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E. Livanova

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Е.Ю.Ливанова

Денежное обращение и кредит

Учебно-методическое пособие
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Рекомендовано методической комиссией Института экономики и предпринимательства ННГУ для иностранных студентов, обучающихся по направлению подготовки 38.03.01 «Экономика» (бакалавриат) на английском языке

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В настоящем пособии изложены учебно-методические материалы по курсу «Денежное обращение и кредит» для иностранных студентов, обучающихся в ННГУ по направлению подготовки 38.03.01 «Экономика» (бакалавриат).
Учебно-методическое пособие предназначено для студентов факультета иностранных студентов обучающихся по направлению подготовки 38.03.01 «Экономика» и может быть использовано школьниками старших классов, занимающихся научной работой в рамках НОУ.

Ответственный за выпуск:
председатель методической комиссии ИЭП ННГУ,
к.э.н., доцент Летягина Е.Н.

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Contents

Topic 1. Money and Currency Circulation.

The need for and the nature of money. The roles, types and the role of money in the economy. Money turnover and currency circulation. Monetary system, its essence, elements, and types. Inflation. Forms of its manifestation, causes, social and economic consequences. The theory of money and inflation. Basics of international currency and credit relationships and settlements.

Money in the modern world constitutes the basis of market relations - most economic indicators are presented in monetary terms, allowing analysis and comparison their movement.

Money is used in everyday life of people, businesses, government and other bodies in various areas of economic activity to:

- determine prices of sales of goods and services;
- determine the cost of production and profit value;
- pay salaries;
- prepare and execute budgets;
- implement credit and settlement operations;
- perform operations with securities;
- save and accumulate it as a means;
- assess the level of resources involved in the process of production (fixed and working assets), etc.

Money emerge under certain conditions of production and economic relations in society and contribute to their further development. Prerequisites for money emergence include: 1) transition from subsistence economy to production and exchange of goods; 2) property separation of producers - owners of manufactured products.

Money is a historical category. To date, in science there are two concepts of money origin.

Supporters of the *rationalist concept* believe that money is a artificial social formality (P. Samuelson, J. Galbraith), and it emerged as a result of an agreement between people on a more convenient way of exchange.

Representatives of the *evolutionary concept* explain the origin of money due to spontaneous market forces (K. Marx). In circumstances, where the goods are produced more than needed for each economic entity for their own consumption, their part is exchanged for products from other manufacturers. Hence, there is the need for a universal product that can be used for exchange for all other products.

Economists agree that emergence of money as an exchange tool and subsequent historical development of its forms is a constant seek to expand the existing scope of exchange. During monetary evolution there is a tendency to choose

the most convenient forms of money that allows you to speed up the exchange or make it easier.

Seeking to develop the exchange led to selection from a wide variety of products *of a universal equivalent* used for measuring the cost and in exchange of goods, first, individual types of goods (livestock, fur), and then precious metals. Selection of gold as universal equivalent was due to its homogeneity, divisibility and resistance to spoilage.

The use of money has split the one-time process of exchange of goods (G-G) into two separately executed processes: sale of the goods (G-M), purchase of necessary goods at another time and in another place (M-G). Savings occur that are used for purchase of goods, and for loans and debt repayment. Movement of money separates from movement of goods.

Money is a special economic benefit, unconditionally and freely accepted to pay for all goods and services, and to measure their value.

Various forms of money have common properties:

- universal exchangeability for goods and services;

- measurement of cost;

- preservation of cost;

Money can also be defined as the unity of real and representative values.

The real, or internal, value of money is the market value of money material that was used in its production, its value is determined by the cost of money production.

A representative value of money reflects the economic strength of the issuer of money, its ability to maintain constant purchasing power, i.e. the ability to exchange a monetary unit for a certain quantity of goods and services. It is determined by confidence of the population in money and is manifested in people's consent to accept it at the face value as an exchange tool. In the evolution of money, the combination of real and representative values does not remain constant, increasing in favour of the latter. *Increase in the money of the share of the representative value is called rationalization.*

Money has *a nominal (face) value,* i.e. the value, which is displayed on the banknotes. *If the face value is the same as the real value, the money is called full-bodied.*

Roles, types and the role of money in the economy.

The essence of money is manifested in its functions that reflect capacities and features of its use, as well as the role of money in society.

Functions of money are characterized with sustainability, stability, it is unlikely to change, while the role of money in various conditions can change.

Modern money has four main functions:

- measure of value;
- means of circulation;
- means of payment;
- means of saving.

Money as a measure of value is used to measure and compare values of various goods. The value expressed in money is called the price. The modern scale of

prices is the national currency and its division into smaller multiple parts. Performing the function of a measure money measure the value of goods in the same way as kilograms measure the weight, and meters - the length. As a measure of value of money is homogeneous, which is very important for economic calculations.

Performing the function of a means of circulation, money services transactions between different economic entities. When exchanging goods it is an intermediary, which is recognized by all economic agents *unconditionally*. One can exchange goods produced in different areas, often remote one from another, as well as with a gap in time.

As a means of payment, money is used at effecting payments, without acquiring an equivalent or performing exchange, for example, paying taxes, receiving and repaying loans, paying pensions and benefits.

Money as a means of saving allows using them for savings. A saving function is manifested in the ability of money to preserve wealth, because as they have a more stable value in comparison with other products.

Usually, on the territory of a state, all four functions are performed by one currency - national. During economic crises, accompanied by strong inflation, some functions of money move to currencies of other countries. For example, in Russia of the early 1990s, during severe depreciation of the rouble almost all functions of money were carried out by the Russian rouble and the US dollar simultaneously.

In addition to these functions, it is often recognized that money perform the function of the world's money (the international means of payment), if it is used for monetary transactions between countries.

The role of money. The best way to see the advantage of money is when you compare them to barter. The barter economy implies direct exchange of goods for goods in kind, its shortcomings:

- measuring of the value of one product against another and determining its price;
- difficulty of accumulation and saving of the value for its future use;
- search for a counterparty interested in exchange.

The emergence of money contributed to acceleration of exchange operations and encouraging entrepreneurs to develop production of goods, expansion of their range of goods, and maximum focus on the needs of customers. The role of money is also characterized by their use by the state with a purpose of economic regulation. Money are important as a special tool to measure and compare economic performance, and assess their dynamics.

Money turnover and currency circulation. Monetary system, its essence, elements, and types.

