Chapter 13

CAPITAL STRUCTURE AND FINANCIAL RATIOS

1. Introduction

The purpose of this chapter is to consider the choice between raising finance from equity or from debt and discuss the best capital structure for a company. In addition we will summarise various key financial ratios .

2. Financial Gearing

2.1. Definition

Financial gearing measures the proportion of a company's financing that comes from debt as opposed to equity.

The attraction of debt finance is that lenders are likely to require a lower return than shareholders because an investment in debt is less risky than an investment in shares. In addition, debt interest payable by the company is normally allowable for tax which makes the net cost even lower.

However, the reason that company's do not automatically raise as much of their finance from debt as possible is that increasing the amount of debt in a company (or increasing the gearing) creates more risk for the shareholders.

The reason for the increase in risk to shareholders is that fixed interest must be paid each year before the company is able to pay dividends.

Example 1

Two companies, U and G, are both generating operating profits (before interest) of $100. U is an ungeared company (with no debt finance) whereas G is a geared company and has to pay debt interest of $30 p.a..

Tax is payable at 30%, and both companies distribute all available earnings as dividend.

	U	*G*
Profits	100	100
Debt Interest	–	30
	100	70
Tax @ 30%	(30)	(21)
Available for shareholders	70	49

Calculate the % change in dividends that will result in both companies, if profits were to fall by:

(a) 20%

(b) 40%

Measures of financial gearing

There are two standard ways of calculating the gearing ratio.

It can be defined as either:

$$\frac{\text{Debt borrowing + preference share capital}}{\text{Ordinary share capital + reserves}}$$

(this measure is sometimes known as equity gearing)

or alternatively:

$$\frac{\text{Debt borrowing + preference share capital}}{\text{Total long term capital}}$$

(this measure is sometimes known as total gearing)

Either measure can be used (unless the examination specifies one measure). The result will differ depending on which measure is used, but in both cases the figure will increase with higher proportions of debt.

Gearing is best measured using market values for debt and for equity. If, however, market values are not available then use statement of financial position values.

Example 2

Lavetal plc has the following summarised Statement of Financial Position:

Non-current assets	200,000
Current assets	50,000
	250,000
Share Capital (10c shares)	10,000
Reserves	130,000
	140,000
Debentures	100,000
Current liabilities	10,000
	250,000

The market values at date of the Statement are:

Shares: $2.20 per share

Debentures: 95 p.c.

Calculate the (total) gearing ratio of Lavetal using:

(a) book values

(b) market values

3. Operating Gearing

3.1. Fixed operating costs

With financial gearing, it is the fixed interest payments that create the extra risk for shareholders.

However, company's may have fixed operating costs due to the way they have structured their operating costs between fixed costs and variable costs. More fixed operating costs increase the risk for the shareholders in exactly the same way as do fixed interest costs.

Example 3

Companies A and B both have sales of $100,000 p.a. and costs of $60,000 p.a..

However company A has structured it's costs such that $50,000 are variable and $10,000 are fixed, whereas B has variable costs of $20,000 and fixed costs of $40,000.

	A	*B*
Sales	100,000	100,000
Variable costs	50,000	20,000
Fixed costs	10,000	40,000
	60,000	60,000
Profit	40,000	40,000

Calculate the % change in profits in both companies that results from:
(a) an increase in sales volume of 10%
(b) a reduction in sales volume of 20%

As with financial gearing, the profits of the company with the higher proportion of fixed costs is more risky than the other.

A company has flexibility as to how to structure its costs. For example, staff costs can be fixed by employing staff on annual contracts, or can be variable by employing staff on a day-to-day basis.

In times of growth it will be advantageous to have a high proportion of fixed costs and a low proportion of variable costs. However, in times of recession the opposite is true.

3.2. Measures of operating gearing

There is no standard measure of operating gearing.

Two suggested measures are as follows:

- $$\frac{\text{\% change in earnings before interest and tax}}{\text{\%change in sales}}$$

- $$\frac{\text{fixed costs}}{\text{variable costs}}$$

4. Other financial ratios

Example 4

Statement of Financial Position at 31 December

	2002	*2001*
Non-current assets	300,000	320,000
Current assets	80,000	70,000
	380,000	390,000
Ordinary Share capital (10c shares)	60,000	60,000
7% Preference shares ($1 shares)	40,000	40,000
Reserves	160,000	140,000
	260,000	240,000
6% Debentures	100,000	100,000
Current liabilities	20,000	50,000
	380,000	390,000

Income Statement for the year ended 31 December

	2002	*2001*
Sales	510,000	480,000
Profit before interest and tax	52,000	49,000
Interest	6,000	6,000
Profit before tax	46,000	43,000
Tax	12,000	10,000
Net profit after tax	34,000	33,000
Dividends:		
Ordinary shares	20,000	15,000
Preference shares	2,800	2,800
Retained profit	11,200	15,200

The market values at 31 December:

	2002	*2001*
ordinary shares	$0.83	$0.72
preference shares	$0.90	$1.01
6% debentures	$110	$118

Calculate (for each of the two years) the following ratios:

Debt holder ratios:

- Interest cover
- Interest yield

Shareholder ratios:

- Dividend per share
- Dividend cover
- Dividend yield
- Return on equity
- Earnings per share (EPS)
- Price earnings ratio (P/E ratio)

When you finished this chapter you should attempt the online F9 MCQ Test