



The Balance of Payments

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Balance of Payments

- The balance of payments is an accounting listing (tabulation) of the values of economic (trade and financial) transactions between the **residents of a (home) country** and **residents of other countries**.



Structure of the presentation

- The **balance of payments** is the record of a country's transactions in goods, services, and assets with the rest of the world; also the record of a country's sources (supply) and uses (demand) of foreign exchange.
- When we buy something from another country, we use the currency of that country to make the transaction.
- **Foreign exchange** is simply all currencies other than the domestic currency of a given country.
- *A country's balance of payments accounts* **record its international trading position and its lending and borrowing**
=> records transactions between countries



Principles of Balance of Payment Accounting

- The account records all transactions that affect the **supply of or demand for a currency in the foreign exchange markets.**
1. We should also recognize the importance of residence status in defining balance of payments. **Residents** include individuals, corporations, government entities, and financial institutions. When a corporation or financial institution has branch abroad or affiliate for balance of payments purposes, that abroad unit is a **nonresident**.



Foreign Exchange Market- Fixed ER

Each transaction is classified **according to the payments or receipts that it generates**

- Transactions that generate a receipt of a **payment from foreigners** are a **credit** item in the accounts with a **+** sign
 - ***These represent a supply of foreign exchange and a demand for the local currency (czk)***
 - Transactions that comprise a **payment to foreigners** are reported as a **debit** item with a **-** sign
 - ***=> These represent demand for foreign exchange and a supply of the local currency (czk)***



Principles of Balance of Payment Accounting

- A receipt transaction is one that gives rise to the **receipt of funds** by a resident, and a payment transaction is one that results in **payment of funds** by a resident.
- 1) **Receipt transactions** include goods exports, exports of services (including shipping and tourism), receipt of income on foreign investments, and capital inflows (foreign purchase of domestic assets).
 - 2) **Payments transactions** include goods imports, imports of services, and capital outflows (resident purchases of foreign assets)



Principles of Balance of Payment Accounting

- **Credits:**
 - give rise to payments **inward to** the country
 - create an immediate demand for the country's currency
 - reflect an increase in net claims of foreign countries on the home country:
 - increase in home country assets owned by foreign citizens or government,
 - decrease in foreign assets owned by home country citizens or government.



Principles of Balance of Payment Accounting

- **Debits:**
 - give rise to payments **outward from** the country
 - create an immediate demand for another country's currency
 - reflect a decrease in net claims of foreign countries on the home country:
 - decrease in home country assets owned by foreign citizens or government,
 - increase in foreign assets owned by home country citizens or government).



Balance of Payments Accounts

- There are three balance of payments accounts:
 - **Current account**
 - **Financial account**
 - **Official settlements account**
 - **The balances of these three accounts sum to zero.**
- The **current account** records payments for imports of goods and services from abroad, receipts from exports of goods and services sold abroad, net interest paid abroad, and net transfers (such as foreign aid payments).
- The **Financial account** records foreign investment in the Czech Republic minus czech investments abroad. (This account also has a statistical discrepancy that arises from errors and omissions in measuring capital transactions.)
- The **official settlements account** records the change in Czech official reserves.



