

$$\textcircled{1} \quad P_0 = \$2.08$$

$$D = 2.11$$

$$P_1 = 69.52$$

$$r = 8.4\% \text{ p.a.} \rightarrow 0.161 \text{ P.W.}$$

$$A \rightarrow 1 \text{ YEAR} \times 21 \text{ DAYS}$$

$$B \rightarrow r = 8.4\%$$

$$\text{DIV. YIELD} = \frac{2.11}{2.08} = 0.02927 \rightarrow \underline{\underline{2.93\%}}$$

$$\text{CAP. GAIN} = 8.4 - 2.93 = 5.44\%$$

$$C \rightarrow r_r = \frac{69.52 - 2.08}{2.08} = -0.03552 = -3.552\% \quad \text{FOR 21 DAYS}$$

$$D \rightarrow d = r_r - r^*$$

$$d = -3.552 - \left[(1 + 0.00161)^3 - 1 \right] \cdot 100$$

$$d = -3.552 - 0.4838 = \underline{\underline{-4.036\%}}$$

$$\textcircled{2} \quad \beta_1 = 2.5$$

$$\beta_2 = 1.5$$

$$\beta_3 = 0.8$$

$$E(r_i) = 4.35\% + \beta_i \cdot 8.04\%$$

$$E(r_1) = \underline{\underline{24.45\%}}$$

$$E(r_2) = \underline{\underline{16.41\%}}$$

$$E(r_3) = \underline{\underline{10.482\%}}$$

$$\textcircled{3} \quad r_F = 4,4$$

$$E(r_i) = 4,4 + 1,2 \cdot 4,5 - 0,5 \cdot 2,4 - 0,15 \cdot 4,3$$

$$E(r_i) = 4,4 + 5,4 - 1,35 - 0,645$$

$$E(r_i) = \underline{\underline{8,1\%}}$$

\Rightarrow GROW, LARGE-CAP, HIGHER MARKET RISK STOCKS

$$\textcircled{4} \quad \beta = -0,2$$

$$r_F = 4,5\%$$

$$r_m = 4,5\%$$

$$E(r_i) = 4,5 - 0,2 \cdot (4,5 - 4,5)$$

$$E(r_i) = \underline{\underline{3\%}}$$

$$\textcircled{A} \quad P_0 = 20,45$$

$$P_3^+ = 29$$

$$P_3^- = 30,05$$

$$r^+ = 12,6\%$$

$$k_e = \frac{29 - 20,45}{20,45} = 0,3976 \rightarrow \underline{\underline{39,76\%}}$$

\textcircled{B}

$$k_r = \frac{30,05 - 20,45}{20,45} = 0,4482 \rightarrow \underline{\underline{44,82\%}}$$

(c)

$$V_0 = \frac{D_1}{r-g}$$

$$V_0 \cdot (r-g) = D_1$$

$$V_0 r - V_0 g = D_1$$

$$V_0 r = D_1 + V_0 \cdot g$$

$$r = \frac{D_1}{V_0} + g$$

$$\text{EQUIM PREMIUM} = \frac{D_1}{V_0} + g - r_F$$

$$= 1,2\% + 4\% - 3\%$$

$$= \underline{\underline{2,2\%}}$$

(d)

$$WACC = W_1 \cdot r_d \cdot (1-t) + W_2 \cdot r_e$$

$$r_e = 3 + 2 \cdot 5,5 = 14\%$$

$$WACC = 0,25 \cdot 4,9\% \cdot (1-0,3) + 0,75 \cdot 14\%$$

$$WACC = 0,8575\% + 10,5\% = 11,36\%$$

(e)

$$\text{UNLEVERED BETA} = 1,09 \cdot \frac{1}{1 + \frac{0,6}{0,4}} = 0,436$$

$$\text{LEVERED BETA} = 0,436 \cdot \left(1 + \frac{0,49}{0,51}\right) = 0,8549$$

