

International Economics: Lecture 16

Balance of Payments

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ATC, March 24 & 29, 2017

Balance of Payments (BOP)

BOP is the record of all economic transactions between domestic and foreign residents. Every transaction is a flow and BOP records only flows. Stocks are recorded in International investment position (IIP).

Residence

A household is resident in the economy where he lives for one year or more.

An enterprise is resident in an economy where it is engaged in a production of goods or services.

Carefour Armenia and Coca Cola Armenia are Armenian residents.

Government operations abroad, such as embassies, consulates, military bases, are residents of their home economy.

American embassy in Yerevan is an American resident.

Russian military base in Gyumri is a Russian resident.

Current account of Armenia, 2015



Primary income

- Inflow: \$0.9 B
- Outflow: \$0.5 B
- Net inflow: \$0.4 B

✓ Compensation of employees:
net inflow \$0.66 B

✓ Investment incomes:
net outflow \$0.23 B

- Direct investment
- Portfolio investment
- Interest

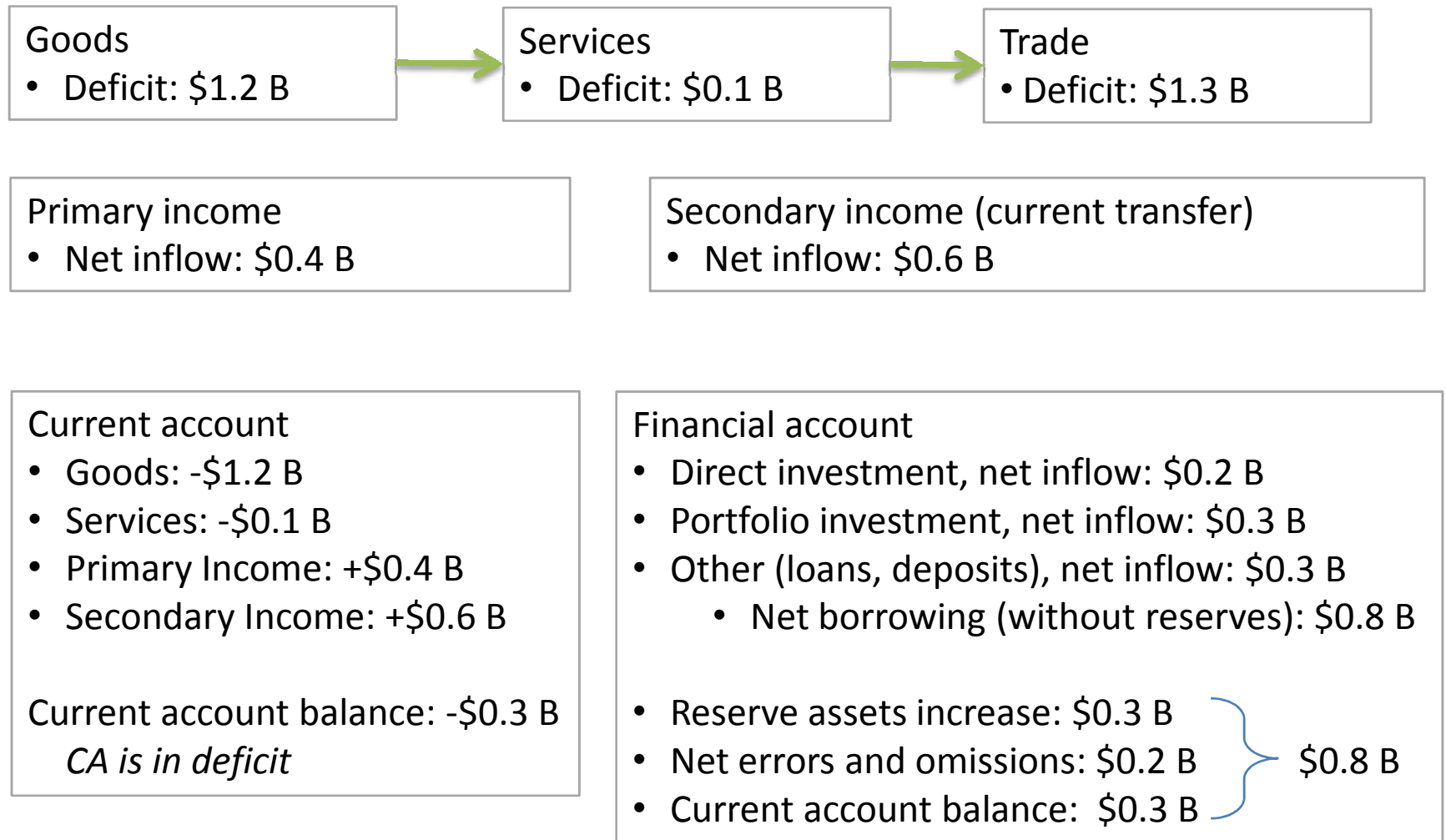
Secondary income (current transfers)

- Inflow: \$0.9 B
- Outflow: \$0.3 B
- Net inflow: \$0.6 B

✓ Government transfers, net inflow: \$0.15 B
 ✓ Personal transfers, net inflow: \$0.42 B

- Direct investment: The investor controls or significantly influences on the management of the enterprise.
- Portfolio investment: The investor has almost no role in decision making.

