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International Economics

VII. The Balance of Payments

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VII. The Balance of Payments

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1. Individual Balances

The Balance of Payment – A Monetary Phenomenon

- Only in a monetary economy does it exist
- In barter, commodities exchange directly for each other
- Only under indirect exchange, with money, does the balance make sense

National Balances of Payment from Individuals'

- Every individual engaged in exchange has a balance of payments
- Income received and money expenditures (and capital transfers)
- National balances are simply aggregates of individual



Balances of payments and double-entry bookkeeping

- Every event generates two entries
 - One debit entry (negative sign)
 - One credit entry (positive sign)
- For this reason, the overall balance of payments *will always balance*

Subsections of the balance of payments

- Can be either in surplus or deficit
- A detailed look at the BoP can give us a lot of information about a country

The BoP's two general sections

- The *current account*: all payments for goods and services, and all other incomes
- The *capital (financial) account*: all transfers of financial assets and similar claims
- The cash balance is a subsection of the capital account, but we treat it separately



A Simple Exchange

Peter sells (exports) an apple to Paul for €1

- This generates two ledger entries for Peter
 - A *credit* entry of €1 on his current account, indicating income from the sale
 - A *debit* entry of €1 on his capital account, indicating that his assets have grown by this much
- The exchange generates two symmetrical ledger entries for Paul:
 - A *debit* entry of €1 on his current account, indicating his expenditure
 - A *credit* entry of €1 on his capital account, showing that his assets have decreased by this much
- Since the apple is paid for in cash, nothing further happens – the exchange is concluded instantaneously



Definition

- An exchange that is *extended through time*
- Final settlement happens at a later date than the receipt of goods or services

Example

- Peter and Paul regularly exchange with each other
- Sometimes with Peter paying Paul and Paul paying Peter, they can economize on the use of money
- Instead, they accumulate claims on each other
 - Peter sells apples and receives a claim on Paul instead of money, a financial asset (debited to his capital account)
 - Paul sells oranges to Peter for a claim on Peter in return, also a financial asset

Settlement

- Peter and Paul tally up their mutual claims, whoever is the net creditor is paid in cash
- Peter has sold apples to the sum of €80, but bought oranges to the sum of €100
- The difference is owed to Paul: Peter has to pay €20



Patterns of Exchange

- In regular markets, constant patterns of favourable balances can emerge
 - Peter can have a constant deficit with Paul and a constant surplus with John
 - A market in foreign exchange – claims on Peter, Paul, John, etc. - will develop

Credit and Extended Exchanges

- The use of credit allows traders to economize on their cash holding
- In theory, credit transactions can displace most of the need for cash settlement
- Never in fact: limited by inherent uncertainty and constant change



The Cash Balance

- Each person intentionally maintains a certain cash balance
- The exchange of money that results from the settlement of claims is not simply a passive element

Three Possibilities

- An individual desires to maintain his current cash holding. Current income will equal current spending
- He desires to increase his cash holding. He will sell goods of greater value than he buys and have a current account surplus
- He desires to decrease his cash holding. He will buy goods of greater value than he sells and have a current account deficit



Money Demand

- A person is drawing down his cash balance – his demand for money has declined
- Once he is rid of his excess stock of money, the balance reverses
- Short-term disturbances can lead to imbalances
 - E.g., if there is an unforeseen change in the terms of trade
- Then a person may draw down (or add to) his cash balance until he has adjusted to the new state of affairs

Capital transfers complicate it – a bit

- A person can borrow money to add to his cash balance
- A person can lend money to draw down his cash balance



Capital Transfers Beyond Claims Settlement

- Such transfers finance production, development
- They are exchanges of money for claims to future income

Example

- Peter wants to expand his apple orchard
- He needs to buy additional land, trees, manure, etc. - he needs capital!
- His own savings are not sufficient. He Asks Paul to help him
- Paul can either
 - Lend him the money
 - Buy a share in Peter's orchard
- Both are examples of capital transfers
 - Paul exchanges money for a claim to future income from Peter
 - Or he buys partial ownership of the orchard (and its future income)



Capital transfers and the financial relations in the economy

- Borrowers receive control over present resources
- Lenders receive claims to future income streams
- A capital transfer by itself *does not increase savings and investment in an economy!*
- It simply transfers control over resources from one person to another

