

Integrative approach for Investment, Financing and Dividend Decisions

a. Assessing long term-financing required

For any project, the D/E ratio to be maintained would determine the amount of borrowing or owner's equity to be contributed towards meeting the cost of the project.

The items which go into the cost of the project have already been explained in Entrepreneurship classes and guidelines in making a business plan. The D/E ratio should be acceptable to the lender or the bank and it varies with nature of business and industry. The higher level of debt or fixed charge burden would make the investment riskier to the lender/investor.

If the Project cost is Rs. 100 Crores then calculate the amount of maximum borrowing as well as equity contribution required from the promoter if the D/E ratio is 2:1, 3:1, 2:1 and 2:3 respectively.

Notice the varying amount of Debt and equity component in total financing of 100 crores in the following table:

D/E	Debt amount	Equity amount	Total financing
3:1	75 Crores	25 Crores	Rs. 100 Crores
2:1	66.67 Crores	33.33 Crores	Rs.100 Crores
2:3	40 Crores	60 Crores	Rs. 100 Crores

The different levels of D/E would require different levels of debt and resulting interest burden. Not to mention that higher amount of debt comes with more exorbitant cost by way of higher rate of interest to compensate for the higher level of risk perceived by the outsiders.

Demonstration example

Foodies Company enjoys market leadership in food brands segment. To capitalize on the growing demand for packaged food, the company is planning to introduce Ready- to- Eat products. The expansion would entail investment of Rs. 250 Crores for the new line of business. As per current financial report, the Interest coverage ratio as well as Return on Investment is higher than industry averages. The existing debt to equity ratio is 1.5:1. The company's tax rate is 35%. *As a Finance Manager, what would be the break-up of the debt and equity financing you would opt to finance the venture if the company prefers to maintain its existing Debt to Equity ratio after the financing? Give conditions under which the shareholders are likely to gain from the issue of debt.*

Existing D/E = 1.5:1. If we need to maintain the same D/E, then for additional financing for expansion entailing investment of 250 Crores, the break-up of debt and equity can be calculated as:

Debt amount for maintaining existing D/E = $(1.5/2.5) \times 250 = 150$ crores

Equity amount for maintaining existing D/E = $(1/2.5) 250 = 100$ Crores.

If the lender insists that for the expansion proposal, the desired D/E should be 1:25:1 then debt amount would $(1.25/2.25) \times 250 = 138.88$ and the remaining $(250 - 138.88 = 111.12)$ amount has to come from equity.

b. Computing additional long term financing required due to expansion of existing business.

The cost of the expansion project depends on your business model and approach. Normal tendency is to look for only at capital expenditure involved. However, in reality, when increases in sales are contemplated then there are bound to be increases in associated expenses as well and resulting Profit after tax and subsequent retained earnings after payment of dividends. Considering that there are proportionate increases in current assets , current liabilities , long term assets etc. in proportion to increases in sales then the total financing needed is the amount of increase in assets required to support the sales minus the increase in in current liability arising out of increased level of sales due to expansion

a. Total financing required = Change in sales x (Asset/Sales) – Change in Current liability(Current liability/ Sales)

A substantial portion of this total financing required can be met out of retained earnings which is

b. Increased retained earnings = Projected EAT – Dividends to be paid

Additional financing required now can be computed by arriving at the difference between a and b i.e.

Additional financing required = Change in sales x (Asset/Sales) – Change in Current liability (Current liability/Sales) – (Projected EAT – Dividends to be paid).

Demonstration Problem 2

The following excerpts from financial statements of Radiant Company are reproduced below:

Radiant Company
Balance sheet as on 31.3.2019 **Rs. in lakhs**

Equity and Liabilities		Assets	
Shareholders' Equity	52.50	Net fixed assets	12.50
Long –term debt	5.00	Current assets:	
Total current liabilities	38.25	Cash	6.25
		Accounts Receivable	25.00
		Inventory	50.00
		Total Current assets	81.25
Equity and Liabilities	93.75	Total Assets	93.75

Radiant Company
Income statement for the period ending 31.3.2019 **Rs. in lakhs**

Sales	187.50
Expenses including taxes	<u>177.50</u>
Net Income	1 0.00
Dividends	2.50
Retained Earnings	7.50

The financial manager makes a forecast that sales will increase by 20 percent, or Rs.37.50,lakhs, next year to Rs. 225 lakhs and expenses including interest and taxes, will increase to Rs. 213.00 lakhs .One of management’s primary concerns is the amount of funds needed to finance this sales growth. Until now, the company has financed its growth by using both internally and externally generated funds. The company has reinvested most of its past earnings, primarily into additional inventory. The company has also used external financing in the form of short-term borrowings from its bank. The company would like to increase the dividend from 2.5 lakhs to 3.00 lakhs this year.

To determine the amount of additional financing necessary to reach the expected Rs. 225 lakhs annual sales level, the management has made the following observations about the company’s various assets and liabilities:

Items of Cash, accounts receivable , Inventory , fixed assets and current liabilities would increase in some proportion to sales depending upon operating cost structure. However long term additional financing and respective sources need to be assessed and decided upon to minimize the interest.

