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 power = $\frac{\text{EBIT}}{\text{Total assets}}$

Inventory turnover ratio = $\frac{\text{sales}}{\text{inventory}}$

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

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

Fixed asset turnover = $\frac{\text{Sales}}{\text{Net fixed assets}}$

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

EBITDA Coverage Ratio = $\frac{\text{EBITDA + Lease Payments}}{\text{Interest Charges + Principal pmts + Lease pmts}}$

Debt ratio = $\frac{\text{total debt}}{\text{total assets}}$

Total asset Turnover = $\frac{\text{Sales}}{\text{total assets}}$

Net profit margin = $\frac{\text{Net income}}{\text{sales}}$

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)

$$\hat{k}_i = \sum_{i=1}^{n} k_i \; p_i \qquad \hat{k}_P = \sum_{i=1}^{n} w_i \; \hat{k}_i \qquad b_P = \sum_{i=1}^{n} w_i \; b_i \qquad k_i = k_{RF} + b_i \, (k_M - k_{RF})$$

$$FV_n = PV\left(1+\frac{i}{m}\right)^{n*m} \qquad PV = FV_n\left(\frac{1}{\left(1+\frac{i}{m}\right)^{n*m}}\right) \qquad FVA_n = PMT\sum_{t=1}^{n}(1+i)^{n-t}$$

$$PVA_n = PMT\sum_{t=1}^{n}\left(\frac{1}{(1+i)^t}\right) \qquad EAR = \left(1+\frac{i}{m}\right)^m$$

$$V_B = \frac{INT}{m}\sum_{t=1}^{N*m}\left(\frac{1}{\left(1+\frac{k_b}{m}\right)^t}\right) + M\left(\frac{1}{\left(1+\frac{k_b}{m}\right)^{N*m}}\right) \qquad V_P = \frac{D}{k_P}$$

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

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

$$\hat{P}_0 = \frac{D_0(1+g)}{k_s - g} = \frac{D_1}{k_s - g} \qquad \hat{P}_0 = \sum_{t=1}^{N_S}\frac{D_0(1+g_S)^t}{(1+k_s)^t} + \frac{\left[\frac{D_{N_S}(1+g_C)}{k_S - g_C}\right]}{(1+k_s)^{N_S}}$$

$$(V_B - FC) = INT\left(\sum_{t=1}^{N}\frac{1}{(1+k_d^B)^t}\right) + M\left(\frac{1}{(1+k_d^B)^N}\right) \qquad (V_{ps} - FC) = \frac{D}{k_{ps}}$$

$$(\hat{P}_0 - FC) = \frac{D_1}{k_s - g} \qquad WACC = w_d\, k_d^B (1-t) + w_p\, k_{ps} + w_s k_s$$

$$\text{Breakpoint (equity)} = \frac{\text{total dollar amount of retained earnings available}}{\text{fraction of equity in the capital structure}}$$

$$NPV = \sum_{t=1}^{n}\frac{CF_t}{(1+k)^t} - IO \qquad IO = \sum_{t=1}^{n}\frac{CF_t}{(1+IRR)^t} \qquad \sum_{t=0}^{n}\frac{COF_t}{(1+k)^t} = \frac{\sum_{t=0}^{n} CIF_t(1+k)^{n-t}}{(1+MIRR)^n}$$