

Econ 102
The Open Economy
Due March 9, 2007

1. Be sure to read your copy of the Wall Street Journal every weekday, looking especially for items related to the material in this course. Find an article in this week's Wall Street Journal or other news source that is relevant to the topic of this homework assignment. Turn it in, or a copy of it, with your assignment, and write a brief summary of it (half a page to a page). Your summary should outline the main points of the article **and** explain why it is relevant to the homework topic, in this case "the open economy."

2. Consider the following data related to US GDP:

GDP: \$12 Trillion
Consumption: \$9.2 Trillion
Government Purchases: \$1.8 Trillion
US investment abroad: \$0.4 Trillion
Imports: \$1.5 Trillion
Domestic Investment: \$1.6 Trillion
Private Savings: \$2.2 Trillion

(a) What is the value of US exports? Is the US running a trade deficit or surplus?

(b) What is the amount of foreign investment in the US?

(c) Is the US government running a deficit or surplus? What is the amount of its tax revenues?

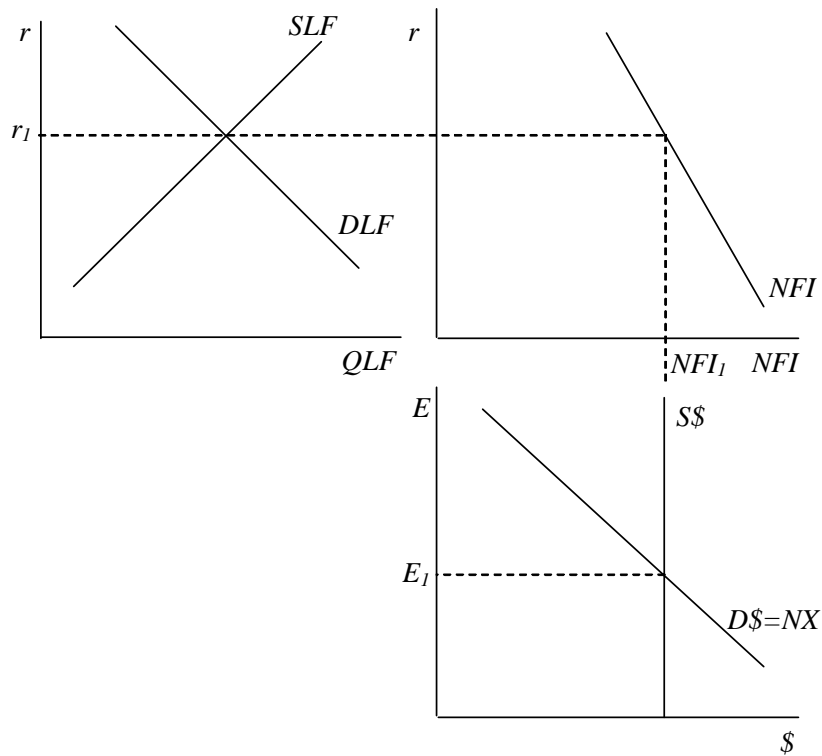
3. For each of the following, explain the effects on US Net Exports (NX) and/or Net Capital Outflow (NCO) of the US. For changes in NCO, indicate also whether the transaction affects Foreign Direct Investment (FDI) or foreign portfolio investment (FPI). Explain your reasoning for each.

(a) A Canadian citizen buys a US-made Ford F150 truck from a US dealer. He pays for the truck with Canadian dollars. The dealer deposits all of this money in a bank account in Canada. (Note: putting money in a foreign bank account or holding a foreign currency is treated the same as holding foreign stocks or bonds.)

(b) GM sells a car to a Mexican citizen. The Mexican citizen pays for the car with pesos and GM sells the pesos to a grocery store in Detroit. The grocery store uses the pesos to pay for a delivery of salsa from Mexico.

- (c) After a fall in stock prices on the NASDAQ, European investors buy US stocks from Americans using the European currency, euros. These euros are deposited in euro-denominated bank accounts in New York.
- (d) A Japanese company buys machinery in the US for use in its subsidiary in the US. It buys the machinery with US dollars that it purchased on the foreign exchange market by exchanging yen with a US citizen. The US citizen later (but in the same year) spends the yen on a vacation in Tokyo.
4. A Russian visiting student exchanges 120,000 rubles for \$6,000 for her living expenditures during her 1 semester stay in Ann Arbor.
- (a) What is the nominal exchange rate?
- (b) Suppose that the average monthly student consumption basket costs \$900 in the U.S. and 3,600 rubles in Russia. What is the real exchange rate for this student and how do you interpret it?
5. Suppose that a friend of yours goes to Australia for spring break, and the day before coming back to the US, she calls you to check if you wanted a case of Australian Chardonnay. She tells you that the cost of this case of wine is 100 Australian dollars. Right after you hang up, your sister, who studies in England, calls. Knowing how much you like Chardonnay, she tells you about a deal that she came across: A case of the same quality Chardonnay for 60 British pounds. Both tell you that they will be able to ship you the case at no cost to you. Furthermore, a case of similar quality US-made Chardonnay is sold at the liquor store next door for \$70 (in US dollars).
- (a) If one US dollar exchanges for 1.5 Australian dollars, how many US dollars will the Australian case of wine cost?
- (b) If one pound exchanges for US\$1.20, how many US dollars will the British case of wine cost?
- (c) If you really believe that all three of the wines will taste the same, and if that and price are all that you care about, among all the options, which one will you choose?
- (d) What are the real exchange rates between US-England and US-Australia? Assume for this that wine is the only good that matters.
- (e) Define Purchasing Power Parity. If Purchasing Power Parity were to hold, what would be the nominal exchange rate for the U.S. dollar relative to the Australian dollar? How about for the U.S. dollar relative to the British pound? What would be the nominal exchange rate between British pound and the Australian Dollar?

6. Suppose that fear of war outside the United States causes people everywhere to view assets outside the US as more risky than before.
- (a) Using Mankiw's Open Economy Model, and starting from the initial position shown in the diagrams below, show which of the curves in the model will be shifted, and in which direction. Explain why these shifts occur.



- (b) Is there anything that you know for sure about the sizes of these shifts?
- (c) In what directions do the following variables change as a result of these shifts? State in a sentence or two the reasons for these changes.
- (i) The US real interest rate, r .
 - (ii) The US real exchange rate, E .
 - (iii) The level of US (domestic) investment, I .
- (d) Suppose that national saving were *not* affected by the interest rate, contrary to what is shown in the figure. How would the changes in part (c) compare to those you found?
7. Suppose the Bush administration is concerned about the magnitude of the U.S. trade deficit. Therefore, it promises U.S. car manufacturers restrictions on imports and subsidies for exports. According to the Open Economy Model, what will be the impact of this new trade policy on the trade deficit in the long run? Who do you think will benefit and who will be hurt by this policy in the U.S.?