Each stage of the development of society has its intrinsic dominant functional form of money. In the modern theory, there are five forms of money:

- *commodity money;*
- *coins;*
- *banknotes;*
- *paper money;*

- *electronic money.*

Each subsequent form becomes less material. Monetary evolution is associated with changing of forms of economy management. Thus, in the subsistence economy, at an early stage of development of exchange the predominant form of money was *commodity* money, providing a function of a universal equivalent. In the regional economy, in the period of emergence of feudal states the commodity money was replaced by the *coin*. In an era of flourishing national economy under capitalism, under conditions of free competition, *banknotes* became the dominant form of money. At the stage of state and monopoly capitalism, banknotes were replaced by *paper money*. In the modern market economy, *electronic money* appeared.

In certain periods, several different forms of money can be in circulation. So, currently the dominant form of money are banknotes and they circulate simultaneously with coins, electronic money, and sometimes commodity equivalents.

Each functional form of money does not exist in the abstract manner, but as a part of a monetary system. Throughout the history of mankind, the appearance of money and their internal content changed, there were changes in financial systems as a whole.

The monetary system *is a form of organization of monetary circulation in the country, which developed historically and is fixed in the national legislation in force.*

The monetary system consists of the following elements:

- *monetary unit;*
- *scale of prices;*
- *type of money with the legal payment power;*
- *order of issue and circulation of money;*
- *state bodies responsible for management of monetary circulation.*

Monetary unit is a statutory currency unit that is used for measurement and expression of prices of all goods.

The scale of prices - the order of dividing a currency unit into smaller multiple parts.

Type of money with the legal payment power - its forms circulating in the country established economically and recognized as legal tender.

The order of issue and circulation of money - legally established rules of the security, issue, storage and retirement from circulation.

State bodies responsible for management of monetary circulation - a state authority that is legally mandated to monitor and regulate the processes of issue, security, storage and retirement of monetary units from circulation.

Historically, types of monetary systems are distinguished *depending on the nature of their elements.* A monetary unit as an element of the monetary system can be with the legally fixed metal content; without the legally fixed metal content; with indirectly fixed metal content.

The scale of prices can also be the basis of classification of the monetary system. There are three kinds of the scale of prices: archaic (Eastern); classic (Western European); and decimal. *Archaic scale of prices* historically appeared first and was used in monetary systems of countries of the Ancient East. It had a ratio of

1:60:360, which corresponded to the following names of monetary units: 1 talent weighing 30 kg contained 60 minas and 360 shekels. Each mina of 0.5 kg consisted of 60 shekels. The shekel weight was defined as the weight of 180 grains of wheat and amounted to 8.41 grams. *The classic scale of prices* began to dominate in the 9th century and had a ratio of 1:20:240. In England, under Charlemagne (8th century) the monetary system was dominant, where one pound of silver (409.3 g) contained 20 solids and 240 denarii. In France, such a scale existed until 1795. Then, 1 livre contained 20 sous and 240 deniers. In the Great Britain, until 1961, 1 pound contained 20 shillings and 240 pence. *The decimal scale of prices* is currently in use in all countries and has a ratio of 1:10:100.

Monetary systems are classified according to *the type of money* in circulation (full-bodied and token). There are two types of monetary systems: 1) *metal*, where full-bodied metal money act as a universal equivalent, and 2) *based on token and not converted to metal money*.

1) In metal monetary systems, the dominant form of money was coins. The first monetary coin system is found in Babylon, and is based on a weight value of metal monetary units having the shape of stamped ingots. In any monetary system coins of two types are in circulation: primary and auxiliary. The primary coin – full-bodied, to which a rule of open coinage is applied.

Open coinage is the coinage of full-bodied coins with the established by the state precious metal content in them, and it can be performed by any economic agent.

Auxiliary coin is always token and issued according to the rules of closed coinage. It is a token coin with a forced rate with respect to primary. Closed coinage is the coinage, when the right to issue coins belongs exclusively to the state.

Depending on the metals involved in the coinage of the primary coin, there are the following kinds of metal monetary systems:

- copper standard, if the primary coin is coined from copper;
- silver standard, if silver is used for coinage of the primary coin;
- gold standard.

Depending on the number of primary coins in metal systems, the latter are divided into two types: monometallic and bimetallic. *In the monometallic monetary system there is only one primary coin, which has unlimited payment power, and all other coins are recognized auxiliary and are means of payment to a limited extent.* The type of the currency metal determines the type of the monometallic monetary system.

In a bimetallic monetary system, the primary currency is based on two standards – there are two primary coins with a legally fixed ration between them. Coins minted from other metals are considered auxiliary. Bimetallic monetary system emerged in the depths of feudalism and became widespread in the era of primitive accumulation of capital (16th – 17th centuries). The use of two metals as a universal equivalent contradicted the nature of money, and caused dramatic fluctuations of prices, denominated both in gold and silver. The bimetallism instability hampered the development of the economy and was the reason of transition to monometallism. The

latter was fixed by law in 1816 in the Great Britain, in 1843-1852 – in Russia, and in 1847-1875 – in Holland.

A variation of the bimetallic monetary system is the so-called *limping currency system*, which is a combination of the above systems. In this system, silver coins cease to be primary, that is remaining a legal tender, they are minted under the closed rule. Gold coins retain the status of primary, they are recognized a legal tender, the open coinage rule applies to them. This system was a transitional form from bimetallism to monometallism, and then it gave way to monometallic monetary system based on the gold standard in its classical form.

There are three varieties of gold monometallism:

- Gold coin or classical;
- Gold bullion;
- Gold exchange.

The classical gold standard prevailed in the era of classical capitalism, i.e. under free competition, it has the following features:

- Circulation of gold coins under the rule of free coinage;
- Exchange of tokens of value (banknotes) to gold at face value;
- Gold performing all functions of money;
- Free movement of gold between individuals and countries;
- Transfer of excess gold into treasure, which contributes to automatic adjustment of monetary circulation.

The gold bullion standard reigned in the period of monopolistic capitalism. Its main features are as follows:

- Gold coins remain in circulation, but the rule of closed coinage applies ti them;
- Banknotes are exchanged for bullions upon presentation of an amount established by law;
- Gold demonetization begins;
- Free circulation of gold between countries is preserved.

The gold exchange standard is characteristic of the system of state monopoly capitalism. Its features are as follows:

- Gold coins leave the cash circulation;
- Exchange of banknotes for gold is performed through their exchange for foreign currency convertible into gold.