Options to the Individual

- He can spend all his income on consumption
- Accumulate cash balances
- Invest in his own durable goods / productive enterprise
- Lend money to other people
- *A priori*, lending by itself does not increase the availability of resources – it may lead to more efficient use of capital through financial division of labour



Accounting for Capital Transfers

- Capital transfers are recorded on the capital or financial account
- The lender credits his cash balance, enters the loan on the debit side as an asset
- The borrower debits his cash balance, enters the loan as a credit
- The overall sum of the capital account has not changed – only the composition
- The lender is the *capital exporter*
- The borrower is the *capital importer*

Note: Capital transfers can finance consumption or investment



Peter receives a loan from Paul

- He now has more capital at his disposal
- He uses the borrowed money to expand his orchard, buy land etc.
- In return, he has incurred the obligation to pay Paul interest (and the principal)

Paul has lent money to Peter

- His holding of financial claims has increased, his cash balance and/or his current consumption has (temporarily) decreased
- In return, Paul now receives a flow of interest payments from Peter

Effects of the Capital Transfer

- The investment in the orchard has increased its productivity, yielding profits for Peter
- This simple capital transfer has resulted in a new flow of income from Peter to Paul
 - Paul can now maintain his previous level of imports while working less



2. National Balances of Payments

The Aggregate Balance

- Only considers the exchanges of a nation with the rest of the world
- The larger the country, the less do we learn from its balance of payments
- The balance of payments helps us understand a country's position in the world

A Guide to Economic Life

- Especially when we look at the different subsections and possible imbalances
- E.g., current and capital account flows and imbalances



Analogous to Individual Balances of Payments

- The current account records
 - Exports and imports of goods and services (the trade balance)
 - Income received from and paid to foreigners
 - Unilateral transfers (e.g., foreign aid)
- The capital (financial) account records
 - The flow of foreign direct investment
 - The flow of financial claims, both long- and short-term

Changes in International Reserves

- Recorded in the capital account
- Presented separately – like cash balance above



The equivalent of the individual's cash holding

- Under a global monetary standard (e.g., the gold standard), “international reserves” would simply be the cash balances of individuals
- In the current system of national currencies, reserves are usually held by a country's central bank or similar institutions
 - Gold
 - Foreign exchange
 - “Safe” financial claims on other countries (e.g., dollar-denominated assets)
 - SDRs from the IMF
- International reserves is a key tool of monetary policy – for later lectures



Definition

- The *international investment position* records the stock of a nation's total foreign assets and liabilities
- Note the distinction from international reserves!
 - Official reserve assets are a part of the stock of a nation's assets, but usually only a fraction of the total

The international investment position shows

- Where the country's residents have invested their capital (the asset side)
- How much capital has been invested in the country by foreigners (the liabilities side)
- It also shows whether a country is a creditor or debtor nation



3. Capital Flows across Borders

Three Reasons for Capital Flows

- To finance trade
- To invest abroad
- Money flows from money-producing countries to the rest of the world

Different Effects

- On the current account
- Allocation of capital
- Structure of trade



Money-producing Countries

- “Export” money to the rest of the world
- E.g., gold-producing countries under the gold standard
- A money-producing country can have a permanent current account deficit since it pays for its imports with newly-produced money

Consequences of Inflow

- The flow of new money will eventually lead to higher prices
- Relative prices determine the direction of the flow
- Money producers export money to consume and invest
- Exporters to the money producers increase their nominal cash balances
- Under a commodity standard, the production of new money is constrained by the law of costs



Cost-Saving, Saving on Money Holding

- Money transfers take time
- Incur costs of transportation
- Capital is bound in money for the duration of the transfer

Foreign Exchange

- It is possible to economize on money by using financial claims
 - A businessman can buy a claim on his foreign trading partner
 - He gives a claim at home in exchange
- Original meaning of “foreign exchange”
- The main way of financing trade until very recently. See e.g. Raymond de Roover 1963



The Gold Export and Import Points

Limits on Foreign Exchange Prices

- The markets for foreign exchange are ruled by supply and demand. As the price of foreign claims fluctuates, it might be cheaper to import or export money to serve once trade needs
- Under gold, exchange rates could fluctuate within a narrow rate set by the *gold export* and *gold import* points
 - If exchange rates exceeded these points, it is cheaper to export (or import) gold