Current Account

- financial flows from (+) and to (-) foreign countries

A. Current Account

I. Trade balance (=Exports-imports)

II. Balance of services (transport, tourism, other services...)

III. Income balance (dividends, interest, profits...)

IV. Current Transfers (legacy, donations, alimony, ...)

B. Capital Account (transfers of capital due to migration, debt pardons,..)

C. Financial Account

I. Foreign Direct Investment (above 30% of ownership)

II. Portfolio Investment

III. Other Investment

D. Net Errors and omissions, valuation changes

E. Change in Reserves (- Increase, + decrease)

$$A + B + C + D + E = 0$$

Balance of Payments

1. Export of Goods

2. Imports of Goods

3. Trade Balance = (1) - (2)

4. Exports of services

5. Imports of Services

6. Net Royalties

7. Net Investment Income

8. Invisible Balance = Balance on Services and Income = (4) - (5) + (6) + (7)

9. Balance on Goods, Services and Income = (3) + (8)

10. Net Foreign Workers Remittances

11. Net International Aid

12. Unilateral Transfers = (10) + (11)

13. Current Account Balance (CA) = (3) + (8) + (12)

14. Gross Inward Direct investment

15. Gross Outward Direct Investment

16. Gross Inward Portfolio Investment

17. Gross Outward Portfolio Investment

18. Long-Term Financial Account Balance = (14) - (15) + (16) - (17)

19. Short-Term Inward Capital Inflows

20. Short-Term Outward Capital Flows

21. Short-Term Financial Account Balance = (19) - (20)

22. Financial Account Balance (FA) = (18) + (21)

23. Errors and Omissions

24. Overall Balance = (13) + (22)

25. Balance on Official Intervention Account (net sales of foreign exchange) – Reserve Account (RA)

Balance of Payments: CA+FA+RA= 0

Burda and Wyplosz: Macroeconomics

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Current Account

- **Credits**
 - exports of goods and services
 - income from investments abroad
 - other factor income earned abroad
 - unilateral transfers to home country from abroad (gifts, aids)
- **Debits:**
 - imports of goods and services
 - investment income sent abroad
 - other factor income sent abroad
 - unilateral transfers sent abroad (gifts, aids)
- **It shows how much a nation has spent relative to how much it has earned.**



The Financial Account

- The financial account records the changes in assets and liabilities.
- **The *balance on financial account* in the Czech Republic is the sum of the following (measured in a given period):**
 - the change in private czech assets abroad
 - the change in foreign private assets in the Czech Republic
 - the change in czech government assets abroad, and
 - the change in foreign government assets in the Czech Republic
- **If the financial account is positive, the change in foreign assets in the country is greater than the change in the country's assets abroad, which is a decrease in the net wealth of the country.**



The balance for Official Financing

The balance for official financing shows the net increase or decrease in a country's holdings of foreign currency reserves:

- A **decrease** in the official reserves is reported as a **credit** item (+), since it involves the purchase of czks
- an **increase** is reported as a **debit** item (-), since it involves the the sale of czks
- **Credit:** Foreign central bank acquires home country currency or assets, home central bank sells foreign assets
- **Debit:** Home country central bank acquires international currency or foreign assets.
- => If the exchange rate is **freely floating**, then the balance for official financing is **zero.....!!!!**



The balance for Official Financing

- If the exchange rate is **fixed**, and there is a BoP **deficit** \Rightarrow **outflows > inflows** \Rightarrow **supply of czks > demand for czks**
- The Central Bank must offset this excess supply of czks by buying them with foreign currency; i.e. runs down its reserves of foreign exchange

A deficit in the current account must be financed by borrowing from abroad or by divestment of foreign assets.

A surplus must be loaned abroad or invested in foreign assets.



Balance of Payment Identity

When the balance of payments accounts are recorded correctly, the combined balance of the current account (CA), the financial account (FA), and the reserves account (RA) must be zero, that is, $CA+FA+RA=0$ **The balance of payment identity (BOPI)**

The balance of payment identity (BOPI) must necessarily hold. The BOPI equation indicates that a country can run a balance of payments surplus or deficit by increasing or decreasing its official reserves.

Under the fixed exchange rate regime, countries maintain official reserves that allow them to have balance of payments disequilibrium, that is, $CA+FA$ is nonzero, without adjusting the exchange rate. Under the fixed exchange rate regime, the combined balance on the current and financial accounts will be equal in size, but opposite in sign, to the change in the official reserves:

$$CA+FA = - RA$$



Balance of Payment Identity

For example, if a country runs a deficit on the overall balance, that is, $CA+FA$ is negative, the central bank of the country can supply foreign exchanges out of its reserve holdings. But if the deficit persists, the central bank will eventually run out of its reserves, and the country may be forced to devalue its currency. **This is roughly what happened to the Mexican peso in Dec. 1994.**

Under the pure flexible exchange rate regime, central banks will not intervene in the foreign exchange markets. In fact, central banks do not need to maintain official reserves. Under this regime, the overall balance thus must necessarily balance, that is, **$CA = -FA$**

In other words, a current account surplus or deficit must be matched by a capital account deficit or surplus, and vice versa.