All types of the gold standard ensured stable operation of monetary circulation, but every type of a monetary system has its historical boundaries, and after the crisis of 1920-1930, metallic systems were replaced by paper money circulation systems. The main reasons for transition to them:

- Monopolization of the economy;
- Containment of economic growth through gold production volumes and the lack of necessary elasticity of monetary circulation;
- Limited control and influence of the state on monetary circulation.

2) Currently, *monetary systems based on the circulation of unconvertible paper money* exist in most countries. The advantages of these systems are related to convenience and efficiency of money in circulation and contribute to their widespread dissemination. This type of the monetary system is not frozen: it is constantly changing, new forms of money emerge, their role changes, and elements of the monetary system undergo transformation.

The expansion of international exchange, the formation of global and regional financial markets have led to emergence of particular forms of money – *international and regional, which serve as a measure of value, means of circulation and payment, as well as a means of accumulation in the global and regional markets.* In other words, international and regional money performs the same functions as the national money, but at the international (supra-national) level.

Monetary circulation and money turnover. Nowadays, monetary systems based on circulation of paper money non-convertible into the metal. Their distinctive features:

- Abolition of the official gold content, and exchange of banknotes for gold;
- Gold leaving domestic and international payment systems;
- Issue of money in the form of bank credit and for increase of official gold and foreign exchange reserves;
- Development of non-cash turnover and reduction of cash turnover;
- Monopolizing by the state of issue cash currency;
- Increase of the role of the state regulation of monetary circulation.

Today, gold is one of the components of the gold and foreign currency reserves of the state, and their significant share is sustainable freely convertible foreign currency. *Gold and foreign exchange reserves* of the country are used to maintain the stability of the national currency. For example, trying to maintain the rouble to US dollar rate of exchange, the Central Bank will buy roubles (limiting demand for them), while selling dollars from the reserves. And vice versa, putting additional rouble stock into circulation, it has to create a proper support for it in the form of increasing its gold and foreign currency reserves. If such support is not available, issue of additional money under the existing security would reduce their purchasing power.

In all countries there is a central bank monopoly to issue cash money. Money are issued into circulation by its special units, and then through commercial banking system it gets to businesses, individuals and other banks, while their bank accounts are debited for relevant amounts. The central bank is also responsible for organizing and managing cash circulation, including their retirement.

Non-cash money gets into circulation through the mechanism of banking multiplier: commercial banks provide loans to their customers and thus they create additional deposits, which leads to the money supply increase.

Money supply in the economy is provided through the central bank of issue of the country, issuing cash, and a system of commercial banks, producing non-cash money. Demand for money is created by economic agents, which need the money to make purchases, make payments and savings.

Money supply shows the amount of money in circulation. Money supply ***(M)*** *includes the total amount of money, cash and non-cash, which is currently in circulation and belongs to different economic agents.*

To characterize the structure of the money stock monetary aggregates are used – M0, M1, M2, M3, M4.

Monetary aggregate is a statistic indicator that defines the size and structure of the money supply. Monetary aggregates differ by their degree of liquidity, i.e. ability of quick conversion of various forms of deposits and savings in the liquid assets with the minimum risk and cost.

In the most general form, monetary aggregates can be presented as follows:

M0 – includes cash money in circulation (banknotes, metal coins and, in some countries, treasury notes) and cash in banks' cash departments;

M1 – M0 plus funds at current bank accounts and demand deposits, which can be immediately used in the function of money, or as a means of circulation, or as a means of payment;

M2 – M1 plus term and savings deposits in commercial banks; funds from these deposits are made available to the depositor only after a certain period of time, provided for in the deposit agreement between a bank and its client;

M3 – M2 plus savings certificates in specialized financial and banking institutions;

M4 – M3 plus shares, bonds, deposit certificates of commercial banks, promissory notes of individuals and legal entities, i.e. liabilities, which conversion into "real" money requires a lot of time.

For analysis of the circulation of money in addition to the money supply other parameters are also used:

Velocity of money circulation reflects the number of transactions, which each currency unit serves during the year.

Monetization factor is the value reciprocal of the velocity of money circulation and is defined as the ratio of the money supply (M1 or M2) to the GNP, reflects the saturation of the economy with money.

Cash ratio is calculated as the ratio of the cash money supply (M0) to M1, or M2, or M3 aggregates, the smaller its value, the more developed the circulation of money.

Maintaining a certain level of inflation is the purpose and instrument of monetary and credit policy.

Inflation is the devaluation of money, decrease of its purchasing power caused by higher prices, shortage of goods and the decline of goods and services quality. It leads to redistribution of national income between the sectors of the economy, businesses, groups of population, the state, the population and economic entities.

Inflationary factors of monetary circulation *include****:*** *overstocking of the sphere of circulation with redundant money due to excessive issue of money used to cover the budget deficit; credit glut; methods of government to maintain the national currency exchange rate, limiting its movement and others.*

Non-monetary factors of inflation *include: factors related to structural*

imbalances in social reproduction, with costly mechanism of management, the government's economic policy, including tax policy, price policy, foreign economic activity, etc.

The essence of inflation is related to the violation of the law of monetary circulation, namely, to the mismatch between the dynamics of the money supply and nominal GNP (M. Friedman). With the exceeding rate of growth of the money supply as compared to the increase of the nominal GNP inflation occurs, and with the reverse ratio – deflation. Although deflation is a very rare occurrence, it is found in developed countries.

Referring to the market economy, two main forms of inflation are distinguished – demand-pull and costs-push. ***Demand-pull inflation:*** too much money "hunt" for a small amount of product, i.e. the aggregate demand is much greater than the total supply. ***Cost-push inflation:*** the aggregate demand practically is not growing, while costs and prices are rising. Cost-push inflation can be caused by a rise in prices for any resources. The highest influence comes from the increase of wages, social costs and prices for material resources, especially energy.

In *Keynesian models* along with the demand-pull inflation the cost-push inflation plays an important role, and inflation type is determined associated with the monopolist position of individual enterprises, which have the ability to set monopoly prices.

Socio-economic effects of inflation:

- Redistribution of income between groups of population, spheres of production, regions, economic structures, the state, businesses, population; between debtors and creditors;
- Impairment of cash savings of the population, businesses and the state budget funds;
- Payment of the inflation tax, especially by recipients of fixed money incomes;
- Uneven growth of prices, increasing inequality of profit margins in different industries, imbalances of reproduction;
- Distortion of the structure of consumer demand due to the desire to turn cheap money into commodities and currency.
- Strengthening of stagnation, decline in economic activity, and unemployment growth;
- Reduction of investment in the national economy and increase of their risk;
- Impairment of reserves for depreciation;
- Development of speculative play on prices, currency, and interest rates;
- Development of the shadow economy, "escape" from taxation;
- Reduction of the purchasing power of the national currency and the distortion of its real exchange rate against other currencies;
- Social stratification of society and, as a result, aggravation of social contradictions.

