INTERNATIONAL FINANCE

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FOREIGN EXCHANGE MARKETS

Key words:

foreign exchange market

foreign exchange rate

direct quotation

indirect quotation

exchange rate spread

BID rate

ASK rate

spot operation

term operation

forward rate

swap rate

INTERNATIONAL FINANCE

(also called as

international monetary economics or

international macroeconomics or

multinational finance)

is the branch of **financial economics** dealing with **monetary** and **macroeconomic relations** between two or more countries.

International finance examines the dynamics of the

- **global financial system**,
- **international monetary systems**,
- **balance of payments**,
- **exchange rates**,
- **foreign direct investments**,
- **International risks (political risks, currency risks)**

and how these topics relate to the **international trade**.

INTERNATIONAL FINANCE - exceeding the level of individual states

INTERNATIONAL FINANCE - complicated financial processes and transactions

knowledge about
INTERNATIONAL FINANCE - be able to orientate in these processes and transactions

knowledge about
INTERNATIONAL FINANCE - usage of this knowledge to your advantage, as well as for development of individual states and for the whole world economy.

INTERNATIONAL FINANCE (definition)

- **(world/global) financial relations between countries, related to the creation, distribution and the use of funds** with supranational character centralized by **international financial institutions** (IMF, IBRD, etc.), **institutions of regional character** (EIB, EBRD, regional development banks, funds, etc.) as well as some **non-financial institutions** (e.g. UNO).

GLOBALIZATION PROCESS IN THE WORLD ECONOMY

r. 1986 **BIG BANG**

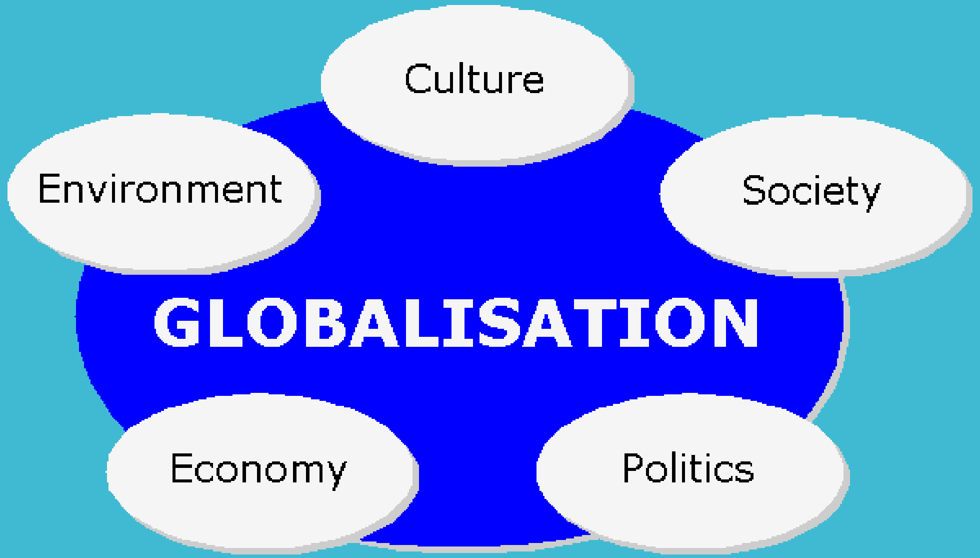
↓

GLOBALIZATION

PREVIOUS DEVELOPMENT

- financial markets strictly regulated by the state
- strictly delimitation of competencies of market subjects
- consistent investor protection
- isolated national markets
- slow transfer of information from business centers

GLOBALIZATION



- worldwide process
- interconnection of national economies
- increasing dependence on the relations of national economies
- building an united economy
- global formed economy and the disappearance of national markets
- supranational institutions (= results)

BARRIERS OF FINANCIAL MARKETS GLOBALIZATION

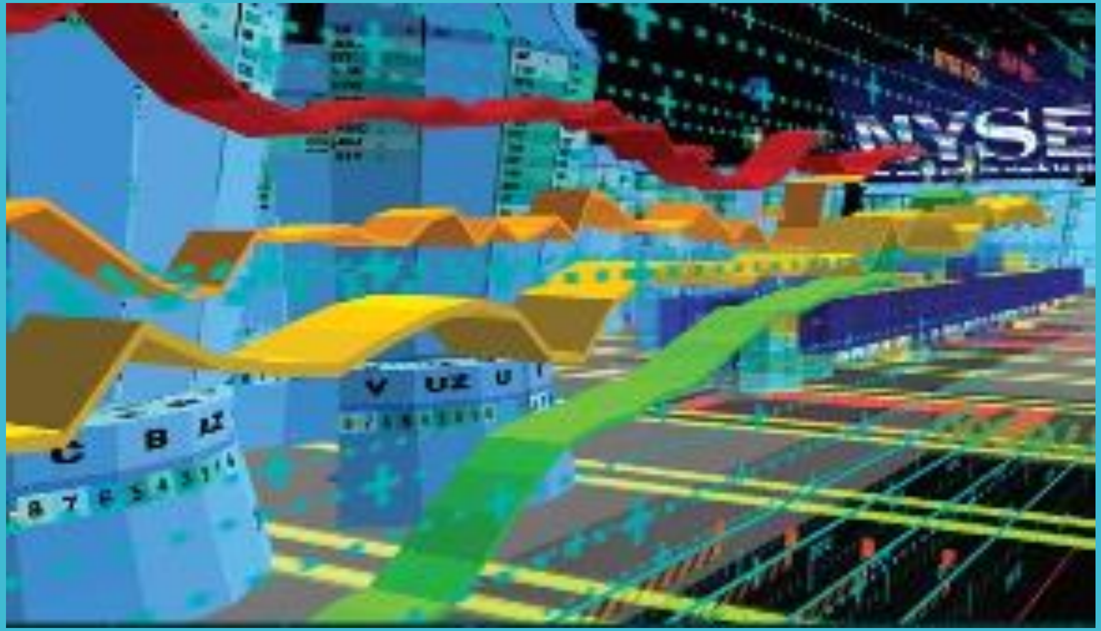
- increasing competition
- insufficient protection (frauds)
- failure of computer equipment (losses)