Let us assume that current assets and fixed assets as well as current Liabilities would increase in same proportion to increase in sales then

$$\begin{aligned}
 \text{Total financing needed} &= \text{Forecasted asset increase} - \text{Forecasted current liability increase} \\
 &= (93.75/187.50) \times 37.50 - (38.25/187.50) \times 37.50 \\
 &= 18.75 - 7.65 \\
 &= \mathbf{11.10} \qquad \qquad \qquad (1)
 \end{aligned}$$

A portion of the total financing needed can be generated internally from increased Retained earnings.

$$\begin{aligned}
 \text{Increased retained earnings} &= \text{Projected EAT} - \text{Dividends to be paid} \\
 &= (225 - 213) - 3 \\
 &= \mathbf{9} \qquad \qquad \qquad (2)
 \end{aligned}$$

$$\begin{aligned}
 \text{Thus Additional financing required} &= 11.10 - 9 \\
 &= 2.10 \text{ lakhs}
 \end{aligned}$$

This additional financing can then be resorted through additional bank borrowings or long term debt or increases in equity contribution depending upon negotiated cost of financing for each of the alternative sources.

Competency check :

1. *Project the Balance sheet as on 31.3.2020 and Income statement for the year ending 31.3.2020 after incorporating item wise changes.*
2. *In the previous example it was assumed that the company’s fixed assets were being used at nearly full capacity and that net fixed assets would have to increase proportionately as sales increased. Alternatively, suppose that the company has excess fixed assets and that no increase in net fixed assets is required as sales are increased. Assume that the company plans to maintain its dividend payments at the same level in 2019 as in 2018.*

Determine the amount of additional financing needed for 2019 under following condition:

Increase in Sales	Increase in Expenses
<i>Rs. .45 Lakhs</i>	<i>Rs.40 lakhs</i>

3. The Poddar Corporation is considering an Rs.200 million expansion (capital expenditure) program next year. **The company wants to know approximately how much additional financing (if any) will be required if it decides to go through with the expansion program.** The company currently has Rs.400 million in net fixed assets on its books. Next year, the company expects to earn Rs.80 million after interest and taxes. The company also expects to maintain its present level of dividends, which is Rs.15 million. If the expansion program is accepted, the company expects its inventory and accounts receivable each to increase by approximately Rs.20 million next year. Long-term debt retirement obligations total Rs.10 million for next year, and depreciation is expected to be Rs.80 million. The company does not expect to dispose any fixed assets next year. The company maintains a cash balance of Rs.5 million, which is sufficient for its present operations. If the expansion is accepted, the company feels it should increase its year-end cash balance to Rs.8 million because of the increased level of activities. For planning purposes, assume no other cash flow changes for next year.

c. Assessing Long-term debt and short term debt required in total financing

Now let us look at short term and long term financing from the given problem pertaining to Deep Enterprise.

Deep Enterprises plans to increase capacity to take advantage of favorable market opportunities. Additional investment required for increasing the capacity is Rs. 50 lakhs.

Deep Enterprise’s current capital structure consists of **60% debt and 40% equity** which it desires to maintain in future also. Forecasted sales for the next year are Rs.150 lakhs with projected EBIT at 20% of sales. It has fixed assets of Rs. 100 lakhs. The tax rate for the business is 40%.

The Owner is considering two alternative working capital investment and financing policies as under:

	Policy A	Policy B
Current assets/sales	60%	40%
Short term debt/ total debt	30%	60%

Interest on short term debt is 14% and on long- term debt is 10%.

Notes: Total debt includes both short term as well as long- term debt.

a. *What is the amount of total debt Deep Enterprises can absorb under each of the policies?*

Hint: use D/E of 3:2 to decompose total financing of 50 lakhs into Debt and Equity amounts required for making the investment.

Answer: Debt= Rs. 30 lakhs ,

b. *How much additional fresh equity financing is required to be made to maintain the desired D/E ratio? Hint: use D/E of 3:2 to decompose total financing of 50 lakhs into Debt and Equity amounts required for making the investment*

Answer: Equity Rs. 20 Lakhs

c. *If current liabilities comprise of short- term debt only, determine the amount of short-term as well as long term debt under the two options.*

Let us take Policy A:

Total incremental debt = 30 Lakhs. If short term debt is 30 % of total debt then it is equal to Rs. 9 lakhs and Long term debt equal to Rs. 21 Lakhs

d. Determine the total interest under each of the policies.

Use the cost of ST and LT debt on the amounts of ST and LT debt arrived in part c

e. Determine the following for each of the policies and comment which policy is riskier given the level of current assets :

i) Return on Equity

ii) Return of Assets under each of the policies.

Hint: Project the Income statement

*EBIT = 20 % of sales
= .20 x 150 lakhs
= 30 lakhs*

Less Interest on ST and LT debt as arrived under policy A to get EBT

Apply tax rate as given to arrive at EAT which then use as numerator for calculating ROE and ROA

Home work: Rework parts a to e under Policy B