Theories of money and inflation

The commodity theory of money explains the value of money on the basis of its "commodity nature." Money is compared with the product of the "special kind" (gold

and silver), and a monetary unit – with a unit of weight of precious metal. According to this theory, the value of money is determined by the cost to produce them. For the first time these ideas were expressed by **W. Petty** (1623-1687), who argued that the price of gold, like any commodity, is determined by the cost of labor for its production. Karl Marx (1818-1883) defined the value of gold through cost of "socially necessary labor", and William Senior (1790-1864) – through the costs for the extraction of precious metal. Gold, according to supporters of this theory, is not fundamentally different from other goods. However, it is gold, with a range of formal properties, that best suits to perform the functions of money. According to the commodity theory of money, unlike gold coins banknotes are not money, but only "money tokens". Amount of paper money must match the quantity of gold needed for treatment. If the number of banknotes exceeds this proportion, then inflation occurs. Marx defined inflation as "oversupply of the sphere of circulation with money tokens in excess of the actual needs of the economy."

The starting point of all *quantitative theories* is the provision, according to which there is certain relationship between the circulating money supply and cost of money. The origins of the quantitative theory go back to ideas of N. Copernicus (1473-1543), who in 1526 called for a monetary reform, arguing that the reason for the decline of the cost of coins is the increase in the money supply. The formation of the concept of Copernicus was influenced by the influx in the 16th century of Latin American gold in Europe, which caused a significant increase in the price level. In 1568, the French economist Jean Baudin (1530-1596) and, in 1588, the Italian economist B. Davanzati expressed the opinion that the price level depends on the amount of money in circulation. In 1691, the English scientist J. Locke expressed the view that an increase in the price level is not due only to growth of the money supply, but also to increase in the velocity of money. Finally, S. Newcomb (1836 - 1909) put forward an idea that the money supply (M) at a given velocity of money (V) must be equal to the volume of the commodity mass (Q) at a given price level (P). Thus, there was only one step to derivation of the famous quantitative formula of money by I. Fischer: MV = PQ.

There are other theories of price (value) of money, but *the majority of the modern economists prefer either a commodity, or a quantitative theory*. The former explain their position that in order to be a measure of value, money must have the property of weights like for weighing. Without the "internal weight" money cannot measure anything. However, if the supporters of the labour cost believe that the "measure of weight" is the cost of labour. Marginalists believe that this is the *marginal utility of money*. The second group of economists, followers of the quantity theory of money, believes that the quantitative formula gives quite an adequate explanation of the price of money. In contrast to the classical theory, the modern economics (*mainstream*) matches the concept of prices and cost (value).

Topic 2. Credit

Necessity, nature, forms and types of credit. The role and limits of credit. Theory of credit and their evolution in economics. Interest rate and its economic role. Functions, structure and tools of the credit market. Modern credit system.

Credit is the transfer of real assets (including money) in exchange for future assets (including money) on terms of repayment, for a specified period and with payment of interest.

An important feature of the credit is the transfer in time of buying and selling: getting an asset in the present with payment for it in the future. Credit may be in cash or in kind.

The subjects of the credit relationship are the lender and the borrower. *The person providing the credit is called a creditor, a person who uses credit – the borrower.* The lender provides the borrower a credit in exchange for the promise of the borrower to repay the credit amount at maturity. *The amount of credit loan is the principal amount of the debt (principal). Additional charges that the borrower is obliged to pay as compensation for this credit is the amount of interest on the credit. In the course of the credit transaction a maturity is fixed or the duration of the credit transaction.*

In the modern market economy, the main lenders are households and firms, which expenditures are lower than the income (savers). Households or firms, which expenditures are higher than the income, are the borrowers. In macroeconomic circulation, such economic agents as households are predominantly savers, while the state and the business sector are mainly borrowers. The business sector and the state can borrow households' funds directly (direct funding), for example, through issue and placement of its own securities. *However, in the modern market economy, crediting is usually carried out by means indirect financing, i.e. through financial intermediaries.*

Financial intermediaries are institutions, which function as channels through which funds of the original creditors reach the end users.

Advantages of financial intermediation for lenders:

1) Financial intermediaries reduce the credit risk (risk of non-repayment of the debt) through diversification of investments by categories of financial instruments, in time and between creditors;
2) Financial intermediaries seek out reliable borrowers.

Advantages of financial intermediation for borrowers:

1) Financial intermediaries look for suitable lenders;

2) Reduction of credit risk through participation of financial intermediaries leads to lower interest rates;
3) Satisfy the demand of borrowers for larger loans, through relations with many lenders;
4) Contribute to making short-term loans into long-term.

In the modern economy, the *main lenders are commercial banks, which are able to create independently both money and credit.* In this case, the money base (created by the central bank) is the foundation for creation of money and credit by commercial banks. The *central bank, the state, banks and non-banks* may act as lenders and borrowers both domestically and abroad.

Nature of credit is manifested in a wide variety of credit relations, depending on the degree of development of commodity and money relations.

The earliest forms of credit, such as usury, were not related to the circulation of producers' funds. Such credit serviced overhead costs of the feudal nobility, small craftsmen and peasants.

With the development of commodity production, the credit began to serve industrial and commercial capital. Turnover of industrial capital leads to appearance of temporarily available funds and to emergence of a temporary need for additional resources. The release of the monetary capital is conditioned by a number of circumstances:

- Gradual depreciation of fixed assets: between partial amortization and full restoring the part of their cost settles as temporarily free money capital.
- Sale of goods does not coincide in time with expenditures on raw materials, semi-finished products, payment of wages, and so on, so part of the proceeds from the sale of the finished product takes the form of temporarily free money capital.
- Free money capital is formed on the account of a portion of profits intended for conversion into capital. It is annually deposited in the form of money until it reaches the amount sufficient for acquisition of new equipment and implementation of investment projects.

Consequently, the *movement of the credit is determined* by:

1) The laws of the release of value in the form of money in the process of circulation of capital of producers,
2) The laws of the use of the lent value in the circuit of capital of the borrower.

