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## PREFACE

Market reforms cardinaly change the economy of countries, as well as the consciousness of people. They form the increasing need for knowledge of the theoretical foundations of the market economy development. The lack of this knowledge makes impossible the active behavior within a dynamic market environment, in researches and in business.

Expansion of knowledge for the market reforms implementation significantly promotes the learning patterns of development of the international economics as a component of modern economic theory. In this case, the indispensable condition is to have the basic knowledge in both Microeconomics and Macroeconomics.

The offered textbook directs the reader towards basic problems of instruments' dissemination of micro- and macroeconomic analysis into the international economic relations sphere. We consider the textbook structure in the system of modern economic theory that allows considering main issues of development and functioning of international economics within logic interrelation.

**The first part** addresses the issues concerning: the positioning of international economics within the system of economic science; the forming of modern subject and the structure of "International Economics" ("International Microeconomics" and "International Macroeconomics"); integration and globalization levels of international economics relations.

**The second part** is devoted to the issues of microeconomic mechanism of international economic relations, the international movement of goods, services and production factors (capital, labor, technologies).

Answers to questions concerning the macroeconomic mechanism of international economic relations' realization, the functioning of modern monetary and financial institutions, international financial markets, the macroeconomic policy in an open international economic system are presented within **the third part**.

We believe that this textbook will allow students to make the maximum use of global research experience of the international economics. It will contribute to the forming the way of thinking and economic behavior adequately the modern world and thereby will provide the training for specialists, who need to know what to do to succeed in the global economic environment, to know the new principles of competition, promising areas and forms of interaction of the national economy with the global one.

## **PART I. INTRODUCTION TO INTERNATIONAL ECONOMICS**

### **SECTION 1. INTERNATIONAL ECONOMIC DEVELOPMENT UNDER MODERN CONDITIONS**

#### **Chapter 1. International economics: basic characteristics and the structure**

##### **1.1. What is the place of**

##### **International economics in the system of economic science?**

Discipline “International economics” is an integral part of the training of economists-general and one of the majors in the preparation of international economists. It belongs to the number of basic economic disciplines. It’s not only based on the market economy theory, but also develops it. “International Economics” is a connecting link between such university courses as Microeconomics, Macroeconomics and specific economic disciplines, such as Marketing, Management, Finances, Accounting and Audit, Money and Credit, Banking etc.

Initially “International Economics” in the economics system occupied a peripheral place and based on the principles of separate parts of Micro- and Macroeconomics, which contained the analysis of international economic relations, which contained an analysis of international economic relations in the spheres of foreign trade, interstate flows of production factors, financial and monetary system that causes those flows.

Establishment, development and functioning of the world economic relations as a special, integral and organic system influenced the separation of “International economics” into the independent discipline. Formation of this system was caused by evolution of international division of labor, the internationalization process of the world economies, the integration of countries groups into regional economic complexes (unions) with interstate and suprastate regulation of the socio-economic processes, production transnationalization, functioning of the international monetary and financial sphere as an independent phenomenon, which is not connected directly with the external trade and the international factor flows [11; 12].

The economic openness in relations between every country and the world community in whole is the defining feature of the "International economics» existence as an independent academic discipline. The current state of international economic relations allows to define two levels of openness:

1. the level of countries involvement not only into the international goods and production factors turnover, but also into the international production and investment activities;
2. the cooperation level between national economies and the world economy in whole in terms of financial markets globalization [10; 12; 13].

**On the first level**, the “openness” means the development of three main channels, which not only connect the national economic systems, but also determine the form and degree of countries’ involvement into the international flows of goods, capital and labor.

The export ratio (export quota) and the import ratio (import quota) in gross domestic product (GDP), can be the indicators of openness on the first level.

$$Eq = \frac{E}{GDP} \times 100, \quad (1.1)$$

where: Eq - export quota;  
E – export volume.

$$Iq = \frac{I}{GDP} \times 100, \quad (1.2)$$

where: Iq - import quota;  
I – import volume.

Export and import combinations of quotas inform about relation scales between separate national economies and the world economy in whole.

The migration intensity, which is defined as a ratio of migrants’ number to the population size, can also be the openness indicator of the first level. In this case coefficients of emigration (Ce), immigration (Ci) and migration turnover (Ct) must be calculated.

$$Ce = \frac{Me}{P} \times 1000, \quad (1.3)$$

$$Ci = \frac{Mi}{P} \times 1000, \quad (1.4)$$

$$Ct = \frac{Me + Mi}{P} \times 1000, \quad (1.5)$$

where: P – average annual population size;  
Me – number of emigrants;  
Mi – number of immigrants.

The migration coefficients are usually defined in per mille (‰).

The difference between the amount of immigrants and emigrants (Mi – Me) forms the migration balance of the country, which can be positive or negative.

Involvement of the country into the international capital flows is also a factor of the economic openness. The role of foreign capital (such as FDI) in national economy is determined by its share in total amount of capital investment in a country (including investment of residents).

A share of foreign investment (mainly FDI) in GDP can be another indicator:

$$\frac{FI}{GDP} \times 100, \quad (1.6)$$

where FI – foreign investment.

Economic openness on the second level is mainly determined by independence standard of international monetary system, which is realized over the functioning of international financial market. The efficiency of monitoring and regulation within either national economy or the world one in whole is the main indicator of market economy performance as the international economy.

## **1.2. How are the modern subject and the structure of “International economics” course formed: «International Microeconomics» and «International Macroeconomics»?**

International economics is a part of modern economics, which has the following structure:

- Microeconomics;
- Macroeconomics;
- International economics.

The components of modern economics are correlated. This reflects the integral approach to functioning and developing of the market economy. But the subject of Micro- and Macroeconomics is substantially limited by borders of national economies. Microeconomics examines market behavior of individual consumer and firm, and Macroeconomics – functioning of national economy as a whole and also its leading components.

As opposed to Micro- and Macroeconomics, International Economics is to wide extent a theory which is mainly applied to the analysis of world economic relations as an integral phenomenon. That’s why international economic relations and foreign economic influence on national economies are regarded as paramount phenomena in International Economics. Increasing openness level in countries, harmonization and correlation of their economies, internationalization and integration of world economic relations, which are realized in globalization conditions, compose an individual subject for analysis.

International economics (according to its function) consists of:

- International Microeconomics;
- International Macroeconomics.

Such a sequence is not a coincidence. International trade of goods and production factors was historically the first and, up to the certain time, the main form of international economic relations. Only at the end of the XX century, it lost the leading role that began to take a variety of forms of international financial transactions. International economics is concentrated on studying the laws of international flows of goods and factors of their production. Separate countries in the International Microeconomics are regarded as the primary elements, as well as households or firms in traditional Microeconomics, and the international monetary system – as the means of the goods and production factors flows. International Microeconomics examines integration processes only because they provide the

intensification of liberalism in the international flows of goods and production factors.

Thereby, **International Microeconomics** is a part of International Economics that examines the international flows of goods and production factors in other words it studies market behavior of a certain commodity) and its basic characteristics. It's a well-known definition of the International Economics part, which has been lectured for a long time at universities and colleges in the USA and Western Europe [11].

In contrast to the International Microeconomics, the general definition of the International Macroeconomics theory does not exist yet. The subject of this part of the International Economics is still controversial and contradictory, that sometimes makes it eclectic. The selection of the basic components of research in International Macroeconomics focuses on their practical significance and usefulness in solving specific problems of open economies functioning and the development of the world economy as a whole.

Therefore, the International Macroeconomic significantly expands a subject of the analysis of the International Economics theory, provides it out at the level of interaction between open national economies the world economy as a whole. This expansion is based on the existence of the international monetary system not only as the mechanism that serves the goods and production factors flows, but also as an independent system of the international economics. Therefore, the leading position in International Macroeconomics primarily belongs to:

- the research of the modern international monetary system phenomenon;
- the analysis of the problem, which concerns the exchange rate and the mechanism of its formation, the status of the balance of payments, that determine the place of national economies in the world economic relations;
- the analysis of the international financial markets and the concrete financial instruments trade (e.g. currency, credit, securities).

The functioning of the open economy and world economy as a whole includes also in a subject of the international economics such aspect as its regulation by international economic and financial organizations.

Thus, the International Macroeconomics is a part of the International Economics, which develops the macroeconomic theory in the conditions of open economy, studies the features of interaction of national economies and the world economy as a whole, their specific function and regulation in the context of globalization.

The International Microeconomics and the International Macroeconomics are the interrelated parts of the International Economics as a component of the modern economic theory. As such, International Economics examines the processes and phenomenon of the economic life of the society, which has an international character and even supranational (global) character. The "International Economics" is a separate discipline and its subject consists of the

relations, which are formed between entities in the spheres of international trade (goods and service), international factor flows (capital, labor, technology), in the international monetary and financial sphere as independent phenomenon of economy of modern world economic relations, and with the developed mechanisms of monitoring and regulation (are inherent) [ 6; 11; 12; 24; 27].

## **Chapter 2. Integration and globalization processes of international economy**

### **2.1. Integration processes in the international economics system**

#### **2.1.1. How to define the notion of international economic integration?**

Phenomenon of economic integration, understood as compilation and joining, appears along with a progress of commodity – monetary economy. At the beginning, integration got a form of joining different branches of economic activity in some regions. The next stage was joining regions – that is how, integrated national economies started. Then, economies of different countries – by creation thicker and thicker net of economic relations – begin to merge, and create, this way, the world economy. In the modern world economy, the economic integration has a form of creation different kinds of international, economic groupings, including groups of countries, which have a target of mutual integration of their economies [16, p.28].

At the turn of the 20<sup>th</sup> and the 21<sup>st</sup> centuries, it is difficult to overestimate an influence of integrative processes on the global economy. An effect of mentioned processes on national economies, is also seen in every aspect of economic life. Integration became this factor, which has an essential meaning, to make economic decisions for national economies, as well as, for international ones. A majority of countries join integrative processes with liberalization of commerce, not ignoring, an important globalization process [15, p.26].

In an analysis of an economic aspect of integration, there are two tendencies: traditional modern one. The traditional analysis of economic integration, is based on classical and neoclassical theories of international exchange. The first of them, is Ricardian's law of comparative advantage. It is based on advantages from specialization. This theory is based on different production equipment factors and different level of activity of two countries. A known description of this theory is an example of England, where labor costs of cloth are smaller and Portugal, which makes cheaper wine. Barter trade between these two countries lead to a situation, when they concentrate on production of goods, made more effectively (England – cloth, Portugal – wine). This way, international exchange allows getting comparative profits [28, p.741, 742]. Neoclassic theory – Heckscher – Ohlin – says, about uneven equipment of two countries with production factors.

As a result, both countries have fulfilling structure of production – complimentary, which is good to lead international trade [2, p. 17].

These two theories build a base to define an economic integration, in such called traditional way. An author of the first definition is W.Ropke, by whom, a base of integration is liberalization of foreign trade it is a state, which allows commercial relations as free and profitable, as these, which are in national economy'. While a final effect should be a rotation of goods and service between national economies, like in a single country.

A modern attitude to the economic integration, shows fully changes, which were made in the theory of international trade. Economists, not only stress a need to eliminate various barriers in trade exchange, but also say about necessity to assure a free flow of production factors between a group of countries. An example of such an attitude, is the definition of A. Budnikowski, who treats economic integration like a process of liquidation limits in flow of goods and production factors, and creation similar conditions of competition [2, p. 18].

The second adequate definition of economic integration, is presented by an author, who reflexes reasons, targets and results of European integration (in European Union) and motives, directing countries, joining integrative groups. Economic integration (I) is showed as: "made by countries institutional relations and economic processes, which by international cooperation, are heading for optimization of basic economic – social parameters of all members of these agreements" [2, p. 20].

Presented above definitions of integration, stress a point of economic integration, which is joining economies by processes of elimination barriers economic trade and, by building its institutional bases.

Moreover, economic integration should be treated like a process, in which there are changes, not only inside structure integrating countries, but also between them. As a result of this process, a merge of separate elements goes, what leads to creation a new economic organism. Transformations, taking place in the structure of national economies, and charts of integration subjects themselves, cause, that whole this process, has a dynamic character. For this reason, even in seemingly integrated group, can appear following integrative processes [23, p. 208-209]. On a base of these deliberations, we can pronounce, that integrative processes, have an endless character, regarding a permanent progress of the world economy, permanent globalization and competition.

Besides, an economic aspect of integration in the literature of a subject, concerning the international integration, you can find political science interpretation of this phenomenon, the most important are ; functionalism and neo - functionalism.

A founder and main representative of functionalism was D. Mitrany. He looks for ways to prevent international conflicts, besides he wants to set sources of cooperation between countries. According to a conception of functionalism, cooperation between nations should be in economic branches and with reference to their nature. It carries a necessity to focus an attention on a chosen task, and abstract from ideological elements, so, a primacy of economy over politics is

accepted. Politics is inseparably with a power and is special for a concrete country. While, economy has an international character, it is a base for cooperation between societies. Approach of national economies goes by, such called spillover effect. This means, that, starting cooperation in one branch, draws a necessity of cooperation in other zones – integration accelerates it automatically. Next, we can mention two stages of this effect. The first stage aims to make changes in attitudes in societies - it is an educational effect of integration. Whereas, the second stage, includes changes in politicians' attitude, and, as a result, bringing actions connected with national safety, foreign politics and defense for common organizations . So, integration process goes to a limitation of a power of independent countries and widening international functional activity, by international organizations. Functionalism also supports global cooperation more, than a regional one .

The second political theory is neo-functionalism. Its main representatives are E. Haas and L. Lindberg. On a contrary to functionalism, they support a regional integration and joining, as a result of spill effect, an economic integration with a political one. An engine of integration, are elites and groups of business. These political forces, wanting to solve their problems, pass them to institutions of nationless character. An essential role in the neo-functionalism plays a spillover. But, there are three kinds of it. Functional spillover, by Mitrany, is an effect of choosing economic ties.

An effective realization of tasks in separate branches, needs an integration of the following ones, and , as a result, there is a coordination of politics. While, the second kind, is a political spillover. It comes from an economic approach of integrating countries and decisions of elites, who, by their actions, accelerate an integration process.

By E.Hass, the political spillover takes place, when next authorities competences of integrating national countries, are given to international organizations .The last spillover effect is a supported spillover. Here, a main role play international subjects, which are promoters of political integration and initiators of international improving. The last kind of spillover proves, that neo-functionalists throw away a thesis of self-acceleration of integration, and set a necessity make political decisions to support its dynamics.

As a result of integration process, a new economic body comes into being, which is not a compilation of consisting it elements, but states quite new, separate quality, and its progressing possibilities are higher than a sum of possibilities of creating it economies. Also, its meaning and tendering power in the international arena, is bigger, than each of creating it countries, separately. By P. Bozyk, in other situation, the integration would be pointless, because it is accompanied by costs, born both individually, by each member country, and together by all countries [92, p.368].

A notion: economic integration, in its modern meaning started to be used in economic literature, at the turn of forties and fifties of the 20<sup>th</sup> century. F. Machlup

a spreading of this term, ties with a work of German authors, H. Gaedick and G. von Eyern, concerning statistics of commerce (1933), and a work of E.F. Heckscher about mercantilism (1931).

At the same time, the international economic integration, started to appear in official speeches of politician and officials, as well as, in documents concerning international matters. It is worth to mention a speech of P. Hoffman (managing European Community Administration – ECA) in Organization of European Economic Cooperation (OEEC) on the 31<sup>st</sup> October 1949, in which he insisted on a faster progress in "integration of Western European economy". He means, that "the pint of this kind of integration, was forming one big market, from which quantitative limits of goods flow".

Monetary barriers for money flow and even all customs would be removed for good'. Another significant example, can be a fact, that J. Tinbergen gave his second edition of his book a title 'International Economic Integration', while the first edition was titled 'International Economic Cooperation'. So far, in the literature of the subject one, commonly accepted definition of international economic integration has not existed. It comes from a fact of complexity of discussed problem, and its interdisciplinary character. Some authors, dealing with international economic integration, define it differently and stress various aspects of this process.

With the passing time, a new current appeared, treating the economic integration like, happening in economy, process of joining separate, so far elements, into one, which creates a new qualitatively economic structure, represented by B. Ballasa, R. Cooper, G.Giersch, A. Marschal and J. Tinbergen.

The most known representative of this current is B. Ballasa, and, by him, a definition of economic integration, is one of the most quoted in the literature of the subject. It treats the integration like an objective process, tied with a reached stage of manufacturing base, and, coming from it process of internationalization of economic life . By him, integration can be understood "as a process and as a state". Integration, treated like a process, involves different means of liquidation of discrimination between economic subjects, belonging to various national countries. Treated like a state, cane be presented as a lack of different forms of discrimination, between national economies, considering, that discrimination, on the whole, influences mutual economic relations.

Integration process, understood usually, as a group of means, is to lead to reach awaited state of integration. By B. Ballasa, the economic integration can have a few forms, representing different stages of it – a zone of free trade, a customs union, a common market, an economic union and a total economic integration.

B. Ballasa also achieved a differentiate between an integration and cooperation. According to his conception, cooperation involves actions, going to

minimalize the discrimination, while a process of integration, additionally involves actions going to limitation of some forms of discrimination.<sup>1</sup>

Z. Kamecki thinks, that defining the integration by B. Balassa raises some objections. First of all, it is considering the economic integration, as an economic politics, thus to equate reasons ( a set economic politics ) with results ( economic integration ). The following reservation, is to equate the economic integration with a zone of free trade, customs union and following mentioned by Balassa, stages of integration. By Kamecki, an essence of integration are changes in economic structure, and, it cannot be equated with, coming into being, integrative groups. He stresses, that starting this type of organization, not always must lead to the economic integration, and integration can have place without creation this type of organization. In relation with it, he says, that these organizations 'can be treated only as institutional forms and necessary only in some circumstances, to make the economic integration, bit not , as forms of economic integration generally [16, p.23].

J. Tinbergen achieved a division of integration into negative and positive one. The negative integration leads to elimination different obstacles, in commercial exchange between member countries. The positive integration is tied with a modification of instruments of economic politics, and with leading new instruments and institutions, which would make easier a functionality of a market in an integrated area and would promote wider political targets of a union. In practice of integrative processes, separating these two types of integration is not easy. A statement that the negative integration is tied with lower integration stages, and a positive one appears only on a stage of building the economic union, is not true [20, p. 25]

Negative integration is characteristic for free trade zone and the customs union. Yet, leading a common customs tariff for the third countries in the customs union is a symptom of the positive integration. In realization, the negative integration is easier. Member countries of the integrative grouping can identify and eliminate all symptoms of discrimination in the commercial exchange much easier, than realize the common politics in any other fields.

