EC201 Macroeconomics 2

Week 3 - Seminar 1

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Review Questions - A

Describe how each of the following transactions affects the U.S. Balance of Payments.

(Recall that each transaction gives rise to two entries in the Balance-of-Payments Accounts.)

a) An American university buys several park benches from Spain and pays with a $120,000 check.

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Table 1: U.S. International Transactions Account

Balance of Payments Item	$
Current Account	-120,000
Trade Balance	-120,000
Income Balance	0
Net Unilateral Transfers	0
Financial Account	120,000

b) Floyd Townsend, of Tampa Florida, buys 5,000.00 dollars worth of British Airlines stock from Citibank New York, paying with U.S. dollars.

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- Since this transaction takes place between two American companies, it causes no change in the overall level of U.S.-owned assets abroad; therefore, the financial account is unaffected. So is the current account.

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Table 2: U.S. International Transactions Account

Item	$
Current Account	0
Financial Account	0

c) A French consumer imports American blue jeans and pays with a check drawn on a U.S. bank in New York.

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- The export of merchandise to France improves the U.S. trade balance. The payment by check deteriorates the financial account correspondingly, because it amounts to a decrease in foreign-owned assets in the U.S. (i.e. a reduction in the French consumer's deposit at the New York bank). Assuming that the value of the transaction is X dollars, the U.S. international transactions account looks as follows.

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Table 3: U.S. International Transactions Account

Item	$
Current Account	X
Trade Balance	X
Income Balance	0
Net Unilateral Transfers	0
Financial Account	-X

d) An American company sells a subsidiary in the United States and with the proceeds buys a French company.

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- Two different transactions take place. First, the sale of the subsidiary in the U.S. is an internal transaction that leaves the U.S. external wealth unchanged: therefore, both the current and the financial account remain unaffected. Second, the purchase of a French company gives rise to two entries in the financial account: an increase in U.S.-owned assets in France (which deteriorates the U.S. financial account) and an increase in French-owned dollars (which improves the U.S. financial account). These two effects cancel out: both the current and the financial account are zero. Assuming that the value of the transaction is X dollars, the U.S. international transactions account looks as follows.

Item	$
Current Account	0
Financial Account	0
Increase in foreign-owned assets in the U.S.	X
Increase in U.S.-owned assets abroad	-X

e) A group of American friends travels to Costa Rica and rents a vacation home for \$2,500. They pay with a U.S. credit card.

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- Renting a vacation home abroad amounts to importing a service, so it deteriorates the U.S. trade balance and the current account. The payment by credit card represents the sale of an asset, so it improves the U.S. financial account accordingly.

Table 4: U.S. International Transactions Account

Item	$
Current Account	-2,500
Trade Balance	-2,500
Income Balance	0
Net Unilateral Transfers	0
Financial Account	2,500

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- Foreign aid gives rise to two offsetting entries in the current account: an export of goods (which improves the U.S. merchandise trade balance) and a unilateral transfer to waive the corresponding payment (which deteriorates the U.S. net unilateral transfers account). As the value of the merchandise is 400 million dollars, the U.S. international transactions account looks as follows.

Table 5: U.S. International Transactions Account

Item	$
Current Account	0
Trade Balance	400,000,000
Income Balance	0
Net Unilateral Transfers	-400,000,000
Financial Account	0

Class Questions - B -

1) Outland starts 2015 with holdings of 100 shares of the German car company Volkswagen. These securities are denominated in euros. The rest of the world holds 200 units of dollar-denominated bonds issued by the Outlandian government. At the beginning of 2015, the price of each Volkswagen share is 1 euro and the price of each unit of Outlandian bond is 2 dollars. The exchange rate is 1.5 dollars per euro. Compute the net international investment position (NIIP) of Outland at the beginning of 2015.

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$$
\begin{aligned}
NIIP_{2015} &= Assets - Liablities \\
&= 100 \times 1\,\mathrm{EUR} \times 1.5\,\mathrm{USD/EUR} - 200 \times 2\,\mathrm{USD} \\
&= -\$250
\end{aligned}
$$

2) During 2015, Outland exports toys for 7 dollars and imports shirts for 9 euros. The rate of return on the Volkswagen shares was 5 percent and the rate of return on Outlandian bonds was 1 percent. Residents of Outland received money from relatives living abroad for a total of 3 euros and the government of Outland gave 4 dollars to a hospital in Guyana. Calculate the Outlandian trade balance, net investment income, and net unilateral transfers in 2015. What was the current account in that year? What is the Outlandian NIIP at the end of 2015 expressed in dollars.