Completion of the turnover of the cost with a specific borrower provides a basis for repayment of the credit. In the modern market economy, with the help of a loan one can not only accumulate money capital, released in the process of reproduction of industrial and commercial capital, but also cash income and savings of the various social groups, and temporarily free funds of the state.

Relationships between the lender and borrower are built as those of legally independent entities that provide financial responsibility before one other. The

foundation of this relationship is mutual economic interest in transfer of the value into temporary use.

Functions of credit. In the theory of credit there is no unanimity on the number and content of the functions of the credit. Credit increases the purchasing power of the economic entity, which can use it to purchase goods and productive consumption. Credit optimizes the use of the money in circulation. Credit directs capital to more promising areas of application and has a productive effect on aggregate demand, output and employment. The following functions of the credit are identified:

1. *Transformational function of the credit*: small and short-term savings are transformed into long-term credit.
2. *Redistributive function*: temporarily free funds are reallocated between sectors and rush into the sphere ensuring a high profit or government programmes for economic development.
3. *Circulation costs economy*: credit reduces the circulation by the central bank (cash money). In modern developed countries, the share of cash circulation in the total money turnover does not exceed 5-10%.
4. *Acceleration of concentration and centralization of capital*: credit accelerates the economic growth of enterprises, private enterprises turn into joint stock companies.
5. *Means for regulating the economy*: the state through the banking system, the differentiation of interest rates regulates access to credit by borrowers.

In the period of economic crises, credit may be an *additional factor of the instability of the economic system.*

Form of the credit *is the internal organization and external expression of its content. They form an inseparable unity. The form of the credit specifies how credit shall perform its functions in a given country and at this stage of economic development.* The mismatch of form and content of credit from time to time occurring during the development leads to the extinction of old forms and creates new ones.

Type of the credit is *its detailed characteristics* by organizational and economic features, which is used to classify the loan depending on:

1) stages of reproduction;
2) sectoral focus;
3) objects of crediting;
4) security;
5) term;
6) serviceability.

The credit is also classified according to its term: *short-term (up to one year), medium-term (from one to five) and long-term (over five years).*

In the market economy, the *role of credit* is extremely high:

1. Enterprise as an independent market entity operates in the self-financing mode. Funds of the enterprise make a continuous turnover, during which there may be a need for additional temporary funds or, conversely, monetary resources get

temporarily released. Thanks to the credit, enterprises at any time have a sum of money required for normal operation.

2. In the process of reproduction of fixed assets: the use of credit allows one to improve the production technology, to move quickly to the production of new products, expand or maintain a stable market share of its products.

3. Regulation of liquidity in the banking system, creation of an effective mechanism for financing of state expenditures.

Determining of *limits of the credit application* involves the setting of:

- Range of needs of funds that can be met by the credit;
- Limits of application of the credit in the national economy as a whole, including the increase of working capital, fixed assets, consumer needs and the needs of the state;
- Quantitative limits of the credit (the volume of credit investments of individual banks, and others.)
- Limits of granting the credit to individual borrowers due to the peculiarities of the creditor-borrower relationships, taking into account the interests and needs of the borrower, as well as the capabilities and interests of the lender.

The most appropriate is to provide loans for their *advances in working assets.* In this case, it is understood that such funds are released after the completion of the circuit, and can serve as a source of repayment of loans.

An acceptable scope for the credit is also the *need of funds to increase the fixed assets*. Repayment of such loans may be made within the payback period for such purposes, mainly due to the profit generated through the use of new fixed assets.

In an inflationary environment, the use of credit as a source of funds for investment is little unattractive, given the depreciation of money and a long repayment period.

There are prospects for expanding the limits of the credit application by increasing the credit volume for increase of fixed assets, and for consumption purposes, as well as loans secured by real estate. Consequently, the limits of the credit are prone to change.

On the one hand, the cost of the credit is the interest rate, which size is set by balancing supply of and demand for loan. On the other hand, the interest rate is the income of the production factor “capital”.

Interest rate – the price the borrower pays to the lender for the temporary assignment of the use of economic assets.

Theories of interest emerged with the appearance of a monetary economy and examined the interest rate as an economic category. Over the centuries, due to the authority of Aristotle, the Catholic Church preached the idea of the sinful nature the interest rate. As a result, legal ban of interest rate transactions was abolished in England only in 1571, in France – in 1789. The Koran condemns the interest rate, so in some Muslim countries, interest rate transactions are still masked by neutral terms.

The classical school laid the foundations of the theory of interest rate. The early theories of the interest rate include the *theory of capital productivity* (J.B. Say,

V. Rauscher, T. Malthus, G. Currie, and J. Thünen), according to which the capital bears the inherent ability to bring a certain surplus to the product above the cost of capital applied, and the interest rate measures this additional surplus, i.e. it serves as an indicator of net productivity of capital.

The *abstinence theory* (J.B. Say, K. Menger) explains the interest rate as a reward of lenders for giving up the consumption of their own money. Senior introduced the concept of "self-control" into the theory of interest rate, which formed the basis of psychological theories of the interest rate. The interest rate is the reward to a person reducing his or her current consumption with a view to accelerate the growth of capital in the future.

The theory of exploitation was developed by economists of the socialist direction (D. Ricardo, P. Proudhon, L. Rodbertus, and K. Marx). According to Karl Marx, the interest rate is a form of capitalist income, which expresses the relationship between the owner of the *loan capital* – the lender and the person applying this capital – the borrower. Marx argued that on the surface of the phenomena, the interest rate is seemed as the cost of loan capital as a commodity. According to Marx, it is only “an irrational form of the price”. In fact, the basis and source of the interest rate is, according to Marx, the added value created in the productive use of loan capital. The source of the interest rate, as well as other forms of capitalist profit, is the "unpaid labor" of hired workers.

The *Agio Theory* (E. Böhm-Bawerk) explains the interest rate as the difference between the preferences of economic agents of current consumption and future consumption.

The *expectations theory* (A. Marshall) treats the interest rate as a reward to the capitalist for waiting the return of their capital, provided for hire to another person.

The *dynamic theory of the interest rate* (J. Schumpeter) explains the emergence of interest rate as follows: the entrepreneur in a developing economy is obliged to innovate through technological progress and optimization of the combination of production factors, and the interest rate is a consequence of implementation of new combinations of production.

The *marginal utility theory* (G. Menger, V. St. Jevons, L. Walras) explains the origin of the interest rate by the subjective nature of the marginal utility.

