6th set of assignments Financial Econometrics – solutions

pooled time series regression using avwret

- Sample(adjusted)! 1947:2-1993:4

- series factor1b = avwret-avustret
  series factor2 = hml_r-1
  series factor3 = smb_r-1

- Objects -> new objects -> pool: pooled time series regression
  Dependent variable: decile?-avustret
  Cross section specific coefficients: c factor1b factor2 factor3
  No intercept, no weighting -> estimate
  Make residuals
  matrix varcovres6b = @cov(residuals6b)

- group factors: factors6b
  matrix varcovfactor6b = @cov(factors6b)

- create mean vector:
  vector(3) meanfac6b
  meanfac6b.fill @mean(factor1b),@mean(factor2),@mean(factor3)

  0.018130
  0.002613
  -0.005883

- GRS statistic:
  alpha: see assignment sheet
  one: see assignment sheet

  matrix grsb =
  t*@inverse(one+(@transpose(meanfac6b)*@inverse(varcovfactor6b)*meanfac6b))*
  @transpose(alpha6b)*@inverse(varcovres6b)*alpha6b

  GRS- Statistic: 10.545

- p-value :
  matrix pavelgrs6b = one-@cchisq(grsb,10)
  p-value = 0.394