### **2.1.2. Which are the most important conditions of the international economic integration ?**

For initiation and a right course of process of international economic integration, it is necessary to fulfill a few basic conditions .

The most important condition is a real, or at least potential (possible to achieve while realizing ) complementarity of economic structures of countries

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<sup>1</sup> B. Ballasa, H. Kilamura, S. Burestam, R. Prebisch, P. G. Reynoso, J. Tinbergen, M. S. Wionczek "Problems of Economic Integration. Latin America". Polish Scientific Edition Warsaw 1988 p. 78-80 and B. Ballasa "The theory of Economic Integration' George Allan and Union London", 1962 p.1

heading for the economic integration. Z. Nowak thinks that economic complementarity of different countries, compared to each other, shows a level, in which work division between them makes easier the economic progress each of them. According to it, countries with a similar structure of production, are little complimentary.<sup>2</sup>

Complementarity should be understood dynamically, what means, that its lack in a separate moment ( making the same goods, competitive to each other, in two or more countries ) does not mean, that it cannot be created or developed in the future. If a lack of complementarity or competition exists in economy branches, in which it is easy to get a work division and specialization of production, (industry, especially processing one) then mutual adjustment and improving a general level of complementarity, can appear relatively fast. Whereas, the lack of complementarity or competition, is in agriculture or in mining industry, so in branches, where getting work division and specialization is difficult, then the process to increase complementarity, will go slowly.

Complementarity can have inter branch or inside branch character. An example of inter branch complementarity can be a traditional, international work division. Its bases are differences in recourses of production factors, coming from differences in raw materials, geographical situation and climate conditions. While, the base of inside complementarity, are differences in effectiveness of production factors.

Inter branch complementarity is not a necessary and enough condition, to the progress of international economic integration. In case of developed countries, its lack, and, even competition of economic structures are not an obstacle in the integration progress. In this group of countries, a necessary condition of the progress of international economic integration is existing inside branch complementarity, understood in dynamic way [2, p.372-373].

The second necessary condition for the process of integration is existing a right technical infrastructure, allowing countries to make trade sales. It is mainly a question of the right communication, transport or telecommunication connections, which enable the flow of goods, services, capital, information and, such called social-psychological infrastructure, understood as a level of acceptance of an idea and results of integration by citizens [22, p. 434].

Far easier when neighborly countries are integrating with each other, traditionally leading foreign trade and other forms of economic cooperation.

The third, important equally, although not always absolutely necessary condition, is pro integrative economic politics of countries, heading for integration, and accompanying creation some institutional-organizational structures, supporting this politics, in form of free trade zone, customs union, common market or economic union. Pro integrative politics includes actions, which enable and make

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<sup>2</sup> Z. Nowak 'International economic Integration'' in 'West Review' 1971 nr 2 p. 323 after M. Walkowski 'Modern Tendencies' quoted before p.21

easier, intensification of trade and services, and stimulate a transfer of production factors.

Two of the mentioned conditions – complementarity of economic structures and the right infrastructure – are necessary to make the process of international economic integration successful. Not fulfilling them causes, that the process of integration is practically impossible. The third condition – the pro integrative economic politics, is not an enough one, but, at the same time, is not the necessary condition. This means, that not fulfilling it, does not have to mean, that the integration cannot be done. Along it, fulfilling this condition together with not fulfilling, or only partly filing the next two conditions, is not enough to lead the effective process of economic integration.

### **2.1.3. What are the targets, premises and motives of the economic integration process ?**

There are two kinds of targets of the economic integration: economic and political ones. The main economic target is: progress of economic effectiveness, and in a consequence, economic development, which a synthetic factor is an increase of the national product and income . While, to the more analytical targets, we can count [1, p.292]:

- modernization of economy, by leading structural changes in production zone;
- free flow of goods, services, labor force and production factors, easy access to outside production factors, that means natural sources and technical knowledge;
- free access to foreign markets,
- reaching profitable prices in import and export,
- progress of specialization and cooperation in production,
- lower costs of technical progress and its higher dynamics.

Also the second group of targets - political ones – played an essential role in European integration.

The main economic target of integration, is maximization of profits from foreign trade and other forms of international cooperation, in frames of integrative grouping. In a short time, member countries increase their share in the internal trade of grouping and terms of trade are getting better. It is possible, thanks to elimination of tariffs, para tariffs and extra tariffs barriers. At the same time, access to markets of other member countries of grouping, is getting better. In a longer time, we can observe profitable changes in economy of member countries of the integration grouping.

Thanks to a cheaper specialization of production and division of work, there is a limitation or abandon of production and investments with relatively lower effectiveness, and concentration investments in the most effective branches. It enables of series of made goods, increase a production range, and then – increase

of profits, connected with lower costs. Integrative processes make easier countries, which take part in it, access to outside production factors, especially to raw materials, labour sources and technical knowledge. It enables a limitation or elimination of national barriers of economic development, so also acceleration of a speed of national income increase [2, p.371].

Among the rest of integration targets, it is worth to put attention on civilization ones, tied with development of science technology, informatics, communication, economy organization and political life organization. Reaching these targets is possible, thanks to development of scientific – technical and productive cooperation, information exchange coordination of scientific research, or their common conducting.

Integration also enables a realization of cultural targets. It comes true, by leveling language barriers, ethnic conflicts, closeness all nations and singular people. Besides, integration allows realize targets, coming from global needs. First of all, it is protection of environment, prevention an arms race or disadvantageous demographic phenomenon.

A base of integration process, are some premises and motives. In the literature of the subject, it is stressed that premises, contrary to motives, have an objective character (come from outside of a country and are independent of it) and outside (connected with unprofitable for countries wanting to take part in the integration process, changes, which happen in the world economy, and other outside political, military and ecological threats). Objectivity of premises concerns also a right economic and civilization preparation of a country to be integrated [2, p.34].

Premises of integration can be divided into economic and outside economic ones. Economic premises, appeared in integration ideas in Europe of capitalistic system, what had place in 18th century. Before, premises of internal and outside safety, as well as premises of political nature, were dominated. In case of integration countries, creating Council for Economic Assistance, political reasons dominated over economic premises [2, p.18].

To the main economic premises belong: growing competition in the world economy, connected with development of globalization processes – nowadays considered to be the most important premise, limitation of raw materials and labor force in many national economies, searching additional markets for a surplus of goods, necessity to develop inter branches specialization, necessity to concentrate expenses on research and progress of chosen production branches, market reforms in many countries, which resulted in opening for abroad.

To the outside economic premises belong: political and social ones and premises of internal and outside safety. To the political premises, we count uniform system and similarity of targets of foreign politics. Social premises come from a general development of civilization, which limits basic standards in existence and organization of life. Premises of internal and outside safety, define in going to strengthen a defending position of integration grouping, towards

surrounding and preventing international conflicts. Another group of outside economic premises, are needs to a common creation of infrastructure of communication and informatics. Also, in environmental protection, cooperation of countries in prevention of pollution, and leveling their negative results, is necessary.

Motives of integration, on a contrary to premises, have a subjective character, and are results of unforced will of power and safety of a country, to the integration. In the literature of the subject, we can differ two kinds of motives – with universal and particular character. Universal motives, come from objective premises of integration, represent mainly in going to improve a defense of a country, towards outside surrounding, by strengthen a position of integrative grouping, towards this surrounding and by stabilization an effect of it.

For developing countries, taking part in integrative processes is a chance to facilitate and accelerate their economic development. Integration allows them to make common infrastructural projects.

Investments, coordinated industry development and mutual sales of goods. Thanks to integration, they can focus on development of these production branches, which enable the most effective use of owned raw sources, reduction of import or widening and verification of export. Also, thanks to integration, creating and developing industry branches in these countries, have a sure sales in internal market of integrative grouping.

To the political reasons of integration of developing countries, belong: strengthen their political position and auction strength in relations with other countries, especially with highly developed ones.

Unfortunately, despite numerous positive aspects of integration for developing countries, real integration processes, meet many difficulties and go very slowly. The results lie in a low level of economic development of these countries and a lack of complementarity of their economy.

#### **2.1.4 . What are the methods and types of the international economic integration ?**

In the literature of the subject, two methods of economic integration are presented – functional method (liberal, free market) and institutional one (authoritarian).

The first of them, is a result of objective necessity and a natural outcome of development of manufacturing forces, while, in institutional method, usually predominate political motives.

Supporters of the first of mentioned methods – functional one– think, that, a right process of integration should come from working of market mechanism and competition, While, a role of international institutions, which come into being in the process of integration and the state, should be limited to elimination all obstacles in flow of goods and production factors. According to this method,

countries taking part in the integration process, should not create close regional groupings, and the market mechanism should lead to integration of the world economy, in free market conditions, and at the same time, to increase complementarity between individual countries.

The second method of integration – institutional one – has more numerous group of supporters. By this method, the economic integration is coordination and then unification of economic politics of integrating countries. In practice, it means, that these countries give a part of their functions and competence in economic politics, to a common international integrative institutions.

Presented methods of integration, are theoretical solutions and none of them exists in practice, in a pure form. Real processes of integration go according to a method, which uses, in different level elements, typical for both functional and institutional method.

Speaking about methods of integration, it is worth to remind of basic models of international economic integration. The model of integration is a total shape of integrative grouping, containing its main charts, especially a division of competitiveness, between international and over national organs and governments of member countries. In the literature of the subject, there are presented two models of integration in the market economy: model of international integration and, the model of over national integration [2, p. 178-179].

In the model of international economic integration ( also called liberal no regulated model ), all decisions, concerning ties of a group of countries, are made only by national institutions, whereas, an international centre has only coordinative functions. Recommendations of international integrative bodies, are prepositions and suggestions, towards member countries, and the latter ones can, but do not have to submit them.

The model of over national economic integration (also called the model of regulated or institutional integration) characterizes a fact, that over national centre of integration, on the base of information, passed by national integration centers, makes decisions obligatory to economic subjects in member countries – enterprises and national integration centers. They take a form of directives and orders. A range of decisive competitiveness of over national integration center, depends on decision of member countries and during the integration process, there is a gradual transfer of bigger and bigger part of authorities, from national to over national centers [2, p.373-379].

In a context of taking new countries, with different level of social- economic development, to the integrative grouping, appears an idea of diversity integration. It is searching a new model of integration, which allows to agree basic targets and rules, accepted by all member countries, with aspiration of countries, less or more engaged in the process of integration. Models of diversity integration, appear both in political science and in economic theories of integration .

Among ideas of diversity integration, a special attention, need four conceptions: the model of many speeds, the model of changeable geometry, the model of individual options and the mode centre-peripheries.

The model of many speeds sets, that member countries accept the same targets, and realize the same politics of actions, but in different speed. The model of 'changeable geometry' appears also in a version of 'concentric circles', 'strengthened cooperation (partnerships)' and 'flexibility' one. This conception sets that more advanced countries, develop a wider cooperation, over normal integrative process. The model set on individual options, when it comes to a range of integration, called also 'Europe a la carte', 'integrative menu', conception is chosen Europe, allows countries to choose some programs and politics from obligatory law order, and resignation with the rest of them. The model centre-peripheries sets a division for countries of a core (avant-garde), which are the main heart of economic and political development, and countries of peripheries (catching up ones).

A part of integration model, is a mechanism of integration. By a notion of mechanism of economic integration, you should understood rules of functioning of a market, in the integrative grouping. This notion contains functions of international market such as: international money, rates of currencies, international prices, international settlements, as well as, their connections with parameters of national markets. In the theory, there are two kinds of mechanism of integration – the mechanism of free market and the mechanism of regulated trade market [2, p.372].

In countries of the market economy, the main factor of integration is the mechanism of the market and competition. In economic practice, we speak about the regulated market mechanism. It means, that pro integrative politics and creation a grouping of integrative character go to facilitate of market mechanism working and a right direction or correction of its working.

In case of developing countries, where a mechanism of competition often does not work properly, to initiate a real process of economic integration, it is necessary to use other means. For example they can be: a trial to coordinate the economic development of a group of countries, free setting of chosen investments in the industry and infrastructure, coordination of chosen branches of economic politics, and, where it is possible and intentional, also gradual opening and joining national markets, in chosen branches of production.

### **2.1.5. What are the stages of economic integration process?**

Processes of economic integration are characterized by stages. By B. Ballasa, considered as classical one, there are five stages of integration process. Starting with the simplest regional forms of economic integration, there are followed by: a free trade zone, customs union, common market, economic and monetary union and a total integration. Each of mentioned stage is characterized

by specific charts. The main characteristic charts in singular stages, are presented in Table 2.1.

Table 2.1

**Institutional forms of regional integrative groupings**

	<b>Liberalization of trade between member countries</b>	<b>Common outside customs tariff</b>	<b>Free flow of production factors</b>	<b>Harmonization of economic politics</b>	<b>Unification of economic politics</b>
<b>Free trade zone</b>	<b>X</b>				
<b>Customs Union</b>	<b>X</b>	<b>X</b>			
<b>Common market</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<b>Economic and monetary union</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<b>Full integration</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>

**Source:** J Borowiec, K. Wilk “Theory and Practice of European Economic integration” Academy of Economics O.Lange in Wroclaw, Wroclaw 1997. p. 23

The simplest institutionally form of the integration grouping, is a free trade zone. Its target is elimination of customs and quantity limits in trade between member countries and, at the same time, keeping by each member country, a full autonomy in economic and customs politics, in relations with countries, which are not members of the zone.

Creation of the free trade zone, in practice, is often preceded by leading preferential commercial agreements, or automatically removing customs in mutual trade [26, p.67].

Liberalization of commerce in the free trade zone usually happens in stages – analytical schedule to abolish customs barriers and quantity limits for singular groups of goods, is contained in an agreement, signed by countries creating this zone. Such gradual abolishing limits in the commerce, goes to minimize negative effects of exaggerated competition, and allows the right effect for results of creation and reallocation of commerce, which accompany functioning of free trade zone.

Subject of an agreement of the free trade zone, can be a whole trade sale between countries creating the zone, or only chosen groups of goods. In the second case, usually comes a total abolish of barriers, towards industrial goods, while liquidation of agricultural goods trade, has a selective and partial character (customs and quantitative limits for chosen agricultural products are abolished totally, for others are reduced, and for some stay the same).

After creation the free trade zone, commercial sales between member countries become more liberal. It means that goods, made by member countries, are cheaper by abolished customs in the grouping market. While, towards the third countries, each country uses its own, most often different customs and commercial politics. In a consequence, in the zone area, goods, coming from countries of its zone, are treated differently than from other countries.

The higher form of regional grouping, is the customs union. It is thought to be a stem of integration groupings, and has the most built theory among other forms of integration groupings. Progress of the customs union theory, is tied with J. Viner and his book 'The Customs Union Issues', published in 1950 .

An essence of the customs union is a full liberalization of mutual trade sales, acceleration a common outside customs tariff and unification of commercial politics, towards other countries. It means that customs politics of this grouping, is focused on liberalization of trade between member countries and discrimination goods from other countries, at the same time .

J. Viner writes that a basic target of the customs union, and a main effect of its functioning, is reallocation of supply sources into specific goods. Depending on circumstances, this reallocation can go either, to a place of lower, or to higher manufacturing costs of these goods.<sup>3</sup>

Abolish customs in mutual trade of countries, creating the union, and keeping them exchange with other countries, cause specific effects. In the literature, most often they are divided into static and dynamic ones.

Static effects appear in a short period, so they have another name – short periodical effects. They appear, when there are not structural changes (changes of equipment in manufacturing factors, changes in structure of production and consumption), or technical – technological changes ( changes of a speed of technical progress and its structure ). Static effects can be divided into commercial, which appear in the trade zone of goods and services, and outside commercial effects, which appear in investments, production and consumption zone.

Dynamic effects, called also long periodical ones, appear with reaction and adaptation of enterprises, governments and labor force, to changes made by creation of the customs union. A result of these adaptive processes, is a stimulation of economic development of the member countries of the union.

Commercial static effects, characteristic for the customs union are: effect of commerce creation and effect of commerce reallocation (changes of commerce directions). They go to a change of volume and structure of commerce. The first of them, concerns mutual trade between member countries of the union, the second one, the commerce of the union members with the third countries. These effects can also appear after creation of the free commerce zone.

Effect of commerce creation, is a creation new stream (streams) of commerce between member countries of the union, resulted by abolish of customs

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<sup>3</sup> J. Viner 'Economics of the Customs Unions' in 'Theoretical bases' p.75

and other limits in the mutual commerce, keeping these barriers in the commerce with countries, which are not members of the union, at the same time. As a result of commerce liberalization, products, imported from member countries, become, in the specific country market, cheaper ( price – related functioning of customs and other barriers is eliminated ), so they are more competitive, than product made in this country. As an effect, the country production is replaced by import from a partner country. A condition to appear the effect of commerce creation, are differences in manufacturing costs of a specific product in singular countries.

A power of the commerce creation effect depends on following factors:

- price flexibility of demand of the country, which has not imported this good so far (the higher flexibility of demand is, the more intensive the commerce creation effect is, while, at a set flexibility, the more intensive creation effect is, the higher were customs rates between countries of the zone before its creation, and the bigger are differences in the costs of production of a similar good, in singular zone countries);

- price flexibility of demand in the country of a cheaper manufacturer;
- keeping a difference in costs and prices.

Liberalization of the commercial exchange in the customs union can cause, that a steam of it from countries, which are not members of the integration grouping, will be replaced by supplies of goods from member countries, even if a member country is characterized by lower production costs. It is connected with preferential treatment goods from member countries, which price and out price competitiveness rises, thanks to abolition of commercial barriers and discrimination goods, from countries, which are not members. This phenomenon is called the effect of commerce reallocation. It means a worse allocation of sources, both on member countries side, and the whole world economy. This effect will be always unprofitable for more effective third country. Reallocation of commerce is also accompanied by production and consumption effects, which, in this case, we can find in a relation: member countries – countries, which are not members.