Currently, the theory of interest rate is considered as part of the main stream of modern economic thought (mainstream), according to which the interest rate is the price of the credit. *The interest rate is determined by the intersection of the money supply curve that is created by savings (S), and the money demand curve, which is formed by the investments (I). Changes in the market interest rate take place, when the line of investments or savings shifts with changing of behavior of households or enterprises (Fig. 1).*

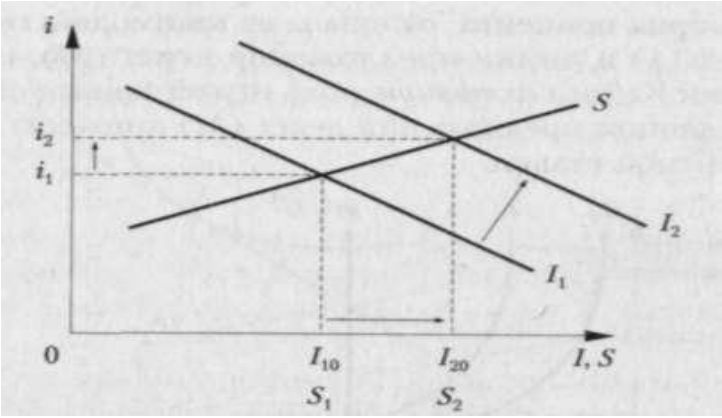

Figure 1. The nature of the interest rate in the neo-classical theory

The interest rate is the price of the credit, it is paid to the owner of capital.

The interest rate is the payment received by the lender from the borrower for the use of lent money or material goods.

The interest rate is important for the bank, since the receipt and provision of credit – its main purpose. *If the bank charges the interest rate on credits, it gets an active interest, which represents the interest income. If the bank pays interest to its customers, it will be a passive interest, which is the interest expense. The difference between the total amounts of interest received by the bank for the credits and interest paid by it on various deposits is the interest margin, i.e. income of the bank.*

There are nominal and real interest rates on credit. *The nominal rate is an interest rate expressed in money. The real interest rate is the interest rate adjusted for inflation that is expressed in constant prices. This is the real interest rate that affects decisions about the appropriatness of investments.*

I. Fisher determined the nominal interest rate as a function of the real rate of interest and the expected rate of inflation*:*

$i = r + e,$

where i – nominal or market interest rate;

r - real;

e – rate of inflation.

Only in special cases, when there is no price increase in the money market (e = 0), the real and nominal interest rates match.

This formula can be used for an approximate estimation of the nominal interest rate and gives acceptable results only for small values of *r* and *e.* Otherwise, one uses *the approach that takes into account the need for compensation of accrued fees for the credit. The nominal interest rate is determined by the formula:*

$$i = (1 + r)\ (1 + e) - 1 = r + e + r \bullet e,$$

the level of the real interest rate is expressed as:

$$r = \frac{1+i}{1+e} - 1.$$

The interest rate may be *constant* throughout the term of the credit or *variable* (floating). Floating interest rate varies depending on the fluctuations in interest rates on the loan market and is applied at the national and international market of loan capital.

Functions, structure and tools loan market. Modern credit system.

The rate of interest is determined by the interaction of supply and demand in the credit market. The financial sector plays the role of an intermediary between lenders and borrowers. The credit market consists of a number of credit submarkets, each of which has its own specifics of supply and demand. There are the following *credit submarkets*.

1. *The capital market, i.e. the market of long-term claims, primarily bonds with a maturity of at least 2 years. Lenders and borrowers may be any economic agent, except for the Central Bank. The capital market forms interest rate for long-term bonds,* $i_{w.}$
2. *The credit market – a market of bank credit in the form of current account invoices, promissory note credits, short-term, medium-term and long-term loans (bank interest rate is formed,* i_s*). Commercial banks are lenders, and non-banks – borrowers.*
3. *The market of bank deposits (correspond to interest rates on deposits,* i_h*) – households provide credits to commercial banks, opening with them termless, term and savings deposits.*
4. *The interbank credit market (correspond to interbank interest rates,* i_t*) – it is the wholesale market of credit resources, which opens to commercial banks access to resources to ensure their liquidity and income on temporarily available funds.*
5. *The central bank money market (the discount rate or the refinancing rate,* i_d*) – the agents from the supply and demand side are commercial banks and the central bank, the object of transactions is the central bank's money.*
6. *The open market (open market rate,* i_b*) – the central bank carries out operations on purchase and sale of securities, nominally owned by the money market (treasury bills, bills of government bonds, industrial companies' and banks' promissory notes accounted by the central bank.*

The institutional structure of interest rates is as follows:

$$i_s > i_w > (i_T) > i_D > i_T > i_B > i_H .$$

All credit submarkets are connected with each other: if the interest rate increases in one market, the borrowers are beginning to seek credits in other submarkets.

A major role in financial intermediation play *financial and credit institutions that attract temporarily available funds of economic entities, and provide them on different conditions for use by other economic entities.* In national legislations the concept of the "credit system", as a rule, does not appear, the term "banking system" is often used. However, they cannot be regarded as the same. Banks are just one, albeit the most common type of credit institutions, so the banking system is a segment of the credit one.

In a broad sense, a *national credit system is an aggregate of credit institutions and legal rules governing their activities and establishing relationships with other economic entities*.

The institutional framework of the credit system is formed by an aggregate of credit institutions, their regulatory bodies and various organizations. Figure 5 shows an array of types of financial and credit institutions, where the *credit sector* includes those financial institutions that provide loans and credits. *Specialized financial and credit institutions* are presented separately that do not perform the specified type of transaction or do it on a limited scale.

The *main functions of credit institutions* include: 1) accumulation and mobilization of monetary capital; 2) redistribution of monetary capital (mediating role); 3) regulation of monetary circulation; 4) reduction of financial risks for providers of monetary capital.

The credit sector of the country usually includes the following types of financial institutions:

1) the central bank;
2) commercial banks of various types, including universal (offering the majority of banking operations and services) and specialized (savings, investment, mortgage, trade, etc..)
3) Specialized credit organizations of non-banking type (SKON);
4) specialized credit institutions (credit cooperatives, unions, savings and loan associations, and others.), which are not always recognized as credit institutions, but they actually perform the part of banking operations and services.

The panorama of the credit system will not be complete without the financial services offered by the *post*. With an extensive network of offices located in the territory of many countries, the postal and savings system collects a large number of deposits (for example, in Japan, they account for more than 20%, which corresponds to about $2 trillion). The postal and savings system is engaged in insurance, and provides other financial services, but does not offer credits.

