

Final examination

---

**Instructions:**

- This is a **3 hour** exam with **5 questions** worth a total of **180 points** (approximately 1 point per minute), as indicated at the start of each question.
- In order to get full credit, you must give a clear, concise, and correct answer, including all necessary explanations.
- Calculators, books and notes are **not** permitted.
- Use this exam copy for question 1. Use bluebooks for questions 2-5
- Please don't forget to write your name on each copy of your exam.

Good luck!

Last Name: \_\_\_\_\_

First Name: \_\_\_\_\_

**WRITE YOUR ANSWERS TO QUESTION 1 ON PAGES 2-5.**

1. [30 points, 5 each] **Choose six out of the eight following True, False, Uncertain questions.** Explain briefly your answers, and cite the relevant theories, when applicable.

(a) A current account deficit requires a depreciation of the domestic currency in order to stimulate exports and limit imports.

(b) Countries with high domestic inflation rates over long periods of time experience a high rate of depreciation of their nominal exchange rate relative to the currency of countries with lower inflation rates.

(c) An increase in domestic nominal interest rates is always associated with a nominal appreciation of the domestic currency.

(d) If the price of oil were to temporarily fall to \$15 a barrel, we should expect the U.S. and other oil dependent countries to run a smaller current account deficit.

- (e) According to the World Bank, GDP per capita in 2002 was close to \$1,000 in China and \$36,000 in the U.S. [This is a fact; do not discuss]. This implies that the typical U.S. person has about 36 times the purchasing power of a typical Chinese person.

- (f) Under the Bretton Wood system, the country at the center (the U.S.) can set its monetary policy at will. Other countries will have to adjust their monetary conditions.

- (g) Currency crises arise when financial markets panic and trigger a run on a central bank's international reserves. Therefore, currency crises are fundamentally unpredictable.

- (h) Under a fixed exchange rate regime, a country can generally attain internal and external balance using only fiscal policy.

**WRITE YOUR ANSWERS TO QUESTIONS 2-5 ON BLUEBOOKS**

2. **[25 points]** Policymakers around the world often face what Obstfeld and Taylor dubbed a ‘policy trilemma’:

- They want to fix the nominal exchange rate, in order to stabilize the price level;
- They want capital mobility for efficiency and flexibility purposes;
- They want to engage in active monetary policy for output stabilization purposes.

Using the concepts you have learned in class, explain in detail why this is a ‘trilemma’, i.e. why only two of the three objectives can be achieved at any point in time. Explain in detail, using diagrams and theory how your answer depends on whether the domestic and foreign economies are hit by real or nominal shocks.

[Note: you may interpret a real shock as a shock to the IS curve, and a nominal shock as a shock to the LM curve]

3. **[30 points]** The European Monetary Union.

- (a) **[10 points]** In May 2003, Gordon Brown, Britain’s Chancellor of the Exchequer, announced that the UK would postpone joining the Euro. At the heart of that decision were five tests that the UK should pass before joining. The first three tests are:
- i. Are business cycles and economic structures compatible so that Britain can live permanently with euro interest rates?
  - ii. If problems emerge, is there sufficient flexibility to deal with them?
  - iii. Will joining the euro promote higher growth and stability?

(The other two tests have to do with London as a financial center and whether the UK will keep attracting foreign capital). Discuss the rationale behind the three tests above. Do they make sense? Regarding test iii, would you expect joining the Euro to have a permanent effect on growth and stability?

- (b) **[10 points]** In light of your readings from The Economist, discuss some of the economic problems associated with the European Union’s Stability and Growth Pact (SGP).
- (c) **[10 points]** Last year, output growth was -0.2% in Germany and 4.5% in Greece; Inflation was 1.2% in Germany and 3.5% in Greece. The three-month nominal money market rate in the eurozone was 2 percent. Based on these numbers, discuss whether a common monetary policy is appropriate and why.

4. **[50 points]** Over the years, a number of countries (Mexico, Brazil, Argentina....) have implemented **Exchange Rate Based Stabilization** programs (ERBS). In an ERBS, the government of a country with high inflation pegs the domestic currency to the U.S. dollar or to the currency of some other country with low inflation.
- (a) **[10 points]** Discuss briefly why fixing the exchange rate can be an effective way to fight inflation.
  - (b) **[10 points]** Explain why the domestic and foreign *nominal* interest rates must be equal during the ERBS program.
  - (c) **[10 points]** Infer what happens to the domestic real interest rate in the early stage of the stabilization program. What happens to output in the short run? (Hints: (a) you may assume that the stabilization is not immediate so that domestic inflation  $\pi$  still exceeds U.S. inflation  $\pi^*$ ; (b) recall the Fisher relation:  $i = r + \pi^e$ )
  - (d) **[10 points]** Express the rate of depreciation of the **real** exchange rate in terms of domestic and foreign inflation. Describe what happens to the real exchange rate and the current account following an ERBS. What needs to happen to domestic inflation relative to foreign inflation for the real exchange rate to depreciate?
  - (e) **[10 points]** ERBS often end with a speculative run against the currency. In light of your answer to the previous question, can you explain why?
5. **[45 points]** The U.S. dollar has declined substantially against the Euro over the past year.
- (a) **[10 points]** In light of your readings of The Economist, discuss broadly how you interpret this depreciation of the US dollar and some of the associated risks for the US economy.
  - (b) **[10 points]** The European Central Bank (ECB) is very concerned with the depreciation of the dollar. Suppose it decides to increase permanently its money supply. We are interested in the impact of this policy on the U.S. Using the IS-LM/IEB-RIP diagram, explain how the Euro real interest rate and Euro output change.
  - (c) **[10 points]** Describe the effect on the current Euro real and nominal exchange rates, on the future Euro real and nominal exchange rates and on Euro area net exports.
  - (d) **[5 points]** Describe how the change in (a) Euro output and (b) the exchange rate affect US's output. What can you conclude about the impact of a Euro monetary expansion on US's output?
  - (e) **[10 points]** Explain why the U.S. might respond to the European monetary expansion with a permanent expansion of its own money supply. Briefly, describe why coordination of monetary policies might yield a better outcome.