Econ 4382 - International Finance Spring 2026
Granados

Problem Set # 3

Due date: 3/11

Answer the following questions. Show your work. As mentioned in class, you are encouraged to work in groups but must write your own answers.

1. **(Continued question from PS1)** Fixed Exchange Rate Regime: China (Mainland)

   Consider the USD/CNY FX market, where CNY is the Chinese currency, Yuan. Assume that China is operating a fixed exchange rate system. Suppose that there is an increase in Chinese exports to the U.S.A.

   (a) If the People's Bank of China (PBC), the Chinese central bank, wants the exchange rate to stay at its target level, how should it intervene in the FX market? (Indicate which currency PBC buys and which it sells.)

   > To maintain the exchange rate at its target rate, PBC should buy USD (and sell RMB). You answered this part in the problem set 1.

   (b) What are the Chinese balance of payments entries for PBC's FX market intervention? Assume that PBC is providing US importers with the necessary CNY and that, in the same period, US importers use the CNY to buy Chinese goods. What's the credit, what's the debit, and in which accounts do they go?

   (c) Does the FX market intervention increase or decrease the following?

   (i) Chinese holdings of official reserve assets; (ii) Chinese money supply:

   (d) Assume that China continues to operate a fixed exchange rate system. Which of the following are part of an adjustment mechanism that might follow the repeated FX market interventions by the Chinese central bank and might ultimately bring CA+FA, i.e., the sum of current and capital account balances, back to zero? Circle all that apply

   - Chinese price level rises
   - Chinese price level falls
   - Chinese (real) interest rates rise
   - Chinese (real) interest rates fall

   (e) How could the Chinese state (i.e., PBC, other regulators, or state owned enterprises (SOEs)) accommodate the export-related demand for CNY at the fixed exchange rate without changing the money supply (i.e., the amount of CNY in circulation)? [Hints: Make a guess based on other policy regulations]

2. **External Wealth with three periods** Consider a world with three periods, $t = 0, 1, 2$. A country has initial wealth W_{-1}, the interest rate is r^* for all periods, and the country can have a non-zero trade balance in each period. At the end of the third period, the country's wealth must be equal to zero.

   (a) Write out the country's budget constraint for each period

   (b) Combine the three budget constraints from (a) to create the long-run budget constraint. Write out the long-run budget constraint in present-value form.

   (c) Suppose $W_{-1} = 100$, $r^* = 0.1$. Can all three trade balances ($TB_0,\ TB_1,\ TB_2$) be positive? Explain your answer.

   (d) Suppose $W_{-1} = -50$, $r^* = 0.1$, and $TB_0 = 10$: Give values for TB_1 and TB_2 such that the long-run budget constraint holds. [There are many correct answers, just provide one]

   (e) List the values of W_0, W_1; and W_2 associated with your answers in part (d).

3. **(Based on FT 15.4)** In 2021 the country of Ikonomia has a current account deficit of $1 billion and a non-reserve financial account surplus of $700 million. Ikonomia's capital account is in a $150 million surplus. In addition, Ikonomian factories located in foreign countries earn $700 million. Ikonomia has a trade deficit of $600 million. Assume Ikonomia neither gives nor receives unilateral transfers. Ikonomia's GDP is $9.4 billion.

   (a) What happened to Ikonomia's net foreign assets during 2021? Did it acquire or lose foreign assets during the year?

   (b) Compute the official settlements balance (OSB). Based on this number, what happened to the central bank's (foreign) reserves? [Hint: the FA can be split into transactions conducted by the central bank (OSB) and those conducted by everyone else, the non-reserves FA]

   (c) How much income did foreign factors of production earn in Ikonomia during 2021?

   (d) Compute Ikonomia's gross national expenditure (GNE), gross national income (GNI), and gross national disposable income (GNDI).

4. **(BEA BOP release)** Go to the Balance of Payments report published by the BEA for any of the last two releases (go to bea.gov → data → data by topic → international trade and investment → international transactions (BOP) → current release - US international transactions, *quarter year*). Read the summary report and answer:

   (a) Is the Current Account (CA) in surplus of deficit? did this account decreased or increased with respect to the previous quarter?

   (b) Have the trade balance subaccounts (exports and imports) recovered the peak levels they had in (the first half of) 2019 before the COVID shock? Which subaccount recovered faster? Can you guess why?

   (c) The primary income is what we denoted as Factor Income (labor and capital income). Is this subaccount larger or smaller than in 2017? What does it mean for the level of debt of the US given that the CA is more negative (on average) over time?