- **financial crisis** (monetary, banking, systemic and fiscal crisis)

financial crisis → big test of the globalized market

Cause of the crisis ? → underestimating the quantity and seriousness of the **risk**

THE FOREIGN EXCHANGE MARKET



FOREIGN EXCHANGE MARKET

- the place where supply and demand for foreign currencies are meeting
- the place where the price of the individual currencies is created – **exchange rate**
- the largest and the most liquid market in the world - **least regulated!!**
- **THE MOST "GLOBALIZED" FORM** OF INTERNATIONAL MARKET
- Foreign Exchange Market is a **part of the FINANCIAL MARKET**!

FOREIGN EXCHANGE MARKET

- **unorganized** way of trading → **OTC market**

  /informal, unwritten rules/ (over the counter)

- **organized** way of trading → **stock exchange**

  /stock exchange regulations/ (publicly on a centralized place)

The current interbank market is called **FOREX** (foreign exchange).

(For example, London's foreign currency market has over 200 participants, including 50 large international banks)

The most important system for clearing operations is called SWIFT

(Society for Worldwide Interbank Financial Telecommunications)

- **international communications network designed for implementation international financial transactions between banks**

  - it works since 1977

  - electronically connects dealers and brokers

INFORMATION NETWORKS - agency REUTERS, MINEX, EBS (Electronic Broking Service) provide information about the foreign exchange quotations.

Other automated systems: TELERATE, QUOTRON - automatic adjustment of purchase and sale of foreign exchange

FOREIGN EXCHANGE MARKET

market based on the "SCREEN"

FUNCTIONS OF FOREIGN EXCHANGE MARKETS

- **Ensuring foreign currencies**

  (for international trade - (trade financing), Investments, tourism, etc.)

- **Hedging**

  (hedge against the exchange rate risk)

- **Speculations**

  (stabilizing, destabilizing)

- **Foreign exchange arbitration**

  (direct/bilateral, trilateral)

The foreign exchange market fulfills two basic tasks:

- realizing the transfer of the purchasing power of one currency to the other

- and securing against currency risk

IMPORTERS - **are buying foreign currencies**
(are buying foreign goods
- **they must pay in foreign currency**
/commitments abroad/)

EXPORTERS - **are selling foreign currencies**
(are selling domestic goods
- **they must convert foreign currency into the domestic currency**
/debits from abroad/)

IN TERMS OF MONEY TRADED

- **Market of foreign currencies in cash** /TRH VALÚT/

  (currencies in cash are "more expensive"
  than currencies in noncash;
  have a wider exchange margin "spread")

- **Market of foreign currencies in noncash** /TRH DEVÍZ/

Spread of cash:	4-5% (10% exotic currencies)	
Spread of noncash:	wholesale market	0,1%
	retail market	1%

CURRENCY MARKETS CAN BE DIVIDED INTO TWO LEVELS

Interbank market

relationship "bank - bank"

Retail market

relationship "bank - client„

The structure of the foreign exchange market

3 levels

1. - transactions between **banks** and **customers**
2. - foreign exchange trades between **domestic banks** and the **domestic central bank**
3. - transactions between **domestic banks** and **foreign banking institutions**

PARTICIPANTS OF FOREIGN EXCHANGE MARKET

Financial institutions

Central Banks

Commercial banks (domestic, foreign)

