

EE431/438 Economics of Financial Markets and Institutions

Problem Set 2 : Mean-Variance Analysis.

This topic is the last one before the midterm exam. It covers the materials discussed in the last class before the midterm week. There is not enough time to assign this exercise, to mark and to return it back to the students before the midterm week. Therefore, students should practice this exercise by themselves for the exam preparation. **There is no need to submit.**

If you have any problem with this exercise, please come to my office during office hours (Tuesday 11.00 – 12.00, Thursday 11 – 12.00) or make an appointment via email (sicha@econ.tu.ac.th or sicha28@gmail.com). I would be pleased to assist. I regularly come to my office (except Wednesday and Friday when I have other arrangements to do at the other campus).

Instructions:

Use the following information to answer part (a), (b), (c) and (d) of this question.

Portfolio	Expected rate of returns (%)	Standard deviation (%)
X	10	10
Y	15	20

Correlation coefficient (r_{xy}) between the rate of return of portfolio X and the rate of return of portfolio Y is - 0.2. The risk free rate (R_f) is 2%.

- (a) Let the market portfolio M has 2/3 of the asset invested in X and 1/3 of the asset invested in Y. Find the equation for the CML.
- (b) Suppose that Mr.Stefan chooses to invest 50% in the market portfolio M and 50% in the risk free asset. Show how to calculate the standard deviation and the expected rate of returns on his portfolio. Graphically illustrate his choice on the CML.