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Econ182
International Monetary Economics
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Midterm examination

Instructions: This is a 1 hour 30 minute exam with 3 questions worth a total of 90 points (1 point per minute, plus 10 bonus points), 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 are permitted, books and notes are not. Good luck!

1. **[20 points, 5 each] True, False, Uncertain**. Explain briefly your answers, and cite the relevant theories, when applicable.

   (a) If the US interest rate increases relative to the rest of the world, the dollar will appreciate slowly over time as investors progressively rebalance their portfolio towards US based assets.

   (b) You read in the press: 'The strength of the dollar comes from the superior performance of the US economy.'

   (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 temporary fall to \$5 a barrel, we should expect the U.S. and other oil dependent countries to run a smaller current account deficit.

2. **[35 points, 7 each] Current Account Sustainability.** Brazil's foreign debt to GDP is currently around 60%. Most of it is sovereign debt (i.e. it represents government liabilities to foreign investors). Because foreign investors are worried about a possible default of the Brazilian government on its international obligations, interest rates on this debt have been quite high for the last year or so. Let's assume that the average *nominal* interest rate on external debt is now 18%. Assume inflation in Brazil runs at 7% while *real* output growth is only 1%.

   (a) Calculate the maximum current account deficit that Brazil *needs* in order to stabilize the debt/GDP ratio at its current levels (recall that the accumulation equation for Brazilian external debt is: $\$CA_t = \$B_{t+1} - \$B_t$ where $\$B_t$ denotes *nominal* external debt, $\$CA_t$ the *nominal* current account. Recall also that stabilizing the external debt means that $\$B_{t+1} - \$B_t = \$g\ \$B_t$ where $\$g$ is the growth rate of *nominal* output).

   (b) Calculate the associated net export surplus that Brazil needs (recall that current account and net exports are linked as: $\$CA_t = \$NX_t + i\ \$B_t$ where $\$NX$ represents net exports and i denotes the nominal interest rate on Brazilian external debt).

(c) Brazil currently runs a current account deficit of 6.8% of GDP. Calculate the level at which the ratio of debt to GDP will settle if the current account deficit remains at 6.8% while the growth rate of GDP, the inflation rate and the nominal interest rate on Brazilian debt remain unchanged. In your view, is the situation under control?

(d) In light of your previous result, suppose that foreign investors become even more worried and ask for an increased premium on Brazilian external debt. Assume that the interest rate is now 20% per annum. Answer question (a) and (b) again. What do you conclude?

(e) In light of your readings, discuss how you think Brazil is trying to handle the situation.

3. [**35 points + 10 bonus**] **Productivity growth**. Assume that the U.S. is initially in equilibrium in the IEB-RIP/IS-LM diagram. Recall that this means that (a) the goods money and foreign exchange markets are in equilibrium, and (b) that the external debt is sustainable. We wish to study how the exchange rate, output, and interest rates change with productivity growth.

   (a) [**2 points**] Based on your readings, discuss whether the US is currently experiencing faster or slower productivity growth than its economic partners.

   (b) [**7 points**] Given your answer to the previous question, describe how this impacts aggregate demand (hint: consider the impact of a different productivity growth on domestic investment and consumption)

   (c) Using the IS-LM/IEB-RIP framework,

      i. [**4 points**] Describe the direct effect on US real interest rates and output

      ii. [**4 points**] Describe the effect on the current real and nominal exchange rates, future real exchange rates, and net exports today and tomorrow.

      iii. [**4 points**] Describe the indirect and final effect on output and interest rates.

   (d) [**7 points**] Suppose you are the chairman of the federal reserve board. What, if any, monetary policy action would be appropriate to restore both internal and external balance? Explain.

   (e) [**7 points**] Suppose you are the chairman of the Council of Economic Advisers to the President. What, if any, fiscal policy would you recommand to the President to restore both internal and external balance? Explain.

   (f) [**Bonus: 10 points**] In light of the current fiscal and external situation of the U.S., explain how you would modify your recommendations in the previous two questions.