BASICS OF FINANCIAL SCIENCE

László Demeter

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Líceum Kiadó
Eger, 2015

Edited by:
László Demeter

Series editor
Lajos Kis–Tóth PhD, Professor

Reader
Erzsébet Hollóné Kacsó PhD.

Authors
László Demeter

ISBN 978-615-5509-61-2

Content

1. INTORDUCTION

1.1 OBJECTIVES, COMPETENCES, SUBJECT REQUIREMENTS

1.1.1 Objective

The objective of the introduction to (basics) financial science is to familiarize students with basic financial concepts, connections and the most familiar processes contributing to understand and analyse financial processes, to learn a system approach to thinking. The topic is extremely complex: it ranges from activities of financial markets through bank system and international finances to economic policy and state monetary policy. Therefore certain areas depending on the type of training can either be compulsory or even optional units of study. A unit of study establishes a deeper study of finances and contributes to recognise and study financial respects of other professional materials enhancing students' abilities to have a good grip of things and to reason correctly.

In the basics of Financial Science students get acquainted with and learn:

- Financial concepts and a special technical vocabulary;
- How financial markets work and function, main types of the process of interposition;
- The concept of securities and features of certain securities;
- Basic concepts in connection with the world of the stock exchange, types of stock trades and main steps of a stock trade;
- Methods of money creation, the concept of inflation and elements of accessories to measure it;
- Basics of the theory of activities and means of the monetary policy and its national routine;
- Institutions of the bank system and organizations supporting them;
- Transactions of credit banks, basics of activities of the payment systems;
- Basic connections of international finances and aspects of the development of the international financial system;
- Steps of the process of the European economic and financial integration and its present;
- Basic concepts of economic policy and its main areas;

  Features of financial activities and its subsystems.

1.1.2 Competencies

Thematically different competencies are needed to acquire in order to reach the training aims of the basics of finances unit of study. Students should:

- Know and correctly use basic financial concepts;
- Know functions of financial markets and the process of interposition;
- Be able to show features of certain securities: especially the share, bond and investment units;
- Learn basic concepts of the stock exchange, features of certain types of stock trades;
- Be able to show the main steps of a stock trade;
- Know methods of money creation in the bank of issue and the process of creating active, passive and multiplicative account money of merchant banks;
- Know the concept of inflation and the main national price indeces to measure it;
- Learn basic concepts of the monetary policy and features of its accessories;
- Know features and principles of the system of direct inflation detection or the main elements of accessories of the Hungarian National Bank;
- Be able to define and describe types of financial institutions, functions and features of the financial control, the reconstruction of finances, the trust information system and the insurance of deposit as well as the investor protection;
- Know the main international and national regulatory elements of prudent activities;
- Learn features of banking; peculiarities of deposit creation or rather types of credits and the process of crediting;
- Know the main groups and types of payment methods, the main element of the national payment system;
- Learn the basic connections in international finances, stages of its history and features of the present institutions;
- Know the process of the European economic and financial integration, the sphere of activities of the standard monetary policy;
- Learn basic concepts of the economic policy;

- Know the activities of subsystems of the budget, the main groups of revenues and spending of the government budget, basic concepts of the balance and the public debt of the budget;

1.1.3 Subject requirements

The subject Basics of Financial Science requires students to meet the following requirements:

- To know basic concepts of finances;
- To understand the process of financial interposition;
- To know features of some securities;
- To know basic concepts of the stock exchange, some types of stock trades, main steps of a stock trade, or determining stock market indices;
- To comprehend the process of money creation of the bank of issue and that of merchant banks;
- To understand the concept of inflation and the differences between price indices used to measure it;
- To know basic concepts of the monetary policy, its objectives and features of the elements of its means;
- To understand how a direct inflation detection system works;
- To know the main elements of the financial institution system;
- To comprehend principles and risks of the management of credit institutions, elements of the regulation of prudent activities;
- To know features of banking;
- To understand basic concepts of international finances;
- To know the most important events in the European economic and financial integration, features of its present activities;
- To understand basic concepts of economic policy and those of its subfields;
- To comprehend how subsystems of finances work;
- To know methods of revenues and spending of the government budget and means of measuring its balance.

1.2 CONTENT OF THE COURSE

The curriculum consists of four modules easy to build on each other. The first module shows financial market activities, mentioning the process of interposition, means of interposition, analysis of securities and

activities in the stock exchange. In the second module after studying the concept of money and money creation activities of the bank of issue and the bank system is in the centre. The third module shows basic concepts of the international financial system and its development, emphasising the process of the European economic and financial integration. Finally, the fourth module concerns with basics of the economic policy, and especially activities of the lawyer and foreign currency policy.

At the end of the curriculum in the addendum there are a list of references, figures, tables and media elements (audio, animation and video). In the last chapter there are tests helping to learn the curriculum and with the help of them one can test his or her level of knowledge concerning basics of the financial science.

1.3 STUDY TIPS, INSTRUCTIONS

At the beginning of lessons a map of thought helps to get familiar with the curriculum and facilitates to comprehend means of the structured methods. At the end of chapters there are self-checking questions and exercise for practice contributing to learn the curriculum efficiently and meet the subject requirements successfully.

2. FINANCIAL INTERPOSITION, FINANCIAL MARKETS

2.1 OBJECTIVES AND COMPETENCES

Activities of financial markets influence all people and entities being involved in the economy, in case of trouble – as it happened even in autumn of 2008 – activities of the economy are faced very strong consequences. An actively functioning financial market is essential for a well-functioning economy. By means of the complexity of the financial market it continuously influences financial decisions, concentrating prominently many intentions and transactions generated by sellers and buyers often into a single information (e.g. rate of exchange).

The aim of the lesson is to show activities of financial markets, its functions, two types of the interposition process and the main institutions of the financial market. Students should know to group and describe the financial market from different aspects. They should know the concept of security and know how to group and describe it according to different criteria.

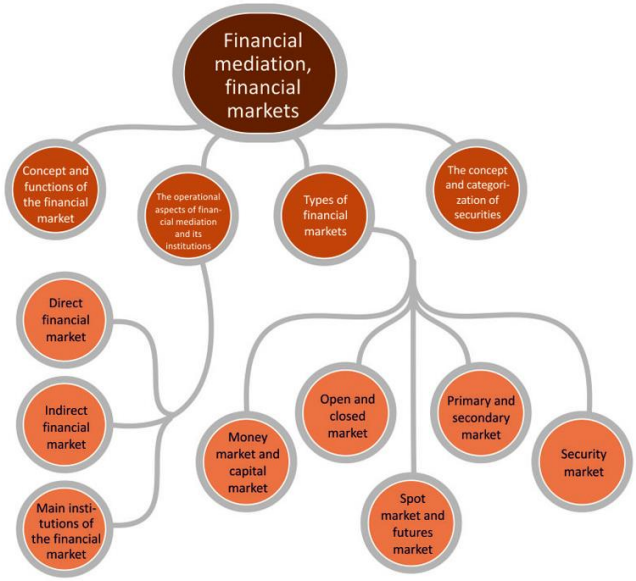

Figure 1: Financial interposition, financial markets, and structure of the lesson financial markets

source: edited by the author

2.2 CURRICULUM

2.2.1 Concept and functions of the financial market

The concept of the **financial market** is difficult and defined in an extremely complex way: it is a place where exchanges of money and relating assets, namely financial instruments take place, all those participants, financial entities, mechanisms, laws, regulators and customs that play a part in the interposition of the exchange.

The essential of its function mainly be described according to its primary task that is to pass free liquid assets to the ultimate borrowers.

Participants in the economy can be divided into two groups according to their financial situation:

- **Savers** whose incomes exceed their expenses related to a given period of time, namely they have surplus (namely surplus);
- **Borrowers** whose incomes are smaller than their expenses related to a given period of time, namely they have a shortage related to a given period of time (namely deficit).

Trying for balancing the budget (income is equal to the expenses) a participant with deficit has three possibilities:

- Reducing the expenses;
- Selling a commitment bought earlier, in a period of time when he or she had some surplus; or
- Earning money by selling a commitment (e.g. raising a loan).

A participant in the economy with some surplus, being in an easier situation has also three possibilities to equilibrate:

- Increasing the expenses (as the simplest possibility);
- Spending money to buy in a commitment being bought in a period of time with deficit; or
- Lending money to a participant with deficit by buying some commitment (e.g. lending).

An important function of financial markets is to facilitate the transfer of financial funds from lenders to ultimate borrowers. At the same time financial markets, in point of the function of a macro-economic model describing an economic system of four participants (companies, households, state and foreign markets), do not only play a key role in rearranging positive and negative balances of the budget of four income-owner groups, however, between participants in one group, too. (For example an individual (household) uses its bank deposit (savings) to finance another individual’s credit demand.)

Generally households are participants with surplus on the whole, financial situation of states is of deficit, and the balance of enterprises is of deficit owing to their activities (depending on the economic situation). However in an aggregated level the sum of income balances of the main economic participants is defined as zero: that is the deficit of one participant has to be financed by saving(s) of other participants. As the figure shows, in the middle of years 2000 foreign markets financed the deficit of enterprises and the state due to relatively small savings of households.

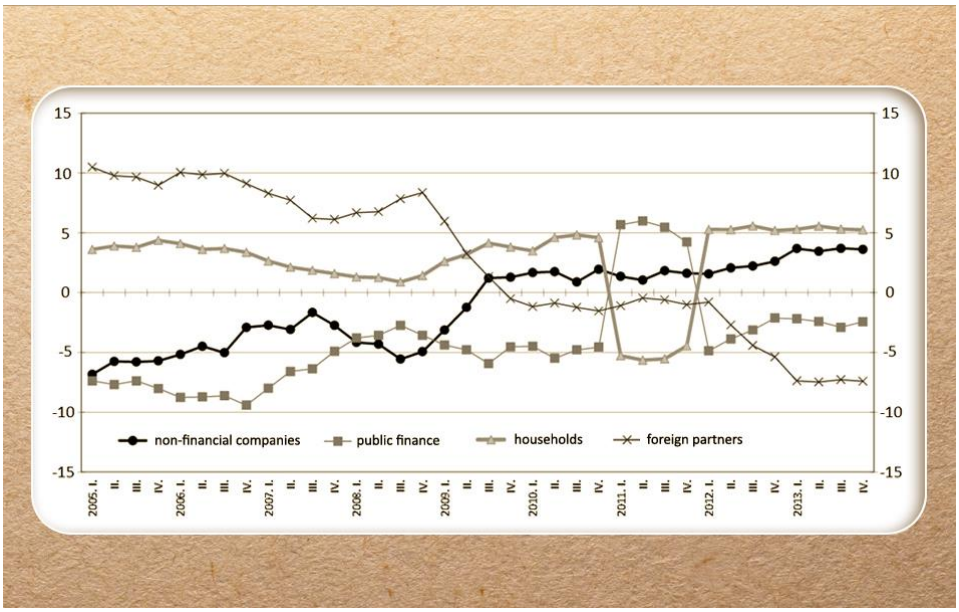

Figure 2: Tendency of the income balance of the main economic sectors in per cent of GDP[1]

source: MNB, p.4., 2014

Also, an important parameter of interpositions is related to time: in the present savers want to exchange their money available at present into some future money; or the ultimate borrower wants to exchange future money (e.g. the profit gained form an investment) into money available at present. According to this the financial market can also be defined as a

[1] For the sake of good arrangement financial enterprises and non-profit institutions supporting households (their abilities to finance is usually around zero) are not in the figure.

place where money appearing in different times is exchanged. (Therefore it is important in the field of financial decisions to compare money flows becoming due at different times, with to the help of calculations concerning the present and future values, which is not in the content of this Basics of Financial Science unit of study.[2])

Six functions of the interposition can be distinguished[3]:

- Transactions of payment and account trades and operating its systems (as the oldest function);
- Clubbing and repartition of funds amounting only to a small amount;
- Rearrangement of funds in time and space between different participants of the economy;
- Risk assessment and –share;
- Information processing and – service for savers;
- Bridging incentive problems.

Historically two main types of financial interposition can be emphasized:

- System based on banks in which the role of banks is decisive in an interposition (e.g. Germany, Japan);
- Systems based on the market in which the role of institutional investors and that of the stock market is decisive in an interposition (e.g. the USA, England).

2.2.2 Activities of the financial interposition and its institutions

If demands of savers and ultimate borrowers are in accordance with the main parameters (e.g. expiration, interest, etc.) in the financial market then it is called a **direct financial market.** In this case savers and borrowers get into direct connection, in exchange for a saving a bond (primary security) insuring some future money is supplied in the usual form. Technical intermediaries, agents (dealers and brokers) can help them to find each other or speed up the procedure.

It could be a more effective intermediary technique from the saver's aspect as in this case costs of intermediary institutions could be saved. However, direct financing is less popular due to problems as follows:

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[2] Calculations based on time and value are part of further financial units of study (Compa ny finances, Financial calculations, etc.), however, in some Hungarian institutions units of study describing basics of finances include them.

[3] MIHÁLY ERDŐS – KATALIN MÉRŐ: *Financial intermediary institutions – Banks and institutio nal investors*. Akadémiai Kiadó, 2010.

- **differences in nominal value,** which means that savings are smaller amounts on the average (hundreds of thousands, perhaps millions), while investments launched by borrowers are far greater (projects that can easily be worth several milliards) and in this way one investment could be financed after entering into a contract with several hundreds or thousands of savers one by one;
- **differences in expiration**, which means that the average duration of savings is typically short-term, perhaps medium-term, on the other hand investments of borrowers are typically long-term therefore it should be refinanced several times in its duration (for example a 20-year long investment in case of 2-year long savings 10 times all together on the average);
- **bankruptcy and other risks,** which means that if a borrower does not or partially fulfil his or her obligation this risk is taken by the saver.

Beside difficulties direct financing can even reduce the effectiveness of the economy as small amount of savings, which are short-term could not finance investments and would remain useless.

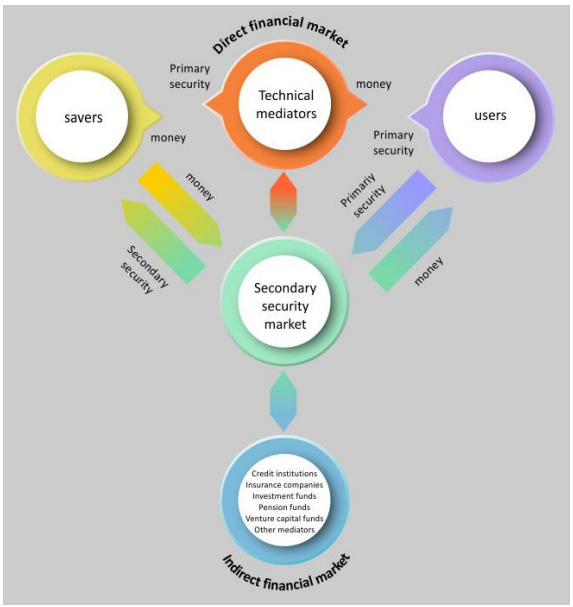


Figure 3: Main types of financial intermediation

source: edited by the author

In case of **indirect** (also known as financial intermediary) **financial market** financial intermediaries offer intermediary supply and demand: savings are first collected in an intermediary institution as an exchange for a subsidiary security and then the collected funds are forwarded to borrowers according to their demands for the amount, expiry, risk and liquidity as an exchange for primary security. Thus in the process of interposition they offer a solution for problems of the direct financial market:

- *collect disorganised savings,* and in this way they are capable to insure even a considerable amount of funds according to demands of lenders;
- *transform expiries*, which means they insure long-term funds from short-term savings (see for example in case of banks, financing mortgages having a duration of 15-20 years with deposits within a year);
- *reduce transaction costs* by concentrating information (and thus one user needs to make only one contract instead of several hundreds);
- *extend risks of some trades,* as they match several savers to several borrowers.

Savers and borrowers are charged with costs and profit of intermediaries, however, these charges equilibrate conflicts showed in the description of the direct financial market. Nevertheless in years 2000 **des-intermediation** intensified, which means that for the sake of avoiding the financial intermediary system savers directly lend out their savings towards lenders.

In case of indirect financing two large groups of intermediaries can be distinguished:

- monetary intermediaries are institutions which play an important part in the process of a money creation and in the transaction of cash flow;
- Non-monetary intermediaries whose fundraising differs from that of banks, furthermore they can be bank-like (e.g. mortgage bank) and not bank-like (e.g. insurance companies, investment funds).

Main institutions of the national financial market according to their activities:

- Credit institution (or financial institutions, see more in lesson 7);

- Insurance companies, which allow of protection against substantive claims (loss) of unpredictable and randomly occurring events;
- Investment funds defined as total assets operated by a fund manager (see more in lesson 3);
- Pension funds which give an opportunity for their members to save from the income during their active years for their retirement years;
- Venture capital funds, which allow of lending out and financing smaller ventures operated by a fund manager as total assets.

2.2.3 Types of financial markets

According to **expiry and content of financial assets money markets and capital markets are distinguished.** According to the classical conception a money market is the place of exchange of assets expiring within a year, while a capital market is the place of exchange of assets expiring over a year. At the same time on account of financial innovations appeared in the last decades today we distinguish according to a different aspect:

- Lenders of the money market are looking for a solution for their temporary lack of liquidity, its savers are financial players with excess liquidity, intermediaries are typically banks (most common assets are bills of exchange, treasury bills);
- The capital market funds long-term investments (the most common assets are bonds, securities and deed mortgages).

As transactions in the money market means moving typically large amounts therefore it is also called ‘’wholesale” market.

According to the issue open and close markets are distinguished. In the former case for selling financial assets a public offer is made which means that anybody can take part (in this way the range of investors is not known in advance), at the same time on account of informing savers continuously and of the requirements of the content and (formal) accessories lenders must meet strict regulatory compliance standards. On the other hand in a close market a lender make a contract with a predetermined (typically known, preferably selected) savers.

According to the function of a market primary and secondary markets are distinguished:

- In the former the financial product gets directly from the lender to the saver during the issue;

- In the latter through intermediation, namely from an investor who had got it earlier.

Therefore a secondary market creates the possibility of a continuous purchase of securities issued earlier such that only the investor changes but this does not affect the issuer. Its basic functions:

- ensure the liquidity of savings;
- coordinate the different term savings and investments; or
- continuously provide information for both the issuer (e.g. changes in exchange rates, turnover) and the saver (e.g. by securities brokerage firms rating).

Based on transaction due spot and futures markets are distinguished: as long as in the spot market contracting is at the same time as the performance in the futures market contracting and performance take place at different times. (See more in lesson 3).

In addition to the foregoing considerations financial markets can be grouped in several different ways:

- according to issuers (government securities, corporate bonds, municipal bonds, shares), or even
- geographical regions and/or according to economic development (see for example emerging markets).

  According to the nature of the financial instruments the securities market can be mentioned, as a place for purchasing securities. A securities market is part of the money market (e.g. Treasury bill), and of the capital market (e.g. stock), but there are also securities which are not part of the financial market (e.g. ware receipt), and therefore the concept of the securities market is wider than the financial market. At the same time it is also narrower because both parts of the financial market (both the money market and the capital market) have tools that do not qualify as securities (e.g. bank deposit). As the securities market is also part of the financial therefore in case of the securities market there are open and closed, primary and secondary, as well as spot and futures markets.

2.2.4 Concept and types of security

Thus a **security is a tool of financial intermediation** and represents the exchange of money in different point in time: the buyer of securities passes through present available savings to the seller (issuer) of securities in exchange for future money.

Defining the concept of securities however is not easy: certain professions, especially lawyers and economists have a different approach to the essence of it. Economists place the emphasis on the function therefore their approach is wider. In an economic sense **securities representing the right to property, negotiable** (therefore freely tradable) **document**, **an amount appearing on the invoice, or electronic signal.** (Legal definition of securities focusing on its content criteria is in the paragraph 6:565, in law V., 2013, on the Civil Code.)

Securities can be classified according to different criteria naturally in addition to typing criteria specified hereinafter there exist several others.

Under the law contained in securities exist:

- debt securities (such as checks, bonds, etc.);
- securities personifying equity participation law (e.g. shares, investment-unit);
- securities personifying rights to goods (e.g. ware receipt);
- securities for transactions (e.g. forward and option transaction.)

On the basis of yield there are

- fixed income securities, or inside
  - *fixed rate bonds*, in which the interest can be fixed during maturity (e.g. a 5-year government bond with an interest rate of 4 % per year), but it may vary by up to a predetermined pattern (e.g. a 3-year government bond with an interest rate 3.5 % in the first year then it is increased by 0.5% every year);
  - zero-coupon (or in other word discount) bonds pay no regular interest*,* issued below par and in this way the yield can be interpreted as the difference between the issue price and the nominal value as a foreign exchange gain (e.g. discount treasury bills);
- Floating rate notes are bonds with the yield not known in advance (e.g. equity, in which even during profitable operation, yield may not necessarily happen – dividend – payment);
- *temporary securities*, in which yield can be defined specifically (e.g. convertible bond, which at a specified time with a fixed exchange rate is convertible into shares).

According to expiry (maturity) there exist:

- *short-term (bills):* maturities less than one year (e.g. six-month discount Government Treasury bills);

- *medium term (notes*): maturities between one to five year (e.g. certificates of deposit);
- long term (bonds): maturities greater than five years (e.g. mortgage);
- Conditional maturity securities (e.g. annuity bonds);
- non-maturity securities (e.g. share).

According to the identity of the issuer there exist:

- government bond, also called Treasury bond, issued by a national government (e.g. fund, and municipal bonds can be included);
- *securities issued by companies* (e.g. securities, and deed mortgage issued by limited liability companies can be included);
- securities issued by private individuals (e.g. check).

The criterion according to the **form of appearance** can even be highlighted, according to which two large groups are distinguished. *Materialized securities* physical, appearing in a printed and representative form (document), and must meet strict formality defined by law. (E.g. in case of a check the date and place of issue, signature of the issuer, etc.). At the same time most of the securities today, thanks to the spread of information technology *appear in a dematerialized form*: that is not printed, but registered as an electronic signal, in a securities account for that purpose (investors will receive a statement of account about it). The latter helps enhance the transparency of financial flows, and simplifies the issue (there are no costs of materialised preparations – which was 587.500 Ft for example in the case of 2001/G bond series) as well as the purchase (the assignment happens by movements between accounts – similarly to transfer).

2.3 SUMMARY, QUESTIONS

2.3.1 Summary

The primary function of the financial markets, is financial intermediation namely delivery of free cash in the economy from savers to lenders. Two main types of financial intermediation is direct and indirect financial market, the latter is essentially a solution to the problems arise during the operation of the previous through intermediary institutions. Mediation occurs by a financial instrument any financial instrument, typically by means of securities.

2.3.2 Self-check questions

What are the main functions of financial intermediation?

What are the difficulties with the operation of the direct financial market?

Describe the operation and benefits of indirect financial market!

Describe the types of financial markets on the basis of maturity and content of financial assets!

Describe the types of the financial market on the basis of the issue!

Describe the types of the financial market on the basis of the function of the market!

Determine the types of securities with examples on the basis of the yield!

Determine the types of securities with examples on the basis of the person of the issuer!

2.3.3 Practice tests

Which of the following is the function of the financial market:

- delivery of free cash in the economy to its users.
- distribution between users of goods and services.
- more efficient provision of the arrival of state tax revenues.

In order to balance a deficit a person with deficit will:

- increase the expenses.
- Lend money to a person with deficit by purchasing some commitment.
- Sell a commitment purchased in an earlier period with surplus for money.

One feature of the direct financial market is that maturities are transformed, i.e. long-term resources are provided from short-term savings.

- ture
- false

The disintermediation is directed for circumventing financial intermediaries.

- ture
- false

Both on money market and capital market instant money is exchanged for different term future finances.

- ture

- false

Which of the following is not a participant in the financial system?

- investment fund
- insurer
- state

Which of the following allows the purchase of securities owned by investors, previously issued?

- the secondary market
- the primary market
- Hungarian Post

Which of the following securities may not be issued by companies?

- fund
- share
- bond

Which of the following securities reveals what legal relationship is a bond about?

- securities representing claims on money
- equity participation securities law
- securities representing rights to goods

Mock exam

Which of the following securities may be issued by individuals?

- fund
- share
- check

The primary market gives the possibility of continuous purchase of securities previously issued.

- true
- false

Final exam A

Which of the following is not a feature of the functioning of the indirect financial market?

- collect the scattered savings
- allow settlement between the parties in case of payment by credit card
- transforms the maturities

Dematerialized securities will not be printed, but are recorded electronically.

- true
- false

Final exam B

Which of the following reveals what legal relationship is a bond about?

- securities representing claims on money
- securities representing equity participation law
- securities representing rights to goods

The secondary market creates the potential for continuous sale of the securities previously issued.

- true
- false

3. SECURITIES

3.1 OBJECTIVES AND COMPETENCES

Securities are important assets in financial intermediation, during its ''life" almost all participants of the economy will be in contact with them. They are important for households as investment opportunities, and important for companies seeking for funding and even for the government. Thorough knowledge of their characteristics sound financial decisions can be made, highlighting the return – horizon – risk.

The purpose of the lesson is to show certain characteristics of domestic securities, highlighting the shares, bonds (in addition to the popular residential investment as well as an important corporate funding sources) and a very wide range of investment units due to the properties. The student should recognize the rights of a shareholder, main types of the share capital and the government securities, basics of the operation of the government securities market. Be able to recognise investment units, knowing indicators including its price and cost. Get to know the main features of the other securities.

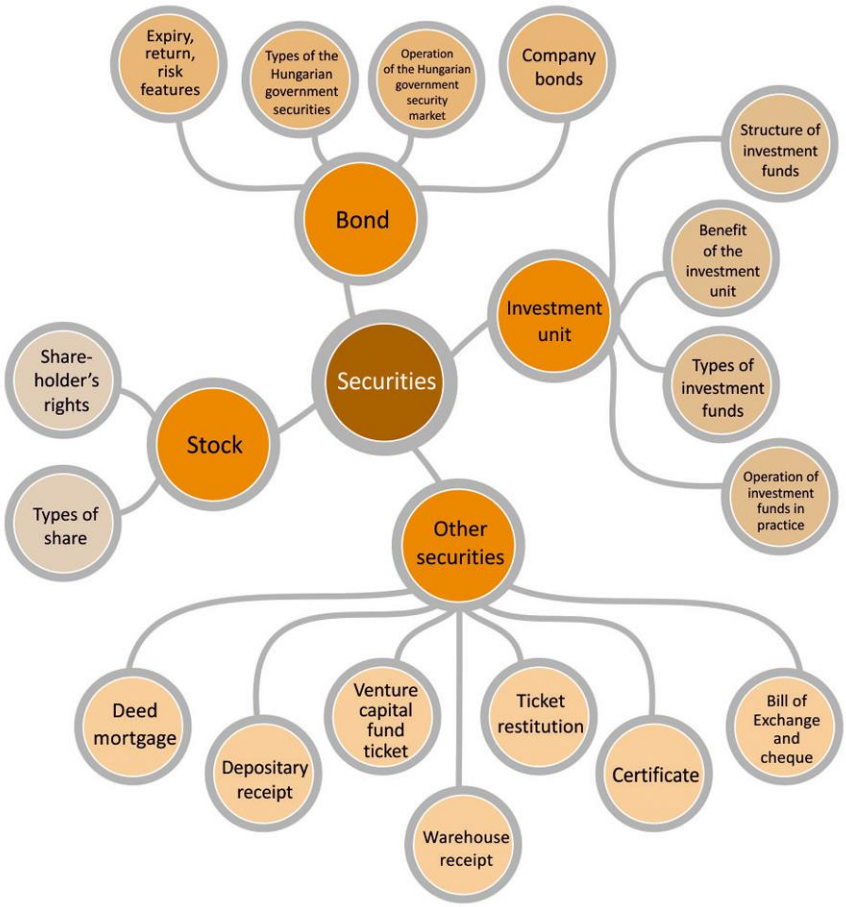


Figure 4: Structure of the lesson Securities

source: edited by the author

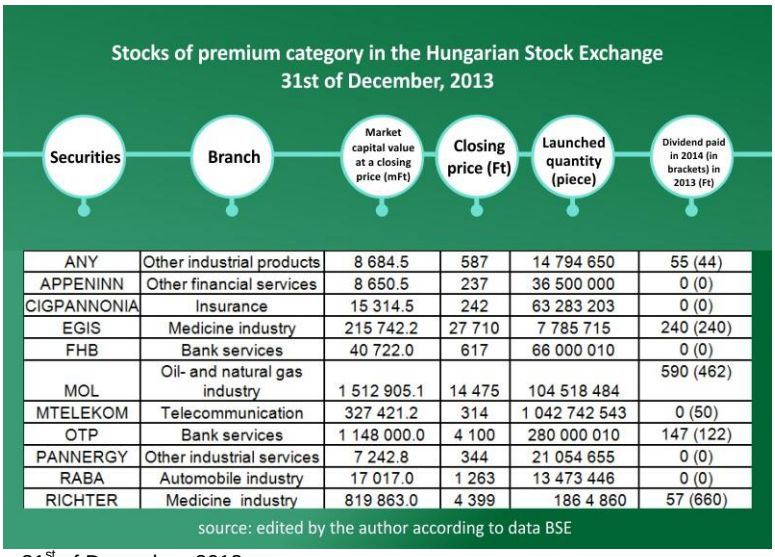
3.2 CURRICULUM

3.2.1 Share

The share is a security representing the rights of members, being name on and marketable issued by a joint stock company (rt.) – in order to ensure the funding sources – at its foundation or when raising capital, which embodies the appropriate proportion of the company's share capital – corresponding to the nominal value.

The issue price shall not be less than the nominal value, but after the release of the foreign exchange market – as a function of supply and

demand – can go even below face value (this usually indicates some negative aspects of the operation of the company, or states near-bankruptcy). If the market rate multiplied by the number of shares issued pieces, then market capitalisation – somewhat simplified the rt. market value is.



ANY	Other industrial products	8 684.5	587	14 794 650	55 (44)
APPENINN	Other financial services	8 650.5	237	36 500 000	0 (0)
CIGPANNONIA	Insurance	15 314.5	242	63 283 203	0 (0)
EGIS	Medicine industry	215 742.2	27 710	7 785 715	240 (240)
FHB	Bank services	40 722.0	617	66 000 010	0 (0)
MOL	Oil- and natural gas industry	1 512 905.1	14 475	104 518 484	590 (462)
MTELEKOM	Telecommunication	327 421.2	314	1 042 742 543	0 (50)
OTP	Bank services	1 148 000.0	4 100	280 000 010	147 (122)
PANNERGY	Other industrial services	7 242.8	344	21 054 655	0 (0)
RABA	Automobile industry	17 017.0	1 263	13 473 446	0 (0)
RICHTER	Medicine industry	819 863.0	4 399	186 4 860	57 (660)

source: edited by the author according to data BSE

* data from 31st of December, 2013

Table 1: Premium[4] shares in the domestic stock market on 31.12. 2013

The shares owned by the shareholder, who, in a proportion of the shares held by him or her – exercising the subscription rights – can have a say in the rt. functioning. A shareholder can exercise the right to vote at general meetings. Shareholders' liability is limited, their responsibility for the company's operation extends up to the amount invested.

Another large group of shareholder rights form the property rights which occur in three forms:

- *rights to dividend*: in case of return to profit rt. can pay dividends to shareholders from the net profit based on the decision of the General Meeting (however, the gains can also rotate back, thereby providing additional resources to finance the company);

[4] On the domestic stock market (on BÉT) shares may be made in three different categori es: Premium, Standard and Category T. The premium category includes more liquid, se ries of shares of companies having a wider circle of investors.

- *option:* when the capital increases shareholders are entitled to purchase new shares in proportion to previous shares (thus ensures ownership interest unchanged);
- *the liquidation surplus law*: upon termination of an rt. in proportion to ownership, after satisfaction of the claims of providers of funds (for example creditors) shareholders have the right to get some liquidation ratio.

The rt. can issue different types of shares. A **common share** is regarded as the basic case, no other entitlements are added to it. Total nominal value must always be greater than half of the company's share capital.

The **preference shares** provide the shareholders with defined benefit compared to ordinary shares:

- the preference dividend entitles more favourable dividends ahead of other shares, at the same time voting rights may be limited or excluded (the latter is typical);
- *voting preference shares* a multiple of the rate defined in statues (corresponding to maximum ten times of the nominal value) gives the owner the right to vote;
- *the owner of preference shares related to the liquidation surplus* in case of termination gets high-priority property satisfaction, or can expect a greater portion of the divided assets;
- *executive officer,* preference shares for the appointment of members of the Supervisory Board.

Employee share for full and part-time workers working in a joint-stock company may be issued – free or at a discount price lower than the nominal value of the shares. An important element of the company's incentive scheme, in the pay of employees in senior management at large quoted companies often get a great emphasis. Limited marketability can be mentioned as a disadvantage, because it can be transferred only to workers or pensioners. Employee share can be marketed together with raising the share capital of the joint-stock company, up to fifteen per cent of the increased capital.

The holder of the **interest-bearing shares** gets interest after the nominal value of the share from the current year's profit after tax, calculated as defined in the statutes in addition to other rights attached to the share. Up to ten percent of the share capital may be issued.

Typically shares are traded on the stock market. It is important to point out that an investment having a high risk but producing high yields (mainly in the long run) which may produce very hectic exchange rate movements in the short run.

3.2.2 Bond

In case of a bond the issuer (debtor) commits itself to pay and satisfy the interest of the therein specified amount of money or other commissions and any other services which may be undertaken (hereunder together: interest), furthermore money (nominal value) to the respective owner of the bond or the policyholder (the creditor) in the indicated time and manner. The bond represents debt securities thus, it is a temporary capital transfer, so its owner does not become the owner of the issuing company and he or she has no say in the running of the company.

In terms of maturity it is typically medium or long-term, but there is also short-term (see, for example Government Treasury bills). Bonds even up to a 100-year term are issued: first Chicago & Eastern Railroad appeared with such an instrument in 1954, but Walt Disney and Coca Cola also issued 100-year term bonds.

In terms of the yield of the bond – typically – interest-bearing securities. The interest rate is determined by the issuer as a percentage of the face value of the bond. In case of fixed rate bonds the interest rate fixed in advance during the term is unchanged, and usually once a year, or twice the interest is paid. In the case of variable rate bonds the interest rate is bound to an economic indicator: yields (the Central Bank's base rate, BUBOR, etc.), inflation or interest depends on the effectiveness of the entity.

At the same time not all bonds pay interest continuously: there is a lump-sum payment of interest on the maturity date, or as well as interest as prize drawing winnings, but discount bonds pay no interest either. (82% of bonds issued by the Hungarian government had a fixed rate, 8% was of variable rate and 10% was discount type of bond at the end of 2013). In fact, the yield of the convertible bond is also special: the paper allows the holder to exchange the bond for a specified number of shares at a specified time, in this way the yield depends on the ratio and the market price of the shares. Furthermore, mini-bonds are interesting, which, the issuer aims at its own customer base and in addition to the bond coupon or instead they provide products and/or services.

- In the summer of 2014 the Chilango Mexican restaurant chain gained 1.8 million pounds from 585 bond buyers, the four-year bonds pay 8 cent per year, in addition, two free burrito coupons belong to one paper.)

The bond, as the **risk** of the investment is indicated by the issuer's credit rating: the better is the classification of the issuer, and at the same time the lower is the risk of non-payment of the investment (nominal value), the lower is the interest of the bond (for example the interest on 10-

year bonds issued by the German government was 1.75 % per year in March 2014). The lower-rated bonds are also called speculative bonds or junk bonds: in this case, the issuer tries to make securities attractive with promises of higher yields.

The bond market is often segmented based on the identity of the issuer. Bonds are issued with the **authorisation** of:

- the government,
- the council,
- the central bank (in Hungary from 2007 to the end of July 2014)[5],
- international organizations, and
- Entity with legal personality (or its branch), i.e. companies.

Among the issuers mentioned above the state and companies are typically the most prominent actors, so bonds of these issuers are detailed hereinafter.

3.2.2.1. Government securities

Government securities are bonds issued by each country, which represents the country's debt, loan. Typically secure, and produce low yields of securities but the yield rate risk in this case also depends on the state's credit rating (see the Greek bond yields rise after the 2008 crisis) and on maturity (with 10-15 years maturity the risk of insolvency is larger than in the short run).

- Interesting to note that Argentina has announced bankruptcy seven times since the Argentina's first bond was issued in 1824, Turkey 8 times, recently in 1982, our country eight times, recently – after the world war – in 1941.

According to the classical grouping T-bills are short-term, treasury notes are medium-term and government bonds are long-term. (In America, in terms of maturity those with more than ten years are called bonds, those with one to ten years are called treasury notes, and those with less than that are called treasury bills.

3.2.2.1.1. Types of Hungarian government securities

In the Hungarian practice government securities with more than one year maturity are called government bonds, those with less than that are called treasury bills.

[5] See in lesson 6 the concept of the policy instrument and its changes.

- Treasury bills are issued to finance the state for a short-term, there are three types:
  - **T-bills**, which are 3 and 12-month term non-interest-bearing securities, and mainly aimed at institutional investors;
  - **Half-year Treasury notes**, which are six-month term fixed-rate securities with a basic denomination of 10,000 HUF;
  - **Treasury notes**, which is a one-year term fixed-rate securities with a basic denomination of 10,000 HUF;
  - **Savings Treasury notes**, which are a two-year term (the latter is classified as bonds), with a fix, step rate (the size of the annual interest rate depends upon the time of purchase of securities), printed (materialised) securities.

Hungarian government bonds are registered, dematerialized securities, currently with a maturity of 3, 5, 10 and 15 years, marketed by auction, with a fixed interest. However, to increase public interest the government appeared on the market with several new design in recent years:

- **Premium Hungarian Government bonds** are securities of three and five-year maturity first issued in the spring of 2009, adapted to small investors, with a basic denomination of 1.000 HUF, with an inflation-indexed rate (different for each series): after each interest period, knowing the past inflation data interest was paid annually (the initial interest derived from the 3.5% inflation valid for December 2008, and from the premium fixed in 6 percent per year for the entire term, respectively. Now the premium interest rate is 3 % per year);
- **Premium Euro Hungarian government bonds** are securities with a maturity of three years, first issued in December of 2012 subject to inflation of the euro zone, with a variable rate **(**inflation-indexed), with a basic denomination of 1 euro, in which case the interest payments are semi-annually;
- **Bonus Hungarian Government bonds** are securities with a maturity of four and six years, first issued in March of 2014, with a basic denomination of 1 HUF, with a variable rate (the base interest is given by the averages of annual T-bills yields, the risk premium is 1.25% and 2% at present).

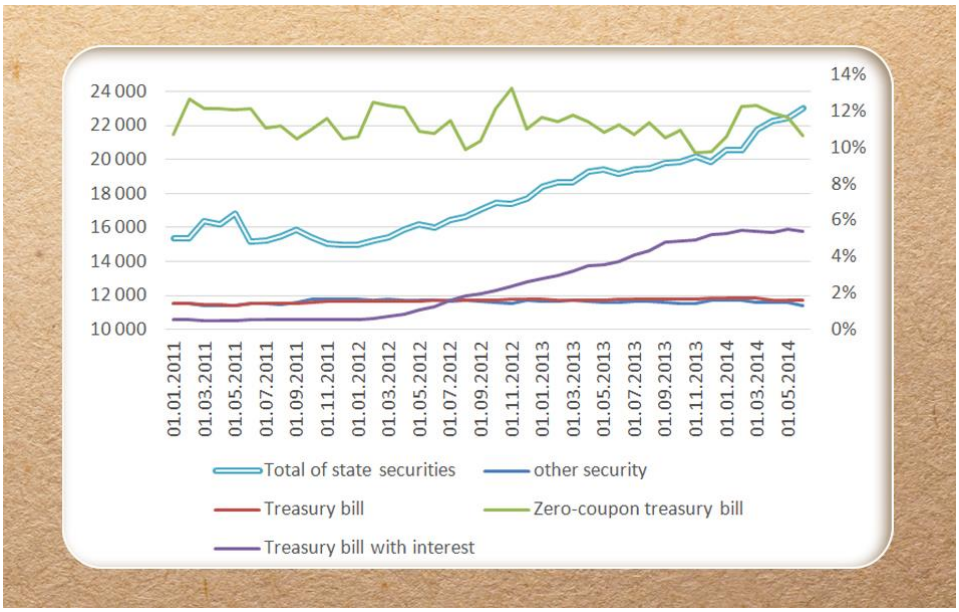


Figure 5: The total value of Hungarian government securities issued (in billions HUF) and the share of non-government bonds between June 2011 and 2014

source: edited by the author based on data ÁKK

The state has sought to involve the population to take the greater part in the financing of public debt in recent years, therefore promoting the government securities in the household sector was continuous. So from 2012 the retail securities portfolio has increased dynamically: At the end of July in 2014 it exceeded HUF 2,200 billion (between 2008 and 2012 HUF 800 billion was the average), which meant approximately 10 % of the total Hungarian government debt (the rate was around 2-3% between 2008 and 2012).

3.2.2.1.2. Functioning of the Hungarian government securities

In Hungary from 2001 debt management and thus the issue of state securities are performed by a business association operating in an independent organization, the debt management centre (AKK) Zrt. (See the role of the public debt financing AKK in lesson 11.) Government securities are sold in auctions, administered emissions, by subscription and continuous sales depending on the model. In terms of the total value, the most common method is auction (thus the issue of Hungarian

government bonds and treasury bills happen in this way): the issuer under the conditions it laid down (published in public Tenders) provides an opportunity to bid, then the bid received sorted by the yield and net foreign exchange rate compete and will be evaluated and approved.

Government securities can primarily be purchased at a retail from dealers in government securities can be purchased at a retail in the Hungarian State Treasury's branch network, and at postal service locations of Magyar Posta Zrt. (**primary market**).

The primary dealer system has worked since 1996 in Hungary. . The basic objective of creating it was

- facilitate the delivery of government securities to investors and
- secure footing of financing of the budget (regular participation and purchase obligation – the Debt Management Agency provides for minimum participation – will increase and concentrate the demand at the auctions).

Exclusively they are eligible to participate in government bond auctions, in return, they have an important role in transparency of the secondary market in respect of the increase liquidity: continuous bilateral price needs to be registered within volume and margin framework set. (Now through MTS Hungary trading system operated by the EuroMTS ltd.). A current list of primary dealers is available in Government Debt Management Agency.

- AKK website

1. http://www.akk.hu/object.154882cd-9b9c-4aa1-beaf-7aa6ce51327e.ivy

The most important task of other actors in the primary market, the Hungarian State Treasury branch network and the postal service sites of Magyar Posta Zrt. is conducting retail sales and small retail investor sales. Therefore, their role in the primary market is minor taking into account the overall sales: in 2012, the treasury branch network gave 13% of the total emissions (only 8% in 2010), 3 % was given by the post.

