

# HEIMADÆMI 2

1.

$$\begin{aligned} r &= 8\% \\ C_0 &= 15 \\ A_1 &= 40 \\ A_2 &= (90-50) \\ A_3 &= 20 \end{aligned}$$

$$\begin{aligned} NPV &= -C_0 + \frac{A_1}{(1+r)^1} + \frac{A_2}{(1+r)^2} + \frac{A_3}{(1+r)^3} \\ &= -15 + \frac{40}{(1+8\%)^1} + \frac{(90-50)}{(1+8\%)^2} + \frac{20}{(1+8\%)^3} \\ &= \underline{72,207} \end{aligned}$$

Já, fjárfestingin er arðbær. Þar sem  $NPV > 0$ , þá uppfyllir fjárfestingin væntingar um ávöxtunarkröfu

2.

$$\begin{aligned} P_t &= 62 \\ P_0 &= 52 \\ t &= 8/52 \end{aligned}$$

$$\begin{aligned} P_t &= P_0 \cdot (1+r)^t \\ \Rightarrow y &= \sqrt[t]{\frac{P_t}{P_0}} - 1 \\ \Rightarrow y &= \sqrt[8/52]{\frac{62}{52}} - 1 \\ &= 2,137 \\ &= \underline{213,7\% \text{ ávöxtun}} \end{aligned}$$

3.

$$\begin{aligned} r &= 12\% \\ M &= 6 \end{aligned}$$

Notum  $i_a = (1 + \frac{r}{M})^M - 1$  og fáum:

$$i_a = (1 + \frac{12\%}{6})^6 - 1 = \underline{12,6\%}$$

4.

$$\begin{aligned} r &= 7\% \\ N &= 5 \\ P &= 600 \text{ þús.} \end{aligned}$$

$$\begin{aligned} F &= 600 \text{ þús.} \cdot (1 + 7\%)^5 \\ &= \underline{841,53 \text{ þús. kr.}} \end{aligned}$$

5.

Setjum  $P = 100$  og þá er  $F = 115$ .

$$\begin{aligned} 115 &= 100(1 + \frac{r}{2})^{2 \cdot 1} \\ \Rightarrow \frac{115}{100} &= (1 + \frac{r}{2})^2 \\ \Rightarrow r &= 2\sqrt{\frac{115}{100}} - 2 \\ \Rightarrow r &= \underline{0,147 = 14,7\%} \end{aligned}$$

6.

$$P_{1/2} = 100 \text{ p\u00fcs.kr.}$$

$$P_2 = 200 \text{ p\u00fcs.kr}$$

$$N_{1/2} = 3/2$$

$$N_2 = 0$$

$$r = 10\%$$

$$\begin{aligned} F &= 100 \text{ p\u00fcs.kr} \cdot (1 + 10\%)^{3/2} + 200 \text{ p\u00fcs.kr} \cdot (1 + 10\%)^0 \\ &= 100 \text{ p\u00fcs.kr} (1 + 10\%)^{3/2} + 200 \text{ p\u00fcs.kr} \\ &= \underline{315.690 \text{ kr}} \end{aligned}$$