

Midterm - Economics 160B, Winter 2008, Version A

You will have 75 minutes to complete this exam. There are 4 pages and 101 points total. Good luck.

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**Multiple choice:** Choose the best answer. (3 points each, 21 points total)

Please record your multiple choice answers here:

1\_\_\_\_ 2\_\_\_\_ 3\_\_\_\_ 4\_\_\_\_ 5\_\_\_\_ 6\_\_\_\_ 7\_\_\_\_

- 1) If the U.S. central bank sells some of its holdings of Japanese government bonds to a French financial firm, how will this affect the U.S. balance of payments accounts?
  - a) Credit in the financial account
  - b) Credit in the current account
  - c) Debit in the financial account
  - d) Debit in the current account
  - e) Does not enter the balance of payments.
- 2) If you purchase a shirt made in India, which of the following U.S. national income account categories will this purchase enter?
  - a) Consumption
  - b) GDP
  - c) Current account
  - d) Both a and b
  - e) Both a and c
- 3) According to the 'asset approach' to exchange rates, if Argentina has a flexible exchange rate and its Central Bank cuts its money supply temporarily, the short-run effect will be to make Argentina's interest rates \_\_\_\_ and the value of Argentina's currency \_\_\_\_.
  - a) rise, depreciate.
  - b) rise, appreciate.
  - c) fall, depreciate
  - d) fall, appreciate.
  - e) fall, not change
- 4) Which of the following would tend to make Purchasing Power Parity hold better?
  - a) Prices become more sticky in the short run.
  - b) Markets become less perfectly competitive.
  - c) Lower oil prices reduce transport costs.
  - d) Governments raise tariff rates.
- 5) The reason that overshooting is a useful theory is that it helps explain:
  - a) how you can make a profit in the foreign exchange market.
  - b) low trading volume in the foreign exchange market.
  - c) existence of a risk premium.
  - d) high volatility of the exchange rate.
  - e) why the foreign exchange market is highly integrated globally.
- 6) Estonia fixes its exchange rate to the euro. If the European central bank lowers the European interest rate, this will cause Estonia's foreign reserves to \_\_\_\_ and its money supply to \_\_\_\_.
  - a) rise, rise
  - b) fall, fall
  - c) rise, fall
  - d) fall, rise
  - e) rise, not change
- 7) According to the trilemma theory, if China has a fixed exchange rate and wants monetary policy autonomy, then it cannot have
  - a) capital controls
  - b) capital mobility
  - c) capital account surplus
  - d) capital account deficit

**Problem 1: Interest Rate and Purchasing Power Parities** (20 points total, 5 points each)

Suppose that the following conditions all hold: uncovered and covered interest rate parity (no risk premium), real interest rate parity, relative and absolute purchasing power parity.

And suppose you read the following information in the newspaper:

- The current nominal interest rate for a 1-year deposit in a Brazilian bank is 20% (0.20).
- The current spot exchange rate between Mexico and Brazil is 1 (Mexican peso / Brazilian real).
- The 1-year forward exchange rate between Mexico and Brazil is 0.95 (Mexican peso / Brazilian real).

For each of the following, compute a value using the information above, or state if there is not enough information given above to do this. Show your work in each case and name which parity conditions you are using. (If you are unable to compute a numerical answer without a calculator, you can get partial credit for setting up the problem correctly.)

a) nominal interest rate in Mexico

b) expected future spot exchange rate for one year from now (Mexican peso / Brazilian real)

c) gap in expected inflation rates over the next year (inflation in Mexico minus inflation in Brazil)

d) real interest rate in Mexico over the next year

**Problem 2: Monetary Approach to exchange rates** (20 points)

The value of the dollar relative to the euro currently is depreciating rapidly. Let's use the monetary approach to exchange rates to try to understand these recent developments.

- a) (6 points) First, write the fundamental equation for the monetary approach to exchange rate determination.
- b) (10 points) Using just the monetary approach to exchange rates, list two possible explanations for the depreciation in the value of the dollar, and explain each in a couple of sentences. Please be specific about what variables are moving and in what direction.
- c) (4 points) Let's think of one way to test your explanations with data. If your explanations for the dollar depreciation are correct, what should be happening to the US inflation rate relative to European inflation?

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**Problem 3: The Asset Approach and Exchange Rate Overshooting** (25 points)

This question considers the relationship between the U.S. dollar (\$) and the British pound. Let the exchange rate be defined as U.S. dollars per pound  $E_{\$/\text{pd}}$ . Suppose that money demand in the U.S. falls permanently. (Make the usual assumptions: prices are sticky in the short run and flexible in the long run, and that uncovered interest rate parity holds.)

- a) (15 points) Illustrate in graphs of the U.S. money market and the foreign exchange market how this change affects the money and foreign exchange markets. Label your initial equilibrium point A, labor the short-run equilibrium point B, and your long-run equilibrium point C. (You can put

short run and long run on the same graphs.) Label all axes, and indicate curve shifts with arrows. Explain the reason for each curve shift briefly.

- b) (6 points) Using a set of three time diagrams, illustrate how the exchange rate ( $E_{\$/\text{pd}}$ ), U.S. interest rate, and U.S. real money supply (nominal money divided by price) change over time. Be sure to indicate clearly the relationships between the initial, short run, and long run values.
- c) (4 points) Suppose the U.S. had capital controls in the foreign exchange market. Discuss briefly how this would affect your analysis in part (a) above.

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**Question 4 : Discussion** (15 points total)

Explain and critique the “twin deficits hypothesis” in 3-5 sentences. Include in your discussion an equation that involves the government budget deficit (6 pts), an explanation of the hypothesis (5 pts), and a discussion of how well this hypothesis has applied to the U.S. experience over the last several years (4 pts). (Please continue writing on the back.)

(Test Version A - 2/15/08)