Topic 3. The Banking System

Emergence and development of banks. Banking system and its elements. Peculiarities of modern banking systems. Central banks and the basis of their activity. Commercial banks and economic basis of their activities. International financial and credit institutions.

Emergence and development of banks. The emergence of banks preceded the coins issue. First banks – "business houses" – appeared in the Ancient East. They were particularly developed in the Neo-Babylonian kingdom (8^{th}-6^{th} centuries B.C.). They performed a variety of functions: receipt and return of deposits, providing credits, bills accounting, payment of checks, cashless settlements between depositors, financing of domestic and foreign trade. Borrowers payed 20% per annum, depositors received 13%. In the Ancient Egypt, centralized harvesting and its storage in state warehouses led to the development of depository and banking system. Warehouses accepted written orders to carry out operations with grain from the owners, which became the prototype of non-cash turnover.

Further development of the banking occurred in ancient times in Greece and Rome. For example, in Greece, in the 6th century B.C. there were *trapezids*, which took valuable things for storage and issued loans. Part of trapezid bankers played the role of money-changers, and they took fees for the exchange. Normally, the loan was provided secured with ships and goods, as well as with precious objects, estates, houses, and slaves. When in the Western Roman Empire the development of trade and industry stopped, bankers' activities degraded as well, and only in the Byzantine Empire, it did not stop even after the capture of Constantinople by the Turks (in 1453). In the Middle Ages, bankers' activities revives, particularly actively in Italy, monasteries performed the functions of banks. Official canonical doctrine condemned usury, but soon "legitimate" reasons for charging the interest rate were found. It was necessary to give a "free" loan for a short period (e.g., 3 months), and then charge high interest rates, explaining this by "incurred loss". Interest rates on loans in 12th-14th centuries fluctuated at a level of 40-60%.

Modern banking has developed as a result of money-changers' activities. The term "bank" comes from "banco" (Italian for a bench, a table). Money-changers not only exchanged one coins to other ones and storage of valuable things, but also contributed to the emergence of money (bill) turnover. At the beginning of the 15th century, the first bank of a modern type was established - Bank of St.George in Genoa. In the 16th-17th centuries merchant guilds of Northern Italian and German cities created special girobanks (from Italian. giro - round), they effected non-cash payments between the regular customers.

Banking system and its elements.

The banking system is a historically and legally established form of organization and functioning of specialized credit institutions in the country. The modern model banking system typically consists of two tiers.

<table>
<tr><td colspan="6">Parliament and/or ministry of finance (Treasury)</td></tr>
<tr><td>First tier</td><td colspan="2">Central Bank</td><td colspan="3">Bank control authority</td></tr>
<tr><td>Second tier</td><td></td><td>Banks</td><td></td><td></td><td></td></tr>
<tr><td>"State"</td><td>Universal</td><td>Specialized</td><td>Non-banking credit organizations</td><td colspan="2">Branches and representative offices of foreign banks</td></tr>
<tr><td>Investment</td><td>Savings</td><td>Mortgage</td><td>Innovation</td><td>Industrial</td><td>Other</td></tr>
</table>

The first tier of the banking system is represented by *the central bank* of the country. This is the bank of issue, it is an independent but state-controlled credit institution ensuring the implementation of monetary policy and the effective functioning of the banking system of the country.

In many countries, the first tier of the banking system also includes for the *banks control authority*. Thus, in the United States, it is the Federal Deposit Insurance Corporation, in Germany – Federal Office for the Banks Control.

The second tier of the banking system consists of the following institutions:

1. *State banks* – credit institutions where a controlling interest in the share capital belongs to the State (the central bank, the government, regional authorities).
2. *Universal banks* – credit institutions, which offer 100 to 300 types of banking operations and related to all spheres of the economy.
3. *Specialized commercial banks* perform one or more types of banking operations, based on the functional, industrial, territorial or technological specialization
4. *Non-banking credit organizations (NCO)* – credit institutions performing one or more banking operations constituting a set of a bank's features. The most important of these are *investment companies, financial companies, pension funds, savings institutions, insurance companies and pawnshops.*

Commercial banks and economic basis of their activities.

Commercial banks perform several functions.

1) Credit mediation – remove obstacles that arise in the relationship between lenders and borrowers, related to:

- The size of the requested and the proposed capital;
- Difference between the term of the requested capital and capital supply term;
- Credit risks.

2) Mediation in payments – on behalf of clients banks are involved in performing the bank's cash operations: accept money from customers, keeping them on appropriate accounts, account for all credits and debits, keep cash, make payments, which minimizes circulation costs.

3) Mobilization of people's savings and money incomes of firms and their subsequent conversion into capital.

4) Establishment of credit instruments of circulation (banknotes, checks.) replacing cash flow and reducing circulation costs.

5) *Issue-founder function is manifested* in the issue and placement of securities by banks that are intermediaries between investors and issuing-companies (borrowers).

6) *Consulting services* – banks accumulate information about the status of the financial market and its development trends.

7) *The implementation of monetary policy of the central bank*.

Operations of commercial banks

All operations of a commercial bank can be divided into credit: passive, active, active-passive (trust or commission and intermediary).

Passive operations are operations to draw funds into the banks, to form their resources. Liabilities of commercial banks consist of own funds (capital) and liabilities.

Own funds of commercial banks include authorized capital, a reserve fund, special funds, insurance reserves, retained earnings during the year.

Commercial bank liabilities consist of raised and borrowed money. Raised funds consist of demand deposits, term deposits and overdraft. *Borrowed funds* include loans of the central bank, as well as debt liabilities issued by the bank: promissory notes, bonds, deposit and savings certificates.

Active operations are operations of placement of bank resources for profit and maintaining liquidity.

Commission operations – transfer of cash and non-cash money to third parties (letter of credit, collection and trust operations).

Central banks and the basis of their activity.

Central banks are legal entities with a special status – isolation of the bank's property from the property of the state. The central bank has the right to dispose of state property as an owner. The activity of the central bank is governed by the *law on the central bank* of the country, where its legal status, functions, procedures for appointing senior management, relationships with the state and the national banking system are defined.

The central bank combines features of a commercial banking institutions and a government agency, has authority to regulate the credit system.

Relationships of the central bank with public authorities vary greatly in different countries. The legislation of the United States, Germany, Switzerland, Sweden and the Netherlands provide for the direct reporting of central banks to parliaments. In most countries, central banks are accountable to the treasury or ministry of finance. In the United Kingdom, France, Italy, Japan, the ministry of finance is authorized to give instructions to central banks.

