabilities				
(i) Borrowings	19	10,222.90	6,587.71	3,925.16
(ii) Trade payables	24	6,629.11	5,075.98	8,467.46
(iii) Other financial liabilities	20	13,656.61	11,135.37	9,695.13
(b) Other current liabilities	23	669.45	726.41	805.13
(c) Government grant		1.61	9.40	7.29
(d) Provisions	21	704.92	598.27	579.47
(e) Current tax liabilities (net)		-	-	165.03
Total current liabilities		31,884.60	24,133.14	23,644.67
Total equity and liabilities		168,541.55	96,592.63	57,360.78

What is Financing Decision?

Two Points that we would want to refer to

Accounting Equation

$$\text{Assets} = \text{Shareholders funds} + \text{Liabilities}$$

Long Term Assets are financed through a **combination** of Shareholders Funds and Long Term Borrowings

The Decisions on the determining the Combination and also Quantum of funding is **Financing Decisions**

It involves identification of various sources of finance and the quantum of finance to be raised from long-term and short-term sources.

- Shareholders Funds
- External Borrowings (Debt)

SOURCES OF FINANCE

Basis of Time

Long Term

- Equity Shares
- Preference Shares
- Internal Accruals
- Debenture/Bonds
- Term Loans
- Venture Funding
- Asset Securitization

- International Financing
 - 1. Euro Issue,
 - 2. Foreign Currency
 - 3. Loans,
 - 4. ADR,
 - 5. GDR etc.

Medium Term

- Preference Shares
- Debenture/Bonds
- Medium Term Loans from
 - 1. Financial Institutes
 - 2. Government
 - 3. Commercial Banks
- Lease Finance
- Hire Purchase Finance

Short Term

- Trade Credit
- Short Term Loans like WC Loans
- Fixed Deposits for a period of ≤ 1 year
- Advances received from customers
- Creditors
- Payables
- Factoring Services
- Bill Discounting etc.

Basis of Ownership & Control

Owned

- Equity Capital
- Preference Capital
- Retained Earnings
- Convertible Debentures
- Venture Fund or Private Equity

Borrowed

- Loans from
 - 1. Financial Institutions
 - 2. Commercial Loans
- Debentures

Basis of Source of Generation

Internal

- Equity Capital
- Preference Capital
- Retained Earnings
- Convertible Debentures
- Venture Fund or Private Equity

External

- Retained profits
- Reduction of Working Capital
- Sale of assets etc.

What are the Various Sources of Finance

Share holders Funds

- Share Capital or Equity Shares
- Preference Capital or Preference Shares
- Retained Earnings or Internal Accruals

External Borrowings

- Debenture / Bonds
- Term Loans from Financial Institutions, Government, and Commercial Banks
- Venture Funding
- Asset Securitization
- International Financing by way of Euro Issue, Foreign Currency Loans, ADR, GDR etc.

What are the Various Sources of Finance

Equity Share Capital

- They are generally the Owners Funds (Beneficiary Interest)
- Broadly Classified into Equity Shares with Voting Rights and Equity Shares with Differential Rights
- Legally Irredeemable except through Buyback route as prescribed in the companies act 2013
- High Risk – High return Instruments
- Refer to Page 132 of the reading material for
 - Provisions under the Companies Act, 2013
 - Advantages & Disadvantages of Equity Shares as fund raising instruments

What are the Various Sources of Finance

Preference Shares

- Generally issued as redeemable Instruments
- No Voting Rights (Except under exceptional circumstances)
- Can be Convertible or Non-Convertible
- Can be Listed on Stock Markets subject to SEBI Regulations
- Redeemable for a period of upto 20 years (Except infrastructure companies)
- Capped return – Seniority of repayment over Equity Shares at the time of winding up

What are the Various Sources of Finance

Term Loans

- Can be Secured or Unsecured
- Cannot be Convertible (Unless in Exceptional Circumstances)
- Cannot be Listed on Stock Markets
- Repayable in a fixed tenure at a fixed rate of Interest
- Fixed return – Seniority of repayment over Equity and Preference Shares at the time of winding up

Cost of Various Sources of Capital

Cost of Irredeemable Debt before Tax (K_{idb})

$$(K_{idb}) = I/P \text{ (or) } I/NP$$

Where, I = Interest amount

P = Principal Amount

NP = Net Proceeds

Example: A company has issued One Crore irredeemable bonds having a face value of Rs.100 each at a premium of Rs.10. The interest rate on the bonds is 10%. The issue expenses are 2% of the issue size. Calculate Cost of Irredeemable Debt.