Example

- Ruritania and Lapitania are both gold standard countries
- One oz of gold is equal to 5 rur or 1 lap. The exchange rate is therefore set at 5:1
 - A Lapitanian businessman wants to do trade in Ruritania, he therefore needs rur
 - If the demand for rurs or claims denominated in rur is high, the exchange rate will fall below 5
 - Once the rate hits the gold export point, it becomes cheaper to send gold to Ruritania

Determination of the Import and Export Points

- The cost of transport, insurance, and interest foregone determine the export and import points
- The points are usually a band of a few percent around the official rate
- *Interlocal exchange rates* fluctuate like this
 - In modern times, interlocal exchange is usually costless
 - If costly, it is now hidden in banking fees



The Cause of Flows

- Capitalists decide to lend abroad
 - Either the capitalists buy assets located in the foreign country
 - Or they lend money to foreigners
 - Or they purchase foreign securities

Consequences

- An increase in foreign financial assets in the domestic country and an export of capital to the foreign country
- Entrepreneurs in the foreign country can use the additional capital to expand production
 - E.g., by more purchases of inputs from capital-exporting country
 - Or a foreign government may be the borrower, or consumers



Financial Account

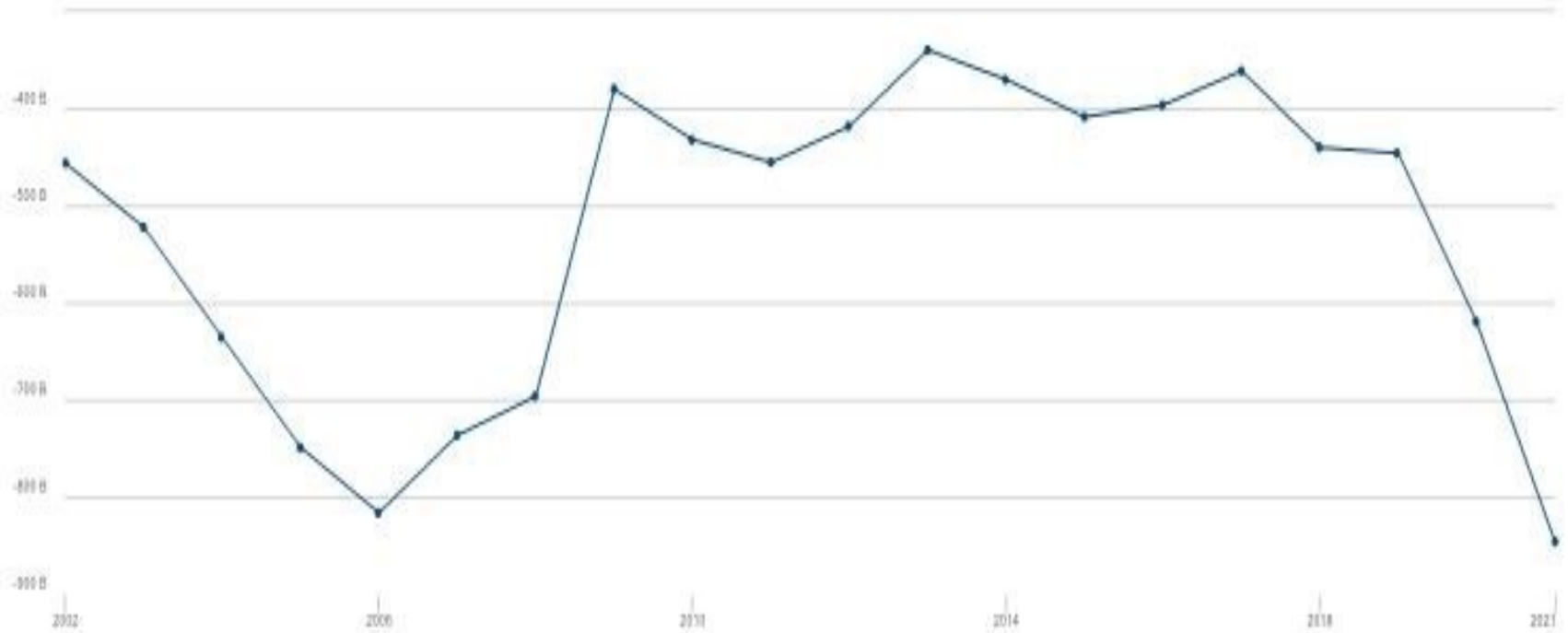
- The capital-exporting country is *increasing* its holdings of foreign financial assets (or decreasing its liabilities) and is an international lender
- The capital-importing country is *decreasing* its holdings of foreign financial assets (or increasing its liabilities) and is an international borrower
- Capital exports are *initially* recorded as a debit on the financial account and are usually counterbalanced by a credit somewhere else on the financial account – e.g., the capitalists' cash balance
- Capital imports are *initially* recorded as a credit on the financial account and are usually counterbalanced by a debit somewhere else on the financial account – e.g., the entrepreneurs' cash balance

