The balance of payments

dr hab. Bart Rokicki

Chair of Macroeconomics and International Trade Theory
Faculty of Economic Sciences, University of Warsaw
Definition of the balance of payments

The balance of payments - is the record of all economic transactions between the residents of the country and nonresidents. It refers to the flows of goods, services, capital and unilateral transfers (e.g. humanitarian aid).

Balance of payments accounting is based on international standards. These standards are provided by IMF within „Balance of Payments and International Investment Position Manual”. Currently, the sixth edition (2009) of the manual is the binding one.
Balance of payments – the rules of accounting

1. Each transaction leads to at least two corresponding entries (double-entry rule), traditionally referred to as a credit entry (+) and a debit entry (-). This principle ensures that the total of all credit entries and that of all debit entries for all transactions are equal, thus permitting a check on consistency of accounts for a single unit.

2. A credit denotes entries from exports, primary income receivable, transfers receivable, disposals of nonproduced nonfinancial assets, a decrease in foreign financial assets and an increase in liabilities.

3. A debit is used to record entries for imports, primary income payable, transfers payable, acquisitions of nonproduced nonfinancial assets, an increase in foreign financial assets and a decrease in liabilities.
Balance of payments – the rules of accounting examples

1. **Sale of goods to a nonresident for 100 in currency.** For the seller:
   Exports 100 (credit)
   Currency 100 (debit - increase in foreign financial assets)
   (The transaction involves the provision of physical resources to nonresidents and a compensating receipt of financial resources from nonresidents.)

2. **Sale of shares for 50 in currency.** For the seller:
   Shares 50 (debit - reduction in domestic financial assets)
   Currency 50 (credit - increase in financial assets)
   (The selling party provides shares and receives currency in return.)

3. **Borrower receives a loan of 70 in cash in currency.** For the borrower:
   Loan 70 (credit - increase in liabilities)
   Currency 70 (debit - increase in financial assets)
Balance of payments – the structure

1. Current account
   • Balance on goods
   • Balance on services
   • Balance on income
   • Balance on current transfers
2. Capital account
3. Financial account
   • FDI
   • Portfolio investment
   • Other investment
   • Financial derivatives
4. Net errors and omissions
5. Financial reserve assets
Balance on goods and services

This balance records transactions related to the production of goods and services (trade balance).

It is important that in case of exports, the debit entry may be recorded on current, capital or financial account.

For example, if the payment for export is made immediately then it will be recorded on the financial account (as a currency or deposit). If the payment is delayed than we face the creation of financial instrument (e.g. trade credit). In case of humanitarian aid or gift the transaction will be recorded as a transfer (either current transfer or capital one).
Primary income represents the return that accrues to institutional units for their contribution to the production process or for the provision of financial assets and renting natural resources to other institutional units.

Two types of primary income are distinguished:

(a) Income associated with the production process.

(b) Income associated with the ownership of financial and other nonproduced assets (this category does not include financial derivatives).

Credit entries reflect primary income receivable by the compiling economy (e.g. dividends, interests) and debit entries reflect primary income payable by the compiling economy.
Balance on current transfers (secondary income account)

The secondary income account shows current transfers between residents and nonresidents. Various types of current transfers are recorded in this account to show their role in the process of income distribution between the economies. Transfers may be made in cash or in kind. Secondary income, together with primary income, affects gross national disposable income. Current transfers include:

- Personal transfers
- Current taxes on income
- Social contributions
- Social benefits
- Current international cooperation (including gifts and donations)
The capital account shows capital transfers receivable and payable between residents and nonresidents as well as the acquisition and disposal of nonproduced, nonfinancial assets between residents and nonresidents. Nonproduced, nonfinancial assets include:

- Natural resources (land, water, minerals, fishing rights etc.)
- Contracts, licenses etc.
- Marketing assets (brand names, trademarks, logos or domain names)

Capital transfers include:

- Debt forgiveness
- Institutional investment grants
- Contributions for international or non-profit organisations
Foreign direct investment

Direct investment is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy.

