

Rutgers University
Department of Economics
Econ 510 (Applied Econometrics for Macro)
Spring 2008
Exercise 2

Notes

1. All answers should be typed and written in complete sentences. Your answers should be such that I can recreate your results from reading your write-up.
2. This assignment is due on Wednesday, March 12.

Problem 1

In this exercise I want you to formally test for a unit root in the 3-year constant maturity Treasury Bill interest rate. You can use any methods described in class. The data can be found in the file *Tbill.xls* on the course website: <http://econweb.rutgers.edu/lane/courses>.

- a) Test for a unit root under the assumption that there are no structural breaks in the series. Be clear as to what your maintained and alternative hypotheses are.
- b) Test for the presence of any structural breaks in this series. In particular, estimate an AR(p) model in first differences and test whether there are any breaks in the underlying parameters of the model.
- c) Use the information from part b) to test for a unit root in the presence of, possibly, multiple breaks.