Assignment 3

Started: Oct 25 at 10:24pm

Quiz Instructions

Complete this assignment by 11:59 p.m. on Saturday November 5.

Consider the following mean-variance analysis for the case of two risky assets. These two assets have the following expected returns and variance-covariance matrix:

$$\overline{R} = \begin{pmatrix} 1.06 \\ 1.09 \end{pmatrix}, V = \begin{pmatrix} 0.1 & 0.05 \\ 0.05 & 0.15 \end{pmatrix}$$

Question 1

5 pts

What is the standard deviation of the minimum variance portfolio?

State your answer to 4 decimal places, e.g., 0.2532 .

0.2887

Question 2

5 pts

What is the expected return on the minimum variance portfolio?

State your answer to 4 decimal places, e.g., 1.0745 .

1.07

Question 3

5 pts

Based on your answer in question 2, what must be the minimum variance portfolio's proportion invested in asset 1, ω_1?

State your answer to 4 decimal places, e.g., 0.4221

0.6667

Question 4

5 pts

Suppose an investor chooses a mean-variance efficient portfolio with a variance of 0.1. What is the expected return on this mean-variance efficient portfolio?

State your answer to 4 decimal places, e.g., 1.0857 .

1.08

Question 5

5 pts

Suppose, in addition to the two previously-specified risky assets, there is now a riskfree asset at pays the return R_f =1.03. Consider the tangency portfolio. What is the tangency portfolio's proportion invested in asset 1, ω_1^T ?

State your answer to 4 decimal places, e.g., 0.5839 .

0.25

Question 6

5 pts

With this riskfree asset and the two risky assets, what is the Sharpe ratio obtained by investors who choose mean-variance efficient portfolios?

State your answer to 4 decimal places, e.g., 0.5297 .

0.1587

Question 7

5 pts

With the riskfree asset and two risky assets, suppose an investor chooses a mean-variance efficient portfolio with a variance of 0.12. What is the expected return on this mean-variance efficient portfolio?

State your answer to 4 decimal places, e.g., 1.08346.

1.085

Quiz saved at 9:39pm

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