

Introduction to Financial Econometrics Fall 2017
Assignment 5: Model Misspecification

Using the database FF_Data_CH3.xls with all transformation implemented

1. Estimate over the sample 1962:1 2014:6 the CAPM for the returns on portfolio 15
2. Estimate the same sample a 3-factor model based on the the MARKET, R_HML and R_SMB
3. What is the semipartial R^2 associated to R_HML and R_SMB ?
4. Using just the output of the regressions of point 1. and 2. derive an F-test for the joint significance of the coefficients on the Fama-French Factors. Compare your results with those derived by using the traditional Wald test specification.
5. Test the restrictions that the coefficient on R_HML is equal to the coefficient on R_SMB minus 0.5. In the case the null is not rejected perform RLS estimations and compare the efficiency of the RLS and OLS estimates.
6. You are asked to evaluate the effect on the excess returns on portfolio 15 of a shock of 5 per cent in the market excess returns. Provide an estimate and carefully discuss the procedure you have chosen to reach the required objective.