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??? 2015^{during} = Trade Balance // Net Investment Income // Net Unilateral Transfer // CA

??? 2015^{end} = NIIP in \$

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The Net International Investment Position at the end of the year is

$$\begin{aligned} NIIP_{2015}^{end} &= -250\text{ USD} - 2.5\text{ USD} \\ &= -252.5\text{ USD} \end{aligned}$$

3) Suppose that at the end of 2015, Outland holds 110 Volkswagen shares. How many units of Outlandian government bonds are held in the rest of the world? Assume that during 2015, all financial transactions were performed at the beginning-of-year prices and exchange rate.

Remember = Zero Sum Game

We make use of the following accounting identity:

$$NIIP_t = A_t - L_t$$

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- Holdings of Outlandian Government Bonds.

We plug in the information we have got about Outland's end-of-year shareholding in Volkswagen, the price of those shares, the price of Outlandian government bonds and the nominal exchange rate. Then we solve for the quantity of bonds held by the rest of the world:

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$$\overbrace{-252.5\ \text{USD}}^{NIIP\ from\ Q2} = 110 \times 1\ \text{EUR} \times 1.5\ \text{USD/EUR} - X \times 2\ \text{USD}$$

$$X = 208.75$$

Self Study Questions - C

1) Indicate whether the statement is true, false, or uncertain and explain why.

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a) The net international investment position of South Africa was -70.5 billion USD in 2010 and -19.7 billion USD in 2011. The current account in 2011 was -10.1 billion USD. There must be an error in the official numbers. The correct figure should be a net international investment position of -80.6 billion USD in 2011.

1) Indicate whether the statement is true, false, or uncertain and explain why.

a) The net international investment position of South Africa was -70.5 billion USD in 2010 and -19.7 billion USD in 2011. The current account in 2011 was -10.1 billion USD. There must be an error in the official numbers. The correct figure should be a net international investment position of -80.6 billion USD in 2011.

- The statement is false: the numbers that we see are not necessarily the consequence of an error. Changes in the net international investment position (NIIP) of a country are not caused by current account (CA) balances alone: they also depend on valuation changes (VC), according to the accounting identity

$$\Delta NIIP = CA + VC. \tag{1}$$

We are given the following information about South Africa:

$NIIP_{2010} = -70.5 \text{ bn USD},$

$NIIP_{2011} = -19.7 \text{ bn USD},$

$CA_{2011} = -10.1 \text{ bn USD}.$

If the official numbers are correct, then

$\Delta NIIP_{2011} = +50.8 \text{ bn USD}.$

By equation (1), this requires substantial valuation gains:

$VC_{2011} = +60.9 \text{ bn USD}.$

This is a large number for an economy with a negative net international investment position. Does South Africa own large underestimated foreign assets, or is it earning very positive return differentials on its external assets and liabilities?

b) The fact that the United States made large valuation gains on average over the past 30 years means that the rest of the world as a whole made equally large valuation losses. After all, this is a zero sum game.

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- The statement is true. Since the world is a closed system, changes in the net international investment position of the U.S. must be the opposite of those of the rest of the world:

$$\Delta NIIP_{US} + \Delta NIIP_{ROW} = 0.$$

For the same reason, current account balances in the world must sum up to zero:

$$CA_{US} + CA_{ROW} = 0.$$

Combined with condition (1), these two observations imply that any valuation gain enjoyed by an economy must be mirrored by an equivalent valuation loss suffered by the rest of the world:

$$VC_{US} + VC_{ROW} = 0.$$

For this reason, recent studies of valuation effects have uncovered an entire "geography of wealth transfers" across the world operating through international asset markets.

c) The United States has large unrecorded foreign asset holdings.

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- The statement is uncertain. Although it is possible that the U.S. owns some intangible assets abroad that are difficult to measure, their size remains unknown. As explained in the text, it is unlikely that these unrecorded assets are large enough to explain the discrepancy between the positive net investment income enjoyed by the U.S. and its negative NIIP. Modest return differentials between *recorded* external assets and liabilities, instead, represent a plausible alternative explanation that is sufficient to fully solve the paradox.