Current Account Deficit or Surplus

- Current account deficit reflects a shortage of saving over investment; current account surplus reflects an excess of saving over investment.
- Current account deficits either run down net foreign wealth or run up foreign debts.
- Any current account deficit must be matched by an equal capital account surplus, and vice versa.



Current Account and National Income

- The current account provides information on the balance of consumption, saving, investment and government taxes and spending.
- Because a current account surplus means we are purchasing less than we are earning, this must mean there is a direct relationship between the current account and domestic national income.

Recall the basic macroeconomic equality:

$$\mathbf{GDP = Y = C + I + G + X - M}$$

Y = national income

C = consumption spending

I = Investment spending on plant, equipment, etc.

G = government spending on goods and services

X = exports (credit items in Current Acc)

M = imports (debit items in Current Account)



Current Account and National Income

$$Y - (C + I + G) = (X - M)$$

- The left side represents national income less spending. This is domestic savings
- The right is the current account balance.

Another approach

Income can be written as:

$$Y = C + S + T$$

S = private savings

T = taxes

This means that income can be used for consumption, including imports, savings or taxes.

We can combine this with the national income identity...



... to obtain

$$C + I + G + (X - M) = C + S + T$$

and rearrange to get

$$(X - M) = S + (T - G) - I$$

This tells us that the current account depends on

- Private savings (S)
- Public savings (T – G)
- less investment spending

- **$(X - M) = S + (T - G) - I$**
- This shows that a positive current account balance means the country is saving more than it is investing.
- A negative balance means that the country's net investment is partly being financed abroad (more than we are financing other countries' investments)



Current Account

- A country that is borrowing more from the rest of the world than it is lending to it is called a **net borrower**.
- A country that is lending more to the rest of the world than it is borrowing from it is called a **net lender**.
- A **debtor nation** is a country that during its entire history has borrowed more from the rest of the world than it has lent to it.
- A **creditor nation** is a country that has invested more in the rest of the world than other countries have invested in it.
- The difference between being a borrower/lender nation and being a creditor/debtor nation is the difference between stocks and flows of financial capital.



Current Account Deficit Good or Bad

- **It depends**
 - CA deficit means a country is spending beyond its means
- **But, it also could mean**
 - it is recovering from a recession before its partners (income increase boosts imports, partners still lagging)
 - it is attracting a lot of financial investment
 - country's companies are liquidating capital investments abroad, moving money home



Current Account Deficit Good or Bad

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Current account deficits either run down net foreign wealth or run up foreign debts.

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Financial account

- If **financial surplus** is due to investment, that can be good and even needed by most countries.
- However, investment implies future factor payments outward. Therefore continual **CA deficits may be a cause for concern.**
- **The US is the biggest debtor nation on the planet.**
- **Disadvantage of foreign investment**
- will need to pay investors later
 - foreign countries own a lot of czks and may use that leverage politically
- **Advantages of foreign investment**
 - foreign investment contributes to czech growth in output
 - keeps interests rates lower than would be otherwise



Factors Affecting DFI

- **Changes in Restrictions**
 - New opportunities may arise from the removal of government barriers.
- **Privatization**
 - DFI has also been stimulated by the selling of government operations.
- **Potential Economic Growth**
 - Countries that have higher potential for economic growth are more attractive.
- **Tax Rates**
 - Countries that impose relatively low tax rates on corporate earnings are more likely to attract DFI.
- **Exchange Rates**
 - Firms typically prefer to invest in countries where the local currency is expected to strengthen against their own.



Factors Affecting International Portfolio Investment

- **Tax Rates on Interest or Dividends**
 - Investors will normally prefer countries where the tax rates are relatively low.
- **Interest Rates**
 - Money tends to flow to countries with high interest rates.
- **Exchange Rates**
 - Foreign investors may be attracted if the local currency is expected to strengthen.



