

MATH 497 - Additional Questions for Homework on Section 3.2.2.

A. Suppose that S_1 and S_2 are securities with expected returns $\mu_1 = 0.12$ and $\mu_2 = 0.05$, and risk measured as $\sigma_1 = 0.2$ and $\sigma_2 = 0.02$.

(i) Suppose that $c_{12} = 0.003$. What is the expected return μ_V and standard deviation of the portfolio return σ_V for portfolio that is weighted 40% towards S_1 and 60% towards S_2 ?

(ii) Compute the weights in the portfolio with the minimum risk for each of the following cases. Also calculate the expected return and standard deviation of return produced by portfolios with such weightings.

(a) $\rho_{12} = 0.9$

(b) $\rho_{12} = 0$

(c) $\rho_{12} = -0.9$