Firm Valuation In Mergers And Acquisitions

- Equity Valuation Models
  - Balance Sheet Valuation Models
    - Book Value: the net worth of a company as shown on the balance sheet
    - Liquidation Value: the value that would be derived if the firm's assets were liquidated
    - Replacement Cost: the replacement cost of its assets less its liabilities
  - Dividend Discount Models

$$V_0 = \frac{D_1}{1+k} + \frac{D_2}{(1+k)^2} + \frac{D_3}{(1+k)^3} + \ldots\ldots$$

Where V_0 = Value of the firm

D_1 = dividend in year 1

K = discount rate

  - The Constant Growth DDM

$$V_0 = \frac{D_0(1+g)}{1+k} + \frac{D_0(1+g)^2}{(1+k)^2} + \ldots\ldots$$

And this equation can be simplified to :

Where g = growth rate of dividends

$$V_0 = \frac{D_0(1+g)}{k-g} = \frac{D_1}{k-g}$$

  - Price Earning Ratio

$$\frac{P_0}{E_1} = \frac{1}{k}\left[1 + \frac{PVGO}{E/k}\right]$$

PVGO - Present Value of Growth Opportunity

$$\frac{P_0}{E_1} = \frac{E_1(1-b)}{k - ROE \times b} \qquad \frac{P_0}{E_1} = \frac{1-b}{k - ROE \times b}$$

  - Cash Flow Valuation Models

The Entity DCF Model : The entity DCF model values the value of a company as the value of a company's operations less the value of debt and other investor claims, such as preferred stock, that are superior to common equity