Factors Affecting International Trade Flows

- **Impact of Inflation**
 - A relative increase in a country's inflation rate will decrease its current account, as imports increase and exports decrease.
- **Impact of National Income**
 - A relative increase in a country's income level will decrease its current account, as imports increase.
- **Impact of Government Restrictions**
 - A government may reduce its country's imports by imposing a tariff on imported goods, or by enforcing a quota.
 - Some trade restrictions may be imposed on certain products for health and safety reasons.



Factors Affecting International Trade Flows

- **Impact of Exchange Rates**
 - If a country's currency begins to rise in value, its current account balance will decrease as imports increase and exports decrease.
- The demand for czech exports depends on economic activity in the rest of the world. If foreign output increases, czech exports tend to increase.
- The factors interact, such that their simultaneous influence on the balance of trade is complex.



The Exchange Rate

- We get foreign currency and foreigners get czks in the **foreign exchange market**—the market in which the currency of one country is exchanged for the currency of another.
- The price at which one currency exchanges for another is called a **foreign exchange rate**.
- **Currency depreciation** is the fall in the value of the currency in terms of another currency.
- **Currency appreciation** is the rise in value of the currency in terms of another currency.



The Exchange Rate

- **Fixed exchange rate regime**
- **flexible exchange rate regime**

- ***Floating***, or ***market-determined, exchange rates*** are exchange rates determined by the unregulated forces of supply and demand.
- Exchange rate movements have important impacts on imports, exports, and movement of capital between countries.

Determination of the Real Exchange Rate

- **Real exchange Rate:**

$$R = E \cdot PF/P$$

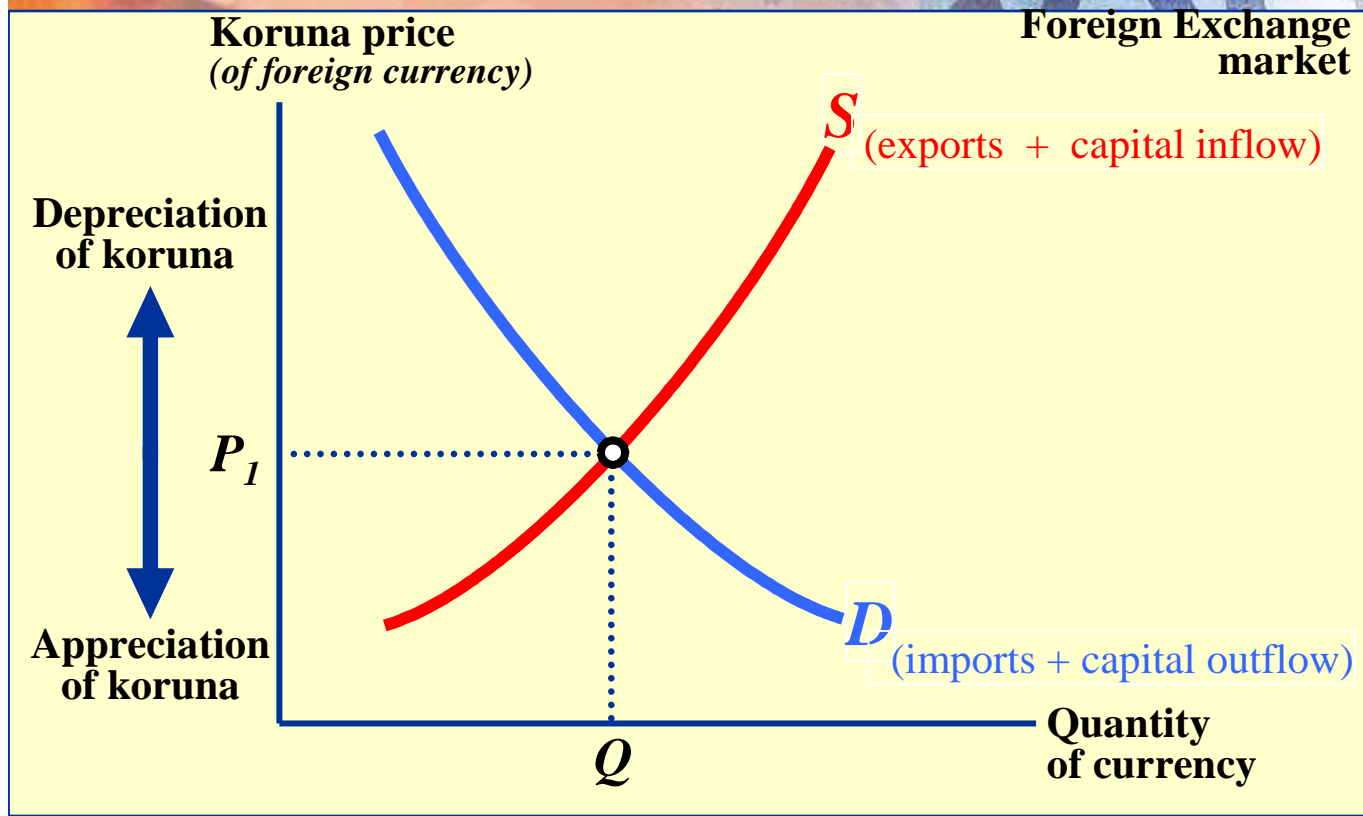
- E - nominal exchange rate
- P - price level of domestic good
- PF - price level of foreign good
- R - real exchange rate
- **Decrease of R is real appreciating and vice versa!!!!**
- **Purchasing Power Parity (PPP)**
- Holds that the prices of identical goods should be the same in all countries, differing only by the cost of transportation and any import duties.
- It is simply the law of one price applied to the international market