The greater part of the government securities market is made up of **the secondary market,** the scene where government securities are already in circulation on the trade market:

- the main players are distributors (especially highly primary dealers) and investors (institutional investors, corporations, individuals, etc. , and
- its main regions are the stock exchange and OTC trading.

Figure 6: Hungarian government securities yields reference (%) between 2008 and 2013

Source: edited by the author based on data ÁKK

Now the majority of secondary market transactions takes place in OTC market (MTS Hungary and Bond Vision systems, and telephone-based trading), trading in the stock market is gradually losing ground in recent years.

- Observe the AKK website, how the main parameters of last government bonds and treasury bills auctions established. (Submitted and approved quantity, minimum, average and maximum returns). Look at again figure 6t! Now how the reference yields develop?

2. http://www.akk.hu/index.ivy?public.lang=en-U

3.2.2.2. Corporate Bonds

Corporate bonds are issued by a company in order to get fundraising, it can be considered as an alternative to the corporate credit. Typically riskier than government bonds, as a company has – normally – greater chance of a bankruptcy (and of the non-repayment of the loan) than in the case of the State. However, these bonds have typically higher yields than government bonds.

The Hungarian corporate bond market unfortunately can be considered underdeveloped: although there have been issues in the past few years (as the emission of Business Telecom in early 2014 next to a maturity of

2.5 years and a yield of 9.9 %), the government bond market is still dominating: at the end of June 2014 the market capitalization worth HUF 450 billion was negligible compared to the value of government securities in circulation worth about 14,000 billion HUF (crowding-out effect of government securities).

Moreover, the weight of financial institutions is considerable – in recent years, CIB, MKB, OTP Bank and the Student Loan Centre Ltd. were the major issuers –, for smaller companies relatively high costs make the issue of bonds expensive.

3.2.3 Investment unit

The **investment unit** is issued in a series on behalf of an investment fund (for and against), ensuring property and other rights, transferable securities, which represents the investor's share of the investment fund.

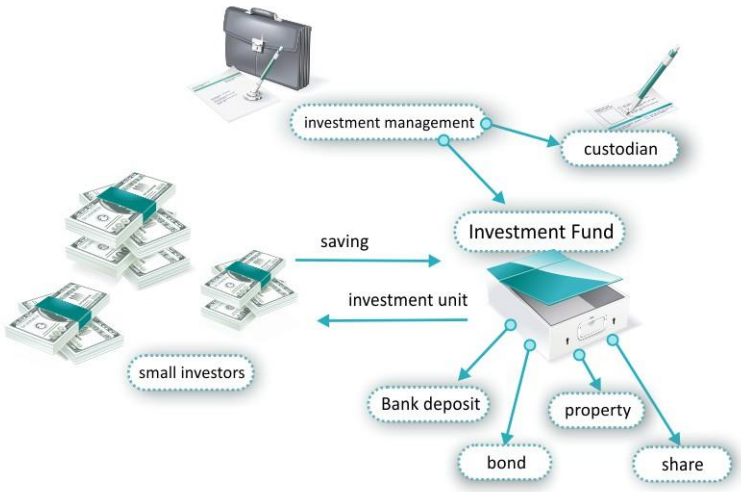


Figure 7: Operation of the investment fund

Source: edited by the author

The Investment fund is issued and operated by investment units – and so by collecting investors' money –, total assets with legal personality, which is managed by the investment management fund to investors in the investment management for investors, in order to derive maximum yield. The total assets can be invested in any financial instrument in accordance with a predetermined investment policy: bank deposits, securities, real

estate, commodities or products (gold, oil, etc.). Thus investment funds make it possible to build a very wide variety of investment portfolio.

In the operation of the investment funds the management, the custodian and the dealer play an important role. The task of the **fund management** is to create a fund, deciding on, implementing and administering investments, as well as informing investors. A fund manager can manage several investment funds (for example OTP management managed about 90 different investment funds at writing this curriculum). The most important task of **a custodian** (typically a bank) is the preservation of fund's assets, technical execution of transactions of securities based on management's orders, determining and disclosing the market price of shares. **The dealer** provides the necessary distribution system for the sale of shares.

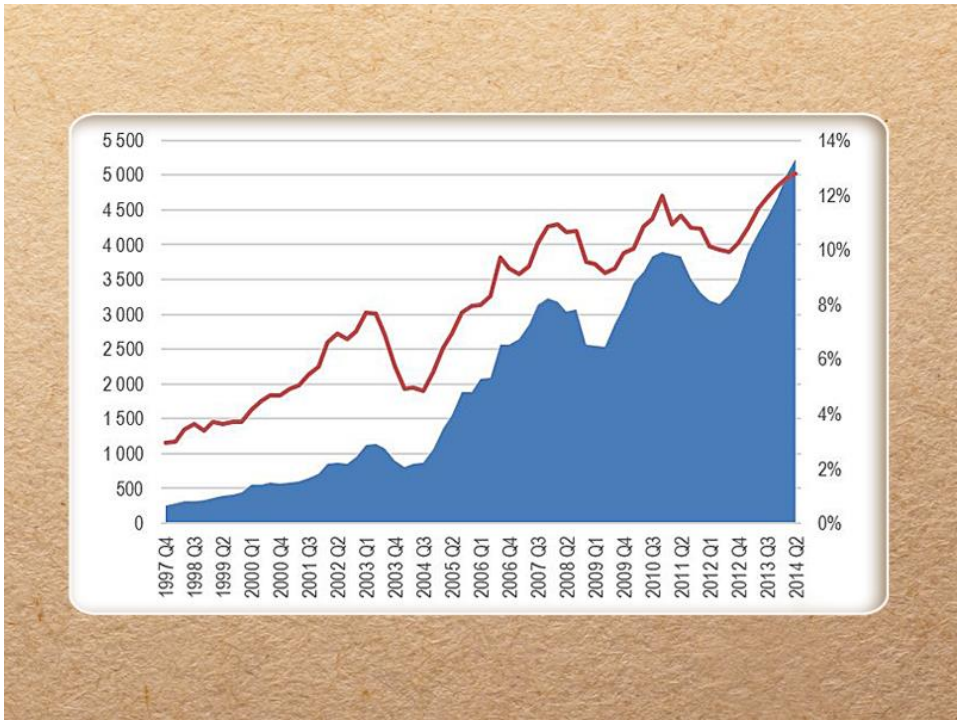


Figure 8: Holdings of mutual fund shares (left axis, column, HUF billion) and share (right axis, line) in the stock market between 1997 and 30 June 2014

Source: edited by the author based on data MNB

One of the biggest advantages of the **investment unit** is economies of scale and cost-effectiveness, under a given size it is not worth investing directly in securities, because the relative cost of the one-time investment is significantly higher (for example in case of a share purchase, the typical one percent but a minimum purchase of HUF 3,000 retainer fee can only be produced by a 5 percent rate increase in case of HUF 60,000 investment. However, upon receipt of investment units, less, typically a fixed fee (independent of the amount of the investment) is to be paid (in our country it is typically a few hundred Forints), thus savings under the optimal limit of investment (up to 10-20 thousand pounds) may be available on the market.

Moreover, benefits arising from the diversification can also be exploited in order to share the risks: if a fund invests its property in stocks of 10 kinds, then any investor's investment means a portfolio of a similar rate. Most investors are neither expertise nor have the time for an ongoing management of the investment portfolio: instead, these tasks are carried out by financial management professionals.

Also important to emphasize the publicity: for funds there exists broader collective information service to investors in various reports, briefings through than for any other forms of savings.

3.2.3.1. Types of mutual funds

In terms of public there are

- private funds, which are created by the management for a predetermined range of investors; or
- open range of funds, shares of which are publicly marketed, so anyone can purchase them.

According to **liquidity** there exist open-end and closed-end funds**.** Open-end funds, after the release can constantly be bought or sold at the fund manager, (therefore, the open-ended investment fund's equity, certainly, may vary). So their great advantage is that there is no tie-time: investors may get their savings any time in case of need. Closed-end funds are created for a fix period (1-5 years), after the subscription the issue of new units do not take place, and the management cannot be redeemed prior to the maturity date. So the owners could sell their investment units to a third party, typically on the stock market (unfortunately, with a very low liquidity). In our country in a couple of years after the launch of investment funds mostly closed-end funds were established, now the superiority of open-end funds is typical, but some basic types (real estate funds, and the yield and capital guaranteed funds), almost without exception, have been established in closed form.

In terms of yield point of view, there are

- distributing funds which pay the capital increase regularly to investment-holders, and
- re-investment fund, which reinvest the capital increase (in this case the investor gets part of its share of the income earned by the Fund in a form of foreign exchange differences.

According to the type of investment (asset class) funds can be divided into three main categories: real estate-, securities- and special funds. The latter may even mean precious metal investment, or any specific investment. **Real estate funds** seek to realize a return with property investment or from marketing or from continuous operation. **Securities funds** may develop highly diversified portfolios, there are clearly one type of security funds (e.g. bond or equity funds) investing in funds as well as mixed funds (which contain types of securities in different ratios).

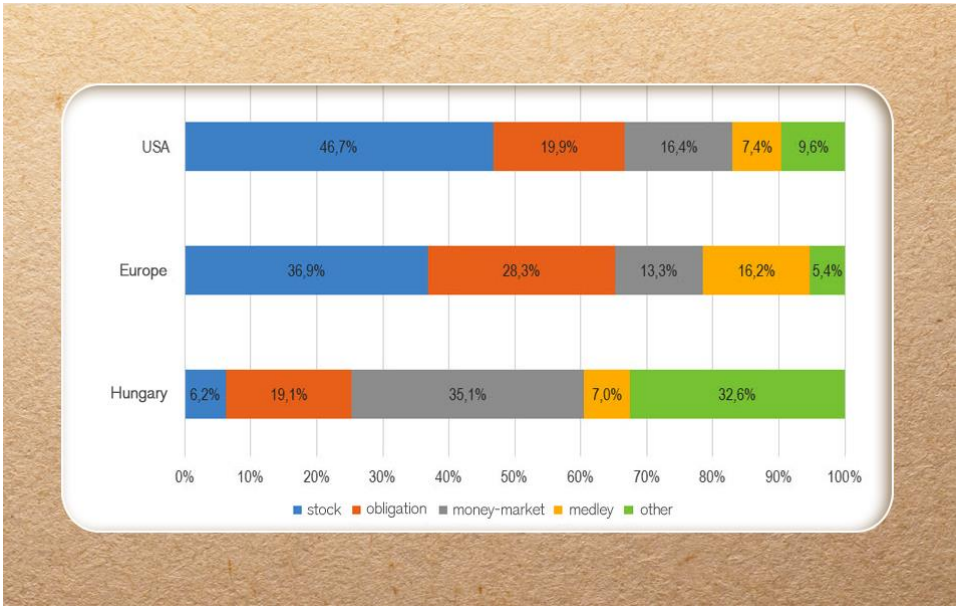


Figure 9: Distribution of investment funds with assets under management according to categories used in the USA, Europe and in our country at the end of 2013

Source: edited by the author based on data EFEMA and BAMOSZ

However, there are also special investment funds such as index funds (these replicate the composition of certain capital market indices), basics

of funds (solely buying investment units of other funds) investing in derivative instruments funds (futures and options) or guaranteed funds. The latter in our country have become extremely popular in recent years, they are typically of closed-end maturity (3-5 years), and are able to produce two types of warranties:

- in the case of capital warranty funds the investor gets at least the invested capital,
- In case of yield guarantee funds the investor gets an investment yield increased to a predetermined value.

In order for investors to be informed properly, however, worldwide broad and distinct practices in the categorisation of funds spread. In Hungary, BAMOSZ give recommendations for the members in this area, which classifies domestic funds into 9 main and altogether 15 sub-categories.

Hungarian Association of Investment Managers BAMOSZ website

3. http://www.bamosz.hu/en/web/guest/celok

Also interesting the **hedge fund**: it is an investment fund whose investment policy, framework of its operation is not regulated, so it can buy and sell any means, engage in any investment strategy. With highly complex investment strategies specifically looking for high risk, and thus seeks to maximize the total return. An important feature is that it is characterised by significant performance fees (in case of a ''2 to 20'' charge rule the management fee is 2% and the performance fee is 20%) or often a time limit is imposed on the redemption of investments (2-3 years).

- Interesting to note that at the beginning of 2014 – according to Alpha – the largest hedge fund, the fund of Bridgewater Associates invested 87 billion dollars. Accordin to Barron's in 2013 the highest returns were reached by the Glenview Offshore Opportunity: 101,74 %.

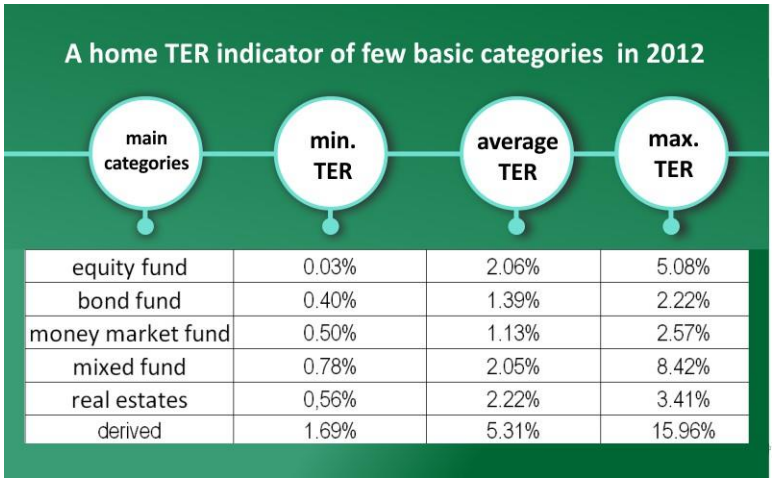
4. http://www.institutionalinvestorsalpha.com/Article/3340199/The-2014-Hedge-Fund-100-The-Worlds-Top-Hedge-Funds.html

5. http://online.barrons.com/news/articles/SB50001424053111903301904579566373990361000

3.2.3.2. Operation of the investment funds in practice

At the launch of the fund its equity can be calculated from the product of the nominal value and the number. However, the market value of equity-fund assets is constantly changing, thus an active investment fund is characterised by its **net asset value**.

The custodian of the fund determines the daily market value (at the price of which the custodian could have purchased or sold them on that day on the market), then from the value of assets obligations of the funds will be deducted, and demand of the funds will be added, in this way the fund's net asset value is obtained. If the net asset value is divided by the number of shares in circulation, then the price of paper, that is, **the net asset value per unit** is obtained. Somebody who wishes to purchase tickets following the launch of the fund, he or she can buy the investment ticket at the current rate on the day of purchase.



equity fund	0.03%	2.06%	5.08%
bond fund	0.40%	1.39%	2.22%
money market fund	0.50%	1.13%	2.57%
mixed fund	0.78%	2.05%	8.42%
real estates	0,56%	2.22%	3.41%
derived	1.69%	5.31%	15.96%

Table 2: A home TER indicator of few basic categories in 2012

Source: edited by the author based on data MNB

The trend of costs in the fund is important, which is reflected in the Total Expense Ratio (TER) – based on recommendation 2004/384/EC. During its calculation among costs charged to the funds operating expenses presented in the fund prospectus and management regulations are included, but costs of management fees, commissions and transfer costs related to securities trading are not included in the costs to fund. The biggest benefit of the index is that during an informed investment decision in addition to examining the risk-return relationship it expresses and makes

it comparable to the cost of each fund level (in the same way as for the APR loans).

It is important to emphasize that in our country from 2013 a disclosure of a two-sided document with clear explanations has become mandatory for all public, open-ended investment funds. (Key investor information document, namely **KIID**). This, compared to the previous (often 100 pages) information, allows rapid acquisition of information on a given fund: in addition to the investment policy and the single risk rating it includes the past performance, and both costs of each ticket and the rate of indicator TER.

- Key investor information document, namely **KIID**

6. http://www.investinginfunds.org/facts-about-funds/information-from-the-fund-manager/guide-to-kiid.html

3.2.4 Mortgage

Deed mortgage issued only by mortgage banks, covered by real estate property, medium or long-term (typically 5-10 years), fixed income type of securities, which was issued in order to finance existing mortgage bank loans. (In Hungary in accordance with the provisions of the Act XXX of 1997 on the mortgage loan and mortgage bonds based on the German model.) The mortgage owner actually indirectly – through mortgage credit institution – provides mortgage: the credit will be managed by the mortgage bank which collects the principal and interest repayments and passes a portion of them to the mortgage holder in the form of interest and as well as in the form of the maturity of capital repayment.

As securities it has a very long historical past, in Europe – first in Prussia it was present at the end of the 18th century (in Hungary it began operations in 1863 by the Hungarian land credit institutions, and in the 1880-ies, almost all major financial institutions dealt with this and the Hungarian mortgage was popular throughout Europe.) The name of mortgage bonds varies from country to country, in the international context typically the term mortgage bond, or covered bond is used, although the latter term refers to the broader category than the same concept in our country (it includes debt securities secured by each specific asset coverage).

- The European mortgage market data are available on the website of the European Mortgage Federation and quarterly reports.

7. http://www.hypo.org/Content/default.asp?PageID=401

The advantage of the mortgage is that it carries a low risk for investors, because the underlying collateral assets are of low risk category, and

special, strict rules are applied for the issuer. Mortgage banks should have at any one time – what a property inspector keeps track of – coverage for the nominal value not yet repaid and a value greater than the amount of interest of mortgage bonds in circulation. The coverage may cover collateral and additional coverage:

- value of collateral consists of capital assets resulting from mortgage loans and from its interests,
- additional collateral is the issuer's liquid assets, government securities and financial assets on cash accounts.

In Hungary the mortgage market in spite of the recovery of the housing-related lending aid in the early 2000s, can be regarded as marginal compared to the European context (at the end of 2012, it is less than 0.3% of the European market) and the domestic securities market. There are three players on the market, OTP, FHB and UniCredit mortgage banks. Very interestingly, the outbreak of the 2008-2009's economic crisis in the USA can be related to these securities through credit problems developed in sub-prime or sub-prime lending.

3.2.5 Deposit ticket

A deposit ticket is a branch of only a credit institution or a foreign credit institution, furthermore debt securities may be issued by the Hungarian National Bank in order to complete monetary policy. The issuer commits to pay the fixed interest rate of the therein specified amount of money and the amount of money to the ticket holder at any given time and in the manner. The maturity of the deposit ticket can extend to 3 years from the date of issue, the claim contained in it expires ten years after the expiry of the period specified in the redemption.

3.2.6 Venture capital fund ticket

A venture capital fund ticket is a transferable stock issued in series on behalf of the venture capital fund insuring properties and other rights representing the owner’s shares in the venture capital fund. Venture capital fund can be considered as an alternative investment fund, established for the purpose of financing business development: typically providing funding for small and medium enterprises in exchange for a share of ownership. Its popularity is growing in our country, which is also due to the EU program JEREMIE: since 2010, about 28 new venture capital fund has been established.

3.2.7 Warehouse receipts

Warehouse receipts are negotiable instruments issued to the public warehouses goods (typically agricultural commodities, such as grain), which represents the ownership of the goods. The paper will be issued pursuant to the warehouse contract, the depositor shall pay a warehouse fee.

The warehouse warrant marks are led by the warehouse according to schedule and number of deposit coupon book and it consists of two coherent but separable parts such as the delivery slip and the pawn ticket, containing the same data as on the main page remaining in the deposit book. The delivery slip provides power to dispose of the goods, the pawn ticket allows the holder representing the ownership of goods to pledge as collateral offered – Lombard – in borrowing. The two parts of the warehouse ticket so independently transferable, nevertheless, the goods may only be issued against the joint property of both parts.

3.2.8 Compensation notes

Compensation notes are very special securities introduced to some of the former socialist countries after the change of regime, issued by the State for compensated people meeting specified conditions, in a value corresponding to the level of compensation.

Compensation notes so claim against the State, there is no expiration, payable to bearer, negotiable. Specifically bearing securities: it was bearing interest from the date of 10 August 1991 and 31 December 1994 (the interest rate was 75% of the Central bank interest), the interest increased the nominal value of the paper (at present 174.2%).

The price of the ticket (exchange rate) basically depended on its possible use: it could be used for the acquisition of land ownership, for purchasing housing owned by local governments, for annuity disbursement. However, the most typical redeeming of shares was the purchase of bonds and business shares sold during the privatisation of state property. The most well-known ticket exchanges were the MOL, OTP, and the exchange to shares of power companies. Exact statistics on the issuance are not available, based on expert estimation approximately HUF 2-5 billion worth tickets are in the market, in case of a redemption compensation notes would be abolished in Hungary.

3.2.9 Bill of exchange and checks

Bills of exchange represent debt securities: one party recognizes outstanding debts to the other party, and agrees to offset it in time and in the manner specified. Securities with strict formality, materialized.

Checks are securities for the payment of money, in which the issuer instructs some credit institution (where the issuer has claims), to pay a certain amount of money determined by the check to the ticket holder.

3.2.10 Certificate

Certificates are derivative securities not issued by financial institutions not according to the Hungarian law, allowing for benefitting from exchange rate fluctuations of an underlying fund product or group of products.

Through certificates a variety of investment strategies can be ,: the base product can be a share, index, mutual fund or currency pairs, but commodity product, a given portfolio and interest rate, or futures relating to these or a combination of several of these. Interestingly, not only the rise of prices (long certificate), but even with the decline in rates (short certicate) also allows benefitting, moreover we have the opportunity to make use of leveraged trading with the help of turbo certificates (as warrant on BÉT). (The essence of leverage is to have the opportunity to buy a large position in lower capital needs. For example, if the investor buys HUF 100 shares by a capital investment of HUF 10, then the leverage achieved is tenfold.)

Since 1989, they are present in dominant international financial markets, typically, in our country they have been available through private banking services since 2008.

3.3 SUMMARY, QUESTIONS

3.3.1 Summary

The lesson presented the characteristics of individual securities, highlighting three of the most common household products. In addition to the types of high-risk shares, resulting in high overall yield in long-term it is also important to know of the shareholder's rights. Government securities are not only low-risk securities producing lower returns, but their role in embodying the state's debt is outstanding both in terms of financial markets and of fiscal policy. Investment units as classic retail securities allow a highly diversified investment, even in the case of an amount up to a few thousand forints. Along with this knowledge of essential characteristics of other securities is also required, their role is determining in certain segments of the financial market.

3.3.2 Self-test questions

Describe and characterise rights of a shareholder!

Demonstrate and describe types of shares!

Characterise the bond with respect to maturity, yield and risk!

Demonstrate and describe types of Hungarian government securities!

Describe and characterise primary and secondary markets of Hungarian government securities!

What are the advantages of a unit?

Classify and characterise the unit from public, liquidity and yield point of view!

Describe and characterise mortgage bonds!

Describe and characterise the certificate!

3.3.3 Practice tests

For which securities the following statement is? Debt securities, in which one party recognizes outstanding debts to the other party and agrees that it will be smoothed out in time and in the manner specified.

- share
- unit
- bill of exchange

Which of the following are interest-bearing securities under the general rules?

- ordinary shares
- bond
- investment unit

With the purchase of shares

- a portion of ownership of the assets of the issuing company can be acquired
- we become an entrepreneur
- we give a loan to the issuer.

The preference dividend:

- Entitles to much more favorable ratings ahead of other shares.
- Provides the owner with multiple levels of voting rights specified in the statutes.
- Owner has priority in wealth pay-out in the event of termination without successor.

Which of securities has more than one year of maturity?

- Treasury
- Treasury Bill
- interest-bearing Treasury

The bulk of Transactions of Hungarian government bonds in the secondary market takes place in OTC market, trading in the stock market is gradually losing ground in recent years.

- true
- false

Shares in the open-ended investment funds may not be redeemed by the management company during the term and after the subscription period closed new units are not on the market: buying and selling tickets takes place in a buying or selling rate available in the stock exchange transaction.

- True
- False

For which securities the following statement is true? Derivative securities, allowing for benefitting from exchange rate fluctuations of an underlying fund product or group of products.

- ticket restitution
- certificate
- venture capital fund ticket

Mock exam

Which is not true for the share?

- A portion of the ownership of the assets of the issuing company can be acquired.
- The issuer pays interest on a loan given in exchange for a share.
- Its return is dividend.

In case of purchasing a ticket deposit the investor provides funding by the issuing fund of it for small and medium businesses

true

- false

Mock exam A

Which securities have a maturity not less than one year?

- Treasury
- share
- bill of exchange

The owner of the mortgage is actually providing mortgage loans indirectly – through a mortgage institution: the credit is treated by the bank which collects repayments of principal and interest and passes part of them to the mortgage holder also as an interest or in the form of capital repayment when the mortgage matures.

- true
- false

Mock exam B

An open-end fund can be quitted by redemption of our investment units: when selling our investment tickets as an exchange we can receive an amount equal to the multiple of the exchange rate and the number of our investment units reduced by the sales commission and interest tax.

- true
- false

Select the definition of the government securities from the following definitions!

- government securities are bills representing public debt
- government securities are bills representing membership
- government securities are bills representing equity participation rights in a public holding company.

4. BASICS OF STOCK MARKET

4.1 OBJECTIVES AND COMPETENCES

The stock market as an institution existing for hundreds of years is closely related to the economy, indicating its performance, and possible interference as an indicator. It offers for investors the possibility of achieving outstanding profits and also the high risk of failure: indices already showed up over 20% reduction in the stock market in one day (see Black Monday October 19, 1987).

The lesson is designed to illustrate the operation of the stock market, its development and basic concepts related to the world of stock. The student can group transactions on the basis of time and risk, and learn main features of each type of transaction. He or she is able to present main steps of the process of an exchange transaction, is able to describe the types of orders, and two types of trading systems. After studying this lesson, learn the major domestic and international stock market indices.

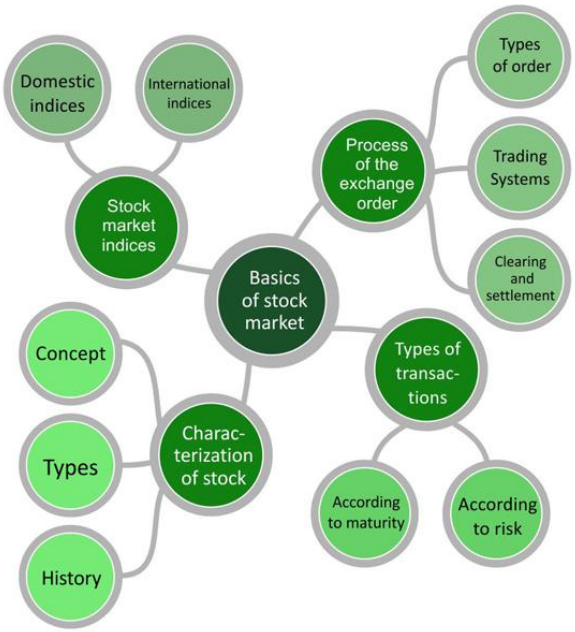


Figure 10: Structure of the lesson Basics of Stock market

source: edited by the author

4.2 CURRICULUM

The sale of securities, the continuous sale and purchase occurs int he securities market, three types of which are distinguished based on the concentration of buyers and sellers:

- In case of decentralised market the sale takes place in geographically dispersed locations, terms of the contract are determined by the parties therefore less information is available;
- In case of OTC market (over the counter market) the organization is higher, this represents an interbank market working through computer networks;
- market participants and trading is geographically available at the same location in case of a concentrated market.

Forms of a concentrated market:

- auction, which focuses on the demand;
- tender, which focuses only on the supply;
- stock exchange, which focuses both demand and supply.

Thus, the **stock market** is a specially organized, focusing on market supply and demand, where trading of replacable bulk goods takes place strictly according to rules laid down. Conducting the trade is done on the basis of the stock market convention: only specified goods can be sold and bought by persons specified at place and time specified and in a manner specified in the stock market.

From a different approach (Act CXX of 2001 on the Capital Market Law) the stock market is a business organization, which in order to activate the efficient flow of capital stock, capital assessment, to share risks of the exchange rate and other focuses on market supply and demand of products in stock and conducts their trading, promotes changes in the public price. Thus, the stock market is perceived not only as a location, today most stock markets are profit-oriented joint stock company which strives to gain more profit by allowing the trading.

Exchanges can be grouped according to different criteria:

- based on the sale of products traded, commodity goods (sale of physical goods for example Chicago Mercantile Exchange), stock exchange, (purchase securities, currencies, precious metals, etc.) and commodity and stock market;
- On the basis of status it is a European continental type of stock (of public nature with substantive state influence), or Anglo-American-style stock exchange (private law nature, generally in a form of a limited company).

4.2.1 History and development of the Stock market

Formation and evolution of stock markets closely related to the development of securities markets. The stock market emerged from the market, where basically physical commodities were traded at the beginning. The market became the stock market when the business deals became a mass phenomenon, and securities first appeared. The first shares were issued in 1602 by the Dutch East India Company, and other securities appeared (such as deed mortgage). For the development of stock markets the XIX. century railway construction was a big boost: limited liability companies were formed one after the other, which collected funds by issuing shares. So in the second half of the century, almost all countries have formed their own stock exchange. In Hungary in 1860, an imperial edict prescribed to set up commodity exchanges in larger cities of the empire operating under rules adopted by the state, and finally Pest commodity and stock market began to operate on 18 January 1864. By the end of the century, Pest bourse became Europe's fourth-largest stock market, a financial centre of the Central and Eastern European region: at that time the flourishing the stock market was clearly demonstrated by a private palace built for it. Dissolution of the domestic stock market happened in 1948: the stock market as a symbol of capitalism was abolished and reorganization of the securities market only started in the early 1980s, (bonds have been re-issued). After the change of the regime the legal framework was quickly adopted (Act VI of 1995 on public release and distribution of certain securities and on stock holding), and in our country two stock exchanges started to operate: the Budapest Stock Exchange (BSE), and the Budapest Commodity Exchange (BCE). BSE has continuously developed in the 1990s, expanded the range of products and developed trading, then after becoming a joint stock company in 2002 it bought up BCE in the autumn of 2005 so our country has had only one stock market again.

- BCE Website is as follows:

8. http://www.bse.hu

However, the global financial markets are in constant change and transformation: stock markets started to buy up each other (for example formation of Euronext group or the merger of Nordic stock exchanges), the goal of integration is to achieve an optimal plant size, and thus higher profits. The establishment of the Central and Eastern European stock exchange in cooperation with Vienna, Budapest, Ljubljana and Prague since the Vienna Stock Exchange became the main owner of the BSE, can be considered as part of the process in 2009,

At the same time the deregulation strengthened in Europe: MiFID (Markets in Financial Instruments Directive – directive on markets in financial instruments) was aimed at a single European capital market regulation in Europe entering into force in 2004, and brought two major changes in the functioning of stock exchanges:

- abolished the so-called ’’ exchange constraint” that is, the Member States could no longer compelle investment firms to transmit orders only to stock exchanges; or
- In addition to regulated markets (stock markets) new representatives of organized trading facilities were formed such as alternative trading platforms (Multilateral Trading Facilities, MTF) which may also be operated by investment investment firms (e.g. investment banks).

So significant changes have taken place in European securities trading, and due to the ever increasing competition securities trading has been displaced from the traditional exchanges. In February 2011, the second largest share trading venue was MTF, Chi-X Europe behind the London Stock Exchange.

4.2.2 Types of transactions

Any product can be traded in the stock exchange if there is supply and demand for a new product, product line expansion is the interests of the exchange management. Transactions involving trading with the stock market can be classified on the basis of several criteria, typically, according to the due date of the transaction (date) and the degree of risk.

4.2.2.1. Types of transactions according to the due date of a transaction

According to the **due date of the transaction** there are spot and derivative transactions.

- In case of a **spot transaction** (spot or promt transaction) the conclusion of the contract and its execution take place immediately or in a short time. There is some lead time of the settlement and and the performance of the contract, therefore the completion of such transactions must take place within 2-5 days (in the equity section of BSE for example a three-day settlement works in the debt securities section a two-day settlement works.)
- In case of a **derivative transaction** the conclusion of the contract and its execution are separated in time, and the performance

happens at a later date (such as half a year later) specified in the transaction. The value of the derivative transaction depends on the underlying financial instrument as a basic value of the product: a transaction just concluded, expiring in six months, with the strike price of HUF/EUR 320 allowing an euro account depends on the size of the current spot market price on the date of maturity. (If it is HUF/EUR 310, then in the transaction at the strike price of HUF/EUR 320 purchase results in a loss of HUF 10 compared to the spot market price).

The reason for the popularity of derivatives is that they help to reduce the risk of spot transactions and a strategy can be built not only to the increase in prices, but also to price reductions. Three additional types of transactions can be distinguished within the derivative transactions, as shown in Figure 3.

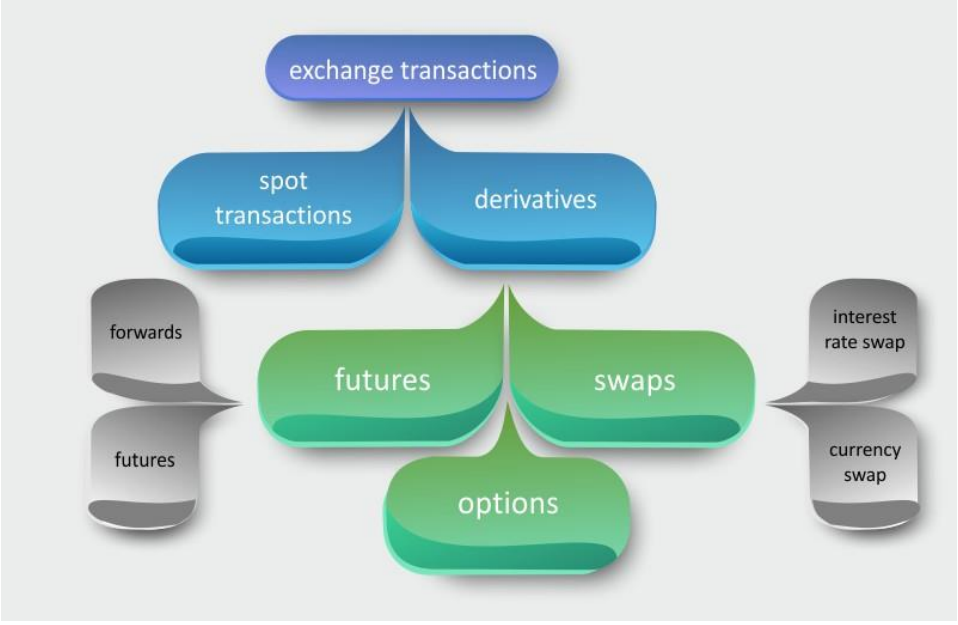


Figure 11: Transactions grouped according to the due date of the transaction

source: edited by the author

The **swap** is an agreement on the exchange of a financial instrument – usually currency, securities, or interest rate, but even commodity, which results in the exchange of future cash flows. Typically made for investors, i.e. OTC market transactions, so flexible, but – due to counterparty risk – less secure. Several types of swaps can also be distinguished.

- Simple interest rate swaps (plain vanilla) is an agreement, in the framework of which in a predetermined time related to the given amount one party (selle) pays an amount determined by a fix interest rate, while the other party (buyer) pays an amount corresponding to a variable rate of interest (eg. BUBOR). During the settlement no interest payments are exchanged but the difference between in the amounts payable to each other are accounted for. The main function of the transaction is the fact that the parties can change interest rates of previously taken credit: a loan with fixed interest rate can be converted into a loan with variable interset rate (assuming a future reduction in the interest rate), while a credit with a variable interest rate can be converted into fixed-interest (assuming a future increase in interest rates).
- **Currency swap** is an agreement in the framework of which a currency – its amount and interests – change to a different currency – its amount and interests. Typically, companies operating in two different countries are involved in transactions: when the transaction is concluded the capital is exchanged on the spot exchange rate, and when the interest payments is due the fixed interest funds are exchanged, and finally when the transaction matures their base currency is changed back to the starting foreign currency.

Futures is a binding contract in the course of which parties commit to market (purchase or sale) specified quantity and quality of assets (basic products), at a predetermined rate (futures price), in a specified future date (expiry). Such a transaction is also required to meet, at maturity either party may change his or her mind, can not make the completion depending on changes in prices. There are two types of futures distinguished.

- The forward contract is an agreement between two parties for selling or purchasing the base product (of any type) at a predetermined future date. Parameters of the transaction are free to set thereby flexibly adjusted to the needs of the parties.
- Futures are standardised transactions with stock management, whose basic product, and the amount, date and price of the performance is pre-defined. (In case of expiry transaction can be

entered into for example for months March, June, September and December.) The basic unit of the transaction is a contract, which means the amount specified by product (for example 50 shares of CHF 1,000, 5,000 tons of wheat, etc.), so even binding contract also indicates a major investment.

An important feature of futures is the **leverage**, i.e. there is no need to provide the full value of the underlying asset but only a part of it needed to be provided as collateral (margin). As accounts occurs on a daily basis the initial margin – typically, its rate is 10-15% of the value of the contract – must be available on the invoice until the closing of the open position, it covers losses caused by the maximum daily price change. If the deposit falls below the minimum level the client may be requested to place some additional collateral (variable deposit).

EXAMPLE: assume that in order to purchase a contract (a contract is equivalent to 50 shares) of futures on account of a share 100,000 Ft deposit is required. If the price of a share is 20,000 Ft then 5 pieces of shares could be bought on the cash market. On the other hand, 50 pieces of shares can be traded on the futures market, whose price is HUF 1,000,000 thus, the leverage in this case is 10 times.

Option transaction represents an entitlement (therefore, no obligation) which allows for the purchaser to buy (purchase, or call option) or sell (selling, or put option) products involved in the transaction (a specified quantity of it, at a price fixed in advance in the contract (strike price), in a future period or by a date. Option transactions can be European or American type: in the former case the option right can only be exercised on the expiry of the contract while in the latter case, at any time until the expiry of the contract. Option transations can be done both on the exchange (it is more frequent) and on OTC market: in the latter case, similarly to forwards parameters of the transaction can flexibly be adjusted to the needs of the parties.

The option contract represents an obligation (announcer) only to one party – the seller – and to the other – the buyer – however, a right (entitled). It is manifested in the option fee which is payed by the entitled (owner) to the announcer at the inception of the contract (thus, it is the cost of obtaining an option). As the contract of an option transaction means a specified quantity by product similarly to futures, and only the option fee must be paid, therefore here also a leverage occurs.

The exercise of rights depends on the relationship between the spot market price and the strike price: it is worth using the option right if we can buy cheaper or sell more expensively than the market price by validating the option price.

- TASK: you expect a price increase so you give a buying (call) option order to purchase a share. The exercise price per share is HUF 2,800, the option price is HUF 250. Determine the value of the option, if the exchange rate at maturity is HUF 3,200, HUF 2,700, and HUF 3,000 respectivley, on the spot market.

SOLUTION: if the exchange rate at maturity on the spot market is:

- HUF 3,200 you may want to exercise an option, because a surplus of HUF 150 is gained, shares at a purchase price of HUF 2,800 can be sold for HUF 3,200, at the same time the profit of HUF 400 is reduced by the option premium paid;
- HUF 2,700, it is not worth it to retrieve the option, that is, a loss of HUF 250 incurs (shares purchased at a price of HUF 2,800 could sell for HUF 2,700 and the option premium paid would add to the loss of HUF 100);
- HUF 3,000, it is not worth it to retrieve the option as a loss of HUF 50 incur (shares purchased for HUF 2,800 can be be sold for HUF 3,000, at the same time the profit of HUF 200 is reduced by the option premium paid).

Thus, the higher the spot market price at maturity, the higher gain can be achieved by exercising the option when you buy a call option however, in case of a decrease in the rate the loss can be limited in the option fee.

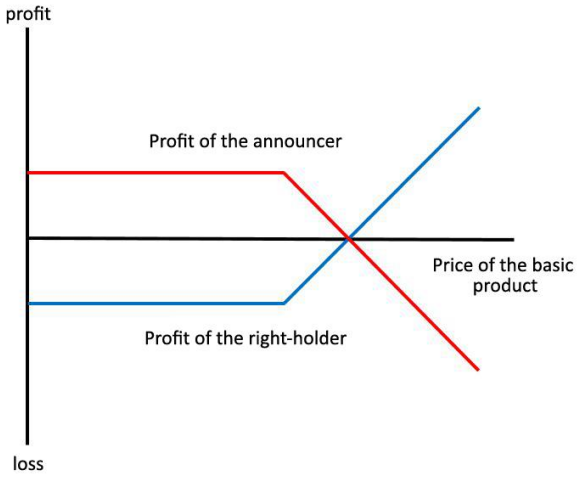


Figure 12: A profit function of a call option

source: edited by the author

The lower the price at maturity on the spot market,if you buy a put option the higher the gain can be achieved by exercsising the option, however, in case of an increase in the rate a loss can be limited in the option fee.

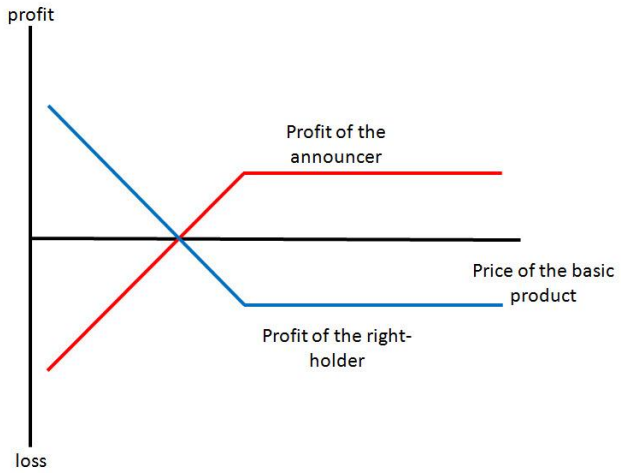


Figure 13: A profit function of a put option

Source: edited by the author

Another important characteristic of options that by proposing and buying options of different term, exercise price and type (buying, selling) investors can build extremely diverse strategies, and and thus not only for an increase or decrease in prices, but even for the stagnation a trainable position can be formed.

- The straddle strategy is used when we expect that the exchange rate will move significantly but we do not know what the direction of movement will be. The strategy means buying a given call option and the purchase of an equal amount of put option with the the same strike price and time.

