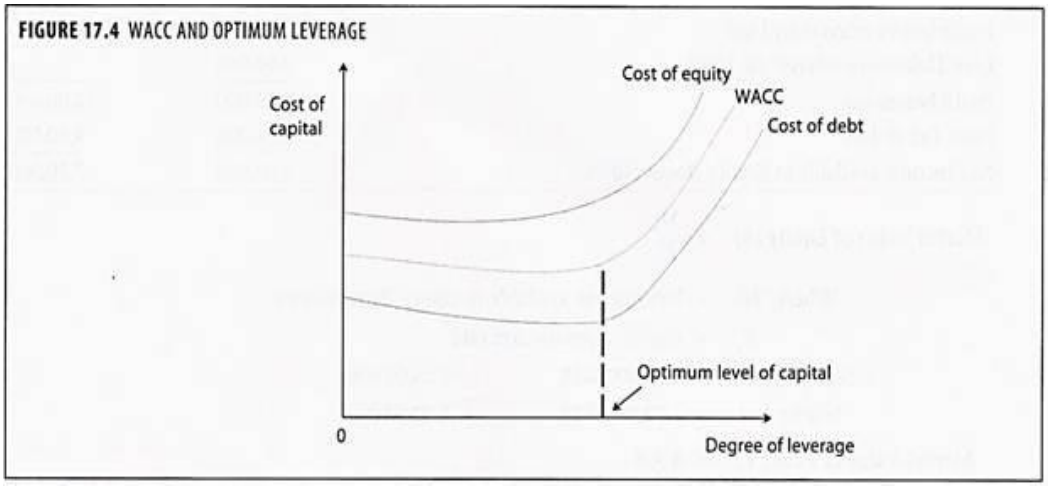
Updated on 16.12.2025

AS - 05 (v) – Actuarial Aspects of Risk Management

Original Text in book

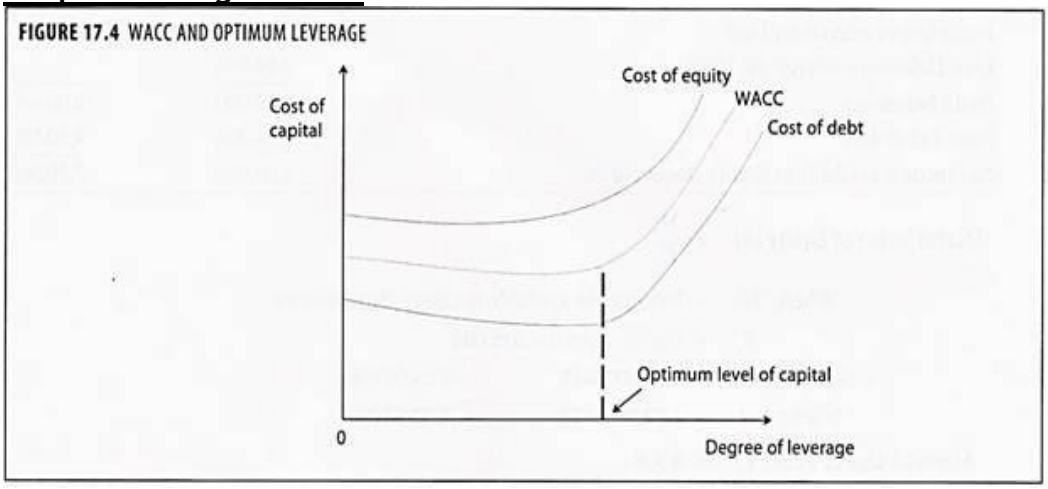
Chapter 11 Page no.192



WACC is undoubtedly an important tool in determining optimal capital structure. To minimise the value of the firm as well as the market value of the stock, the firm should strive to minimise WACC. Thus considerable weight is placed on WACC for achieving the ultimate objective of increasing the stockholders worth by choosing an appropriate capital mix.

Revised text as below

Chapter 11 Page no.192



WACC is undoubtedly an important tool in determining optimal capital structure. To minimise the value of the firm as well as the market value of the stock, the firm should strive to maximise WACC. Thus considerable weight is placed on WACC for achieving the ultimate objective of increasing the stockholders worth by choosing an appropriate capital mix.

Original Text in book

Chapter 11 Page no.188 & 189

DFL:

DFL = EBIT / EBIT - I - (P / (1-TR)) where I is Interest and P is Preferred Dividends and TR is the tax rate.

Example 1 - Calculate Degree of Financial Leverage (DFL)

Mason Corporation has sales of $ 400,000 with total operating costs consisting of $ 330,000 in variable costs and $ 30,000 in fixed costs. Annual interest is $ 6,000 and preferred dividends are $ 2,000 per year. The tax rate is 20%.

Solution:

Sales $ 400,000

Less Variable Costs (330,000)

Less Fixed Costs (30,000)

EBIT $ 40,000

DFL = $ 40,000 / $ 40,000 - $ 6,000 - ($ 2,000 / .80) = 1.27

In addition to financial leverage, there is operating leverage. Operating leverage is the use of fixed costs in production over variable costs. For example, replacing production workers (variable cost) with robots (fixed cost) would be an example of increased operating leverage.

As operating leverage increases, more sales are needed to cover the increased fixed costs. Since variable costs have been reduced, profits will increase more given an increase in sales after the breakeven point has been reached. High levels of fixed costs increase business risk. Like financial leverage, we can measure the Degree of Operating Leverage (DOL) as the percentage change in operating income given a change in sales. The following formula can be used to calculate DOL:

DOL = CM / CM - FC where CM is Contribution Margin and FC is Fixed Cost.

Example 2 - Calculate Degree of Operating Leverage (DOL)

Referring back to Example 1, we can make the following calculations:

Sales $ 400,000

Less Variable Costs (330,000)

Contribution Margin $ 40,000

DOL = $ 40,000 / $ 40,000 - $ 30,000 = 4.0

Revised text as below

Chapter 11 Page no. 188 & 189

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Mason Corporation has sales of $ 400,000 with total operating costs consisting of $ 330,000 in variable costs and $ 30,000 in fixed costs. Annual interest is $ 6,000 and preferred dividends are $ 2,000 per year. The tax rate is 20%.

Solution:

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Less Fixed Costs (30,000)

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DFL = $ 40,000 / $ 40,000 - $ 6,000 - ($ 2,000 / .80) = 1.27

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DOL = CM / (CM – FC) where CM is Contribution Margin and FC is Fixed Cost.

Example 2 - Calculate Degree of Operating Leverage (DOL)

Referring back to Example 1, we can make the following calculations:

Sales $ 400,000

Less Variable Costs (330,000)

Contribution Margin $ 70,000

DOL = CM/(CM-FC) =70,000/(70,000-30,000)

$$=\frac{70,000}{40,000} = \frac{7}{4} = 1.75$$

Original Text in book

Chapter 6 Page no.104 & 105 – Learning Outcomes E. Techniques adopted by Insurance company to set Reserves - point Average Value Method

The average value method considers all claims in a specific category still open at the end of the current fiscal year to set a per policy reserve for the upcoming fiscal year. For example, assume 9 auto insurance liability cases from 2013 are still open at the end of the fiscal year -- three averaging Rs.5,000 each, three averaging Rs8,000 each and three averaging Rs10,000 each -- and a Rs10,000 carryover case from 2012 is still open. Underwriters would set an auto insurance liability per policy reserve of Rs.8,090, or Rs.89,000 divided by 10, for the 2014 fiscal year.

Revised text as below

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