January 25, 2021

Empirical Asset Pricing A

Homework III

Data

For a sample period from 1969 to 2018 (last 50 years):

- Download from Kenneth French's Data Library monthly return data for the *25 portfolios formed on size and book-to-market* (5 x 5) and the *market excess return* Rm-Rf as well as the *risk-free (short) rate* Rf – both contained in the Fama/French 3 factors.
  `http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html`
- Download from the St. Louis Fed FRED database monthly data on *Moody's Seasoned Aaa and Baa Corporate Bond Yield* and create a monthly time-series of the default spread ("Baa - Aaa").
  `https://fred.stlouisfed.org/categories/32348`.
- Download from the Bureau of Economic Analysis (BEA) monthly data on *Compensation of employees*, using NIPA Table 2.6 "Personal Income and Its Disposition, Monthly", and create a monthly time-series of labor income growth.
  `https://apps.bea.gov/iTable/iTable.cfm?reqid=19&step=2#reqid=19&step=2&isuri=1&1921=survey`

Exercise

1. *Predictability Regression:* Run predictability regressions for the one-year ahead market excess return using (a) the default spread and (b) the short rate as predictor.

   Describe and interpret your findings.

2. *Conditional CAPM Test:* Test the conditional CAPM using the methodology of Jagannathan and Wang (1996) for the 25 Fama/French portfolios. That is,

   - run time-series regressions to get the betas ("market", "premium", "labor");
   - run a cross-sectional regression of mean portfolio excess returns on betas;
   - plot the mean realized portfolio excess returns against the "fitted" excess returns from the cross-sectional regression.

   Report the R^2s of the regressions as well as any other statistics that you find important. Describe and interpret your findings.