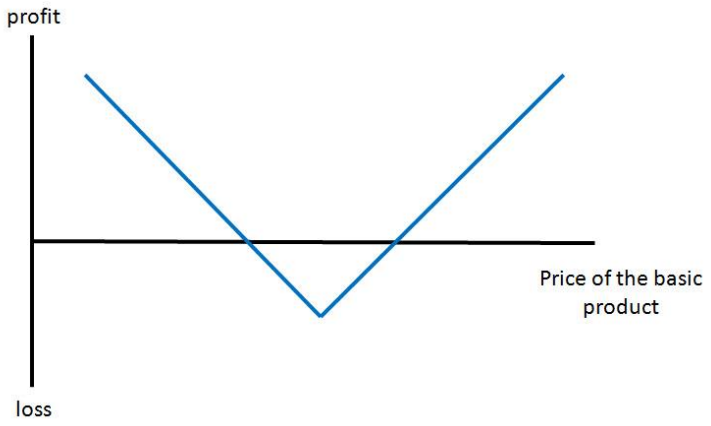


Figure 14: A profit function of a buying straddle (long straddle) strategy option

Source: edited by the author

4.2.2.2. Types of transactions by risk

According to the **the risk of a transaction** undertaken there are hedging, speculative and arbitrage transactions (figure 14). However, the real (effective) transaction exists in which contractors actually need the product, goods (for example a bakery buys wheat because its products are produced by processing it), in this case, the risk can not be interpreted.

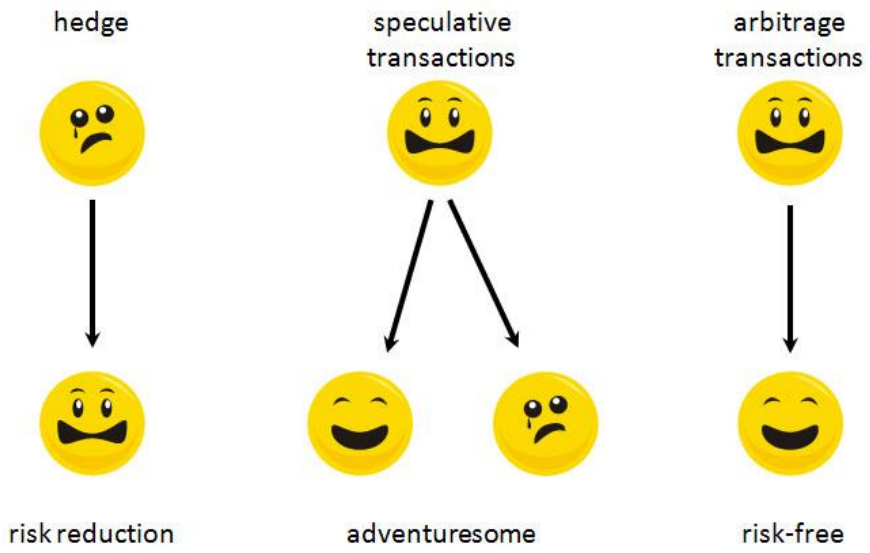


Figure 15: Transactions grouped according to the risk assumed

source: edited by the author

In **case of hedge** operators with open positions (a future cash flow, which is exposed to some kind of a risk for example foreign exchange), ensure their position against possible losses: the aim is to reduce risk, eliminate the safety by focusing on security. In hedges generally derivative transactions are made and it is important to emphasize assumed that with a fixed price potential benefits of positive changes of the assumed risk are also given up.

EXAMPLE: a company signed a contract with its Austrian partner for an import of goods worth € 100,000 on the first of February. The partner delivers the goods at the end of July and the company is required to transfer the consideration August 31. In February, at the time of contracting the euro exchange rate is HUF 310. The company expects a weakening of the forint and rising of the exchange rate. Therefore it enters into forward purchase transactions, the six-month futures price of EUR is HUF 320. As a result of the transaction the risk of the exchange rate is terminated for the company, no matter how the rate changes one eruo still will be HUF 320. If the euro exchange rate will be higher than that in August, for example HUF 355, then some of the price increases is prevented, and it could buy the required amount

of euros for HUF 1.5 million cheaper. Certainly if the forint had strengthened against the euro (for example on HUF 305) then it would be worse off and overall, it could buy euros for HUF 1.5 million more expensively. But remember that the transaction was not intended to achieve profits, but also to reduce the risk of the exchange rate!

In case of **speculative transactions** the risk is ought to aim potential profits: outcome of the transaction can result in profits or but even losses. The **haussier trader** expects an increase in the exchange rate and therefore buys today in the hope that they can later sell at things a higher rate. The **baisser trader** expects a decrease in the rate therefore sells things today such that later he or she will buy the same product back at a lower rate. Speculators are also distinguished according to how long they are maintaine their open positions:

- **a skalper** maintains its position only for a few minutes perhaps hours, with frequent business deals he or she wants to take advantage of small price changes;
- a **day-trader** (daily speculator) always closes his or her position at the end of the day, due to the risk arising from the difference between the daily closing and the following opening price;
- **trend speculators** formulate expectations for long-term (months, even years).

Speculators are useful and indispensable players of all markets: they take on the risk from those who want to cover and since they are always ready to buy and sell so they provide the liquidity of the market.

In case of **incremental transaction** (arbitrage) the purpose of the arbitrageur is a risk-free realization of profits: he or she buys on the market, where the product is cheaper and at the same time sells on which it is more expensive (in this way no open position arises). A reason for arbitrage transactions is the difference in prices and its consequence is the disappearance of price differences, and thus a price equalization. The price difference is due to insufficient information flow: on one of the markets information is already built into the price (for example a major vendor appears in the market and the increase in supply causes a fall in prices) while on the other market it has not happened yet.

EXAMPLE: Assume that the Hungarian Telekom shares are traded both on the stock exchange in Budapest and in New York, and the rate in Budapest is HUF 310, while in New York it is HUF 305. In this case the arbitrageur will buy some for HUF 310 in New York and at the same time will sell for HUF 310 in Budapest, and so making a profit of HUF 5 per share without any risk. As a result

of the transaction a demand is increased in New York which pulls up the exchange rate and at the same time the supply is increased in Budapest which pulls down the rate until shares will be traded at the same rate.

4.2.3 Process of the exchange order

Exchange transactions can be concluded related to the context of exchange order the implementation of which is effected through an exchange trading member (brokerage firm). The most important criteria for selection of the stock trading company:

- the company's financial strength,
- the company's fee structure,
- personal connection,
- types of payment opportunities (in person or by mail, fax, telephone or on the Internet).

For orders all important parameters of the transaction are given by the investor: name or code of securities, or information on the duration, the quantity and the price. A key feature of the order is selecting a type according to the price under which four types of orders can be distinguished.

- when market orders prices need not to be specified the system meets the order then at the best available price. Its risk is that it is not exactly known at what rate the order will be fulfilled.
- In case of a limit order it can be met at a price specified in the offer or even at better prices: in case of purchasing the order can be met at a specified or below a price, in case of selling at a given or over a price.

Market-to-limit orders covers primarily a market offer without specifying a price which binds only at the best price level but part of the offer which does not bind at the best price is not deleted permanently from the order book, but but equal to the price of the bond price it gets back there as a limit order.

- In case of iceberg orders only a small portion of bids is visible in the order book, the rest remains invisible during the continuous offer pairing (like an iceberg floating in the sea).

Thus orders get in the trading system of the stock exchange with the help of intermediaries and if the seller and the buyer find each other then a stock exchange transaction is born. Under the technical management of trading two main types of exchanges are distinguished:

- open outcry trading: brokers cry bids loudly and if an offer is accepted from another broker, then the business is established, then the settlement will take place following the trading.
- automated trading through: a single and continuous pairing of offers are performed by a computer system, e-commerce does not require listing parquet trading brokerage happens at remote terminals.

If a buyer and a seller orders correspond to each other on the basis of parameters then stock market transactions will be established. Closing of the transaction can be divided into two steps:

- clearing means the calculation and reconciliation of bilateral or multilateral obligations of the accounts of operators which can happen on a gross (from transaction to transaction) or a net basis (incorporating the mutual obligations;
- during the execution (settlement) securities and the purchase price change hands securities will be transferred from the seller to the buyer (delivery) or transfering the purchase price to the seller (payment) occurs.

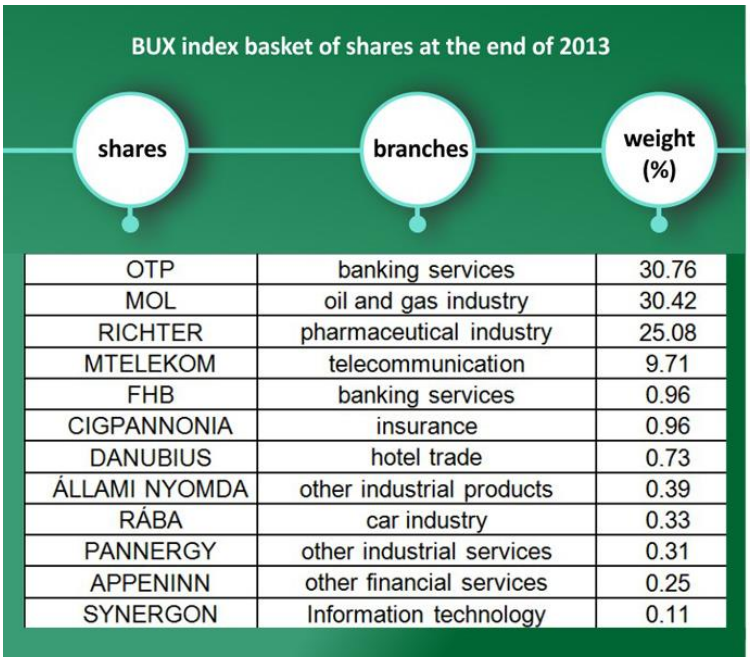
Settlement and performance of transactions in the domestic stock market go through a central depository and calculator house ltd. (KELER). KELER as a specialized financial institution provides the institution of the CCP (CCP central counter party) in case of spot securities transactions: in case of a potential default it acts as a seller against the buyer, and as a buyer against the seller (novation) thereby meeting the execution of transactions.

4.2.4 Stock market indices

The role of stock market indices is the mediation of the evolution of market processes on a single number towards market participants. Basically the important information is not its value at a given point in time (for example in case of the index BUX it was 18.564 points at the end of 2013) but changes in value of the index during a given period (for example BUX grew by 2.15 % as a whole in 2013).

Another important function of indices is that processes of specific market segments are comparable with their help (for example the performance of two indeces by comparing FTSE100 and BUX or the performance of equities and government bonds by comparing BUX and MAX indeces) and they are benchmarks (reference points) for measuring the performance of mutual funds, they even function as an exchange product.

The most well-known domestic stock market index is **the Budapest Stock Exchange index (BUX)** existing since 1991 which measures the performance of the Hungarian stock market. In the basket of an index minimum of 12, maximum of 25 shares can be found, shares are not of the same weight but they are determined by the ratio of the free float-adjusted (in case of a given issuer the ratio of shares for sale on the stock market compared to the total equity) capitalizations (market capitalization). An index committee proposes a revision of the basket (in March and in September) on the basis of the index manual (analysing the evolution of even parameters, a scope of shares included in the basket so changes from time to time.



OTP	banking services	30.76
MOL	oil and gas industry	30.42
RICHTER	pharmaceutical industry	25.08
MTELEKOM	telecommunication	9.71
FHB	banking services	0.96
CIGPANNONIA	insurance	0.96
DANUBIUS	hotel trade	0.73
ÁLLAMI NYOMDA	other industrial products	0.39
RÁBA	car industry	0.33
PANNERGY	other industrial services	0.31
APPENINN	other financial services	0.25
SYNERGON	Information technology	0.11

Table 3: BUX index basket of shares at the end of 2013

source: edited by the author on the basis of data BSE

Other important domestic stock market indices:

- BUMIX: medium and small-cap shares in the BSE (maximum capital value of HUF 100 billion);
- RAX: BAMOSZ Share Investment Fund Portfolio Index;
- DWIX: Treasury bill yield index calculated from auction results of 3, 6 and 12-month treasury bills;

- MAX: an indicator of the exchange rate of Hungarian government bonds of fixed rate, with more than one year remaining maturity.

Some major **international stock indices**:

- the DJIA (Dow Jones Industrial Average) as an index of New York Stock Exchange existing since 1896 shows changes in shares of the thirty most important large companies in the US;
- S&P500 shows the changes in shares of the 500 most important large companies in the US;
- Nasdaq100 is a compression index of the top 100 technology companies;
- Dax30 contains the 30 most important German shares;
- FTSE100 involves the top 100 English shares;
- Nikkei225 is a compression index of the 225 most important Japanese shares.

☐ New York Stock Exchange Website:

9. http://www.nyse.com/index

☐ London Stock Exchange Website:

10. http://www. londonstockexchange.com/home/homepage.htm

4.3 SUMMARY, QUESTIONS

4.3.1 Summary

Thus, a stock market is a place where securities are traded, its significance steadily increased from the second half of the 19th century until the end of the 20th century. Almost any product can be traded on the stock market, which has a market thus, if there is an intent of sellers and buyers. Investors conclude transactions basically categorized on the basis of timeliness and risk on products for many reasons and more parameters (price, duration, quantity, etc.) of a transaction can also be emphasised.

Indices have an outstanding significance in the life of stock markets since they show and make the performance of individual market segments compareable.

4.3.2 Self-test questions

Describe types of securities markets on the basis of concentration!
Classify and characterise transactions according to their due date!
Describe the concept of swaps and two types of it!
Describe the concept of futures and two types of it!

Classify and characterise transactions according to risk!
Describe types of domestic stock market orders by price!

4.3.3 Practice tests

Which transactions are characterised by the following statement? An agreement under which one party (seller) pays an amount determined by a fixed rate of interest while the other party (buyer) pays a sum equivalent to a variable rate of interest for a predetermined time with respect to a given amount.

- Option transactions
- Swap
- Forwards

If you buy a put option the higher the spot market price at maturity, the higher the gain can be achieved by the exercise of the option, however, in case of a decrease in the rate the loss can be limited in the option fee.

- True
- False

For which type of order is the following statement true? In case of order a price does not need to be specified, the system meets the order then at the best available price.

- Market order
- Limit order
- Iceberg order

For which concept is the following statement true?
During the process securities and the purchase price exchange hands, securities will be transferred from the seller to the buyer (delivery or transfer of the purchase price to the seller (payment)).

- Open outcry trading
- Limit order
- Settlement

Comparing the performance of the Hungarian and German equity market in the year 2013 the index (BUX or DAX30) scoring higher points at the end of the year resulted in higher yields.

- True
- False

Which one of the following statements is true for the BUX index?

- Index of the Budapest Stock Exchange, reported from prices of shares being in its basket
- Index of fixed rate Hungarian government bonds with a remaining maturity in the calendar year
- Investment Funds Index of shares

Which is the company whose equity share is not a member of the BUX?
- Richter
- Hungarian Post
- OTP

Which of the following is true for Nikkei225 index?
- Exchange rate indicator of fixed rate Hungarian government bonds with more than one year remaining maturity
- Shows changes in shares of the hundred most important large US companies
- Involves the 225 most important Japanese shares

Mock exam

For which type of order is the statement true? The order can be met at a price specified in the offer or at even better prices: in case of a purchase the order can be met at a price specified during the purchase or below it, in case of selling at a given price or over.
- Market order limit order, iceberg orders piaci megbízás
- Limit order
- Iceberg order

The issuer of the option is always obligated to fulfil as the buyer of the option acquires rights to exercise an option in option contracts.
- True
- False

Final exam A

Which transaction is characterised by the following statement? It is a derivative contract which is essentially a contract for purchasing or selling

a product (underlying) in a predetermined quantity and at a predetermined price in the future future.

- Option transaction
- Swap
- Forward transaction

A speculator is an operator who gains a profit without risk-taking by taking advantage of mispricing due to market anomalies.

- True
- False

Mock exam B

Which of the following is true FTSE100 index?

- Exchange rate indicator of fixed rate Hungarian government bonds with more than one year remaining maturity
- Involves the top 100 English shares
- Shows changes in shares of the 100 most important large companies in the US;

- KELER is a specialised credit institution providing services related to performing and accounting capital market transactions concluded on the stock market.

- True
- False

5. MONEY, MONEY CREATION

5.1 OBJECTIVES AND COMPETENCES

What is the concept of money? It seems to be a simple question, but as a result of financial innovations occurring in recent decades its interpretation may even result in a debate among economists. The money creation process with the development of the economy, at the same time the banking system, is now much more complex than it was in the Middle Ages. Measuring the amount of money will be important in terms of central banks' activities but the loss in value and the measurement of inflation influences every economic decision.

The lesson is designed to introduce a historical and functional approach to the concept of money and the content of the definition of the modern money. The student learn about the methods of the central bank money creation and an active, passive and multiplicative money account creation process of commercial banks and motives of the demand for money. Be able to interpret the concept of inflation, its types and major home price indices for the measurement.

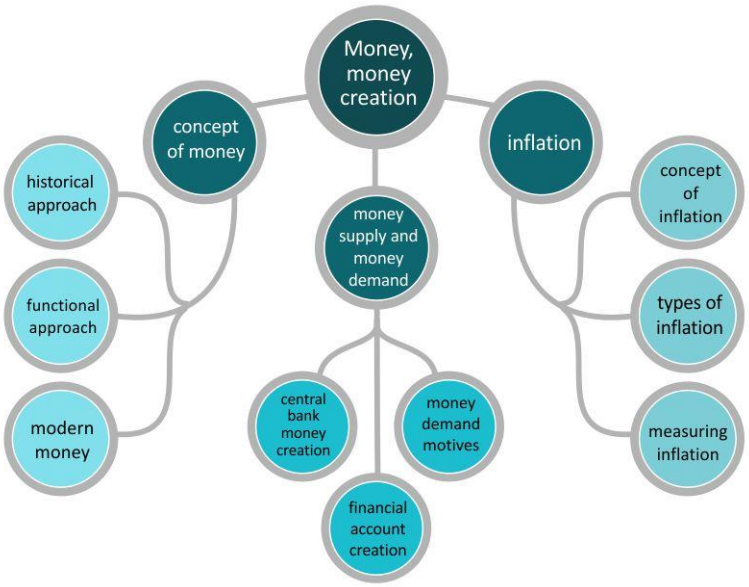


Figure 16: Structure of the lesson: Money, money creation

source: edited by the author

5.2 CURRICULUM

5.2.1 Concept of money

Definition of money is extremely difficult to determine due to its complexity. In legal sense – according to the Act LXXXV of 2009 on the provision of payment services – money is a banknote, coin, bill money, and electronic money. cash accounts and electronic money. In an ordinary sense money is a banknote and a coin however, you can also pay by debit/credit card or meal vouchers that is the concept of money is much broader than we may think in the first interpretation. Moreover, money has taken numerous shapes and loaded diverse special functions as a result of the socio-economic development in the history: so the concept can be analysed from historical and functional aspects adding that the formation of money has a broad literature (for example going back to antiquity, Aristotle, or Smith, Ricardo and Marx's theories and Weber's sociological approache, or Polanyi's anthropological approach)[6].

5.2.1.1. Historical approach

Analysing the historical development of money first the **system** can be highlighted, where the role of money was loaded by a product (commodity) reducing a long process of direct exchange of procucts into two steps: selling a product for commodity money, then spending it on another product. Classically certain products (for example salt, beef, fur, shells, etc.) became commodity money with the following characteristics: rare, stable value, aesthetic and easy to use.

In the case of **precious metal currency systems** the role of commodity money was filled by precious metals, from the VIIth century[7] BC already in the form of coins. In the case of monometallizmus one type of precious metal (gold) while in the case of bimetallism other precious metals (such as silver, copper) also filled the role of money.

In the development of the economy a finite amount of precious metals was no longer able to cover the financial need of the growing trade therefore **paper-based cash equivalents** appeared.

Two models also explains their emergence:

- According to the Lombard model in the Middle Ages (first in Italian city-states in XIIth century) because of the long-distance trade,

[6] On which – among others – Vigvári provides an overview in his book titled ''Pénz ügy(re ndszer)tan" (Vigvári, 2008).

[7] Probably the first coins were minted around 650 BC in Lüdia from electrum, which was anatural alloy of gold and silver.

part of the trade transactions were financed by customers by issuing debt obligations, bills then banks started to use them or to issue their own banker bills and, later, the state picked up the right to issue banknotes now in round denomination, without maturity and interest payment;

- According to the Chinese model the circulation of paper money was forced by the emperor with ruler's regulation defining its value in terms of weight in precious metals (it began to be used around 800 AD).

In the nineteenth century the spread of cash equivalents accelerated and the gold is increasingly excluded from payment transactions (this is the process of the demonetization of gold). After the first world war the gold-based **monetary system** was ceased and former cash equivalents entered into currency however, the gold held financial functions in the international financial system until 1971.

5.2.2.2. Functional approach

Due to difficulties to define the money economists put the emphasis on its functions. Classically four main functions can be highlighted:

- A common measure of value (or unit of account) function that is a standard numerical monetary unit of measurement of the market value of goods, assets, services, and other transactions;
- medium of exchange function that is, the money and the goods are exchanged at the same time and thus the long chain of an exchange of products can be reduced to two exchange acts;
- store of value is a function that is, it accumulates (will not be spent) for a shorter or longer period of time and its purchasing value is constant in the function of time;
- a standard of value (or standard of deferred payment) function that is, the purchase and the consideration paid for the goods is torn apart in time.

In the functional approach, a device which is fully equipped and fully capable of the above, can be considered money.

5.2.2.3. Modern money

The current money system is called a credit money system since the creation of money is done by lending in the banking system, in two ways:

- the issuer of the central bank money is the central bank of a country;
- commercial-bank currency is issued by a bank in the country.

Considering the form, money supply can be currency (banknotes and coins) and bank money (without a materialistic form) but cash can not be created by banks, it is the monopoly of central banks. Coin of account created by banks represents the bank's promise of limited payment and the conversion of a coin account into central bank money is the responsibility of the issuing bank.

So it is clear that the concept of money is extremely difficult to be determined exactly. Since there are many forms of money therefore, it is the money in circulation that performs all functions of money and only within customer base. **Monetary aggregates** are used to measure its amount. While determining a categorisation system (using the abbreviation of the English word money they are designated by M and numbers) it is based on the liquidity of the financial instrument used as money and on functions of payment and store of value, ever increasing the amount of money taken into account and reducing the liquidity.

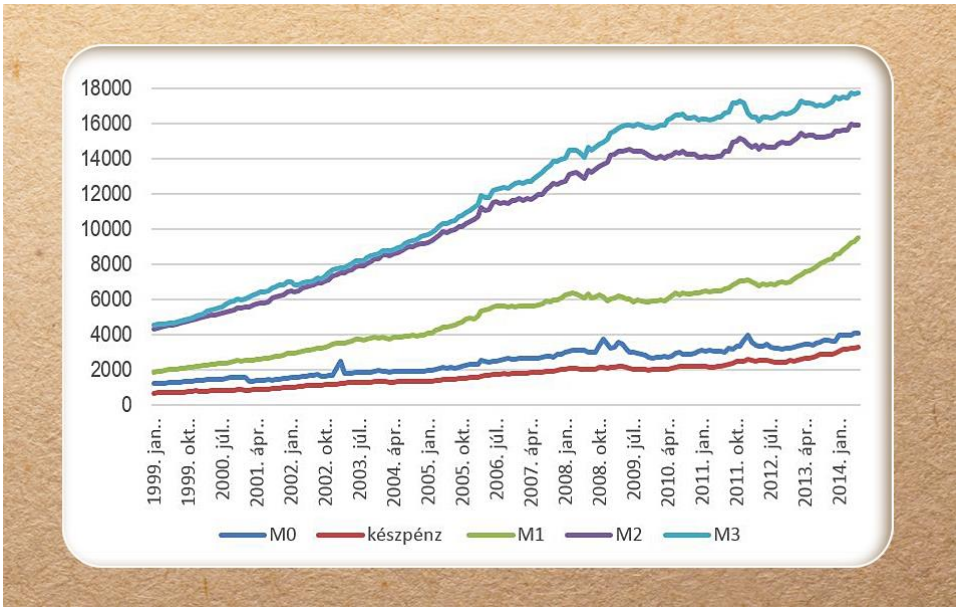


Figure 17: Development of domestic monetary aggregates (HUF billion between 1999 and 30 June 2014)

source: edited by the author on the base of MNB data

Categories:

- M0 (or base money) is the amount of money actually issued by the central bank of a country. Being the narrowest money aggregate it includes the balance of cash and accounts of commercial banks kept at the central bank;
- M1 is currency plus deposit demand;
- M2 includes: in addition to M1, deposits whose agreed maturity is not longer than two years; or
- M3 which includes marketable financial instruments regarded as bank close substitutes for deposits (repurchase agreements, money market fund shares and securities up to two years of maturity representing debt).

5.2.2 Money supply and money demand

Thus, central banks and commercial banks are able to create money. **The central bank** – based on its balance – is capable for money creation by means of three financial instruments (through their reverse it is capable for the destruction of money):

- gold or foreign currency (currency, foreign currency);
- purchase loans (refinancing loans) granting to commercial banks directly or in the form of purchasing securities;
- loans to budget (which is banned in developed countries).

Commercial banks are able to create money in a similar manner to the central bank with the proviso that they can create only account money. One way of it is active account money creation in which the bank will increase the amount of money by creating claims on itself – but these claims are widely accepted because of the extensive clientele– with two means:

- lending, in which both the bank and the client's assets (balance sheet total) increase; and
- purchasing securities in which only the bank's assets (balance sheet total) grow and in the case of the customer, the customer's asset is unchanged however, its structure (securities in exchange for cash) is amended.
- Another way is **passive money account creation** in which the bank creates a claim on itself by a customer payment of money or by transfer reception from another bank. In this case the customer's asset is also unchanged however, its structure (securities in exchange for cash) is amended.

Another important feature of the money creation of banks is the **process of multiplicative money creation**, which shows the relationship between the stock of central bank money and the *maximum* amount of commercial bank money that can be created by a given unit of central bank money. An important element in the process is a compulsory reserve according to which banks are required to hold a certain proportion of deposits on an account managed by the central bank.

If the reserve ratio is 10%, then the bank keeps 100 units reserve from 1000 units of cash deposited by the customer in the bank and 900 units of free reserve are left for the bank. Based on the free reserves the bank gives loans to another customer which he (as a buyer) transfers to a seller when purchasing a product or service. In this way the seller's bank released 900 units of currency from which he keeps a compulsery of 90 units and 810 units of free reserves and after a subsequent lending and transaction the third bank also keeps 81 units of minimum reserve and 729 units of free reserve out of 810 units of currency deposited in the bank. The process continues in a multiplicative manner until after further similar periods (vasty) no excess reserves have been formed and the initial 1000 units of central bank money is committed.

Since the process is a geometric series therefore, the amount to be granted under the Bank's treasury bill funds the reciprocal of the reserve requirement called **the money multiplier** shows. Muny multiplication so is the process in which due to banks' money creation activities the expansion of the central bank's monetary unit many times increases by multiples of the amount of money. In the practice of the Hungarian central bank money multiplier M1 or M3 is the quotient of the monetary aggregate and the monetary base (as central bank money). Banks money creation activities, in addition to the required reserve ratio level, are also affected by how much of the customer's cash flow will get into the money creation chain via a bank.

A **demand for money** is the money supply that economic operators intend to hold for transaction, precautionary and speculative reasons:

- *Transactions demand for money* is the money which is to be held for the purpose of economic operators to purchase products and services and to fulfill their financial obligations;
- *Precautionary demand for money* is the money being held for the economic operators in order to finance unscheduled expenses;
- *Speculative demand for money* is the money stock for liquidity to preserve the value of the property.

5.2.3 Inflation

Inflation means a continuous and sustained increase in the general price level − that is, the general price level of goods and services − a decrease in purchasing power of money. Its opposite is deflation (or disinflation) which means a continued and sustained decrease in the price level. Deflation is an extremely harmful phenomenon: economic actors waiting for further reduction in prices postpone their consumption which is why the demand drops, and so companies cut back on production, which can lead to a long-term economic (downturn) recession.

Inflation is more typical in the economic process than deflation. In addition to a number of adverse effects some of the advantages can be detected from the perspective of certain economic operators. Some of the harmful effects of inflation (disadvantage):

- Makes it difficult for economic operators to decide because of the uncertainty;
- increases the cost of the current management (menu cost[8]);
- increases the cost of holding money (sole charge[9]) and reduces the value of savings;
- confirms speculation.

The benefit of inflation in terms of the budget due to higher prices can be tax revenues – in addition to the control of expenses (for example freezing the salaries of public employees) – therefore, the economic policy may encourage inflation (see, for example economic policies in 1995).

5.2.3.1. Types of inflation

According to the rate of increase in the price level three types of inflation are distinguished: creeping (its annual rate is under 10%), galloping (its annual rate is a two digit number) and hyperinflation. Hyperinflation is an extreme inflation annual growth rate of prices exceeds 100 %. As a self-reinforcing process it is generally a sign of the collapse of the economy as a result money looses its function and other assets will take over the role of it (for example direct barter). With regard to hyperinflation the current economic history record is linked to Hungary: as a result of World War II in our country on July 10 in 1946 the financial deterioration was 348.46 % (prices doubled in 11 hours). Also at that time

[8] Due to continuous changes in the price range restaurants are forced to adjust their price s, which results in increasing the cost of printing menus.

[9] In case of high inflation economic operators carry less money and therefore they must g o to the bank or the ATM often, and so spending more time on travelling and sole of thei r shoe wears out.

the appearance of a bank note of the largest denomination value shows the currency devaluation: one billion ''bilpengő'' [10] (therefore ''pengő'' was replaced by forint on the first of August).

Based on the root causes of inflation, classically **two basic types of inflation** can be identified:

- *demand-side inflation* occurs, when the cause of the long-term price level rise is an increased demand compared to the supply;
- in the case of *supply-side inflation (or cost-push)* due to the increase in production costs the supply is decreased through the production of companies while prices do not change due to which the same level of demand occurs as excess demand, starting an increase in the price level.

Inflation expectations are of crucial importance for the monetary policy ie for the planned inflation expected at a future time or period. Expectations are a kind of self-fulfilling prophecy work: if economic operators expect an inflation rate of 5% at the beginning of the year throughout the whole year and raise their prices accordingly then by the end of the year actually an inflation rate of 5% can actually be measured.

Concept of the **inflationary spiral** is a phenomenon related: economic operators – for example compared to the central bank's communication – expect higher price levels in the future therefore expect higher wages for maintaining the real value of their wages which appears even in prices through increased costs of producers then the process is self-reinforcing and spiral starts. In a low inflation environment, the success of monetary policy depends largely on to what extent the central bank can guide inflation expectations.

5.2.3.2. Measuring inflation

inflation is measured by **price indices**: these are ratios that show the ratio of the average price levels between two dates. Depending on the scope of the considered products different inflation indices are obtained depending on the length of the period there are long-month (for example annual if we compare to the previous year's price level) and on-month (for example quarterly or monthly) indeces.

[10] That 1000.000.000.000.000.000.000 ‘’pengő”.

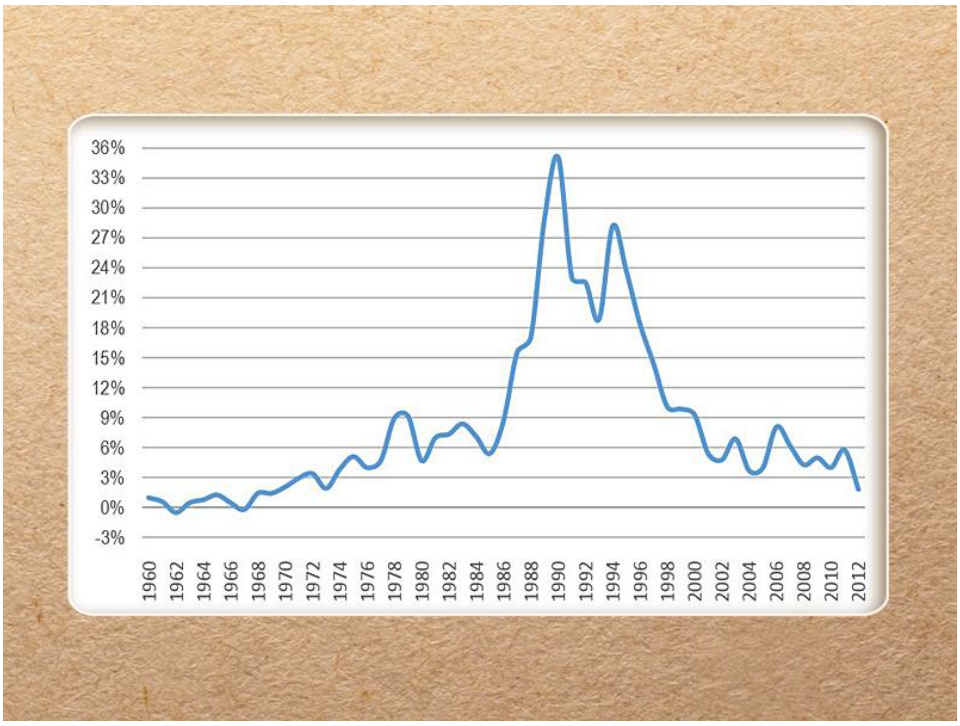


Figure 18: Changes in the consumer price index (%) between 1960 and 2013

source: edited by the author on the basis of MNB data

The most commonly used tool for measuring inflation is the **consumer price index** (consumer price index, CPI), which expresses changes in prices of the consumer's basket assembled with products typically purchased by a household compared to the previously observed period representing the consumption of the entire population. In Hungary the Central Statistical Office (CSO) makes a survey and determines the composition of the basket on the basis of it. CSO changes the weights of representatives in the consumer's basket once every year (in January), which are taken into account based on the structure of consumption expenditure of households observed in the past two years.

CSO publishes two additional price indeces by the consumer price index:

- **core inflation** essentially scans products, whose prices are less volatile and change mainly due to market trends (it does not include for example fuels, regulated commodity products, etc.); or

- **constant tax rate index** (from 2004) filters out price changes due to the tax change (its usefulness arises from frequent changes in the regulatory environment – for example VAT rate).

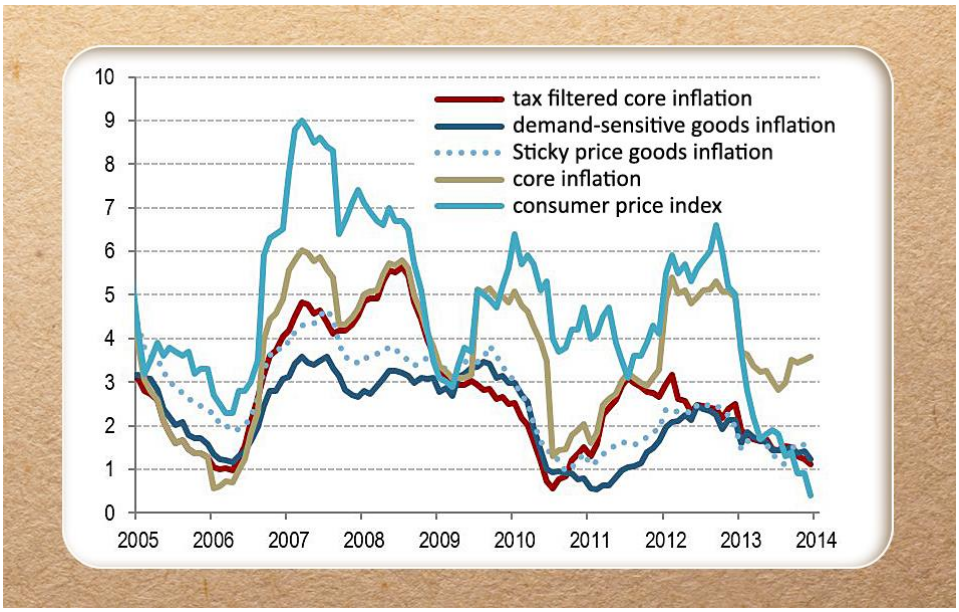


Figure 19: Changes in inflation indicators (%) in Hungary between 2005 and 2014

source: edited by the author on the basis of MNB data

As measuring basic processes of inflation is a key factor in the functioning of the monetary policy therefore, other new basic inflation indicators are published from 2014 in order to support the central bank's decision-making:

- **Indirect tax filtered core inflation index,** based on core inflation published by the Central Statistical Office, net of VAT, estimated changes in excise duties and other indirect effects of taxes effects of taxes;
- **Sticky price inflation index** measures price changes of only those groups of products of the consumer price index are used where maximum 15 per cent of the individual, shop level prices tend to change on average monthly;

- **Demand-sensitive inflation index** excludes processed food prices from tax adjusted core inflation as well. This may be justified by the fact that price changes of processed food are greatly dependent on typically highly volatile movements in unprocessed food prices. Consequently, the demand sensitive price index shows the inflation of tradable goods, market services, and alcoholic drinks and tobacco, excluding the effects of indirect taxes.

☐ CSO information on changes in consumer prices:

11. http://www.ksh.hu/consumer_prices_tn?lang=en

☐ MNB Information on the development of basic inflation indicators:

12. http://english.mnb.hu/Statisztika/data-and-information/mnben_statisztikai_idosorok/mnben_elv_prices/underlying_inflation_indicators_MNB

5.3 SUMMARY, QUESTIONS

5.3.1 Summary

Thus, the concept of money is very complex. The substance of it can be defined by its functions, its amount can be measured by the monetary aggregates.

Two economic operators have the ability to create it, the central bank and commercial banks, the latter ones are able to create only account money both actively and passively. A decline in the purchasing power of money jeopardise the operation of the economy, and makes financial decisions uncertain. There exist several indicators for measuring the inflation which are designed to allow a more complex observation of inflation processes taking place in the economy.

5.3.2 Self-test questions

Present and describe the main stages of the historical development of money!
Describe and characterise functions of money!
Describe and characterise the concept of monetary aggregates and its main domestic types!
Characterise the commercial banks' money creation techniques!
Describe the process of money creation multiplier!
Formulate the substance of the consumer price index and the core inflation!

Describe – in addition to those mentioned – at least two other price indices!
Describe and characterise CSO price indices!
describe and characterize the central bank's price indices!

5.3.3 Practice tests

For which of the following financial functions is the following statement true?

Being a standard numerical monetary unit of measurement it must be able to define the value of all goods, assets, obligations.

- Unit of account function
- Medium of exchange function
- Store of value function

Which of the following categories are not included in the M2 monetary aggregate?

- Dash
- Dank bond
- Deposit demand

Which cause of the demand for money is covered by the following statement? Economic operators keep money in order to purchase goods and services, as well as to fulfill payment obligations.

- Transaction demand for money
- Precautionary demand for money
- Speculative demand for money

Deflation is the continued and sustained increase in the general price level of goods and services, a reduction in the purchasing power of money.

- true
- false

For which type of inflation is it true that the annual rate of growth in prices exceeds 100%?

- creeping inflation
- galloping inflation
- hyperinflation

Supply-side inflation occurs when compared to the supply an increased demand is the cause of a long-term price level rise.

- true
- false

Which price index is characterized by scanning products whose price development is less volatile and changing mainly due to market trends?

- consumer price index
- core inflation
- constant tax rate index

Mock exam

Which cause of the demand for money is covered by the following statement? The amount of money being held for the operators in order to finance unscheduled expenses.

- transaction demand for money
- precautionary demand for money
- speculative demand for money

In case of creeping inflation the annual growth rate of prices is more than 100%.

- true
- false

Which price index has the characteristic that it cleans the core inflation published by the Central Statistical Office from the VAT, excise duties and from other estimated effects of changes of indirect taxes?

- indirect tax filtered core inflation
- Sticky price inflation index inflációja
- Demand-sensitive inflation

Mock exam A

In addition to cash in circulation M1 monetary aggregate includes deposits with agreed maturity of not more than two years.

- True
- False

Which process has a fundamental principle of the minimum reserve control?

- Active account money creation
- Passive account money creation
- Multiplicative money creation

Mock exam B

For which financial function is the following statement true? Money and goods are exchanged at the same time and thus the long chain of exchange of the barter can be reduced to two exchange acts.

- medium of exchange function
- store of value function
- unit of account function

Measuring the amount of money available in the economy monetary aggregates are used.

- true
- false

6. THE MONETARY POLICY INSTRUMENTS

6.1 OBJECTIVES, COMPETENCES

When does the tapir comer? Escape when tapir comes! Similar-sounding titles also appeared in several forms in the financial news at the end of 2013. The term itself [11] refers to slowing down, eliminating unconventional means of the US central bank after the 2008 crisis, seeking to stimulate the economy, which is a significant change not only in the US monetary policy, but it also affects the functioning of the global financial markets.

Activities of central banks are now more transparent, thanks to the growth of transparency experienced in recent decades, the use of certain instruments is also done more in public.

The purpose of the lesson is the presentation of the objective of monetary policy, the mechanism of action, assets and elements of the central bank's independence. Students get to know the purpose and functions of the national central bank and major organs of its functioning. Be able to demonstrate the characteristics and principles of the currently very popular direct inflation targeting regime, together with its domestic practical operation.

The student knows what the key elements are in the policy instruments of the Hungarian National Bank, how the base rate has an effect on the development of financial market returns.

[11] Tapir is a result of a play on the phrase used by CNBC editors when the restraint of as set purchases (in English: tapering asset purches) of the US central bank was illustrate d by an image of a tapir.

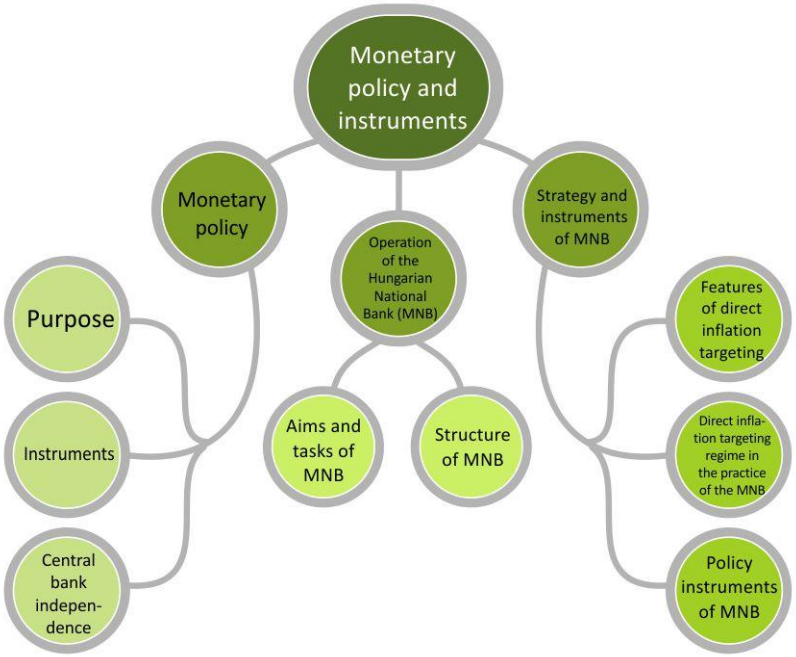


Figure 20: Structure of the lesson: the monetary policy instruments

source: edited by the author

6.2 CURRICULUM

6.2.1 Monetary policy

Monetary policy is part of the policy of the economic policy, which intends to influence the activity of economic operators through the regulation of benchmark interest rate, exchange rate and money supply. In most countries, the central bank is a responsible institution for the monetary policy.