Current Account

- Over time, *capital imports* will be accompanied by a *current account deficit*: borrowed funds are spent on capital goods to help expand production
- *Capital exports* will likely lead to or be accompanied by a *current account surplus* in the exporting country: funds are used to buy capital goods from the country
- Capital flows can speed up the process of capital accumulation in a developing country
 - The rate of return on investment will be higher in developing countries
 - We should therefore expect capital to flow from wealthier, to poorer, developing countries

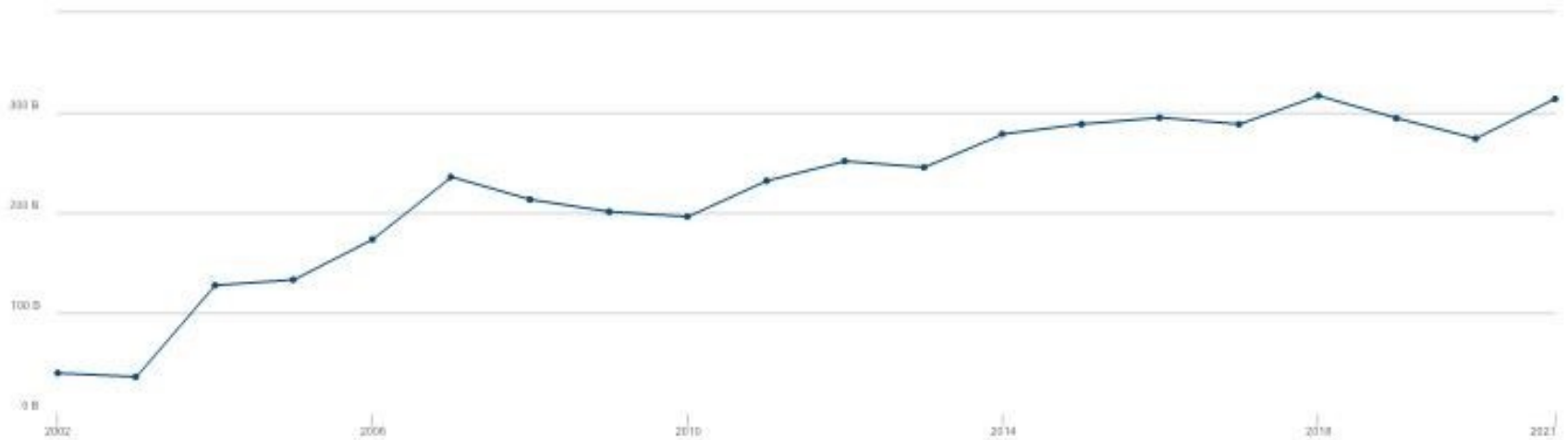


Capital Flows – US Current Account 2002-21





Capital Flows – German Current Account





- If capital should flow to developing countries, why the huge US current account deficit?