Determination of the Real Exchange Rate

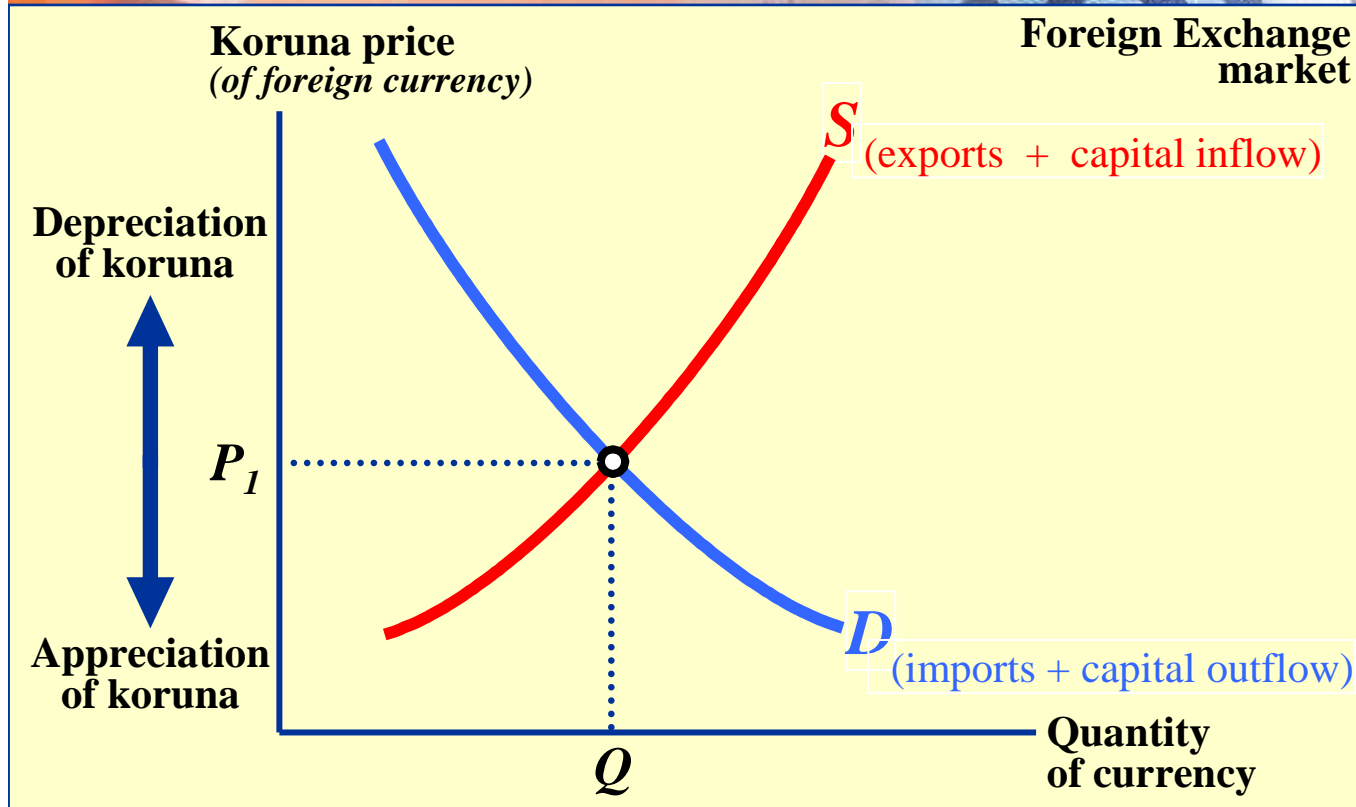
- **The Law of One Price** If the costs of transportation are small, the price of the same good in different countries should be roughly the same.
- If the law of one price held for all goods, and if each country consumed the same market basket of goods, the exchange rate between the two currencies would be determined simply by the relative price levels in the two countries.
- **Why PPP does not hold?**
 1. There is no free mobility of goods as there is a transaction cost to moving goods across international borders
 2. Tradable goods are not always perfect substitutes. (differentiation of goods)
 3. Many goods are not easily traded. E.g. haircuts might be more expensive in London than in Prague but arbitrage opportunities would not arise as it is impossible to transport haircuts.