A power of the commerce allocation depends on:

- price flexibility of demand in the importing country and price flexibility in the exporting country;
- outside customs rate;
- reaction of suppliers from the third countries, and reaction of manufacturers from the countries belonging to the zone.

The following stage, of the integration process, by B. Balassa, is the common market. It joins elements characteristic for the customs union – liberalization of the internal trade, a uniform outside customs tariffs and the common economic politics towards the third countries, with a free flow between member countries, and factors of production ( labor and capital ).<sup>4</sup>

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<sup>4</sup> Weidenteld/Wessels Europe von a bis Bundeszentrale fuer politische Bildung, Bonn p. 95. By Blassa, while analyzing production factors flow, we should consider a factor of enterprise

In frames of the common market happens leading, such called rule of four freedoms, containing the free flow of goods, services, capital and people.

According to the theory of international trade, creation of the common market leads to an increase the economic effectiveness in the region. It happens, thanks to the right allocation of production factors – factors reallocate from areas with a lower final productivity, to areas of the higher final productivity.<sup>5</sup>

In the literature of the subject, an essence of functioning of the common market, is explained in various theoretical models. Generally, they can be divided into two groups – neo classic (concerning the integration of capital market and labor market) and modern models, containing elements of the theory of international production (stressing internal diversity of capital – flow of payments, portfolio investments, direct international investments).<sup>6</sup>

The free flow of production factors causes, that factors go out of the country rich of them, to the country, in which they are relatively rare, and, in which you can get a higher rate of return with their application. Effects are short periodical adaptations of supply and prices of production agents, in the integrating countries.

The most mobile agent of production is capital. Flow of capital, especially productive capital, is accompanied, most often, by migration of technical knowledge, licenses, patents and international flow of labor, which are correlated with improving qualifications and cooperation with specialists [20, p.133].

The following stage of the economic integration, is a monetary union. The monetary union is an important element of the economic integration processes, because an effective functioning of the customs union, the common market or the economic union, is impossible without an advanced integration in the monetary zone.

Theoretically, the monetary union can be realized itself or along to the economic union. In reality, realization of the monetary union, is an element of the economic union functioning.

The monetary union contains all elements, characteristic to the common market, and additionally is characterized by the common capital market (including financial one) of integrating countries and the full rate union.

Three main premises of the monetary union, mentioned in the literature of subject, are:

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resourcefulness. B. Blassa ‘The Theory...’, S. Ladyla ‘From the Theory of Integration..’ p. 134-135. In the resolutions of the European Union

<sup>5</sup> A conception of the common market became popular since fifties, and introduced in the Spaak Report in 1956, Ibidem p. 119. In the literature of subject, there are three notions describing this stage of integration – uniform market, common market and internal market. They are taken to have the same meaning. ‘A shape of Europeanizm’ edited by A. Z. Nowak, D. Milczarek Polish Scientific Edition Warsaw 2006 p. 125).

<sup>6</sup> See J. W. Wiktor ‘European Union Market’ p. 22-30 and W. Molle ‘Economics of Integration’ p. 154-185.

- internal logics of the integration processes (coming to the stage of the common market, forces a progress in the monetary integration);
- crisis of the international monetary system (it is about the crisis of the system from Bretton Woods, which became a reason to start actions, going to the monetary integration, by countries of European Community);
- elimination of the rate risk and costs of monetary exchange.

In case of European Community, reasons, mentioned above, appeared at the end of the sixties of the 20<sup>th</sup> century. Then, it became clear, that a farther progress of economic integration is not possible, without acceleration of the monetary integration.

For the right functioning of the monetary union, some conditions are necessary. They are:

- liberalization of the capital sales and providing a freedom of financial service (integration of the capital market means a full freedom of the capital flow, portfolio, productive one ) and an income from lending and productive capital);
- elimination of differences in fluctuation of exchange rate or setting a common currency;
- creation an over national centre of issuing banks, leading the common monetary politics;
- effective coordination of the economic politics of member countries, to eliminate essential differences in stage of the economic cycle.

In the literature, besides the monetary union, there are differed also, the rate union, the union without limited administratively rates and the union with parallel currency. All mentioned forms of the monetary integration, present a narrower range than the monetary union.

In case of the rate union, we can speak about the full and the partial rate union ( pseudo union ). In the partial rate union, a member country is obliged to keep its permanent currency rate, towards the currency of other member countries. It means, that fluctuation of rates is allowed, only in strictly limited borders. At the same time, the member country can keep its own currency reserves, and its own monetary and fiscal system.

The full rate union means, that monetary politics of the whole grouping, is shaped by the common central bank, which can issue the common currency, and keeps common currency reserves of the member countries. One of the banks, creating the union, can takeover functions of the common central bank.

The conception of the union without limited administratively fluctuation of rates, sets, that coordination of the monetary politics, will contribute to approach of creation basic sizes of the monetary market, and they will stabilize in the natural way. The union with parallel currency is the parallel functioning of the common currency, to the national currency of countries, creating union.

W. Molle presented, a little different from B. Balassa, picture of stages of the economic integration.<sup>7</sup>

He thinks that economic integration is the process happening on two fields – market and politics. On the market field, the integration concerns the market of goods, services and the market of production factors. The integration of markets is realized by elimination obstacles, which make hard, a free flow of goods, services and production factors, between member countries. It contributes to improve the effectiveness of economy. The essence of integration in the political field is the integration of intervention influence of governments on economy. Integration in these two fields has, due to the author, (by an author,) a stage character.

He differed following stages in the integration of goods and services:

- the free trade zone – all obstacles in trade between partners, are abolished, and, at the same time, each country can use its own customs tariffs, towards other countries; goods in the international trade must have origin certificates;

- not full customs union – obstacles between member countries are abolished, and towards goods coming from the third countries, it is led the common outside customs tariff, so, there is no need to show origin certificates on internal borders; whereas barriers towards some goods are kept,

- the customs union – all obstacles in the trade are abolished and the common outside customs tariff is led.

By W. Molle, the integration of production factors happens in two stages:

- not full common market – its first element, is not full customs union, there is a freedom of internal flow of significant segments of labor and capital, in relations with the third countries, different country regulations can be obligatory – like in the free trade zone – or common regulations – like in the customs union;

- the common market – is consisted of a domestic market, where a freedom of flow of goods, services and production factors is obligatory, as well as, common outside regulations, concerning, both goods, services and production factors. In the integration in political field, W. Molle differs three stages:

- the economic union – determinates the common market, and a high level of coordination or unification of the most significant branches of economic politics;

- the monetary union – currency of member countries are tied by steady currency rates, and, are fully exchangeable, or, in all member countries there is one obligatory currency, reallocation of capital in the union borders is totally free;

- the economic and currency union joins characteristic charts of monetary union and economic one, besides, it is characterized by a big cohesion of macroeconomic and budget politics. To other charts of integration, W. Molle counted:

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<sup>7</sup> W. Molle ‘Economics of European integration’, p. 11-13

- political union – in its frames, integration goes out of economic field and contains branches, like foreign politics, to prevent crimes ( police ) and politics of safety,- full union – determinates a total unification of joining economies, and leading a common politics in many important branches, for example: social safety, income taxes, macroeconomic politics and stabilization politics.

### **2.1.6. What are the main regional integration groupings ?**

In the 20<sup>th</sup> century there was a strong dynamics of integration processes, in the singular regions of the world, what is identified, by many scientists, with a trial to find a new way of economy development. Nowadays, integration activity is tied with liberalization of economic relations, and they are not treated, like a necessary evil any more, but like a necessary condition of farther economic development. T. Sporek identifies this activity with a desire to create the free trade zone, where customs and quantitative limits in a group of countries, would be abolished. This view seems to be real especially, when observing a significant progress of commercial agreements, since the beginning of the nineties. A special attention needs a fact, that highest rise of numbers of commercial agreements, was in the West Hemisphere, and areas of Asia and Pacific.

A structure of the modern world economy is very complex. It comes from growing number of subjects, building it, and more complicated relations between them. In the last century, a new subject of the world economy appeared – integration grouping. It is defined, as ‘significantly different, on the surrounding background (for example, in the world economy, and in international economic relations), relatively uniform, new economic organism ,including two or more countries ( national economies ). A process of integration joins members of groupings, and, it is a mutual adaptation of structures of singular economies. These international groupings have a regional character. It means, that, it is built by countries, which belong to a common geographical region, often neighbor to each other, and they are characterized, by a similar level of economic development though, it is not a necessary condition.

It is worth to stress, that integration groupings can have a dual character: formal (institutionalized) and informal. Formal integration groupings, have right organization structures, and authorities. Their role is a stimulation and continuation of integration processes, in the institutional way. Formalized integration groupings are for example: European Union, NAFTA and ASEAN. Informal groupings are deprived of formal structures, which would initiate and dynamize, integration processes. They can be formed by countries, tied with strong economic relations, for instance commercial, capital or productive ones. An example can be existing, but not formalized, relations between Canada, the USA and Mexico, before NAFTA was formed Integrative activity is observed in all continents. Table 2 presents the most important groupings, with a year of their foundation, the first

and actual composition and describes institutional – legal form of each organization.

Table 2.2

**Chosen integration groupings, their primary and actual composition and planned/obtained institutional – organizational form**

Integration groupings	Primary composition and the year of founding	Actual composition	Institutional organization form
EFTA – European Free Trade Association.	1960 Austria, Denmark Norway, Portugal, Sweden, Switzerland, Great Britain.	Island, Liechtenstein, Norway, Switzerland.	Free Trade Zone.
CEFTA Central European Free Trade Agreement.	1992 Czechoslovakia, Poland, Hungary.	Croatia, Macedonia, Bosnia, Herzegovina, Moldavia, Serbia.	Free Trade Zone.
BFTA – Baltic Free Trade Association.	1994 Estonia, Lithuania, Latvia.	Estonia, Lithuania, Latvia.	Free Trade Zone.
UE – European Union	1951 Belgium, France, Germany, Holland, Luxemburg, Italy.	Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Greece, Spain, Holland, Ireland, Lithuania, Luxemburg, Latvia, Malta, Germany, Poland, Portugal, Croatia, Romania, Slovakia, Slovenia, Sweden, Hungary, The United Kingdom, Italy	Economic and Monetary Union (not all countries belong to it).
NAFTA – North American Free Trade Association.	1992 USA, Canada, Mexico.	USA, Canada, Mexico.	Free Trade Zone.
MERCOSUR – Common Market of The	1991 Argentina.	Argentina, Brazil, Paraguay, Uruguay.	Customs Union.

South.			
Andean Community.	1969 Bolivia, Chile, Ecuador, Columbia, Peru.	Bolivia, Ecuador, Columbia, Peru.	Customs Union.
CACM – Central American Common Market.	1960 Guatemala, Honduras, Nicaragua, Salvador.	Guatemala, Honduras, Nicaragua, Salvador, Costa Rica.	Customs Union.
CARICOM – Caribbean Community.	1973 Barbados, Guiana, Jamaica, Trinidad, Tobago.	Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guiana, Haiti, Jamaica, Montserrat, St. Lucia, St. Kitts and Nevis, St. Vincent and Grenadine, Surinam, Trinidad and Tobago.	Common Market.
FTAA – Free Trade Area of The Americas.	Antigua and Barbuda, Argentina, Bahamas , Barbados, Belize, Bolivia, Brazil, Canada, Chile, Columbia, Costa Rica, Dominique, Dominicans, Ecuador, El Salvador, Grenada, Guatemala, Guiana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, St. Kitts and Nevis, St. Lucia, St. Vincent and Grenadine, Surinam, Trinidad and Tobago, USA, Uruguay, Venezuela.	Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Canada, Chile, Columbia, Costa Rica, Dominique, Dominicans, Ecuador, El Salvador, Grenada, , Guatemala, Guiana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, St. Kitts and Nevis, St. Lucia, St. Vincent and Grenadine, Surinam, Trinidad and Tobago, USA, Uruguay, Venezuela.	Target – Free Trade Zone.

LALA – Latin American, Integration Association.	1980 Argentina, Bolivia, Brazil, Chile, Ecuador, Columbia, Mexico, Paraguay, Peru, East Republic of Uruguay, Venezuela.	Argentina, Bolivia, Brazil, Chile, Ecuador, Columbia, Cuba, Mexico, Paraguay, Peru, East Republic of Uruguay, Venezuela.	Area with Economic Preferences. Target: Common Market
SACU – Southern African Customs Union.	1969 Botswana, Lesotho, Republic of Southern Africa, Suazi.	Bostvana, Lesotho, Namibia, Republic of Southern Africa, Suazi.	Customs Union.
COMESA – Common Market for Eastern and Southern Africa.	1994 Angola, Burundi, Dzibuti, Egypt, Erytrea, Ethiopia, Comory, Congo, Kenia, Madagascar, Malavi, Mauritius, Namibia, Ruanda, Seszele, Suazi, Sudan, Uganda, Zambia, Zimbabwe,	Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Canada, Chile, Columbia, Costa Rica, Dominique, Dominicans, Ecuador, El Salvador, Grenada, Guatemala, Guiana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panamas, Paraguay, Peru, St. Kitts and Nevis, St. Lucia, St. Vincent and Grenadine, Surinam, Trinidad and Tobago, USA, Uruguay, Venezuela.	Free Trade Zone.
ECOVAS – Economic Community of West African States.	1975 Benin, Burkina Faso, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Mauretania, Niger, Nigeria, Senegal, Sierra	Benin, Burkina Faso, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Mauretania, Niger, Nigeria, Senegal, Sierra Leone, Togo.	Target Creation of Economic and Monetary Union.

	Leone, Togo, The Coast of Ivory, .	Island of Green Cape.	
ASEAN – Association of South – East Asian Nations.	1967 Philippians, Indonesia, Malaysia, Singapore, Thailand.	Brunei, Darussalam, Philippians, Indonesia, Cambodia, Laos, Malaysia, Myanmar.	Free Trade Zone.
APEC – Asia, Pacific Economic Cooperation.	1989 Australia, Brunei, Darussalam, Indonesia, Japan, Canada, Southern Korea, Malaysia, New Zealand, Philippians, Singapore, USA, Thailand.	Australia, Brunei, Darussalam, Chile, China, Philippians, Hong Kong, Indonesia, Japan, Canada, Republic of Korea, Malaysia, Mexico, New Zealand, Papua, New Guinea, Peru, Russia, Singapore.	Multilateral System of Trade.
ANZCERTA – Australia, New Zealand Closer Economic Relations Trade Agreement.	1983 Australia, New Zealand.	Australia, Nez Zealand.	Free Trade Zone.

**Source:** Own work out of the author- information from inter webpages of integrative groupings <http://www.efta.int> [08.06.2007], <http://www.aseansec.org/> [08.06.2007], <http://www.comunidadandina.org/> [09.07.2007], <http://www.caricom.org/> [09.07.2007], <http://www.sacu.int/> [09.02.2007], <http://www.comesa.int> [09.07.2007], <http://www.ecowas.int/> [09.07.2007], <http://www.ecowas.info/> [10.07.2007], <http://www.apec.prg> [10.07.2007], E. Oziewicz, K. Zoladkiewicz ‘Integration Groupings in The South and middle America’ in ‘Integration Processes in the Modern World Economy’ Polish Scientific Edition Warsaw 2001 p. 187.

It is worth to notice, that each of integration stages is difficult to reach. It needs, not only a rational attitude to economic matters, but also, a strong political will. The lowest stage – the free trade zone – is supposed to be the most attractive form of the integration process. It is one basic reason of such an attitude. It needs only elimination of quantitative and qualitative barriers, in trade sales, without a need to resign with economic independence of the national economy [29, p.9-10]. Majority of integration processes is limited to the free trade zone, examples are organizations, presented in table 2, for instance EFTA, COMESA and ANZCERTA.

Majority of organizations stay at beginning stages of the free trade zone or the customs union. They also have ambitious integration projects, but for now, do

not feel like getting rid of their independence. At the same time, a new phenomenon is perceived, which was not met before. The target of integration groupings, is not only liquidation of economic barriers, to increase trade, but also cooperation with scientific, technical and financial character. It is, such called new regionalization, which an essence is widening of integration areas, besides building economic groupings, also to ecology, culture or social matters.

Development of the modern world economy, for which, an increase of the global economic interrelationship is characteristic, appoints, a phenomenon of regionalization, sometimes having a form of integration. Globalization and regional integration in the world economy, like economic interrelationship, are not a new phenomenon and they existed before. Yet, a range and course of these processes in the last decade of the 20<sup>th</sup> century, contains many new qualitative elements.

Regionalization, which somehow is a synonym of different integration forms, takes a form less or more close and institutionalized relations, is characterized by inter weaving economic, commercial, technical and financial cooperation [17 p.18]. In the common meaning, international economic integration is understood, as a process of a merge of national economies. Yet, this merge does not mean to add economic potentials, but creation new economic organism with different characteristics [2, p.273].

In the last years, we can observe a notable boom of the integration processes in various regions of the world. Such called new regionalism, became one of the main elements of development of the world economy, on a present stage. Modern integration initiatives, differ from the previous ones. They involve much more countries, have a wider range and different forms. Old groupings try to boom their activity, and, at the same time, new regional agreements are signed. Outside and internal conditions of economic cooperation processes, in particular countries, are also different. Change of political conditions, the end of the cold war and democratic changes, as well as abandon the model directed to inside to the model directed outside, was effective to make agreements in many countries. New conditions resulted in appearing of various forms of integration, and creating integration agreements in different regions of the world, on new rules. Actual processes are an example of integration of countries with diversified potential and big differences in development level.

Countries with lower development level, try to integrate with countries, which are main centers of the world economy.

‘New regionalization is characterized by widening the integration field, besides creation commercial blocks for such branches as: ecology, culture, social and political matters, and at the same time, sensitizing for global transformations. It is not only about defense, against results of global changes, but rather about facilitating of adaptations, which can be realized on particular countries level. It is admitted, that in regions, there are core and periphery areas. Areas out of the core, not having chances to integrate with UE and TRIADA, are less politically stable,

and economically active, but they are conscience of their unprofitable situation, and want to stop a tendency to marginalization. Such called semi – peripheries of Europe, which creates East Europe, are in the indirect position, leading to the integration with the core, so with European Union.