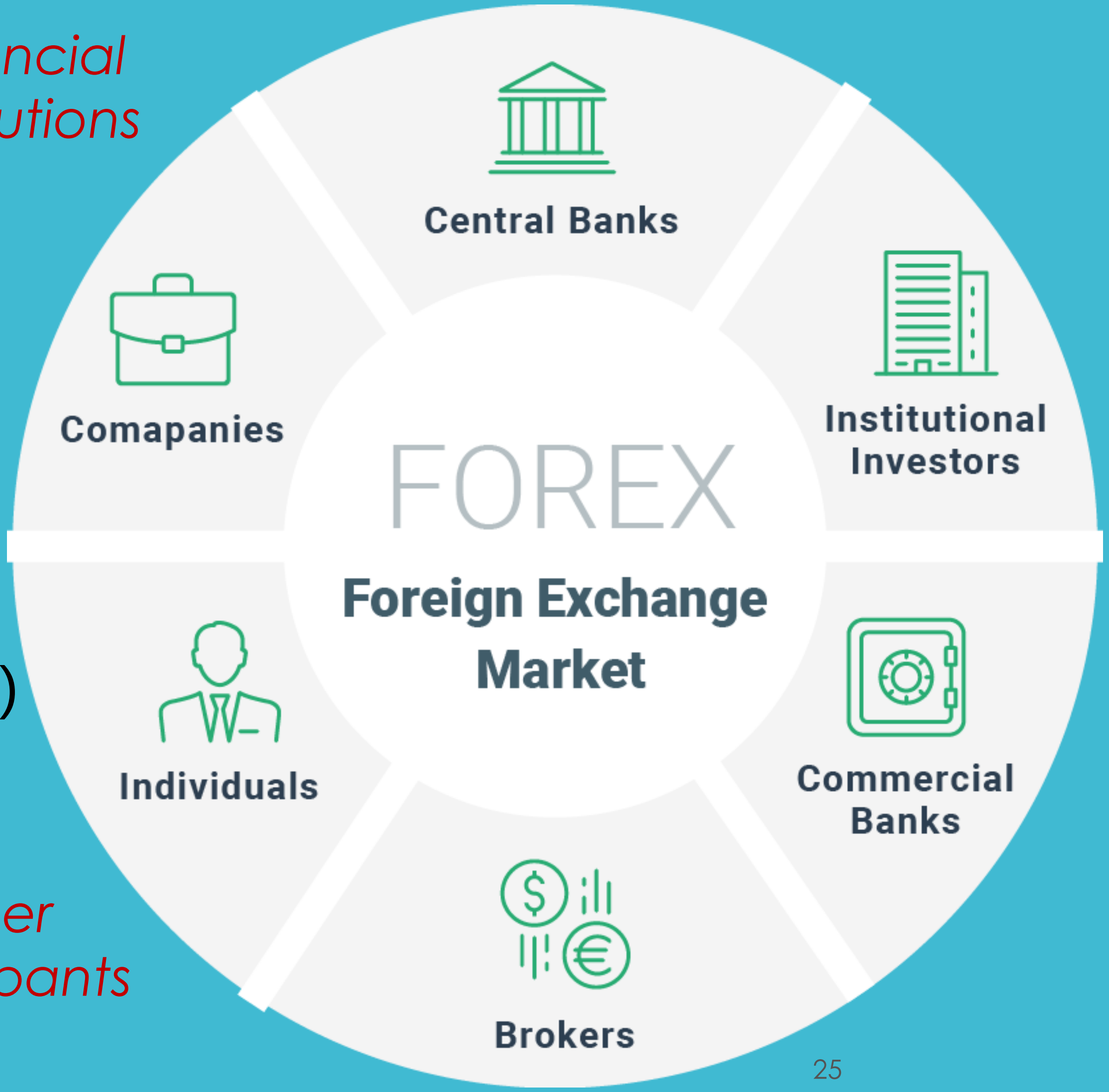
Brokerage firms (brokers)