Types of direct investment transactions:

• Investment by a direct investor in its direct investment enterprise (e.g. greenfield investment),
• Investment between resident and nonresident fellow enterprises that leads to acquire equities that entitles the investor to 10 percent or more of the voting power in the direct investment enterprise,
• Reverse investment by a direct investment enterprise in its own immediate or indirect direct investor.
Portfolio investment

Portfolio investment is defined as crossborder transactions and positions involving debt or equity securities, other than those included in direct investment or reserve assets.

Equity not in the form of securities (e.g., in unincorporated enterprises) is not included in portfolio investment; it is included in direct or other investment.

Equity in time-share accommodation evidenced by a security is usually portfolio investment (although holdings that provided 10 percent or more of voting power would be direct investment, and holdings not in the form of securities and not included in direct investment would be other investment).
Other investment

To the extent that the following classes of financial assets and liabilities are not included under direct investment or reserve assets, other investment includes:

• Currency and deposits,
• Loans (including use of IMF credit and loans from the IMF,
• Trade credit and advances,
• Nonlife insurance technical reserves, life insurance and annuities entitlements, pension entitlements, and provisions for calls under standardized guarantees,
• All other financial transactions not included in different parts of balance of payments.
Financial derivatives

This category includes both financial derivatives (futures, options, etc.) and employee stock options.

A financial derivative contract is a financial instrument that is linked to another specific financial instrument or indicator or commodity and through which specific financial risks (such as interest rate risk, foreign exchange risk, equity and commodity price risks, credit risk, and so on) can be traded in their own right in financial markets.

Employee stock options are options to buy the equity of a company, offered to employees of the company as a form of remuneration. If a stock option granted to employees can be traded on financial markets without restriction, it is classified as a financial derivative.
Reserve assets are those external assets that are readily available to and controlled by monetary authorities for meeting balance of payments financing needs, for intervention in exchange markets to affect the currency exchange rate, and for other related purposes (such as maintaining confidence in the currency and the economy, and serving as a basis for foreign borrowing). They include:

- Currency and deposits,
- Reserve position in the IMF,
- Monetary gold,
- Securities,
- SDR (special drawing rights - international reserve assets created by the IMF and allocated to members to supplement existing official reserves).
Balance of payments basic identity

Basic balance of payments identity:

\[ CA + KA + FA + SD + RES = 0 \]

where:
CA – current account
KA – capital account
FA – financial account
SD – statistical discrepancy
RES – reserves

Balance of payments is always equal to zero (in accounting sense)!
Balance of payments equilibrium

We talk about balance of payments inequilibrium (or imbalances: surplus or deficit) only related to basic accounts without official reserve assets. Balance of payments excluding the records of changes of reserves is called the balance of payments in the narrow sense:

\[ \text{BP} = \text{CA} + \text{KA} + \text{FA} + \text{SD} \]

If the sum of the balances of these accounts is positive, we are observing balance of payments surplus in the narrow sense. When it is negative – we have a deficit.

Equilibrium on the financial assets markets:

\[ I = S - \text{CA} = S_{pr} + S_{pu} - \text{CA} = S_{pr} + (T - G) - \text{CA} \]
Question 1. Define the trade balance and the current account balance. What is the difference between the two?

Question 2. Does the sale of a domestic security (asset) to a foreign resident represent a capital inflow or capital outflow? Why?

Question 3. In the year 2050, the current account balance in Canibalia reached -$5 billion and the capital and financial account balance together peaked +$8 billion. At the same time central bank of Canibalia bought foreign assets for the value of $2.5 billion. What is the balance of errors and omissions?
### GREECE: BALANCE OF PAYMENTS