(6)

$$WACC = 0,8 \cdot 15,6 + 0,2 \cdot 8,28 \cdot (1-0,3)$$

$$WACC = 12,48 + 1,1592 = 13,6392\%$$

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$$r_F = 4,5\%$$

$$r_m = 14,5\%$$

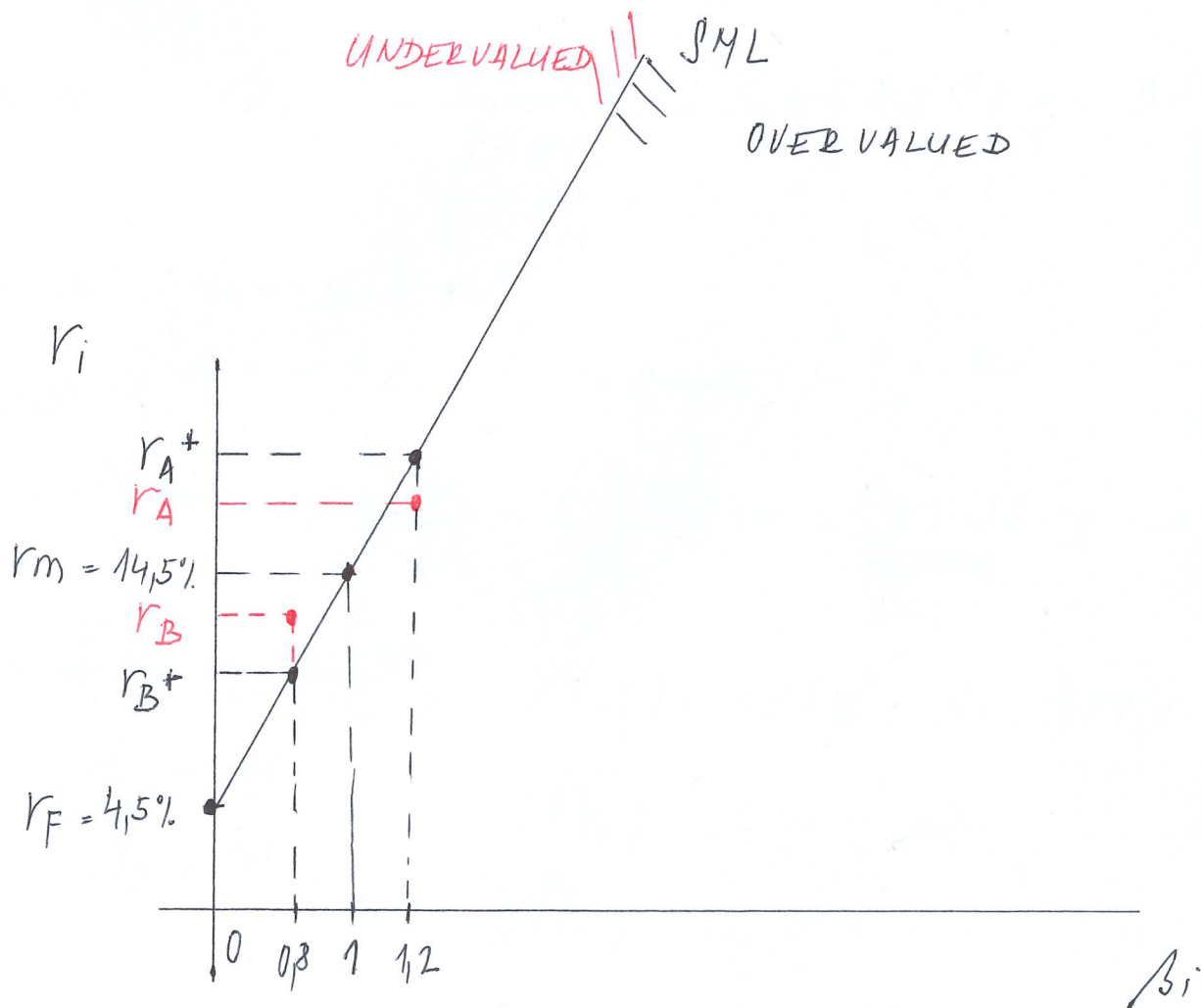
$$E(r_i) = r_F + \beta_i \cdot (r_m - r_F)$$

$$E(r_i) = 4,5 + \beta_i \cdot (14,5 - 4,5)$$

$$E(r_i) = 4,5 + 10 \cdot \beta_i$$

$$\underline{r_A = 16\%} \quad \beta_A = 1,2 \quad \rightarrow \quad r_A^* = 4,5 + 10 \cdot 1,2 = \underline{\underline{16,5\%}}$$

$$\underline{r_B = 14\%} \quad \beta_B = 0,8 \quad \rightarrow \quad r_B^* = 4,5 + 10 \cdot 0,8 = \underline{\underline{12,5\%}}$$



$$r_A < r_A^* \quad \text{OVERVALUED STOCK}$$

$$r_B > r_B^* \quad \text{UNDERVALUED STOCK}$$