1) $D_{2009} = 4$

$D_{2010} = 5$

$P_{2010} = 250$

$r = 11\%$

a) $V_{2009} = \frac{5+250}{1+0,11} = 229,73$

b) $V_{2008} = \frac{4}{1+0,11} + \frac{5+250}{(1+0,11)^2} = 210,57$

2) A) $g_1 = \sqrt[2]{\frac{15,5}{9}} - 1 = 0,3123 \rightarrow 31,23\%$

$g_2 = \sqrt[2]{\frac{20,2}{15,5}} - 1 = 0,1416 \rightarrow 14,16\%$

B) $g_L = \frac{14,16}{2} = 7,08\%$

$V_{2007} = \frac{D_{2007} \cdot (1+g_L)}{r - g_L} = \frac{15,5 \cdot (1+0,0708)}{0,11 - 0,0708} = 423,40$

3) $g = 5,9\%$

$D_0 = 246,6$

$r = 8\%$

$V_0 = \frac{246,6 \cdot (1+0,059)}{0,08 - 0,059} = 12.435,6$

(2)

$D = 0{,}045 \cdot 100 = 4{,}5$

$V_0 = \frac{0{,}045}{0{,}056} = \underline{80{,}35\ €}$

(6) $E(r_i) = r_F + \beta_i \cdot r_p$

$= 4{,}0 + 1{,}2 \cdot 5$

$= \underline{10\ \%}$

$24 = \frac{1 \cdot (1+g)}{0{,}1 - g}$

$2{,}4 + 24g = 1 + g$

$-25g = -1{,}4$

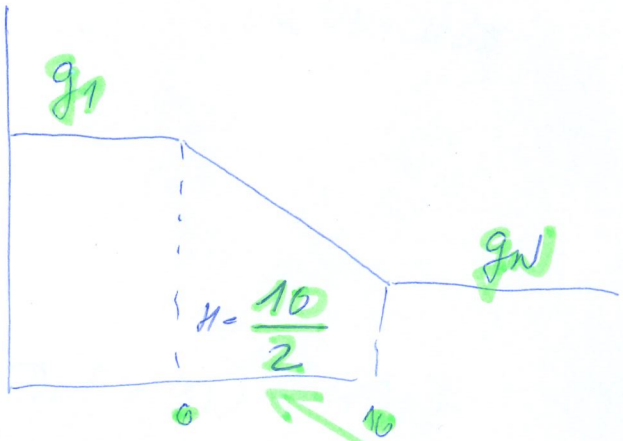
$g = 0{,}056 \rightarrow \underline{5{,}6\ \%}$

(7) $D_{2008} = 9$

$g_1 = 14\% \rightarrow 6\ y$

$g_N = 10\%$

$r = 10\%$



$$V_0 = \sum_{i=1}^{6} \frac{D_0 (1+g_1)^i}{(1+r)^i} + \frac{D_0 \cdot (1+g_1)^6 \cdot (1+0{,}1) + D_0 \cdot (1+g_1) \cdot (1+0{,}1) \cdot 5 \cdot (0{,}14 - 0{,}1)}{(1+r)^6 \cdot (r - g_N)}$$

$V_0 = 50{,}8334 + 175{,}644 = \underline{226{,}51}$

$P_0 = 9,74$

$D_{2008} = 0,27$

$g_1 = 10\%$

$g_2 = 8\%$

$r = 12\%$

A) $$V_0 = \sum_{i=1}^{3} \frac{0,27.(1+0,1)^i}{(1+r)^i} + \frac{0,27.(1+0,1)^3.(1+0,08)}{(1+0,12)^3(0,12-0,08)}$$

$V_0 = 0,7814 + 6,9064 - 7,6878$

B) $$V_0 = \frac{0,27.(1+0,08) + 0,27.(1+0,08).3.(0,1-0,08)}{0,12-0,08}$$

$V_0 = 7,695$

FAIL VALUE $< 9,74$

OVERVALUED

9) SPREAD MODEL

10) A

11) $$V_{2007} = \sum_{i=1}^{4} \frac{D_0.(1+g_1)^i}{(1+r)^i} + \frac{D_0.(1+g_1)^4.(1+g_2)}{(r-g_2).(1+r)^4}$$

$= 8,6346 + 42,6069 = 51,24$

12) A → LOWER

13) $$58,49 = \frac{3,15.(1+0,04) + 3,15.(1+0,04).2.(0,08-0,04)}{r-0,04}$$

$58,49r - 2,3516 = 3,53808$

(4)

$$V_0 = \sum_{i=1}^{2} \frac{3{,}15 \cdot (1+0{,}06)^i}{(1+0{,}08)^i} + \sum_{j=1}^{2} \frac{3{,}15 \cdot (1+0{,}06)^2 \cdot (1+0{,}05)^j}{(1+0{,}08)^2 \cdot (1+0{,}08)^j} +$$

$$+ \frac{3{,}15 \cdot (1+0{,}06)^2 \cdot (1+0{,}05)^2 \cdot (1+0{,}03)}{(1+0{,}08)^4 (0{,}08-0{,}03)}$$

$$V_0 = 3{,}092 + 3{,}034 + 2{,}95 + 2{,}87 + 59{,}084 = 71{,}03$$

(15)

$$\frac{NI}{S} \times \frac{S}{TA} \times \frac{TA}{E}$$

$$ROE = \frac{43.923}{423.474} \times \frac{423.474}{486.203} \times \frac{486.203}{397.925}$$

$$ROE = 0{,}103 \times 0{,}871 \times 1{,}22 = 0{,}1094 = 0{,}11$$

$$g = b \cdot ROE$$

$$g = 0{,}97 \cdot 0{,}1094$$

$$g = 0{,}106 \rightarrow 10{,}6\%$$

$$p = \frac{1.518}{43.923} = 0{,}03$$

$$b = 0{,}97$$

(16)

$p = 0 \rightarrow b = 1 / 100\%$

$p = 10\% \rightarrow b = 0{,}9 / 90\%$

			g	
ROE	8%	12%	8%	8%
b	100%	0,9 = 90%	72%	10,8%

g MIN ... 72% → ... 0,9 · 8% = 72%

g MAX ... 12% ... 1 · 12%