Some possible answers

- Despite being a developed country, the US economy still yields high returns, attracting foreign capital
- Dollar-denominated assets are considered safer investments
- Dollars and dollar-denominated assets are important reserve assets
- If we look at the US current account for 2017, it looks like foreign holdings of US assets in reserves financed the deficit



US Balance of Payments

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Current Account	
Exports of goods and services	(+) ^a 2,351
Imports of goods and services	(-) 2,903
Income received from foreigners	(+) 928
Income paid to foreigners	(-) 706
Unilateral transfers, net	-119
<i>Current account balance</i>	<u>-449</u>
Financial Account (excluding official international reserves)	
Changes in U.S. direct investments abroad	(-) 379
Changes in foreign direct investments in the United States	(+) 355
Changes in U.S. holdings of foreign stocks and bonds	(-) 587
Changes in foreign holdings of U.S. stocks and bonds	(+) 589
Changes in U.S. loans to foreigners and other investments	(-) 219
Changes in foreign loans to the U.S. and other investments	(+) 410
<i>Financial account balance</i>	<u>169</u>
Official International Reserves	
Changes in U.S. official holdings of foreign assets	(-) -2
Changes in foreign official holdings of U.S. assets	(+) 185
<i>Changes in official international reserves, net</i>	<u>187</u>
Statistical Discrepancy^b	93
Other important balances:	
<i>Goods and services balance</i>	-552
<i>Overall balance^c</i>	<u>-187</u>

^aThe (+) symbol indicates a credit item, and the (-) symbol indicates a debit item. An entry without a sign symbol is a net value, credits minus debits.

^bThe statistical discrepancy is the net value of all errors and omissions in measuring the items. It equals the negative of the sum of the current account balance, the financial account balance, and the net changes in official international reserves. Here it equals $-(-449 + 169 + 187)$.

^cThe overall balance is also called the official settlements balance. It equals the current account balance plus the financial account balance plus the statistical discrepancy because it is the total of all items except for the changes in official international reserves. (It is also equal to the negative of the net changes in official reserves.)

Source: U.S. Bureau of Economic Analysis, *International Data*, June 20, 2018, International Transactions Tables I.1 and 9.1.



US Net International Investment Position

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	1897	1914	1930	1946	1960	1980	1994	2017
U.S. investment abroad	\$1.3	\$5.0	\$21.5	\$39.4	\$85.6	\$839.1	\$3,434.6	\$27,632.8
Direct investments*	0.6	2.7	8.0	7.2	31.9	297.3	1,234.1	8,863.4
U.S. official reserve assets†	0.6	1.5	4.3	20.7	19.4	171.4	163.4	449.7
Other	0.1	0.8	9.2	11.5	34.3	370.3	2,037.2	18,319.7
Foreign investments								
in the United States	3.4	7.2	8.4	15.2	40.9	542.2	3,544.9	35,478.6
Direct investments*	—	1.3	1.4	2.5	6.9	99.9	877.4	8,871.4
Other	3.4	5.9	7.0	12.7	34.0	442.4	2,667.6	26,607.3
U.S. net international investment position	-2.1	-2.2	13.1	26.7	44.7	296.9	-110.3	-7,845.8

**Direct investment* refers to any international investment in a foreign enterprise owned in large part by the investor. For 1982 and subsequent years, direct investments are reported at estimated market values. For previous years, they are reported at historic cost.

†U.S. official reserve assets consist of gold and foreign exchange assets plus the reserve position at the IMF and Special Drawing Rights. For 1982 and subsequent years, reserve gold is reported at market values.

Sources: U.S. Bureau of the Census, *Historical Statistics of the United States: Colonial Times to 1970* (Washington, DC: U.S. Government Printing Office, 1976); and U.S. Bureau of Economic Analysis, *International Data*, March 30, 2018, International Investment Position Table 1.1.



4. The Balance of Payments and the Macro-Economy

The Current Account and Foreign Investment

- The current account balance must equal net foreign investment
 - I.e., the increase in foreign assets minus the increase in foreign liabilities
- If a country has a CA surplus, then it is a net lender to the rest of the world – its financial assets are growing faster than liabilities
- If a country has a CA deficit, then it is a net borrower – its liabilities grow faster than assets



The Current Account and Savings

- The CA is linked to national savings and domestic investment
- National saving (S) can be invested in domestic capital formation (I_d), or abroad in net foreign investment (I_f)
- So $S = I_d + I_f$
- Net foreign investment equals the difference between national saving and domestic investment, or $I_f = S - I_d$
- Equivalently, the current account balance equals national saving not invested at home: $CA = S - I_d$
- If national savings are too low to finance all domestic investment, net foreign investment will be negative



