

Introduction to Financial Econometrics Mock Exam November 2017

Please answer to all questions

Allowed time 90 minutes

1. Please describe (a) the general purpose of the programme **mock201712.R** and (b) the successive steps that are taken in its implementation (**6 points**)
2. How is portfolio 15 constructed ? (**1 point**)
3. Generate a crossplot of the `ret15` and `retmkt` and add to the plot the linear interpolant. Can you deduct the CAPM beta from such an interpolant ? (**3 points**)
4. Suppose to have invested 1 dollar in portfolio 15 and in the market at the beginning of 1956. Can you give an indication for the total compensation for risk that it has been earned by investing in these two portfolios over the period 1956-2000 ? (**3 points**)
5. What does the command "seasplot" do and how do you interpret the results obtained by running it on `ret15` and `retmkt` ? (**2 points**)
6. Explain what the command `wald.test` on line 38 of the code does (**2 points**)
7. Does the estimation of the model "seasreg" allow to test the CAPM ? How would you perform such a test using the Wald test ? Run the test and interpret the results (**3 points**)
8. Briefly describe the Fama McBeth procedure to test the CAPM. (**3 points**)
9. What are the intercept and the slope of the Security market line estimated on the 25 FF portfolio over the period 1962:1-2014:16 ? (**2 points**)
10. Interpret the results of the cross sectional test of the CAPM provided in the code. Which variance covariance matrix is used to construct such a test? Is the choice made in the current version of the programme optimal ? If not provide a better alternative. (**5 points**)