Foreign exchange dealers

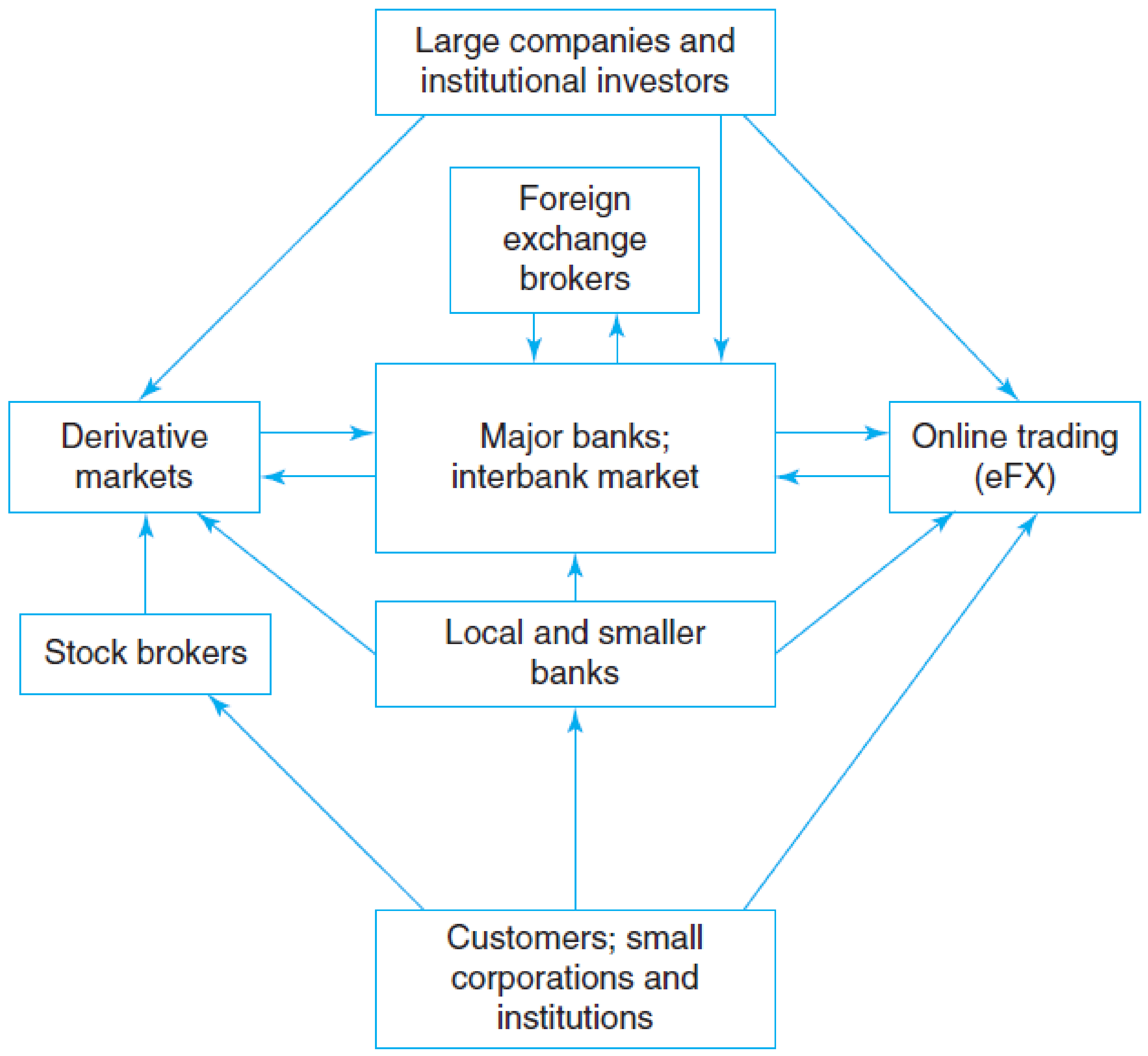
Others (hedge funds, investment funds, insurance companies, dealers with securities, with commodities)

export and import companies
citizens

Other participants



Structure of the Foreign Exchange Market



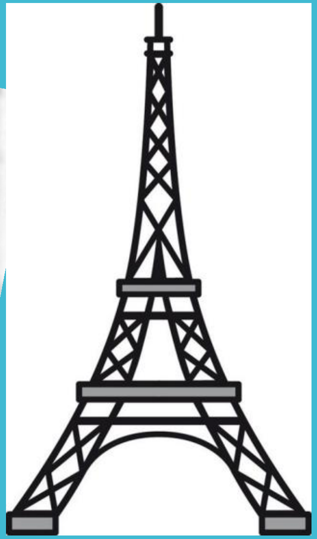
PROFIT FOR:

dealers	the difference between buying and selling prices of currencies
speculators	resulting from exchange rates movements at the time
arbitrators	result of trading in various Foreign Exchange Markets


NATURE OF
FOREX MARKET
Seeking the best price
High quality information
One market
Many buyers and sellers
PERFECT COMPETITION
Homogenous output:

FOREIGN EXCHANGE MARKET IS DIVIDED:

- **according to the time**
- **according to the territory where it is implemented**



- **according to the character**
- **according to the entities**

ACCORDING TO THE TIME

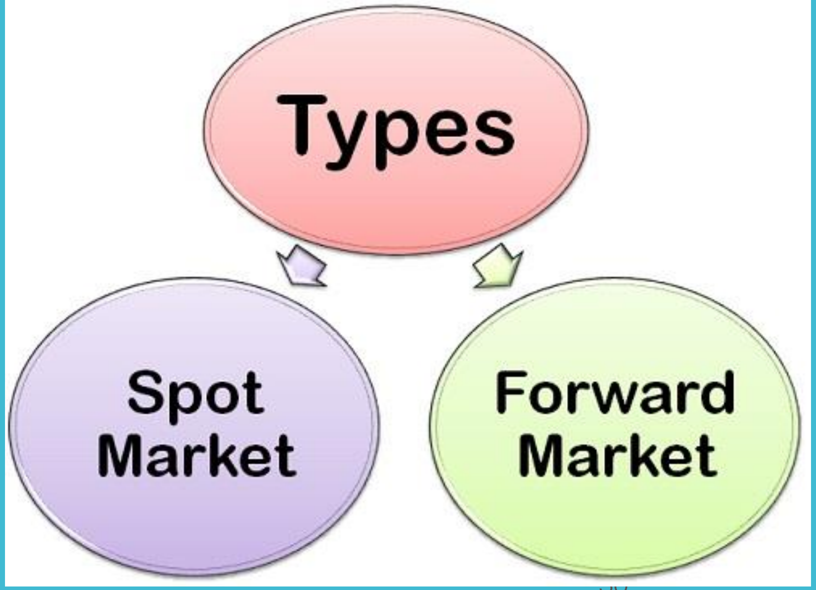
prompt foreign-exchange markets

(1, 2 days)

forward foreign-exchange markets

(more than 2 days)

- **forwards**
- **swaps**
- **financial futures**
- **options market**



ACCORDING TO THE TERRITORY WHERE IT IS IMPLEMENTED

foreign exchange markets of individual states

international foreign exchange markets

(e.g. Euro money markets)

ACCORDING TO THE CHARACTER

Stock exchange markets
OTC market

BY ENTITIES

interbank market
retail market


High Leverage
International Trade
Trading Option
Flexibility
Hedging Risk
Low Transaction Costs
Inflation Control
Advantages of Foreign Exchange Market

FINANCIAL CENTERS:

ON SHORE CENTERS (the place in the form of the Foreign Exchange Market where intermediaries trading with commodities or financial funds in their registered offices.)