Balance of Payments of Armenia, 2015



Balance of Payments basic accounts

1. Current account
 - Goods
 - Services
 - Primary income
 - Secondary income
2. Capital account
 - Acquisition/disposal of nonproduced nonfinancial assets
 - Tangible assets, such as mineral right, fishing rights
 - Intangible assets, such as patents, copyright, trademark, franchises, lease
 - Capital transfers (investment grants, debt forgiveness)
3. Financial account: Net lending (+) / net borrowing (-)
 - Direct investment
 - Portfolio investment
 - Financial derivatives
 - Other investment (loans, deposits, trade credits)
 - RESERVE ASSETS

 - Net errors and omissions

Services account

- ✓ *Manufacturing services on physical inputs owned by others*
 - Processing, assembly, labeling, packing, etc. (oil refining, assembly of clothing and electronics)
- ✓ *Maintenance and repair services*
 - Repairs and maintenance on ships, aircraft, and other transport equipment
- ✓ *Transport*
 - Passenger, freight, postal
- ✓ *Travel*
 - Goods and services for own use or to give away acquired from an economy by nonresidents during visits to that economy. Includes local transport.
- ✓ *Construction*
- ✓ *Insurance and pension services*
 - Life insurance and annuities, nonlife insurance, freight insurance
- ✓ *Financial services*
 - Bank services, such as deposit taking and lending, letters of credit, credit card services, commissions and charges related to financial leasing, factoring.

Services account

- ✓ *Charges for the use of intellectual property*
 - Charges for the use of proprietary rights (such as patents, trademarks, copyrights, franchises)
 - Charges for licenses to reproduce or distribute intellectual property (such as copyrights on books, computer software, cinematographic works, and sound recordings)
- ✓ *Telecommunications, computer, and information services*
 - Mobile telecommunications services, online access services
 - Hardware- and software-related services and data-processing services (e.g. call center providing computer support service)
 - Provision of news, photographs, and feature articles to the media
- ✓ *Other business services*
 - Research and development services
 - Consulting services
 - legal services, accounting, management consulting, managerial services, and public relations services;
 - advertising, market research, and public opinion polling services.

Services account

- ✓ *Other business services (continued)*
 - Technical, Trade related services
 - Architectural, engineering and other technical services
 - Agent's commission on sales, call center providing selling service
- ✓ *Personal, cultural, and recreational services*
 - Production of motion pictures, radio and television programs, and musical recordings
 - Health and education services. However, health and education services provided to nonresidents who are present in the territory of the service provider are included in travel.
- ✓ *Government services*
 - Services supplied by and to embassies (charges for visas)
 - Services acquired from the host economy by diplomats, consular staff

Basic BOP identity as presented in textbooks

Denote

- Current account balance \equiv CA
- Capital & Financial account balance (without reserve assets) \equiv K
- RESERVE ASSETS \equiv dR

$$CA + K + dR = 0$$

This identity is not consistent with BPM6, because of new sign conventions.

BOP identity in BPM6

Armenia, 2015, mln. \$		
Current account	-279.1	A
Capital account	65.3	B
<i>Net lending (+) / net borrowing (-)</i> <i>(from current and capital accounts)</i>	-213.8	
Direct investment	-161.7	
Portfolio investment	-259.1	
Financial derivatives	-1.7	
Other investment	-290.8	
Reserve assets	332.9	C
<i>Net lending (+) / net borrowing (-)</i> <i>(from financial accounts)</i>	-380.4	D
<i>Net lending (+) / net borrowing (-)</i> <i>(from financial accounts, without reserve assets)</i>	-713.3	E
<i>Net errors and omissions</i>	-166.6	F

BOP identity consistent with BPM6.

$$\begin{aligned}
 A + B + F \\
 &= D \\
 &= E + C
 \end{aligned}$$

Financial account basics

Hypothetical example

1. Nonresident acquires a company in Armenia for \$100 mln.
2. Nonresident sells an Armenian company owned by him to a resident for \$20 mln.
3. A resident acquires a company in ROW for \$27 mln.
4. A resident sells a foreign company owned by him to nonresident for \$3 mln.

