

# Optimising capital structure



## **Part 1: THEORITICAL FRAM WORK**

### **Chapter 2: MEANING OF OPTIMAL CAPITAL STRUCTURE**

A capital structure is nothing one can touch or see in realty, but it is measured using accounting and financial information. It can hence be calculated for organisation sophisticated enough to portray their operation in the form of a balance sheet. From this it follows that the capital structure is socially constructed and thus not always an objective and uncontroversial measure. Capital structure decision authors used the terminology of debt and equity when categorising companies' liabilities. Debt then refers to liabilities bearing a contractual cost, where equity refers to liabilities bearing a residual, or implicit, cost. What, then, is the optimal capital structure, even its exists (so far) only in theory? To provide some insight into an answer, we will examine some basic financial relationships. It is generally believed that value of the firm is maximized when the cost of capital is minimized, by using a modification of the simple zero-growth valuation model.

The simplest approach to dividend valuation the zero-growth model, assumes a constant, no growing dividend stream. In terms of the notation already introduced

$$D_1 = D_2 = \dots = D_\infty$$

When we let  $D_1$  represent the amount of the annual dividend, equation under

$$R_s P_0 =$$

## **Chapter 3: MEASUREMENT OF OPTIMAL CAPITAL STRUCTURE**

Cost of capital

In percent

**Ke**

**(A)**

**(C) WACC**

**(B)**

**Kd**

0 x Label of gearing

At extreme levels of gearing the cost of debt will also start to rise (as debt holders become worried about the security of their loans), share holders will continue to increase their required returns and this will contribute to sharply increasing WACC.

As accompany begins to suffer from high gearing, problem such as tax exhaustion, fewer assets left to offer for security on new loans, and restrictive terms from investor, become more likely. Key staff leaves to avoid being tainted by failed company. Uncertainties are placed in the minds of customer and suppliers, which may result in lost sales and more expansive trading terms. Share holders refuse to invest new funds for positive NPV projects, as they do not wish ' to throw good money after bad'. If the bankruptcy situation finally occurs, the assets may be sold off quickly and cheaply. A large proportion of management time is spent ' fire fighting', i. e.

focusing on short-term cash flow rather than long-term shareholder wealth. The traditional view therefore claims that there is an optimal capital structure where WACC is at minimum. This is represented by point X on the above diagram. At point X the overall return required by investor (debt and equity) is minimised. It follows that at this point the combined MV of the firm debt and equity securities also be maximised.

Plots three charge occupation -the cost of debt, the cost of- equity, and the weighted average cost of capital (WACC)-as a function of financial leverage measured by the debt ratio (debt to total assets). The cost of debt,  $R_i$ , remains low because of the tax shield, but it slowly increases as leverage increases, to reimburse lenders for increasing risk. The cost of equity,  $R_s$ , is above the cost of the debt. It increases as financial leverage increases, but it generally increases rapidly than the cost of debt. The cost of equity rises because the stock holders require a higher return as leverage increases, to pay compensation for the higher level of financial risk.

The weighted average cost of capital,  $R_a$  (WACC) result from a weighted average of the firm's debt and equity capital costs. At a debt ratio of zero, the firm is 100 percent equity - financed. As a debt substituted for equity and as the debt ratio increases, the WACC declines because the debt cost is less than the equity cost ( $R_i < R_s$ ). As the debt ratio continues to increase, the increased debt and equity costs eventually cause the WACC to rise. This behaviour results in a U-shaped or saucer-shaped, weighted average cost of capital function,  $R_a$ .

## Leverage

Leverage use from the permanent cost assets or funds to expand proceeds to the firm's vendor. Generally, increases in leverage result in increased return and risk, whereas decrease in leverage result in decreased return and risk. The amount of leverage in company's capital structure – the combine of long – term debt and equity maintained by company can considerably affect its worth by affecting return and risk . distinct some causes of risk, organization has approximately complete be in charge of over the risk introduced from side to side the use of leverage. Because of its consequence on value, the financial director must understand how to measure and assess leverage, predominantly when making capital structure decision. The three basic type of leverage can best be defined with reference to the firm's income statement.

Operating leverage is concerned with the relation between the firm's sales proceeds and its earnings before interest and taxes or EBIT (EBIT is a descriptive level for operating profit )

Financial leverage is concern with the relationship between the firm's EBIT and its common stock earning s per share (EPS).

Total leverage is concerned with the relation ship between the firm's sales revenue and EPS.

Sales revenue

Less: cost of goods sold

Operating leverage Gross profit

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Less: Operating expenses

Earning before interest and tax

Less: interest Total leverage

Net profit before tax

Financial leverage Less: taxes

Net profit after taxes

Less preferred stock dividends

Earnings available for common stock

Earning per share (EPS)

## **Chapter 4: OBJECTIVE AND CONTENT OF CAPITAL STRUCTURE**

### **EBIT- EPS approach to capital structure**

It should be clear from earlier that the goal of the financial manager is to maximize owner wealth -that is, the firm's stock price. One of the widely followed variables affecting the firm's stock price is its earnings, which represents the returns earned on behalf of owner. In spite of the fact that focusing on earning ignores risk (the other key variable affecting the firm's stock price), earning per share (EPS) can be conveniently used to analyze alternative capital structures. The EBIT-EPS approach to capital structure involves selecting the capital structure that maximise EPS in surplus of the expected range of earnings before interested and taxes (EBIT).