(e.g.: London, New York, Tokyo, Frankfurt am Main, Zürich, Amsterdam, Paris, Brussels...)

OFF SHORE CENTERS (areas – mostly Islands) = „tax oasis“

Advantages for foreign investors:

(anonymity, confidentiality, tax benefits, liberal legislation, low operating costs, **There is not an obligation to keep accounting, respectively to submit audited annual accounts)**

(e.g.: Singapore, Hong Kong, Panama, Bahrain, Beirut, Cayman Islands, Barbados...)

→ **GLOBAL WORLDWIDE CHARACTER**

FOREIGN CURRENCY TRANSACTION

- exchange of cash, exchange of short-term receivables and liabilities from one currency to another currency

In international financial relations is used three-components marking of currencies:

CZK, EUR, USD, JPY, GBP...

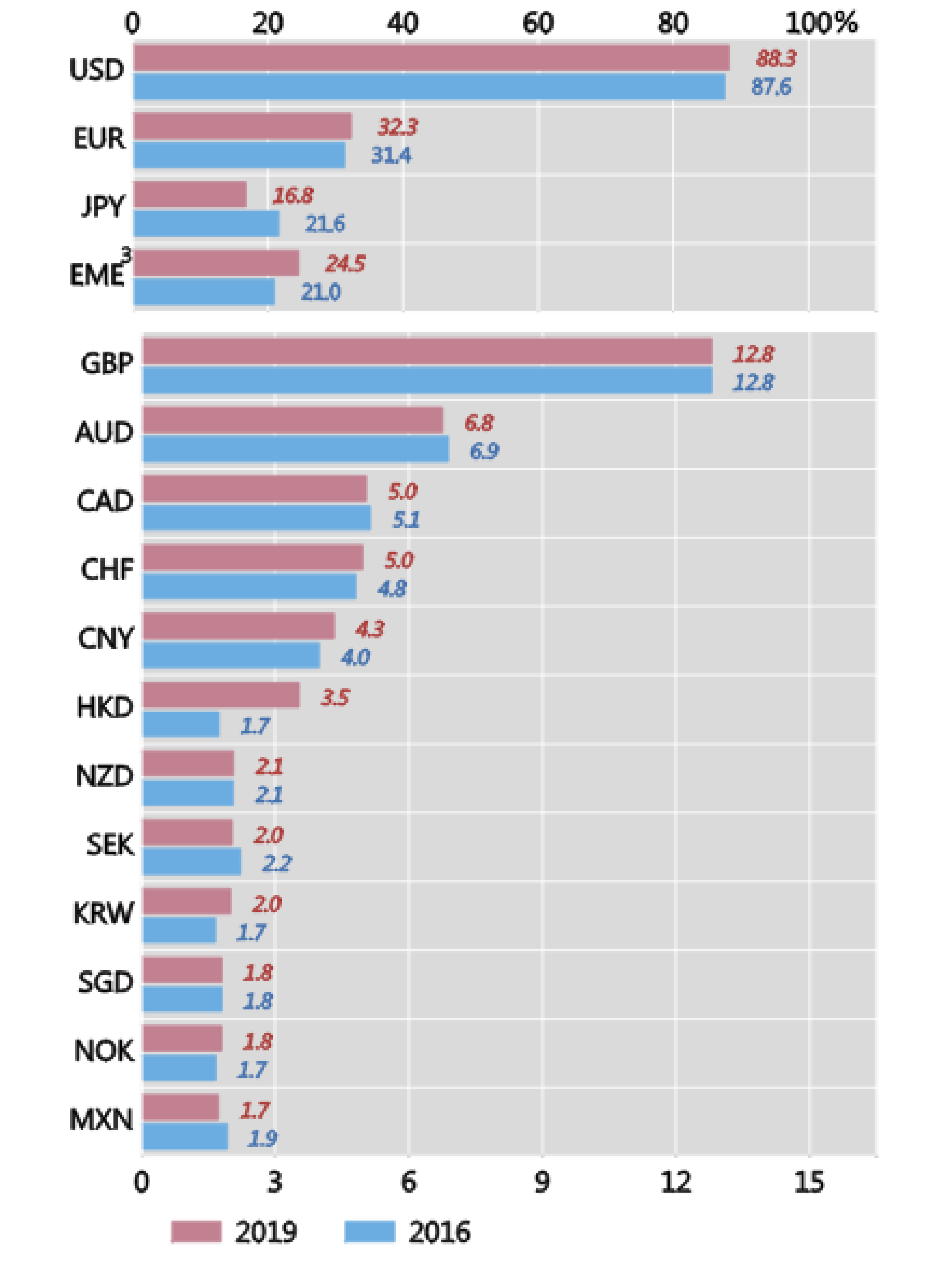
The most widely used currencies in foreign exchange markets