	<i>mln. USD</i>
Direct investment	-56 (=24 - 80)
Net acquisition of assets	24 (=27 - 3)
Net incurrence of liabilities	80 (=100 - 20)

*For the financial account items
the balance is equal to
= Net acquisition of assets
- Net incurrence of liabilities*

Direct investment assets net increase: 24 mln.

Direct investment liabilities net increase: 80 mln.

Financial account basics

Hypothetical example

1. Nonresident acquires a company in Armenia for \$100 mln.
2. Nonresident sells an Armenian company owned by him to a resident **for \$120 mln.**
3. A resident acquires a company in ROW for \$27 mln.
4. A resident sells a foreign company owned by him to nonresident for \$3 mln.

	<i>mln. USD</i>
Direct investment	44 (=24 – (-20))
- Net acquisition of assets	24 (=27 – 3)
- Net incurrence of liabilities	-20 (=100 – 120)

Direct investment assets net increase: 24 mln.

Direct investment liabilities **net decrease: 20 mln.**

Financial account basics

Hypothetical examples

	<i>mln. USD</i>	<i>1st example</i>	<i>2nd example</i>
<i>Financial account</i>		– 240	360
<i>Net lending (+) / net borrowing (–)</i>			
Direct investment		–56	44
Portfolio investment		–230	–230
Financial derivatives		–4	–4
Other investment		–250	250
Reserve assets		300	300

1st example: The country is a net borrower. Net borrowing is \$240mln.

2nd example: The country is a net lender. Net lending is \$360mln.

In both cases reserve assets increase by \$300mln.

BOP identity

Hypothetical examples

	<i>mln. USD</i>	<i>1st example</i>	<i>2nd example</i>
Current account		– 270	330
Capital account		30	30
<i>Financial account</i>		– 240	360
<i>Financial account (without reserve assets)</i>		– 540	60
Reserve assets		300	300

1st example: The country is a net borrower. Net borrowing is \$240mln.

Total net inflow of investments is \$540mln, of which \$300mln has been used for reserve assets increase, and \$240mln for balancing current and capital accounts' total deficit.

2nd example: The country is a net lender. Net lending is \$360mln.

Total net outflow of investments is \$60mln, another \$300mln has been used for reserve assets increase. All these matches to current and capital accounts' total surplus.

Recording of current account transactions, debits

- An Armenian resident buys an iPhone from China
 - ✓ Import of goods (debit)
- An Armenian resident travels to Spain with Air France
 - ✓ Import of travel and transport services (debit)
- An Armenian resident buys a licensed Windows from MSFT trade rep in Armenia
 - ✓ Not related to BOP, as the trade rep is an Armenian resident
- The MSFT trade rep sends profits to U.S.
 - ✓ Primary income paid to abroad (debit)
- Armenian government pays interest on foreign debt
 - ✓ Primary income paid to abroad (debit)
- The American boss of MSFT trade rep, who lives in Armenia for years (already an Armenian resident), and may be even have married here, sends money back home, to his former wife.
 - ✓ Secondary income paid to abroad (debit)

Debit rule

- If you should pay a foreign resident for something, then the something counts as a debit.

Recording of current account transactions, credits

- An Uzbek resident buys an Armphone from Armenia
 - ✓ Export of goods (credit)
- An Uzbek resident travels to Armenia with Armenia Air company
 - ✓ Export of travel and transport services (credit)
- An Armenian resident moves to Russia to work on construction project for three months and receives monthly wage of \$10,000
 - ✓ Primary income received from abroad (credit)
- An Armenian confectionery tycoon receives income on its foreign direct investments in Europe
 - ✓ Primary income received from abroad (credit)
- The Armenian former resident, after wasting his life in Russia, and after 30 years of separation sends \$100 to his daughter in Armenia, who himself already has a daughter.
 - ✓ Secondary income received from abroad (credit)

Credit rule

- If a foreign resident should pay you for something, then the something counts as a credit.

Recording of financial account transactions, debits

Debit rule

■ If you should pay a foreign resident for something, then the something counts as a debit.

- An Armenian resident instead of buying licensed Windows, buys a software company in the U.S.
 - ✓ Direct investment: Acquisition of financial assets (debit)
- An Armenian resident instead of buying licensed Windows, buys 5 shares of MSFT
 - ✓ Portfolio investment: Acquisition of financial assets (debit)
- An Armenian resident instead of buying MSFT stocks, lends money to MSFT for 3 years
 - ✓ Loans: Acquisition of financial assets (debit)
- Armenian Central Bank buys 30-year U.S. treasury bonds and increases its deposits in Citibank
 - ✓ Increase of reserve assets

Recording of financial account transactions, credits

Credit rule

■ If a foreign resident should pay you for something, then the something counts as a credit.