The Market for Foreign Exchange



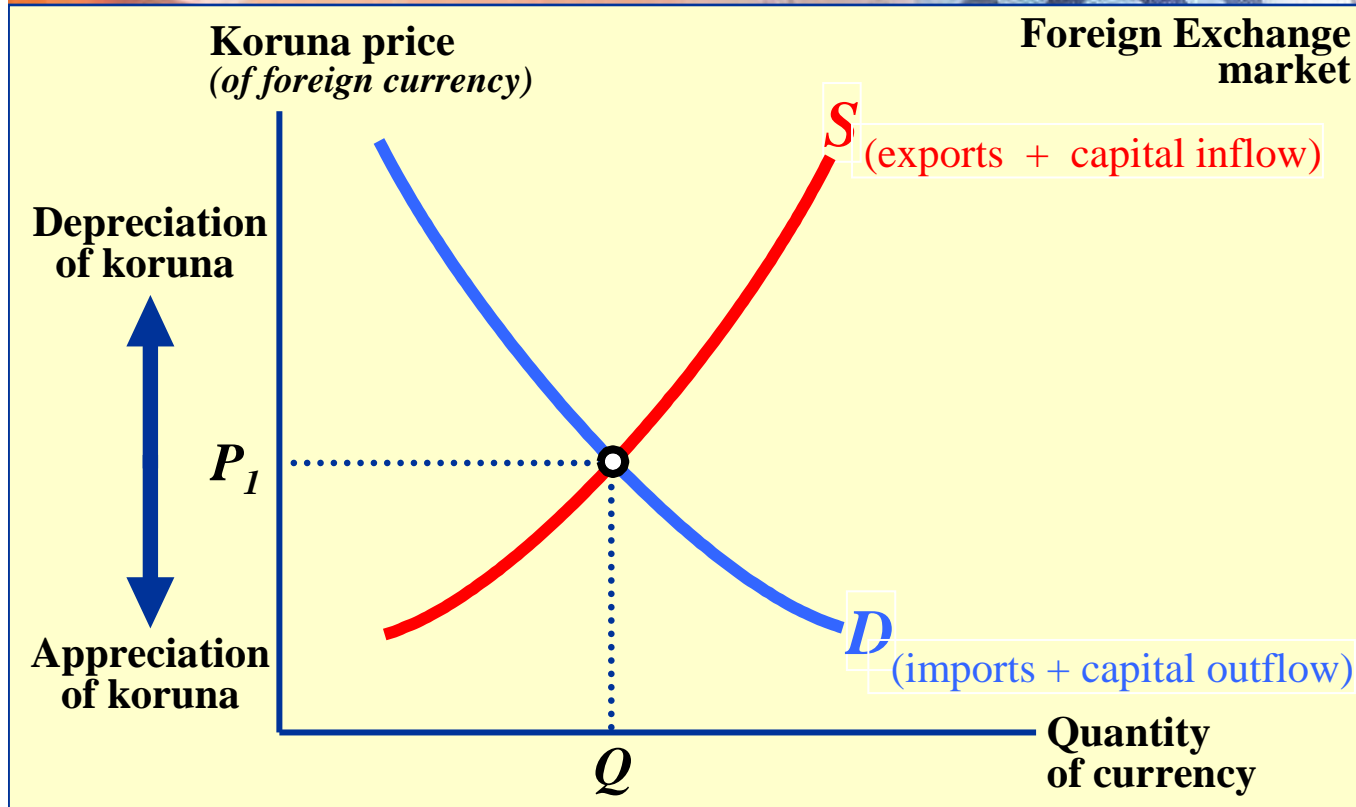
- When the price of pounds falls, British-made goods and services appear less expensive to Czech buyers. If British prices are constant, Czech buyers will buy more British goods and services, and the quantity demanded of pounds will rise.

