

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

$$\text{Quick ratio} = \frac{\text{Current assets} - \text{Inventory}}{\text{Current liabilities}}$$

$$\text{Cash ratio} = \frac{\text{Cash}}{\text{Current liabilities}}$$

$$\text{Total debt ratio} = \frac{\text{Total assets} - \text{Total equity}}{\text{Total assets}}$$

$$\text{Debt / equity ratio} = \frac{\text{Total debt}}{\text{Total Equity}}$$

$$\text{Equity multiplier} = \frac{\text{Total assets}}{\text{Total Equity}}$$

$$\text{Times interest earned} = \frac{\text{EBIT}}{\text{Interest}}$$

$$\text{Cash coverage ratio} = \frac{\text{EBIT} + \text{Depreciation}}{\text{Interest}}$$

$$\text{Inventory turnover ratio} = \frac{\text{Cost of goods sold}}{\text{Inventory}}$$

$$\text{Days sales inventory} = \frac{365 \text{ days}}{\text{Inventory turnover}}$$

$$\text{Receivables turnover} = \frac{\text{Sales}}{\text{Accounts receivable}}$$

$$\text{Days sales receivables} = \frac{365 \text{ days}}{\text{Receivables turnover}}$$

$$\text{Total asset turnover} = \frac{\text{Sales}}{\text{Total assets}}$$

$$\text{Profit margin} = \frac{\text{Net income}}{\text{Sales}}$$

$$\text{Return on assets} = \frac{\text{Net income}}{\text{Total assets}}$$

$$\text{Return on equity} = \frac{\text{Net income}}{\text{Total equity}}$$

$$\text{PE ratio} = \frac{\text{Price per share}}{\text{Earnings per share}}$$

$$\text{Market to book ratio} = \frac{\text{Market Value per share}}{\text{Book value per share}}$$

$$\text{DuPont identity} = \text{ROE} = \frac{\text{Net income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Total equity}}$$

$$\text{Dividend payout ratio} = \frac{\text{Cash dividend}}{\text{Net income}}$$

$$\text{Retention ratio} = \frac{\text{Addition to RE}}{\text{Net income}}$$

$$\text{Internal growth rate} = \frac{\text{ROA} \cdot b}{1 - \text{ROA} \cdot b}$$

$$\text{Sustainable growth rate} = \frac{\text{ROE} \cdot b}{1 - \text{ROE} \cdot b}$$

$$\text{Future value} = \text{PV} \cdot (1 + r)^t$$

$$\text{Present value} = \frac{\text{FV}}{(1 + r)^t}$$

$$\text{Present value annuity} = \text{pmt} \cdot \frac{1 - \frac{1}{(1 + r)^t}}{r}$$

$$\text{Future value annuity} = \text{pmt} \cdot \frac{(1 + r)^t - 1}{r}$$

$$\text{PV Perpetuity} = \frac{\text{Pmt}}{r}$$

$$\text{EAR} = \left(1 + \frac{\text{Quoted rate}}{m}\right)^m - 1$$

$$\text{FV EAR} = \text{PV} \cdot \left(1 + \frac{\text{Quoted rate}}{m}\right)^{mt}$$

$$\text{Bond Value} = C \cdot \frac{1 - \frac{1}{(1 + r)^t}}{r} + \frac{F}{(1 + r)^t}$$

$$\text{Fisher effect: } 1 + R = (1 + r) \times (1 + h)$$

$$P_0 = \frac{D_1 + P_1}{1 + R}$$

$$P_0 = \frac{D}{R}$$

$$P_0 = \frac{D_0(1 + g)}{R - g} = \frac{D_1}{R - g}$$

$$\text{CFAT} = \text{CFBT} (1 - T) + \text{DEP} (T)$$

Payback period is the time (T) such that:  $\sum_{t=0}^T \text{CF}_t = \text{CF}_0$

$$\text{NPV} = \sum_{t=0}^n \frac{\text{CF}_t}{(1 + r)^t}$$

$$0 = \sum_{t=0}^n \frac{\text{CF}_t}{(1 + \text{IRR})^t}$$

$$\text{AAR} = \frac{\text{Average Net income}}{\text{Average Book value}}$$

$$\text{Profitability Index} = \frac{\text{PV CF's}}{\text{Cost of investment}}$$

Total dollar return = Dividend income + Capital gain (or loss)

Total return = Dividend yield + Capital gains yield

Dividend yield =  $D_{t+1} / P_t$

Capital gains yield =  $(P_{t+1} - P_t) / P_t$

Ex-ante:

$E(R) = \sum_{i=1}^n P_i R_i$  from  $i = 1$  to  $n$

$$S = \sqrt{\sum_{i=1}^n \left( R_i - E(R) \right)^2 P_i}$$

Ex-post:

$$R = \frac{\sum_{t=1}^n R_t}{n}$$

$$S = \sqrt{\frac{\sum_{t=1}^n \left( R_t - E(R) \right)^2}{n - 1}}$$

$$RP = \sum_{j=1}^n W_j R_j$$

$$b = \sum_{j=1}^n W_j b_j$$

CAPM:  $E(R_i) = R_f + b_j [E(R_M) - R_f]$

WACC =  $W_P \times R_P + W_E \times R_E + W_D \times R_D$

MACRS Factors			
Year	3-Year	5-Year	7-Year
1	33.33%	20.00%	14.29%
2	44.44	32.00	24.49
3	14.82	19.20	17.49
4	7.41	11.52	12.49
5		11.52	8.93
6		5.76	8.93
7			8.93
8			4.45