

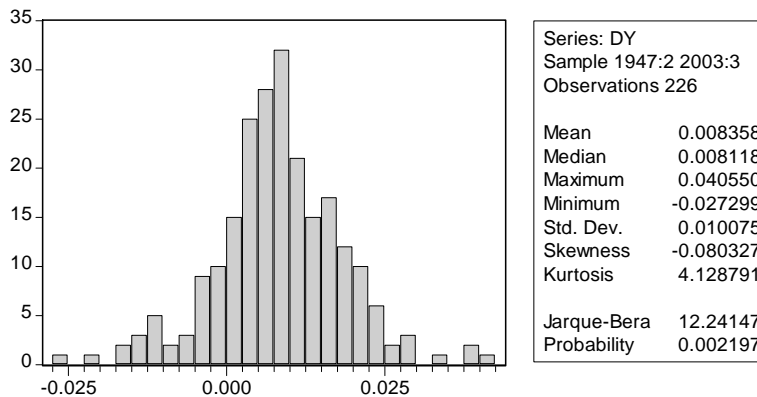
## Problem Set 4

This problem set is due in lecture on **Monday, November 10th**. No late problem sets will be accepted. **Be sure to show your work** (that is, do not use a spreadsheet or statistical program to generate your answers), and to write your name, ID number, as well as the name of your Teaching Assistant, on your problem set.

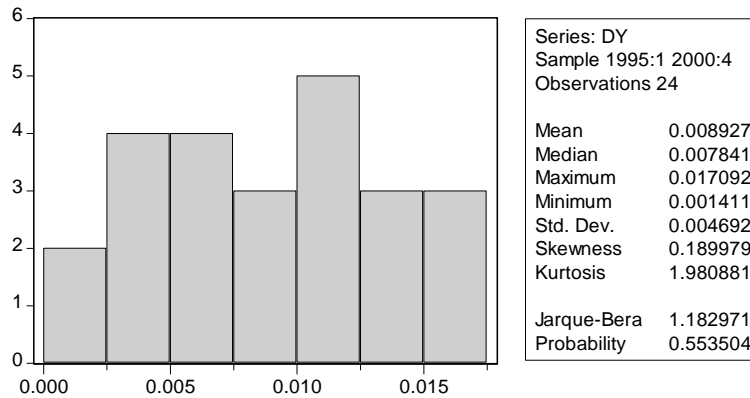
Answer all these problems. They are from the textbook, with the exception of Problem Z.1 which is written out.

- 7.8
- 7.20
- 7.28
- 7.34
- 7.40
- 7.56
- 8.10
- 8.16
- 8.18
- 8.26
- 8.34
- 8.48
- 8.52
- 8.58

Z.1. Below are summary statistics and a histogram for GDP growth rates (quarter-on-quarter) over the 1947q1-2003q3 period.



- a) What is the 99% confidence interval for quarterly GDP growth?
- b) During the late 1990's there was discussion of a New Economy, characterized by accelerated GDP growth. Over the 1995q1-2000q4 period, the growth rate was 0.8927% quarter on quarter, with standard deviation of 0.4692%.



Conduct a hypothesis test that 1995q1-2000q4 growth rate was different from the of 0.7111% quarter on quarter growth rate prevailing during the 1973q1-1994q4 period. State your assumptions.

c) GDP for 2003q3 was announced on Thursday, October 30<sup>th</sup>. It implied a 1.7276% quarter on quarter growth rate (6.9% at an annualized rate). With this single observation, is it possible to conduct a hypothesis test that the growth rate is significantly higher than that prevailing in the 1973q1-1994q4.