In the above example,

- Number of bonds issued = 1,00,00,000 and Face value of each bond = Rs.100 at premium of Rs.10
- Issue Price = Rs.100 + Rs.10 = Rs.110
- **Issue Size = 1,00,00,000 X 110 = 110,00,00,000**
- Issue Expenses = 2% (i.e 0.02) of issue size = 110,00,00,000 X 0.02 = **2,20,00,000**
- **Net Proceeds = Rs.110,00,00,000 – Rs.2,20,00,000 = Rs.107,80,00,000**
- Total Face Value of the Bonds = 1,00,00,000 X Rs.100 = 100,00,00,000
- Rate of interest = 10% (0.1).
- **Interest Amount (I) = Rs.100,00,00,000 X 0.1 = Rs.10,00,00,000** (*Note: Interest Amount shall always be calculated only on Face Value but not on issued value.*)
- **Cost of Irredeemable Debt (K_{idb}) = I/NP = Rs.10,00,00,000 / Rs.107,80,00,000 = 0.0927 i.e 9.3%**
- Cost of Irredeemable Debt After Tax (K_{iat}) : (K_{iat}) = (K_{idb}) X (1-T) Where T = Rate of Income Tax
- In the above example if the company is in 30%(0.3) tax bracket, then the cost of capital after tax will be **0.0927 X (1-0.3) = 0.0648 = 6.5%**

Cost of Various Sources of Capital

- **Cost of Redeemable Debt Before Tax (K_{rdb})**

$$K_{rdb} = \left[\frac{\left(I + \left(\frac{MV - NP}{n} \right) \right)}{\left(\frac{MV + NP}{2} \right)} \right]$$

Where I = Interest Amount

MV = Maturity Value

NP = Net Proceeds

N = Number of years to redeem

Cost of Various Sources of Capital

- Example A company has issued One Thousand irredeemable bonds having a face value of Rs.1000 each at a premium of Rs.50. The interest rate on the bonds is 10%. The issue expenses are 2% of the issue size. The bonds shall be redeemed after 10 years at a premium of 10%. Calculate Cost of Redeemable Debt Before Tax.
- Face value of each bond = Rs.1000 and Number of Bonds Issued = 1,000
- Face Value of the total bonds = Rs.1000 X 1,000 = Rs.10,00,000
- Interest Rate = 10% (0.1), hence Interest Amount (I) = Rs.**10,00,000 X 0.1 = 1,00,000**
- Premium amount per bond = Rs.50 ; Issue Price = Rs.1000 + 50 = Rs.1050
- Issue Size = Rs.1050 X 1,000 = Rs.10,50,000
- Issue Expenses = 2% = 0.02 X 10,50,000 = Rs.21,000
- **Net Proceeds (NP) = Rs.10,50,000- Rs.21,000 = Rs.10,29,000**
- Premium on Redemption at 10% (.1) = (Face value of the total issue X Rate of Premium) = Rs.10,00,000 X 0.1 = Rs.1,00,000
- Maturity Value (MV) = Face value of the total issue + Redemption Premium = Rs.10,00,000+ Rs.1,00,000 = Rs.11,00,000
- Number of Years to Redeem (n) =10

Cost of Various Sources of Capital

Cost of Debt

- $$K_{rdb} = \left[\frac{\left(I + \left(\frac{MV - NP}{n} \right) \right)}{\left(\frac{MV + NP}{2} \right)} \right]$$
- Substituting the value in the above formula:
- $$K_{rdb} = \left[\frac{\left(1,00,000 + \left(\frac{11,00,000 - 10,29,000}{10} \right) \right)}{\left(\frac{11,00,000 + 10,29,000}{2} \right)} \right] = 0.1006 = 10.06\%$$

Cost of Redeemable Debt After Tax (K_{rat}) :

- $(K_{rat}) = (K_{rdb}) \times (1 - T)$ Where, T is Tax Rate.
- In the above example, if the company is in 40% tax bracket, then the cost of debt after tax will be : $10.06 \times (1 - 0.4) = 6.04\%$

Cost of Various Sources of Capital

- Cost of Redeemable Preference Shares (K_{rp})

$$K_{rp} = \left[\frac{\left(D + \left(\frac{MV - NP}{n} \right) \right)}{\left(\frac{MV + NP}{2} \right)} \right]$$

