

# Assignment 11

1. Consider the daily simple returns of IBM stock, CRSP value-weighted index, CRSP equal-weighted index, and the S&P composite index from January 1980 to December 2008. The index returns include dividend distributions. The data file is d-ibm3dxwkdays8008.txt, which has 12 columns. The columns are (year, month, day, IBM, VW, EW, SP, M, T, W, H, F), where M, T, W, R, and F denotes indicator variables for Monday to Friday, respectively.
  - (a) Use a regression model to study the effects of trading days on the equal-weighted index returns. What is the fitted model? Are the weekday effects significant in the returns at the 5% level?
  - (b) Use the HAC estimator of the covariance matrix to obtain the t ratio of regression estimates. Does the HAC estimator change the conclusion of weekday effects?
2. Now consider similar questions of the previous exercise for the IBM stock returns.(d-ibm3dxwkdays8008.txt)
  - (c) Refine the above model by using the technique of regression model with time series errors. In there a significant weekday effect based on the refined model?
3. Again, consider the two bond yield series, that is, Aaa and Baa. What is the relationship between the two series? To answer this question, build a time series model using yields of Aaa bonds as the dependent variable and yields of Baa bonds as independent variable.