A new stage of integration is often determined as, an open regionalism, what means, that its target is not a creation of close commercial blocks, but only increase of the free trade area. International regional cooperation is treated as a factor to strengthen of democratic and political stabilization, and to ensure economic progress and life improvement [21, p.4-9]

In the literature of the subject, a lot of place is sacrificed to research of mutual relations between two tendencies, characteristic for modern economy, especially growing up, at the same time, processes of globalization and international regionalization.

These relations are perceived in different way. On one side, it is shown, that the process of globalization and regionalization, strengthen mutually, on the other one, there is not lack of their opposition. J. Mayal interprets processes of globalization and regionalization in a very interesting way. He thinks that both trends are not opposite, but symbiotic, and appear in the world at the same time, fulfilling each other. By him, a development of regionalization was an answer to globalization process, like globalization itself, and powers, which stimulate it, were a consequence of competition in the world.<sup>8</sup>

By J. Kleer, a base of these two processes, are mechanisms tied with profits of scale ( it is called like that in economy ). A deciding role in these processes played three phenomenons: a violent acceleration of technical progress, informatics revolution, and a fast development of work efficiency per worker. Although, a core of globalization are similar, or even the same reasons, members of these processes , targets and rules setting both of them, are different. Targets of globalization do not have to be the same, as targets of the regional integration. Some are common, others can be different. Processes of the world globalization are directed by requirements of competition, and searching by economic subject, the most effective forms and localization of economic activity, and its chart differing it from integration, is spontaneity(20,p.20-24). While, activity for regionalism, is mainly limited by needs of cooperation, not only economic, but also political and social, and contain many branches ( for instance,environment protection or work conditions ). Regional cooperation's target is resolving differences and contradictions between economies and works to compensate their development chances [21,p.40] (Table 2.3).

Table 2.3

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<sup>8</sup>J. Mayal 'Globalization and the Future of Regionalism the Future in the Past' Yatsuatake 1993. p. 48

### **The main rules of globalization and international regionalization**

	<b>Globalization</b>	<b>Regionalization</b>
<b>Main Subjects</b>	Main carriers of globalization processes are first, of all, transport cooperation.	Carriers of regional processes are always countries, agendas of institutions. They possess some power functions in the territory of regionalization.
<b>Targets</b>	Acting on many markets, corporations head for their maximal uniformity. Approaching of conditions happen mainly influenced by a market.	Regionalization is to go to higher effectiveness of economy, reduction of transaction costs.
<b>Rules of activity</b>	Corporations, lead by they own targets (finally it is maximization of profit), so activity is submitted to rules of micro economy.	Regionalization is tied with rules of macro economy – creation of outside conditions, macroeconomic stabilization, new impulses for development of infrastructure etc.

**Source:** Own outcome on the base: J.Kleer ‘Globalization of Economy and Regional Integration’ in ‘Globalization of the World Economy and Regional Integration. Consequences for the World and Poland’ Warsaw 1998. p. 18.

The modern world economy faced many new problems, coming from reasons of a present financial crisis, stagflation, huge divergences in goods – services – capital sales, unemployment and political events, caused by 11<sup>th</sup> September 2001 in the USA, on which there are two dominated trends – challenges: globalization and development of international economic integration.

Dynamics of above events, in the global economy, increases a need of coordination of activities, yet, so far, a clear and precise conception in this range, was not worked out. Often, different, particular, mutually contradictory views of countries, despite a common interest, and then gradual widening of similarity zone, caused, that business were nor similar enough, to allow a coordination in the global scale.

Present realities of the world economy prove that, there is not the cooperation between countries, in the system of the world economy, despite a bigger engagement of international regulative organizations, such as: the United Nations, the World Trade Organization, Organization for Economic Cooperation

and Development, International Monetary Fund or others form in regions, which start playing a serious role in the international economic and political relations.

By A. B. Kisiel-Lowczyc, possibility to regulate economy in the international scale, can be created by regional integration, which is a function of the global transformations of the world economy.

Relations between the regional integration and the global system of the world economy, works on interrelation rule, that regional integration, which is a result of long term transformations of the world economy, is, at the same time, an important part of the global order, because it takes part in its development and transformation itself.

We share an opinion of many authors, who accept the regional integration for an indirect stage, on the way, to the global multilevel liberalization, stressing, that it is a fulfilling of difficult efforts, in order to remove many various barriers, in the commerce development, so it fulfills an important pragmatic stage. A practice of previous commercial negotiations proved, that important global targets, are possible to realize, only in a long time perspective, and, at the time, regional integration can fulfill an important function of stimulator of multinational process.<sup>9</sup>

J. Kleer asks a very important question: will the global model, worked out in the continent of West Europe, keep a capitalistic form and will be modified, or, the new model created in Asia, will win.<sup>10</sup>

Looking at the world division, into national regions or international ones – politics of integration of a few, dozen or several dozen of countries, has nowadays a special meaning. Even setting, a priori, that in global perspective, a big part of state subjects, will join each other institutionally, in economic sense, and will unify noticeably, looking at obligatory law, it is still discussable, in what level and similarity of business, and advanced economic and civil progress, would allow such spacious areas, and a deeper integrative cooperation direct qualitatively. Moreover, in what level an outstripping legal – international combination, so institutional authentically, will strengthen intensification and a range of material and economic combination of economies, tied formally. M. Dobraczynski approaches the above problem, in a very interesting and careful way. He suggests that economic development and institutional behaviors, affect and will affect each other mutually, despite noticeable variances, depending on a concrete situation. Author wonders of quite a new economic category, which he calls a notion ‘global region’, so the area containing the most advanced national economies, so a model approached to a wider Organization for Economic Development<sup>11</sup>.

Yet, an above vision is a matter, not belonging to solution, in the first decades of the 21<sup>st</sup> century, despite functioning of mentioned above, international

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<sup>9</sup> A. B. Kisiel- Lowczyc ‘Modern World Economy’ Gdansk 1994. P. 197-8

<sup>10</sup> See J. Kleer ‘Globalization: General or Specific Phenomenon?’ Scientific Notebooks of, Body of the World Economy. Main School of Commerce. Warsaw 2008 p. 38-39

<sup>11</sup> M. Dobraczynski ‘Modern Conditionn of International Regions’ Reports of the Congress, V Session, Congress of Economists, Polish Economic Society, Warsaw 2000, p. 10-11

organizations. A level of the real integration, both in the economic, and political field, is still too loose or limited (geographically, legally or politically), to try, to authorize the mentioned institution with a term 'global region'. This situation would be very harmful towards very pragmatic integrative initiations, created on a ripe economic area of Western Europe, which worked out concrete integration models. Confirmation of it, is the present European Union, which is, in a very ambitious and responsible role, towards the rest of European groupings and the rest of the world. Creators and supporters think, that 'European 27', will carry out its most important duty, which is finishing institutional reforms, what allows a fast spreading process, so that this grouping can fulfill a role of the future ambassador of the old continent, towards the rest of the world, which are regional groupings of American and Asian continents.

In the modern world, a position of a particular country is determined, more and more, by belonging to a set region. Regionalism is shaped mostly by market powers and technological progress, like globalization, but its shape is determined by politics of governments of countries, which are members of this region, and development contacts between firms, and people. In this way, a particular area, can express common business, in the global negotiations, and solve problems and conflicts. A new regionalism is also a base for safety and political stabilization in the region.

To the most interesting and mostly extended projects of the regional in 90s, you can count groupings like: APEC, NAFTA, MERCOSUR, European Union and ASEAN, which have many features of the new regionalism. All these regional groupings, are tied with each other in different way, by additional agreements or plans, to create, much bigger area of the free trade and investments, for example Free Trade American Area (FTAA), Transatlantic Free Trade Area (TAFTA). While, European Union improves cooperation for free trade with Asian countries, in frames of dialogue Union – Asia, and with countries of South America – in frames of negotiations with MERCOSUR and with many other groupings, in various parts of the world.

## **2.2. Globalization of modern international economic relations**

Globalization is a processes of fundamental change taking place in world economies and based on information and development of new technologies. It influences and intensifies connections among countries and involves virtually all sectors of economic activities. The process of globalization is multi-dimensional. In the first part of the article, specific aspects of globalization have been discussed suggesting various definitions and approaches, all of which can be found in the discipline's literature. The key features of globalization are presented in a detailed manner. In the second part of the article attention has been given to the main

determinants of globalization including: global markets, global competition and interactions, education, ecology, cultural changes and social identity.

According to scientists, globalization is a term, not only hard to define, but it is also difficult to provide the exact date of its beginning. Despite that fact, some of them conduct attempts to do it. Lord Dahrendorf claims that this date is the 20th of July 1969, when the first man reached the Moon and saw the Earth as a whole. This thesis explains that despite the Earth's diversity, it is still a uniform planet.

The term "globalization" appeared the first time in 1985 as the title of a book of Ronald Robertson - the sociologist. Since then, this term has been started to be used in scientific discussions, but only in the beginning of 1990's globalization was becoming more and more popular [10, p.11].

There are many definitions of globalization, but there is still the lack of a standard one, which would fulfill its task in different scientific environments. Therefore there is a need of presenting a few definitions which treat globalization from the economic point of view.

According to Anthony McGrew, the British economist who compiled a popular definition, "globalization is a process (or set of processes) which embodies a transformation in the spatial organization of social relations and transactions, generating transcontinental or interregional flows and networks of activity, interaction and power

In sum, "globalization can be thought of as the widening, intensifying, speeding up, and growing impact of world-wide interconnectedness. By conceiving of globalization in this way, it becomes possible to map empirically patterns of worldwide links and relations across all key domains of human activity, from the military to the cultural".<sup>12</sup>

The other definition was provided by UNCTAD, which says that "globalization refers both to an increasing flow of goods and resources across national borders and to the emergence of a complementary set of organizational structures to manage the expanding network of international economic activity and transactions. Strictly speaking, a global economy is one where firms and financial institutions operate transnationally - beyond the confines of national boundaries."<sup>13</sup>

The synthesis of most definitions is the approach of Anna Zorska, who claims that globalization is the world long-lasting process of integrating more and more countries economies over their borders, as the result! Expansion and intensification of their connections (investment, production, and cooperation). This creates the worldwide economic system, which is characterized by high dependence and leading common tasks, realized even by remote countries.<sup>14</sup>

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<sup>12</sup> [www.polity.co.uk/global/default.htm](http://www.polity.co.uk/global/default.htm)

<sup>13</sup> [www.unctad.org](http://www.unctad.org)

<sup>14</sup> Zorska, Ku globalizacji, Warszawa 2002, p. 20

Nowadays globalization is thought to be the fundamental process of changes in the world economy. It is the next stage of internationalization. Globalization results from the trade liberalization, opening economies processes and reinforcing the worldwide competition. The basis of globalization is the countries integration that consists in linking their economic processes, which include foreign trade, investments and production. It is connected with migration of goods, services, production factors, labor, capital and technology. That causes that competition becomes stronger and there are more (anymore) competitors, who act on the global market. Globalization is also based on information and high technology development.

Looking from the countries' position, globalization also influences on their activities and their roles in the contemporary world. The intensification of connections between countries makes national economies more dependent and they become the elements of world economies integration system. They cooperate with each other and coordinate joint undertakings. The deeper integration decreases their sovereignty. That doesn't mean that they lose their autonomy, history, culture and independence. Countries, being members of regional or world associations, have to keep signed agreements and take into consideration the common wealth in order to contribute to the development of the entire community.

### **2.2.1. What are the main features of globalization?**

In order to better understand the globalization process, it is necessary to introduce its main features:

- multidimensional character - manifests itself in many aspects of social life, in economy, in politics and also in culture. In globalization process, there are different actions, conducted at the same time;
- complexity - globalization consists of a huge amount of sub-processes, spread all over the world, which create the exact structure. There are four main processes in the world economy: the decrease of USA's domination, financial market development, globalization of companies' activity, ecological problems;
- integration - connecting activities run on different levels: economies, markets, and companies by trade, agreement and investment connections;
- international dependence - the development of a particular entity depends on its activities run abroad and their success. This dependence can become one way dependence on a stronger foreign partner;
- connection with the progress of science, technology and organization - economies modernization, development of new production branches, increase of high qualified labor and new technology play a crucial role in the long-lasting globalization process. At the same time, globalization accelerates the technological progress;

– compression of time and space - the "world shrinking" phenomenon is the result of science and technology development. It is seen in the labor migration, products coming from all over the world, possibility in taking part in world's events (Television, Internet) and in the fast products' and services' delivery processes;

– dialectical character - clashing of processes and opinions which have opposing character: globalization - regionalism, integration - de-integration;

– multilevel character - the world economy is the highest level in the hierarchy, economy's branches, markets, companies, assets, products and services are lower in this hierarchy;

– international range - extension of activities to the international and worldwide level.<sup>15</sup>

Some scientists list also other distinctive features of globalization, which are presented below:

– the creation of a global financial market - as the result of liquidation of obstacles and difficulties in capital flows;

– institutionalization of foreign trade - foreign trade is controlled by such institutions like: World Trade Organization (WTO), General Agreement on Tariffs and Trade (GATT), International Bank for Reconstruction and Development (IBRD) and International Monetary Fund (IMF);

– MacDonalidization - global unification of needs according to some products and services, especially in the food industry, electronics and car branches;

– sudden increase of Foreign Direct Investments FDI flows - in 1990's their growth exceeded 4 times the growth of world export;

– domination of transnational corporations in the global economy – which are the main entities of the globalization process;

– geographical disjunction of the value added chain in the global scale – setting the part of chain (production of part of final product) in the place where the ratio of expenditures to effects is the most favorable;

– creation of knowledge based economy - huge capital investments in Research and Development (R&D) activities;

– creation of the fourth economic sector - traditionally, the economy was divided into three sectors: agriculture, industry and services. Nowadays services are divided into further two sectors: traditional services and intellectual services. The tasks of intellectual services are: information processes, Research and Development (R&D) and information management. They all create the new discipline, which is The Knowledge Management;

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<sup>15</sup> Zorska, Ku globalizacji, Warszawa 2002, p. 16-18

– redefinition of the term "country" - decreasing roles of countries as the result of growing roles of integration associations and international organizations [7, p. 38] .

### **2.2.2. Which are the most important determinants of the globalization process?**

There are many factors and determinants which influence on the globalization process. Some of them appear on the worldwide scale and other are realized in particular countries. If these factors are more and more advanced in the country, this country will better conduct the globalization process. The most important determinants are the following .

#### **Global Markets**

1. **Financial markets** - thanks to financial markets deregulation and capital flows liberalization, their globalization process is the most advanced. Private capital is transferred very fast all over the world. Huge amounts of capital flows, financial transactions and a multitude of mediators have contributed to the creation of global financial markets. Nowadays they are working automatically and aside of the real sphere. The creation of electronic money, as the computer record, became a wonder of the contemporary world economy. In the new electronic economy, fund managers, banks, international corporations and many individual investors are able to transfer capital from one to another remote place in the world. Thanks to technology development and using the newest computer science solutions, very complex financial operations can be realized on different markets during 24 hours a day. Global financial markets have also dominated contemporary production factors allocation processes, recently. Nowadays financial markets are not stable, there are sudden changes of capital flows directions and financial crises are spreading very fast all over the world.

2. **Markets of goods and services** - globalization of these markets accelerated thanks to liberalization, opening of national economies and institutionalization of foreign trade global rules within the WTO. 90% of foreign trade is based on these rules. It develops dynamically and the share of trade in GDP increases in many countries. More and more goods are subject of foreign trade and many market segments offer products equal to standards and quality on the global market. The global consumer markets, ranges of products and brand names are becoming bigger. As the result of MacDonalization, consumers' needs and preferences are also similar. Only in some areas they are differentiated.

3. **Job markets** and labor migration - progress in this sector is rather not so great. Job markets are not global, but thanks to computer technology the work can be done in remote places without the employees' migration. The management staff is the most mobile in the global economy. The globalization process

influences on local job markets, salaries, unemployment rates and migration. Migration can also result from tourism. Nowadays it is more and more popular, especially when flight tickets are cheap and global services and information are more developed [21, p.37].

**4. Markets of technology, knowledge and information** - Transport and telecommunication technology progress and computer science development are crucial factors which accelerate the globalization process. Computer revolution and telecommunication progress (electronic communication, Internet, e-business, cell phones, computers and programs) enabled the development of global interactions. The world transport and telecommunication network system helps to transfer ideas, goods, information and capital the most effectively. The computer technology progress causes that "the world shrinks" and events, information and ideas are at once spread all over the world. The global information revolution made changes in production, finance, foreign trade and in business. Services branches, with a weak position in foreign trade before, have become stronger and industrial branches gained the global range. Information revolution also created opportunities of production organization for companies' branches all over the world.<sup>16</sup>

#### **Global competition**

The globalization process is connected with global competition, which becomes stronger on the international markets. If these markets are more connected with each other, companies have to coordinate their activities in many countries and competition conditions become more and more difficult.

Liberty, liquidation of goods, services and capital flows' obstacles and possibility of doing business abroad, caused that the world economy's entities (companies, banks, financial institutions) on the one hand started to look for bigger profits abroad, but on the other hand they had to face the global competition. Globalization changes also the rules of game in gaining profits from competition. It puts the pressure on mergers and acquisitions in order to possess a long-lasting competitive advantage. Both companies and national economies have to take actions to fight with global competition. This competition sets the paths of production restructuring, its organization and fastens the technology progress.

#### **Global economic activity**

In the last decade, the high dynamism of Foreign Direct Investment (FDI) contributed to the globalization process of goods, services and financial markets. It was even higher than the dynamism of world trade. Thanks to trade and capital flows liberalization and possibility of doing business abroad, more and more companies transfer their capital and technology to other countries in order to be more efficient. Globalization creates favorable conditions for expansion and profits. Foreign Direct Investments change streams and structure of international

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<sup>16</sup> J.E. Garten The Global Economic Challenge, „Foreign Affairs”, January, February 2005, p. 37-40

trade and influence on development processes. Companies realize global expansion strategies, reorganize and change management methods in order to decrease cost, improve profits, minimize the risk and possess a competitive advantage on the global market.

International corporations' activities reinforce the globalization process, because they are able to adjust to new conditions the most effectively. They act on different markets and increase the flows of capital, goods, services and technology. Corporations join and cooperate with each other. They conduct very complex investments and make strategic decisions concerning allocation of resources. Formerly, this was the role of countries and governments. Nowadays corporations' position still grows on the global market.

