

Homework 6:Portfolios

Due Monday November 11 5pm (in TA or instructor boxes).

1. Financial Literacy: Answer these questions in 3 steps. (1) give an answer to the question, (2) look over the material assigned for class and find a definition (3) modify, if need be, your first answer. The goal is not for you to memorize a given answer but to be sure you can explain the concept to someone. If you can't, then you do not control that concept.
 - a. Market portfolio
 - b. Systematic risk
 - c. Relative return ratio
 - d. Tangent portfolio
 - e. Leverage
 - f. Loan to value ratio
2. An investor who has been using CAPM principles for choosing her portfolio (she has a mean-variance utility function) faces a number of different situations. Note you are trying to trace out partial equilibrium effects (if everyone's demand changes in the same way there would be other effects as well).
 - A. Given a risk free return 4% and her portfolio is balanced 30% risk free asset and 70%, graph the efficient frontier, the market portfolio, the set of tangent portfolios and her choice in a risk-return diagram. What condition is required of her utility function at her choice?
 - B. Suddenly there is a sharp inflow of capital from abroad and the price of the riskless asset rises so that its return drops to 3.5%. If there was no change in the price of risk securities, how would the investor's optimal portfolio change?
 - C. Suppose as in (B) that the price of the riskless asset falls to 3.5% but there is no change in the variance-covariance matrix of risk assets, what happens to the price of risky securities? In a new diagram plot the change to the efficient frontier, the market portfolio, the set of tangent portfolios. What can you say about the investor's change in portfolio?
 - D. Suppose conversely that the riskless return remains the same but that due to budgetary uncertainty in Washington the amount of systematic risk has increased. What do you think happens to the return to the risky portfolio? (hint consider an investor who was wholly invested in the market portfolio). What would be the response of the investor we considered above?