USD - 88% of all trades

EUR – 32%

JPY – 17%

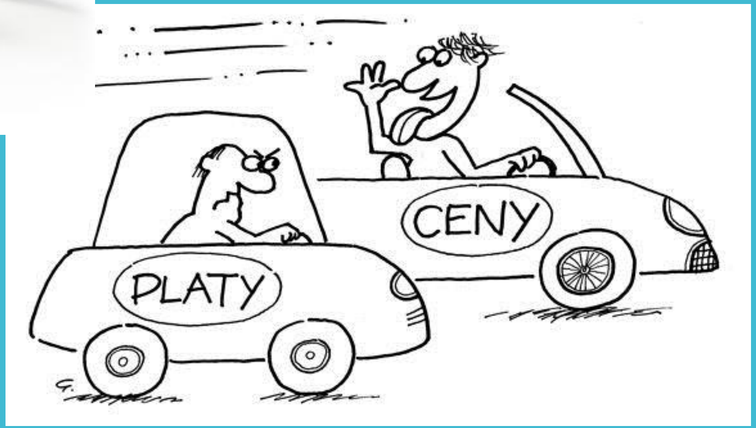
EME - currencies of emerging market economies

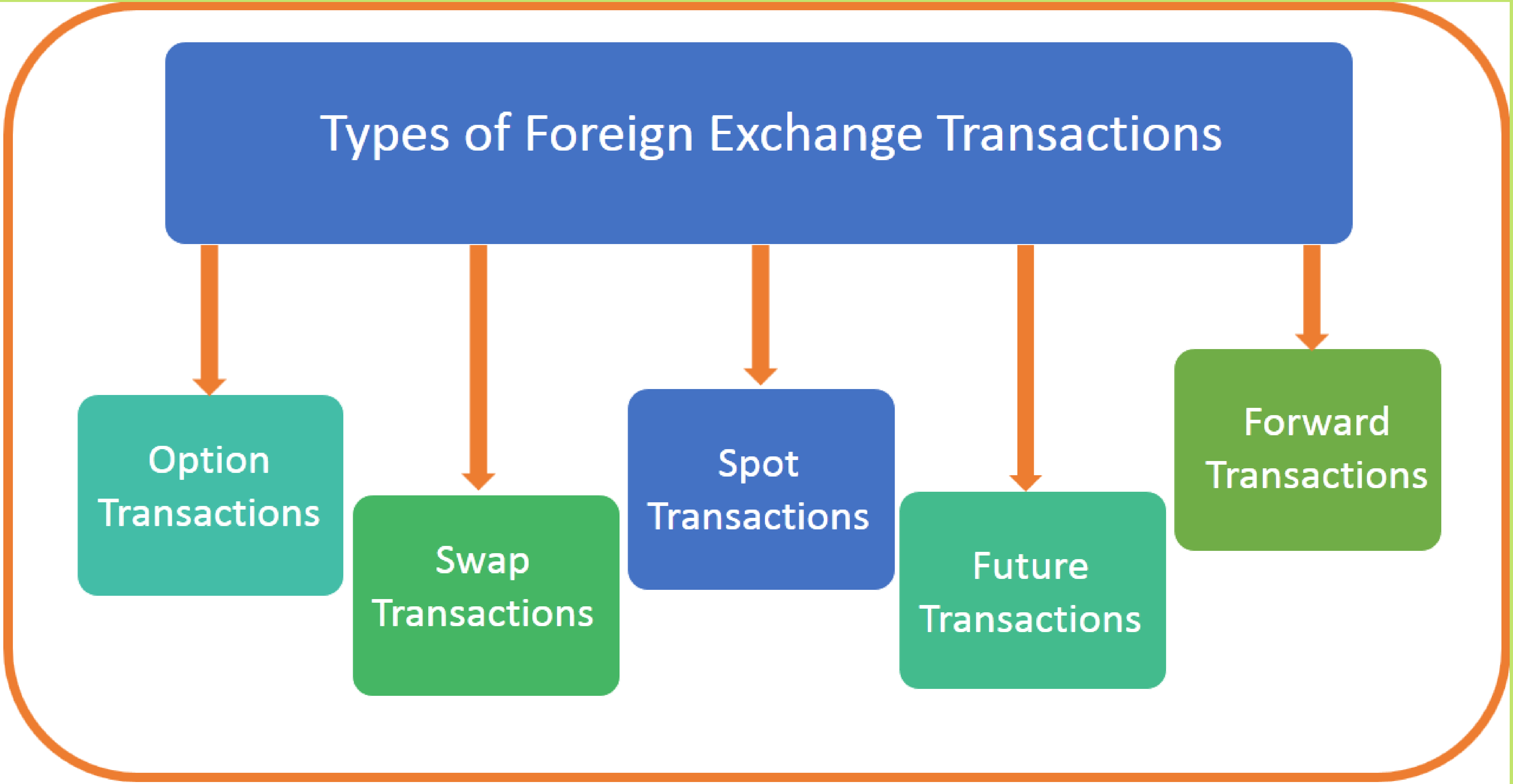


FOREIGN EXCHANGE MARKET IS AFFECTED BY MANY **FACTORS:**

- domestic and foreign interest rates
- changes in expectations of future rate
- labor productivity in the country
- political situation in the country
- flow of international trade
- investment flows
- Inflation
- relative price levels
- level of duty
- import and export quotas




