# Lecture 6

**Example 1**
Calculate the optimal weights for the example 1 from seminar 4 if you want to have an expected return of the portfolio 30 %.

**Example 2**
The betas of the following four stocks are:
$\beta_1 = 1{,}235$; $\beta_2 = 0{,}268$; $\beta_3 = 1{,}997$; $\beta_4 = 2{,}45$.
Assume that the market is in equilibrium with available risk-free asset of 6 %. $r_m = 14\%$. What will bet he expected return of every of this stocks?

**Example 3**
Assume following rates of returns:

| Year | $r_M$ | $r_i$ | $r_j$ | $\beta_i$ | $\beta_j$ |
|------|-------|-------|-------|-----------|-----------|
| 1 | 10 | 9 | 22 | | |
| 2 | 32 | 24 | 48 | | |
| 3 | 20 | 14 | 30 | | |
| 4 | 18 | -2 | -20 | | |
| 5 | 17 | 16 | 29 | | |
| 6 | 3 | 4 | -3 | | |
| 7 | 12 | 8 | 21 | | |
| 8 | -5 | 0 | -15 | | |
| 9 | 18 | 12 | 28 | | |
| 10 | 21 | 15 | 36 | | |

$r_f = 7\%$

Calculate the betas, then decide if the stock in every year is „aggressive" or „defensive". Thus calculate the beta of every stock for 10 years. Draw a chart…