Endterm Examination

IFMR GSB, Krea University (Batch: 2019-21)
Macroeconomics (Course Code: **ECON502**)
04 December 2019

Maximum Points: 60 **Duration**: 150 minutes

Instructions and Advice:

- This exam accounts for 30% of your final grades.
- The question paper is divided in two sections- Part A and Part B.
- You need to answer 6 questions in all. [3 from Part A, and 3 from Part B]
- You can choose between Question 1 and Question 2, between Question 3 and Question 4, between Question 5 and Question 6.
- In case you choose to answer Question 1 as well as Question 2 (by accident or by design) in the exam, the first question that you attempt will be evaluated. Same goes for Questions 3 and 4 (and for Questions 5 and 6).
- All other questions are compulsory.
- Please be brief and precise in your answers. Unnecessarily lengthy answers will attract penalty.
- Label all graphs and figures clearly.
- At no point of this examination you are allowed to ask clarificatory questions. Make reasonable assumption if you have doubts and proceed to answer the question.
- You are **allowed** to use a non-scientific calculator in the exam.
- There is plenty of time. Use it wisely, do not rush.
- All the best! **:)**

Part A

1. (4 points) *Label each of the following statements true, false, or uncertain. Explain briefly. [NOTE: There are no points for answers without explanation.]*
   (a) (2 points) A high value of Tobin's q indicates that the stock market believes that capital is overvalued, and thus investments should be lower.
   (b) (2 points) Current money demand depends on current and expected future nominal interest rates.

   Or

2. (4 points) *Using the IS-LM model, determine the impact on stock prices of each of the policy changes described in (a) and (b).*
   (a) (2 points) An unexpected expansionary monetary policy with no change in fiscal policy.
   (b) (2 points) A fully expected expansionary monetary policy with no change in fiscal policy.

3. (5 points) *Consider an open economy with a fixed exchange rate, $\bar{E}$. Assume that the foreign interest rate, i^*, remains constant. Suppose that financial market participants believe that the government is committed to a fixed exchange rate.*
   What is the expected exchange rate? According to the interest parity condition, what is the domestic interest rate?

   OR

4. (5 points) *Assume that the one-year nominal interest rate is 10% in the domestic economy and 6% in the foreign economy. Also assume that inflation over the coming year is expected to be 6% in the domestic economy and 3% in the foreign economy. Suppose that interest parity holds.*
   What is the expected nominal depreciation of the domestic currency over the coming year?

5. (6 points) *Consider a world with three equal-sized economies (A, B, and C) and three goods (clothes, cars, and computers). Assume that consumers in all three economies want to spend an equal amount on all three goods. The value of production of each good in the three economies is given below.*

	A	B	C
Clothes	10	0	5
Car	5	10	0
Computer	0	5	10

   (a) (3 points) What is GDP in each economy? If the total value of GDP is consumed and no country borrows from abroad, how much will consumers in each economy spend on each of the goods?
   (b) (3 points) If no country borrows from abroad, what will be the trade balance in each country? What will be the pattern of trade in this world (i.e., which good will each country export and to whom)?

   Or

6. (6 points) When the stock market crashes, what influence does it have on investment, consumption, and aggregate demand? Why? How should the central bank respond? Why?

Part B

7. (10 points) *Consider a fixed exchange rate system, in which a group of countries (called follower countries) peg their currencies to the currency of one country (called the leader country). Since the currency of the leader country is not fixed against the currencies of countries outside the fixed exchange rate system, the leader country can conduct monetary policy as it wishes. For this problem, consider the domestic country to be a follower country and the foreign country to be the leader country*
   (a) (5 points) In an $IS - LM - UIP$ diagram, show the effect of an increase in foreign output, Y^*, on domestic output, Y. Explain in words.
   (b) (5 points) In an $IS - LM - UIP$ diagram, show the effect of an increase in the foreign interest rate, i^*, on domestic output, Y. Explain in words.

8. (15 points) *Consider an open economy in which the real exchange rate is fixed and equal to one. Consumption, investment, government spending, and taxes are given by*

$$C = 10 + 0.8(Y - T), I = 10, G = 10, \text{ and } T = 10$$

   Imports and exports are given by

$$IM = 0.3Y \text{ and } X = 0.3Y^*$$

   where Y^* denotes foreign output.
   (a) (5 points) Solve for equilibrium output in the domestic economy. What is the multiplier in this economy? If we were to close the economy what would the multiplier be? Why would the multiplier be different in a closed economy?
   (b) (5 points) Assume that the foreign economy is characterized by the same equations as the domestic economy (with asterisks reversed). Use the two sets of equations to solve for the equilibrium output of each country. What is the multiplier for each country now? Why is it different from the open economy multiplier in part (a)?
   (c) (5 points) Assume that the domestic government, G, has a target level of output of 125. Assuming that the foreign government does not change G^*, what is the increase in G necessary to achieve the target output in the domestic economy? Solve for net exports and the budget deficit in each country.

9. (20 points) *When looking at the short run in Section 14-2, we showed how an increase in nominal money growth led to higher output, a lower nominal interest rate, and a lower real interest rate. The analysis in the text (as summarized in Figure 14-5) assumed that expected inflation, π^*, did not change in the short run. Let us now relax this assumption and assume that in the short run, both money growth and expected inflation increase.*
   (a) (5 points) Show how this affects the IS curve. Explain in words.
   (b) (5 points) Show how this affects the LM curve. Explain in words.
   (c) (10 points) How does this affect output and the nominal interest rate? Could the nominal interest rate end up higher than before the change in money growth? Why?