The Market for Foreign Exchange



- When the price of pounds rises, the British can obtain more Czks for each pound. This means that Czech - made goods and services appear less expensive to British buyers. Thus, the quantity of pounds supplied is likely to rise with the exchange rate.

The Market for Foreign Exchange



- An excess supply of pounds will cause the price of pounds to fall—the pound will **depreciate** with respect to the Czk. An excess demand for pounds will cause the price of pounds to rise—the pound will **appreciate** with respect to the Czk.



Factors that Affect Exchange Rates

- A high rate of **inflation** in one country relative to another puts pressure on the exchange rate between the two countries, and there is a general tendency for the currencies of relative high-inflation countries to **depreciate**.
- A higher price level in the Czech Republic increases the demand for foreign currency. The result is appreciation of the foreign currency against the Czk.
- The level of a country's **interest rate** relative to interest rates in other countries is another determinant of the exchange rate. If Czech interest rates rise relative to foreign interest rates, foreigners may be attracted to Czech securities.
- A higher interest rate in the Czech Republic increases the supply of foreign currency and decreases the demand for foreign currency. **The result is depreciation of the foreign currency against the Czk.**



Exchange Rates and Prices

- Depreciation of a country's currency tends to increase the price level.
 - Since the currency is less expensive, export demand rises.
 - Domestic buyers substitute domestic products for the now more expensive imports.
 - If the economy is operating close to potential, the increase in aggregate demand is likely to result in higher prices.
 - If import prices rise, costs may rise for business firms, shifting the AS curve to the left.



Monetary Policy with Flexible Exchange Rates

- Central Bank actions to lower interest rates result in a decrease in the demand for Czk and an increase in the supply of Czk, causing the Czk to depreciate.
- If the purpose of the C. B. is to stimulate the economy, Czk depreciation is a good thing. It increases Czech exports and decreases imports. If the purpose of the C.B. is to fight inflation, Czk appreciation resulting from tight monetary policy also helps in that fight.



Fiscal Policy and Exchange Rates

- A tax cut results in increased household spending, but some of that spending leaks out as imports, reducing the multiplier.
- As income increases, the demand for money increases. The resulting higher interest rates cause the Czk to appreciate. Exports fall, imports rise, again reducing the multiplier.
- If interest rates rise, private investment may be crowded out, also lowering the multiplier.



Thank You for your Attention



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