### **Global industry production**

Technological changes, progress in the computer science, the development of telecommunication and the decrease of transport costs created new possibilities for many industrial branches and improved the organization of production. The basis of production internationalization is technology progress, markets liberalization and the increase of production factors mobility. These industrial changes are the result of creating complex production connection networks between companies in many countries. Globalization is connected with companies' new activities and their specialization in the global scale (investments, trade, production, technology development, Research and Development - R&D, new products and marketing). Companies' global strategies allow them to settle production in particularly favorable conditions. Their development results from headquarters' activities in connection with other cooperating companies in the world. Acting on the global market is supported by disseminating of market institutions, organizational structures, management methods, production systems, data processing methods, communication, and law regulation in the worldwide scale.

### **Global relationships and interactions**

Nowadays, the high degree of relationships and connections between economies causes that a phenomenon existing in one country or region is easily transferred to other countries or regions. Unfortunately, the most often this concerns crises. The development of particular countries often depends on the situation on the main stock exchanges and on the currency markets.

In the past, most countries were independent on sudden changes of other markets. The pace of crises' transfer is very dangerous especially for emerging markets. Now, remote economic and political events have a stronger direct influence on other countries than ever before (financial crises). Additionally, actions and decisions made in one country can have global implications and influence on economy, politics and lives in other countries.

As the result of trade, production, financial, investment and technological connections between countries, the world economy is not the sum of individual markets any more, but has become an integrated market system [7, p.52].

## **Education**

Nowadays, in the era of globalization, the education system correlates with new global economic requirements. It is the result of problems the society has to face: increasing changeability and uncertainty and deepening different social and economic risks. Therefore, there are a few challenges confronting education systems, which make it necessary to conduct improvements in those systems:

- sudden development of technological knowledge;
- countries' integration and world economy's globalization;
- increase of importance of small and medium enterprises;
- increase of costs of education.

Therefore, the education system has to be changed, too. Schools and universities should develop abilities of fast self-organizing and enterprising adaptability to continuously changing conditions. Modernity and entrepreneurship have become the most important and the most difficult challenges of education in the XXI century. The experts claim the new education system should be a pro-investment. It is to be based on the development of individual creative abilities and on preparation to taking part in innovative organizational cultures and institutions, where innovations are created. Therefore, pupils should be taught innovation from the lowest education level – the primary school. Virtual organizations play also a crucial role in the education process. They are the source of innovation and possess the ability of elastic adjustment to new conditions. Pupils and students should take part in practice and education exchange programs, because this teaches them how to act in conditions of other cultures and traditions and how to cooperate with people from other countries.

The education system also has to be continuously improved, because change is one of the most important features of the global economy.

## **Ecology**

Global problems are some of the features of the world economy and they are thought to be a result of the integration process. Nowadays these problems are a danger for humanity and therefore they have to be solved not locally but globally.

Environment contamination is the most global problem and it is connected with countries' economic activity. Currently, the contamination level is so high that it is hard to keep the environment in balance and also possibilities for human existence decrease.

The world production has grown five times since the II World War. Dynamic transformations (opening of economies, standardization of preferences and transport and communication development), being conducted in the last years, require a huge amount of natural resources and contribute to environment contamination at the same time. Human activities put pressure on environment through: overusing natural resources, contamination of natural ecosystems, pollution of air and water causing diseases, high population growth.

In the globalization process the efforts taken in order to improve the environment are necessary and laborious. It is impossible to conduct them by one country or even by a group of countries. They have to be done globally, because nowadays the environment, like money, possesses a more international character than ever before.

## **PART II. INTERNATIONAL MICROECONOMICS:**

### **FLOW OF GOODS AND FACTORS OF PRODUCTION SECTION 2. INTERNATIONAL TRADE IN GOODS AND SERVICES**

#### **Chapter 3. Basic features of modern international trade**

##### **3.1. What is the nature of international trade?**

Today international trade is one of the major driving forces of economic development. It appears as a sphere of international economic relations and is formed by merchandise trade, trade in services and products of intellectual labor of all countries in the world. Today, it accounts about 80% of all international operations.

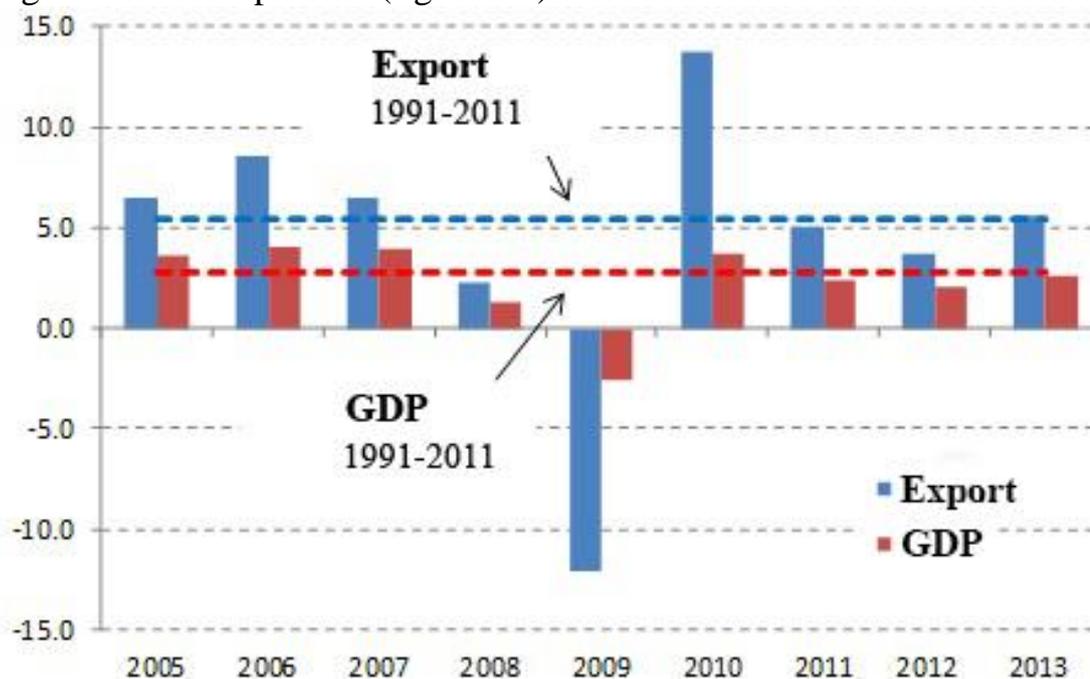
A single country takes part in international trade in the form of foreign trade, i.e. it is the trade between the country and other ones, which consists of two opposing flows of goods and services: export and import.

International trade is trading between residents of different countries, which may be individuals and legal persons, firms, TNC, non-profit organizations, etc. It provides the voluntary exchange of goods, services, products of intellectual labor between the parties of a trade agreement. Since this exchange is voluntary, both parties of the agreement must be confident that they will get benefit from this exchange, otherwise the agreement will not be signed.

International trade is a characteristic feature of the existence of the global market, which is the realm of commodity-money relations between the two countries and is based on the international division of labor and other factors of production. The product, which is located on the world market in the phase of the exchange, performs the function of information as reported on the mean values of aggregate demand and supply. Therefore, countries have the opportunity to evaluate and adapt the parameters of its products and production (ie what, how much and for whom to produce) to the demands of the global market.

International trade of goods was historically the first and until the certain period of time, the main sphere of international economic relations. Only at the end of the 20th century, different forms of financial operations became dominant in the international economic system. But international trade is still very important, which is proved by the growth of international trade volumes. According to the WTO experts, international trade volume increased by 7.6% in 2006, 15.2% in 2007, 15.4% in 2008. Such rapid development of international trade, is mainly connected with strengthening of international relations liberalization process, increase of demand on manufactured goods, percentage of which composes 70% in total volume of international export. However in 2009 international trade volume reduced to 13.1% due to the world financial crisis. In 2010, the decline in world trade has stopped: the increase was 13.8%, and in 2011 and 2012 - respectively 5.0% and 3.7% [102].

International trade today, as before, remains an important growth driver for international economics. International trade flows are well ahead of the growth of world gross domestic product (figure 3.1).



**Figure 3.1. Growth rate of volumes of world trade and world GDP, 2005-2013**  
Source: [102].

This is the result of the deepening of the international division of labor, the formation and development of new types of division of labor, which lie at the heart of international economic integration and intracompany exchange. In this regard, it is important to note that in the EU - the most integrated international economic grouping - trade goes ahead of production by 3 times.

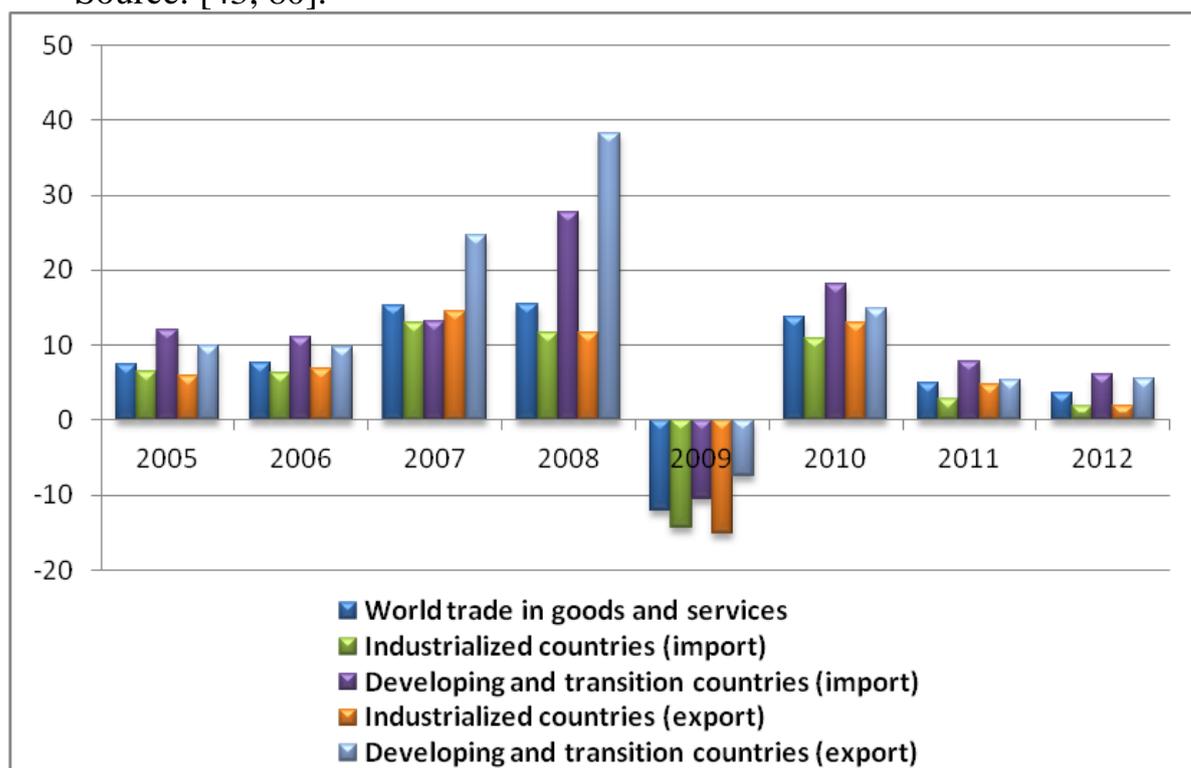
Rapid growth of international trade has a favorable effect on the economy of developing countries by stimulating their exports (table 3.1, fig. 3.2).

Table 3.1

**The dynamics of development of the world trade in goods and services**

Data	Growth %							
	2005	2006	2007	2008	2009	2010	2011	2012
World trade of goods and services	7,4	7,6	15,2	15,4	-12,0	13,8	5,0	3,7
<b>Import</b>								
Industrialized countries	6,5	6,3	12,9	11,7	- 14,4	10,9	2,8	1,9
Developing and transition countries	12,0	11,0	13,2	27,7	- 10,5	18,1	7,9	6,2
<b>Export</b>								
Industrialized countries	5,9	6,8	14,6	11,7	- 15,1	13,0	4,7	2,0
Developing and transition countries	9,9	9,7	24,6	38,2	- 7,5	14,9	5,4	5,6

Source: [43, 80].



**Figure 3.2. Economic growth in developing and transition countries in comparison with industrialized ones, 2005-2012**

Source: [43, 80].

### **3.2. Why is it important to know the geographical and commodity structures of international trade?**

Geographic and commodity structure is an important feature of international trade and presents a structure in terms of geographic distribution and commodity filling.

Geographic structure of international trade means the distribution of trade flows between separate countries and their groups, created according to territorial or organizational criterion.

Territorial geographic structure generalizes information about international trade scale of countries belonging to the same part of world or extended country group (developed countries, developing countries, countries in transition).

Organizational geographic structure generalizes data concerning international trade between both countries belonging to international trade and political unions and countries, which are separated in defined groups by the chosen criterion (oil-exporting countries, debtor countries etc.).

Geographic structure of international trade was formed under the influence of world economic division of labor and scientific and technical revolution development (table 3.2).

Table 3.2

**Geographic structure of the world merchandise trade  
by separate regions in 2012**

<b>Export volume</b>		<b>Region</b>	<b>Import volume</b>	
<b>billion dollars</b>	<b>%</b>		<b>billion dollars</b>	<b>%</b>
18401,0	100,0	World	18601,0	100,0
2371,4	12,9	North America	3192,0	17,2
749,6	4,1	Latin America	754,7	4,1
6384,8	34,7	Europe	6530,5	35,1
5803,3	31,5	EU	5937,6	31,9
805,3	4,3	CIS	569,1	3,1
529,3	2,9	Russian Federation	335,5	1,8
630,0	3,4	Africa	610,2	3,3
1349,0	7,3	Middle East	739,6	4,0
6110,6	33,2	Asia	6205,1	33,4
798,6	4,3	Japan	885,8	4,8
2048,7	11,1	China	1818,4	9,8
294,2	1,6	India	489,7	2,6

Source: [87].

Commodity structure of international trade is formed under the influence of competitive advantages, which are available for the national economy. A country has competitive advantages only if prices on export commodities (or domestic prices) are lower than the world ones. Difference in prices occurs due to different production costs, which are depended on two factor groups.

**The first factor group** is formed by natural competitive advantages. Among them are natural-geographical factors: climate, availability of mineral fossils, soil fertility etc.

**The second factor group** (the socio-economic one) is formed by gained competitive advantages. These factors define scientific-technical and economical level of country development, its production apparatus, scale and sequence of production, production and social infrastructure, scale of research activities. All this defines competitive advantages, which were gained in the development process of the national economy.

There is a typical tendency in merchandise trade: the growth of specific weight of the trade in manufactures (about  $\frac{3}{4}$  of the world export cost volume) and reduction of raw materials and provision unit weight (about  $\frac{1}{4}$ ).

The commodity structure by regions is presented below (see Table 3.3).

Table 3.3

**The structure of world merchandise export  
by major product categories by regions, 2012**

Region	Agriculture products		Fuels		Manufactures		Total	
	Billion dollars	%	Billion dollars	%	Billion dollars	%	Billion dollars	
Europe	657,3	10,3	623,8	9,8	Europe	657,3	10,3	623,8
Asia	383,6	6,3	492,2	8,1	Asia	383,6	6,3	492,2
North America	257,6	10,9	305,3	12,9	North America	257,6	10,9	305,3
South and Central America	205,2	27,4	198,5	26,5	South and Central America	205,2	27,4	198,5
Commonwealth of independent states (CIS)	65,9	8,2	503,3	62,5	Commonwealth of independent states (CIS)	65,9	8,2	503,3
Africa	57,4	9,1	349,4	55,5	Africa	57,4	9,1	349,4
Middle East	29,8	2,2	911,2	67,5	Middle East	29,8	2,2	911,2
World	1656,8	9,0	3383,7	18,4	World	1656,8	9,0	3383,7

Source: [57; 102].

The data in table 3.3 show the relationship between the level of economic development and the structure of foreign trade. So, for the countries of Western Europe, North America and Asia, related to the industrialized and newly industrializing countries that are predominantly acquired competitive advantage in the export structure dominated by manufactures. Both Middle East and Africa, being countries with rich natural resources, have high enough proportion of the fuel industry. The CIS countries make extensive use of its natural competitive advantages, and therefore in the commodity structure, which is different from the world average, there is a high proportion of production extractive industries and, relatively, the low one of manufactures.

### 3.3. What are the main specific features of international trade?

International trade, as a special sphere of international economics, has its own specific features, which distinguish it from intra-national trade: government regulation of the international trade; independent national economic policy; social and cultural difference of countries, financial and commercial risks.

**Government regulation of the international trade.** Every country is functioning within its own legal framework. The government of the country controls and takes an active part in foreign-trade relations and monetary relations, connected with trade operations. Such interference and the control differ significantly from the degree and the nature of those measures, which are applied to domestic trade. Government of every sovereign country, due to its own trade

and fiscal policy, creates its own system of export and import licensing, import and export quotas, duties, embargo, export subsidies, its own tax legislation etc. Government rules on monetary regulations and the delegated legislation, concerning standards of quality, security, public health, hygiene, patents, trademarks, packing of goods and information content, which is mentioned on packing, can be regarded as international trade barriers.

**Independent national economic policy.** National economic policy can permit free flow of goods and services between countries, regulate or prohibit it, All this influence significantly the international trade.

To support the balance of international payments, a country must harmonize its economy with world one, i.e. pursue a policy, which would provide the competitiveness of prices and costs in comparison with other countries and which wouldn't allow a discrepancy between domestic law and international regulation, which could lead to a conflict situation in the sphere of foreign trade.

**Social and cultural differences of countries.** Countries which take part in international trade have different traditions, languages, priorities and culture. Although such differences do not influence significantly on international trade, they complicate relations between governments and add a lot of new elements in activity of international enterprises. Lack of knowledge of exporting or importing in a country leads to uncertainty and distrust between sellers and customers.

**Financial and commercial risks.** International trade takes place between countries with different exchange systems, which cause the exchange of one currency to another one. Due to the exchange-rate instability, there is the currency risk. Currency risk in international trade means risk of currency loss as a result of change in currency of price in relation to currency of payment in between signing an international contract and effecting of payment according to this contract.

