

$$N = 9$$

$$C = 4\% \text{ p.a.}$$

$$FV = PV = 100$$

$$4m = 4\% \rightarrow 4m = 8\%$$

$$P_5 = \sum_{i=1}^4 \frac{4}{(1+0,08)^i} + \frac{100}{(1+0,08)^4}$$

$$P_5 = \frac{4}{1+0,08} \cdot \frac{\left(\frac{1}{1+0,08}\right)^4 - 1}{\frac{1}{1+0,08} - 1} + \frac{100}{(1+0,08)^4} = 23,18489 + 73,5029$$
$$= \underline{\underline{96,6878}}$$

1)

$$FV_5 = 4 \cdot (1+0,08)^4 + 4 \cdot (1+0,08)^3 + 4 \cdot (1+0,08)^2 + 4 \cdot (1+0,08) + 4$$
$$= 4 \cdot \frac{(1+0,08)^5 - 1}{0,08} = \underline{\underline{41,07}}$$

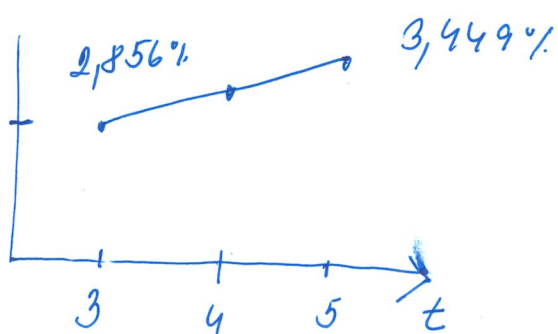
2)  $\text{ZTRITA} = 100 - 96,6878 = \underline{\underline{3,31}}$

3)  $FV_5 = 96,6878 + 41,07 = 137,7578$   
 $PV_0 = 100$

$$r = \sqrt[5]{\frac{137,7578}{100}} - 1 = 0,0662 \Rightarrow \underline{\underline{6,62\%}}$$

4) A:  $P_0 = 107,5$   
 $C = 5,5\%$   
 $N = 3$   
 $4TM_A = 2,856\%$

B:  $P_0 = 104,450$   
 $C = 4,5\%$   
 $N = 5$   
 $4TM_B = 3,449\%$



$$\frac{3,449 - 2,856}{5 - 3} = 0,2965$$

$$4TM_4 = 2,856 + 0,2965$$

$$4m_4 = \underline{\underline{3,1525\%}}$$

$$P_0 = \sum_{i=1}^4 \frac{4,5}{(1+0,031525)^i} + \frac{100}{(1+0,031525)^4}$$

$$P_0 = \frac{4,5}{1+0,031525} \cdot \frac{\left(\frac{1}{1+0,031525}\right)^4 - 1}{\frac{1}{1+0,031525} - 1} + \frac{100}{(1+0,031525)^4}$$

$$P_0 = 16,6661 + 88,32446 = \underline{\underline{104,9905}}$$

$$5. \quad P_0 = \sum_{i=1}^{3.4} \frac{2,25}{(1+0,0245)^i} + \frac{100}{(1+0,0275)^{12}}$$

$$= \frac{2,25}{1+0,0245} \cdot \frac{\left(\frac{1}{1+0,0245}\right)^{12} - 1}{\frac{1}{1+0,0245} - 1} + \frac{100}{(1+0,0275)^{12}}$$

$$= 22,4345 + 72,2134 = \underline{\underline{94,948}}$$

$$6. \quad P_0 = 45$$

$$FV = 100$$

$$n = 4$$

$$FV = PV \cdot \left(1 + \frac{r}{12}\right)^{4 \cdot 12}$$

$$100 = 45 \cdot \left(1 + \frac{r}{12}\right)^{48}$$

$$\underline{\underline{r = 0,042136 \rightarrow 4,2136\%}}$$

$$7. \quad P_0 = 96$$

$$FV = 100$$

$$c = \text{LIBOR} + 0,8 = 1,8 \text{ p.a.} \rightarrow 9,9\%$$

$$96 = \frac{9,9}{1+r} + \frac{9,9}{(1+r)^2} + \dots + \frac{109,9}{(1+r)^4}$$

$$r = 0,016818 \text{ p.s.}$$

$$0,016818 = \frac{\text{LIBOR} + \text{DM}}{2} \rightarrow \underline{\underline{\text{DM} = 0,023636 \rightarrow 2,36.636}}$$

$$PV = 96.500.000$$

$$FV = 100.000.000$$

$$r = \frac{100.000.000 - 96.500.000}{96.500.000} \cdot \frac{365}{360} = 0,03644 \rightarrow \underline{\underline{3,647\%}}$$

9.  $FV = 100$

$$d = 4,25\%$$

$$d = \frac{FV - P}{FV} \cdot \frac{360}{180}$$

$$d = 94,845$$

$$r = \frac{100 - 94,845}{94,845} \cdot \frac{360}{180} = 0,043422 \rightarrow \underline{\underline{4,3422\%}}$$

10.

$$z_3 = \sqrt[3]{(1+0,008) \cdot (1+0,0112) \cdot (1+0,0394)} - 1 = \underline{\underline{0,01944 = 1,944\%}}$$

$$P_0 = \frac{3,5}{1+0,008} + \frac{103,5}{(1+0,008) \cdot (1+0,0112)} = \underline{\underline{105,01}}$$