Lecture 9

Example 1

Calculate Ci and C*. Find the weights for the situation if there is a ban on short selling. How change the weights if SS will be allowed? Calculate return and risk of the portfolio for both scenarios.

Security i	Return $\bar{r}_i$ V%	Excessive Return $\bar{r}_i - r_f$	Beta β_i	Unsystematic risk $\sigma^2_{\varepsilon_i}$ V %	$\frac{\bar{r}_i - r_f}{\beta_i}$
1	15	10	1	50	10
2	17	12	1,5	40	8
3	12	7	1	20	7
4	17	12	2	10	6
5	11	6	1	40	6
6	11	6	1,5	30	4
7	11	6	2	40	3
8	7	2	0,8	16	2,5
9	7	2	1	20	2
10	5,6	0,6	0,6	6	1,0
$r_f = 5\%$, $\sigma^2_M = 10$					

Example 2

Repeat the procedure with new input data:

Security i	**Return** $\bar{r}_i$ V%	**Beta** β_i	**Unsystematic risk** $\sigma^2_{\varepsilon_i}$ V **%**
1	19	1	20
2	23	1,5	30
3	11	0,5	10
4	25	2	40
5	13	1	20
6	9	0,5	50
7	14	1,5	30
8	10	1	50
9	9,5	1	50
10	13	2	20
11	11	1,5	30
12	8	1	20
13	10	2	40
14	7	1	20

$r_f = 3\%$, $\sigma_M^2 = 10$