During international trade realization, it's necessary to spend some time on goods transportation, that's why an exporter runs the credit risk and feels discomfort, connected with time and distance, which is needed for the transportation abroad and payment receiving. The time gap between the order to a foreign supplier and goods receiving, as a rule, is often connected with the duration of the period of transportation and the need to prepare the appropriate documentation for it.

The goods preparation and its delivery abroad requires additional financing, for which an exporter has to apply to a bank. In this case, the exporter needs a credit for a much longer time than he needed in case of selling goods domestically. The exporter must carry out his own commitments in compliance with term and conditions of a credit deal. However, a risk of a bad debt can appear.

Commercial risks, connected with possibilities of non-receipt of profits or a loss occurrence during trade operations realization, can appear in such cases:

- customer insolvency at the moment of merchandise payment;
- customer's refusal of merchandise payment;
- change in price on goods after making of contract;

- decline in demand for goods;
- impossibility of money transfer to the exporter's country in connection with currency limitations in a customer's ( importer's) country or a lack of currency; or refusal of an importer's country government for assignment of this currency because of any other reasons.

### **3.4. Why is the importance of international trade growing in the modern world?**

The importance of international trade within the world economic system is caused by important factors and practicability of international exchange of goods and services.

There are some factors predetermining the necessity of international trade. They are:

- Emergence of the world market.
- Unevenness of development of individual industries in different countries. Products of the most developed industries, which can't be realized at the internal market, is transported abroad. In other words, both the sales requirements at foreign markets and the need in receiving certain goods from outside, appear.
- Tendency to unlimited expansion of the production. Since the capacity of domestic market is limited by solvent demand of population, production is overgrowing the limits of domestic market and businesspeople of every country are struggling for foreign markets.
- Tendency to get higher income in connection with the usage of low-paid manpower and raw materials from developing countries.

International trade is especially important, because there is no country in the world, which can exist without foreign trade. They are all depended on international trade, but their level of dependency is different. It's determined as the ratio of half value volume of foreign trade turnover (export + import) to GDP. According to this indicator, all countries can be divided into 3 groups: high dependent (45 – 93%), medium dependent (14-44%) and low dependent (2,7 – 13%).

International trade is rational, when it provides some benefits, which can be received on three levels: national level, the level of domestic international firm and also on customers' one.

Due to taking part in the international trade, countries gain:

- the opportunity to export those goods, production of which takes more national resources, which country has in relatively large numbers;
- the opportunity to import those goods, which can't be produced in their country because of the lack of needed resources;
- economies of scale effect in production, specialized on more narrow set of goods.

There are two points of view on benefits from international trade for home international firms. The first point of view concerns the export opportunities, the second one - the import ones.

From the point of view of export activity, enterprises obtain benefits at the expense of:

- using excess capacity, which is held by companies, but are not desirable by domestic demand;
- getting greater profits. Because of the difference between the foreign trade competitiveness environment and the national one, the producer can sell goods there with higher income;
- considerable volumes foreign sales, which make natural producers less dependent on domestic economic conditions;
- reduction of production costs, connected with: fixed costs, covered by the expense of bigger volume of outputs; effectiveness rising due to experience, gained during manufacture of large batch of produce; bulk purchases of materials and their transportation by large batches;
- distribution of risk. Producer can reduce the fluctuations of demand by organizing the production distribution on foreign markets, due to of countries' economic activity being in different phases, and some goods being on different stages of the life cycle;
- knowledge and best practices, received by firms in the functioning process on foreign markets.

From the point of view of import activity, enterprises obtain benefits at the expense of:

- avoiding limits of the domestic market by reducing production costs or by upgrading quality of production;
- getting cheap high-quality materials, components, technologies to be used in its production;
- using excess capacity of trade distribution network;
- expansion of commodity line due to which a firm can increase its supply of product line;
- possibilities of distribution of operative risks, as by expanding the suppliers range, the company will be less depended on a singular supplier.

In their turn, consumers obtain benefits from cheaper prices, increasing of quantity and diversification of goods, which leads to higher standard of well-being.

## **Chapter 4. Fundamental theories of international trade development**

### **4.1. What are the essence, the significance and limitations of the mercantilism?**

The modern theories of international trade have a rich history. For a long time, started from the emergence of economic science by itself (the beginning of the 17th century) scientists have tried to answer the following key questions:

- Why does international trade exist and what are its economic basis?
- How much profitable is the trade for each of the participating countries?
- What is it necessary to choose for economic growth: free trade or protectionism?

Mercantilism was the first one, which proposed the theoretical understanding of these questions. It is a doctrine, where the existing world was considered in a static and the wealth of nations was considered as a fixed phenomenon in every moment. Therefore, its adherents (T. Man, A. Serra, A. Montchrestien) believed that the welfare of one country is possible by means of redistribution of the existing wealth, i.e. through the pauperization of another country. Mercantilists associated the wealth with stocks of precious metals (gold and silver). In their opinion, the larger number of precious metals a country owns, the richer it is. Also, from their point of view, having more money in circulation stimulates the development of national production and the employment increase. A state, according to mercantilists, should:

- stimulate exports and export more goods than import. This approach will provide the gold inflow;
- restrict the importation of goods, especially luxury goods that will provide export balance of trade;
- forbid the production of the final products in its colonies;
- forbid the exportation of raw materials from the parent states to the colonies and allow free importation of raw materials, which are not obtained within the country;
- stimulate an export of mainly cheap raw commodities from the colonies;
- forbid any trade of its colonies with other countries, except the parent state, which can resell the colonial goods abroad by itself.

Thus, the mercantilist policy of major countries was based on striving for maximum accumulation of money capital and maximum reduction of import, i.e. a state should sell to the foreign market as many goods as possible and should purchase as little as possible. Meanwhile, the country should accumulate gold. Mercantilists also felt the need to perform the governmental control over all economic activities and so justified the economic nationalism.

The importance of mercantilism is in the following statements:

1. For the first time, there was made an attempt to create a theory of international trade, which directly linked trade relations with the domestic economic development of a country and with its economic growth.

2. Mercantilists worked out one of possible models for the development of international trade on the basis of commodity character of production. They laid the foundations of categorical apparatus used in modern theories of international trade.

3. There were laid the foundations of what in the modern economy is called the balance of payments.

However, mercantilists could not understand that the enrichment of one country could be carried out not only by means of pauperization of other ones it trades with, that the economic growth is possible not only as a result of redistribution of existing wealth, but also by means of its accumulation. In other words, they believed that a country could have benefit from trade only at the expense of another country that makes trade a zero-sum game.

Nowadays, neomercantilism appears to be when the countries with high rates of unemployment try to limit import in order to stimulate domestic production and employment.

Mercantilism school dominated in economy during 15th century. By the beginning of the 18th century international trade had a huge number of possible restrictions. The rules of trade were contrary to the needs of production, and there was a need for a transition to free trade.

The theory of international trade found its next development in the writings of economists of the classical school.

#### **4.2. What are the essence, positive and negative features of the absolute advantages theory?**

Development of international trade during the transition period of the developed countries to a large machine production led to the emergence of the absolute advantage theory, developed by A. Smith. In his work "An Inquiry into the Nature and Causes of the Wealth of Nations" (1776), he criticized mercantilism. A. Smith hold the view that the wealth of nations depends not so much on the accumulated stock of precious metals, but on the possibility of economy to produce final goods and services. Therefore, the main task of the country is not the accumulation of gold and silver, but making arrangements to develop production on the basis of cooperation and division of labor. A. Smith was the first one, who answered the question "Why is a country interested in international exchange?" He believed that when two countries are trade partners, they need to benefit from trade. When one of them does not win anything, it will abandon the trade. A state can benefit not only from selling, but also from purchasing goods at the foreign market. And A. Smith made an attempt to

determine what products are profitable to export and import, and how benefits from trade appear.

The theory of international trade by A. Smith is based on the following preconditions:

- labor is the only factor of production. It only affects the productivity and price of goods;
- full employment, i.e. all available labor forces are used in the production of goods;
- international trade involves only two countries, which trade only by two products between each other;
- production costs are constant, and its reduction increases the demand of goods;
- the price of one product is expressed in amount of labor spent on production of another product;
- transport costs of goods from one country to another are not taken into account;
- foreign trade is carried out without any restrictions;
- international trade is balanced (import is paid by export);
- factors of production are not moved between countries.

This theory became known as the absolute advantage theory, because it was based on the absolute advantage: a country exports the goods, which costs of production are lower than in a partner country, and imports the goods, produced abroad with lower costs. Both countries benefit from the specialization of each of them in the production of the goods they have absolute advantage in. This gives an opportunity to use the resources most effectively, resulting in the increasing of production of both goods. Increase of production of both goods represents the gain from specialization in production, which is divided between two countries in the process of international trade.

The main conclusion of the theory of absolute advantage is that every country benefits from international trade and it is decisive for forming the external sector of economy. International trade is not a zero-sum game, but a game with a positive result, i.e. division of labor is beneficial at both the national and international levels. However, nowadays, by using the principle of absolute advantage, only a small portion of international trade can be explained (for example, some part of trade between the developed countries and developing ones). The overwhelming part of international trade, especially between the developed countries, is not explained by this theory, because it does not consider the situation when one of the trading countries has no absolute advantage in any commodity. This position was explained by D. Ricardo in the comparative advantage theory.

### **4.3. What are the essence, the importance and disadvantages of the comparative advantage theory?**

A rule of international specialization, depending on absolute advantage, excluded countries without absolute advantage from international trade. The D. Ricardo's work "On the Principles of Political Economy and Taxation" (1817) developed the absolute advantage theory and proved that the existence of absolute advantage in the national production of any commodity is not a necessary precondition for the development of international trade: the international exchange is possible and desirable in the presence of comparative advantages.

D. Ricardo's theory of international trade is based on the following preconditions:

- free trade;
- fixed costs of production;
- absence of international labor mobility;
- absence of transportation costs;
- lack of technical progress, i.e. the technological level of each country remains unchanged;
- full employment;
- there is one factor of production (labor).

Comparative advantage theory states that if countries specialize in the production of the commodities that have relatively lower costs in comparison with other countries, a trade will be mutually beneficial for both countries, regardless of whether the production in one of them is more effective than in the other one. In other words, the basis for emergence and development of international trade can be exclusively a difference in relative costs of production of the commodities, regardless of the absolute amount of these costs.

In the D. Ricardo's model, domestic prices are determined only by cost, i.e. by supply conditions. But the world prices may also be determined by the world demand, which was proved by the English economist John Stuart Mill. In his work "Principles of Political Economy", he showed at what price the exchange of goods between countries is carried out.

In free trade, exchange of goods is carried out in such a proportion of prices that is set somewhere between the existing relative prices of goods within each of the trading countries. The final level of prices, i.e. the world prices, of mutual trade will depend on the level of world demand and supply for each of these products.

According to J.S. Mill's theory (the reciprocal demand theory), the price of imported goods is determined by the price of the goods, which should be exported, to pay for imports. Therefore, the final proportion of prices in trade is determined by domestic demand for goods in each trading country.

Thus, this theory is the basis of determining the price of goods, taking into account the comparative advantage.

But its drawback is that it can be applied only to the countries of approximately the same size, when domestic demand in one of them can affect the price level in the other one.

In the specialization of countries in trade of goods, in production of which they have comparative advantage, countries can benefit from the trade (the economic effect).

A country benefits from the trade, as instead of its goods it can get more needful foreign goods from abroad than on the domestic market. Benefits from the trade are both the saving of labor costs and the growth of consumption.

The importance of the comparative advantage theory is the following:

- the balance of aggregate demand and aggregate supply was first described. The cost of goods is determined by the ratio of aggregate demand and supply for them, both domestically and from abroad;
- the theory is true regarding any quantity of goods and any number of countries, as well as for the analysis of trade between different entities. In this case, country specialization in some goods depends on the ratio of wage levels in each country;
- the theory based the existence of benefits from trade for all countries, taking part in it;
- there become possible to develop foreign economic policy on the scientific foundation.

The limitation of the comparative advantage theory is in that presuppositions, on which it is based. It does not take into account the impact of foreign trade on income distribution within a country, fluctuations in prices and wages, international capital movements. Also, it does not explain the trade between almost identical countries, none of which has no a relative advantage over another, it takes into account only one factor of production – the labor.

#### **4.4. What is the significance of the factor proportions theory and its testing by W. Leontief?**

The research of factors, influencing product range and volume of international trade, allowed the Swedish scientists E. Heckscher and B. Ohlin in 30-s of XX century to clarify and supplement the key points of the comparative advantage theory and to formulate the concept of factors of production.

Need to seek a new concept of international trade dictated by the fact that the ideas of David Ricardo based on the assumption of a constant cost of production in each country. However, in practice, along with the growth of production and product diversification was an increase of marginal costs, leading Swedish economists to the conclusion of necessity to introduce the growth conditions for replacement cost (relative costs) into the model.

The theory is based on the following preconditions:

- there are two countries; two commodities, one of which is labor-intensive and another one is capital-intensive; and two factors of production: labor and capital;
- technologies in both countries are the same;
- each country in varying degrees endowed with factors of production;
- there is no international movement of factors of production;
- there cannot be the full specialization of countries in production of any product.

The most important assumption of this theory is a different factor intensity of individual commodities (one commodity is labor-intensive, the other one is capital-intensive) and different factor abundance of individual countries (one country has relatively more capital, the other one has relatively less capital).

Factor intensity is an indicator that determines the relative costs of production factors on the product development.

For example, product B is relatively more capital-intensive than the product A, if the ratio of capital to labor in the production of goods is more than the ratio of the same cost of production of the product A.

Factor abundance of the country is an indicator that determines the relative factor endowment of the country.

For example, if you define factor abundance through the absolute size of the factors of production, the country where the ratio of total capital to total labor is greater than in other countries will be considered as capital abundant or capital endowment country.

The essence of the Heckscher-Ohlin theorem is as follows: each country will export that factor abundant goods, for the production of which it uses relatively abundant and cheap factors of production, and will import the goods, which require relatively scarce and expensive resources.

The Heckscher-Ohlin theorem considers trade to be based on comparative advantages and shows that the reason of the differences between the relative prices of goods and the emergence of comparative advantage between countries is the difference in factors endowment.

The Heckscher-Ohlin theorem had further development in the factor-price equalization theorem (the Heckscher-Ohlin-Samuelson theorem). It answers the following question: "If the relative price of labor-intensive goods changes, how will the relative price of the labor change in a labor abundant country, which produces these goods, as well as, if the relative price of capital abundant goods changes, how will the price of capital change in a capital abundant country?"

The essence of the factor-price equalization theorem is as follows: international trade leads to the equalization of absolute and relative prices for the goods, and this, in its turn, leads to the equalization of relative and absolute prices for homogeneous factors of production, whereby there produced these goods in partner-countries.

The theorem has some limitations: it considers the world in static, determining the factors affecting the macroeconomic equilibrium at a certain time, and does not take into account the fact that the absolute amounts of factors of production are different in different countries, and therefore the absolute amounts of income for capital will be greater in the country, which is endowed with more capital. It follows that full equalization of the prices of factors of production as a result of trade is impossible.

However, despite the shortcomings, the factor proportions theory is an important instrument for the analysis of international economy, showing the principle of general equilibrium, which is subject to economic development. This model of international trade proved to be the most suitable for explaining the processes of trade between the parent states and colonies, when the first ones performed as the industrialized countries, and the second ones as agrarian and raw-material-producing appendage.

Nevertheless, in the analysis of trade flows in the “triangle” of the United States – Western Europe – Japan, the Heckscher-Ohlin theorem faces difficulties and contradictions, which attracted the attention of many economists, in particular, the American Nobel Laureate Wassily Leontief. He applied the Heckscher-Ohlin theorem to the analysis of foreign trade of the United States, and by means of several empirical tests he showed that the terms of the theory do not keep in practice. Since the United States was a capital abundant country with relatively high wages, according to the theory, it should export capital-intensive goods, and import labor-intensive ones. However, in reality, they exported more labor-intensive goods, and capital intensity of American imports exceeded exports by 30%. This meant that the United States was not capital abundant, but labor abundant. The results of the Leontief’s research were named “Leontief’s paradox”: the Heckscher-Ohlin theorem is not confirmed in practice, as labor abundant countries export capital-intensive products, and capital abundant countries export labor-intensive products.

W. Leontief explains this paradox by division of labor into skilled and unskilled. The United States exported the goods, whose production in other countries was impossible or inefficient due to the lower labor skill. W. Leontief created the model of “labor skill”, according to which, instead of the three factors (capital, land, labor) the production includes four factors: skilled labor, unskilled labor, capital and land. The relative welfare of professional staff and skilled labor predetermine the export of goods, the production of which requires the use of skilled work; and surplus of unskilled labor contributes to the export of goods, the production of which does not need the high qualification.

Nobody can give a convincing answer to the question about the reason of Leontief's paradox. The main explanations are the following: 1947 year, analyzed by Leontief, was not representative; a two-factor model (capital and labor) was used; American tariffs, to a considerable extent, protected domestic labor-intensive industries; human capital was not taken into account. The testing of the Heckscher-

Ohlin theorem, by means of the data of a large number of countries, confirmed the existence of Leontief's paradox in other countries.

#### **4.5. What are the reasons of occurrence and the significance of alternative international trade theories?**

Modern theories of international trade are generally considered:

– on the one hand, as alternative ones to the Heckscher-Ohlin theorem, because they examine the circumstances which are not covered by the factor proportions theory. These theories characterize international trade mainly on the basis of goods supply;

– on the other hand, as alternative ones to the classical theories, which are considered to be obsolete. These theories analyze international trade mainly on the basis of demand from the point of view of consumer preferences.

The main alternative theories usually include: the product life-cycle theory; the country similarity theory, the theory of economies of scale.

The basic positions of **the product life-cycle theory** were developed by Raymond Vernon in 1966. It is based on the concept of the product life-cycle, proposed since the early 1960s by specialists of Harvard Business School, who declared that sales of the products and their profits from them change over time.

A product consistently passes four stages of life cycle:

1. The stage of appearance of a new product on the market shows the low sales. The costs of implementation of this product make the profits low too.