6.2.1.1. The aim of monetary policy

Typically, **the aim of the central bank** is to achieve and maintain price stability: thus monetary policy can contribute to the increase of social welfare and the promotion of economic growth. At the same time there may be other goals in addition to price stability: for example in trends of the currency exchange rate.

Interesting to note that the US central bank (FED) has a dual mandate to fulfill that is, in addition to price stability – as a coequal goal – the achievement of full employment.

Monetary policy strategy (regime) is the cognitive framework, model, in which functioning of the economy and the implementation of the objectives of monetary policy are approved by the central bank.

Several types of strategies can be distinguished (without being exhaustive):

- in the case of **monetary control** the central bank determines the demand for money and annual targets for the amount of money are formulated and followed (applied by the German central bank in 1970s);
- in the case of **inflation targeting** (for details, see chapter 3.1) the central bank pursue a publicly announced inflation target with its available means (used by the European Central Bank);
- in the case of **price level targeting** the price leve itself, rather than its growth rate is to be stabilized by the central bank (applied in Sweden in 1930s);
- in the case of **fixed exchange rate** the exchange rate of currencies of the country is tied to the exchange rate of a foreign currency or foreign currency basket held at a predetermined level or within a narrow range (applied by China).

Interesting question, however, how monetary policy affects the economy? The process through which monetary policy decisions, usually through the individual decisions of economic operators, influence an economy and specifically the target to achieve is called the **transmission mechanism**.

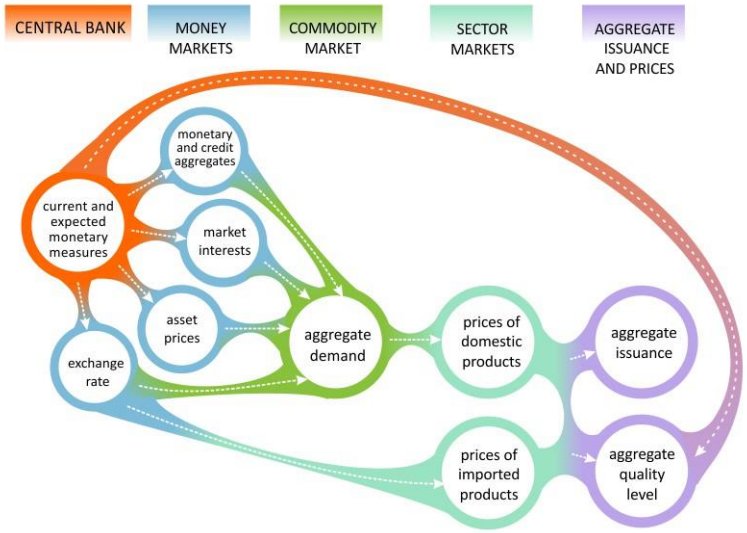


Figure 21: Ttransmission mechanism

source: Hungarian National Bank, 2012, p.21.

Decision of the central bank first effect financial markets; market interest rates (for example lending rates), asset prices (for example bond and stock prices) and exchange rates respond the fastest. Then operators in the product market adapt to changes in the money market which changes their demand for products. Companies respond to that by changing the amount of products manufactured on the other hand their prices thus exerting an effect on output and inflation.

The transmission itself is uncertain, exact effects of monetary policy actions and its magnitude are difficult to estimate. According to experts, the process takes 5-8 quarters, as a consequence very advanced statistical methods are applied by central banks in order to ”see the future”.

6.2.1.2. Monetary policy instruments

Monetary policy can fulfill its mission through the application on setting appropriate objectives assigned to devices. Tools which are used in the practical implementation of the monetary policy of the central bank are collectively called **monetary policy instruments**.

Changes in the equipment may affect the stated purpose in two ways:

- **the restrictive (narrowing) monetary policy** slows economic growth through lessening the amount of money (for example raising interest rates) and thereby can help to slow inflation;
- **the expansionary (amplifying) monetary policy** stimulates the economic growth through increasing the money supply (for example reducing interest rates) therefore it can have stimulating effect on the inflation.

Traditionally instruments are divided into two groups:

- **indirect instruments** that directly affect the rate of interest, and the control of money supply is done through it; and
- indirect instruments that directly affect the rate of interest, and this is done through the control of money supply and
- **Direct instruments** that directly affect the money supply.

Assets set out below the refinancing policy, open market operations and the repo operations belong to the group of indirect instruments.

The refinancing loan is a loan provided by the central bank for commercial banks, basicallyin two forms:

- rediscounting commercial papers (discount policy), and
- loans provided under collateral securities (lombard politics).

The instrumnet itself is displayed in many forms in practice: the range of securities, the fixed quota for some banks moreover, the cost of credit and the interest rate can be changed.

Expansive intervension can be achieved by the increase of the range of securities accepted, a quota increase and a reduction of the interest rate.

Open market operations are securities transactions subject to the central bank's own account: in case of purchase money supply increases (expansionary effect) while in case of fale (restrictive effect). The process is initiated by the central bank and banks decide on their own initiative whether to accept the offer of the central bank in the function of market conditions. A condition for the operation of the imnstrument is a sufficient amount of the securities portfolio to be available in the market. Thus subjects of transactions are typically government bonds, perhaps (for example in US) mortgage bonds.

Repo (reverse) operations also fall into the former group: in this case, two contrary (spot and futures) transactions sale and purchase are entered into at the same time, whereby assets change hands in the present, and a contrary transaction in the future is also determined at bind time and price. In the case of active repo the central bank buy securities and sells it in the future to the same party from whom it was purchased: at this time the money supply is increased so the central bank has an expansive effect. (Its opposite is the passive repo.)

Under the **mandatory reserve** (as a direct tool) deposits are meant that banks should be held to the extent and manner in accordance with the requirements of the central bank after their deposits. The required reserve ratio is a ratio of statutory reserves and deposits placed in commercial banks. Banks can provide less credit by increasing the reserve ratio thereby money supply is decreased (restrictive effect).

In the case of credit limits, the central bank maximizes the banks' lending activities. Only applicable in restrictive direction, and as it has a strong interference in the functioning of markets, it is advisable to apply for a short time and where appropriate.

Through **moral pressure** the central bank tries to influence on the behaviour of economic operators in order to achieve its objectives. A similar device is the gentleman's word of honor but it is voluntary and concrete, as well as a mutual agreement assuming a partnership relationship between the parties.

One more note on **unconventional monetary policy instruments**, whose role has become accentuated after the financial crisis of 2008.

Their ultimate goal was to avoid deflation, to prevent the collapse of financial intermediation and to reduce the economic downturn. Their applications typically may be appropriate in two cases:

- the benchmark interest rate declined near zero and it is still necessary
- monetary easing is possible only by alternative means; or
- in the monetary transmission they play an important role in trying to alleviate the financial market disturbances (low liquidity, unjustified surcharges, etc.).

Such instruments were asset purchase programs of the US central bank, or bond purchase programs covered by the European central bank. (But programs of the Central Bank of Japan are also interesting, which covered securities issued by property developers and exchange-traded investment units.)

☐ For details, see Lehmann study[12].

13. http://www.mnb.hu/Root/Dokumentumtar/MNB/Kiadvanyok/mnbhu_mnbszemle/mnbhu-msz-201206/lehmann.pdf

[12] Kristóf Lehmann: international experiences in unconventional central bank assets. MNB Szemle, June, 2012.

6.2.1.3. Central bank independence

The central bank's independence is now generally accepted in developed countries, and promote the maintenance of price stability. The idea behind the concept is that spending money and disposal of financial pressure should be separated from each other: thereby ensuring the benefits of long-term monetary policy concerns over the possible short-term political interests. For example, the government easily falls into temptation before the election to stimulate lending and thus the economy by lowering interest rates which in turn can generate inflation in the long run.

There is not universally valid definition for the central bank's independence, central bank laws circumscribe it: there are provisions in relation to personal, institutional, operational and financial independence.

According to the **operational independence** the central bank controls the monetary policy and should set a goal clearly defined for it – in addition to providing both resources and means.

According to the **institutional independence** it is forbidden to members of the decision-making bodies to seek or adopt instruction from any third-party, institution, body. Furthermore, the chairman of the central bank can issue legislation to carry out tasks.

Personal independence dispones the security of office hours of members of the decision-making bodies, the mandate of the senior management should be longer than a parliamentary heating period. (For example, the ECB provides for a minimum five-year term of office for the President and a minimum of eight years of service time for the members of the Board of the ECB.)

According to the **financial independence** the central bank should be allowed to have the financial resources to acquire the performance of their duties. Furthermore, the public finances do not have to be financed, and the potential loss of the central bank is refunded by the government (while profits are payed in the budget).

6.2.2 Operation of the Hungarian National Bank (MNB)

In the second half of the nineteenth century because of the Habsburg Empire, the Austrian-Hungarian bank then the Royal Hungarian National Central Institution founded on July 11, 1921 filled the central banking function. The independent Hungarian central bank, the National Bank of Hungary in form of a limited company began his work on June 24, 1924.

Purpose, functions and operations of the central bank are determined by law. According to the fundamental law of Hungary, the Hungarian National Bank is responsible for monetary policy

Magyarország Alaptörvénye szerint a Magyar Nemzeti Bank felelős a monetáris politikáért, and since October 2013 it has provided oversight of the financial system. Detailed rules for the organization and operation were defined by cardinal law, Act CXXXIX of 2013 on the National Bank of Hungary.

6.2.2.1. The purpose, responsibilities of the MNB

The primary objective of the MNB is **to achieve price stability and maintain it**, however without compromising it, supports to maintain the stability of the financial system, to increase its resistance, to ensure a sustainable contribution to economic growth and of in the provision and the tools available to the government's economic policy, sustainable contribution to economic growth and the government's economic policy with the tools available. Latter requirement and price stability can lead to conflicts in some cases: a reduction in interest rates can have a positive effect on economic growth but also it can have the opposite effect on price stability depending on the inflation rate and the current trends. Although the law gives priority to price stability, endangering it is not always clear.

Important to note that although the price stability of prices would mean unchanged rates and thus 0% price level increase still the **price stability even in developed countries is not equal to zero inflation**. One reason is that *several statistical distortion is to be expected during the measurement of inflation* for example, the CPI can not handle some improvement in the quality of some products. Another problem is the *risk of deflation*, which is a self-reinforcing process leading to a permanent decline in the economy through a reduction in the price level (for example in the case of Japan in 1990s).

Therefore inflation is around 1-2% in developed countries, in the case of the European Central Bank the value that means the stability of prices is ”below 2% but close to it” in the medium term.

In Hungary, the government and the central bank, due to the economic recovery, targeted for a higher inflation among other things: according to the consumer price index published by the Central Statistical Office, inflation target can be reduced to a value of 3% – as the convergence process progresses – in a longer-term to about 2%.

Tasks of the **MNB**:

- defines and **implements monetary policy** (but with regard to the choice of the exchange rate system the government decides in agreement with the MNB);
- has an exclusive **right to issue banknotes and coins** in the official currency of Hungary;

- forms official **foreign exchange and gold reserves** and manages it in order to maintain the external stability of the economy;
- **conducts foreign exchange operations** in relation to the management of foreign exchange reserves and exchange rate policy implementation;
- takes part in the **payment and settlement, as well as** in the development of **securities settlement systems** and **monitors** (controls) **its activities** in order to ensure the safe and efficient operation and a smoot conduct of the cash flow;
- collects and publishes statistical information to fulfil statistical reporting obligations (for example report on the payment system, financial stability report, etc.)
- adopts a **macroprudential policy** on the stability of the financial system as a whole.

☸ Observe what type of information is disclosed by central banks on the following websites!

- statistical data of the Hungarian central bank:

14. http://english.mnb.hu/Statisztika/data-and-information/mnben_statisztikai_idosorok

- statistical data of the Bank of Japan:

15. https://www.boj.or.jp/en/statistics/index.htm/

- statistical data from the European Central Bank:

16. https://www.ecb.europa.eu/stats/html/index.en.html

Macro-prudential supervision is a relatively new field of political economy, its importance has increased after the financial crisis in 2008. Basically trying to mitigate the financial intermediation frictions on a forward-looking basis: its aims is to increase the resilience of the financial intermediary system, and to ensure the financial system's contribution to sustainable economic growth. To this end, the Hungarian National Bank:

- explores business and economic risks threatening the financial system as a whole;
- promotes the development of systemic risk prevention and the reduction or elimination of already formed risks;
- contributes to the achievement of a balanced intermediaries economy finance function by encouraging lending in case of credit

market disruption and by reining it in case of the excessive credit outflow.

Other tasks of MNB beyond its basic functions are as follows:

- acts as a resolution authority;
- is exclusively responsible for supervision of the financial system;
- provides non-court settlement of disputes by performing consumer functions.

6.2.2.1.1. Bank of banks function

MNB in order to fulfil its specified primary objective influences money and credit supply and demand for money and credit. It manages accouns of: credit institutions, clearing houses, the National Deposit Insurance Fund and the Investor Protection Fund.

6.2.2.1.2. Bank of State function

The National Bank of Hungary manages the single Treasury account and the current account of Public Debt Management Center Ltd.

Although the original function of the central banks was – among others – to meet the credit needs of the state (see, for example, the creation of the Bank of England), nevertheless in developed countries financing the budget deficit by the central bank is now strictly prohibited. In this context, the Bank does not provide overdraft facilities or any other type of credit for the public sector, and debt securities can not be purchased directly from them.

However, it may act – as any other operator – in the securities market according to the state mandate or as an agent with regard to securities owned by the state.

6.2.2.1.3. Relationship of MNB with other bodies

President of the National Bank hands in a written report to the National Assembly on a semi-annual basis on the central bank's semi-annual activities, furthermore the National Assembly may also require ad hoc written or oral information.

Minister after the adoption of the draft law on the central budget shall immediately inform the MNB, who is entitled to send its opinion on the draft directly – at a fiscal council meeting – to the Minister.

6.2.2.2. Bodies of the MNB

MNB is a legal person acting as joint stock company and its shares are owned by the State, who is represented by the Minister of state budget.

Bodies of the MNB: Monetary Council, the Financial Stability Board, the Management Board and the Supervisory Board.

Monetary Council is the MNB's supreme decision-making and governing body. If necessary, may be convened at any time, but it holds a meeting at least once a month.

(Twice a month in 2014, the second meetings of the month selected as the rate-setting meeting). It is a body of at least five, at most nine members composed of: the President, the Vice-Presidents (three in 2014) and other members.

The Board has a quorum if a majority of its members are present. Decisions are taken by a simple majority of those present, event of a tie vote of the President decides.

Members of the **Financial Stability Board** formed on the first of October in 2013 are: the President of the MNB, Vice-Presidents of the supervisory tasks involved, and executives appointed by the President of the National Bank. Among other things it is responsible for:

- monitoring the financial system as a whole, and the stability of the financial markets;
- identifying and analysing risk factors of the entire financial system;
- following ongoing developments in the international and European markets;
- discussing strategic, regulatory, risk, issues concerning the financial system as a whole and, if necessary, takes a position.

The **Board of Directors** is responsible for implementing the decisions of the two councils, and for the operation of the MNB management, for the approval of issues related to its organization and internal management.

Its members are the president of the MNB as the Chairman of the Board and the Vice-Presidents the Hungarian National Bank.

The **Supervisory Board** – like the classic stock company – is an internal organ of the continuous ownership control of the MNB.

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6.2.3 Strategy of MNB and its instruments

6.2.3.1. Features of direct inflation targeting

Today, nearly 30 central banks pursue inflation targeting worldwide, its popularity is due to its simplicity and effectiveness.

Features of this monetary strategy still to be found in the European Central Bank (ECB) and also in the strategy of the US Federal Reserve (FED) from 2012.

The most important element of the monetary policy framework is a numerical pre-selected inflation target as a nominal anchor, which is commited to achieve within a fixed time horizon by the central bank.

The nominal anchor is an economic variable that is able to stabilize inflation expectations of economic agents, and thus will have an impact on inflation as a kind of self-fulfilling prophecy.

This **aim enjoys primacy** over other central bank targets and monetary policy decides independently in using central bank assets necessary to achieve this purpose.

Decisions are based on the inflation forecast: higher forecast compared to the target wants a restrictive monetary policy with an inflation-reducing effect, while the lower target forecast wants a looser (expansive) monetry policy with an inflation-increasing effect.

During a characterization of the strategy the following factors may be important: the rate and measurement of inflation targeting, and the time horizon.

The inflation target may be determined as a band (in case of Reserve Bank of Australia from 2 to 3%) or a point (in case of Bank of England it is 2%) by the central bank.

Advantage of the band is that in a relatively wider range it is more likely to succeed to keep the inflation in the target range, which increases the flexibility of the central bank.

The band width can be narrower and wider, the latter, however, may also indicate the uncertainty of the central bank's forecast.

It is also important **in which manner the objective is measured:** in case of a broadly-defined indicator (for example CPI) economic operators can easily understand the goal, at the same time a lot of other factors may have an affect on it in addition to the development of the central bank activities, which reduces the probability of the occurrence of the target.

Determination of the optimal time horizon of the inflation target is not easy either: if the central bank wants to adapt inflation to the purpose within a too short period then its measures may have a serious output

victim if the rate of the time horizon is longer then it increases the uncertainty of the forecast.

6.2.3.2. Direct inflation targeting system in the practice of the MNB

The Hungarian National Bank has applied the inflation targeting framework since June 2001.

The first targets were determined by December in 2001 and 2002: an increase of 7%, and 4% respectively, with ±1% tolerance band.

Next, an inflation target line was set two years in advance and from 2007 onwards the inflation target became continuous with a 3 percent growth.

The inflation forecast is included in the central bank's inflation report: the quarterly publication reports the previous and expected changes in inflation and evaluates macro-economyic processes determining inflgation.

One of the most important chart in the publication is **the inflation forecast fan chart**: it shows the central bank's forecast over the next two years of the evolution of inflation and the uncertainty of the future.

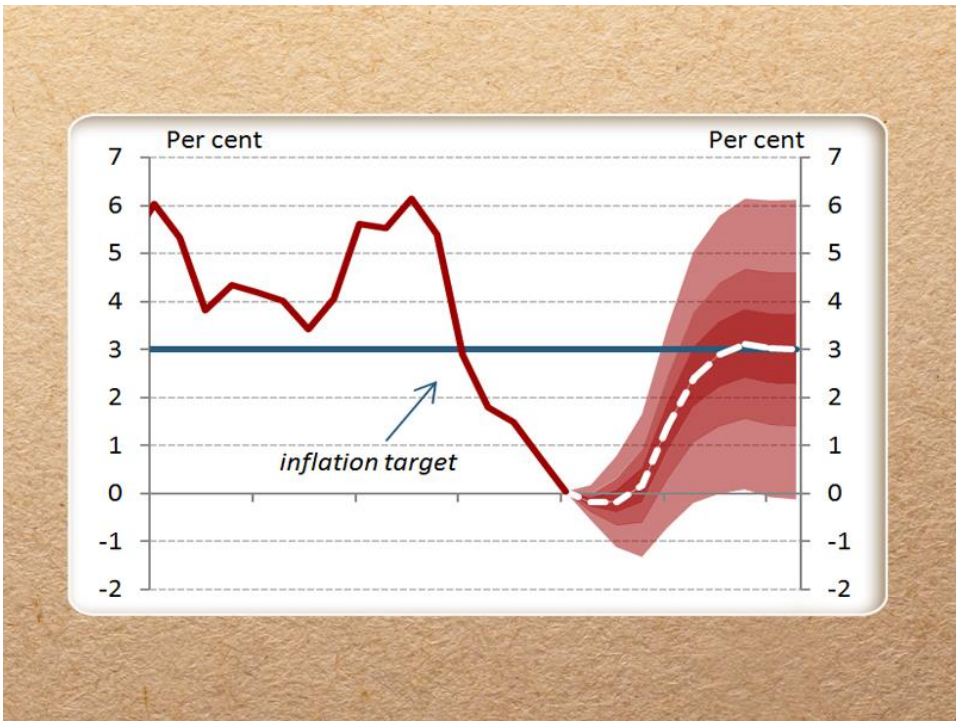

Figure 22: Inflation forecast fan chart in June 2014

source: Hungarian National Bank, 2014.

Common practice between central banks applying the medium-term, standing inflation target that **the goal is not valid for an unlimited period**, but after a certain period – mostly within 3-5 years – it will be reviewed.

Tthe review took place in August in 2008 and in 2011, as part of which the medium-term target value is still 3% left.

In accordance with the accountability requirements two publications are published on the functioning of the central bank. Interim quarterly reports present the National Bank's activities and the annual report also includes the annual report required by the Accounting Act, and an **assessment on how the inflation target was met**.

As inflation can be affected by unexpected shocks for which could not be calculated when making the forecast so ±1 % percentage points of difference is acceptable in terms of price stability.

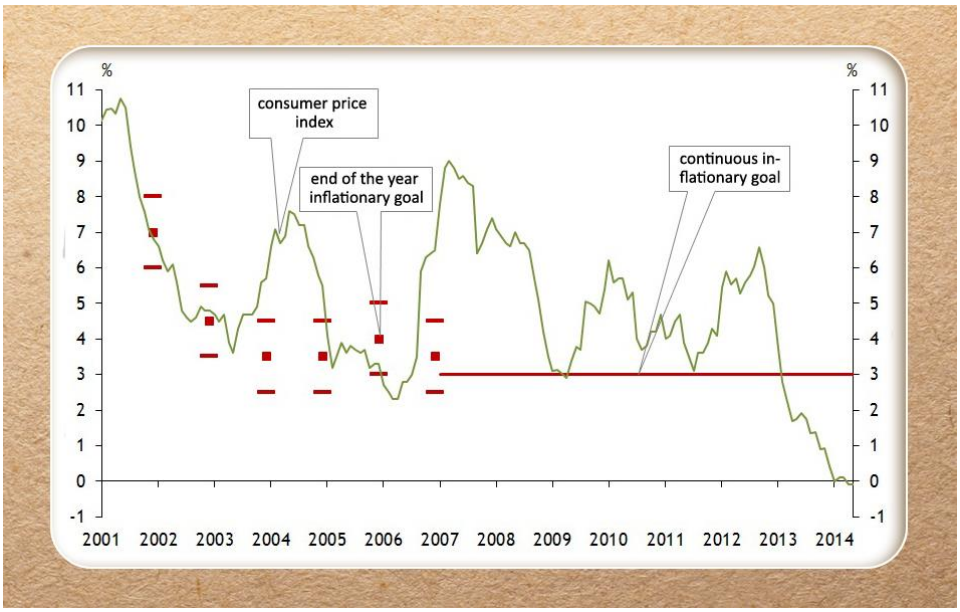

Figure 23: Evolution of inflation and inflation targets in Hungary

source: MNB website

6.2.3.3. Hungarian National Bank's policy instruments

A possible range of assets of the central bank is included in the central bank law. Within the toolbar four types of instriments can be distinguished:

- the governing instrument;
- means reducing the volatility of interbank rates;
- instruments directly influencing the forint rate;
- other, supporting the liquidity of the financial markets and the crisis management instruments (latter ones will not be dealt with).

6.2.3.3.1. The governing instrument

An instrument believed to be optimal by the central bank for interest rate mediation, which has an impact on the money market rates, and through them on corporate and retail deposit and loans, as well as on the forint exchange rate.

The policy instrument changed from August 2014: the previous two-week MNB bond was transformed into a two-week, fixed-term deposit. (Like the pre-2007 period, and similarly to the practice of a number of central banks). The two-week deposit is available only for the central bank

counterparties institutions (domestic banks), thus no longer available to foreign investors and domestic non-bank investors. Its liquiditiy is limited: it is non-callable during its term and does not belong to the scope of eligible collateral acceptable in credit operations of the central bank.

Due to this change a portion of funds (in spring 2014 the two-week MNB bills were approx. Over HUF 5,400 billion) of banks committed in the central bank is released transfers of which – as a result of a self-financing program – into government securities is expected to strengthen to finance the national debt by internal sources.

6.2.3.3.2. Means reducing the volatility of interbank rates

To mitigate the volatility of short-term rates the MNB uses two instruments continuously: the interest rate corridor is used to keep the short interest margin limited, while the minimum reserve system dampens the volatility within the band.

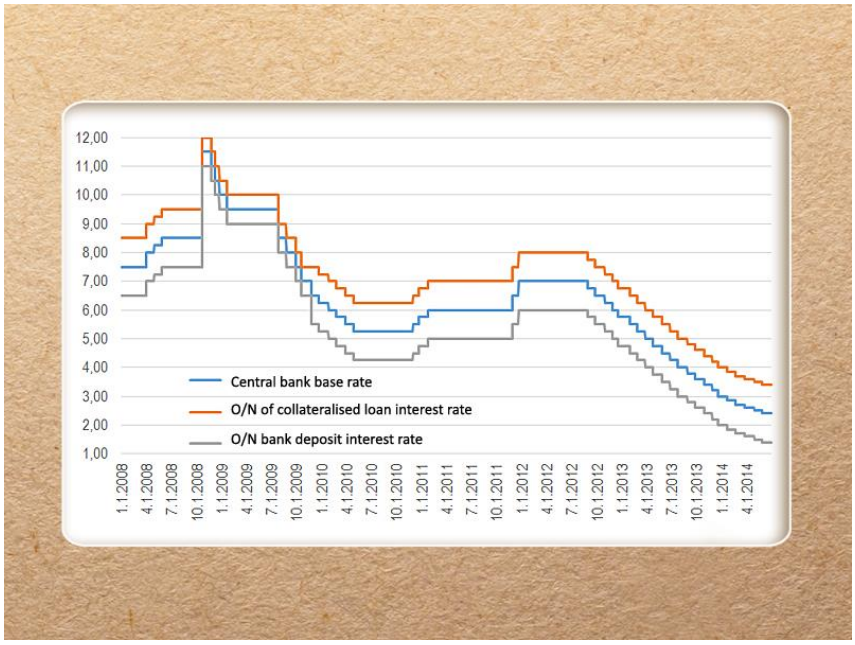

Figure 24: Development of the domestic interest rate channel between 1 January in 2008 and 1 July 2014

source: edited by the author on the basis of MNB data

The interest rate corridor is a corridor between the interest rate on overnight bank loans and overnight deposits whose top and bottom are of equal distance from the benchmark interest rate.

The interest rate of an interbank overnight loan can not be higher than the limit of the interest rate as the central bank can offer credit up to an unlimited extent corresponding to the top level of the interest rate corridor with one-day maturity.

Similarly, if there is ample liquidity in the market, at the bottom of the interest rate corridor, credit institutions may deposit their excess funds with the central bank without limit with overnight maturity so credit institutions have no interest to conclude overnight interbank transactions at an interest rate lower than the interest rate at the bottom of the interest corridor.

The main function of the **minimum reserve** control in instruments of the MNB is to promote smoothing the overnight interest rates.

Credit institutions must meet the reserve requirement of an average month and can flexibly choose the size of the reserve ratio according to their size and fluctuations of their financial demand.

The chosen rate can be between 2 and 5% and its modification is possible every half a year.

6.2.3.3.3. Instrumnets for the forint direct influence

Intervention is influencing **– basically short term –** the exchange rate of domestic currency using foreign exchange market operations:

- the central bank in order to prevent the appreciation of the currency buys foreign currency in the foreign exchange market against the domestic currency, thus weakening its rate by increasing the supply of domestic currency;
- in contrast, if it wants to slow down the depreciation of the domestic currency it sells foreign currency up to the available reserves.

Verbal intervention can also be an instrument of influencing the exchange rate, which is capable of orienting expectations: the central bank gives its opinion on the exchange rate. Credibility and effectiveness of the central bank is ensured if it is willing to deploy other means (go-to rate) to achieve goals in the event of failure.

6.3 SUMMARY, QUESTIONS

6.3.1 Summary

Monetary policy has changed in recent decades, today typically the price stability appears in the centre of its target.

Monetary policy instruments vary widely through the transmission mechanism of exerting their effects an instrument type can appear in many forms in central banking practice under the impact of the crisis a number of central banks began to employ unconventional means instead or in addition to traditional and monetary assets to achieve their objectives.

Purposes and functions of central banks are typically determined by law, in the case of the Hungarian National Bank the focus of the monetary policy is on achieving and maintaining price stability.

The Hungarian central bank like many other central banks uses the strategy of direct inflation targeting, showing some unconventional means in its monetary policy instruments as an effect of the crisis.

6.3.2 Self-test questions

Describe some of the central bank strategy!

Characterize the refinancing loan, reverse action and moral pressure!

Characterise open market operations, the minimum reserves and credit limits!

Describe the unconventional monetary policy instruments!

Describe the main manifestations of central bank independence!

List tasks of the Hungarian National Bank!

Which are strategic elements of the direct inflation targeting?

Characterise the governing instrument of the Hungarian National Bank and the operation of the interest rate corridor!

Characterise instruments of the Hungarian National Bank directly influencing the forint rate!

6.3.3 Practice tests

Which of the following instrument of the central bank's policy affects indirectly the money supply:

- Refinancing policy.
- Credit limitation.
- Moral preassure.

Which of the following is of a restrctive type?

- In the case of refinancing operations expanding the range of accepted securities;
- Reducing the required reserve ratio;
- securities sale subject to the central bank's own account.

Which of the following operation is expansive?

- passive reverse operation passzív penziós művelet
- increasing the rate in the case of refinancing
- credit limitation

One reason for the deployment of unconventional is that keeping the interest rate too high the central bank can not specifically intervene in economic processes in order to achieve the ultimate goal.

- true
- false

Determination of the inflation target as a point in a direct inflation targeting system increases the flexibility of the central bank.

- true
- false

Central bank transparency is a transparency of operations of the central bank for economic agents, which will help to develop and maintain the credibility and effective operations of monetary policy.

- true
- false

An essential function of forecast inflation fan chart is to facilitate the decision-making of monetary policy and to inform the public about the inflation and real economy developments expeced in the future.

- true
- false

For which of the central bank’s assets is the following statement true? It is a corridor between the interest rate on an overnight bank loan and an overnight deposit, designed to mitigate the volatility of short-term interest rates.

- intervention

- interest rate corridor
- reserve requirement regulation

Mock exam

Which of the following instrument of the central bank's policy affects indirectly the money supply:

- credit limitation.
- open market operations
- the moral pressure.

The Financial Stability Board, the supreme decision-making body of the National Bank, identifies and analyses risk factors of the entire financial system.

- true
- false

Final exam A

Which of the following is the task of the central bank?

- To ensure the lowest possible cash withdrawals from bank accounts for the general public.
- To control activities of payment and settlement systems
- To offer credits to state institutions if necessary.

The purpose of the required reserves control is to determine a corridor to mitigate volatility of short-term interest rates between interests of overnight loans and overnight deposits of the central bank.

- true
- false

Final exam B

The primary objective of the Hungarian National Bank is:

- to achieve and maintain price stability.
- To implementat the Government's economic policy.

- To protect the domestic currency's exchange rate

Determination the inflation target as a band in the direct inflation targeting system increases the flexibility of the central bank.

- true

  false.

7. BANK SYSTEM AND INSTITUTIONS

7.1 OBJECTIVES AND COMPETENCIES

Banking system activities are closely related to the functioning of the economy, a healthy banking system provides an important basis to economic growth.

However, problems in the banking system can immediately return to the state of the economy, as happened even after the financial crisis in 2008.

The purpose of the lesson is to present and characterise the concept and two majors forms of the banking system and types of financial institutions.

Students learn institutions supporting the functioning of the domestic banking system, functions and features of the supervision, the bailout fund, the credit information system, the deposit insurance and the investor protection. Be capable to demonstrate the three major principles of functioning of credit agencies and to characterise the main types of risks.

The student knows which are the main domestic and international components of the regulation of prudence operation.

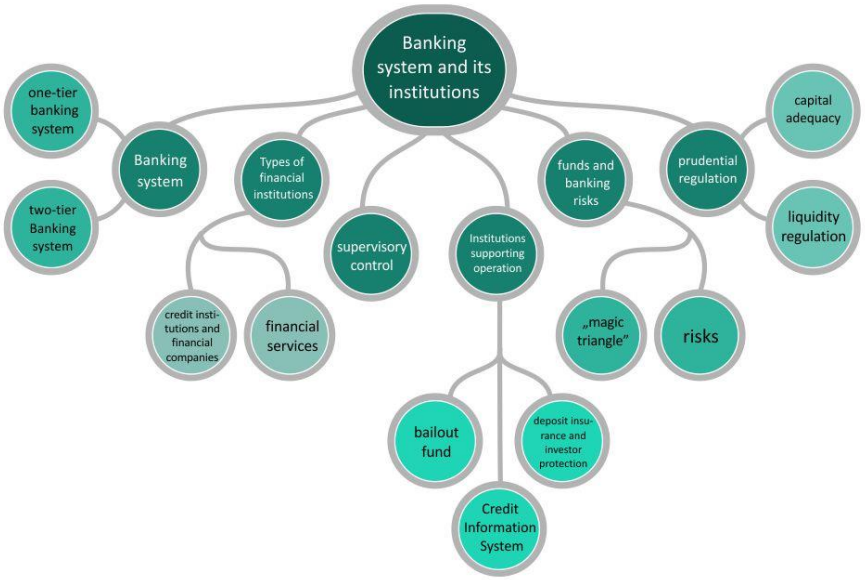

Figure 25: Structure of the lesson: bank system and institutions

source: edited by the author

7.2 CURRICULUM

All banks in a country is called **banking system** (in a narrow sense, and banking sector more broadly). Two types of banking systems can be distinguished: one-tier and a two-tier banking system.

In case of **one-tier banking system**, the central bank, in addition to central banking functions, is directly in conncecitons with economic subjects so manages their bills and disburses loans for them.

Typically, in addition to central banks, other specialized banks also operate, but there is a type where only one bank actually performs all types of banking functions (record banking system).

In case of a **two-tier banking system**, the central bank is in connection with only commercial banks and not with businesses and the general public: thus, the central bank is at the first level and commercial banks are located at the second level.

In Hungary after the Second World War a working one-tier banking system existed between December 1947 and January 1987 the operation of the MNB and other existing credit institutions based on functional delimitation.

(The MNB was a bank for companies, OTP bank was for the population, but there were the Hungarian foreign bank financing foreign trade transactions and the State Development Bank financing public investments).

7.2.1 Financial system in Hungary

Legislation defining the domestic financial system is the Act CCXXXVII of 2013 on Credit Institutions and Financial Enterprises, determining, among other things, the approval of the operational and prudential rules, supervision and operation of the deposit insurance or consumer protection regulations.

The law allows for financial institutions subject to the provision of financial services to carry out other activities like performing additional financial service provision, insurance mediation activities, managing and driving claims, or selling data and information relating to financial instruments.

Financial services mean activities as follows:

- collection of deposits and acceptance of other repayable funds from the public;
- offering credit and loan;
- financial leasing;
- provision of payment services;

- issuance of electronic money;
- issuance of paper-based non-cash means of payment;
- guarantees and warranties as well as other banking commitments;
- trading activities with currency, foreign currency, bills and checks on their own account or as a commission agent;
- financial services brokerage;
- escrow service, safe service;
- credit reporting services; and
- receivables purchase activity.

A credit institution is a financial institution which collects at least deposits as one of the financial services, or receives other repayable funds from the public, as well as provides loans and loan money.

Only credit institutions are authorized to collect deposits and to adopt other repayable funds excessing its capital from the public, or perform currency exchange.

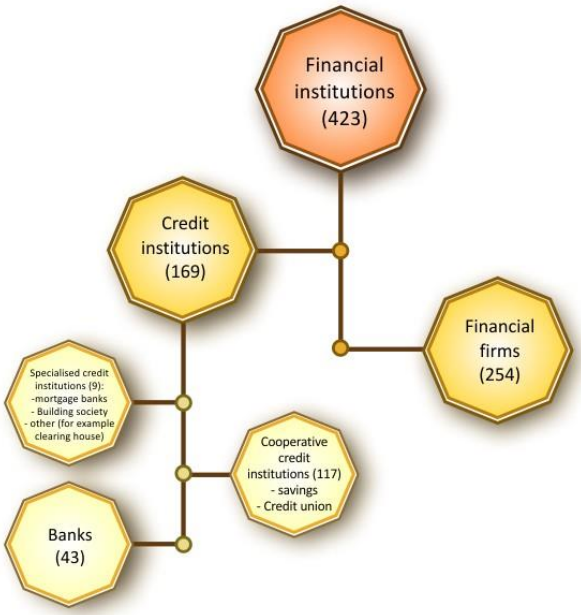

Figure 26: Financial system in Hungary in August 2014

Source: edited by the author on the basis of MNB data

A bank may be established with an initial capital of at least HUF two billion as a limited company or as a branch and all financial service activities can be carried out jointly (exclusively).

A specialized credit institutions are credit institutions may be established as a limited company or a branch authorized to carry out a specified range of financial services. Home savings funds, mortgage banks, clearing houses (KELER Ltd.) and the development of credit institutions (MFB, Eximbank) are included.

Co-operative credit institutions may be established as a cooperative or a private limited company with an initial capital of at least HUF 300 million. It works in two forms: while savings banks provides services to the public, credit unions will only provide services to members.

Financial enterprises may be established as joint-stock companies, co-operatives, as a foundation or as a branch with a capital of at least HUF 50 million, and perform one or more financial services or the operation of the payment system.

Typically, they deal with the provision of credit and loan (more than 60% of them) or financing lease and factoring.

7.2.2 Supervisory control

A healthy, efficient and safe operation of a financial system and of its institutions is an essential condition for a well-functioning economy.

However, the operation of financial institutions dangerous and risky, highly exposed to the risk of failure.

Moreover, a bankruptcy can have ripple effects in other areas of the economy, which may jeopardise the financial system and the stability of the economic policy. So an oversight of the financial system is crucial.

The monitoring function can be divided into three main areas according to the classical approach:

- financial consumer protection (for example publishing recommendations, studies);
- the micro-prudential supervision, which aims to reduce problems faced by institutions; and
- Brought to life in the context of the economic crisis in 2008 – macro-prudential supervision, which aims to reduce the problems that affect the entire financial system.

Typically, in the monitoring systems two different patterns emerged:

- the banking supervision and the role of monetary policy focused in the hand of the central bank in the case of the Anglo-Saxon model (England, the US, Australia) while in the case of the German model they are separated (Germany, Sweden). In the

latter case in some countries basic types of financial services were monitored by separate authorities.

In Hungary, the supervisory function was acted by a Treasury Department from 198, and since 1991 more supervisory institutions have been created.

In 2000 by merging three supervisory body the State Supervision of Financial Institutions (FSA) was established.

From 2010, the **Financial Stability Board**, the main decision-making body of the macro-prudential supervision was created.

From 1 October 2013 the FSA merged with the central bank, and thereby all the supervisory function was taken over by the MNB and the earlier division of macro-prudential supervision between the MNB and FSA terminated.

Similar steps were also made in a number of EU countries – for example in Belgium and in Ireland – in order to achieve consistency in the wake of the crisis and thereby the central bank carries out the prudential supervisory function in the majority of the European Union member states.

However, the establishment of the single supervisory mechanism in autumn 2014 will also be an important change as one of the pillars of the banking union (see Chapter 10).

7.2.3 Institutions supporting the functioning of financial institutions

7.2.3.1. Deposit insurance and investor protection

In order to strengthen confidence deposit insurance and investor protection aim to provide a protection for depositors uninformed in financial affairs, for investors and thereby for the stability of the financial system.

Their distinctive feature is that their function can be fully fulfiled until there is no need of the compensation they provide.

The deposit insurance allows for a deposit owner of an insolvent credit institution to have access typically to a certain limited amount of claims under certain conditions.

It usually operates in an institutional form, where it does not, it is typically the state who assumes that function.

In case of institutionalised deposit insurance for credit institutions membership is compulsory almost without exception but there may be differences where financial instruments under the guarantee or the amount of the guarantee and any deductibles (typically around 10%) as well as charges are concerned.

In Hungary, the **National Deposit Insurance Fund** (OBA) has been an independent institution of the deposit insurance since 1993, before its existence the government guaranteed bank deposits, and fully.

Currently OBA protects registered (forint and foreign currency) deposits (and their earnings) placed at its member institutions as a depositor and per credit institution: thus, if a depositor puts money in several banks, it all becomes insured.

However, the scope of the insured is not completet, the warranty does not cover, including local governments, investment funds, insurance deposits.

- OBA website

17. http://www.oba.hu/en

The compensation limit – starting from the initial HUF 1 million –has changed several times in recent years.

In Europe for the first time the directive 94/19 EC established the minimum service of a deposit insurance (EUR 20,000), then due to the crisis erupted in 2008 it was first raised to 50,000 euros then up to a total of 100,000 euros (down can not be derogated from, but it may be made up) in the entire area of the EU.

In Hungary the EU minimum is currently the ceiling of payments. (But for example $ 250,000 in the USA, two million crowns in Norway.)

An important parameter is the **deadline for payment**: OBA should begin payments and be completed within 20 working days at the latest, after the freezing of deposits, withdrawal of the operating license of the bank, or after the publication of the liquidation.

- In the case of Soltvadkert Region Savings bankruptcy in 2012 the majority of the indemnified – up to a total of HUF 33 billion payment – was compensated in seven working days.

Deposit insurance does not cost anything for the insured (depositor) the fund functions from the payment made by credit institutions.

In Hungary, every credit institution is required to connect to it, at the same time and to pay one-off connection fee and then they are obliged to pay an annual, regular premium payment and they have a reporting obligation. (In 2013 a single key charge was 0.6 per thousand). Furthermore, the Fund may issue bonds or can also get loans from credit institutions and from the central bank.

The wealth accumulated in the fund at the same time is to stand for the bankruptcy of smaller credit institutions however in the case of a large bank it is no longer the case.

Therefore the **coverage ratio** is important that is a internationally accepted indicator of the financial situation of deposit insurance institutions: compares the theoretical portfolio of liquid assets in compensation liability of its members at the same time.

(So even though the OBA indemnification assets devoted was HUF 76.6 billion at the end of 2013, the coverage ratio shows a negative trend, in 2008 about 1.2 dropped to 0.88 by the end of 2013.)

It is important, however, to mention the role of **cross-border deposit insurance** under which the national deposit insurance institution established in the country of incorporation provides insurance for bank deposits registered in the European Union.

That is, for example deposits collected in a Hungarian branch (see branch of Citibank) belonging to a bank registered in Ireland are insured by the Irish deposit insurance agency.

In our country an independent investor protection institution – established along the lines of the OBA – is the **Investor Protection Fund** (BEVA).

Those investors can expect compensation who signed a contract with a member of the investment fund for any of the additional services provided and under this contract, the provider can not issue the investment property registered on their names to them (securities, money) in five days.

The upper limit of the compensation is 20,000 euros, the compensation is 100% up to a level of HUF 1 million forints and over the one-million forint limit it is one million forints and 90 percent of the part over the one million forints (So here a 10% contribution appears).