The Current Account and Production

- The current account balance is the difference between domestic production and total expenditures on goods and services
- $Y = C + I_d + G + X - M$
- The current account balance is (about) equal to net exports, $X - M$
- A positive CA balance thus means that a country is producing more than it is consuming
- A negative CA balance means that it is consuming more than it is producing

Or strictly speaking

- Positive CA: people are spending less than their incomes
- Negative CA: people are spending more than their incomes



The Current Account Balance

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Current Account Balance

- = Net foreign investment
- = The difference between national saving and domestic investment
- ≈ The difference between domestic product and national expenditure

CA

$$\begin{aligned} &= I_f \\ &= S - I_d \\ &\approx Y - E \end{aligned}$$



The Meaning of the Overall Balance

- The balance indicates whether a country's position is sustainable through time
 - But remember: there is nothing *per se* wrong with a CA imbalance
- In order to understand the overall balance, I_f is divided into two components
 - Net private capital flows as shown by the financial account balance (FA)
 - Net flow of official reserve assets (OR)
- The official settlements balance (B) is the sum of the current account balance and the financial account balance
- $B = CA + FA$
- Since all items in the balance of payments must sum to zero, any imbalance in the official settlements balance must be financed through an opposite flow of official reserves: $B + OR = 0$



The Meaning of the Overall Balance

Surplus Overall Balance (credit)

- Official reserves are being accumulated (debit)
- And/or foreigners' official reserve holdings are decreasing

Deficit Overall Balance (debit)

- Holdings of official reserves are decreasing (credit)
- And/or foreigners' official reserve holdings are increasing

Reserves a Matter of Monetary Policy

- Monetary authorities intervene by buying and selling in the foreign exchange market
- International monetary policy is a topic for a later lecture



5. Foreign Direct Investment

Definition

- Funding provided by investors to establish or acquire foreign companies
- The key for categorizing a capital flow as FDI is sufficient control or influence
- The agreed international standard is at least 10 percent ownership

Flows and Stocks

- *Flows* of FDI measure new equity investments and loans within multinational enterprises (MNEs) during a period of time
- *Stocks* of FDI measure the total amount of direct investment at a point in time



Definition

- An MNE is a company that owns and controls operations in more than one country
- The parent firm of the MNE is located in the home country. The home country is the source of outward FDI
- The MNE has affiliates located in host countries. The host country is the destination of inward FDI

Reasons for MNEs

- Inherent disadvantages of being foreign
- Firm-specific advantages, goodwill, trademarks etc.
- Location factors: the availability of land and labour factors
- Trade blocs: an affiliate may give entrance to a large free-trade area
- Internalization advantages: keeping full control of intangible assets



- MNEs are heavily involved in international trade
 - About 1/3 of the world's trade in goods is intrafirm trade between units of MNEs
 - Another 1/3 of trade involves an MNE as seller or buyer

Transfer Pricing

- The price one unit of an MNE pays to another
- From an overall point of view, these are just accounting operations within one enterprise
- Internal prices help the owners and management see which affiliates are profitable

Transfer Pricing and Taxation

- Transfer pricing can shift profits out of high-tax jurisdictions and report more profits in low-tax jurisdictions
- Some MNEs have profits “stranded abroad,” high taxes make it unprofitable to bring them home
 - This problem can be solved by internal loans: subsidiary abroad make a loan to the parent company



6. Summary

1. The balance of payments show the position of an individual or nation within the economy
2. The current account shows the flow of goods and services, incomes and transfers
3. The capital or financial account show the flow of financial assets
4. The overall balances always balances, but there can be surpluses and deficits on the partial balances
5. A surplus on the current account means that more is being exported than imported
6. A surplus on the capital account means that capital is being imported (foreign liabilities increase)
7. Multinational companies play a key role in global trade. They are the source of most foreign direct investment



7. References

De Roover, Raymond, 1963. *The Rise and Decline of the Medici Bank*.

World Bank Databank: <https://databank.worldbank.org/home.aspx>

IMF Balance of Payments Manual:

<https://www.imf.org/external/pubs/ft/bop/2007/bopman6.htm>