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Discussion Session 7 (Chapter 18&19)

PART A: TRUE/FALSE/UNCERTAIN (Explain it.)

a. Devaluation is always associated with gains in competitiveness.

FALSE. If domestic prices increase in the same proportion as the increase in the nominal exchange rate, devaluation has no impact on the real exchange rate. In that case, there is no gain in competitiveness.

b. The bilateral exchange rate between US and Japan is 124 (1\$ can buy 124 ¥). Therefore, American tourists in Japan find everything very cheap.

UNCERTAIN. We cannot infer how cheap the relative price of Japanese goods is by looking at the nominal exchange rate. To know whether goods in Japan are relatively cheaper or more expensive than American goods, we need to consider the real exchange rate.

c. Suppose that Turkey has a large current account deficit. Turkey increases the amount of aid it gives to foreign countries. This event will lead to no change in the current account deficit.

FALSE. Larger CAD, since net transfers to overseas increases.

d. In theory, a financial account deficit necessarily implies a current account deficit.

FALSE. By definition, the capital account is equal to the negative current account. Thus, a capital account deficit implies a current account surplus.

e. Suppose interest rates for a one-period deposit are 5% in the US (the home country) and 2% in Canada. Assume that the risk premium in Canada is the same as in the US. This implies that the investor should invest in the US.

UNCERTAIN. The answer depends on the expected depreciation of the dollar. According to the uncovered interest rate parity, if $i > i^* - (E_{t+1} - E_t)/E_t$, then the investor should put her money into the US. If, however, $i < i^* - (E_{t+1} - E_t)/E_t$, then the investor should put her money into Canada. Here, $i=5\%$ and $i^*=2\%$. Therefore, if the dollar is expected to depreciate by more than 3% during the next period, the investor should invest in Canada. If it's expected to depreciate by less, then she should invest in the US.

PART B - ESSAY TYPE QUESTIONS.

Q 1. 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?

A case of Chardonnay costs 100 Australian dollars, an equivalent of

$100/1.5=66.6$ US dollars.

b. If one pound exchanges for US\$1.20, how many US dollars will the British case of wine cost?

This case costs 60 British pounds, and each pound is worth 1.2 US dollars.

Therefore, its cost in US dollars is $60 \times 1.2 = \text{US\$}72$.

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?

A case of Australian wine costs US\$66.6, a case of British costs US\$72, and a case of US-made wine costs \$70. Therefore, you will choose the cheapest one, which is the Australian wine.

d. What are the real exchange rates between US-England and US-Australia? Assume for this that wine is the only good that matters.

The real exchange rate tells you how much foreign goods and services you can buy with one US-made good or service. A case of US-made wine costs US\$70. To find the real exchange rate, we need to find how many cases of Australian (or British) wine we can buy with this US\$70. Since a case of Australian wine costs US\$66.6, you can buy $70/66.6=1.05$ cases of Australian wine with one case of US-made. Therefore the real exchange rate between US-Australia is 1.05 Australian per one US-made. Similarly, the real exchange rate between US-England is $70/72=0.972$ British cases per one US-made. Another method of finding the real exchange rate is applying the following formula: eP/P^* where e is the nominal exchange rate (foreign currency per US dollar or the amount of foreign currency that one US\$ buys), P is the domestic (US) price, and P^* is the foreign price. US-Australian real exchange rate = $1.5 \times 70 / 100 = 1.05$ Note that the exchange rate given between the British pound and the US\$ is the reciprocal of the exchange rate definition given above. If one British pound buys 1.2 US dollars, then one US dollar will buy $1/1.2=0.8333$ British pounds. US-England real exchange rate = $0.8333 \times 70 / 60 = 0.972$

Q 2. Suppose that Turkey has a large current account deficit. For each of the following (i) – (iii) state whether the event will lead to a larger, a smaller, or no change in the current account deficit:

- i. People in Turkey start buying more domestically – made cars and less foreign – made cars.

Smaller (current account deficit) CAD since imports fall.

- ii. Turkey increases the amount of aid it gives to foreign countries.

Larger CAD, since net transfers to overseas increases.

- iii. More overseas students start coming to study in Turkey.

Smaller CAD since exports increase (domestic goods and services consumed by foreigners increase)

Q 3. Consider an open economy characterized by the equations below.

$$C = C_0 + c_1 Y - T$$

$$I = d_0 + d_1 Y$$

$$IM = m_1 Y$$

$$X = x_1 Y^*$$

The parameters m_1 and x_1 are the propensities to import and export. Assume that the real exchange rate is fixed at a value of 1 and treat foreign income, Y^* , as fixed. Also assume that taxes are fixed and that government purchases are exogenous (i.e., decided by the government). We explore the effectiveness of changes in G under alternative assumptions about the propensity to import.

- a. Write the equilibrium condition in the market for domestic goods and solve for Y .
- b. Suppose government purchases increase by one unit. What is the effect on output? (Assume that $0 < m_1 < c_1 + d_1 < 1$. Explain why.)
- c. How do net exports change when government purchases increase by one unit?

Now consider the two economies, one with $m_1 = 0.5$ and the other with $m_1 = 0.1$. Each economy is characterized by $(c_1 + d_1) = 0.6$.

- d. Suppose one of the economies is much larger than the other. Which economy do you expect to have the larger value of m_1 ? Explain.

- e. Calculate your answers to parts (b) and (c) for each economy by substituting the appropriate parameter values.
- f. In which economy will fiscal policy have a larger effect on output? In which economy will fiscal policy have a larger effect on net exports?