<table>
<thead>
<tr>
<th></th>
<th>mln of euro</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2000</td>
</tr>
<tr>
<td><strong>CURRENT ACCOUNT (I.A + I.B + I.C + I.D)</strong></td>
<td>-10 618.4</td>
</tr>
<tr>
<td><strong>GOODS</strong></td>
<td>-21 927.5</td>
</tr>
<tr>
<td><strong>SERVICES</strong></td>
<td>8 711.1</td>
</tr>
<tr>
<td><strong>INCOME</strong></td>
<td>-955.3</td>
</tr>
<tr>
<td><strong>CURRENT TRANSFERS</strong></td>
<td>3 553.3</td>
</tr>
<tr>
<td><strong>CAPITAL TRANSFERS</strong></td>
<td>2 246.0</td>
</tr>
<tr>
<td><strong>CURRENT ACCOUNT AND CAPITAL TRANSFERS (I + II)</strong></td>
<td>-8 372.4</td>
</tr>
<tr>
<td><em><em>FINANCIAL ACCOUNT</em> (IV.A + IV.B + IV.C + IV.D)</em>*</td>
<td>8 906.3</td>
</tr>
<tr>
<td><strong>DIRECT INVESTMENT</strong>*</td>
<td>-1 116.2</td>
</tr>
<tr>
<td><strong>Abroad</strong></td>
<td>-2 319.0</td>
</tr>
<tr>
<td><strong>Home</strong></td>
<td>1 202.8</td>
</tr>
<tr>
<td><strong>PORTFOLIO INVESTMENT</strong>*</td>
<td>9 107.5</td>
</tr>
<tr>
<td><strong>Assets</strong></td>
<td>-933.0</td>
</tr>
<tr>
<td><strong>Liabilities</strong></td>
<td>10 040.5</td>
</tr>
<tr>
<td><strong>OTHER INVESTMENT</strong>*</td>
<td>-4 856.8</td>
</tr>
<tr>
<td><strong>Assets</strong></td>
<td>-1 060.6</td>
</tr>
<tr>
<td><strong>Liabilities</strong></td>
<td>-3 796.2</td>
</tr>
<tr>
<td>(Loans of General Goverment)</td>
<td>-437.7</td>
</tr>
<tr>
<td>**CHANGE IN RESERVE ASSETS **</td>
<td>5 771.7</td>
</tr>
<tr>
<td><strong>BALANCING ITEM ( I + II + IV + V = 0 )</strong></td>
<td>-533.9</td>
</tr>
<tr>
<td><strong>RESERVE ASSETS (STOCK)</strong></td>
<td>13 208</td>
</tr>
</tbody>
</table>

* (+) net inflow  (-) net outflow
** (+) decrease  (-) increase
### POLAND: BALANCE OF PAYMENTS

<table>
<thead>
<tr>
<th></th>
<th>mln of euro</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2000</td>
</tr>
<tr>
<td><strong>A. Current Account</strong></td>
<td></td>
</tr>
<tr>
<td>Balance on Goods</td>
<td>-11 181</td>
</tr>
<tr>
<td>Balance on Services</td>
<td>1 546</td>
</tr>
<tr>
<td>Balance on Income</td>
<td>-815</td>
</tr>
<tr>
<td>Balance on Current Transfers</td>
<td>1 415</td>
</tr>
<tr>
<td><strong>B. Capital Account</strong></td>
<td></td>
</tr>
<tr>
<td>Direct investment</td>
<td>10 316</td>
</tr>
<tr>
<td>Direct investment abroad</td>
<td>-18</td>
</tr>
<tr>
<td>Direct investment in Poland</td>
<td>10 334</td>
</tr>
<tr>
<td>Portfolio investment</td>
<td>3 435</td>
</tr>
<tr>
<td>Portfolio investment assets</td>
<td>-96</td>
</tr>
<tr>
<td>Portfolio investment liabilities</td>
<td>3 531</td>
</tr>
<tr>
<td>Other investment</td>
<td>-2 873</td>
</tr>
<tr>
<td>Other investment assets</td>
<td>-4 314</td>
</tr>
<tr>
<td>Other investment liabilities</td>
<td>1 441</td>
</tr>
<tr>
<td>Financial derivatives</td>
<td>313</td>
</tr>
<tr>
<td><strong>D. Net errors and omissions</strong></td>
<td>755</td>
</tr>
<tr>
<td>Overall Balance</td>
<td>804</td>
</tr>
<tr>
<td><strong>E. Official Reserve Assets (change)</strong></td>
<td>-804</td>
</tr>
</tbody>
</table>
Question 4. Can we find the traces of „living on credit” in Greek balance of payments? How does it influence the reserve assets stock?