2. The stage of growth is characterized by growth of profits and sales growth.

3. In the stage of maturity, the development of competition and market saturation stabilize the sales and profits.

4. In the stage of decay, the products become obsolete, the sales and profits fall off.

R. Vernon proves that in building up of trade relations between countries an important role is played by technologies and researches, that the industrialized countries have much more technological and scientific possibilities to develop a new product. In countries such as the United States, companies may have comparative advantages in science and technology, which will lead them to a competitive advantage in the new products development. To stretch the stage of growth of their product life-cycle, these firms most probably will export the goods developed by themselves. On the other hand, American import will have a tendency of advantage of the goods, the production of which does not much depend on technology or scientific research.

The product cycle-theory characterizes the dynamic aspect of comparative advantages, assuming that during its life cycle a product consistently changes its suppliers in the world market.

**The country similarity theory** was developed by a Swedish economist Stefan Linder in 1961, where he takes as a basis the volume of exchange of similar goods between countries with a comparable level of development, without regard to the Heckscher-Ohlin theorem. A new approach was founded on the following principles:

- the conditions of production depend on the conditions of demand. Efficiency of production is as high as demand;

- the conditions of domestic production depend mainly on the domestic demand. It is the domestic representative demand that is the basis of production and is necessary, but not a sufficient condition to export the goods;

- the foreign market is just a continuation of the internal one, and the international exchange is only the continuation of the interregional one.

There is a conclusion, that international trade in manufactured goods will be more intensive between the countries with the similar income levels, in comparison with product turnover between the countries with different income levels, while the exchange is carried out by identical or similar goods. The convergence of countries according to the level of development requires to align the quality of goods. However, the Linder's theory does not specify what manufactured goods a country will export and which of them it will import.

**The theory of economies of scale** is not related to the theories of comparative advantage or to the ratio of production factors. It recognizes the different levels of market's monopolization and non-optimal using of factors of production.

As the factors of production growth, the cost-per-unit reduces as a result of: increased specialization of production, the relatively slow growth in auxiliary departments than in the scale of the production, technological economy.

Economies of scale is the production development, at which the growth of unit production factors costs leads to increased production of more than one unit.

The theory of economies of scale explains trade between countries that are so close in factor endowments that even minor discrepancies in its endowment cannot explain the mutual trade, and also explains the trade between the countries by close to or technologically homogeneous products. According to this theory, in countries with a large domestic market, production must be placed to ensure the growth of the economic of scale effect of production. Fundamental to this concept is the assumption that the developed countries are endowed with factors of production in almost equal proportions, and therefore trade between them is suitable in the event that they specialize in the manufacture of goods of different industries due to what costs are reduced as a result of mass production. Because of the international trade, the number of firms and a variety of manufactured goods manufactured by them increase, and the price of goods reduces. This was reflected in the works of the American economist Paul Krugman.

## Chapter 5: International trade policy

### 5.1. Why is it important to know the main types of trade policy?

Regulation of international trade supposes purposeful influence of the state on trade relations with other countries. The main goals of foreign trade policy are:

- the volume change of exports and imports;
- changes in the structure of foreign trade;
- providing the country with the necessary resources;
- the change in the ratio of export and import prices.

There are three main approaches to the regulation of international trade:

- a system of unilateral measures, in which the instruments of state control used by the government unilaterally and not coordinated with the trading partner;
- the undertaking of bilateral agreements, in which trade policy measures agreed between trading partners;
- the undertaking of multilateral agreements. Trade policy is coordinated and regulated by the participating countries (the General Agreement on Tariffs and Trade, which is included in the system of the WTO agreements, agreements on trade of EU member states) [13, p.170].

The state can use each of approaches in any combination.

The basic line of government control of international trade is the application of two different types of foreign trade policy in combination: liberalization (free trade policy) and protectionism.

Under the **free trade policy** is understood the minimum of state interference in foreign trade, which developed on the basis of free market forces of supply and demand, and under the **protectionism** - the state policy, which provides the protecting of the domestic market from foreign competition through the use of tariff and non-tariff trade policy instruments.

These two types of trade policy characterize the measure of state intervention into international trade.

If under the conditions of liberalization policy, a basic regulator of foreign trade is a market, then the protectionism practically excludes the operation of free market forces. It is assumed that economic potential and competitiveness at the world market of separate countries is different. Therefore a free action of market forces can be unprofitable for the less developed countries. Unlimited competition from more powerful states can result to economic stagnation and the formation of inefficient economic structure in less-developed countries

The protectionism policy contributes to the development of certain industries in the country and often is a necessary condition for industrialization of agrarian countries and unemployment reduction. However, the removal of foreign competition reduces the interest of domestic producers in the implementation of scientific and technological progress, improving the efficiency of production.

There are such forms of protectionism:

- *selective protectionism*, directed against some countries or some commodities;
- *industrial protectionism*, which protects certain industries;
- *collective protectionism*: countries, which belong to economic integration organizations conduct this form to countries, which do not belong to a union;
- *hidden protectionism*, which is carried out by methods of domestic economic policy.

Every country has economic, social and political arguments, protecting interests of protectionism.

The main arguments for restrictions on foreign trade are:

- necessity of defense providing;
- increase of domestic employment;
- diversification for the sake of stability;
- protection of infant industries;
- protection from dumping;
- cheap foreign labor force.

So, the art of trading policy is to find the point of balance between two trends: free trade and protectionism. Each policy has its own advantages and disadvantages, depending on the circumstances, time and place of its applying.

The instruments of state regulation of international trade include the following:

- tariff methods that regulate mostly the imports and protect domestic producers from foreign competition. They make foreign goods less competitive;
- nontariff methods, regulating both imports and exports (they help to bring more domestic products on the world market, making them more competitive).

To indicate the nature of trade policy, the following two indicators are used:

- the average level of customs tariff. It is calculated as the average rate of import duties, according to the value of imported goods, to which the rate is applied. This indicator is defined only for the goods whose imports are imposed by duties;
- the average level of nontariff barriers. It is calculated as the value share of the imports or exports, which are subject to the restrictions [13, p. 173].

Mode of implemented restrictions for each of the indicators is considered as open one if its level is less than 10%, the moderate one if less than 10-15%, the limited one if over 25% and the restrictive one if 40-100%.

## **5.2. Tariff methods for international trade regulation**

### **5.2.1. What are the functions and types of custom duties?**

Customs tariff is the main and oldest instrument of foreign trade policy. This is a systematic set of rates of customs duties, imposed on goods and other things, imported to the customs territory of a country or exported from this territory.

A duty, charged by customs, is a tax on goods and other things that are moved across the customs border of the state.

Duties perform the following functions:

- *a fiscal function*, when they are used to generate, mobilize, accumulate financial resources of the state. This function applies to both import and export duties;
- *a protectionist function*, when they are introduced to reduce or eliminate the imports, thereby protecting domestic producers from foreign competition;
- *a balance function*, when they are introduced to prevent from undesired exports of the goods, the domestic prices of which are lower than the world ones.

There are the following types of duties:

#### **1. According to the way of levying:**

- **ad valorem (value) duties** ( $T_{AV}$ ) imposed as a percentage to the customs value of the goods which are subject to duty (for example, 30% of customs value);
- **specific duties** ( $T_S$ ) imposed in the prescribed amount of money per unit of goods which are subject to duty (for example, \$15 per 1 ton);
- **compound duties** that combine the two above-mentioned types of customs duties (for example, 30% of customs value, but no more than \$15 per 1 ton).

#### **2. According to the object of levying:**

- **import duties** imposed on the goods imported to the customs territory of a country;
- **export duties** imposed on the goods exported from the customs territory of a country.

#### **3. According to the nature:**

- **seasonal (import and export) duties**, imposed on the goods of the seasonal nature for operational regulation of international trade. It is valid during a few months;
- **special duties** applied by the state in the following cases:
  - a) as protective duties, if goods are imported to the customs territory of a country in such quantities or under such conditions that cause or threaten to cause injury to domestic producers of the similar or competing products;

b) as a precautionary measure against the participants of foreign economic activity, which disserve the interests of the state in a particular industry, as well as a measure to stop the unfair competition;

c) as a measure in response to discriminatory and (or) the unfriendly actions of foreign countries, as well as in response to the actions of different countries that restrict the legitimate rights of entities of foreign economic activities of a country;

- **anti-dumping duties** applied to the imports to the customs territory at the price significantly lower than in the country of exports at the time of the exports, if such imports cause or threaten to cause injury to domestic producers of similar or competing products, or impede organization or expansion of production of such goods;

- **compensation duties** applied to the imports of the goods on the customs territory, in the production or exports of which the subsidies are used directly or indirectly, if such exports cause or threaten to cause injury to domestic producers of similar or competing products, or impede organization or expansion of production of such goods.

#### **4. According to the origin:**

- **autonomous duties** imposed on the basis of unilateral decisions of public authorities;

- **agreement duties** imposed on the basis of bilateral or multilateral agreements;

- **preferential duties** with rates lower than the current tariff.

#### **5. According to the types of rates:**

- **permanent rates** are rates of customs tariffs, imposed by public authorities, which may not change depending on the circumstances;

- **variable rates** are rates of customs tariffs, which may vary by state authorities in certain cases.

#### **6. According to the calculation method:**

- **nominal rates** are customs rates, indicated in the customs tariff;

- **effective (actual) rates** are a real level of customs rates for the final goods, calculated on the basis of the level of duties, imposed on imported units and components of the products.

### **5.2.2. What are the economic results of the imposition of a duty?**

Economic results of the imposition of a duty are varied: they affect production, consumption, commodity turnover and welfare of the country, which introduced the import tariff, and its trade partners.

Introduction of the import tariff to protect the domestic producers, who bear the losses due to glutting the markets by cheaper goods, affects the economy of both the small and big countries. A country is considered to be small, if its demand

for imported goods does not alter world prices, and the big one, if a change in demand for imported goods causes a change in world prices.

As a consequence, there are following processes in the small country:

- the overall volume of demand reduces that occurs at the expense of consumers, who are not able to buy the product at the high price;
- the volume of imports decreases that occurs as a result of increasing in domestic production and the demand reducing;
- domestic production of goods increases, because domestic producers of the goods, competing with the imported ones, are able to put more products on the market at the increased price;
- its economic losses increase, because the domestic production must be protected by the tariff of supplementary quantities of goods at higher costs. The more the protection of the internal market grows by means of import duties, the more resources that are not specifically intended for the output of this product have to be used for the production. The country could not bear the losses, if it purchased the goods at lower prices from a foreign seller. In the domestic market, there is a change of effective, in terms of costs, foreign goods by the less effective, in the production, domestic goods.

The effects of introducing an import tariff by a big country are almost the same as in a small country. However, it reduces the level of the world prices and falling costs of imports.

An import tariff, introduced by a big country, does not only protect the market from foreign competition, but is also a means to improve the terms of trade with the surrounding world. A big country is a high volume importer of goods in the world market. So if it limits the imports by import tariffs, it reduces significantly the aggregate demand for the goods. As a result, sellers of the goods have to reduce the prices. At the constant prices of the exported goods and the decline in prices of the imported goods, the terms of trade of the country improve. Introduction of an import tariff will cause positive results only if they are not obscured by negative economic losses for the country because it has been imposed. In other words, the positive effect of the tariff is achieved if the effect of the terms of trade in value is greater than the sum of losses arising as a result of less efficiency of domestic production compared with the international one and reduction of domestic consumption of the goods.

Tariff methods of foreign trade protection are always associated with extra expenditures of consumers. The economists calculated that an average Japanese consumer spends 890 dollars more, because of trade restrictions, for food, cosmetics and chemical products; in the USA, the tariffs in 21 industries cause annual expenditures of \$10.2 bill, or \$40.8 per a consumer. Potential income of consumers due to the cancelling of all the tariffs and quantitative restrictions could be about \$70 bill, or 1.3% of GDP [10, c. 128].

### 5.3. Non-tariff barriers for international trade regulation

For international trade regulations also applied the other trade restriction, - non-tariff ones, which is widely used in the trade practices.

Distribution of non-tariff barriers stems from the fact that their introduction is the privilege of the state government, and they are not regulated by international agreements. Governments are free to apply any kind of non-tariff barriers, which is not possible with the tariffs, regulated by the WTO. In addition, non-tariff barriers usually do not result in immediate increase of the price of the goods and, therefore, a consumer does not feel their impact in the form of a supplementary tax (introducing a tariff makes the product price increases by the amount of the duty).

In some cases, the use of non-tariff methods, with a relatively liberal customs treatment, can lead to a more restrictive nature of state trade policy as a whole.

Non-tariff barriers can be divided into the following groups: quantitative, hidden and financial ones.

#### 5.3.1. What kind of quantitative trade restrictions are known?

Quantitative restrictions include quotas, licensing, “voluntary” export restraints.

**Setting quotas.** A quota is the most common form of non-tariff barriers.

A quota is a quantitative measure of the export or import restricting of the goods by a certain number or amount for a certain period of time. Quotas are usually used to regulate the imports of agricultural products.

If the objective of the government is to control the movement of some product rather than its restriction, then a quota can be imposed at a higher level than the possible imports or exports.

By the direction, quotas are divided into the following:

- *export quotas*, imposed by the state government to prevent from the export of scarce products in the domestic market, as well as to achieve political objectives. These quotas are rare;
- *import quotas*, imposed by the state government to protect the domestic market from the foreign competition, to achieve balance in the trade balance, to regulate supply and demand within the country, as the adequate measure in response to discriminatory trade policies of other countries.

By scope, quotas are divided into the following:

- *global quotas*, imposed on imports or exports of a certain product for a certain period of time, and do not depend on the country importing or exporting this product (for example, the USA use quotas to regulate the importation of Roquefort cheese, certain sorts of chocolate, cotton, coffee, etc.). The aim of introduction of these quotas is to achieve the required level of domestic

consumption. The amount of global quotas is defined as the difference between domestic production and consumption of the goods, which they are imposed on;

- *individual quotas* are quotas, imposed as parts of the global quota, of each country, exporting or importing the goods. They are imposed on the basis of bilateral agreements.

Economic results of the introduction of quotas are as follows:

- quotas are a more effective tool, than tariffs on import restrictions, their introduction allows imports to be kept at a constant level, despite the growth in demand that, in its turn, increases the price of a product. At the previous level of imports, domestic production and consumption increase;

- quotas are an absolute value and they are inflexible to the price of a product;

- they are more effective for rapid actions of administrative authorities, they are easy to manipulate (tariffs usually require the enactment of corresponding legislation);

- quotas are a direct source of monopoly profits; they always increase the incomes of producers of import-substituting products; they constrain import competition (tariffs usually permit it).

**Licensing.** Quotas are imposed by government authorities through the issuance of licenses.

A license is a permission, granted by public authorities for export or import of goods in the assigned amount for a certain period of time. A license is issued by the state through the special authorized agencies.

Licensing may be in the following forms:

- an integral part of the quota. In this case, a license is a document which certifies the right to import or export the goods within the obtained quota;

- an independent instrument of government regulation.

**Voluntary export restraints (VERs)** is a quantitative restriction of exports, based on the commitment of one of the trading partners to limit (or not to expand) the volume of exports, adopted within the intergovernmental agreement on quota imposing on product exports.

An importing country forces its trading partner to reduce voluntarily (unilaterally) the exports. The reason of a VERs implementation is usually the statements of national producers that the importation of some product causes the losses in production and disorganization of the local market. Instead of imposing import quotas, an importing country put political pressure on an exporting country, requiring the imposition of restrictions on the exports of a particular product. By means of pressure on the trading partner, there occurs a threat of imposing trade restrictions on such a high level that the very possibility of international trade between countries will be put into question.

In general, the economic effect of the introduction of voluntary export restraints by an exporter is negative for an importer. However, the amount of its

losses reduces due to the increase of imports of similar products originating in countries, which do not impose voluntary restraints on their exports.

### **5.3.2. What kind of hidden trade restrictions are known?**

The essential role of non-tariff methods of trade policy focuses on the hidden methods of trade restrictions with more than 100 titles. They allow countries to restrict exports or imports unilaterally. They include: technical barriers, internal taxes and charges, public procurement, local content requirement.

**Technical barriers** are national standards of quality, economic requirements, medical restraints, packing and marking of goods, requirements to implement the complicated customs formalities, laws of consumer protection and etc. Technical barriers arise from the fact that national technical and administrative rules prevent from the imports of goods. It occurs in case of non-correspondence of the imported goods to the enforceable standard of quality, health and safety, which are applied to the similar domestic products, non-correspondence of agricultural products to the sanitary and phytosanitary norms, applied to prevent from the imported pests and diseases that do not exist in a given country.

**Internal taxes and charges.** State and local governments may impose various direct (value added tax, excise taxes, etc.) and indirect (charges for customs clearance, registration, port charges, etc.) taxes on the imported goods with a view to enhance their internal prices and decline competitiveness in the domestic market.

**Public procurement.** The policy within the government procurement is that the public authorities and enterprises must buy certain goods only from national firms, even if these goods are more expensive than the imported ones. It increases the government expenditures that burden lies heavy on the taxpayers. The use of public procurement policy, to some extent, discriminates against foreign suppliers. The volumes of such purchases often reach 10-15% of the GNP of a country.

**Local content requirement.** This method of the hidden trade policy involves the legal establishment of a share of the final product, which should be produced by local (national) manufacturers, in case of selling this product in the domestic market. Typically, this method is used by the governments of the developing countries in order to replace imports with domestic production and also to avoid transferring the production to the developing countries with lower labor costs and, as a result, to maintain the level of employment.

### **5.3.3. What is the essence of the financial methods of the trade policy?**

The purpose of financing, as a method of the international trade regulation, in particular, the exports expanding, is discrimination of foreign companies for domestic producers and exporters by reducing the value of the exported goods and enhancing their competitiveness in the world market. Export financing is available from the following sources: the state budget, banks, funds of exporters and their

banks. Financial methods of trade policy include: dumping, subsidies, export crediting.

**Dumping** is the export of goods at prices lower than the cost of production, or, at least, at lower prices than in the domestic market. Thus, dumping is considered as a form of international price discrimination.

In international trade practices, depending on the motives and time of application, there are sporadic, persistent and predatory dumping.

*Sporadic dumping* is a casual sale of surplus goods in the world market at a lower price than in the domestic market.

This form of dumping is used in case of overproduction of goods, when a firm is unable to sell the goods in home country and does not want to stop its production.

*Persistent dumping* is a long-term sale in the world market at a lower price than in the domestic market.