Answer:

- a. $Y = C + I + G + X - IM$
 $Y = c_0 + c_1(Y - T) + d_0 + d_1Y + G + x_1Y^* - m_1Y$
 $Y = [1/(1 - c_1 - d_1 + m_1)][c_0 + c_1T + d_0 + G + x_1Y^*]$
- b. Output increases by the multiplier, which equals $1/(1 - c_1 - d_1 + m_1)$. The condition $0 < m_1 < c_1 + d_1 < 1$ ensures that the multiplier is defined, positive, and less than one. As compared to the original multiplier, $1/(1 + c_1)$, there are two additional parameters: d_1 , which captures the effect of an additional unit of income on investment, and m_1 , which captures the effect of an additional unit of income on imports. The investment effect tends to increase the multiplier; the import effect tends to reduce the multiplier.
- c. When government purchases increase by one unit, net exports fall by $m_1\Delta Y = m_1/(1 - c_1 - d_1 + m_1)$. Note that the change in output is simply the multiplier.
- d. The larger economy will likely have the smaller value of m_1 . Larger economies tend to produce a wider variety of goods, and therefore to spend more of additional unit of income on domestic goods than smaller economies do.
- e.
- | | ΔY | ΔNX |
|-------------------------------|------------|-------------|
| small economy ($m_1 = 0.5$) | 1.1 | 0.6 |
| large economy ($m_1 = 0.1$) | 2 | 0.2 |
- f. Fiscal policy has a larger effect on output in the large economy, but a larger effect on net exports in the small economy.

PART C: MULTIPLE CHOICE

1) If the exchange rate between the dollar and the pound (the pound price of the dollar) is currently 1.50, and is expected to be 1.65 in one year, then the expected rate of:

- A) depreciation of the dollar is 15%.
 B) depreciation of the dollar is 10%.
 C) appreciation of the dollar is 15%.
D) appreciation of the dollar is 10%.
 E) none of the above

2) Country A is a small open economy. An external shock led to the immediate appreciation of its currency with respect to the United States Dollar. Investor's expectations are not affected. What happens to interest rate in Country A.

- A) Increase**
 B) Decrease
 C) Unchanged

D) Uncertain

3) Which of the following is not one of the components of the current account?

A) investments made by foreign companies in domestic plants

B) income flows into and out of the country

C) transfers of money into and out of the country

D) payments for imports and exports of goods and services

4) If disposable income rises in the United States, what will be the effect on the American current account?

A) It will worsen.

B) It will improve.

C) It will remain about the same.

D) We cannot make any predictions without further information.

5) Assume that the interest rate in a foreign country is 7% and that the foreign currency is expected to depreciate by 3% during the year. For each domestic currency that a domestic resident that invests in foreign bonds, he/she can expect to get back an approximate total of:

A) 0.93TL. B) 0.96TL. C) 1.04TL. D) 1.07TL. E) 1.10TL

6) Suppose the Turkey one-year interest rate is 3% per year, while a foreign country has a one-year interest rate of 5% per year. Ignoring risk and transaction costs, a Turkish investor should invest in foreign bonds as long as the expected yearly rate of depreciation of the foreign currency is:

A) less than 2%.

B) greater than 5%.

C) less than 1%.

D) less than 5% .

E) greater than 2%.

7) Assume the Marshall-Lerner condition holds. Which of the following will cause an increase in net exports?

A) a reduction in foreign output

B) a real depreciation

C) an increase in government spending

D) an increase in investment

E) all of the above

8) When the interest parity condition holds, we know that the domestic interest rate must be equal to:

A) the expected rate of depreciation of the domestic currency.

B) the foreign interest rate minus the expected rate of appreciation of the domestic currency.

C) the expected rate of appreciation of the domestic currency.

- D) the foreign interest rate.
 E) the foreign interest rate minus the expected rate of appreciation of the foreign currency.

9) A real depreciation will initially cause a reduction in output when which of the following holds?

- A) net exports are initially positive.
 B) the Marshall-Lerner condition.
 C) net exports are initially zero.
 D) net exports are initially negative.
 E) the J-Curve effect.

For the following four questions, look at the following balance of payments table.

(Million US Dollars)	
CURRENT ACCOUNT	3,760
Exports	34,810
Imports	38,092
Balance on Goods	A
Services: Credit	15,122
Services: Debit	6,067
Balance on Goods and Services	5,773
Primary Income: Credit	2,753
Primary Income: Debit	B
Balance on Goods, Services and Primary Income	773
Secondary Income	2,987
CAPITAL ACCOUNT	0
FINANCIAL ACCOUNT	C
Direct Investment: Net acquisition of financial assets	497
Direct Investment: Net incurrence of liabilities	3,352
Portfolio Investment: Net acquisition of financial assets	752
Portfolio Investment: Net incurrence of liabilities	-3,727
Equity Securities	-79
Debt Securities	-3,648
Other Investment: Net acquisition of financial assets	637
Central Bank	39
General Government	36
Banks	-233
Other Sectors	795
Other Investment: Net incurrence of liabilities	-12,296
Central Bank	735
General Government	-1,977
Banks	-9,644
Other Sectors	-1,410
Current, Capital and Financial Accounts	-10,797

NET ERRORS AND OMISSIONS	-2,127
RESERVE ASSETS	D
Official Reserves	-2,694
Credit and loans with the IMF	-10,230
Exceptional Financing	0

10) What is the value of A?

- A) 3.288
- B) 5.765
- C) -3.288
- D) -5.765

11) What is the value of B?

- A) 7.753
- B) 4.245
- C) -7.753
- D) -4.245

12) What is the value of C?

- A) -9.781
- B) 9.781
- C) -14.557
- D) 14.557

13) What is the value of D?

- A) -12.924
- B) 12.924
- C) -2.749
- D) 2.749