It is mportant to emphasize, however, that the provision of the fund does not extend to cover damages resulting from a loss on securities trading or the insolvency of the issuer.

- BEVA website

18. http://www.bva.hu/en/ipf/organisation+1.html

7.2.3.2. Credit Information System

During lending decisions debt and credit information systems hugely assist in the assessment of the creditworthiness of customers: using information acquired on the ability to take on credit is one of the most important means of public credit evaluation in the international practice.

The advantage of the system is that it makes it possible for creditors to gain a more accurate assessment of the repayment risk, to detect clients expected to be problematic and to prevent the the over-indebtedness.

It will also assist the appropriate pricing of credit: mortgage borrowers repaying exactly can have an access to cheaper credits than risky applicants.

Two types of credit information systems can be distinguished:

- a credit registry system with governmental backgrounds, mandatory and is usually operated by the central bank (for example in Spain), or
- credit information market organized on a voluntary basis, so-called credit hemlocks (see for example the database of Experian Ltd. In the UK).

☐ Database of the Experian Ltd.

19. http://www.experian.co.uk/

There are differences in the information collected. The credit registry system is typically a negative list database of negative events (late or non-payment) containing data usually just above a certain threshold.

The credit registry (or full registry) list will contain a full list of data of all debtors who are under credit or loan type contract and date of their contract information.

The domestic credit registry system is run by **the Central Credit Information Private Limited Company** (BISZ Ltd.) established in 1994.

Since its foundation the current **Central Credit Information System** (KHR) has been constantly changing: the scope of information has steadily expanded and the residential subsystem – operating since 1999 – changed to full list of database from autumn 2012.

(Before 2011 it was called **Interbank Debt and Credit Information System** so in everyday language the expression being on the IDCIS list was used for people whose name was included in it.

The system helps financial service orientation, not the public customers.

☐ BISZ Ltd. website

20. http://www.bisz.hu/english

The database can be divided into two major subsystems, individuals and businesses database.

Both subsystem contains information about both positive (debtors paying their obligations fine) and negative (omission of debtors, or in respect of fraud) data.

The retail subsystem contains the following:

- credit history records (that are available only on a voluntary consent of the customer),
- Information on credit malpractice (who did not meet their obligations in excess of the amount of the minimum wage, continuously for more than 90 days),
- Data of credit card frauds (for example using stolen credit cards),
- loan applications rejected due to fraud register (for example false disclosure, false documents).

The credit default can be managed without the expressed consent of the customer in CCIS, thus making another borrowing more difficult.

In case of a closed credit default the settlement sealed omissions 1 year after performing, the loss sealed omissions five years from the closure are visible in the system.

☸ Observe the BIS website to include the information on the corporate engine! What differences do you see as compared to the data stored in the retail subsystem?

7.2.3.3. Bailout fund

The 2008 crisis has drawn attention to the fact that in the case of financial institutions mechanisms for crisis management are incomplete, insufficiently elaborated or not effective so financial institutions considered too large in system level were often saved by the State using state guarantees and capital injections from public money.

(Not always, see e.g. liquidation of Lehman Brothers investment firm). However, in some countries, therefore the debt financing has become very difficult, which made it necessary in many cases (for example Ireland) to borrow from international organizations.

However, in the USA the reorganization tool also worked for smaller credit institutions even from 2007: the resolution authority usually sold insured deposits and other good assets of a shaken bank to another economic operator.

In Europe, the bailouts were less well known and used, but at the end of 2013 as one of the pillars (see chapter 10) of the banking union a Single Bank Resolution Mechanism was created thanks to which each country

can create its own bailout legislation with unified toolbar, carefully controlled financing conditions and along the same harmonized principles.

Thus, the **reorg/anization process** is for the restructuring of the institution or group (credit institution or investment firm) which aims to ensure the continuity of essential functions of the institution, to preserve the stability of the financial system and to restore the viability all or part of the institution or group.

It can be applied (as the last possible means) when other means fail to prevent the situation worsening of the institution to the extent that the institution (more likely) due to come into bankruptcy.

The domestic **Bailout Fund** began operations in the summer of 2014, the MNB has responsibilities of a bailout authority

Instruments used during the reorganization process are as follows:

- asset sales, which sell all or part of the institution to another operator;
- using bridging institution in which good tools of the bank or investment firm are separated and installed into a new state-owned institution (for example bridgebank) which is sold after a time and the original institution will be liquidated;
- asset segregation, that is bad assets of the institution are transferred to an asset management company in order to clean the balance sheet;
- Creditors recapitalisation during which creditors (for example policyholders) not insured by the institution are involved into capital-loss writing-off their claims or through their conversion into capital.

For domestic credit institutions and investment firms it is mandatory to join the fund. In the Fund's resources regular payments are determining (which consists of a base fee and a variable fee based on risk), but it may borrow a loan or even issue debt securities.

It is important to emphasize that OBA is also required to contribute to the cost of bailouts (based on the compensation it has undertaken and on its property) if the reorganization is designed to insure the continued accessibility of insured deposits.

7.2.4 Credit institution funds and risks

Simplifying the operation of a credit institution: it pays interest on deposits placed there and it gets interest after loans, the difference of the two is the interest income as a primary source of bank profitability.

Important principles of operation of the credit institutions are formulated by the ‘’magic triangle”:

- the principle of profitability (payability) that is a credit institution should budget profitably, and from the results achieved dividend to its owners should be paid;
- The principle of liquidity (disponibility), i.e. the credit institution has sufficient financial resources to meet the current demands raised against it; or
- The principle of ability to pay (solvency) that is, claims of the credit institution (disbursed loans) exceeds the value of liabilities, so in addition to positive equity it can meet its obligations in the long term;

The triangle is magic, because the three elements can not occur at the same time: liquidity and solvency change in the same direction, while the profitability and liquidity and the interaction between the profitability and solvency usually change in the opposite direction (the one on the rise results in the decrease of the other).

Moreover, the credit institutions are faced with many risks in their operations: some of them every business is exposed others are specific banking risks.

Credit institutions are key players in financial intermediation who are managing predominantly foreign funds (with high leverage) while they carry out sum-, maturity and risk transformation.

Thus, the key element of the operation of banks – compared to businesses – is greater risk-taking, the treatment of which requires specialized knowledge.

Risks can be categorized in many ways, the most important types are credit, liquidity, market and operational risks. (Other risks are not covered due to space reasons, in this note).

Credit risk, also known as the repayment risk is the risk that the person liable to pay partly or fully rejects to repay the debt owed during the term.

Whereas lending is a typical bank activity, it is the largest bank risk. Therefore, during the lending decision credit approval is very important.

Liquidity risk is the risk that the Bank is not able to meet current obligations or it can only with losses due to no proper coordination of maturing obligations and claims.

Market risk is the risk that the bank has a loss from the position taken due to unfavourable changes in market prices. It can be divided into several subtypes, e.g. interest rate risk, foreign exchange risk, etc.

Operational risk is a collective category of banking risks deriving from special characteristics, including risks difficult to estimate. According to

international control the risk of losses is caused by not appropriate or malfunctioning of people, internal processes and systems or external factors.

For example internal and external fraud, system security problems, losses due to natural disasters, hardware and software problems, etc.

7.2.5 Prudent regulation of the operation of credit institutions

Regulation of credit institutions – in addition to their mediator and risk-taking roles mentioned above – is also very important as they are significantly integrated into the economy. Activities of a dysfunctional credit institutions has a negative impact on other credit institutions and ultimately jeopardize the functioning of the entire financial system.

In addition to the previously mentioned domestic legislation with respect to the international regulatory framework, the Basel Conventions and its transposition into the legal system of each country are to be emhasized.

The Basel Committee on Banking Supervision was founded by leaders of central banks of the G10 countries in 1974, aimed at drafting conventions and recommendations on banking supervision.

The first Basel Convention (Basel I) published in 1988 defined the minimum capital requirement needed to cover losses due to credit risks – the solvency capital and – with the introduction of the capital adequacy indicator (or Cook-rate).

(In 1996, then Basel I ws extended to market risks, too). The second convention (Basel II) published in 2006 was a complex, three-pronged regulatory system, the essence of which was – next to the role of supervision and a public access – to determine methods of credit, market and operational risks acceptable in terms of capital adequacy and – through reforming the calculation of adjusted total assets, the denominator of the capital adequacy ratio – the measurement of capital adequacy.

The third convention (originally it would have served as a complement to Basel II) published in 2010 (Basel III, European counterpart, as an EU Directive the CRD IV.[13], as well as the EU regulation CRR[14]) came into force from 2013 but only after a gradual introduction to some areas from 2019.

Changes in Basel III. fundamentally affect the level and quality of care and the level of capital adequacy solvency and liquidity risk management and specific areas of risk management.

[13] 2013/36/EU irányelv (Capital Requirements Directive IV).

[14] 575/2013/EU rendelet (Capital Requirements Regulation).

- Basel III. monitoring reports published by the Basel Committee on Banking Supervision are available here:

21. http://www.bis.org/publ/bcbs289.htm

Prudential (farsighted, circumspect) rules for the functioning of a credit institution are worded in legislation: a credit institution is obliged to discharge debt and to manage its own resources to continuously maintain its immediate liquidity and the current solvency.

So the capital adequacy is a key element of the **prudential regulation**: that is, the credit institution must have a registered capital of not only when the foundation was laid down, but during the operation the solvency margin should represent a fixed ratio adjasted to the bank's total assets (Risk Weigthed Assets, RWA) it is the **capital adequacy ratio**.

The regulatory capital consists of two main elements:

- of core capital elements (Tier1), which does not entail liability az or within the Core capital (Common Equity Tier 1, CET1) basic and supplementary capital (Additional Tier 1, AT1), and
- of additional capital elements (Tier2), which have a restrictive property[15].

The present value of the minimum capital adequacy ratio of 8% (10.5% from 2019), the value of the rate of one whale (CET 1 / RWA) is currently at least 3.5% (8.5% from 2019.)

Another change in capital adequacy is that **capital buffers** (capital reserves) were introduced to ensure the solvency, and in order to prevent the development of excessive leverage in credit isntitutions introduction of **a leverage limit** will be introduced (from 2018).

However, while the former Basel proposal packages primarily focused on capital adequacy, one of the most important features of the proposal package the Basel III – the effect of the 2008 crisis – is **the liquidity regulation.**

The Basel recommendations proposed the introduction of two indicators In order to reduce the maturity mismatch and management of liquidity risks:

- (to be introduced gradually from 2015 to 2018) a **short-term liquidity coverage ratio** (Liquidity Coverage Ratio, that is LCR) its objective is to provide banks with the necessary quantity and quality of liquid funds in case of a shock.

[15] Terjedelmi okok miatt a jegyzet nem ismerteti a szavatoló tőke mérleg szerinti összetét elét.

- (to be introduced from 2018) **net stable funding requirement** (Net Stable Funding Requirement, that is NSFR), which seeks to enforce claims in the financing of long-extended sources.

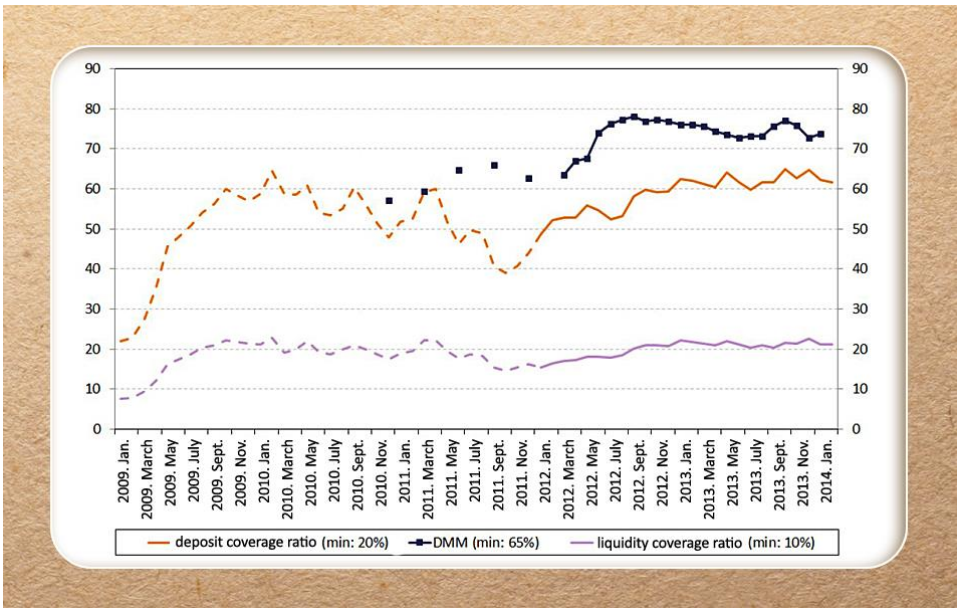

Figure 27: Changes in domestic liquidity ratios (banking system averages)

source: Fáykiss, 2014

It is important to point out that in our country the regulation of liquidity risks with the introdaction of short-term and long-term indicators in July 2012, was implemented earlier compared to Basel III.

- The objective of **deposit and the balance sheet hedging indicators** (similarly to LCR rate), is to show that banks have sufficient liquidity proportionately to total assets (balance coverage ratio) or to deposits (deposit coverage ratio) considering a 30-day time horizon. The minimum value of the indicators is 20% or 10%).
- The purpose of **foreign currency funding adequacy ratio** is (due to tightening in spring of 2014 similar to the NSFR rate) to manage jointly the on-balance sheet and off-exchange position maturity mismatch.

- The minimum value of the index is 65%, 75% from July, 2014 and then increases by 5% every half year up to a percentage point 100% until 1 January in 2017.

It is worth mentioning the **loan-to-deposit ratio** (Loan-To-Debt, that is LTD) which indicates how many units of credit were allocated by the credit institution using one unit of bank deposits. Although the index is not part of the prudential regulation, it still indicates a tight liquidity (thus the liquidity risk) of banks, as due to the relatively low level of customer funds an external, i.e. financial and capital market funds may be necessary to involve.

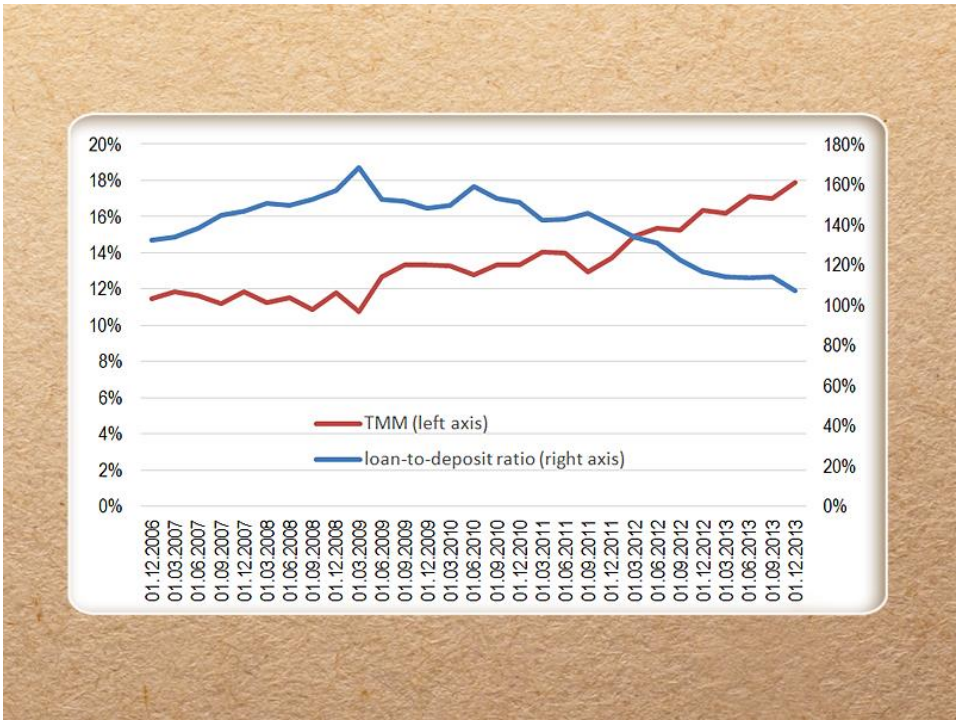

Figure 28: Development of capital adequacy (%) and loan-to-deposit ratio of domestic credit institutions between 2006 and 2013

source: edited by the author on the basis of MNB data

7.3 SUMMARY, QUESTIONS

7.3.1 Summary

Advanced economies are characterized by a two-tier banking system, financial institutions can be divided into financial firms and credit institutions, the latter can be divided into banks, specialized credit institutions and credit unions.

The lesson presented institutions supporting functioning of the domestic banking system: functions, features of the operation and main parameters of the supervision, of the bailout fund, of the credit information system, of the deposit insurance and of investor protection, also addressing changes in the last few years. In addition to principles and risks of bank operating economics in the las few years and especially after the financial crisis prudential requirements have continuously expanded as a result of the practical implementation of Basel III proposal package, so assets of leverage and liquidity regulations appeared in addition to the capital adequacy.

7.3.2 Self-test questions

Describe and characterise the concept of the bank system and the two main types!

Define at least seven financial services!

Describe and characterise the concept of the credit institution and the three main types!

Describe and characterise the operation of the National Deposit Insurance Fund!

Demonstrate and describe the operation of the Investor Protection Fund!

Describe and characterise the range of data stored in the Central Credit Information System!

Demonstrate and describe the basic operation of domestic Bailout! List and describe the major risks of credit institutions!

Describe and characterise the prudential regulation of capital adequacy means!

Describe and characterise the international and domestic liquidity management instrument!

7.3.3 Practice tests

Which of the following means a two-tier banking system?

- The central bank is directly related to enterprisers in addition to central bank functions.
- the central bank is not affiliated with enterprisers but commercial banks.
- The central bank divides other credit institutions into two levels: credit institutions of level ''A" and ''B".

Which of the following are types of credit institutions?

- Banks, specialized credit institutions and credit cooperatives
- banks, leasing companies, credit unions
- credit unions, central bank, financial companies.

The National Deposit Insurance Fund compensation rateis maximum:

- 20,000 euros, such that the compensation to the extent of the sum of one million forints is 100%, over one million forints it is one million forints and 90% of the amount over the one million forints.
- 100.000 euros
- Six million forints such that the compensation to the extent of the sum of one million forints is 100%, over one million forints it is one million forints and 90% of the amount over the one million forints.

Which can be considered to be the main source of the National Deposit Insurance Fund?

- Budget support
- Interest tax on bank deposits
- Annual, regular fees paid by credit institutions

The Investor Protection Fund is currently protects registered (forint and foreign currency) deposits (and their earnings) placed in member institutions per depositor and per credit institution.

- true
- false

The Central Credit Information System

- helps lending decisions of banks through the assessment of the creditworthiness of customers.

- helps retail customers to find the cheapest product in a particular category of credit.
- the central bank's public database, which shows the price of detached residential loans in Hungary.

Bailout as an instrument can be used if other means fail to prevent the situation of a bank worsening to the extent, which is likely due to come into bankruptcy.

- true
- false

Which shows the principle of compliance of the operation of credit institutions that the credit institution has enough financial resources to meet the current demands raised against it?

- Profitability principle
- Solvency principle
- Liquidity principle

Which of the credit risk of the institution, in which losses of a bank may occur in the position it is taking due to unfavourable changes in market prices?

- Operational risk
- Market risk
- Credit risk

Which indicator indicates how many units of credit were allocated by the credit institution using one unit of bank deposits?

- Loan-to-deposit ratio
- Capital adequacy ratio
- Foreign currency funding adequacy ratio

Mock exam

Financial brokerage firms may offer brokerage options, however, may not offer account management options to clients.

- True
- False

What does a bank's ability to pay mean?

- Always have enough (private or foreign) sources to fulfill the commitments
- It can offer credit in any case
- It can receive depositminden in all cases

Final exam A

The National Deposit Insurance Fund compensation rate is maximum six million forints such that the compensation to the extent of the sum of one million forints is 100%, over one million forints it is one million forints and 90% of the amount over the one million forints.

- True
- False.

Which banking risk includes not appropriate or malfunctioning of people, internal processes and systems or the risk of losses caused by external factors?

- Liquidity risk
- Operational risk
- Market risk

Mock exam B

Which type of institution it is not true that collects at least deposits as one of the financial services, or receives other repayable funds from the public, as well as provides loans and loan money?

- bank
- savings
- financial enterprises

Capital adequacy ratio is an important financial indicator used for measuring the capital of banks and for the comparability of individual banks.

- True
- False

8. BANKING

8.1 OBJECTIVES AND COMPETENCIES

All individuals can engage in banking in the course of everyday life: almost all adults have a bank account, one or more credit cards and have typically a loan or use different payment methods (transfer, yellow checks, etc.).

In these areas there are constant changes: today there are no retail foreign currency loans (or at least rare), there is a ceiling on the price of credit, and newer payment technologies appear (see for example spreading of the increasingly popular contactless payment cards).

The purpose of the lesson is to present credit transactions, classifying them into three main groups. Students get familiar with sources of credit institutions to raise credit, especially the main features of deposits, special deposit schemes. Be able to distinguish between the concept of a credit and a loan, get to know the main types of retail loans, the reasons for the domestic and foreign currency debt problems known methods of treatment, and the process of lending, loan pricing and highlighting the concept of THM.

Students get to know the main groups and types of payment methods, and can list the main elements of the national payment system.

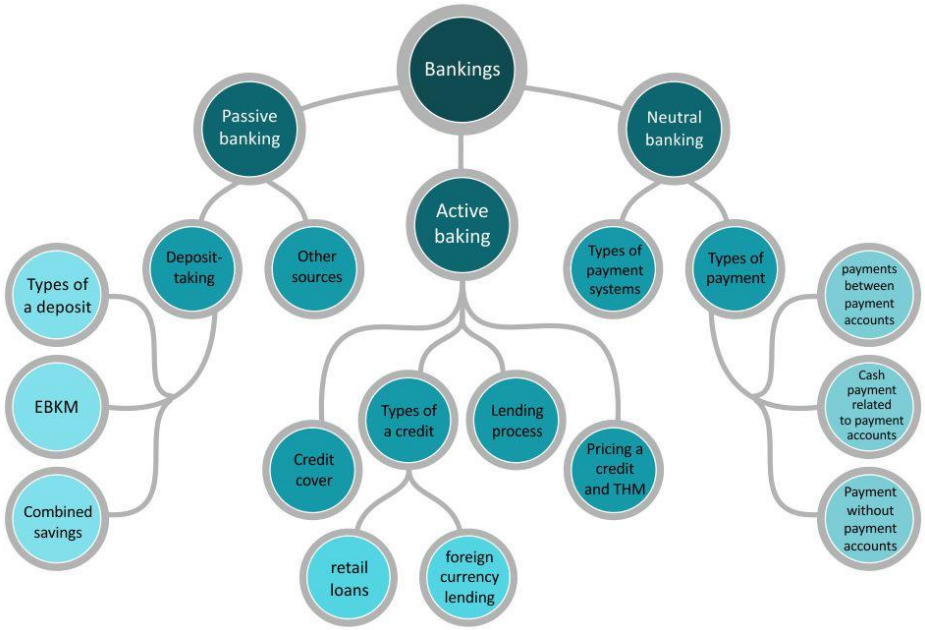

Figure 29: Structure of lesson: Bankings

source: edited by the author

8.2 CURRICULUM

Services performed, operatons (banking) by credit institutions, can be classified into three main categories:

- passive banking is for fundraising and aim to provide the credit institution with funds for the balance sheet against a commitment to earmark (for example debit transactions;
- during the active bank transactions are resources outsourcing in which the credit institution acquires a claim and obtain a commitment for the client side (for example lending);
- the neutral bank transactions are outside the financial intermediation, very diverse transactions (for example managing payments, asset management), they do not appear either the asset or liability side of the balance sheet (therefore often referred to off-balance sheet items as well).

8.2.1 Passive banking

The oldest banking business, in which the bank will concentrate people's money (deposit-taking), but also tries to get money through other operations. Two groups can be distinguished in terms of activity: liabilities acquired passively (for example bank deposits), and in an active way, sources in the bank initiative (for example bank credit). The main types of passive banking are: deposits, issuance of debt securities, credit, equity.

8.2.1.1. Deposit-taking

According to the Act V of 2013 in the Civil Code by virtue of the deposit contract the depositor is entitled to pay a specified amount of money to the bank, the bank is obliged to accept a sum of money offered by the depositor and to pay back the same amount of money at a later date and to pay interest. However, there are also deposits in case of which it is not the interest that credit institutions offer: in the case of premium deposit where the interest is not credited as an amount of money rate premium deposit money amount is not credited, but the interest rates on deposits are collected in a prize pool and prizes (car, home) purchased on it are raffled off among the participants.

Whereas deposit pays back the principal and interest so the main itds main benefits are the security and predictability.

Because of this it is of low-risk, and therefore able to produce a low yield – and spread in our country – potential savings. Deposits of countless kindsre are offered by credit institutions.

In the case of **deposit demand** the owner may decide how to use it at any time, that is money deposited on an account does not earn interest. Since it means more (liquidity) risk for the credit institution, it usually has a minimum yield (for example 0.1%).

In the case of **a fixed deposit account** the holder waives the right to use the money for a while in favor of a credit institution, so the deposited amount without interest loss usually can be get to only at the end of the term. As it is a more predictable source for the credit institution so the interest rate is higher, typically yields around the base rate are available.

Based on maturities the most typical deposits are deposited for 1, 3, 6 months or 1 year term, but it is not uncommon deposit them for any period longer than 1 year.

Based on the way there is a continuous deposit in addition to the one occasion deposit: in this case a credit institution re-angages the sum of the actual amount of the deposit (simple interest), or the amount plus interest (compound interest) as long as the client’s bank gets an opposit order.

Based on defining the interest, stage and band rates are distinguished: while in the case of a step rate a set limit specified is paid on the deposit for the full amount of money, in the case of a band rate parts of the fixed amount within specified limits bear different rates of interest.

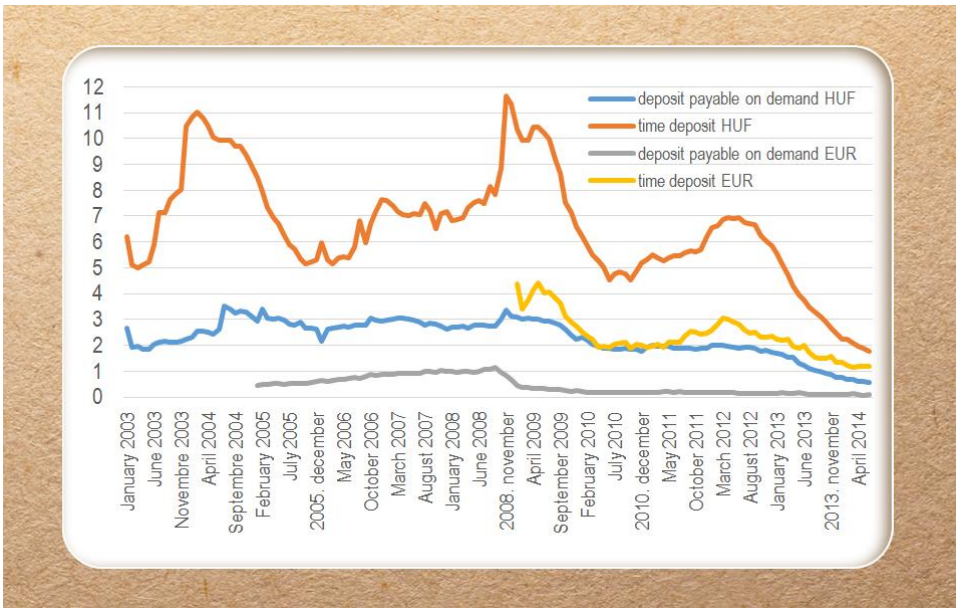

Figure 30: Average annualized interest rate of deposits placed by household (%, weighted by the contract amount)

source: edited by the author on the basis of MNB data

Since so many ways of placing the money on deposit can be distinguished, therfore it is useful to have the **Unified Deposit Interest Rate Index** (EBKM), whose main task is to make single bank deposit offers comparable. Its calculation is specified in the legislation taking into account any deductions or the effect of the compound interest for 365 days (interest rates by some banks – for exaple ERSTE – are set for 360 days).

In addition to the classic deposits in recent years, however, the **combined savings** (special deposit scheme) were released: it also contains at least one other financial products in addition to bank deposits. Their common feature is that rates above the market level are promised for fixed deposits (usually 2-3 months) then they return back to the normal market interest rates. Three classic types can be distinguisked:

- in the case of *index-linked deposit* a portion of the interest rate depends on performance of a money market or a capital market variable (for example inflation, policy interest rate, exchange rate developments in a given period, etc.);
- In the case of rate dependent deposits for the amount of the deposit only a minimum interest is guaranteed to be paid, the majority of the interest rate depends on the kind of financial service (use of credit card, bank transfer, direct debit, etc.) and the number of service used.
- *A deposit product combined with an investment product* includes a term deposit and an ivestment product (for example shares, unit-linked life insurance, bank bonds, etc.), in the case of which a loss on the investment may result in a samller payment than the initial amount.

8.2.1.2. Other sources of credit institutions

Bonds, certificate of deposit tickets and deed mortgage belong to the scope of **debt securities.** Typically, it is a fundraising option used by mortgage banks, but in our country issuing bonds as funding opportunity is used by a number of banks (for example OTP bank, CIB bank etc.).

Borrowing mainly represents inter-bank loans and bank loans (see for example refinancing loans) but it also includes direct loans from international financial organizations, as well as the use of subordinated debt.

Interbank-loans mean that credit institutions – depending on their resources – are lending to each other in which case the price of the sources is shown by the Budapest Interbank Borrowing Rate[16] (BUBOR) as a key benchmark interest rate the interbank lending rate.

Equity can also be an importan type of resources which is provided by the owners for the credit institution. The overwhelming majority of them operates as a limited company, therefore providing the source (raising equity) is usually achieved by issuing new shares. (Which took place after the economic crisis in the case of many national banks.)

[16] Calculated and published at the specified time by the Hungarian National Bank daily, for different maturities, Based on the report given by banks rates, using a predetermined averaging procedure.

8.2.2 Active banking

In active banking resources gathered by the credit institution are used to carry out operations during whichhas gathered translates to carry out such operations which arise claims against partners. Operations belong to three major groups: lending, securities purchase and placing deposit into another bank (but financial leasing and factoring also can be included) of which lending is discussed in detail.

Credit is a commitment of the credit institution to disburse loan against a line of availble credit if conditions specified in the contract are met.

Loan is an amount of money made available on the basis of the contract, which must be repaid by the debtor under the conditions specified in the contract (for example interest rate, maturity, etc.).

Therefore it is important to emphasize the difference between the two concepts (which is often used in the vernacular as a synonym) and that a credit and a loan has a price: after the credit commission, after the loan interest must be paid.

Credit institutions protect themselves against credit risks assumed in the lending involving debtors, basically collateral securities (guarantee), which can only be enforced if there is an obligation to the credit institution against the debtor is unable to comply.

The main forms:

- bail, whose subject may be securities and deposits;
- lien (specific item of property mortgage contract in favor of the creditor tethering) which has two main types mortgage (property, or vehicle) and pawn (e.g. jewel);
- guarantee, which is the guarantor's undertaking (for a simple – or also known as fallback – guarantee must try to recover the debt from the debtor first, while in the case of suretyship the creditor can turn to both the debtor and the guarantor); and
- guarantee, which means a commitment of a credit institution.

Loan-to-value ratio (LTV) is an indicator related to the coverage of loans with mortgage-backed security which can be determined by the ration of the credit value and the price of the property.

(Determining the maximum value of the index is a common – restricting indebtedness – component of the macroprudential instruments of the central bank.)

8.2.2.1. Types of credits

Credits can be classified according to several criteria – without being exhaustive:

- according to which institution pays there exist central bank, commercial bank, monetray institution credits;
- According to recipient (debtor) there aret under corporate, retail, interbank, fiscal, government credits;
- according to the interest rate there are fixed rate, variable rate or discounted credits;
- According to the currency there are forint, euro, dollar, Swiss franc, etc. credits;
- According to maturity there are short-term (maturity is maximum one year), medium-term (between 1-5 years) or long-term (over 5 years of maturity) credits.

Due to space restrictions only major types of retail credits are presented, and we focus on foreign currency lending.

8.2.2.1.1. Retail credit types

Consumer credits belong to one large group of retail credits which are used by a natural person to purchase objects of everyday life and to resort services.

In case of **overdraft** the credit institution disburses a loan charged to the credit facility in such a way that fulfills payment orders for claims which customer accounts will no longer provide coverage otherwise.

Its approval is usually based on the customer's monthly income the amount of it is two or three times of the income.

Personal loans are typically free to use (for example buying a car, travel) the medium-term (ususally 12-72 months), unsecured loans.

Its amount is typically ranging from HUF 100,000 to HUF 5,000,000 also available in forint or in foreign currency.

Installment loans are provided for purchasing consumer durables, using of services.

Its amount is usually ranging from HUF 20,000 to HUF 2,000,000 but but typically of small amounts. Its maturity is between 4-12 months and 3 years, however, certain banks offer larger amount of loans for even 4-5 years, its request usually occurs within the trading business.

The purpose of the Lombard is to finance temporary (usually within a year) cash needs of the debtor whose cover is marketable movables in a wider sense, a security deposit or a bank deposit in a narrower sense. Its interest rate is modest compared to other types of retail loans.

A **credit card** can be used free for debit card purchases or cash withdrawals up to credit limit granted by credit institutions. Condition for claiming – like the overdraft – is a specified minimum regular monthly income, the amount of the loan can range from a few hundred thousand to

a few million forints. Apart from the annual fee for the card using the card is interest-free if the repayment takes place before the payment deadline (billing period plus 15-20 days), however, beyond it a relatively high interest loan is to pay.

Home loans represent another large group which may be required for housing purchase, construction, renovation, modernization and development of public utilities. The requested loan amount is significantly higher than that of consumer loans and the maturity is long 20-25 years (but there are now loans available with a maturity up to 30-35-years).

The risk assumed by credit institutions is high because of the size of the loan amount and its maturity therefore the mortgage cover is mortgage on property in all cases.

The magnitude of the amount depends on the traffic and the collateral value of the property to cover the loan is determined by the bank:

- the fair value represents the market value determined by the appraiser;
  - the collateral value of the property is determined on the basis of a minimum estimate of the value of traffic, the amount for which the property may be sold in case of enforcement of the cover (typically, 70-90% of the market value);
  - the amount of the contract when applying for residential mortgage loans is 70-80% the loan-to-value while in the case of mortgage loans it is 60-70%

8.2.2.1.2. Foreign currency lending

If loans are considered by the type of currency then non-forint loans are called foreign currency loans. However, by definition, a distinction must be made between the foreign currency loans and loans based on foreign currency:

- in the case of a foreign currency loan the disbursement, registration and repayment are actually in foreign currencies;
- In the case of loan based on foreign currency disbursements and repayments are in forints but the amount of credit and installment are determined in currency.

in the case of foreign currency loans to the debtor faces two types of risk:

- according to **interest rate risk,** which is also a characteristic of forint loans, at the end of the interest period (which is less compared to the period of the forint interest loans, typically three, six, or 12 months) any increase in interest rates adjusted to the

specific circumstances of the foreign exchange market results in an increase of the installment; and

- the **exchange rate risk**, in the case of which installments or current liabilities unchanged in a foreign currency may vary from month to month due to fluctuations in the exchange rate, in case of a possible weakening they may grow (and an increase in the debt capital deteriorates coverage of the mortgage loans as well).

Latter effect was very intense in terms of domestic currency after the 2008 crisis: such as the Swiss franc exchange rate from the average range HUF 160 / CHF in 2004-2005 weakened to HUF 240-250 / CHF from 2011.

These risks can be reduced in the case of companies: the interest rate risk by applying swap transactions, while the exchange rate risk by using futures, and – if possible, depending on the intensity of exports – gaining some of the income in foreign currency.

Derivatives, however, in the case of retail loans are costly and therefore it is not used, but it is not specific to pay domestic retail wages in foreign currency either (exceptions may be working abroad).

A major cause of foreign currency lending has been reported to be – formed by a wide variety of factors such as inflation, domestic loose fiscal policy, etc. – the **difference between domestic and foreign interest rates**: on the basis of euro and Swiss franc one could borrow in more favorable terms (smaller installments) compared to loans in forints.

In the 2000s, our country was characterized by the rapid development of retail foreign currency loans (compared to the regional countries):

first appeared in 2000, in the car-financing, then from 2004 by the termination of the state housing subsidy program in housing loans and in mortgage lending. The major increase in foreign currency loans can be made for the period 2006-2008, and from the end of 2008, the stock (due to the different regulatory measures) started to decline.

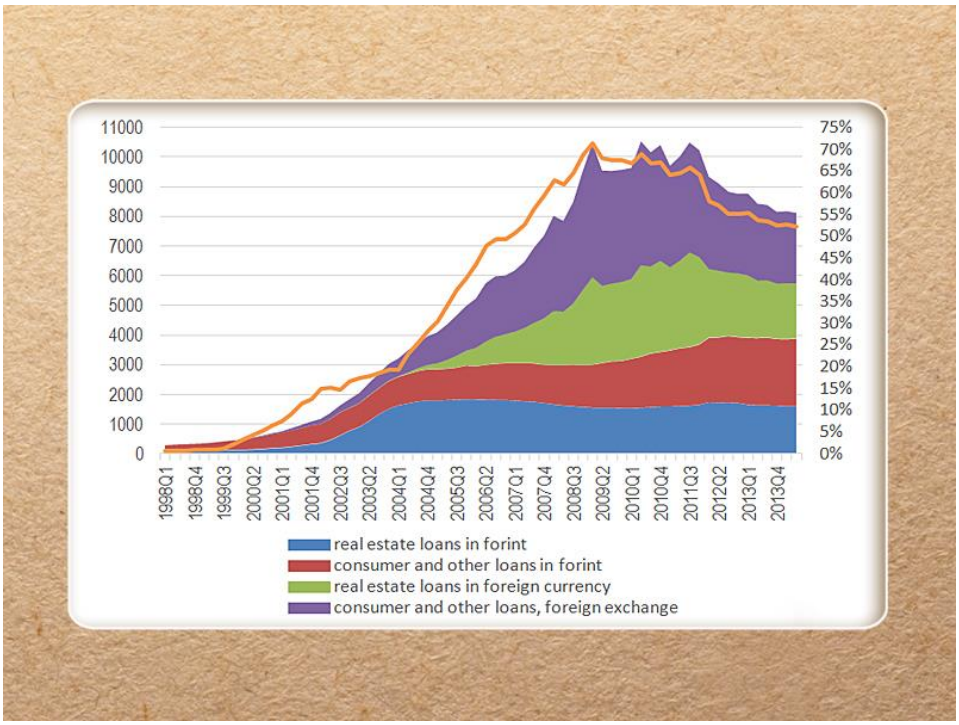

Figure 31: Ratio of loans of households (billion forints, left axis) and the rate of evolution of foreign currency loans (%, right axis)

source: edited by the author on the basis of MNB data

the domestic currency debt has become a source of serious problems after the outbreak of the crisis: the households' debt burden greatly increased, and with it through the deteriorating credit quality of the portfolio meant a major limitation of economic growth. Therefore, in 2010 two major limiting the public debt further regulatory measures were taken:

- in spring allowable collateral values were maximized for residential mortgage and car loans (loan coverage ratio): in 75% in the case of HUF loans, loans in euro in 60%, in 45% in other foreign currency loans; then
- In the summer of 2010 it was **forbidden** for the Land Registry to register a lien on property in the case of loans based on foreign currency thereby eliminating the **foreign currency mortgage lending.**

These measures stopped the further growth of the foreign currency debt, but not treated with the problems of existing resources. Therefore, additional measures were taken in 2011:

- At the end of May introduced a three-year price-fixing option, and eviction quota was applied, and rules on the **National Asset Management** for purchasing real estates were set;
- in mid-September the possibility of **early repayment of fixed exchange rates** was announced before 28 February, 2012; furthermore
- in mid-December a **discount rate fixing option** was introduced fixed and arising from the difference between the market price of the debt burden is shared between the institution and the state.
- Among the measures, early repayment and the discount rate were popular mounting options: the mortgage-backed foreign currency loans fell by about a quarter of the former (at the end of September 2011, approximately HUF 5,600 billion in value), while the latter (in the first two years of the program) about one-third. Nevertheless, further indicating the existence of the problem of foreign currency debt at the end of 2013 the share of non-performing loans among households approached the 20.

8.2.2.2. Lending process

During the examination of the course of lending it is important to emphasize that the primary objective in banking decisions is to repay external capital on behalf of the debtor or to guarantee profits. Two major phases can be emphasized in lending decisions:

- From the filing of the application to the loan disbursement phases, which include compliance with the lending terms of orientation, submission of the loan application and the formal verification of the credit rating, with decision on credit applications or contractual; and
- maintenance phase of the loan, ncluding the disbursement of the loan and related charges, fees collected, or through credit monitoring control of the repayment of the loan or the client's solvency and collateral monitoring;
- moreover, in the case of late payment or non-payment from the customer notice of claim- failing all else – for the recovery of collateral.

The most important step is **the credit decision** aimed at paving decision on taking on the credit risk, its typical elements are the customer classification, assessment and certification of the transaction guarantees.

The objective **of Customer rating** (or credit history) is the assessment of the creditworthiness of the debtor, that is defining the likelihood of non-payment of loans. Rating systems typically consist of two parts:

- Definition of objective indicators on income and financial situation (in case of an individual in private assets and net income, in case the company balance sheet and the profit and loss account); and
- taking into account subjective criteria (for example banking relationships, or business management believes, market position, product services, etc.).

The credit rating agency awards points to prospective debtor under certain criteria during the debtor rating based on customer and partner rating system and then on the basis of it assign a risk class to the debtor, the default probability is determined by reference to past clients belonging to the class of non-payment.

In assessing the market value of securities offered, durability, burden of proof, mobilization and enforceability of the collateral are examined. During **transaction rating** the bank in accordance with the client's future plans is testing whether it is worthy of granting credit for the purpose, taking into account the available information whether loan repayments are established and secured.

To prevent excessive household debt the macro-prudential regulation and within it as an element of the debt brake control two important indicators will affect the credit appraisal from 2015:

- **loan-to-value ratio** with a maximum of 80% in the case of mortgage loans, car loans, 75% (euro loans, 50%, or 45%, foreign currency loans, 35% and 30%.
- **The income ratio installments index** as a new element in the legislation indicates that the debtor's monthly repayments can not be higher than 50% of the regular legal income in the case of a monthly income below HUF 400 thousand, or 60% in the case of a monthly income minimum of HUF 400 thousand (loans of EUR 25% and 30%, other foreign currency loans 10%, and 15% are the two maximum ratios).

