ACCOUNTING-BASED VALUATION

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Accounting-Based Valuation

- **The stock price (P_0) of a company should be equal to:**
  - **The present value of all future dividends (D_t), discounted at the cost of capital (r)**

$$P_0 = \sum_{t=1}^{\infty} \frac{D_t}{(1+r)^t} \quad \text{(Dividend Discount Model)}$$

  - **Current financial assets (FA_0) plus the present value of all future free cash flows (FCF_t) (Free cash flow = operating cash flow – investing cash flow)**

$$P_0 = FA_0 + \sum_{t=1}^{\infty} \frac{FCF_t}{(1+r)^t} \quad \text{(Discounted Cash Flow Model)}$$

  - **The current shareholders' equity (SE_0) plus the present value of all future abnormal earnings (i.e., Earnings (E_t) – Prior book value (SE_{t-1}) x r)**

$$P_0 = SE_0 + \sum_{t=1}^{\infty} \frac{E_t - rSE_{t-1}}{(1+r)^t} \quad \text{(Accounting - Based Valuation Model)}$$

- **However, finite versions of the models will yield different answers because of differences in quality of projections**
  - **Accounting-Based Valuation performs the best**

Accounting-Based Valuation Steps

- **Construct pro forma financial statements over some finite horizon**
  - **Reality Check: Do the statements and ratios make sense?**
- **Compute abnormal earnings over a finite forecast horizon**
  - **5 – 10 years (not much benefit to forecasting longer than 10 years)**
- **Make some assumption about "terminal value" at end of forecast horizon**
  - **For example, assume that abnormal earnings in last year of forecast horizon (AE_T) will grow as a perpetuity at the long-term rate of sales growth (g)**
  - **Terminal value = $[AE_T \times (1 + g)] / (r - g)$**
- **Compute the present value of the abnormal earnings and the terminal value**
  - **Use cost of capital (r) to estimate present value**
- **Add present values to current shareholders' equity to get estimated market value of equity**
  - **Divide by shares outstanding to get estimated stock price**


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