The central bank's independence from the government assumes two forms: political and economic.

The political independence of the central bank determines procedures of appointment of the members of its governing body or manager, approval of the bank's decision by the government and/or parliament. *The economic independence* is expressed in the absence of liability to automatically provide money to the government to finance public spending and to give it preference in lending. The central bank performs the following functions:

1) The main settlement and emission center of the country – has a monopoly right to issue banknotes;
2) Bank of banks –conducts operations primarily with the banks of the country: keeps their cash reserves, supervises and controls bank, provides credits – "lender of last resort";
3) The government banker – issues governmental loans, carries out subscription to loans and places bond loans with commercial banks, insurance companies and other money market participants;
4) The country's regulatory authority by monetary methods of administrative, economic and mixed character.

Additional functions of the central bank are: a) *management of public debt*, b) *analytical studies and statistical database management*, and c) *production of banknotes and others.*

International financial and credit institutions

The foreign monetary and credit policy is a set of measures aimed at promoting foreign economic positions of the state: balancing the balance of payments and stability of the national currency.

It is conducted by the central bank of the country and consists of the following elements: the exchange rate regulation, management of official foreign exchange reserves, currency regulation and currency control, participation in international monetary and financial institutions.

The global financial market:

- Provides cross-country movement of resources;
- Provides interaction between buyers and sellers of financial resources, determines prices of financial assets and profitability of operations in different currencies;
- Attracts additional investors;
- Provides reduction of circulation costs due to the expansion of investment opportunities;
- Accelerates transnationalization of industrial and financial capital;
- Provides the possibility of international asset diversification to reduce risk of investment portfolios.

Global loan capital **market** – a system of relations on accumulation and redistribution of loan capital between the countries of the world economy. From the *institutional* point of view, this is an aggregate of financial institutions, which provides market movement of loan capital between countries, depending on its supply and demand.

Object of the transaction in the global loan capital market is the capital raised from abroad or transferred as a loan to legal entities and citizens of foreign states.

The loan form of capital can function in the following operations:

- Issuance of public and private loans;
- Acquisition of other countries' bonds, securities, promissory notes, bills of exchange of a foreign company;
- Repayment of debts;
- Interbank deposits;
- Interbank and government debts.

The global loan capital market has a complex structure.

The global credit market – the sphere of international movement of loan capital between countries on terms of repayment and payment of interest, where a supply and demand for loan capital is formed. Traditionally, one distinguishes the market of short-term loan capital (money market) and market of medium- and long-term capital (capitals market). *The global money market* – short-term deposit and lending operations from 1 day to 1 year, mainly between large banks. *The global financial market* – the part of the market of loan capital, where mainly emissions and sale of securities are performed, including in euro currencies. In practice, the differences between the global credit and financial markets are gradually obliterated, as there is a mutual flow of capital, and conventional bank loans are replaced by issue of securities. A special link in the global loan capital market is the Euromarket, where deposit and loan operations are performed in euro currencies, and the derivative financial resources therefrom.

Table 1. Players and the structure of global credit and financial markets.

Structure of markets	National players	International players
Foreign currency markets, including eurocurrencies market	Corporations	International corporations, TNCs
Loan capital markets: money market capitals market euromarket	Banks and specialized credit and financial institutes, including insurance companies	International banks, TNBs Specialized credit and financial institutes, including insurance companies
Financial market	Stock and commodity exchanges	Largest stock and commodity exchanges
	State	International monetary and financial organizations

The international loan capital market is characterized by common features with other global markets (gold markets and currencies) and the following specific features:

1. Enormous scale.
2. Lack of clear spatial and temporal boundaries.
3. Institutional peculiarity of the euromarket – determining of the category eurobanks and international banking consortia. The backbone is formed by the transnational banks (TNB) – giant international credit and financial complexes of the universal type, having extensive branch network abroad with operations in many countries in different areas and currencies. Monopolization of the global loan capital market by these banks allows them to dictate their conditions to smaller banks due to the centralized management, unified strategy and tactics of the parent institution. TNBs are competing to receive from customers the mandate to organize a syndicate to place the loan to make profit, strengthen their relationship with customers and serve as an advertisement.
4. Restricting access of borrowers to the global loan capital market. The main borrowers in this market are TNCs (transnational companies), governments, international monetary and financial institutions.
5. The use of convertible currencies of the leading countries and the euro as the currency of the credit and financial transactions.
6. Universality – it is a place for international currency, credit, financial, payment and guarantee transactions. 2/3 of the euromarket operations are performed on the interbank market, 1/3 – deposit and loan operations with non-bank customers.
7. Simplified, standardized procedure of transactions using the latest computer technology.

8. The relative autonomy of interest rates in the euromarket relating to the national interest rates.
9. Higher profitability of operations in euro currencies than in national currencies; because the rates on eurodeposits (*deposit in another country's currency, when performing operations in the eurocurrency market*) are higher, and on eurocredits (*the international credit provided by commercial banks to a corporate or government borrower for the account of the eurocurrency market resources*) are lower, since eurodeposits are not covered by the system of mandatory reserves that commercial banks must keep on non-interest bearing account at the central bank, as well as income tax on interest.
10. Diversification of sectors of the global loan capital market, including the euromarket, and the transactions tools market.

TEACHING, METHODICAL AND INFORMATIONAL SUPPORT SUBJECT

Main literature:

1. Money, Distribution Conflict and Capital Accumulation: Contributions to 'Monetary Analysis'. By ECKHARD HEIN is Senior Researcher at the Macroeconomic Policy Institute (IMK) at Hans Boeckler Foundation, Duesseldorf, Germany, and Visiting Professor at Carl von Ossietzky University Oldenburg, Germany, and Vienna University of Economics and Business Administration, Austria Publisher: Palgrave Macmillan; First Edition edition (February 19, 2008), 224 pages.
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1. The Macroeconomics of Finance-Dominated Capitalism - and Its Crisis Eckhard Hein, Berlin School of Economics and Law, Germany Publisher: Edward Elgar Pub (October 31, 2013), 232 pages.
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Publisher: CreateSpace Independent Publishing Platform; Edition 1, July 2013 edition (August 17, 2013), 292 pages.

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4. The Theory of Money and Credit. by Ludwig von Mises Publisher**:** CreateSpace Independent Publishing Platform (April 15, 2010), 276 pages.
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1. http://librs.net/index.php?id=118449
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Марина Владимировна **Кемаева**

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603950, Нижний Новгород, пр. Гагарина, 23.