8.2.2.3. Pricing of the loan and annual percentage rate indicator (THM)

As in the price of a credit many costs are charged by credit institutions in addition to the interest rate therefore customers can compare similar

products, offers of various lenders with a single index, calculated in accordance with a law[17] – on the basis of a single example of each type of credit – **Annual Percentage Rate** indicator (APR). The APR is the total price of the loan ratio of the total amount of credit expressed as an annual percentage includes virtually all costs to be paid by the customer to the credit institution in addition to the capital.

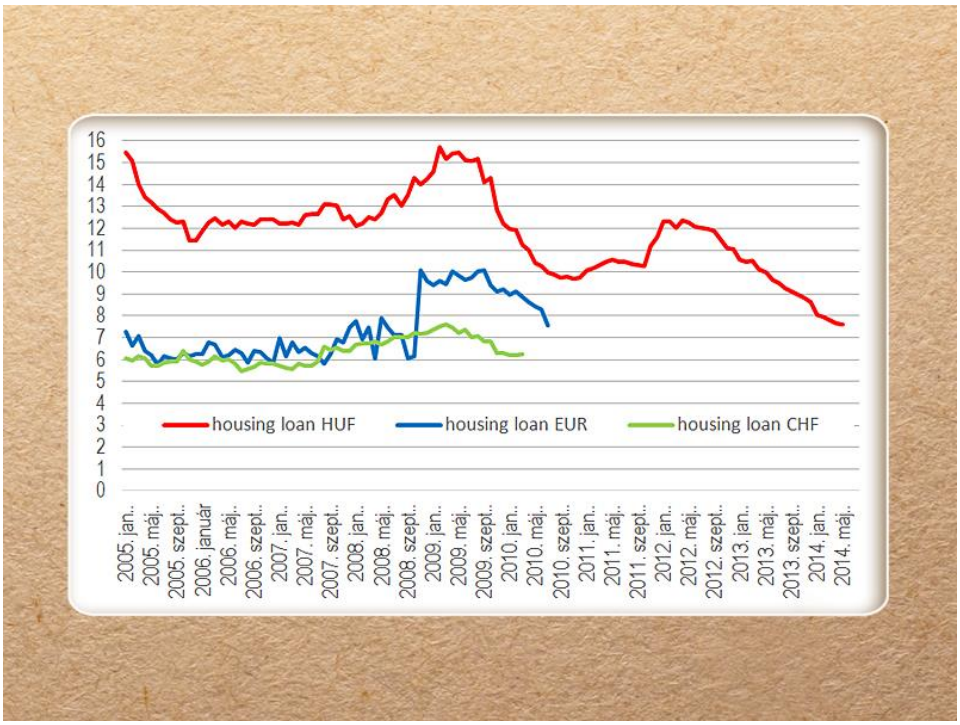

Figure 32: Changes in average APR (%) of housing loans to households

Source: edited by the author on the basis of MNB data

Thus main elements of the APR are: interest, cost management, credit appraisal fee, value-charge estimation, on-site visits (in case of apartment building), fees, fees paid credit intermediary fee for land registration process. In the calculation of the APR is not taken into account prolongation (maturity extension) costs, on interest on late payments, notarial fee, costs and other expenses incurred in payment of the account

[17] 83/2010. (III. 25.) Govt. Regulation on determining the annual percentage rate, calculat ion and publication.

and the use of cash means of payment (if having an account is not required by the lender in the credit-agent contract). it is important to emphasize, however, that in the case of floating rate loans, of the APR does not reflect the interest risk in the case of foreign currency loans and foreign currency risk.

In spring 2012 several legislative amendment also came into force aiming at making the pricing of credit schemes more transparent for customers. The most important change is that the maximum value of the APR rate was set: in the case of new contracts, the financial institutions can not provide a loan to consumers if the value of APR of the loan is more than the base rate increased by 24 (for example mortgage loans, car loans) or 39 (for example overdrafts, hire purchase, credit card) percentage points. When calculating the interest rate to be payed on the first day of the month preceding that calendar year in which half the base rate is a standard for the entire duration of that half calendar year.

A further change is that changing in the interest rate is required to be determined by credit institutions in advance in residential mortgage loan contracts contracts when signing them:

- interest rate must be connected to the reference interest rate (for example BUBOR, EURIBOR or CHF LIBOR, or 3-year or 5-year government bond yield plus the the spread depending on average customer rating); or
- fixed interest rate is to be applied (for a 3, 5 or 10 year interest period).

A financial institution basically can change the interest margin to be negative for the client if a monthly installment payment of the customer is is past due more than 45 days.

A benefits of the new regulation for corporate lending right and the Western European retail practice is that in the event of a reduction in the reference interest rate the loan interest rate also decreases and thus together with it the size of the installment.

8.2.3 Neutral bank transactions

Neutral bank transactions in the financial statements do not concern either the asset and liability sides of the credit institution, no claim, no obligation arise. Activities, such as currency exchange, a safe service, investment, asset management and other banking advice, and especially the cash flow payments belong to this category.

Cash flow management (as the sum of currency movements between money owners) belongs to the oldest activities of credit institutions.

- Domestic regulation is represented by two different levels of regulatory elements[18]:

- Act. LXXXV of 2009 on the provision of payment services which inlcudes among other things a law that rules the payment account, payment service providers to meet the necessary requirements of agents, and the execution of payment transactions is determined by the legal aspects, and
- 18/2009. (VIII.6.) MNB regulation of 2009 on payment transactions, which determines the provision of payment services, and use of specific terms and conditions, as well as arrangements for each payment methods.

8.2.3.1. Types of payment

Three major groups can be distinguished in the payment transaction used in payments:

- payments between payment accounts (transfers, direct debits, credit, initiated by the payer's payment to the beneficiary),
- cash payment related to the payment accounts (issuance and redemption of check for cash payments, to cash deposit payment account, from cash deposit payment account),
- payment without payment account (cash transfer).

8.2.3.1.1. Payments between payment accounts

In case of **transfer,** the payer instructs the payment service provider to transfer (settle) a set amount against payment account to the payee's account. It may be submitted on paper, by phone, or via the Internet, knowledge of the bank account number (number of 16 or 24 characters) is the condition of the order.

The performance of the transfers are typically done in two business days, but important change was the development of the domestic payment system in the summer of 2012, with the result that the forint transfers arrive electronically submitted to the payee's payment service provider within no more than 4 hours.

Three main types of transfer are group transfers, regular transfers and the official transfer and transfer decisions. Group transfer can be highlighted: the payer can submit transfer orders on the basis of the agreement with the payment service provider to different beneficiaries

[18] jointly implemented transposition of the policy 2007/64/EK on payment services in the i nternal market directives into national law.

bundled in groups at a specific place and in manner. (So an employer may transfer wages of several empoyees in one order.)

In case of **direct debit order** the beneficiary lays a charge on the payment service provider managing the payment account to take the amount determined to the benefit payment account under the authorization of the payer, against payment account. Domestic legislation defines six categories. An outstanding one is direct debit, in which case the beneficiary of the same legal title, debit orders for payment accounts in different payers expense bundles, submits by groups. (So a gas company can have the value of a multi-client invoice in one order.)

In the event of a **letter of credit** the payment service – in the order of the defendant underlying transaction – on its own behalf shall be liable to pay a set amount if documents are relevant and the beneficiary submits documents within a specified time.

Typically, it is a form of payment used in foreign trade, it is secure but also expensive.

Payment card payments belong to the group initiated by the payer's payment by beneficiary. A **payment card** (bank card) issued by a card issuing company (for example Visa, Europay, American Express, etc.) is equivalent of an international standard 85x54 mm plastic card as a means of payment which provides services like cash withdrawals, purchases, payment of the value of a service. It should be stressed that the card is owned by the issuer's payment service therefore the client using the card is only a card holder.

In case of a payment by a payment card after verification of the collateral, the merchant sends the transaction details to the taker, who shall forward it to the clearing system operated by card companies. After clearing and settlement between the merchant and the cardholder's bank the merchant's bank credits the merchant’s account with the amount of the purchase. During the system operation two types of costs must be calculated:

- the merchant fee, which is payed by the merchants to service providers contracted to accept payment cards; and
- the interchange fee, which is calculated as a percentage of the amount of the purchase value payed by the accepting payment service provider to the issuer of the card used for payment.

Payment cards can be categorized on the basis of many aspects (media, target, etc.), the most important is a classification on the basis of the load.

Debit card is a card debited when used, which is debited during a transaction or shortly after and it can only be used if it is coverd (by a deposit). Two types of deferred payment cards can be distinguished: credit

cards and debit cards. With respect to the credit card already shown, the debit card differs from it that all the money used has to be paid back in full after receiving the statement of account. Yet another pre-paid card is to be mentioned, in which case, the amount stored or prepaid on the card or on the account belonging to it, can be used for payment purposes (for example a fuel card).

8.2.3.1.2. Cash payment related to payment accounts

In case of checks – which is both a method of payment and securities – issued on the basis of a check contract with the payment service, a check addressed to the payment service provider will be cashed (fulfiled) by the issued account holder up to an amount indicated on the check which is covered within the prescribed period.

Form of payment used less in our country– but it is often used in several European countries and the USA.

Payments to and from payment accounts can only be accepted by the payment service account manager by a form containing specific data defined for this purpose (for example certificates of deposit and withdrawal.)

Payments charged to the bank account can also be made by using cash withdrawal voucher booklet, or by mail, postage payment vouchers (domestic postal money order, or colloquially postal pink check).

8.2.3.1.3. Payment without a bank account

The **cash transfer** is a transfer of money without using a bank account in which the amount is made available to the beneficiary by the payment service provider by a cash payment at the cashier's or by post (delivery). Postal money orders – known as yellow postal checks – are widely used and popular means of payment among the domestic population, often used for collecting public utility fees, monthly installments and local taxes.

8.2.3.2. Types of payment systems

The payment system is part of the financial infrastructure including payment instruments, banking procedures and interbank payment systems, which together make it possible to conduct financial transactions carried out between different actors in the economy.

Two types of payment systems are distinguished:

- In case of a **gross settlement system** clearing and settlement takes place at the same time, through continuous (real-time systems) or delayed (at a certain time of a business day, for example at the end of the day) settlement; and

- In the case of a net settlement system clearing and settlement take place in two stages, according to specific rules (requires less technical liquidity, but the risk of non-payment is greater).

Turnover in the domestic payment system can be fulfilled through multiple systems:

- a payment system for large, urgent transfers of forint is the Real-time Gross Settlement System (RGSS),
- small amounts of HUF transfers and collections are accounted by the Inter-bank Clearing System (ICS),
- a settlement of payments by card transactions is done in the international system of credit card companies (Visa, MasterCard),
- postal payment methods are typically made in the Post Office Giro (POG), and
- capital market transactions take place in the securities settlement and clearing system operated by KELER. Összefoglalás, kérdések

8.2.4 Summary

Bank transactions can be divided into three groups: active, passive and neutral banking. Passive banking serves the bank's resource acquisition, there are also other sources in addition to the collection of deposits particularly discussed.

Loans are in the centre of active banking and they can be grouped according to various aspects. The lesson focused on the examination of the main types of retail loans addressing risks of foreign currency loans and prolbems arising from them, emerging in recent years, threatening financial stability as well as current treatment methods for managing them. The process of lending can be divided into several steps, of which the most important is the credit rating. Neutral banking focuses on three main categories of payment methods, and this also includes parts of the payment system providing support for them.

8.2.5 Self-test questions

Cassify and characterise bank transactions!

Describe and characterise three types of combined savings!

What is the AER? Explain the meaning and essence of the index!

Classify and describe loan guarantees!

Demonstrate and describe types of retail loans!

Describe and characterise regulatory measures limiting further household debts!

Show the debt rating as a major step in the progress of lending!
Describe the content of the APR, and its change in spring 2012!
Demonstrate and describe ways of payment between payment accounts!
Characterise the payment card as a payment method!
Describe types of payment systems!
List elements of the national payment system!

8.2.6 Practice tests

Which is not a passive banking transaction of the following?

- Deposit collection
- Lending
- Bond issue

In case of term deposits the owner may decide on its use at any time, that is an amount of money put on the account earns interest without depositing.

- true
- false

In case of interest-band the limit specified for each rate is paid for the total amount of the deposit.

- true
- false

Which of the following is adapted to compare different deposit offers?

- APR
- EBKM
- BUBOR

The following retail loans which are typically short-term?

- personal loan
- home purchase loan
- overdraft

Foreign currency loans and interest repayments is determined in foreign currency, the amount of these are converted to HUF by creditor financial institutions.

- true
- false

The main objective of the client's rating is
- continuous monitoring of the debtor's financial situation in order to fulfill its obligations.
- assessment of the creditworthiness of the debtor.
- the calculation of the annual percentage rate.

Which is not an element of the APR?
- credit evaluation fee
- default interest
- handling fee

In new mortgage loan contracts financial institutions can not provide the consumer a loan whose APR exceeds the base rate increased by 39 percentage points.
- true
- false

Which does not belong to neutral banking?
- A safe service
- Interbank borrowing
- Payment transactions

Which does not belong to the group of payments between payment accounts?
- Transfer
- Cash transfer
- Credentials

All transfers arrive at the payee's payment service provider within no more than 4 hours.
- True
- False

How is a cash payment method called with which utility debts of individuals are typically settled?

- Collection order
- Cash-transfer orders
- Letter of credit

Which is the payment card type, in which case, for the amount of the issuer in accordance with the customer's creditworthiness provides a kind of revolving credit charging interest?

- Debit card
- Credit card
- Prepaid card

Which statement is true?

- ICS is payment system for large, urgent forint transfers
- Accounting postal payments are typically made in the Post Office Giro
- Accounts of payment card transactions are performed int he KELER system.

Mock exam

Which payment method has the feature that the payer instructs the payment service provider to transfer a specific amount charged to the benefit payment account of the payee's account?

- transfer
- direct debit order

Which index can be determined as the ration of the credit value and the price of the property?

- Income ratio installment indicator
- The loan rate
- BUBOR

Final exam A

For which bank transactions is that true that they serve for fundraising for the bank, and are intended to involve funds into the balance sheet in return for a commitment?

- Active banking
- passive banking
- neutral banking

The merchant fee is a percentage of the amount specified in the purchase paid by the accepting payment service provider paying for the card issuer.

- true
- false

Mock exam B

Which combined saving has the feature that it includes a term deposit and an investment product (for example share)?

- Indexed deposit
- Deposit product combined wit an investment product
- Deposit of depending interest

The main objective of the customer rating is to monitor the its financial situation continuously in order to see if debt obligations are fulfilled.

- True
- False

9. INTERNATIONAL FINANCE

9.1 OBJECTIVES AND COMPETENCES

The international financial system underwent a fundamental change in the 20th century, after the break-up of the Bretton Woods system of relatively fixed nature in 1970 exchange rates became hectic which were confirmed by the emerging financial crisis. Changes in exchange rates, however, do not only affect the public debt or the management of companies involved in the export and/or import activities but they also have an impact on the financial decisions of households.

The purpose of the lesson is to discuss fundamental relationship in international finance and the development and institutions of the international financial system. The student learns about the concept of the balance of payments, features, parts, or the difference between the currency and foreign currency, and types of exchange rates. Be able to describe briefly the main stages of the development of the international financial system and the main features of its existing dominant institutions.

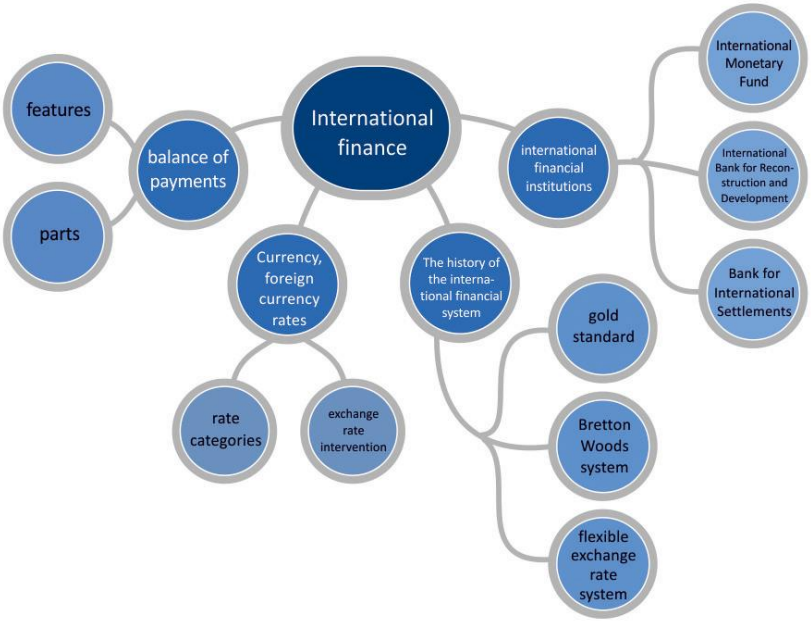

Figure 33: Structure of the lesson: International finance

source: edited by the author

9.2 CURRICULUM

9.2.1 Balance of payments

The balance of payments is a bilateral statement that summarizes a country's real economy and financial transactions conducted over the rest of the world providing important information for policymakers about external economic relations of the nation and about the international economic situation.

For comparability the (international) balance of payments is based on an international methodological framework, drawn up by the International Monetary Fund (IMF), on the Balance of Payments Statistical Manual (BPM).

The first edition was published in 1948 and since then due to changes in the international financial system new versions have appeared. The fifth edition published in 1993 brought changes also in basic definitions and categories[19], the current, sixth edition published in 2009, harmonized with the structure and concepts of national accounts (SNA) was less radical[20] in this respect. Due to the international accounting principles in the last decades balances of payments made by some countries have become increasingly standardized.

- Sixth Edition of the IMF's Balance of Payments and International Investment Position Manual (BPM6)

22. http://www.imf.org/external/pubs/ft/bop/2007/bopman6.htm

According to the definition the balance of payments measues commodity and property transactions in value terms between residents and non-residents in relation to given period.

In terms of related concepts:

- a resident is an organization and an individual whose direct economic interest is primarily linked to our country's economic area (Thus, not only residence and nationality matter);
- commodity transactions are export and import of goods and transactions;

[19] With regard to categories for example until 1993 the balance of payments was divided i nto two parts, the current and capital account.

[20] It is required to be applied uniformly in European Union countries from 2014 (with a ren ewed European sector accounts system – ESA 2010), in case of the domestic balance of payments statistics data publication took place in June 2014 for the first time, in acco rdance with the new method.

- property transaction: international buying and selling of money, securities and other financial instruments.

9.2.1.1. Account features

Typically, transactions are made in different currencies therefore (in a predetermined manner) translated at the appropriate rate the compilation of the balance sheet is set in foreign currencies (in euro in our country) defined by the international economic position and the foreign trade.

An important feature of the balance of payments is the **traffic (flow) type approach** that is, a statement is for a period and not for a calendar day like the accounting balance. The period is typically one financial year, which is not necessarily the same as the calendar year (for example in the case of the USA between 1 July and 30 June) but statistics are typically published quarterly.

Another important feature of the current account is **the principle of double-entry bookkeeping:** each transaction is recorded in statistics in two places, on the one hand a business event, on the other hand financing related to it with an opposite sign (the command line with a positive, the debit item with a negative sign).

The sign indicates that the transaction is a source of funding for the country or a financing need. It also follows from the principle that the current account is always closed with a zero balance by definition, and deficit or surplus can be understood only in the context of one of its sub-accounts. Thus, it is meaningless to talk about a deficit of the balance of payments many typically think of part of the balance sheets, of the current account.

As in practice the balance of payments compilation based on different sources of information therefore its the balance of payments statistics includes a so-called **errors and omissions line,** which subsequently allows the matching of debit and credit sides.

- EU balance of payments statistics (Eurostat):

23. http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Balance_of_payment_statistics

- Domestic balance of payments statistics (MNB):

24. http://english.mnb.hu/Kiadvanyok/report-on-the-balance-of-payments

9.2.2.2. Parts of the balance of payments

One of the most important part of the balance sheets is the **current account balance**. It can be divided into three major parts:

- goods and services which include two and a further sub-account, the trips in accordance with designation (instead of the former tourism);
- primary income which includes income from employment (amounts received or paid as salary), investment income (direct, portfolio and other investments) and other items; and
- secondary income (previously unreturned current transfers and a new category of personal transfers).

The current account balance shows any deviation between the income and the domestic consumption produced in that period: surplus means the same amount of net capital exports, the deficit means the same amount of net capital imports.

Heading	Fourth quarter of 2013 (million euros)
1. Current account balance (1.A.+1.B.+1.C.)	917
1.A. Goods and services	1.552
1.B. primary incomes	-674
1.C. secondary incomes	69
2. capital account	1.590
3. financial balance sheet (3.1+3.2+3.3+3.4+3.5)	1.909
3.1direct investment	-1.636
3.2. portfolio investment	-1.438
3.3. Financial derivatives	-185
3.4. other investments	1.830
3.5. Reserve assets	3.338
4. errors and omissions balance	-597

Table 4: Structure and details of the balance of payments in the fourth quarter of 2013

source: edited by the author on the basis of KSH data

Capital account includes the turnover of non-produced non-financial assets (for example transactions related to intellectual property) and capital transfers (unilateral transfers in the form of money or property).

Sub-balances of the financial account balances:

- direct investment (foreign investments seeking to acquire a lasting interest in a company);
- portfolio investments, which include financial instruments used in stock exchanges and other financial markets;
- Financial derivatives (derivative, i.e. swaps and futures options);
- Other investments (for example commercial loans outside the group of companies);
- Reserve assets (foreign currency assets controlled by the central bank and immediately available).

The financial balance is a mirror image of the combined balance of the current account and the capital account[21]:

- if the combined balance of the current account and the capital account of payments is positive, then we are talking about net financing capacity[22];
- if the combined balance of the current account and the capital account of the payment is negative, then we are talking about net borrowing requirement.

9.2.2 Currency, foreign currency and exchange rates

Currency is legal tender money of a country used in the international trade, money of a country that appears in a physical form. Foreign currency is accounts receivable on the currency, so account money[23].

The exchange rate is some currency expressed in a price of a foreign currency, which can be quoted in two forms:

- **direct quotation** when the price of a unit of a foreign currency is given in the domestic currency (for example 300,15 HUF/EUR); or
- **indirect quotation** when the price of one unit of the domestic currency is given in a foreign currency (for example 0,0033 EUR/HUF).

Countries are generally characterised by direct quotations (also called quotations), indirect quotation is applied by Britain and the European Central Bank. (The two methods of quotations are mathematical inverses of each other).

[21] In theory, in practice the difference between them is the balance of errors and omission s.

[22] Lending from the top, the financial account of the bottom-up financing capacity.

[23] The Anglo-Saxon literature makes no distinction between them, foreign currency is used for both terms.

Thus, we can interpret the exchange rate for each currency and foreign currency:

- the currency exchange rate is the price of a currency unit expressed in another currency;
- the exchange rate is the price of a currency expressed in another currency unit volume.

The exchange rate is higher than the foreign exchange rate, which is due to costs of the transport and handling fees paid by financial intermediaries.

Moreover, not only one exchange rate and foreign exchange rate can be met in practice: There are purchase, sales and average rates. the difference between the two is the spread (or marge), which covers the costs and benefits related to the financial intermediary conversions.

Whereas rates of certain financial intermediaries are different, so the MNB central rate is important to economic operators. (The central bank determines the official EUR/HUF exchange rate every working day at 11 o'clock[24]).

[24] From data of EUR/HUF exchange rates provided by the ten most active domestic credi t institutions being involved in foreign exchange market activities USD exchange rate da ta, omitting the largest and the lowest 2-2 values an official exchange rate of EUR HUF is the arithmetic average of the day. Determination of the Forint to Dollar (USD/HUF) ex change rate is based on cross rate of the EUR/HUF and of USD/HUF, that of the other f oreign exchange rates on the basis of the USD/HUF and the cross rates in the internati onal currency market.

Name	Notation	MNB average rate	OTP average rate	OTP currency buying rate	OTP currency selling	OTP foreign currency buying rate	OTP foreign currency selling rate
Australian dollar	AUD	192.36	192.05	185.71	198.39	190.13	193.97
Swiss franc	CHF	242.14	242.26	234.27	250.25	239.84	244.68
Chinese Yuan	CNY	35.62	35.66	-	-	35.3	36.02
Euro	EUR	296,91	297.2	288.88	305.52	294.23	300.17
English pound	GBP	356.76	356.74	346.75	366.73	353.17	360.31
Russian ruble	RUB	6.55	6.57	6.22	6.92	6.5	6.64
USA dollar	USD	215.67	215.88	209.84	221.92	213.72	218.04

Table 5: Some quotations on 31 December 2013, at the MNB and OTP Bank

Source: edited by the author on the basis of MNB and OTP data

Looking at concepts of the international monetary fund two additional rate categories are worth pointing out.

The **effective rate** is a multilateral measure which shows changes in the value of the domestic currency against the currency (according to their importance natural weights are assigned to them) of the country's most important trading partners. The change can be interpreted taking into account changes in trade relations (and in weights). A country's competitiveness can be inferred from changes in the **real effective exchange rate –** that is the inflation-adjusted value of the difference of the effective exchange rate.

The currency and the foreign currency exchange rate – at least for a flexible exchange rate system, see e.g. US dollar or euro – is of market category and constantly changing.

Changes in exchange rates for households, businesses, financial institutions and other economic agents depend on the intentions of buying and selling that is on the supply and on the demand.

Functioning of foreign exchange markets – which are basically of OTC type, interbank markets (or also known as forex, or FX markets) are characterised by massive traffic, superior liquidity of the market, a large number of players and the geographic dispersion therefore they are close

to the concept of a perfect market in the economic sense. Due to the huge traffic the development of supply and demand, and thus of the exchange rate typically none of the market operators can permanently affect except maybe a few greater central banks (see foreign exchange interventions).

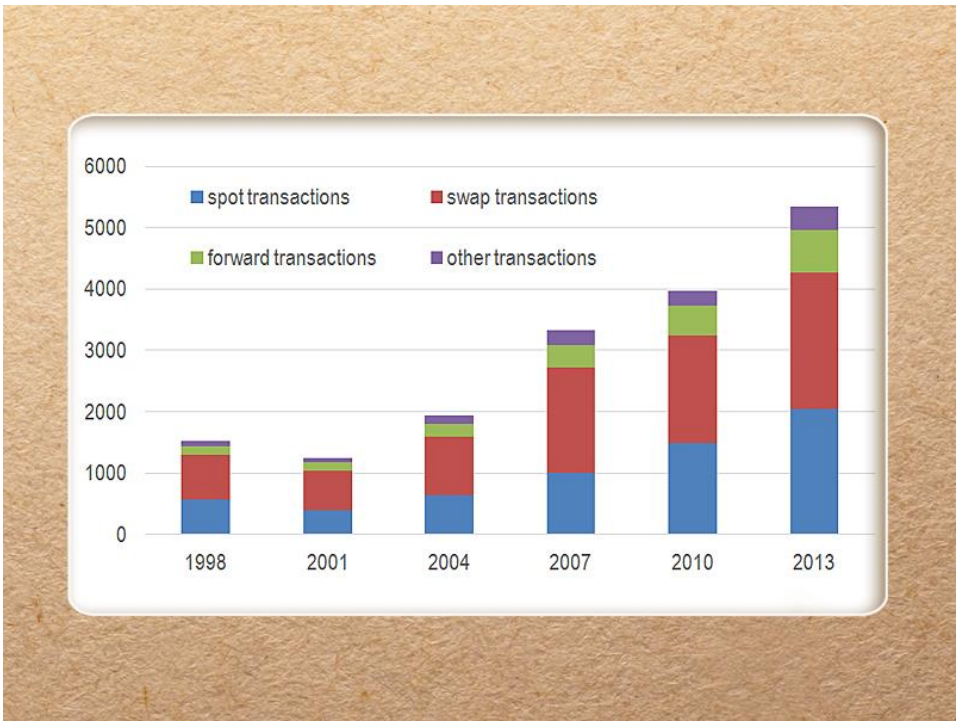

Figure 34: Turnoveof the world's daily global foreign exchange market (average day in April, billion USD)

Source: edited by the author on the basis of BIS data

In case of non-flexible exchange rates the central bank can intervene into exchange rates in two ways:

- In case of a devaluation a foreign currency unit will be equal to more domestic money (for example instead of 300 HUF/EUR it will bethat 315 HUF/EUR) that is, the exchange rate increases;
- In case of a revaluation a foreign currency unit will be equal to less domestic money (for example instead of 300 HUF/EUR it will be 280 HUF/EUR) that is the exchange rate is decreasing.

Devaluation is a favoured instrument of economic policies because it stimulates exports (the exporter company grow revenue or possibly reduce

selling prices) and curbs imports (an imported foreign product of EUR 1 becomes more expensive, instead of HUF 300 it will be HUF 315) hence making a positive impact on the balance of payments structure. Due to the rising cost of imported products (depending on the role of the consumption structure), however, it generates inflation.

In domestic context two further important effects of the weakening of the (market-based) exchang rate or of its possible devaluation should also be emphasized: on one hand, the public debt would increase (or its share based on foreign currency) and would negatively affect the domestic foreign currency debt problem area.

(However, by turning funding from the European Union into HUF more projects could be financed.) As a result, the evolution of the exchange rate assessment – even for economic operatotrs – is a very complex area of economic policy.

9.2.3 The history of the international financial system

The **international financial system** is a set of rules by which individual countries carry out monetary transactions with each other.

In another approach – in a systemic approach – (Vigvári, 2013)

„The international financial system means a totality of linkages, processes, interactions of components of the financial system (legal means of payment, instruments and information) and of subsystems realised outside the nation states and currency zones and the structure of these relations, processes and interactions."

The gold standard system is considered to be the first phase of the international financial system formed in the last third of the 19th century operated from 1871-től[25] to the first world war. Main features of the system:

- gold parity must be recorded for each currency (for example 1 ounce of gold was equal to 86.58 Deutch marks and to 20.67 US dollars and thereby 1 US dollar was equal to 4.19 Deutch marks), which are
- reserved by the states and in addition they undertake to buy or sell gold against the domestic currency.

So the money issue depends on the gold stock, the stability of exchange rates was ensured by the gold automatism through which exchange rates could fluctuate between the upper (export) and lower

[25] In Germany the price of gold was first recorded in 1871, after the Franco-Prussian then most countries joined the system in the 1870s (our country only in 1892 through the mo narchy).

(import) gold-points designated by shipments of gold between gold countries in a not too broad band.

The system resulted in the stability of rates and prices, but with it narrowed the scope of monetary policy in member states. Its operation was ended by the First World War, or the uncovered monetary emission caused by military expenditure. Although attempts were made to restore it in an altered form after the war but it could not work permanently and its crisis was only strengthened by the devaluation race due to the Great Depression between 1929 and 1933 (for example in 1931, the pound sterling by 30%, in 1934 the US dollar was devalued by).

The second phase of the international financial system was the **Bretton Woods**[26] **system** operated between 1945 and 1971 created after the Second World War under the command of the US strengthened during the Second World War (in 1946, it had 71% of the world's gold reserves. Main features of the system:

- mechanism for provisioning reserves;
- fixed exchange rate system;
- reduction of foreign exchange restrictions (convertibility guarantee);
- build-up of financial institutions (for example IMF, IBRD)

Gold parity of the dollar was set under a fixed exchange rate system (1 ounce of gold is equal to 35 US dollars), the US undertook to be willing to buy and sell gold on the parity for US dollars against the other Member of States. Other countries fixed the parity of their currencies and that of the US dollar which had to be kept (central bank interventions) within a narrow (± 1%) fluctuation band).

Until 1958 the system worked smoothly but circumstances changed from 1960s. The system was based on the US current account deficit and the adjastment of its monetary policy to the demand for liquidity of the world economy.

Due to the Cold War and the Vietnam War rising government expenditures resulted in the weakening of the US dollar, therefore the USA suspended the convertibility of the dollar into gold to curb a further large-scale outflows of the US dollar in August 1971.

Although in December 1971 the ten most developed capitalist countries attempted to settle the situation (the US dollar was devalued, the parity was raised to 38 US dollars, and the fluctuation band was extended to

[26] Ezen amerikai kisvárosban tartották 1944. júliusában a rendszert megalapozó pénzügy i konferenciát.

±2.25%) the US dollar was devalued again (by 11%) in February 1973 then from March developed countries shifted to general floatation.

These measures also officially meant the end of the Bretton Woods system.

From 1973 (practically from 1971) a **flexible exchange rate system** is applied between the world's leading financial currencies (US dollars, Japanese yen, and the common European currency) with repeated interventions. The international debt crisis occurring at the end of the 1970s, and the more and more frequent financial crises (for example the Latin American in 1982, or the Mexican in 1994), however, demanded a regulation and a global supervision of the international financial system confirmed by financial integration efforts over the last few decades.

9.2.4 International Financial Institutions

International financial institutions evolved substantially after 1944, and today largely influenc financial relations between the countries, their role is even more intense after the 2008 crisis.

The **International Monetary Fund** (IMF) founded in 1944, currently has 188 member countries, is one of the central institutions of the international monetary system.

Objectives have not changed since the establishment, however, its operation continually adapted to changes in the world economic situation. Three main pillars of its activities are surveillance of economic policies (financial analysis of economic processes and consultation), technical assistance and lending countries experiencing balance of payments problems.

A basic operation of the Member States is financed by contributions, quotas determined by the economic and financial situation which also define the voting weight of member countries.

The base of its own currency is SDR created in 1969 (Special Drawing Rights) which is a unit of account, financial account, the value of it is determined by reference to a basket of currencies (from 2011 it includes 41.9% US dollar, 37.4% Euro, 11.3% English Pound and 9.4% Japanese yen) in which the weight of currencies is weighted on the basis of the role of international trade.

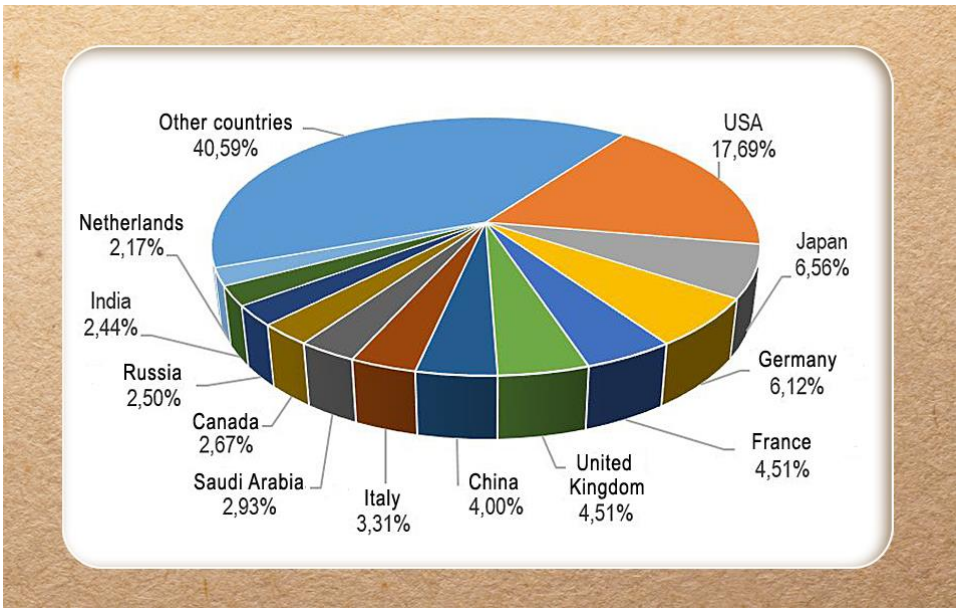

Figure 35: Quota shares of the 12 largest of member countries in September 2014

Source: edited by the author on the bases of IMF data

After the 2008 crisis, mainly the role of credit strengthened, in spring of 2009, the IMF's resources were tripled (up to about $ 750 billion) by a decision of the G20 summit.

A loan is disbursed in the framework of a credit agreement in which political economic measures taken by a given country are set.

Among loans be divided into two major groups (ordinary and special credit lines) new loans also appeared in the last decade and there are three types of credit worth pointing out:

- the **standby credit line** existing since 1946 developed more flexible due to the crisis (Stand-by Arrangement, SBA) in order to solve the short-term balance of payments problems, the lending period is typically 1-2 years, repayment is 3.5-5 years (for example a framework provided for Iceland and Greece in 2008);
- the **flexible credit line** (FCL) introduced after 1997 aimed to prevent crisis and to handle it with respect to countries with strong economic foundations (for example in the case of Poland in 2009);

- the **precautionary credit line** (PCL) which is offered to countries with sound economic foundations, but without fulfilling credit conditions of the flexible credit line.

  Hungary is a member of the International Monetary Fund since 1982 and since joining we have used instruments of the Monetary Fund as a contingency fund assets and as extended credit agreements 11 times.

- The last borrowing[27] took place on November 6, 2008 after the outbreak of the financial crisis: approx. 73% of the amount of SDR 10.5 billion (EUR 12.3 billion) standby credit facility was used. The repayment began in early 2012 after a grace period of 3 years 3 months, and at the beginning of August in 2013 following an early repayment all loans were repaid. In 2012 the the possibility of a new credit line raised but due to the improved market conditions a new credit agreement was not concluded.

The main objective of the **International Bank for Reconstruction and Development**[28] founded – initially on a temporary basis – in 1945 was to fund reconstructions and developments after the Second World War and from 1960s onwards is essentially to provide sources for restructuring and infrastructure development programs. Its resources are ensured by issuing bonds in international money and capital markets. Hungary became a member in 1982 and since then in the framework of more than 40 conventions of $ 3.6 billion dollars various programs have been financed (for example agricultural development or industrial restructuring).

Bank for International Settlements (BIS) was founded in 1930 originally with the purpose of carrying out obligations of the German reparations after the First World War. Now the main organiser (''bank of banks) of the international monetary cooperation among central banks carries out economic and monetary research activities and data collection and as the operator of the Basel Committee on Banking Supervision engaged in consulting and coordinating activities related to the regulation of banks.

- The IMF's website of:

25. http://www.imf.org/external/index.htm

[27] Interesting to note that prior to the economic policy measures in 1995 (''Bokros" packag e) the credit line (264 million SDR) conluced as a precaution finally has not been drawn at all.

[28] Together with the International Development Association as the World Bank and with t hree other financial institutions it is also known as the World Bank Group.

- The World Bank's website:

26. *h*ttp://www.worldbank.org/

- Website of BIS:

27. http://www.bis.org/index.htm

9.3 SUMMARY, QUESTIONS

9.3.1 Summary

An important instrument of the development of international finance is the balance of payments and changes in the balance sheet of it shows the the development of the country's external economic relations.

The exchange rate is a key external variable of an economy and it has an impact on the evolution of the financial situation of economic operators.

In addition to basic concepts the lesson presented the main stages of the development of the international financial system from the 1870s to the present day highlighting the main characteristics of the gold standard system, the Bretton Woods system and of a flexible exchange rate regimes.

Among institutions of the international financial system, the operation of the IMF, IBRD and BIS was discussed highlighting the IMF loan constructions appreciated after the financial crisis and the relationship of Hungary and the IMF.

9.3.2 Self-test questions

Describe and characterise the balance of payments!

Describe and characterise parts of the balance of payments!

Define and describe the two main ways of intervention by the central bank into exchange rate developments!

Characterise the gold standard!

Characterise the Bretton Woods system!

Describe the operation of the International Monetary Fund!

Present the operation of the International Bank for Reconstruction and Development and of the Bank for International Settlements!

9.3.3 Practice tests

The current account surplus represents the same level of net capital imports.

- True

- False

Buying and selling of currencies in terms of trade carried out mainly

- On the OTC market.
- In the stock exchange.
- In a common international payment system operated by the central banks.

Due to a revaluation import becomes more expensive in the domestic currency or export prices in foreign cash may fall but in domestic money – increasing the revenue of companies – they may even grow.

- True
- False

Which is not one of the features of the Bretton Woods system?

- Cutback on foreign exchange restrictions
- flexible exchange rate system
- build-up of international financial institutions

For which international financial institution is it true that the Basel Committee on Banking Supervision as an operator engaged in consulting and coordinating activities related to the regulation of banks?

- International Bank for Reconstruction and Development
- International Monetary Fund
- Bank for International Settlements

Mock exam

The current account deficit can be divided into three major parts:

- goods and services, capital account, the central bank reserves
- balance of secondary income, portfolio investment, errors and omissions line
- goods and services, primary income, secondary income

A standby credit line introduced in 1997 after the IMF loan product aimed at the prevention and management of the crisis for countries with strong economic foundations.

- True
- False

Mock exam A

For which rate statement is it true that the price of an unit of the domestic currency is given in a foreign currency?

- Direct quotation
- Indirect quotation
- Effective exchange rate

If the balance of the current account and the capital account of payments is positive then we are talking about net borrowing requirement.

- True
- False

Mock exam B

Which is not characteristic of the balance of payments?

- the traffic (flow) type approacha
- shows the effect of the central bank's measures on price stability
- the principle of double-entry bookkeeping

In the gold standard system the gold parity for each currency was recorded under which the participating countries undertake to buy or sell gold against domestic currency.

- True
- False

10. FINANCIAL AND ECONOMIC INTEGRATION IN EUROPE

10.1 OBJECTIVES AND COMPETENCES

The greatest currency exchange in history during which more than 15 billion banknotes and 51 billions coins substituted 9 billion banknotes and 107 billion coins used nationally took place in 2002. The process which started at the beginning of September 2001 and concluded at the end of February 2002 represented a significant milestone in the history of European integration. European integration has been a major priority since 1957 and despite the recent financial crisis it has not lost its momentum in the past 12 years. However,the financial crisis of 2008 has highlighted the weak points of a shared economic policy and currency and even the option of Greece leaving the Eurozone emerged.

The lesson focuses on the European economic integration process while introducing other forms of economic integration. Students will become familiar with the types of integration, the evolution of European integration, the steps made for the introduction of uniform monetary policy and the introduction of the euro. Students will understand the functioning of shared monetary policy and the European efforts promoting integration since the crisis of 2008.

