The Dividend Discount Model

The Dividend Discount Model

- The basis of the Dividend Discount Model is that the value of a security is based on the future value of all the company's dividends discounted to a present value

The Dividend Discount Model

- This is very similar to the DCF modelling but uses a different cash flow for its calculations
- Its most applicable to evaluating the current share price of a listed company when trying to establish whether the company is under valued or over valued in the market.

The Dividend Discount Model

- There are three main variations of the Dividend Discount Model
  - The Gordon Growth Model
  - The Single Period Dividend Discount Model
  - The Multi Period Dividend Discount Model

The Dividend Discount Model

- The main assumptions of the model are that:
  - The company's business model is stable - no major fluctuations in its performance
  - It is growing at a steady unchanging growth rate
  - The company has a stable balance of debt and equity - as we used a fixed rate of return
  - The company's free cash flow is paid as dividends - which in practice is seldom the case.

The Dividend Discount Model

- To calculate a Discounted Dividend Valuation we need to set values for three variables
  - The expected dividend per share in the next year
  - The expected dividend growth rate in pepetuity
  - The required rate of return or cost of equity

The Dividend Discount Model

- The formula is shown here
- D1 = Dividend in next year
- k = Required Rate of Return
- g = Growth Rate

- Value = D1 / (k-g)

The Dividend Discount Model

- Lets consider a simple example

- Company Share Price = $100
- Rate of Return = 10%
- Dividend = $5
- Growth Rate = 4%

The Dividend Discount Model

- The value therefore $83.33
- The company price of $100 therefore overvalues the company

- V= 5 / (0.1-0.04)
- V = $83.33

The Dividend Discount Model

- The DDM assumes a constant growth of the dividend in perpetuity - whereas in practice they are much more likely to fluctuate
- The model focuses purely on the cash flow from Dividends and does not take into account any market factors, the value of the company's brand and consequently it is more likely to return an undervaluation.

The Dividend Discount Model

- The model is highly sensitive to both the discount rate and the assumed growth rate
- If the growth rate in our example in this lecture was 5%, the model would return a value of $100 suggesting that the company was correctly valued by the market

The Dividend Discount Model

- Another way of looking at this is that the market is assuming a 5% growth rate of the dividend in perpetuity

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