Question 5. Answer the following questions:

• How has changed the balance of payments after Polish accession to the EU?
• How has changed the current account after Polish accession to the EU?
• Why do we observe a deterioration in current account from 2005 onwards?
• Why do we observe a deterioration in income?
• Why there has been an improvement in current transfers and capital account?
Question 6. The equilibrium on the assets markets is given by:

\[ I = S - CA = S_{pr} + S_{pu} - CA = S_{pr} + (T - G) - CA \]

The above equation tells us that in order to reduce the current account deficit, a country must either increase its private savings, reduce domestic investment, or cut its government budget deficit. Nowadays, some people recommend restrictions on imports from China (and other countries) as a way to reduce the American current account deficit.

a) How would that kind of measure affect private saving, domestic investment and government deficit in the US?

b) Do you agree that import restrictions would necessarily reduce the US current account deficit?
Question 7. During the late 1990s (believe it or not), the U.S. government budget turned from deficit to surplus. Meanwhile, the U.S. current account deficit continued to grow. What does that tell you about private investment and/or private savings in the United States in that period?

Question 8. In December 1994, a major earthquake rocked Kobe, Japan, destroying the housing stock of more than 300,000 people and ruining bridges, highways, and railroad tracks. What impact, if any, do you think this event had on the Japanese current account deficit? Why?

Question 9. Is it possible for a country to have a current account deficit and a surplus in its balance of payments at the same time? Explain your answer using hypothetical figures.
Question 10. Provide the balance of payments definition and explain what means the balance of payments equilibrium. Moreover, answer the following questions:

(a) What is the relationship between balance of payments and the supply of domestic currency?

(b) What problems may arise as a result of a long term balance of payments deficit and a balance of payments surplus?

(c) What is the role of sterilization policy in offsetting the balance of payments inequilibrium?
Question 11. Let’s imagine that Canibalia is running a current account deficit of USD 10 billion and a financial account surplus of USD 5 billion. The balance on capital account and errors and omission equals 0. Taking into account the above explain:

a) What is the balance of payments of Canibalia in a narrow sense? Do they face a deficit or surplus?

b) How will change the reserve assets? How will it be recorded on the balance of payments?

c) How will the change in reserve assets influence the money supply in Canibalia? What can do the central bank in order to keep money supply unchanged?

d) What would be the answer in point b) if foreign central banks bought Canibalian bonds worth USD 5 billion?
Question 12. In 2139, the Martians engaged in the following transactions:

a) They sold ice to Jupiter for MCU 20 million (Martian Currency Unit), and to Uranus for MCU 3 million.

b) They bought natural water from Earth for MCU 10 million, and stardust from Saturn for MCU 12 million.

c) The Interstellar Committee gave a grant of MCU 5 million to Mars, but also required a membership contribution of MCU 1 million.

d) Mars lent MCU 10 million to Venus, and a Neptunian firm invested MCU 3 million on Mars.

e) A Mercurial investment bank bought MCU 5 million of Martian Government Bonds.

f) Martian banks paid MCU 3 million as interest to their Plutonian lenders.

Write the balance of payments for Mars in 2139, identifying each transaction with its ID, the letter next to which it appears below. What did Martians do with their excess of exports over imports?
Question 13. Record the following transactions in the balance of payments accounts for Canibalia by constructing a table of credits and debits (make a distinction between current account and capital and financial account only):

a) Exporters of Canibalia send 6000$ of goods to United States of Vegetarians (USV), receiving in exchange a short term bank deposit of 6000$ in USV.

b) Residents of Canibalia send 1000$ of dried bones to United States of Vegetarians citizens as a gift.

c) Canibalian flight carrier brings tourists from United States of Vegetarians. This service worth 5000$ is paid through the highest quality kerosene from USV worth 5000$.
Question 14. Due to global credit crisis, during the year 3012 all of the international transactions of Canibalia were those listed below. Enter them into the country's balance of payments, identifying each with its ID, the letter next to which it appears below.

a) A branch of international company Rokitek&Sons operating in Canibalia paid a dividend of $100000 to its mother company. The mother company opened a long-term deposit account in a Canibalian bank.

b) A Canibalian family spent $2000 during holidays in London. The payment for £ was made through the transfers to the accounts of British residents in a Canibalian bank.