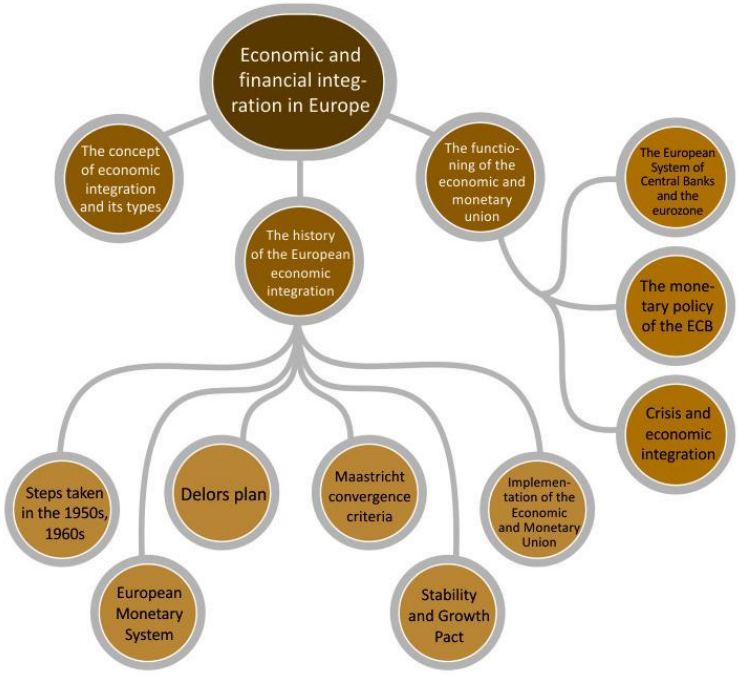

Figure 36: Economic and financial integration in Europe

Source: Author's own compilation

10.2 CURRICULUM

10.2.1 The concept of economic integration and its forms

The process of economic integration, a formation of a close economic cooperation between participating countries within a given framework, intensified throughout the 20th century. Economic integration can take place in many forms.

- *Preferential zones:* a loose form of cooperation during which the participating countries provide favored treatment to each other;
- *free trade zones:*, a form of cooperation in which the participating countries eliminate trade barriers but retain their independent customs policies. (i.e European Free Trade Association EFTA established in the 1960s and the North American Free Trade Agreement established in 1994);

- *customs union:* a form of cooperation in which the participating countries maintain a uniform customs policy against third countries in order to facilitate the free flow of goods and services;
- *common market:* a form of cooperation assuring the optimal allocation of resources via the free flow of all production factors (goods, services, capital, and labour) among the participating countries;
- *economic union*, a form of cooperation realizing the goal of uniform economic policies;
- *financial union:* a form of cooperation with uniform financial policies and uniform currency.

An additional development is the political union taking such forms as the alliance of states, confederal or federal systems.

10.2.2 The history of European economic integration

10.2.2.1The political developments in the 1960s

The first step of the European economic integration was the three treaties signed by six European countries[29] in the 1950s:

- The European Coal and Steel Community (established by the Treaty of Paris,1951)
- The treaty establishing the European Atomic Energy Community (1957)
- The Treaty of Rome establishing the European Economic Community in 1957

The main objective of the EEC was the development of economic integration entailing shared political initiatives and a customs union realized by 1968. The common market was established after a twelve year transition period. At this point the idea of common currency was not included in the plans and economic cooperation was primarily realized on the level of basic principles including:

- *coordinated economic policies* in order to promote the implementation of the Treaty
- the protection of internal and external financial stability of member states

Furthermore, two committees were established as well:

[29] France, Germany, Italy, Belgium, Netherlands, Luxemburg

- The Monetary Committee established in 1958 was in charge of the analysis of economic and financial processes
- The Committee of Central Bank Presidents established in 1964 was in charge of the coordination of monetary strategies.

The first milestone on the road to common currency was the Marjolin memorandum accepted in 1962. The Marjolin memorandum urged the conversion of the customs union into an economic union with set currency or exchange rates by the end of the 1960s. However, due to the wide spread stability of the exchange rates guaranteed by the Bretton Woods system the cause of the common currency did not progress any further.

Since the international arena experienced significant changes in the end of the 1960s, integrational aspirations gained additional momentum. In 1969 the European Commission aiming to promote the introduction of shared currency presented a proposal (the so-called Barre plan) leading to the formation of an expert group. The group led by the prime minister of Luxemburg, Pierre Werner was authorized to develop a plan for the gradual introduction of the economic and monetary union.

The **Werner Report** published in 1970 elaborated a criteria system for the gradual introduction of the economic and monetary union by 1980 as a target date. The Report called for:

- **full convertibility** the free exchange of national currencies in adidition to liberalization of the flow of capital;
- **narrowing, then fixing exchange rates**: in order to introduce a common currency the exchange rates have to be permanently fixed;
- **the formation of a monetary reserve fund:** this step is needed for the stabilization of the current accounts.

The plan emphasized the coordination of economic policies while urging the establishment of a community level economic policy decision centre.

The currency snake mechanism became operational in April 1972. Accordingly the coordinated exchange rate fluctuation of national currencies was limited. The exchange rate of the participating currencies had to be kept in a 2.25% band (snake) as compared to the dollar, while other currencies were kept at a 4.5% exchange rate (snake in the tunnel). The European Monetary Cooperation Fund facilitating the functioning of the currency snake was the first step in the future cooperation of central banks.

However internal, but mainly external circumstances frustrated the implementation of the plan. Member states satisfied with the present forms of economic cooperation were reluctant to limit the exchange rates and in

1973 Washington's decision to float the dollar ended the Bretton Woods system. In the same year the first oil price explosion occurred. Accordingly OPEC raised the price of the barrel from 3 dollars to 12 dollars. While national currencies were floated against the dollar (the snake was released from the tunnel) due to the de- and overvaluation of exchanges the snake did not function anymore.

Thus the process lost momentum and in 1974 the EEC officially gave up on the Werner plan amidst the changing international financial arena and the differing economic policies of member states.

10.2.2.2. The European Monetary System

Due to the political changes in the member countries by the end of the 1970s the idea of integration appeared again on the agenda leading to the eventual establishment of the **European Monetary System** (EMS) in March 1979. The System rested on the following pillars:

- *European Currency Unit* (ECU) or an artificially formed currency basket[30], whose value was established according to the proportion of exchange within the community with a review scheduled every 5 years;
- *an exchange rate mechanism*, the European Exchange Rate Mechanism (ERM) restricting the bilateral exchange rates within the 2.25% official parity limit.[31]
- *a credit mechanism*, accordingly the member states establish a mutual fund to support countries with weaker currencies in case of exchange rate and balance of payment accounts-related problems

While the ECU was not an official currency, it did not appear in the form of bank notes or coins, its use as an accounting or settlement unit in the transactions of central banks became widespread. Subsequently it became an important means of payment on the currency and bond markets and gained increasing importance as a reserve currency as well. The system was launched in 1979 with the participation of eight countries, Great Britain did not participate. The EMS promoted monetary and exchange rate stability, while decreasing inflation.[32] [33]

[30] Between March 13 1979 and September 16 1984 the structure of the currency basket was made up in the following way: 32,98% German Mark, 19,83% French Franc, 13,34 % Pound Sterling, 10,51% Dutch Forint, 9,64% Belgian Franc, 9,49% Italian Lyre, 3,06 % Danish Crown, 1,15% Irish Pound.

[31] With the exception of the Italian Lyre with a permitted floating zone of ±6%.

[32] France, German Federal Republic, Belgium, Luxemburg, Holland, Italy as founders of t he EEC, and Denmark and Ireland joining in 1973..

10.2.2.3. The Delors plan

The Single European Act signed in February 1986 indicated the re-intensification of monetary integration related aspirations. The Single European Act as a comprehensive modification of the Treaty of Rome establishing the European Economic Community confirmed the intention of the establishment of a monetary union and laid down the foundation of a uniform market of goods, service, capital and labour, known as the European Unified Community by the end of 1992. Member states were required to participate in the European exchange rate mechanism and all flow of capital had to be liberalized.

The European Council meeting in Hanover in the summer of 1988 made an official commitment to the establishment of the Economic and Monetary Union. Consequently a commission led by Jacques Delors, the President of the European Commission began to explore the possibility of the implementation of the EMU and made recommendation for the respective phases.[34]

The establishment of the monetary union was seen as an objective, economic necessity, a requirement for the formation of unified internal markets. Compared to the earlier Werner plan it urged the reinforcement of central banks via a European network of central banks. The integration had to be implemented in three interrelated stages:

During the first stage lasting until the end of 1993 cooperation at monetary level has to be strengthened, obstacles to financial integration have to be eliminated and the discrepancies of national economic policies have to be reduced;

- in the second stage the organizational framework for the economic and monetary union has to be established along with the strengthening of economic convergence;
- the third stage entails the permanent and irreversible fixing of exchange rates and the implementation of a shared monetary policy with the launching of the central bank.

[33] While Britain joined in October 1990, the government was not able to keep the exchan ge rate within the specified band due to heavy exchange rate speculation in the Fall of 1 992. Britain left the EMS on September 16, 1992.
(Black Wednesday)

[34] Sándor Lámfalussy (the father of the Euro) was also member of the commission. The Hungarian professor of economics was the managing director of the International Payment Bank and the first President of the European Monetary Institute from 1994 until June 30, 1997.

While the objectives of the first stage were realized within the existing institutional framework, the later stages required the formal change of the institutional structure via the modification of the Treaty of Rome.

10.2.2.4. The Maastricht convergence criteria

The Treaty of Maastricht signed on February 7, 1992 was a result of an effort starting with an intergovernmental conference convened by the Council of Europe at the end of 1989. The Treaty of Maastricht establishing the European Union became effective after the ratification process concluded in November 1993. The Treaty has three main pillars, the European Community, shared foreign and security policy, and cooperation in internal affairs and legal issues.

The first pillar was expanded with a chapter focusing on economic and monetary policy laying the foundation and establishing the implementation schedule of the Economic and Monetary Union. The basic documents of the new monetary system, the European System of Central Banks along with the foundation document of the European Monetary Institute was added to the treaty as well.

The elaboration of the **Maastricht convergence criteria** was an important step in the assessment of economic convergence. The criteria established at Maastricht are requirements for each country requesting entry into the Economic and Monetary Union.The Maastricht criteria include the following:

- **stability of prices:** this means that in the year preceding entry the respective inflation rate cannot exceed the mathematical average of the inflation rate of the three EU countries with the lowest inflation rate with more than 1.5%;
- **interest rate convergence:** the long term interest rate (annual interest on 10 year securities) can exceed only by 2% the mathematical average of the long term interest rates offered by the three countries with lowest inflation rate in the EU.
- **the sustainability of public finances:**, the national budget deficit cannot be higher than 3% of the GDP and the gross public debt cannot be higher than 60% of the GDP
- **stability of exchange rates,** the exchange rate will remain within the affixed band without any tensions (±2,25%, then as of August 1993 l ±15%) and in the two years prior to accession into the Monetary Union the given country cannot unilaterally devalue its currency.

The Maastricht Treaty, however specified exceptions pertaining to the balance of public finance and to public debt:

- The budgetary deficit proportional to the GDP significantly and continuously decreases or reaches a level close to the reference value;
- The reference value can only be surpassed in exceptional situtations (natural disasters), and the transgression must be temporary as the rate has to be close to the reference value;
- the proportion of public deficit decreases in an adequate manner and approaches the reference value (this exception was used in case of several member countries including Belgium, Italy, or Greece).

A major advantage of the Maastricht criteria is the facilitation of a relatively objective and multi level measurement of economic convergence, but a real picture concerning the performance of the economy (growth, employment, balance of payments) is not provided.

10.2.2.5. Stability and Growth Pact

The purpose of the **Stability and Growth Pact** (SGP) introduced in 1996 was the clearer definition and supplementing of the fiscal exceptions while promoting an effective national budget management. The pact has two main parts:

- **prevention**: 1466/1997/EC decree on the supervision of the budget balance and the coordination of economic policies;
- **adjustment:** 1467/1997/EC decree establishes the procedures to be followed in case of excess budget deficit.

According to the Pact by the beginning of the third stage all countries have to submit a budgetary stability plan aiming at balance or surplus at the medium run. During the control process members of the Monetary Union submit a stability plan, while countries outside the Union submit a convergence plan to be evaluated by the European Commission.

If the budget deficit exceeds the reference value (3%) an excess budget deficit procedure is initiated. After the confirmation of the excess budget deficit the Council makes special recommendations and if the budgetary discipline is continuously violated the given country can be sanctioned. The sanction implies an obligation to make an interest bearing deposit to the community budget. The deposit has two parts:

- a fixed portion equaling 0.2% of the GDP
- a fluctuating part equaling 1/10 of the difference between the actual deficit and the reference value (in case of a 6% deficit, the payment is 0.3%).

The upper limit of the deposit is 0.5% of the GDP and if no corrective steps are made within two years it is converted into a fine. (This is however a political question as the budget deficit of Germany and France was not sanctioned in 2004, and so far no fines or penalties have been issued either)

Other decrees aimed at guaranteeing fiscal discipline is the prohibition of the monetary financing of the national budget deficit, in other words central banks cannot give credit to finance the national budget deficit. Another codicil gaining special importance during the crisis of 2008 stipulated that neither the Community nor any member state can be held responsible for or assume the deficit of another country.

10.2.2.6. The implementation of the Economic and Monetary Union

The **first stage** of the **Economic and Monetary Union** starting on July 1, 1990 resulted in the following developments:

- total elimination of limitations to the movement of capital.;
- a closer cooperation between the central banks of member states via the expansion of the scope of the authority of the Committee of Central Bank Presidents established in 1964;
- establishing the framework for a closer cooperation between member states on economic policy

The **second stage** starting in 1994 and lasting until the end of 1998 following the decision made at the Madrid summit in December 1995 produced these results:

- The establishment of the European Monetary Institute (EMI), the predecessor of the European Central Bank;[35]
- Elaboration of the legal, institutional, and technical prerequisites for the introduction of uniform monetary policy;
- potential elimination of the differences between the economic performance of the member states via the fulfillment of the convergence criteria;
- guaranteeing the independence of the central banks in member states.

[35] At the same time the Committee of the Presidents of Central Banks was eliminated.

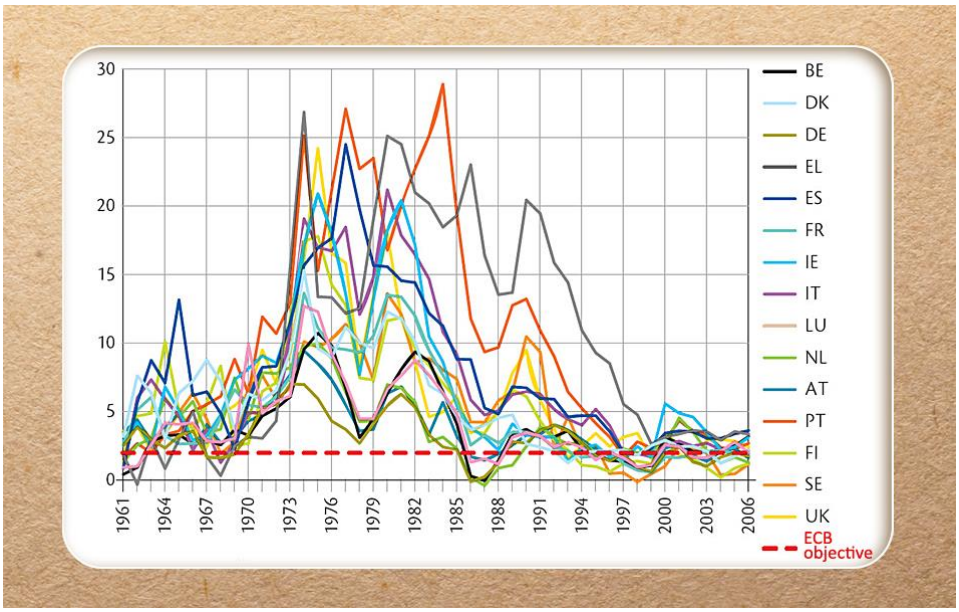

Figure 37: The convergence of the inflation in the 12 member Euro zone

source: European Commission, 2007.

While monitoring the fulfillment of the Maastricht convergence criteria the EMI issued convergence reports. The last report was issued in Spring 1998 and in the Brussel summit held in May the same year it was confirmed that out of 15 member states 11 fulfilled the convergence criteria. Sweden and Greece were declared as divergent member states, meaning they could not fulfill the requirements, but on the long run they were obliged to do so, Denmark and the United Kingdom invoked its abstention codicil, enjoying exemption from participation in the third stage, but reserved the right of joining later.[36] [37]

The **third stage** of the EMU began in 1999. The exchange rate between the currency of the member countries participating in the Monetary Union and the euro was irreversibly fixed and the uniform monetary policy was established with the leadership of the European Central Bank with powers delegated to the Central System of European Banks.

[36] In 1995 one member state could fulfil all criteria, and five member states fulfilled three criteria, by 1996 the fulfilment rate decreased with 1 and 4 member states respectively.

[37] Belgium, Germany, Spain, France Ireland, Italy, Luxembourg, Holland, Austria, Portugal and Finland.

Figure 38: Irreversibly fixed euro exchange rates

Source: Author's own compilation

Simulataneously with these developments as a modification of one of the pillars of the European Monetary System established in 1979 a new exchange rate mechanism named **ERM II** was launched aiming at the stabilization of the exchange rate of the euro with states outside the Monetary System. The date of accession into the system was optional but the fulfillment of the requirements as a condition of exchange rate stability and for the introduction of the euro is mandatory According to the system:

- the central parity of the given country's currency as compared to the euro is determined with a permitted fluctuation bandof ±15%.
- The middle of the domain (parity) can be modified, but the currency of the member state can only be overvalued as it was done by Slovakia in March 2007.
- Based upon common agreement the fluctuation band can be smaller as in case of Denmark it was ±2,25% (the exchange rate of a Danish Crown to the Euro was 1 :7,46038).

However, the common currency was not physically available at the beginning of Stage Three as it was considered a financial unit for the settlement of accounts. While financial market transactions took place in

Euro, the national currencies were used as legal tender and as the changing currency of the Euro. The introduction of euro bank notes and coins representing the largest exchange of legal tender in history started on January 1, 2002, and was concluded within two months.[38]

- The pictures of the euro bank notes and coins are available at:

28. https://www.ecb.europa.eu/euro/banknotes/html/index.en.html
29. https://www.ecb.europa.eu/euro/coins/common/html/index.en.html
30. https://www.ecb.europa.eu/euro/coins/2euro/html/index.en.html

10.2.3 The operation of the Economic and Monetary Union

The **Central System of European Banks** includes the European Central Bank and the central banks of the member states regardless of the introduction of the euro in the given country. It is not considered as a legal entity, has no right of action or an own decision making body.

- The webpage of the European Central Bank:

31. https://www.ecb.europa.eu/home/html/index.en.html

Since 1999 the main objective of the European Central Bank is the shaping of the monetary policy of the **Eurozone**. The Eurozone (eurosystem) has a narrower scope than the Central System of European Banks entailing the ECB and the central banks of the countries of the Eurozone. The ECB as one of the institutions of the European Union is considered a legal entity. Since its introduction the Eurozone has continuously expanded as Lithuania gained membership as of 2015. It is noteworthy that in addition to the Eurozone the euro is recognized in 6 other countries. As a result of an international agreement Andorra, Monaco, San Marino and the Vatican currently uses the euro, while it is yet to be introduced in Kosovo and Montenegro.

[38] The 11 countries mentioned earlier were joined by Greece. While the European Commi ssion confirmed the country's ability to meet the respective criteria, the budget deficit-rel ated requirements were fulfilled by creative accounting.

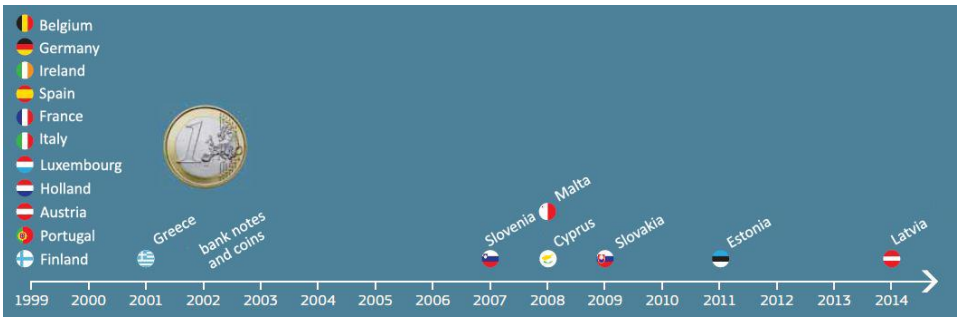

Figure 39: The introduction of the euro in the European Union

source: The Eurozone

With the exception of Denmark and Great Britain member states outside the *Eurozone* prepare annual convergence programs demonstrating the efforts made for the introduction of the common currency. The programs are evaluated by the European Commission and the European Central Bank and a convergence report is issued on a biennial basis or at the request of a pre-accession country.

- The convergence program of Hungary is available at this web site:

32. http://ec.europa.eu/europe2020/pdf/csr2014/cp2014_hungary_en.pdf

- The convergence reports issued for EU countries since 1996 are available at this web site:

33. http://www.ecb.europa.eu/pub/convergence/html/index.en.html

10.2.3.1. The monetary policy of the European Central Bank

The **primary** objective of the Eurozone is the maintenance and protection of price stability in support of the general economic initiatives of the community including high employment rate and balanced growth. In order to assure the transparency of the monetary policy the Governing Council of the ECB issued a quantity based definition for the price stability concept implying the annual growth of the Eurozone consumer price index[39] at a rate less than 2 % on a medium term.

[39] A comparative price index compiled by the Eurostat from data supplied by member stat es.

Figure 40: The changes of the harmonized consumer price index in the Eurozone

source: ECB

The basic tasks of the Eurozone:

- the determination and implementation of monetary policy;
- carrying out foreign currency transactions;
- maintenance and handling of official foreign currency reserves of the Eurozone countries;
- assuring the smooth functioning of payment systems.

Additional tasks:

- issuing bank notes within the Eurozone;
- gathering statistical information in cooperation with the national central banks;
- contributing to the prudential supervision of authorities guaranteeing the stability of the financial system;
- cooperation on the international and European level.

The monetary policy stragegy of the ECB rests on two pillars:

- economic analysis focusing on the short and medium term with special emphasis of economic processes and the relevant financial conditions

- monetary analysis with a long term perspective exploring the correlations between the available amount of money and the prices.

The main tools of the ECB's monetary policy arsenal: open market transactions, (four types with varying terms), providing options of one day liquidity for the Central Bank, and the maintenance of obligatory reserves. It must be noted that special measures were taken by the ECB in order to deal with the crisis demonstrated by the Security Markets Program (SMP) between May 2010 and February 2012 or by the Outright Monetary Transactions (OMT) launched in August, 2012.

- Detailed information is found in the essay of Lehmann−Mátrai−Pulai http://english.mnb.hu/Root/Dokumentumtar/ENMNB/Kiadvanyok/mnben_mnbszemle/mnben_spec_bulletin-oct-2013/lehmann-matrai-pulai.pdf

The main decisionmaking body of the ECB is the **Governing Council** and the **Executive Board.** The Governing Council at the helm of the monetary policy of the Eurozone is the principal decision making body of the Eurozone. The Governing Council includes 6 members of the Board and National Central Bank Governors of member states. As of November 2011 the Governing Council has been headed by Mario Draghi for an eight year term. The Executive Board is in charge of operative efforts preparing the sessions of the Governing Council and integrates the directives and decisions of the Governing Council in its efforts managing the monetary policy of the Eurozone.

10.2.3.2. The crisis and the economic integration

The economic crisis of 2008 has illustrated the deficiencies of the common currency as the establishment of the financial union was not paired with a real economic union or uniform economic policies.

In order to deal with the crisis in addition to the measures taken by the ECB and to promote the stability of the Eurozone and providing assistance to the countries coping with financial difficulties or excessive market-related pressures a temporary financial rescue package was developed with IMF co-financing in 2011. The two main components of the package:

- the development of the European Financial Stability Facility providing help to countries of the Eurozone struggling with financial difficulties, (the program jointly financed by the EU and the IMF provided an overall credit line of 440 billion Eur);

- the development of the European Financial Stability Mechanism, a 60 billion euro credit line (EFSM).

The beneficiaries of the program in the amount of a 200 billion euro EFSF financed program were: Ireland, Portugal, and Greece.

In December 2011 a new legal regulation package containing six regulations (six pack) reinforced the preventive and adjusting capabilities of the Stability and Growth Pact and introduced a new macroeconomics supervisory mechanism. The preventive branch of the **macroeconomic imbalance procedure** entailed the annual assessment of the imbalance related risks and results of the member states according five external (amomg them proportion of the current balance of payment accounts to GDP) and five internal conditions (among them proportion of private sector indebtedness compared to GDP, or three year unemployment average) and the results are published in the form of an Alarm Mechanism report. Consequently the Council can make recommendations or start the Excess Deficit Procedure (EDP). The next step is the correctional procedure during which the member state prepares and action plan. The Council assesses the action plan and establishes the relevant due dates. Repeated failures of meeting deadlines imply sanctions..

In September 2012 the European Stability Mechanism (ESM) superseding the EFSF and EFSM was launched.This intergovernmental organization established by the agreement of the Eurozone countries manages the distribution of financial support to protect the stability of the zone. The ESM with a 500 billion Euro credit capacity can provide loans, precautionary financial support, purchasing securities, and providing credit for increasing the capital base of financial institutions.

The publication of the bank union report in the summer of 2012 was an important measure for coping with the crisis.The main objective of the report is the strengthening and development of the Economic and Monetary Union within ten years along the following lines:

- an integrated financial framework;
- integrated budgetary framework (includes the European Financial Pact along with the already mentioned six pack of regulations);
- integrated economic policy
- democratic and predictable decision making.

The purpose of the bank union is the elaboration of an integrated financial framework protecting financial stability while minimizing the expenses related to bank failures. The bank union will be developed in three stages:

- the establishment of a uniform supervisory mechanism (As of November 2014 the bank supervision authority in the Eurozone is transferred from the national authorities to the ECB);
- the introduction of a uniform bank rescue mechanism effective from 2016
- uniform deposit insurance system (under negotiation)

Whether these measures will be sufficient for the long term functioning of the financial union and for achieving the respective depth of economic integration is a question to be decided in the future.

10.3 SUMMARY, QUESTIONS

10.3.1 Summary

The various forms of economic integration laid the foundation for the emergence of the financial integration. The introduction of the Euro was a corner stone of a process starting in 1957. Although plans for a common currency appeared as early as 1970, the contemporary changes of the international financial system were not favourable to such developments. The 1989 Delors plan was more successful and by 1999 a uniform monetary policy had been introduced in three stages in a smaller circle of EU countries. The financial crisis of 2008, however, highlighted the lack of a real economic integration and uniform economic policy. In order to achieve these goals several steps have been taken in the past years.

10.3.2 Self test questions

Describe the main forms of economic integration!

Describe the Werner Report and the implementation of its recommendations!

Describe the European Monetary System established in 1979!

Describe the main features of the Delors plan!

Provide a definition of the Maastricht convergence criteria!

What are the main features of the Stability and Growth Pact?

Describe the three stages of the formation of the Economic and Monetary Union!

Explain the concept of the European System of Central Banks and the Eurozone!

Describe the steps of the macroeconomic imbalance procedure proposed by the “six pack” legislation!

10.3.3 Practice tests

Which type of economic integration is described by the following statement: the participating countries eliminate trade barriers but retain an independent customs policy?

- preferential zone
- financial union
- common market

Which of the following is not part of the Werner Report?

- full convertibility,
- the formation of a monetary reserve fund
- uniform economic policy

Which of the following was not part of the EMS established in 1979?

- exchange rate mechanism
- introduction of the Euro
- credit mechanism

Is the following statement true or false? Price stability as one of the Maastricht convergence criteria means that the exchange rate remains within a fixed range without any major tensions and before accession into the monetary union a member state must not devalue its currency.

- true
- false

Which Maastrich convergence criteria is described by the following statement: The long term reference interest rate can be only 2 % higher than that of the mathematical average of the three EU countries with the lowest interest rate.

- price stability
- interest rate convergence
- sustainability of the government's financial situation

Which of the following is not characteristic of the first stage of the development of the Economic and Monetary Union?

- elimination of barriers to the free flow of capital

- delegation of monetary policy to the European System of Central Banks
- promotion of closer cooperation between national central banks

Which country entered the third stage of the evolution of the Economic and Monetary Union in 1999?

- Denmark
- Italy
- Sweden

In 2014 which of these organisations does Hungary belong to?

- European System of Central Banks
- Eurozone
- None of the above

How many countries belong to the Eurozone in 2014?

- 18
- 28
- 10

The primary objective of the Eurozone:

- guaranteeing a high level of employment throughout the member states.
- supporting balanced economic growth.
- maintaining the stability of prices

Test examination

Which of the following statements apply to the convergence program?

- introduces the monetary policy of the ECB
- it is a device for member states to demonstrate the steps made for meeting the requirements of the introduction of common currency
- introduces the steps made for the establishment of the bank union

Is the following statement true of false: During the macroeconomic imbalance procedure the Commision annually evaluates the risks and results related to the imbalance. The evaluation takes five external and five internal indicators into consideration

- true
- false

Final examination A

Which form of economic integration is characterized by the free flow of all production factors to promote the optimal allocation of resources among the member countries?

- free trade zone
- common market
- customs union

The financial stability requirement of the Maastricht convergence criteria means that the current national budget deficit cannot exceed 60% of the GDP and the gross national debt cannot exceed 3% of the GDP.

- true
- false

Final examination B

Which is not a basic task of the Eurozone?

- foreign currency transactions
- financing the budget deficit of member states
- maintaining and handling the official foreign currency reserves of the member states

The greatest exchange of legal tender took place during the third stage of the evolution of the Economic and Monetary Union in 12 EU member states.

- true
- false

11. ECONOMIC POLICY, FINANCIAL POLICY

11.1 OBJECTIVES AND COMPETENCES

The concept of economic policy is extremely complex, even economists have different views about its existence and function. As it influences the function of economy and the behaviour of economic participants, its process cannot be seen exactly in advance and it can also be evaluated only after a longer period of time.

The aim of this lesson is to present the concept, the goals, tools of economic policy and its main fields related to finances. Students will get acquainted with the four classical functions of the economic role of the state and they will be able to characterise them briefly. They will be able to interpret the goal system of monetary policy, and characterise its various levels. They will be able to describe the major fields of foreign exchange policy, and interpret the free and bound foreign exchange controls, the concept of convertibility and the major types of exchange rate systems. They will know the main events of domestic foreign exchange policy that happened after the change of regime.

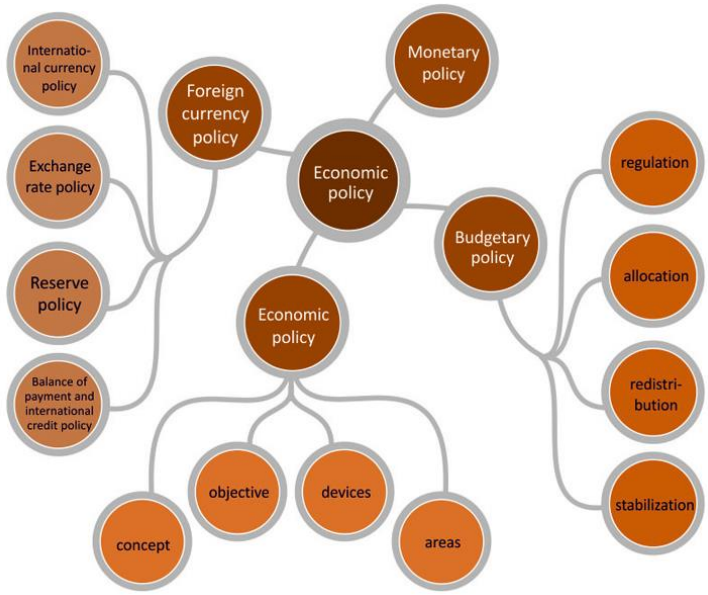

Figure 41: The structure of the lesson of economic policy and financial policy

source: author's own classification

11.2 CURRICULUM

11.2.1 The concept of economic policy

It is not easy to give a definition of economic policy, and even economists have different approaches to its concept:

- according to one approach ”the actions that the state takes to regulate, direct and influence economy and society in the frame of which applying financial policy, competitive policy, regional policy and many other state policies serve political values and interests. ”[40];
- according to another approach ”it means the views, determinations, regular decisions and actions of the state, which the state uses to influence economy in order to achieve its social-political goals.”[41].

Thus economic policy is a state (governmental) level category and embodies the role the state takes in economy. The form and the ideal size of the role the state takes in economy has been widely examined in economics: there were different views about it, such as mercantilists (the role of state is to support foreign trade), neo-classicists (the interference of state must be restricted), the followers of Keynes (the interference of state is needed) or the followers of alternative economics (economic policy is useless).

The goals of economic policy can be systemised along the “**magic quadrant”,** the elements of which are:

- creating internal balance, see government budget balance and changes in the national debt;
- creating external balance, see the situation of balance of payments, perhaps changes in foreign balance,
- increasing employment, see changes in unemployment and activity rate; as well as
- fostering growth (see the annual, quarterly growth rate of GDP).

The four goals form a “magic quadrant” because there is no economic policy tool by which all four goals could be influenced at the same time and into a positive direction. (A simple example: employment can be improved by creating public workplaces, which at the same time deteriorates the budget balance through expenditure.)

[40] BOD PÉTER ÁKOS: Bevezetés a g*azdaságpolitikába.* Aula Kiadó, 2006. 41. o.

[41] VERESS JÓZSEF: *Gazdaságpolitika*. Budapest, Aula Kiadó, 2001. 17. o.

The goals of economic policy can be achieved by applying **policy tools** in such a way that the decision maker uses different mixes of policy tools to achieve the set goals. Tools can be classified into three main groups:

- tools directed at behaviour (e.g. pricing regulation, determining minimum wage, etc.),
- tools inducing behaviour (e.g. process regulation, information prognosis), as well as
- tools reconciling behaviour (e.g. reconciliation between employers and employees).

Economic policy can be grouped according to many different aspects: it can be regional (e.g. one special area), national or international, but even the European Union has its own economic policy. Within economic policy we can make a distinction between various sub-fields, thus we can talk about financial-, structural-, employment-, external trade-, or agricultural policy.

Financial policy is the functional element of economic policy, a system of goals related to finances, money laundering, money relationships and that of tools for realising these goals. There is an interrelationship between financial policy and economic policy: financial policy can, however, have its own goal- and tool system, it is determined as a tool system of economic policy. Primarily it has three main fields:

- budgetary (fiscal) policy,
- monetary policy, and
- foreign exchange policy.

(In this course we deal with financial policy in detail).

11.2.2 Budgetary (fiscal) policy

Budgetary policy is a tool of financial policy in which the state seeks to have an impact on the behaviour of the participants of economy through governmental incomes and expenses. Its goal is to ensure budgetary incomes, to develop an optimal and efficient division of tasks within the system of state budget as well as to manage and finance budget deficit.

Primarily, the economic policy functions of the state include the following:

- regulation,
- allocation of resources,
- redistribution of incomes according to definite principles,
- stabilization, development and improvement of competitiveness.

The goal of state **regulation** is to ensure the legal and social frames of the economy. It can be

- normative, which means creating the frames of economic cooperation, and
- discrete, which is used for one group of the economic participants and activities (e.g. restriction of entering into the market, determining the conditions of an activity, etc.).

In **allocation** the state provides resources in order to achieve a preferred goal by correcting the allocation of market resources. Its task is to provide public goods, i.e. collective goods that can be consumed by a community (e.g. national defence, education, etc.) and to treat market failures and externalities of the behaviour of an economic participant having a positive or negative impact on another.

The goal of **redistribution** is to correct distribution of income developed in market operations, to fix inequality by draining one part of incomes (centralization) and returning it for preferred goals through expenses (redistribution). It can be realized within generations (support of people with a lower income by a greater tax burden for those with a higher income), or even between generations (the classical example for it is the dividing-imposing type of social security in which the payments of active employees cover the pension payments of the elderly), or even between geographical areas (support of less developed regions and villages at the expense of incomes coming from more developed regions or towns).

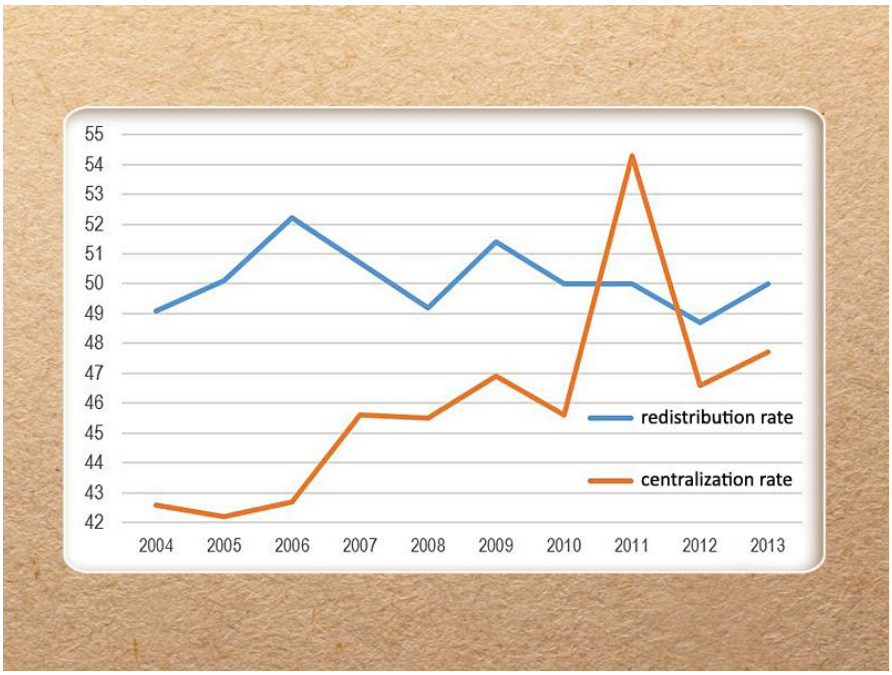

Figure 42: The rates of centralization and redistribution of the governmental sector between 2004 and 2013 [42]

source: edited by author based on Eurostat data

The goal of **stabilization** is to moderate and treat the fluctuations of economic activities typical of economic processes as well as to ensure economic competiveness. While examining state interference aimed at the stabilization of economic policy, it is worth pointing out the anti-cycle fiscal policy: the budget accumulates surplus during the time of economic growth, by which it boosts the economy at decline.
We will discuss budgetary policy and the function of national budget in detail in the next lesson.

11.2.3 Monetary policy

Monetary policy is a part of financial policy which seeks to have an impact on the behaviour of the participants of the economy through the relevant interest rate, price and money supply-regulation. Thus its goal is

[42] In 2011 the rate of centralization was 46,3% without the wealth of private pension fund-taken over.

to facilitate the realization of the goals of economic policy and support economic stability.

Its goal system can be classified at three levels:

- *the final goal*, which is the most important one of the goals of economic policy and typically a goal declared in law (e.g. achieving price stability, increasing employment, etc.);
- *the intermediate goal,* which means an economic variable that can be influenced immediately by monetary policy (e.g. the volume of money, price, etc.);
- *operative goal,* which means a variable that is able to influence an intermediate goal and can be changed immediately by the central bank (e.g. short term money market yields);

Monetary policy is directed by the national central bank (its function will be discussed in Lesson 6 in more detail).

11.2.4 Foreign exchange policy

Foreign exchange policy is the part of financial policy which seeks to have an impact on the behaviour of the participants of economy through the exchange rate policy by linking the internal and external financial system.

The fields of foreign exchange policy:

- international money circulation policy,
- exchange rate policy,
- reserve policy,
- balance of payments policy,
- international credit policy.

11.2.4.1. Policy of international money circulation

In the international money circulation policy decision is made about how freely the participants of economy can shape currency relationships, i.e. how much a given country allows the sales of domestic currency abroad and under what conditions it exchanges foreign currency into domestic currency. We can point out two extremes: bound and free foreign exchange controls.

In the case of *foreign exchange restrictions* the participants of economy are not free to possess and use other countries' currencies: they can obtain foreign currency by the permission of the exchange authority at the rate and quantity determined by it, perhaps in the case of export activity it must be exchanged into domestic currency at the authority (compulsory

delivery). Foreign exchange market does not function, the exchange authority (as a monopolistic participant) is the only legal authority that can exchange a country's foreign currency. Its usage is justified in the case of problems with the balance of payments and/or in that of extraordinary economic situations. The advantage of the system is that there are no dangers of exchange rate risk and speculation while its disadvantage is that it can deter foreign investors by its enormous administration costs of maintaining it.

In the case of *free foreign exchange controls* there are no administrative barriers, the economic participants can keep and use foreign currencies. Market mechanisms prevail on the foreign exchange market, the exchange authority can interfere into the processes only by using market conformity tools.

The possible transition between the two extremes, i.e. the level of restrictions is shown by the degree of *convertibility,* which means the free usage and exchange of a national currency into foreign currencies. In the case of partial convertibility there will be state interference in particular fields of foreign exchange controls while other fields are liberalized.

In Hungary during the time of socialism foreign exchange restrictions were characteristic from 1946. During the years of the change of the regime the foreign exchange market operations started gradually, from 1990 commercial banks were allowed to manage companies' transactions of circulations of foreign exchanges. In the summer of 1992 the foreign exchange market between banks starts, and then from 1996 partial convertibility, and from June 15th 2001 complete convertibility is realized.

11.2.4.2. Exchange rate policy

Exchange rate policy is one of the most important fields of foreign exchange policy, which shows the influence of the exchange rate of a currency by the government and/or the exchange authority. Its two extremes are the fixed and flexible exchange-rate systems, but there are several intermediate solutions as well.

In the case of *the fixed exchange-rate* the currency's value against the value of another single currency, or to a basket of currencies (perhaps or to another measure of value, such as gold, see Bretton Woods's system) is officially declared, and the government will try to maintain its value fixed and pre-determined by various interventions. Its advantage is that it is simple while its disadvantage is the continuous costs of interventions due to the difference between the fixed exchange-rate and the pegged exchange-rate.

In the case of *flexible (floating) exchange-rate* there is no intervention into the exchange rate of a currency, and market relations (demand-

supply) prevail. Its advantage is that the national economy is forced to adapt to the changes of world economy, its drawback is the volatility of exchange rates. In such a system the country actually gives up exchange rate policy as a tool of economic policy.

- The annual report of IMF describes the exchange rate systems of the different countries of the world:

34. https://www.imf.org/external/pubs/nft/2013/areaers/ar2013.pdf

One type of intermediate solutions is the *fixed exchange-rate regime supplemented by an intervention band.* In this case the exchange rate can move against the fixed middle exchange rate in the band determined by intervention points freely according to market conditions. The degree of deviation is determined by the exchange authority, it can be ± 15%, or even narrower (e.g. in the case of ERM which started in 1979 ± 2,25%). The government interferes into it, typically by interventions only if the exchange rate reaches the side of the band. At the same time it can be a problem if in the case of devaluation of the domestic currency the central bank has to buy domestic currency, in which its own foreign currancy reserve means a barrier.

The crawling peg system of fixed exchange rate can be regarded to be a variant of the system. In this case the exchange rate specified by the exchange authority, fixed to an external currency will be changed from time to time by devaluating the currency at a pre-determined (announced) rate. Typically the regime starts with a greater devaluation the first time, and then the pace of devaluation will be determined weekly or monthly. Devaluation and the gradual decrease of its pace lasts until the exchange rate reaches a level of balance. The width of intervention band is usually narrow (e.g. ± 2,25%). Typically the goal of such a system is to support export activities, and by this to increase the country's competitiveness through gradual devaluation.