Where D = Amount of Dividend

MV = Maturity Value

NP = Net Proceeds

n = Number of Years to redeem

Cost of Various Sources of Capital

- A company Issues 1000 12% redeemable preference shares of INR 100 each at par. The floating charges are 5% of the issue. They are to be redeemed after 10 years at a premium of 10%. Calculate cost of Preference Shares.
- From the given data,
- Par value of Preference Shares = 100 ; Number of shares issued = 1000.; Total issued valued = 100 X 1000 = INR 1,00,000
- Dividend Amount = 1,00,000 X 12 / 100 = 12,000
- Issue Expenses = 5% = 1,00,000 X 5 / 100 = 5,000
- Net Proceeds (NP) = Issue Value – Issue Expenses = 1,00,000 – 5,000 = 95,000
- Premium on Redemption = 10% = 1,00,000 X 10 / 100 = 10,000
- Redemption Value (or) Maturity Value = Par Value + Redemption Premium = 1,00,000 + 10,000 = 1,10,000
- Number of Years to Redeem (n) = 10

$$\bullet (K_{rp}) = \left[\frac{\left(D + \left(\frac{MV - NP}{n} \right) \right)}{\left(\frac{MV + NP}{2} \right)} \right] = (K_{rp}) = \left[\frac{\left(12000 + \left(\frac{1,10,000 - 95,000}{10} \right) \right)}{\left(\frac{1,10,000 + 95,000}{2} \right)} \right] = \underline{\underline{0.1317 \text{ i.e } 13.17\%}}$$

Note: As Preference Dividend is always paid only after paying Taxes, the cost of Preference Shares is always After Tax.

Cost of Various Sources of Capital

Cost of Equity Shares under the following scenarios :

**No Dividend Paid &
Unlisted Shares**

**No Dividend Paid &
Listed Shares**

**Dividend Paid &
Unlisted Shares**

**Dividend Paid &
Listed Shares**

**Dividend Paid & Listed Shares with
Expected growth in Dividend**

Cost of Various Sources of Capital

Case I : For Non-Dividend Paying Unlisted Shares:

$$K_e = \text{EPS} / P$$

- Where EPS is Earnings Per Share
- P is par Value
- **Example:** A Company issued 10,000 equity shares of INR 10 each at par value. Its Earnings Available to Equity Shares (EAES) is INR 10,000. Calculate its cost of Equity Shares.
- Par Value of the Share (P) = 10.
- Earnings Available to Equity Shares (EAES) = 10,000
- Number of Equity Shares = 10,000
- Earnings Per Share (EPS) = $10,000 / 1000 = 1$
- Cost of Equity Shares $K_e = \text{EPS} / P$
- $K_e = 1 / 10 = 0.1$ or 10%.

Cost of Various Sources of Capital

Case II : Non Dividend paying Listed Company Shares

$$K_e = \text{EPS} / \text{MP}$$

- Where EPS = Earnings Per Share
- MP = Market Price.

Example. A Company issued 10,000 equity shares of INR 10 each at par value. Its Earnings Available to Equity Shares (EAES) is INR 10,000. The Share is Currently Trading at INR 12. Calculate its cost of Equity Shares.

In the above example,

- Earnings Available to Equity Shares (EAES) = 10,000
- Number of Equity Shares = 10,000
- Earnings Per Share (EPS) = $10,000 / 1000 = 1$
- Market Price Per Share (MP) = 12
- $K_e = \text{EPS} / \text{MP}$
- $K_e = 1 / 12 = 0.0833$ or 8.33%

Cost of Various Sources of Capital

Case III. Dividend paying Unlisted Equity Share

- **$K_e = D / P$ or D / NPS**

- Where,
- D = Dividend
- P = Par Value
- NPS = Net Proceeds

Example : A company issued equity share of INR 10 at par. It is currently paying a dividend of INR 2 per shares. Calculate Cost of Equity.

In the above example,

- Dividend (D) = 2
- Par Value (P) = 10.
- Cost of Equity $K_e = D / P$
- $K_e = D / P = 2 / 10 = 0.2$ or 20%

Cost of Various Sources of Capital

- Example : A company Issued 10000 Shares of INR 10 Each for INR 12. The Issue expenses are INR 1 per share. The company pays 20% as dividend. Calculate Cost of Equity.
- From the above example,
- Par Value per share = 10
- Rate of Dividend = 20%
- Dividend Per Share = $10 \times 20 / 100 = 2$
- Issue Price = 12
- Issue Expenses = 1 per share.
- Net Proceeds = $12 - 1 = 11$
- $K_e = D / NP$
- $K_e = 2 / 11 = 0.1818$ or 18.18%

Note: Dividend is always calculated only Par Value but not on Issue Price or on Market Price.

Cost of Various Sources of Capital

Case IV. Dividend paying Listed Shares.

$$K_e = \text{DPS} / \text{MP}$$

Example: A company issued equity shares of INR 10 each for INR 15. It is currently trading in the market for INR 30. It is expected to pay a dividend of INR 2 per share. Calculate Cost of Equity.

