

$$M = 9$$

$$c = 7\%$$

$$ym_1 = 4\%$$

$$ym_2 = 8\%$$

$$\begin{aligned} & 7 \cdot (1+0,08)^4 + 7 \cdot (1+0,08)^3 + \dots + 7 = \\ \textcircled{1} & = 7 \cdot \frac{(1+0,08)^5 - 1}{0,08} = \underline{\underline{41,07}} \end{aligned}$$

$$\begin{aligned} \textcircled{2} & P_5 = \sum_{i=1}^4 \frac{7}{1+0,08} + \frac{100}{(1+0,08)^4} = \\ & = \frac{7}{1+0,08} \cdot \frac{\left(\frac{1}{1+0,08}\right)^4 - 1}{\frac{1}{1+0,08} - 1} = 23,18488788 + 43,502985 = \end{aligned}$$

$$+ P = \sum_{i=1}^4 \frac{4,5}{(1+0,031527)^i} +$$

$$= 96,6878 \rightarrow \underline{\underline{-3,31}}$$

$$\textcircled{3} \quad FV_5 = P_0 \cdot (1+r)^5 + \frac{100}{(1+0,031527)^4}$$

$$41,07 + 96,69 = 100 \cdot (1+r)^5$$

$$\sqrt[5]{\frac{137,76}{100}} - 1 = 0,0662 \rightarrow \underline{\underline{6,62\%}}$$

$$\textcircled{4} \quad \text{BOND}_1 \rightarrow N=3, c=5,5\% \rightarrow 107,5 \rightarrow ym = 2,8559\%$$

$$\text{BOND}_2 = N=5, c=4,5\% \rightarrow 104,750 \rightarrow ym = \begin{matrix} 2,455\% \\ 3,4495\% \end{matrix}$$

$$\Delta r = \frac{3,4495 - 2,8559}{2} = 0,2968\%$$

$$P_0 = \underline{\underline{104,9899}}$$

$$\text{BOND}_3 \rightarrow 4 \rightarrow 2,8559 + 0,2968 = \underline{\underline{3,1527\%}}$$

$$c = 9\% \rightarrow 1,25\%$$

$$n = 3 \rightarrow 12$$

$$r = 11\% \rightarrow 1,45\%$$

$$P_0 = \sum_{i=1}^{12} \frac{1,25}{(1+0,0275)^i} + \frac{100}{(1+0,0275)^{12}}$$

$$P_0 = \frac{1,25}{1+0,0275} \cdot \frac{\left(\frac{1}{1+0,0275}\right)^{12} - 1}{\frac{1}{1+0,0275} - 1} + \frac{100}{(1+0,0275)^{12}} =$$

$$= 22,4345 + 42,2134 = 94,9479$$

6)

$$P_0 = 45$$

$$FV = 100$$

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

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

$$1 + \frac{r}{12} = \sqrt[48]{\frac{100}{45}}$$

$$r = 0,04214 \rightarrow 4,214\% \text{ p.a.}$$

7)

$$c = \text{LIBOR} + 0,8\% \rightarrow \text{LIBOR} = 1\% + 0,8\%$$

$$c = 1,8\%$$

$$\frac{0,9}{1+r} + \frac{0,9}{(1+r)^2} + \frac{0,9}{(1+r)^3} + \frac{100,9}{(1+r)^4} = 97$$

$$r = 0,016818$$

$$\text{LIBOR} + DM = 0,016818$$

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$$DM = 0,013676$$

$$PV = 96,5$$

$$FV = 100$$

$$n = 360$$

$$100 = 96,5 \cdot \left(1 + r \cdot \frac{360}{365}\right)$$

$$r = 0,03482 \rightarrow \underline{\underline{3,482\%}}$$

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$$n = 180$$

$$T = 360$$

$$FV = 100$$

$$d = 4,25\%$$

$$d = \frac{100 - P}{100} \cdot \frac{360}{180}$$

$$0,0425 = \frac{100 - P}{100} \cdot \frac{360}{180}$$

$$P = 97,875$$

$$Y = \frac{100 - 97,875}{97,875} \cdot \frac{360}{180}$$

$$YIELD = 0,04342 \rightarrow \underline{\underline{4,342\%}}$$

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$$(1+0,008) \cdot (1+0,0112) \cdot (1+0,0394) = 1,05944961$$
$$\sqrt[3]{1,05944961} - 1 = 0,01944 \rightarrow 1,944\%$$

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