Problem Set 6

March 13, 2012

From Chapter 2, we learnt for the case of n risky assets and a riskfree asset, the optimal portfolio weights for the n risky assets were shown to be

$$\omega^* = \lambda V^{-1}\left(\bar{R} - R_f e\right)$$

where $\lambda = \frac{\bar{R}_p - R_f}{\varsigma - 2\alpha R_f + \delta R_f^2}$, $\alpha = \bar{R}' V^{-1} e = e' V^{-1} \bar{R}$, $\varsigma = \bar{R}' V^{-1} \bar{R}$, *and* $\delta = e' V^{-1} e$.

Explain why all investors, no matter what their degree of risk aversion, choose to hold the risky assets in the same relative proportions. In particular, provide an numerical example for illustration.

This problem set is due to Mar 28th.