

Macroeconomics I

Homework assignment #2

Deadline: April 11th, 2014, before the midterm as a **hard copy**

Problem 1. (25 points) Identifying business cycles

Pick a country which is of interest to you. **DO NOT CHOOSE THE U.S.** Go to the official web page of the national statistical office of this country and download **quarterly data** as far to the past as possible (minimum from 1990) on the following statistics: real GDP, consumption, investment, unemployment. Hint: You should look for the GDP data by expenditures.

Using the data for real GDP, calculate quarterly growth rates, average growth rate over the entire period and plot the graph. On the graph, identify the areas of recessions. Then, calculate growth rates of consumption, investment and unemployment, plot their graphs and analyze behavior of these variables during business cycles (recessions). You can plot all variables as one graph. Describe your results.

It would be interesting if you choose your country of origin.

Problem 2. (15 points) Monetary policy

Pick a country (you can use the same country as in Problem 1) and visit the web page of the central bank of this country. Describe the current stance of the monetary policy. What is the main short-run interest rate and its current target level? How often the interest rate is changed? If the interest rate has changes recently, what does the change imply about the bond holdings by the bank?

Problem 3. The IS-LM model

a) **(15 points)** During financial panics, economic agents complain of high interest rates and declining economic output. Use the IS-LM model to describe why panics have those effects. Hint: financial panic is characterized by declining and volatile prices of financial securities (for example, bonds) with positive default risk.

b) **(15 points)** Suppose that the government wants to raise investment but keep output constant. In the IS-LM model, what mix of monetary and fiscal policy will achieve this goal? In the early 1980s, the U.S. government cut taxes and ran a budget deficit while the Fed pursued a tight (contractionary) monetary policy. What effect should this policy mix have? Explain using the IS-LM diagram.

c) **(15 points) Inelastic demand for money.** Suppose the demand for money depends only on income and does not respond to the interest rate (changes in i do not affect M^D).

- Draw the general equilibrium described by IS-LM diagram. What is the form of LM curve in this case and why?
- Suppose the government intends to increase Y by means of either fiscal or monetary policy. Which policy would allow the government to achieve this objective in a situation of inelastic demand for money and which will not? Explain using the IS-LM diagram.

d) **(15 points) Inelastic investment.** When investors are very pessimistic about the future, investment is not sensitive to interest rates.

- What is the form of IS curve?
- If the government intends to stimulate the economy, which policy (monetary/fiscal) will be effective in this case and which will be not? Explain using the IS-LM diagram.

Good luck!