Optimal Capital Structure

Optimal Capital Structure

- While talking about cost of capital and valuation, it is worth spending a little time discussing Optimal Capital Structure

Optimal Capital Structure

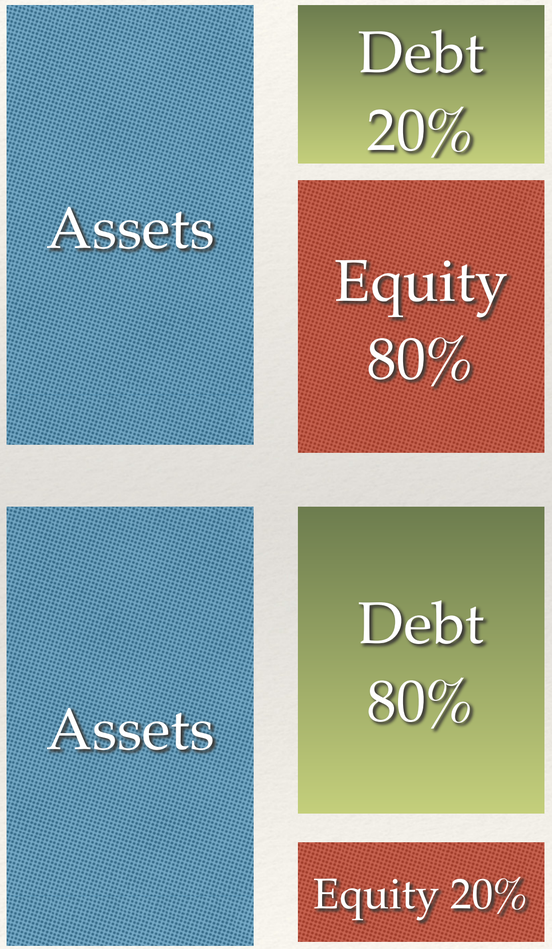
- The optimal capital structure is achieved by getting the right balance between debt and equity that maximises the company's market value while minimising its cost of capital (partly due to the tax shelter of the debt)

Optimal Capital Structure

- Too much debt increases the financial risk of the business, the volatility of earnings and the risk of bankruptcy
- This increase in financial risk then tips the balance and increases the WACC and lowers the market value

Optimal Capital Structure

- Two similar firms may have different capital structures
- One 20% Debt and the other 80% Debt
- The cost of the debt is reduced by the value of the tax shield, the ability to deduct debt interest costs before tax



Optimal Capital Structure

- As debt increases the proportion of (D/V x Rd) x (1-T) increases which lowers the cost of capital, as debt cost is lower and it benefits from the tax shield

- WACC = (E/V x Re) + ((D/V x Rd) x (1-T)
- E = market value of equity
- V = total value of capital (equity + debt)
- D/V= % of debt capital
- Rd = Cost of debt
- D = Market value of firms debt
- E/V = % of equity capital
- Re = Cost of Equity (required rate of return)
- T = Tax Rate

Optimal Capital Structure

- However, as debt increases, the risk of the business increases Re as equity investors require a higher rate of return to compensate for the high leverage and risk of financial distress

- WACC = (E/V x Re) + ((D/V x Rd) x (1-T)
- E = market value of equity
- V = total value of capital (equity + debt)
- D/V= % of debt capital
- Rd = Cost of debt
- D = Market value of firms debt
- E/V = % of equity capital
- Re = Cost of Equity (required rate of return)
- T = Tax Rate