An intermediate solution is also represented by *the managed float exchange rate system,* in which the exchange rate of the domestic currency is determined in the long run by market conditions, but in the short run the central bank wards off a greater de- or upvaluation by a unique and transitional intervention in the foreign exchange market.

In Hungary following the change of regime devaluation was carried out more than 20 times (e.g. in January 1991 up to 15%, in September 1993 up to 4,5%). From March 15th 1995 the crawling peg system of fixed exchange was in force with a devaluation of 9% once and a monthly

devaluation of 1,9% [43]. In 2001 first the intervention band was widened to ± 15%, and then in October the system was abolished and the fixed exchange-rate regime supplemented by an intervention band was introduced (with an exchange rate of 276,1 Ft against the euro)

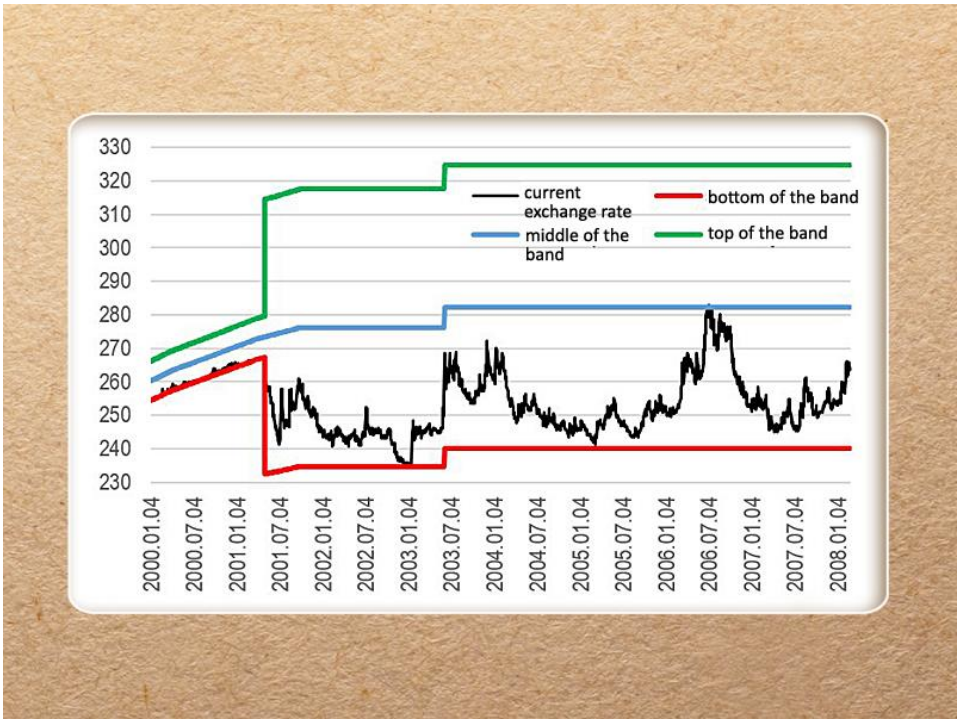

Figure 43: The situation of Forint in the intervention band from 2000 to 25 February 2008

source: edited by author based on the data of MNB

A new change happened in the spring of 2008: from 26 February the Monetary Council in agreement with the government – partly due to the changes in the monetary policy – abolished the fluctuation band of the Forint, and the flexible exchange rate system came into force.

[43] The rate of devaluation decreased gradually, from 2 June 1995 to monthly 1,3%, and t hen gradually by 0,1 percentage point until the termination of the system.

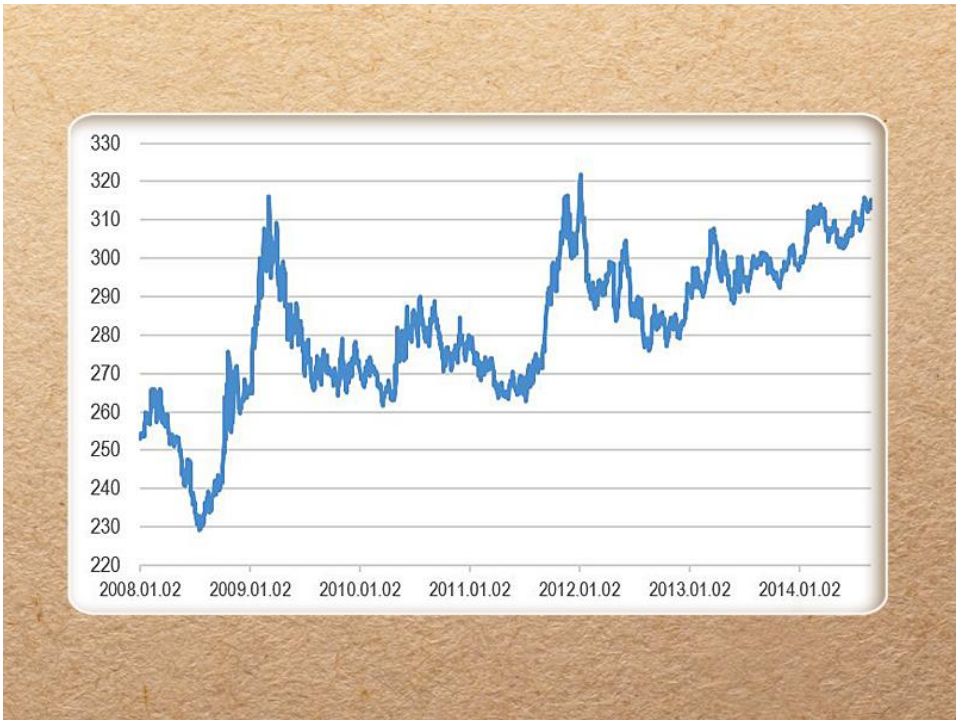

Figure 44: The change of the exchange rate of the forint against the euro between 26 February 2008 and 29 August 2014

source: edited by author based on the data of MNB

11.2.4.3. Reserve policy

Reserves mean the liquid foreign exchange assets of the national bank which the monetary authority can use directly in the case of payment problems (national debt management), and which mean coverage of the foreign exchange market interventions aimed at exchange rate policy.

In managing foreign currency reserves the requirements of liquidity, safety and yield must be met, that is the central bank should achieve the highest possible yield level with the smallest possible risk (at the level of the given risk). That is why the central bank is ranked among the biggest and the most conservative investors in the world: while the role of gold decreased (in the case of Hungary the stock of 60 tonnes at the time of the change of regime reduced to 3 tonnes by today) in reserve management in the last few decades, the foreign currency based securities of the best credit score are sought after on the securities market. From the point of view of the foreign exchange structure of the world's well-known central

bank reserves the dollar still has a determining role, its rate, however, has decreased in the last few decades (in 1973 it was more than 80%). At the same time the role of the euro strengthened (from 18% measured at the time of its introduction in 1999 to 25% today)

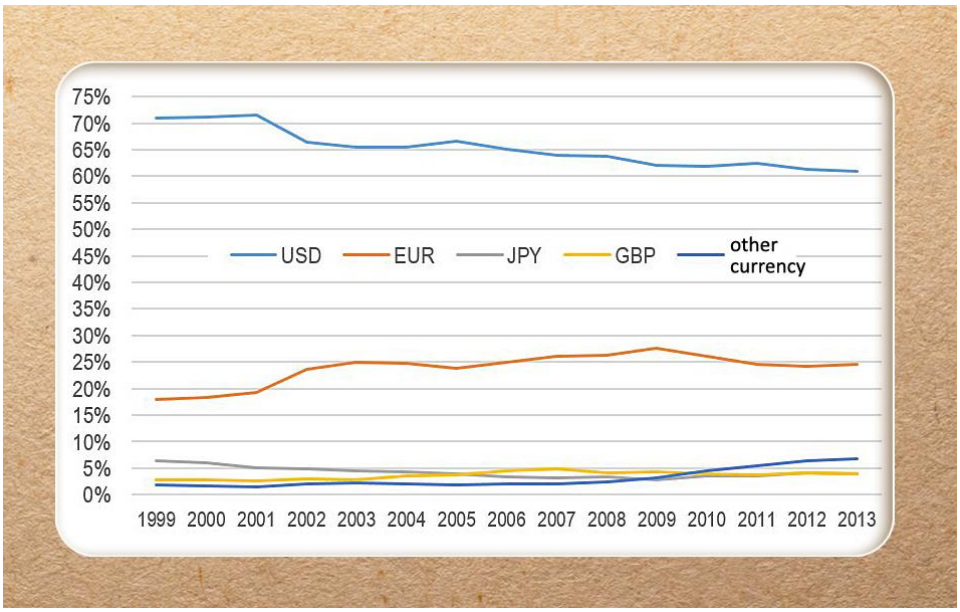

Figure 45: The structure of the world's currency reserves between 1999 and 2013

source. edited by author based on the data of IMF

A key question of reserve policy is to determine the optimal reserve level. Typically, two rules can be pointed out:

- according to the *rule of thumb* the reserve of foreign currency must cover three months of import (perhaps half a year). (in the case of Hungary the value of the yearly import of 2013 was 73,5 billion euros, and thus about 18 billion euros);
- the other rule simulating a liquidity crisis, *Guidotti-Greenspan rule* which got at the centre after the crisis of 2008, according to which a country's foreign currency reserve is sufficient if it exceeds the foreign debt expiring within one year (in the case of Hungary it was 6.110 billion forints at the end of 2013, that is the optimal level is about 20 billion euros).

Our domestic central bank reserve was higher in the last few years compared to earlier times: the reserves increased from the level of 10-17

billion euros of earlier years to over 30 billion euros after the central bank ranked one part of the loans taken out from the International Monetary Fund at the end of 2008 following the crisis among foreign currency reserves. The reason for taking out a loan was the then insufficient level of reserves (about 18 billion euros) besides the market troubles in financing national debt.

Figure 46: The change in the domestic foreign currency reserves between 1998 and 2013 (million euros)

source: edited by author based on the data of MNB

11.2.4.4. Policy of the balance of payment and international credit

The goal of the balance of payments policy is to create a long-term balance of payments, perhaps active balancing and to ensure measures aimed at that. Typically, the administrative and stimulating tools related to passive part-balances are in its centre.

International credit policy means increasing or restricting capital movements determining borrowing, and thus it is closely related to the situation of the balance of payments.

11.3 SUMMARY, QUESTIONS

11.3.1 Summary

It is difficult to give a definition for the concept of economic policy, and its operation requires using a complex tool system through the elements of the “magic quadrant” in order to achieve all the set goals. We pointed out three fields of financial policy interpreted as the functional element of economic policy – budgetary (fiscal) policy, monetary policy and foreign exchange policy, of which we dealt with foreign exchange policy in detail. We can interpret fiscal policy, which will be discussed in more detail in the next lesson, through the four functions of the role that the state takes in economy, i.e. regulation, allocation, redistribution and stabilization. We can break down the operation of foreign exchange policy into five major areas, of which we examined primarily money circulation policy, exchange rate policy and reserve policy.

11.3.2 Self-control questions

Describe the concept and elements of the “magic quadrant”.

Define the concept of financial policy and describe briefly its sub-fields.

Characterise the economic policy functions of the state.

Introduce and describe the goal system of monetary policy.

Characterise the bound and free foreign exchange controls.

Describe the characteristics of fixed and flexible exchange rate regimes.

Characterise the intermediate exchange rate systems between the fixed and flexible exchange rate regimes.

Characterise reserve policy and the rules related to the size of reserves.

11.3.3 Practice tests

Which is not an element of the concept of “the magic quadrant” in economic policy?

- internal balance
- increasing employment

- price stability

Which is not part of financial policy?

- fiscal policy
- employment policy
- monetary policy

Which functions of the state's economic policy does providing collective goods that can be consumed by a community belong to?

- allocation
- redistribution
- stabilization

Which state functions of economic policy does correction of income division emerged in market operations, correction of inequality belong to?

- allocation
- redistribution
- stabilization

Achieving price stability belongs to the following level in the goal system of monetary policy:

- operative goal
- final goal
- intermediate goal

What is not a characteristic of bound foreign exchange controls?

- there is no danger of exchange rate risk and speculation
- the exchange authority can interfere into the processes only by using market conformity tools
- it deters foreign investors

In the case of free foreign exchange controls the foreign exchange markets does not function, but the exchange authority is the only one that can exchange a country's foreign currencies legally.

- true
- false

In the case of floating exchange rate regime the exchange rate can move against the fixed middle exchange rate in the band determined by intervention points freely according to market conditions.

- true
- false

In Hungary from 15 March 1995 to October 2001 the following exchange rate regime was in force:

- the crawling peg system of fixed exchange rate
- managed float exchange rate system
- flexible exchange rate system

According to the Guidotti-Greenspan rule the foreign currency reserve of a country is sufficient if

- exceeds the rate of the annual deficit of state budget planned.
- exceeds foreign debt expiring within a year.
- exceeds the rate of the previous year' deficit of the foreign balance.

Mock exam

According to the Guidotti-Greenspan rule the foreign currency reserve of a country is sufficient if it exceeds the rate of the previous year' deficit of the foreign balance.

- true
- false

The two main characteristics of free foreign exchange controls are that the exchange authority can interfere into the processes only by using market conformity tools, and there is no danger of exchange rate risk and speculation.

- true
- false

Final exam A

For which sub-field of the financial policy is true that it seeks to have an impact on the behaviour of the participants of economy through governmental incomes and expenses?

- fiscal policy
- foreign exchange policy
- monetary policy

In the case of free foreign exchange controls the foreign exchange markets does not function, but the exchange authority is the only one that can exchange a country's foreign currencies legally.

- true
- false

Final exam B

The degree of convertibility indicates

- if the size of the given country's reserves is sufficient;
- how easy it is to exchange the national currency into foreign currency;
- how much credit a country can take out from the IMF.

The four main goals of economic policy form a "magic quadrant" because if three goals can be influenced into the positive direction by the tool of economic policy, the fourth will also change automatically favourably.

- true
- false

12. PUBLIC FINANCES

12.1 OBJECTIVES AND COMPETENCES

Public finances is one of the oldest and most often reviewed fields of economic policy. In the past centuries the structure and shape of governmental incomes and expenditures continuously changed. While economic actors appear reluctant to pay taxes, they expect the government to provide such services as education, health care, or the maintenance of roads Many countries amass a greater national debt by spending more than the respective governmental income and the financing of the given deficit depends on contemporary markets, while debt settlement is rather uncertain.

The principal objective of this lesson is to introduce the subsystem and other subordinate units of public financing. Students will become familiar with the operation of public financing, budgetary planning, the acceptance of the central budget, main indicators of public finance balance, and techniques for financing the annual deficit. The chapter will promote the understanding of national debt and the relevant domestic and EU rules and regulations.

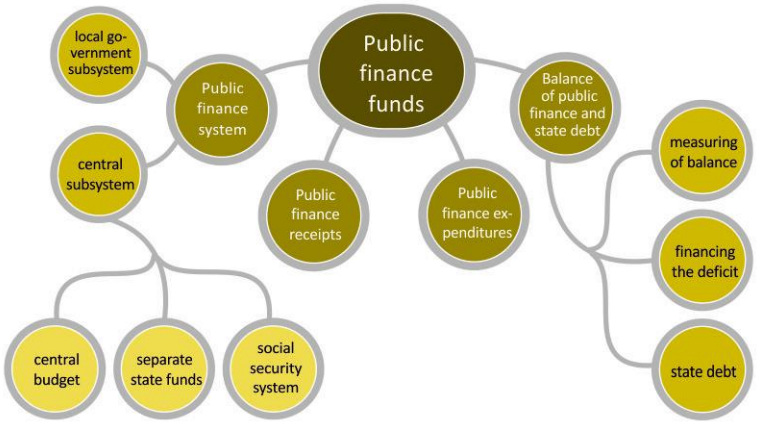

Figure 47: The structure of the lesson Public financing funds

Public financing funds, the system of public financing, governmental income, governmental expenditure, public financing balance, national debt, self governments, central subsystem, central budget, separate governmental funds, social security system, measuring the balance, financing the deficit, national debt

12.2 CURRICULUM

12.2.1 The system of public financing

In a broad context public financing refers to a system guaranteeing the financing for the performance of governmental functions. The system and subsystems jointly responsible for the given tasks and devices differ from country to country. According to the CXCV/2011 Public Financing Act in Hungary two major sectors of public financing exist: the local governmental sphere and the central governmental sphere, to be further be divided into such sub spheres as self governments, central budget, social security system, and separate state funds.

The **self-governmental sphere** carries out state delegated functions at the local level and includes municipal governments, self-governments of ethnic minority groups, various associations (circuit municipal clerkship) and the regional development councils. The legally mandatory and self-assumed tasks are carried out with independent financial management. The respective sources of financing include in part self-generated receipts (local taxes on entrepreneurs or tourism-related activities) and income received from governmental funds including shared public receipts, governmental contributions, and other forms of support.

The social security system is a mandatory insurance system based upon shared assumption of the burden of risk. The system financed by employee and employer contributions has two main segments: the Pension fund provides retrirement benefits,the Health insurance fund facilitates financial and non-pecuniary support in the form of sick leave allowance, and medicine-purchase support respectively

Separate state funds finance governmental tasks with the support of budgetary and non-budgetary sources. Since the 1990's their number significantly decreased as presently six such funds exist including the National Employment Fund (previously: Labour market Fund) and the Research and Technology Innovation Fund

The central budget makes up a greater part of the public finances and as a main source provides funds for the rest as well. The central budget is a legally codified financial plan for the financing of governmental tasks. The central budget schedules the annual incomes and receipts and its objective is to determine the framework of financial management for the given period..

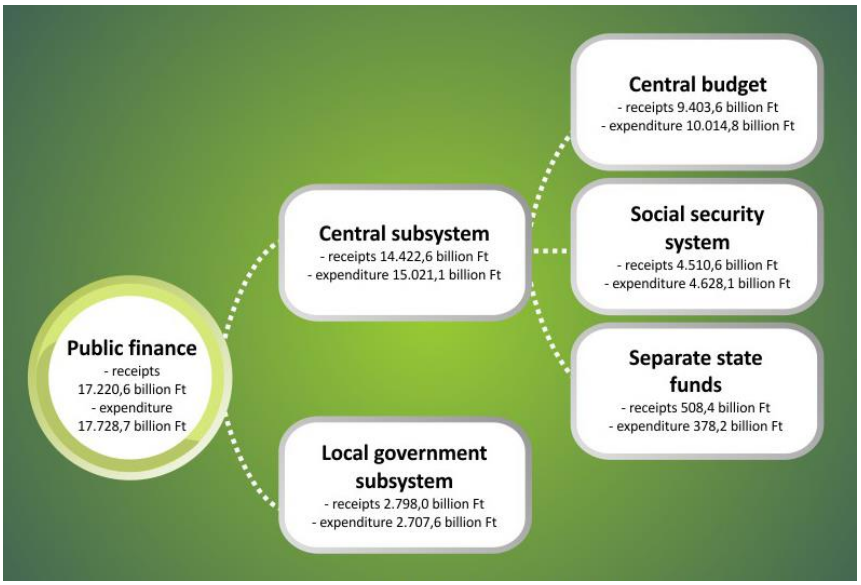

Figure 48: The description of the Hungarian public financing system and its main components in 2012 [44]

The budget of the central subsystem of public financing is officially accepted by the Parliament in form of a law, while the members of the local government subsystem determine their own budget. The central budget is divided into chapters including the predicted cost statement for the given year pertaining to independently monitored authorities including the Parliament, Constitutional Court, or the respective ministries.[45] The chapters can be further divided into titles and subtitles and the respective tasks are performed by organisations supported by public funds.

The planning of the national budget begins in the spring a year before its becoming effective. Following the setting of the main fiscal policy and economic development directions and targets the detailed plans are circulated and the accepted version is presented by the government to the Parliament by the end of September. Several methods of budgetary planning are known:

- *base oriented planning* the budget following the structure of the current one maintains the goals and trends of the past year or corrects them if needed with the consumer price index;

[44] The 2013 report of the General Accounting Office did not contain the latest data.
[45] .e CCXXX/2013 law on the national budget of Hungary for the year 2014.

- *zero based planning*: the budgetary planning emphasizing the given tasks starts from scratch;
- *Planning, programming, and budgeting system* (PPBS): is a multi stage technique. In the first stage the comprehensive, long term goals are established, in the second stage the objectives are integrated into a program, and in the third stage priorities and the respective sphere of responsibility are established.

Following its introduction the budget draft is examined by the Budgetary Committee of the Parliament and it is discussed in two stages, a general and specific debate takes place, and after potential modifications the state budget is adopted. The forecasting of revenues and expenditures takes place the year prior to the presentation of the budget, and in the year of the adoption of the budget the financial management is governed by the budgetary law. A year after the completion of the given budget final reports have to be submitted.

12.2.2 State incomes

The state collects receipts for the financing of governmental tasks and by extension the implementation of economic and social policy goals. Receipts and revenues can be grouped in the following way:

- taxes and tax-related revenues;
- receipts related to governmental activities and in part to the respective expenses;
- revenue from the utilization or sale of state property and from concessions;
- revenue from the operational and entrepreneurial activity of publicly financed organisations and entities;
- Refunds, support received from the EU;
- opening credit lines;
- other receipts (donations, allowances).

Taxes and tax-related revenues are classic forms of financing state tasks and in developed countries they are the most important source of state revenue. Taxes are recurring payment obligations forcibly and legally demanded by the government from various actors in the economy for which no direct returns are provided. According to the bearer of the burden taxes can be divided into two major groups:

- direct taxes: a payment obligation related to an economi activity or its financial result or personal income (personal income tax, corporate income tax);

- indirect taxes: levied on goods, services, the buyer of the certain good or service pays the tax The prospective taxpayer transfers the tax to te buyer of the respective goods or services. (VAT,consumption tax).

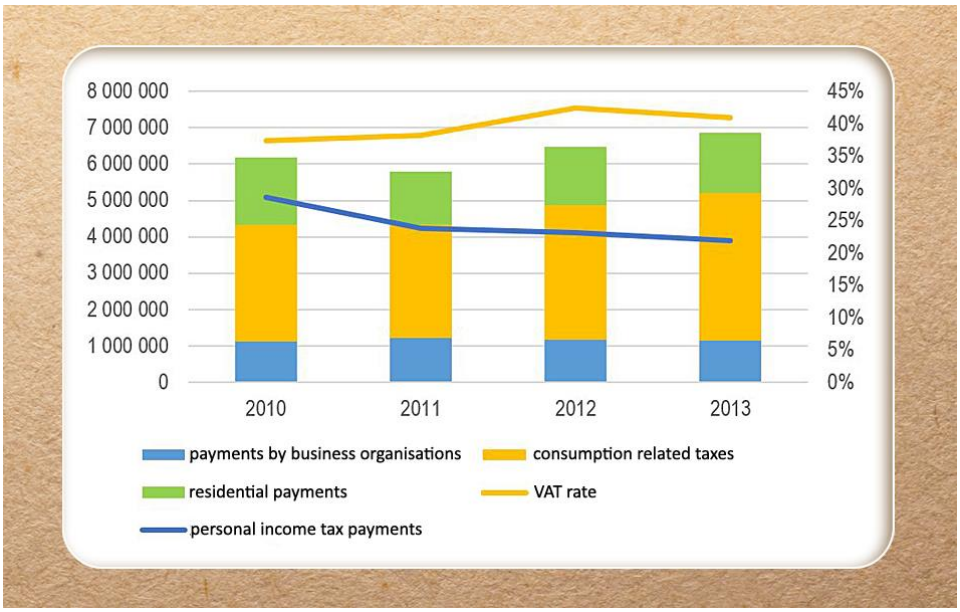

Figure 49: The development of tax and tax-related income of the state budget, left axis: expressed in billion forints, right axis: the proportion of VAT and personal income tax

source: Author's own compilation

In the past years the proportion of indirect taxes (VAT, excise or consumption, or registration taxes) increased compared to direct taxes levied on income (corporate income tax, personal income tax).

Other sources of state revenue are various fees for a governmental service used on a case by case basis (estate transfer, preparation of official documents, procedural fees). Dues are paid for a definite service, i.e customs

Receipts from the sale of state property can either be rent or dividend. After the introduction of the 24.74% governmental share in the MOL the state received a dividend income of 15.2 billion forints. Another example is the revenues realized from the privatization,that is the sale of government owned companies or firms.

12.2.3 Budget expenditures

Budget expenditures include the purchase of goods and services, direct financial support, salary related expenses and interests paid on state debt. Expenditures can be divided into groups from different aspects:

Economic division of budget expenditures:

- current expenditures and supports,:
  - expenses related to public services (earnings, deductions, material expenditures),
  - support and transfer payments i.e. to households,
  - interest-related expenditures;
- capital-related expenditures and supports (investment, renovation expenses, accumulation oriented money transfers):
- domestic lending (to state run companies)).

Functional division of budget expenditures:

- expenditures related to fulfilling governmental functions (public administration, law enforcement, general public services);

  welfare related expenses (social security, social transfers);
- expenditures related to economic functions (transport, agriculture);
- expenditures related to the management of the public debt.

The consolidated expenditure structure of public finance in a functional breakdown
(percentage rate)

	2010	2011	2012	2013
government functions	15,3	19,1	15,1	16,8
including general services	9,8	13,9	9,6	11,6
welfare functions	61,5	57,6	58,9	56,7
including education	11,6	10,8	10,3	10,2
health care	9,1	8,8	8,6	8,7
social security and welfare services	34,6	32,3	33,9	31,9
economic functions	14,3	13,1	15,5	17,5
state debt processing	8,5	7,7	8,7	8,6
non-functional items	0,5	2,5	1,8	0,4
total	100,0	100,0	100,0	100,0

Table 6: The consolidated expenditure structure of public finances in a functional division

Source: State Accounting Office:, 2014, 41. p

12.2.1 The balance of the budget and the state debt

The balance of the budget is financial report showing the difference between the incomes and expenditures and by extension the full financing needs of the state. During the calculation process the balance of each subunits has to be taken into consideration, identifying the mutual debts incurred among the given subunits.

"The Parliament of Hungary declares that the main source of income of the state finances is 15 983 668,7 million forint, „expenditure 16 968 306,1 million ft, the state deficit 984, 637, 4 million fts."[46]

12.2.4.1. Measuring the balance of the budget

Measurement of the budget can take place with many indicators including financial ones and result oriented ones, mostly characteristic of the business sector.

- *cash flow principle:* transactions are taken into consideration at the time of actual payment and only financial transactions are included;
- *result oriented perspective:* all transactions have to be taken into consideration when economic value is produced, converted, or such value is destroyed. (The VAT paid in January 2014 according to consumption in December 2013 should be accounted as revenue for 2013)).

The types of budgetary balance indicators:

- *full balance:* balance of total income and expenditure;
- *primary balance:* difference between non-interest bearing expenditures and credits and incomes not including privatization-related receipts (indicates budgetary balance without state debt);
- *GFS-balance:*[47] this accounting does not take into consideration transactions related to financial operations (credit assumption, debt payment, interest-related expenditures) indicating the change of the net debt status of the budget (can be calculated without privatization-related incomes as well);
- *operational balance:* removes interest-related expenses from inflation, and indicates the impact of inflation (in case of a strong

[46] CCXXX/2013 law on the budget of Hungary 2013.

[47] A balance indicator following the Government Financial Statistics System developed by the IMF.

distribution of inflation the balance of several countries can be compared);

- *balance according to ESA'95*[48], as a result-oriented indicatior does not include financing-related items and privatization-related incomes while including pending future obligations and quasi fiscal actitvities.[49]

This indicator provides a better picture of the connection between the fiscal situation and the macroeconomic processes and it meets EU specifications as well.

12.2.4.2. Financing the state budget deficit

Budget deficits can be financed in two ways:

- *monetizing the deficit*: the internal cash flow increases with the rate of debt financing as a result of a money raising bank transactions
- *financing from capital markets:* the government finances the debt with issuing securities (or denominated promissory notes either in domestic or foreign currency or by the assumption of credit or denominated promissory notes either in domestic or foreign currency.

In case of debt monetization inflation can be expected, if the money created for the financing of the debt is higher than the monetary demand. In the developed world as a sign of monetary independence the state debt cannot be financed directly by the central bank. In case of financing from the capital markets the debt is financed by the government with the means and conditions of the market via domestically sold securities and bonds issued abroad. (exchange rate-related risks are assumed by the government)

[48] Indicator according to the European System of Accounts.

[49] Firms performing government functions (government run firms) financed at least 50% fr om public budget (Hungarian Development Bank)

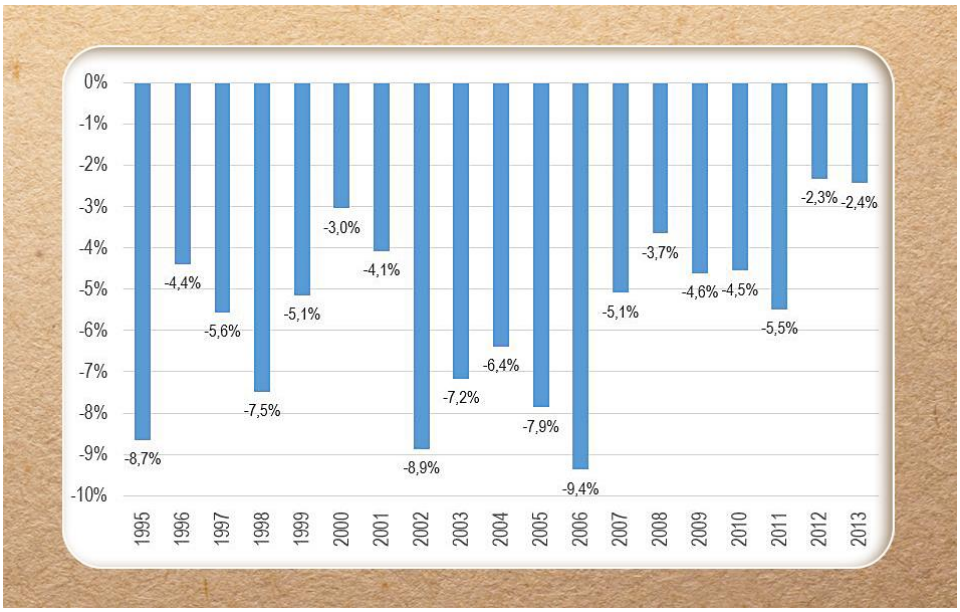

Figure 50:[50] The rate of the budget as compared to the GDP between 1995-2013.

source: Author's own compilation

The tasks of the State Debt Management Centre in Hungary include:

- maintaining the liquidity of the central budget according to the annual budgetary law;
- the managing of the state debt or the temporarily unburdened funds of the state
- maintaining records of the state budget deficit.

The State Debt Management Centre designs and carries out the financial operations according to the annually reviewed debt management strategy. The financing of the budget is an external attribute determined by economic policy and its main obligation is the financing of the fiscal needs of the budget on a long run with minimal expenses and acceptable risks.

[50] According to the statistics meeting new methodological specifications effective as of September 2014 (ESA 2010).

12.2.4.3. The state debt

The state debt is the accumulated component of debentures issued for the financing of state deficit, or from a different aspect the consolidated amount of the debts assumed by local governments and the central government. Assumption of debts in the past has an impact on the present and the future as the debt has to be repaid along with interests and the expired debentures have to be financed by new securities.

According to Czeti-Hoffmann (2006) state debts have many levels:

- the debt of the central budget and local governments in the narrowest sense;
- debts of certain firms performing quasi fiscal activities (MTVA-Hungarian Television);
- debts of government run companies performing quasi fiscal activites whose debt is periodically assumed by the government (MÁV (Hungarian Railways, Budapest Transport Company);
- The least quantifiable implicit future obligation of the state is the pension system whose expenditures can be regarded as part of the state debt.

In addition to gross, consolidated nominal debt (Maastricht convergence category) net debt including the consolidated financial devices, or the state debt minus the claims and reserves is recorded as well.

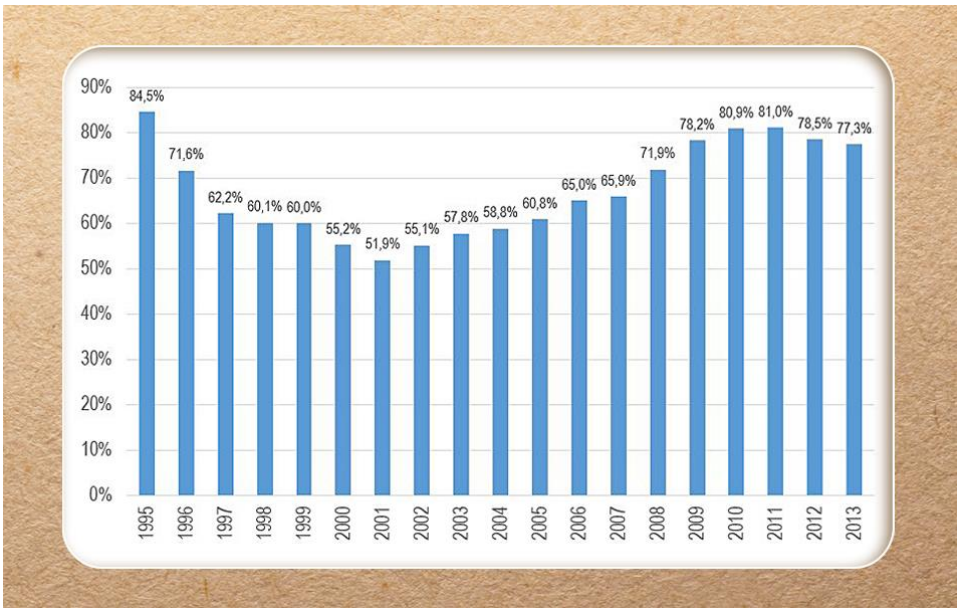

Figure 51: The rate of the net debt as compared to the GDP between 1995-2013

Source: Author's own compilation based on data provided by the National Statistics Office

The status of the budget and its planning are regulated by domestic and EU rules. According to the debt rule of the Basic Law of Hungary the GDP proportional state debt has to be reduced annually until the 50% target, complemented with a debt formula stipulated by the law of financial stability is met. Namely, the extent of the state debt expressed in forints has to be determined in a way that its growth rate compared to the previous year cannot exceed 50% of the difference between expected inflation and the real growth rate of the GDP[51].

On EU level two rules are effective:

- according to the Maastricht critieria the GDP proportional state debt cannot exceed the 60% threshold value or in case of higher debt rate it has to be reduced;
- the change of the debt rate is regulated by the one twentieth rule, the state debt has to be reduced annually at least by one

[51] Until the debt formula becomes effective in 2016 the law of fiscal stability employs a de ficit rule. Accordingly the budget deficit cannot exceed 3% of the GDP until 2015.

twentieth of the difference of the real debt level and the 60% state debt threshold limit value measured as an average of three years. (upon fulfilling certain conditions the member states can be exempt from the procedure).

In order to assure the reliability of EU statistics the member states subjected to the Excess Deficit Procedure are required to submit EDP reports twice a year until April 1 and October 1 of the given year on the status of the deficit and debt of the respective governmental sector.

- EDP reports submitted by the Central Statistics Office are available :

35. http://www.ksh.hu/edp_jelentes

12.3 SUMMARY, QUESTIONS

12.3.1 Summary

Public or state financing can be divided into two major sub systems and altogether four larger units. The largest of these units is the central budget. The budgetary process starts with planning in spring of the year prior to its becoming effective and concludes with the final report submitted in next fall. State revenues can be divided into seven large goups with the VAT and personal income tax being the most significant. The financing of the annual debt is done on a capital market basis and the annual debt along with the development of the state debt are regulated both by domestic and EU regulations (EDP).

12.3.2 Self-test questions

Describe the subsystems of the public finance system and the respective units!

Describe the methods of budgetary planning!

Categorize state revenues into groups!

Describe taxes and tax-related revenues!

What are examples of the economic division of budget expenditures!

What are examples of the functional division of budget expenditures!

What are the main budgetary deficit indicators?

What are the two types of financing the public deficit?

Describe the concept of state debt!.

Describe the domestic and EU regulations concerning the state debt!

12.3.3 Practice tests

Which of the following is not part of the subsystem of public financing?

- local governments
- central subsystem
- social security subsystem

Which unit of the central subsystem is described by the following statement: a mandatory social insurance system based on shared assumption of risk?.

- central budget
- social security system
- separate state funds

Is the following statement true or false? The most significant funds of the social security system are the Pension Fund and the National Employment Fund.

- true
- false

Which is not a separate state fund?

- National Employment Fund
- Health insurance Fund
- Reseach and Technology Innovation Fund

Which type of budgetary planning method utilizes the priorities of the previous year while building on the structure of the current budget?

- base oriented planning
- zero base planning
- planning, programming, and budgeting

Which one is not a direct type tax?

- personal income tax
- corporate income tax
- VAT

Direct taxes are levied on the prices of products and services

- true
- false

In the past years the decreasing VAT rates resulted in decrease of VAT-related income, while the personal income tax-related income significantly increased.

- true
- false

Which expenditure group does pension payment belong to?

- expenditures related to governmental operations
- welfare related expenditures
- economic function related expenditures

According to the cash flow perspective all transactions must be taken into consideration at the time of producing an economic value or the time of its conversion and destruction.

- true
- false

Which category of budgetary balancing is described as the difference between the non-interest and credit-related expenditures and the incomes without privatization-related revenue?

- full balance
- primary balance
- GFS balance

In case of monetizing the deficit the government finances the debt from the capital markets with the securities meeting market conditions

- true
- false

Which of the following is not the responsibility of the State Debt Management Centre?

- maintenance of the liquidity of the central budget
- promoting and maintaining price stability
- managing the state debt

A member state submits an EDP report on the condition of tax revenues on a quarterly basis.

- true
- false

Trial examination

Which of the following groups does privatization-related income derived from the sale of state-owned firms belong to?

- taxes and tax related income
- income from the sale and utilization of state property and concessions
- refunds, or support from the European Union

The GDP proportional balance of the state budget showed a surplus before the crisis of 2008, but as a consequence of the crisis the deficit continuously increased since 2009 eventually surpassing the EU specified 3% limit.

- true
- false

Final examination A

Which unit of the central budgetary subsystem provides the greatest share of the budget while as a main budget provides financing for governmental tasks??

- state budget
- social security system
- separate state funds

According to the one twentieth rule if the state debt surpasses 60% of the GDP, the GDP proportional budget has to be decreased by 20% next year.

- true
- false

Final examination B

Which budgetary planning method includes the following steps: determining the comprehensive long term objectives, integration of the given objectives into programs, the objectives are paired with priorities and relevant spheres of responsibility?

- base planning
- zero base planning
- programmed budget system

In case of the monetization of the deficit inflation can emerge if the money supply aimed at financing the debt exceeds the respective money demand.

- true
- false

13. SUMMARY

13.1 CONTENT SUMMARY

The first module of the curriculum presented functioning of financial markets covering the mediation process, assets of mediation, examination of securities and functioning of the stock market.

The primary function of financial markets is financial intermediation, which has two main types the direct and indirect financial market. A tool of mediation is some financial instrument typically securities whose features were described from aspects yield – risk – maturity.

The stock market is a place where securities are traded and only those products can be traded which comply with well defined rules.

Transactions concluded on products by ivestors based on various reasons (timeliness and risk), the process of a transaction is precisely regulated by the institution. Indices have an outstanding importance in the functioning of stock markets creating the comparability the performance of specific market segments.

In the second module, following an examination of the concept and creation of money activities of the central bank and the banking system is in the focus.

The concept of money is very complex, the amount of money can be measured by monetary aggregates. The central bank and commercial banks are able to create money latter ones may create account money both actively and passively.

A decline in the purchasing power of money is inflation for the measurement of which there also are several indicators.

In the focus of monetary policy is now – because of the harmful consequences of the inflation have experienced several times – focused on price stability as its primary objective raising the direct inflation targeting system to be the most common strategy. Instruments of the monetary policy vary widely, due to the crisis many central banks began to use unconventional means to achieve their objectives.

In a two-tier banking which is a feature of advanced economies financial institutions can be divided into financial firms and credit institutions, the latter ones can be banks, specialized credit institutions and credit unions.

In addition to principles and risks of applied bank economics there is a steady increase in prudential requirements in recent decades, so next to the capital adequacy assets of leverage- and liquidity regulations also appeared.

Bank transactions can be divided into three groups: passive transactions focusing on acquiring funds, active transactions focusing on investing resources acquired and neutral banking transactions. Priority was given to the main types of retail loans, risks of foreign currency loans, the process of lending, and methods of payment and elements of the payment system.

The third module presents basic concepts and development of the international financial system highlighting the process of European economic and financial integration. The balance of payments shows the development of the country's external economic relations while the exchange rate is an important external variable of the economy.

Main stages of the development of the international financial system and institutions of the international financial system were examined. Economic integration efforts have intensified in recent decades which may take many forms. The European economic and financial integration launched in 1957 is a process happening even in the present whose important milestone was the appearance of the euro and the achievement of the single monetary policy focused on a narrower range of EU countries.

However, the 2008 financial crisis highlighted the lack of a real economic union and a single economic policy the strengthening of which will be the next problem to be sold in the future.

The fourth module deals with fundamentals of economic policy, especially with the operation of the fiscal, monetary and exchange rate policies. The operation of economic policy requires to use a mixture of various instruments to achieve the objectives set.

The operation of foreign policy can be divided into five main areas, among which payment policy, exchange rate policy and reserve policy priority were particularly investigated. The importance of the fiscal policy was justified by four functions of the economic role of the state: the regulation, the allocation, redistribution and stabilization.

Functioning of the government can be divided into four major parts, out of which the central government is the most decisive. Many, extremely complex processes of its operation basically influenced by the policy can typically be described as a more than two-year cycle and its stages. Tax revenues are the most important regarding revenues of the government, the provision of welfare functions results in the largest item with regard to expenditures.

Financing the annual deficit in developed countries is based on the capital market, and both the annual deficit (see excessive deficit procedure previously described) and the public debt dynamics are now also affected by domestic regulations next to EU rules.

13.2 CLOSING REMARKS

Thus, the course dealt with the basic financial concepts and relationships, the most common procedures supporting an understanding of financial processes and supporting the acquisition of systems thinking.

However, everyone has finances and in the best case individuals are able to interpret some basic financial information or to make financial decisions being aware of possible consequences.

Unfortunately, this is not necessarily true for everyday life therefore it would be very important for knowledge of the material covered by the training course to appear not only in business, but also in almost all the context of higher education.

Financial innovations have persisted and the financial crisis unfolded in 2008 drew attention to the lack of basic financial knowledge in recent decades.

In order to improve the financial literacy everyone should become familiar with the general economy and the world of finance in today's world in the framework of basic and secondary education in order to establish more conscious financial decisions.

14. ADDITIONS

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