- An Uzbek resident instead of buying Armphone, acquires 15% of the company producing Armphone
 - ✓ Direct investment: Incurrence of liabilities (credit)
- An Uzbek resident buys 10 shares of Unibank OJSC
 - ✓ Portfolio investment: Incurrence of liabilities (credit)
- An Uzbek resident buys Armenian government Eurobonds
 - ✓ Portfolio investment: Incurrence of liabilities (credit)
- World Bank and Russian government lend money to Armenian government
 - ✓ Loans: Incurrence of liabilities (credit)
- Armenian Central Bank sells U.S. treasure bonds and decreases its deposits in Citibank
 - ✓ Decrease of reserve assets

Recording of transactions

CREDIT

- Exports of goods and services,
- Income receivable (income inflow),
- Reduction in assets, and
- Increase in liabilities.

DEBIT

- Imports of goods and services,
- Income payable (income outflow),
- Increase in assets, and
- Reduction in liabilities.

Credit rule

- If a foreign resident should pay you for something, then the something counts as a credit.
- If you should pay a foreign resident for something, then the something counts as a debit.

Balance of Payments structure

Current account

- Goods
 - Export – Credit
 - Import - Debit
- Services
 - Export – Credit
 - Import – Debit
- Primary income
 - Inflow – Credit
 - Outflow – Debit
- Secondary income
 - Inflow – Credit
 - Outflow – Debit

Capital account

- Export – Credit
- Import - Debit

For Current and Capital
account items

$$\text{Balance} = \text{Credit} - \text{Debit}$$

Balance of Payments structure

Financial account

- Direct investment
 - *Net acquisition of assets*
 - *Net incurrence of liabilities*
- Portfolio investment
 - *Net acquisition of assets*
 - *Net incurrence of liabilities*
- Financial derivatives
 - *Net acquisition of assets*
 - *Net incurrence of liabilities*
- Other investment (Currency, deposits, loans, trade credit)
 - *Net acquisition of assets*
 - *Net incurrence of liabilities*
- RESERVE ASSETS
 - *Net acquisition of assets*

For Financial Account items

Balance

= *Net acquisition of assets*
 - *Net incurrence of liabilities*

Acquisition of an asset: \$100

Sale of same type of asset: \$20

Net acquisition of asset: \$80

Incurrence of a liability: \$300

Decrease of same type of liability: \$400

Net incurrence of liabilities: (-\$100)

Balance = \$80 - (-\$100) = \$180

Double entry bookkeeping

BOP is based on double entry bookkeeping.

- An Armenian buys an iPhone from China of \$1000, and pays for that from her Armenian bank account
 - ✓ Goods
Debit: \$1000
 - ✓ Other investment, net acquisition of assets
Currency: -\$1000
- A foreign expert is hired to teach how to cultivate apricot in Armenia. The payment is made from the bank account of the hiring firm.
 - ✓ Business services
Debit: \$250,000
 - ✓ Other investment, net acquisition of assets
Currency: -\$250,000
- That foreign expert spends some money on entertainment in Armenia
 - ✓ Travel services
Credit: \$10,000
 - ✓ Other investment, net acquisition of assets
Currency: +\$10,000

Double entry bookkeeping

- Armenia receives 36,000 tones of wheat of \$5mln from Chinese government as a gift (from China with Love)
 - ✓ Goods
Debit: \$5mln
 - ✓ Secondary income (current transfers)
Credit: \$5mln
- An Armenian bank borrows \$10mln from German bank
 - ✓ The bank receives \$10mln
(currency, net acquisition of assets, increase of assets (+))
 - ✓ The bank's foreign indebtedness increases
(loans, net incurrence of liabilities, increase in liabilities (+))

Double entry bookkeeping

- An export of goods, services (current account)
 - either increases the claim on other countries (financial account)
 - or reduces the debt (financial account).
- An import of goods, services (current account)
 - either decreases the claim on other countries (financial account)
 - or increases the debt (financial account).

Macroeconomic identities

$$\text{GDP} = C + I + G + (X - M)$$

$$\text{GNI} = C + I + G + (X - M + \text{PIB})$$

$$\text{GNDI} = C + I + G + (X - M + \text{PIB} + \text{SIB})$$

$$\text{GNDI} = A + \text{CAB}$$

$$S = \text{GNDI} - C - G$$

$$S = I + \text{CAB} \Rightarrow \text{CAB} = S - I$$

The current account balance is the gap between saving and investment.

$$I = I_p + I_G \quad S = S_p + S_G$$

$$\text{CAB} = (S_p - I_p) + (S_G - I_G)$$

If government sector dissaving is not offset by private sector net saving, the current account will be in deficit.

Thank you and take care,

but remember

You educate a man; you
educate a man. You educate
a woman; you educate a
generation.

Brigham Young