FINC 3511 - Corporate Finance - Formulas

Net income = (EBIT - INT)(1 - tax rate)  

Operating cash flow = NOPAT + Dep

NOPAT = EBIT(1 - tax rate)  

Net cash flow = Net income + (Dep + Amort)

MVA = (shares outstanding)(stock price) - (total common equity)

EVA = EBIT(1 - tax rate) - (investor supplied capital)(percentage cost of capital)

Current assets = cash + marketable securities + inventory + accounts receivable

Current ratio = \( \frac{\text{current assets}}{\text{current liabilities}} \)

Basic earning = \( \frac{\text{EBIT}}{\text{power}} \)

Total assets

Inventory turnover = \( \frac{\text{sales}}{\text{inventory}} \)

Times interest = \( \frac{\text{EBIT}}{\text{earned}} \)

Interest charges

Quick ratio = \( \frac{\text{current assets} - \text{inventory}}{\text{current liabilities}} \)

Fixed asset = \( \frac{\text{sales}}{\text{turnover}} \)

Net fixed assets

Days sales outstanding = \( \frac{\text{receivables}}{(\text{annual sales})/365} \)

EBITDA Coverage = \( \frac{\text{EBITDA} + \text{Lease Payments}}{\text{Interest} + \text{Principal} + \text{Lease Charges} + \text{pmts} + \text{pmts}} \)

Debt ratio = \( \frac{\text{total debt}}{\text{total assets}} \)

Total asset = \( \frac{\text{Sales}}{\text{Turnover}} \)

Net profit = \( \frac{\text{Net income}}{\text{sales}} \)

Price earnings ratio = \( \frac{\text{Price per share}}{\text{Earnings per share}} \)

Market/Book ratio = \( \frac{\text{Market price per share}}{\text{Book price per share}} \)

Return on total assets = \( \frac{\text{Net income}}{\text{Total assets}} \) = (Net profit margin)(Total asset turnover)

Return on common equity = \( \frac{\text{Net income}}{\text{common equity}} \) = (net profit margin)(total asset turnover)(1/(1 – debt ratio))

projected account balance = (old account balance)[(new sales)/(old sales)]

Change in retained earnings = (net profit margin)(sales) – dividends

Additional funds needed = projected assets – (projected liabilities + projected equity)
\[ \hat{k}_i = \sum_{i=1}^{n} k_i \hat{p}_i \quad \hat{k}_p = \sum_{i=1}^{n} w_i \hat{k}_i \quad b_p = \sum_{i=1}^{n} w_i b_i \quad k_i = k_{RF} + b_i (k_{M} - k_{RF}) \]

\[ FV_n = PV \left( 1 + \frac{i}{m} \right)^{nm} \quad PV = FV_n \left( \frac{1}{1 + \frac{i}{m}} \right) \quad FVA_n = PMT \sum_{i=1}^{n} (1 + i)^{n-1} \]

\[ PVA_n = PMT \sum_{i=1}^{n} \left( \frac{1}{(1 + i)^i} \right) \quad EAR = \left( 1 + \frac{i}{m} \right)^m \]

\[ V_B = \frac{\text{INT} \sum_{t=1}^{N^m} \left( \frac{1}{(1 + \frac{k_s}{m})^t} \right) + M \left( \frac{1}{(1 + \frac{k_B}{m})^{N^m}} \right)}{m} \quad V_P = \frac{D}{k_p} \]

Current yield = (annual interest payment)/(current price)

Yield-to-maturity = current yield + capital gain/loss

\[ \hat{P}_0 = \frac{D_0 (1 + g)}{k_s - g} = \frac{D_1}{k_s - g} \quad \hat{P}_0 = \sum_{t=1}^{N_s} \frac{D_0 (1 + g_s)^t}{(1 + k_s)^t} + \frac{D_{N_s} (1 + g_c)}{(1 + k_s)^{N_s}} \]

\[ (V_B - FC) = \text{INT} \left( \sum_{t=1}^{N^m} \frac{1}{(1 + \frac{k_B}{m})^t} \right) + M \left( \frac{1}{(1 + \frac{k_B}{m})^{N}} \right) \quad (V_{ps} - FC) = \frac{D}{k_{ps}} \]

\[ (\hat{P}_0 - FC) = \frac{D_1}{k_s - g} \quad \text{WACC} = w_d k_d^B (1 - t) + w_o k_{ps} + w_s k_s \]

Breakpoint = total dollar amount of retained earnings available/(equity)

\[ \text{NPV} = \sum_{t=1}^{n} \frac{CF_t}{(1 + k)^t} - IO \quad \text{IO} = \sum_{t=1}^{n} \frac{CF_t}{(1 + IRR)^t} \quad \sum_{t=0}^{n} \frac{COF_t}{(1 + k)^t} = \sum_{t=0}^{n} \frac{CIF_t (1 + k)^{n-t}}{(1 + \text{MIRR})^{n-t}} \]