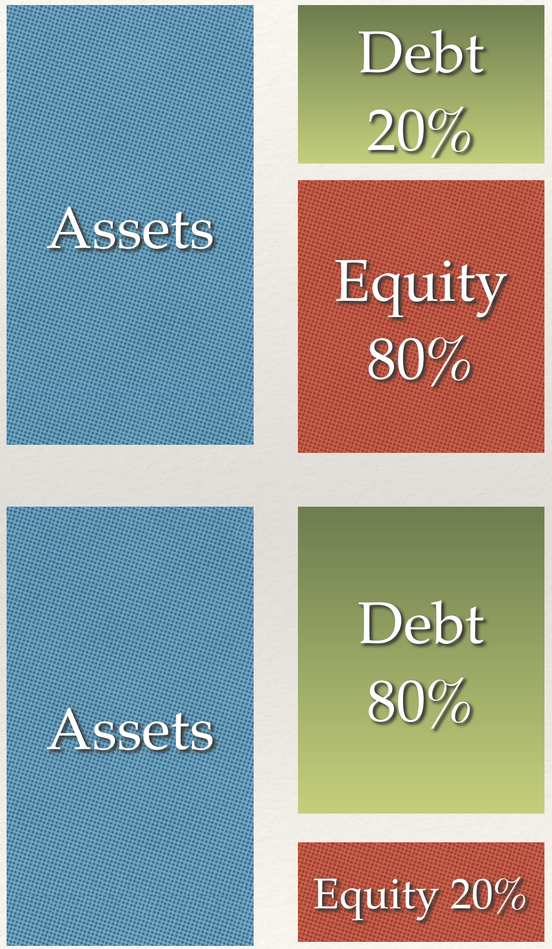
Optimal Capital Structure

- This would be reflected in an increase in the company specific beta - from the CAPM

- WACC = (E/V x Re) + ((D/V x Rd) x (1-T)
- E = market value of equity
- V = total value of capital (equity + debt)
- D/V= % of debt capital
- Rd = Cost of debt
- D = Market value of firms debt
- E/V = % of equity capital
- Re = Cost of Equity (required rate of return)
- T = Tax Rate

Optimal Capital Structure

- Capital Structure is also a factor of industry and cash flow
- Companies with stable cash flows can afford to carry more leverage
- Companies with uncertain cash flows are not able to sustain higher debt levels and are more likely to have higher proportions of equity



Optimal Capital Structure

- In an M&A deal, the capital structure of the business post transaction is an important issue
- If the acquirer uses cash or debt to finance the deal, the proportion of (net) debt to equity will increase
- If the buyer issues new shares to pay for the acquisition, the debt equity ratio will fall
- This is an important aspect of financial modelling in M&A deals

Optimal Capital Structure

- The Capital Structure is also at the centre of LBO modelling where Private Equity firms often seek to maximise debt so as to minimise the amount of equity they have to provide
- This is not about cost of capital or optimising the capital structure rather simply minimising the up front cost of the deal for the Private Equity house

Optimal Capital Structure

- You will notice too that many Private Equity Deals are recapitalised
- After a few years of successful growth, debt is reduced, cash balances increase.
- The PE house will re-capitalise the debt side of the balance sheet, taking on new debt
- The surplus cash is then distributed to equity stockholders in the form of a dividend

Optimal Capital Structure

- Taking the opposite view Modigliani and Miller argue that in the absence of taxes, bankruptcy costs, agency costs and asymmetric information, in an efficient market, the value of a firm is unaffected by its capital structure

Optimal Capital Structure

- Modigliani and Miller argue that value is independent of the financing used
- A major assumption supporting their Capital Structure Irrelevance Proposition (1958) is the absence of corporate taxes, which of course is somewhat artificial

Optimal Capital Structure

- This whole discussion of course suggests that Finance Directors are trying to operate to the maximum capital efficiency at all times and have perfect information with which to do this

Optimal Capital Structure

- The Pecking Order Theory suggests that in the real world this is not the case.
- It argues that firms take the line of least resistance to capital raising
- Internal financing is the most preferred and easiest, this is followed by debt and then equity
- The last two of course also require greater effort, time and cost to organise

Optimal Capital Structure

- When considering Company Valuation, the Optimal Capital Structure teaches us not to just accept the current levels of debt and equity but to challenge them
- Should the Debt/Equity ratio be something different, either higher or lower and what impact would this have on the valuation?

Optimal Capital Structure