

Session 3

Capital Asset Pricing Model (CAPM)

Market_Portfolio.xlsx contains monthly nominal (net) returns for the market portfolio, expressed as a percentage. These returns cover the ten-year period from Jan 2004 through Dec 2013. Assume that the (net) risk-free rate is 0.13% per month.

Market Model

Estimate the intercept coefficient (α) and slope coefficient (β) for each of the ten industry portfolio using the market model: regress the monthly *excess* returns for each industry portfolio on the monthly *excess* returns for the market portfolio.

- Create a table showing the intercept and slope coefficients for the ten industry portfolios.
- Briefly explain the economic significance of the intercept and slope coefficients.

Security Market Line (SML)

Calculate the mean monthly return for each of the ten industry portfolios, as well as the market portfolio.

Regress the mean monthly returns of the ten industry portfolios and the market portfolio on the corresponding β 's. This will give you the intercept and slope coefficients for the SML. (Warning: the results may be very different from what you would expect!)

- Use the estimated intercept and slope coefficients for the SML to plot the SML in the range of β from zero to two on the horizontal axis.
- Also plot the positions of the ten industry portfolios and the market portfolio. (You are NOT required to label the individual portfolios.)
- Briefly explain the economic significance of the SML.

Please submit all relevant results (including graphs and qualitative discussion of economic significance) as an Adobe PDF file to Homework 2 before the end of Sunday, 24 Sep 2023.

0 % 0 of 3 topics complete

Wikipedia: Capital Asset Pricing Model ●

 Link

Lecture Notes: Capital Asset Pricing Model ●

 PDF document

Market Portfolio ●

 Excel Spreadsheet