Types of Foreign Exchange Transactions
Option Transactions
Swap Transactions
Spot Transactions
Future Transactions
Forward Transactions

FOREIGN EXCHANGE POSITION

- quantitative and qualitative relationship between foreign currency assets and liabilities of an entity

OPEN foreign exchange position — assets and **liabilities are not equal** in monetary, quantitative, time and interest rate structure

CLOSED foreign exchange position — assets and **liabilities are equal**...

OPEN position

- Active/Long — assets in EUR **>** liabilities in EUR
- Passive/Short — assets in EUR **<** liabilities in EUR

EXCHANGE RATE

- **bilateral exchange rates of currencies**

<u>Quantitative side</u>

- simple variable
rate at which foreign currencies are calculated

<u>Qualitative side</u>

- factors that determine the equilibrium level of the exchange rate

and

changes in the relevant currency, economic, political and social conditions

EXCHANGE RATE IS AFFECTED BY MANY **FACTORS:**

- **by balance of payments**
- **by speculations**
- **by central bank intervention**
- **by domestic economic and political conditions**

SPECULATIONS

- foreign exchange operations, which are based on an estimate of the uncertain future exchange rate trend
- are the opposite of security against exchange rate risk (hedging)

Stabilizing speculation

- buying foreign currencies when their prices fall (in the expectation that over time will increase again), or selling currencies when their prices rise (in the expectation that eventually fall again)

Destabilizing speculation

- selling foreign currencies when their prices fall (in the expectation that they will continue to fall), or buying currencies when their prices rise (in the expectation that they will continue to grow)

ARBITRATION

Buying or selling currency in one foreign exchange market and then selling in another foreign exchange market. Arbitrator try to take advantage of price differences of individual currencies in different places of the foreign exchange market. The aim is to make a profit from the price difference.

Arbitrage is not a speculative activity because the result of the trades is known in advance and the arbitrator take no risk.

CENTRAL BANK INTERVENTION

- **DIRECT**

selling and buying foreign currencies on the foreign exchange market (on the debit, or in favor of foreign reserves)

- **INDIRECT**

influencing foreign exchange rates by the policy of interest rates, taxes, subsidies or tariffs.

international liquidity

the volume of payment instruments that can be used to balance the international claims and liabilities between countries

DIVISION CURRENCIES IN TERMS OF INTERNATIONAL LIQUIDITY

- Externally exchangeable currencies

  (convertible)

  Currency used freely (without limitation) in the internal and also external currency circulation

- Internal exchangeable currencies

  (transferable)

  They can not be freely used in international payments.
  Only foreign exchange residents can exchange them for foreign currency and then use them abroad

- Non-exchangeable currencies

  (clearing)

  exchange rates are not created on the foreign exchange market, they are stated administrative as "the price of foreign currencies in cash and as the price of foreign currencies as non-cash"

Definition of EXCHANGE RATES:

- Is the amount of a currency that one needs in order to buy one unit of another currency, or it is the amount of a currency that one receives when selling one unit of another currency.

A **purchase** means that you obtained foreign currency and paid in home currency, (the way you would do it with your other purchases too), and a **sale** means that you delivered foreign currency and received home currency.

TYPES OF EXCHANGE RATES

Cash exchange rate	**Tourist** exchange rate
Non-cash exchange rate	**Regulated floating** exchange rate (often used as a float, is influenced by foreign currencies of banks)
Official exchange rate (long-term)	**Moving – floating** exchange rate (based on supply and demand)
Market exchange rate (is changed often)	**Relatively fixed** exchange rate (determined fluctuation zone)
Real exchange rate (is used by economists)	**Fixed** exchange rate (valid a longer time)
Black exchange rate (illegal trade)	**Pegged** exchange rate (one country follows the exchange rate of the other country)
Gray exchange rate (artificial)	

QUOTATION OF EXCHANGE RATES

- **each exchange transaction contains two currencies**

first is BASIC – ***base currency – A*** **(primary, basic, quoted, starting, fixed)**

the second is VARIABLE – ***terms currency – B*** **(**secondary, derived, expressed, re-counted**)**

	BID (nákup)	**OFFER, ASK** (predaj)
A/B	1,2150	1,2155

BID – OFFER = SPREAD = zisková marža

OFFER > BID

CLOSING MID – POINT = stredná hodnota

QUOTATION OF EXCHANGE RATES

BID ASK

35 - 36 RUB/USD

If you sell USD for RUB, you receive 35 RUB, while if you wish to buy USD you will have to pay 36 RUB.

(It is bank's view)

You buy at the bank's ASK rate, and you sell at the bank's BID rate.

The BID is the lower quote, and ASK is the higher one.

