Lecture Notes for Chapter 5

International Financial Markets and Institutions

Chapter 5

The balance of payments-Exercises

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Road Map

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1. Antarctica uses a system of fixed exchange rates, its current account deficit is AAD 6 billion and its capital account balance is AAD 4 billion.

(a) What is the change in the official foreign exchange reserves of Antarctica?

$$-6 + 4 = -2.$$

-AAD 2 billion

(b) What is the gap between the value of Antarctica's output and expenditure on consumption and investment?

Any consumption and investment expenditure on goods and services not produced by Antarctica must be expenditure on foreign goods and services. Therefore, the gap must be equal to the current account balance:

$$B_C = EX - IM,$$

i.e. - AAD 6 billion.

(c) If there is only one other country in the world, Greenland, can you compute Greenland's current account balance?

AAD 6 billion

2. The data below are taken from the BOP of Switzerland. Based in this data, discuss whether the following statement is true or false.

From 1979 to 1982 foreigners have been net issuers of CHF denominated bonds in Swiss capital markets.

Capital Account	1979	1980	1981	1982
Portfolio investment USD Billions	-11.8	-11.8	-11.9	-32.2

Capital flowed out of Switzerland.

Is this because of Swiss purchases of securities? Not necessarily. Swiss banks may have granted loans to foreigners, or Swiss residents may have paid back loans they had made abroad in the past.

If the transactions do reflect Swiss purchases of securities, the securities need not be bonds. Swiss residents may have bought stocks originally held by foreigners, including stocks that were issued by Swiss companies.

If the transactions do relate to bonds, they need not be newly issued bonds. They could also be old bonds, including bonds originally issued by Swiss companies.

3. You are an analyst working for the Central Bank of Zanzibar. Decide how the BOP accounts are affected by the following: (e.g. a credit in the services section of the current account)

(a) A budget deficit financed by foreign borrowing

Selling securities to foreigners: credit in the portfolio investment section of the capital account.
Resulting interest payments: debit in the services section of current account.

(b) An import quota for foreign cars.

This will reduce imports, so will reduce debits in the goods section of current account.

(c) A purchase of a new embassy in Luxembourg.

Transfers section of current account—debit.

(d) A grain embargo

Decrease in imports: reduce debits in the goods section of current account.

4. Given the following information:

'Last year the US demand for capital to fund the federal deficit and to finance private investment in buildings and equipment exceeded net domestic savings by about USD 100 billion,'

What can you say about the size of the US current account deficit?

It's at least USD 100 billion.

5. The article 'Figures to fret about' (Jul 9th) says the current account can be defined in different ways. We shall look at two of these definitions and show they are equivalent.

'The current account is confusing partly because it can be defined in different ways. The most familiar is the sum of a country's trade surplus (or deficit), the investment income paid to (or received from) foreigners, and net transfers (such as remittances sent home by migrant workers). For most countries the trade balance is the biggest of these factors, so changes in the current account often reflect changes in trade flows. The importance of the trade balance often misleads people into believing that trade barriers, such as tariffs, will determine the current account. That is nonsense, as can be seen by looking at the current account from the other end: as the difference between a country's saving and its investment. A country that invests more than it saves must obtain resources from abroad, meaning that it has to run a current-account deficit. A country that saves more than it invests will export resources-and so run a current-account surplus. A third way of describing the current-account balance is as the addition to (or reduction of) a country's claims on the rest of the world. A country that runs a current-account surplus must be acquiring foreign assets of equal value. Thus the current account gives information about people's decisions as to what kind of assets to hold. The keener investors are to hold a country's assets, the bigger its current-account deficit will tend to be.'

(a) We define national savings, S, as a combination of residents' savings deposits, purchases of government debt, stocks and corporate debt. We define investment, I, as the purchases of goods and services. The current account balance is B_C, so using the information in the article, what is the relationship between national savings, investment and the current account balance?

$$B_C = S - I.$$

(b) Consumption expenditure by households in a given country on goods and services is denoted by C.
Government expenditure (by given country's government) on goods and services is denoted by G.
Investment expenditure by firms on goods and services is given by I.
The value of the total output produced by a country's industries, services, etc is Y.
In a closed-economy (completely isolated from the rest of the world—no trade with other countries and perfectly segmented capital markets), all output must be consumed by its own residents, the government or used by domestic firms for investment. Express this algebraically.

$$Y = C + I + G.$$

(c) Now consider a country which can trade with other countries, so it can import and export goods and services. The current account balance is the value of net exports of goods and services plus net transfers. Assuming net transfers are zero, how can you use the capital account balance B_C to change your previous answer to account for imports and exports?

$$Y = C + I + G + B_C,$$

where

$$B_C = EX - IM,$$

and EX denotes exports; IM denotes imports.

(d) National savings, S, is defined as

$$S = Y - (C + G).$$

So, national savings is what is what is left over after household and government expenditure on goods and services.

Using the above expression for national savings and your answer to the previous question, prove that the balance of the capital account (B_C) can be written in terms of national savings (S) and investment (I) as

$$B_C = S - I.$$

$$Y = C + I + G + B_C,$$

so

$$B_C = Y - (C + I + G).$$

We know

$$S = Y - (C + G),$$

so

$$B_C = S - I.$$