- From the above example,
- Dividend Per Share (D) = 2
- Market Price Per Share (MPS) = 30
- $K_e = \text{DPS} / \text{MP}$
- $K_e = 2 / 30 = 0.066$ or 6.67%

Cost of Various Sources of Capital

Case V : Dividend Paying share, where there is an expected growth in dividend.

- **$K_e = (DPS / MP) + G$**

- Where,
- DPS = Dividend Per Share
- MP = Market Price
- G = Growth Rate in Dividend

Example : In the above example, what will be the cost of equity when the growth rate in dividend is expected to be at 7%.

From the above example,

- DPS = Dividend Per Share = 2
- MP = Market Price = 30
- G = Growth Rate in Dividend = 7% 0.07
- Cost of Equity $K_e = (DPS / MP) + G$
- $K_e = (2 / 30) + 0.07 = 0.137$ or 13.7%

Cost of Equity (CAPM Method)

$$K_e = R_{rf} + \beta_a * (R_m - R_{rf})$$

where:

K_e = Expected return on a security

R_{rf} = Risk-free rate

R_m = Expected return of the market

β_a = The beta of the security

$(R_m - R_{rf})$ = Equity market premium

Weighted Average Cost of Capital

- Weighted average cost of capital (WACC) is a calculation of a firm's cost of capital in which each **category of capital is proportionately weighted.**
- To calculate WACC the analyst **will multiply the cost of each capital component by its proportional weight.**
- Incorporates all sources of a company's capital—including Equity, Preference Capital, bonds, and any other long-term debt.
- Can be used as a **hurdle rate** against which companies and investors can gauge ROIC performance.
- WACC is commonly used as the **discount rate** for future cash flows in DCF analyses.

Weighted Average Cost of Capital

Weighted Average Cost of Capital

$$\text{WACC} = \frac{\text{Market Value of Equity}}{\text{Total Value of Financing}} \times \text{Cost of Equity} + \frac{\text{Market Value of Debt}}{\text{Total Value of Financing}} \times \text{Cost of Debt} \times (1 - \text{Tax Rate})$$

Step 1 : Identify all the components/Sources of Capital

Step 2 : Calculate the Effective Cost of Each Component of Capital

Step 3: Calculate the Total Value (market value and not Book Value) of all the Capital Components

Step 4: Calculate the Proportion of each of the capital components to the Total Value of Capital

Step 5: Apply the WACC Formula to determine the cost of capital.

Weighted Average Cost of Capital

Example : Consider the following Capital Structure of a company.

Equity Share Capital	3000000
10% Debentures	2000000
12% Preference Capital	3000000
Retained Earnings	2000000
Total	10000000

The equity share of the company is currently trading INR 50. It is currently paying a dividend of INR 2 and it is expected to grow at 10%. The Company is in 30% Tax Bracket. Calculate its weighted average cost of Capital.

Cost of Equity (Ke) = (D/MP) + G

Dividend Per Share (D) = 2; Market Price (MP) = 50; Growth Rate in Dividend (G) = 10% i.e 0.1

$$\text{Cost of Equity} = (2 / 50) + 0.1 = 0.14 \text{ or } 14\%$$

Proportion of Equity Share Capital = Equity Share Capital / Total Capital Structure.
= 3000000/10000000 = 0.3

Cost Retained Earnings

= Cost of Equity Shares = 14%

Proportion of Retained Earnings = Amount of Retained Earnings / Total Capital Structure

$$\text{= } \underline{\underline{2000000 / 10000000 = 0.2}}$$

Cost of Debt = I (1-T)

Rate of Interest (I)= 10%

Income tax rate (T) = 30% = 0.3

$$\text{Cost of Debt} = 10 (1-0.3) = 7\%$$

Proportion of Debt = Amount of Debt / Total Capital Structure

$$\text{= } \underline{\underline{2000000 / 10000000 = 0.2}}$$

Cost of Preference Share Capital

= Rate of Dividend = 12%

Proportion of Preference Share Capital = Amount of Preference Share Capital / Total Capital Structure

$$\text{= } \underline{\underline{3000000 / 10000000 = 0.3}}$$

Weighted Average Cost of Capital

Calculation of WACC

Component of Capital Structure	Cost of Capital	Proportion of Capital	Weighted Cost of Capital
Equity Share Capital	14	0.3	4.2
10% Debentures	7	0.2	1.4
12% Preference Capital	12	0.3	3.6
Retained Earnings	14	0.2	2.8
Weighted Average Cost of Capital			12