The difference between the buying and selling rates is called the spread.

QUOTATION OF EXCHANGE RATES

DIRECT RECORDING: **21,381 CZK/USD**

(expresses 21,381 CZK for 1 USD). In terms of formal mathematical notation it is correct.

It is necessary to note, that in Foreign Exchange Market practice is used reverse recording.

(It means formally incorrect)

21,381 USD/CZK **(expresses 21,381 CZK for 1 USD).**

QUOTATION OF EXCHANGE RATES

The direct (HC/FC) quoting convention used to be standard in continental Europe, and is called the „DIRECT“ quote, or „RIGHT“ quote. („American terms“).

The alternative is called the „INDIRECT“ or „LEFT“ quote. („European terms“).

(HC – home currency; FC – foreign currency)

One group of people using mostly indirect quotes are professional traders in the United States.

Average daily turnover on the foreign exchange market

(in billions USD)

	2001	2016
spot operations	516	2 354
term operations	656	2 383
monetary operations	67	350
total turnover	1 239	5 087

Source: Hussam Musa a kol.: Medzinárodné financie, 2017

VIDEO 1

What is FOREX?

https://www.youtube.com/watch?v=NhFlqFVBmxc

VIDEO 2

Investing Basics: Forex

https://www.youtube.com/watch?v=_tEbIzKbZhY

QUIZ QUESTIONS

1. From a Canadian's point of view, which of each pair of quotes is the direct quote? Which is the indirect quote?

    A) 2,31 CAD/GBP; 0,43 GBP/CAD ......; ......?

    B) 0,84 USD/CAD; 1,18 CAD/USD ......; ......?

    C) 1,54 CAD/EUR; 0,65 EUR/CAD ......; ......?

2. True or False?:

Occasionally arbitrage bounds are violated using domestic ("on-shore") interest rates because:

A) Offshore or Euromarkets are perfect markets while "on-shore" markets are imperfect. ....?

B) Offshore or Euromarkets are efficient markets while "on-shore" markets are inefficient. ....?

3. True or False?:

In perfect markets, a manager's decision to hedge a firm's cash flows is irrelevant because there is no exchange rate risk.

4. True or False?:

A risk-averse investor will select a high-variance portfolio only if the expected excess return is sufficiently high.

5. **Suppose a currency increases in volatility. What is likely to happen to its bid-ask spread? Why?**

6. **Who are the principal users of the forward market? What are their motives?**

7. **How does a company pay for the foreign exchange services of a commercial bank?**

8. **The primary objective of the multinational corporation is to:**

A) maximize shareholder wealth

B) maximize world production

C) maximize earnings

D) minimize the cost of doing business globally

E) none of the above

9. Critics of the multinational corporation point to its tendency to:

   A) shift production from one location to another in search of lower costs

   B) avoid taxes

   C) cause balance of payments difficulties

   D) exploit low-wage workers in less-developed countries

   E) all of the above

10. An increase in the real exchange rate will:

A) raise national income
B) lower national income
C) make a country less competitive in international trade
D) lower the cost of foreign goods
E) a and d

11. **Tourism shows up on the:**

A) merchandise account
B) current account
C) capital account
D) a and c above
E) none of the above

12. The sale of U.S. computers to the Spanish government shows up as:

A) a debit on the official reserves account
B) a credit on the official reserves account
C) a credit on the trade account
D) a debit on the current account
E) none of the above

13.The worlds largest currency trading market is:

A) New York
B) Frankfurt
C) Tokyo
D) London
E) Zurich

14. American terms refers to the:

A) number of U.S. dollars per unit of foreign currency

B) number of foreign-currency units per U.S. dollar

C) quotation system found in the United States

D) bid-ask spread on the U.S. dollar

E) none of the above

15. The globalization of financial markets reflects:

A) financial deregulation, which spurs competition among markets
B) reductions in currency controls and other government restrictions on the free flow of capital internationally
C) new technology that has lowered the cost of information
D) all of the above
E) a and b only

VIDEO 3

The Economics of Foreign Exchange

https://www.youtube.com/watch?v=ig_EO805rpA

THANK YOU FOR ATTENTION!

APPENDIX

FOREX

The foreign exchange market is not an organized market. Stock markets or futures markets are: they have fixed opening hours, a more or less centralized mechanism to match supply and demand, standardized contracts, an official publication channel for data on volumes and prices, and specific location or one designated group of computers running everything. In contrast, the exchange market consists of a wholesale tier, which is an informal network of about 500 banks and currency brokerages that deal with each other and with large corporations, and retail tier, where you and I buy and sell foreign exchange. At any point in time, wholesale exchange market is open twenty-four hours a day.

FOREX

Until the mid 1990s, most interbank dealing was done over the telephone; most conversations were tape-recorded, and later confirmed by mail, telex, or fax. Reuters, which was already omnipresent with its information screens, and EBS (Electronic Broking Services) have now built computer networks which allow direct trading and which now largely replace the phone market. The way the computer systems are used depends on the role the bank wants to play. We make a distinction between deals via 1) market makers, 2) auction platforms, or 3) brokers.

The exchange market consist of two core segments: the spot exchange market and the forward exchange market.