c) Canibalian workers in Paris transferred a part of their earnings worth $10000 to Canibalia. As a consequence, the deposits of French banks in Canibalian banks decreased.

d) An English investor bought shares of „Pay&Go” company worth $5000. He collected the necessary $ selling long term treasury bonds of Canibalia.

e) France wrote off a Canibalian debt worth $20000000. Furthermore, they donated to Canibalia some fresh frogs and snails worth $100000.
Question 15. Imagine, that somewhere in the Pacific there is a country, Canibalia, whose currency is the Canibalian dollar, denoted $, and whose capital city is Rokitkowo City. Suppose that during the year 1999, all of the international transactions of Canibalia were those listed below. Enter them into the country’s balance of payments, identifying each with its ID, the letter next to which it appears below.

b) A group of Canibalian children collects $140 worth of canned vegetables which they send to a group of undernourished fashion models in New York City.
c) A Canibalian father orders abroad Romer’s book on Advanced Macroeconomics as a birthday gift for his 12-year old daughter, charging it to his Visa card issued by Citibank in New York. The price of the book is $0.15.
d) The Canibalian president, Mr. Canibaleck, buys Eurofinger fighters from a French firm for $3,000,000, promising that the next administration will pay for it. He then contributes the fighters to the government of an unnamed country as “humanitarian aid.”
e) Hannah Montannah, a wealthy Canibalian businessperson, withdraws £10,000,000 from his Swiss bank account, exchanges it for $2,340,000 in the foreign exchange market, and deposits the proceeds into her investment fund where they are used to purchase Canibalian treasury bills from a resident of Hong Kong.
Question 15 (continued)

f) Canibaleck Jr., son of Mr. Canibaleck, is paid royalties of $1,740 on sales of a book that he had previously ghost-written in the name of the family cat and published with a Japanese publisher. The royalties arrive from the publisher as a packet of small-denomination $ notes in a plain brown wrapper.
g) The national treasury of Canibalia makes interest payments on its national debt, including a check for $3,178 to U.S. resident Jill Scott. Jill Scott mislays it and does not cash it until year 2020.
h) The Ford School of the University of Michigan, having commissioned construction of a subsidiary in Rokitkowo City, purchases architectural drawings of the building from a Canibalian firm. It pays $450,000 for these, writing a check on the School’s account in the Bank of Rokitkowo City.
i) The Bank of Rokitkowo City reports an increase of $42,000 in its deposits. The deposit was in fact made by Mick Jagger, but because the deposit slip bore no name, the bank does not know where this money came from.
j) The Canibalian Reserve Bank, which is the central bank of Canibalia, uses part of its reserves of Canadian dollars to purchase $815,000 from a Canadian student who wishes to liquidate her deposits in the Bank of Rokitkowo City out of fear of a $ devaluation.
Question 16. Suppose that the following transactions take place on the Canibalian balance of payments. Analyze the effects on the corresponding part of the current account, the capital account, the financial account and the official settlements account.

a) Goeing, a Canibalian aerospace company, sells $3 billion of its brand new and super safe 121 max 888 airplanes to the People’s Republic of China, which pays with proceeds from a loan from international banks.

b) Nikko, a Japanese investment bank, purchases $70 million of Canibalian Treasury bonds. Nikko draws down its account with the National Bank of Rokitkowo to pay for the bonds.

c) General Bikes, a Canibalian automobile company, sends a dividend check for $25,255 to a Canadian investor in Toronto. The Canadian investor deposits the check in a Canibalian dollar-denominated bank account at the Bank of Montreal.

d) The Canibalian central bank is authorized to intervene in the foreign exchange market. They purchase $5 billion with Japanese yen and euro that they hold as international reserves.

e) President Canibaleck sends troops into a Latin American country. The total operation costs Canibalian taxpayers $8.5 billion. To show their support for the operation, the governments of Mexico and Brazil each donate $1 billion to Canibalia, which they raise by selling Canibalian Treasury bonds that they were holding as international reserves.

f) Honda of Canibalia, the Canibalia subsidiary of the Japanese automobile manufacturer, obtains $275 million from its parent company in Japan in the form of a loan to enable it to construct a new state-of-art manufacturing facility in Rokitkowo City.