

Home Assignment 4

1. Download the Fama-French factors from:

https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html

Choose **5-factor daily** .csv file and edit it for reading into R script (delete headers and choose relevant time period). Use data for four last years.

2. Choose **unique** four companies: large-cap (growth and value) and small-cap (growth and value). Post them for other students in the Class List, so that nobody else can use them.

Large-cap: market capitalization > 10B;

Small-cap: 300M - 2B.

Growth: technology, biotech;

Value: utilities, consumer staples, energy, finance (but not fin-tech).

One way to choose them is to find constituents of the relevant ETFs, e.g. small-cap value ETF.

3. Implement an R script for estimating one-, three, and five-factor models using F-Factors.r as a prototype.
4. Analyze how important is each factor for chosen securities (discuss the model's R^2 and p-values for factor loadings. Make general conclusions based on your findings.
5. Write a detailed report. Attach the script in the end or as a separate file.