*Predatory dumping* is a temporary intentional reduction of export prices in order to drive out competitors from the market and introduce subsequently monopolistic prices.

Despite the fact that dumping brings some benefit to a country-importer, improving its terms of trade, governments consider all types of dumping of foreign producers a form of unfair competition. Therefore, it is prohibited both by the international WTO rules and national legislation in several countries.

**Subsidies.** Governments of many countries in order to develop certain industries and provide the necessary export policy, use subsidies, i.e. carry out state subsidies to producers when they enter the world market. In other words, a subsidy is a financial or other support by public authorities of the production, processing, selling, transporting, exporting of the goods, in the result of which the entity of economic-legal relations of an exported country receives benefits (profit). This support of national producers, at the same time, discriminates against importers.

Depending on the nature of payments, there are direct and indirect subsidies.

*Direct subsidies* are direct payments to an exporter after the export operation, which are equal to the difference between the expenditures and the received profit. Direct subsidies contradict international agreements and are prohibited by the WTO.

*Indirect subsidies* are hidden subsidies of exporters in the form of tax exemptions, preferential terms of insurance, repayment of import duties, etc.

According to specificity, a subsidy can be as follows:

- a *legitimate* subsidy, which does not give reasons to apply compensatory measures;
- an *illegitimate* subsidy, which gives reasons to apply compensatory measures.

Depending on the entity, receiving a subsidy, there are domestic and external (export) subsidies.

*Domestic subsidies* are government financing of domestic production of goods, competing with imports. They are considered as one of the most disguised financial instruments of trade policy, as well as the best method of import restrictions in comparison with import tariff and quota, because they do not distort domestic prices and provide smaller losses for the country (losses for the national economy occur because : a) as a result of receiving subsidies, inefficient local producers can sell their goods; b) subsidies are financed through the budget, i.e. by means of taxes).

*Export subsidies* are government financing of national exporters, allowed to sell the goods to foreign buyers at lower prices than in the domestic market, and thereby promote the exports.

Export subsidies may be granted in the following main forms:

- providing an enterprise with direct subsidies;
- payment of premiums after export operations;
- introducing preferential (rates, base of calculation, mechanism of charging, etc.) transport or freight tariffs for export shipments compared to transfers in the national market;
- direct or indirect delivery of imported or national goods by a public authority to use the export goods in the production under more favorable conditions than the conditions of supply of competing goods to produce the goods, intended for consumption in the domestic market, if these conditions are more beneficial for their exporters than in world markets;
  - exemption or deferral of payment of direct taxes, which must be paid by exporters, implementing export transaction or paying to social insurance funds;
  - giving reductions when paying taxes;
  - in the case of production and delivery of goods for exports, introducing exemptions of payment or repayment of indirect taxes;
  - reduction of rates or repayment of taxes on imports of material and technical resources, the goods for export;
  - implementation of state programs, which guarantee or insure export credits, guarantees or insurance programs of non-arising of the cost of the exported goods or exchange risk programs, using premium rates, insufficient to cover the long-term costs and losses, arising from the implementation of these programs.

An export subsidy reduces an export price of the product and demand for the product increases abroad. As a result, the terms of trade of the country, that exports, deteriorate. However, due to the decrease in the export price, the quantity of the exported goods increases. Because of the growth of exports, less products appear in the domestic market, a domestic price increases. The benefit or loss of the exporting country depends on the fact, whether it can compensate the losses, linking with the worsening terms of trade, i.e. decline in export prices, by means of increase in sales.

An export subsidy is an expenditure line of the budget, and hence an additional tax burden for the taxpayers (the costs of financing the subsidy are equal to the quantity of goods, exported after the introduction of the subsidy, multiplied by the amount of the subsidy).

Thus, as the subsidies reduce the costs of producers, they have an impact on international trade by means of artificial improving of competitiveness of certain firms in export markets, or providing the advantages of internal products compared with imported ones.

The importing country when an export subsidy occurs (the use of illegitimate subsidies) may impose countervailing duties levied on goods that are subject to countervailing measures. These measures can be used in the event of serious damage to the interests of other countries, in particular in the following cases:

- total amount of subsidy in comparison to the cost of the product is greater than 5%;
- subsidies cover the cost of production of industries;
- subsidies are not one-shot and cover the production costs of the enterprise;
- direct debit by the government.

**Export credits.** To hide the export subsidies, governments use export credits, providing financial incentives to develop exports by domestic producers.

Export credits can be the following: *subsidized credits for domestic exporters*. These credits are issued by state banks at the lower interest rate than the market one; *state credits for foreign importers*, who must purchase the goods only from firms of the country, providing this credit.

## SECTION 3. INTERNATIONAL FACTOR MOVEMENTS

### Chapter 6. International capital movements

#### 6.1. What are the main points and forms of international capital movements?

International capital movement is a rather developed component of the international flows of factors of production. Its nature consists in the partial removal of the national capital, after which it is included to the manufacturing process or other turnover in other countries. Under modern conditions, the capital mobility is relatively high, although it has more restrictions than the international trade. The growth rates of capital movements between countries are several times greater than the growth rates of both production and international trade.

International capital movements can replace or complement the international trade, if the efficiency of use of capital is higher than the result of international trade.

International capital migration is not a physical movement of production means, but a **financial transaction**: loans, purchase and sale of securities, the investment.

Specific forms of international capital movements are distinguished by the following features:

- sources of capital origin;
- the nature of use of capital;
- terms of capital investment;
- the purpose of capital investment [8; p. 171].

By the sources of origin, capital is divided into official capital and private capital.

**Official capital** is funds of the state budget or the budget of international organizations (IMF, the World Bank, etc.), which move abroad or from abroad according to the decisions of governments or intergovernmental organizations. Its source is money of taxpayers.

**Private capital** is funds of private firms, banks and other non-state organizations, which are provided in the form of investment, commercial loans, interbank crediting.

By the nature of use, capital is divided into business capital and loan capital.

**Business capital** is funds that are directly or indirectly invested in the production for profit earning. It is usually private capital.

**Loan capital** is funds that are provided to a borrower to obtain a given percentage. On an international scale, loan capital is basically official capital.

By terms of investment, capital is divided into short-term, medium-term and long-term capital.

**Short-term capital** is capital investment for less than one year, mainly in

the form of the trade credit.

**Medium-term and long-term capital** is capital investment for more than one year.

All investments of business capital are mainly in the form of direct investments, as well as in the form of state credits.

By the purpose of investment, capital is divided into direct and portfolio investment.

**Direct investment** is capital investment in order to acquire control over the object of allocation of capital. It is mainly export of private business capital.

**Portfolio investment** is capital investment in foreign securities without the right of control over the investment object. It is mostly export of private business capital as well.

From a practical standpoint, the most important fact is the functional division of capital into direct and portfolio investment. The major role in international capital movements is played by international loans and bank deposits.

The forms of international capital movements are defined in the investment and banking laws of each country.

## **6.2. Foreign Direct Investment**

### **6.2.1. What is the place of foreign direct investment within international capital movements?**

Foreign direct investment (FDI) has a special place among the forms of international capital movements. This is due to the following two main reasons:

- foreign direct investment is a real investment, which, unlike portfolio investment, is not purely financial assets denominated in the national currency. It is invested in business, land and other capital goods;
- foreign direct investment, unlike portfolio investment, usually provides a managerial control over the object of the invested capital.

Prior to the emergence of transnational corporations (TNCs) all private foreign investments were mainly “portfolio” ones. With the appearance of TNCs (i.e. enterprises that own or control the production of goods and services outside of the country in which they are based), part of international capital movements take the form of foreign direct investment.

Foreign direct investment is a kind of foreign investment, intended to invest in production and to provide the control over the activities of enterprises by means of acquisition of a controlling interest. The proportion that determines the ownership varies in different countries. In the USA, formally a direct foreign investment is any capital investment if an investor holds a 10% interest in the company. Foreign direct investment covers all types of investment, either buying new shares, or simple crediting, if only an investing firm holds more than 10% interest in a foreign company. The proportion of participation in the company’s capital can be obtained in exchange for technology, skilled staff, markets, etc.

Investor's property (complete or partial) and his control over the foreign enterprise, which becomes part of the organizational structure of TNCs as its branch or subsidiary company, are the main differences of foreign direct investment from other types of investing.

The hallmark of foreign direct investment can be considered a prevailing of the sales of the product, produced abroad with the help of FDI, over the sales of domestic products in the form of trade exports.

The factors that affect the growth of foreign direct investment and make proactive growth of FDI compared to the growth of the world trade (as well as GDP of the industrialized countries) are as follows: integration of production, its evolution towards a so-called international production; a growing role of TNCs; economic policies of the industrialized countries to support economic growth and employment; the trend of the developing countries and countries with economies in transition to overcome the crisis of the economy and social sphere; environmental factors that encourage the developed countries to transfer harmful production into the developing countries. When the government participates in foreign direct investment, their additional motive may be the achievement of certain political objectives: providing strategic resources, expanding its sphere of influence.

Foreign direct investment is the basis of TNCs domination in the world market. They allow the transnational corporations to use enterprises in foreign countries for producing and marketing of products and disseminating rapidly new products and new technologies at the international level and, thus, enhance their competitiveness. As far as they are concerned, FDI are motivated ultimately by profits.

The structure of the main factors of foreign direct investment can be presented as follows.

**Marketing factors:** 1) market size, 2) market growth, 3) a tend to hold a market segment, 4) a tend to succeed in export of parent company, 5) the need to maintain close contact with customers, 6) dissatisfaction with the existing state of market, 7) export base, 8) following the buyers, 9) following the competition.

**Trade restrictions:** 1) trade barriers, 2) preference of domestic goods by the local consumers.

**Cost factors:** 1) a desire to be closer to the sources of supply, 2) availability of labor resources, 3) availability of raw materials, 4) availability of capital and technology, 5) low-cost labor, 6) low cost of other production costs, 7) low transport costs, 8) financial and other incentives offered by the government, 9) more favorable price levels.

**Investment climate:** 1) the overall attitude to foreign investment, 2) political stability, 3) restrictions in the ownership, 4) exchange rates adjustment, 5) stability of foreign currency, 6) the structure of taxes, 7) good knowledge of the country.

**General factors:** 1) expectation of high profits, 2) other factors.

The mentioned above factors of FDI are specified during the development of investment policy through the system of indicators, comprising about 340 indexes and more than 100 evaluations of experts in economic, legal, technical, social and other spheres. The data analysis form 10 fundamental factors to assess the potential of the country to act as host FDI or so-called competitive potential of the country. These factors include the following:

- dynamics of the economy (economic potential);
- production capacity of industry;
- dynamics of the market;
- financial support of the government;
- human capital;
- prestige of the state;
- availability of raw materials;
- the orientation to external markets (export potential);
- innovation potential;
- social stability.

Each of these 10 factors includes a system of specific indicators. For example, for human capital's evaluation, Swiss experts suggested using 36 indicators that include: population and its dynamics; the overall unemployment rate; migration of the labor force as a whole, including highly skilled one; the level of professional training; motivation of hired workers and their mobility; management and its professional adaptation; the level of wages; public expenditures for education per capita; the level of workforce with higher education; periodicals publishing; the health care system, etc.

In practice, most decisions concerning foreign direct investment are based on many motives and take into account many factors. Political motives for investing are rarely separated from economic ones.

On the basis of expert estimates, the most attractive conditions for FDI are possessed by the following countries: the USA, Canada, Germany, Switzerland, and Asia-Pacific newly industrialized countries (NICs).

### **6.2.2. Why it is necessary to identify the forms of foreign direct investments?**

Foreign direct investment is carried out in the form of transfer of capital from one country to another by means of crediting or buying the shares from a foreign company, which is largely owned by the investor or under his control, or by means of setting up a new business. Therefore, foreign direct investment tends to imply a high level of investor commitments to the controlled firm in relation to transferring of new technologies, managerial know-how, the provision of the skilled staff. Immaterial, mobile assets become a rather widespread form of FDI under modern conditions. They may occur even with small initial funding or without any movement of financial capital abroad.

The mentioned form of foreign direct investment provides the controlled branch with: the transfer of the management skills; trade secrets; technologies; the right to use the trade mark of the parent company; etc. Therefore, a particular attention should be paid to the technology transfer.

Technology transfer does not mean only the emergence of new equipment in the market, but also mastery of technique of operations' performing on it. In the industries, where the role of intellectual property is essential, such as pharmacy, education, medicine, scientific researches, the access to the resources and developments of parent company generates benefits far beyond those that could be obtained by infusion of capital. It explains the interest of many governments to the fact that TNCs have research centers (capacities) in their countries. An integral part of the technology transfer is the management skills that are the most significant components of foreign direct investment.

The principles of technology transfer are usually the following:

1. The usefulness of the technology.
2. Favorable social and economic conditions for the transfer.
3. The willingness and ability of the host country to use and adapt the technology.

In the industrialized countries, complex technological processes are economically justified, and specialists from these countries are able to solve the problems and develop technology. The problems occur in the less developed countries with little industrial experience. Production capacity must be adapted to the production in small series; equipment and operations should be very simplified due to the lack of qualified and trained personnel. In most cases, in these countries the quality is only reaching the world standards. To overcome these problems, for example, the electronics giant 'Philips' created a special experimental plant. The plant contributes to the fact that a lot of elements, defining the possibility of production functioning, are adapted to the local circumstances, and thus the necessary know-how and other elements are transferred to the developing countries.

Technology transfer increases with the growth of the industrialization, which will create not only the demand for new technologies, but also complicate the processes and technology in the existing economic sectors.

### **6.2.3. What consequences of foreign direct investments could be?**

Foreign direct investment has a significant impact on the socio-economic development of investing countries (where the capital comes from) and destination countries (where the capital comes in), on different social groups in these countries, and on the state and dynamics of the world economy as a whole and of individual regions as well.

The analysis of FDI impact on the well-being of the individual groups of population shows that foreign direct investment brings the following:

- **benefits:**

- a) to foreign firms and investors;
- b) to workers of the receiving country (workplaces);
- c) to the population of the receiving country from a possible increase of social services because of taxes on incomes from FDI;

- **losses:**

- a) to workers of an investing country, as FDI means exports of workplaces;
- b) to competing firms in the receiving country;
- c) to taxpayers of an investing country, as profits of TNCs are more difficult to tax and the government either shift the shortfall in tax revenue to other payers or reduce the budget-funded social programs.

The general conclusion of economists, analyzing FDI is as follows:

**1) an investing country** generally wins because the benefits for investors are more than losses of workplaces and other categories of persons in the home base country;

**2) a receiving country** also generally wins, because the benefits for workers and other categories of persons are more than the losses to investors of the receiving country who are forced to compete with firms that have technological, managerial and other advantages.

The simultaneous existence of both costs and benefits breeds differences in the business world, among politicians, scientists and economists about foreign investment. In many countries, FDI gives birth to nationalistic sentiments. In the USA, for example, according to the survey, 48% of Americans are opposed to Japanese investment and only 18% agree to take them. The position of the developing countries is ambivalent. On the one hand, they fear excessive foreign influence and exploitation and, on the other hand, the disinvestment as a means of access to the latest technology, exports expansion, etc.

In many countries in the sphere of investment policy there are powerful conflicting pressure groups, seeking to limit FDI inflow or their wide attraction.

In the home countries of TNCs, the lobbying influence of these corporations on foreign policies of the governments often results in international military conflicts in order to protect the interests of investing firms that do not coincide with the interests of nations as a whole.

In the global scale, FDI, which reached \$1.5 trillion in 2011, and \$1.6 trillion in 2012, play a positive role [44]. Their distribution by countries, economic sectors, industries largely determines the structure of the world economy, relationship between its separate parts. Foreign direct investment for TNCs is an instrument of establishing of the system of international production, placed in many countries, but controlled from one center.

### 6.3. What is the nature of portfolio investment?

International portfolio investment is a capital investment in foreign securities, giving an investor no right to control the object of investment, but giving only a priority right to receive income according to the purchased share of the 'portfolio' of the investment object, which in international practice generally does not exceed 10%.

International investment portfolio of an individual company includes the following:

- 1) shares;
- 2) debt securities:
  - a) bonds, promissory notes, loan notes,
  - b) money market instruments:
    - treasury bills;
    - deposit certificates of a bank;
    - banker acceptances, etc.;
- 3) financial derivatives.

The main motivation to implement international portfolio investment is the receiving of higher income abroad. For example, residents of one country buy securities of another country if the revenues there are higher. It leads to the international leveling of incomes. However, this explanation for the reasons of international portfolio investment does not take into account the fact that the flow of capital is bilateral. If incomes from securities in one country are lower than in the other one, then it explains the flow of investment from one country to another one. However, it is incompatible with the simultaneous capital flow in the opposite direction. To explain a bilateral capital flow, an element of risk must be taken into consideration. Investors are interested not only in profit, but also in a lower risk, associated with a specific type of investment. Thus, the risk of owning the bonds is linked with the possibility of bankruptcy and change of their market price, and the risk of the shareholding is in the possibility of bankruptcy, significant fluctuations of their market rate and the possibility of getting lower incomes. Thus, investors try to maximize the profits with an acceptable level of risk.

There is a certain link between profitability of securities and risk of their acquisition: the higher profit an investor can get, the higher is the risk. For example, the revenue from the shares of company A and company B is on average 30%. However, with equal probability, the profit from share A can be from 20% to 40%, and the profit from share B is from 10% to 50%. Shares B are associated with greater risk, because the range of values of the income for share B is much larger, so to minimize the risk the investors should buy the shares of company A. If the profit of shares A decreases with simultaneous increase of shares B and vice versa, owning two shares, an investor can get in average 30% of the profit but with lower risk.

The portfolio theory is based on the assumption that profits from securities may change over time in the opposite, and also the income can be obtained with less risk, and higher income can be with the same level of risk of the portfolio as a whole. As revenues from foreign securities are typically higher than revenues from national securities, a portfolio which includes national and foreign securities may have higher revenues and/or a lower risk than a portfolio which is formed of only national securities.

Such balanced portfolio requires a two-way flow of capital. For example, if share A, which has the same average profit like share B but a lower risk, is issued in country I, while share B (with the opposite revenue to revenue A), is issued in country II, portfolio investors of country I must also purchase share B (investing in country II), and investors of country II must purchase share A (investing in country I) for the balance of the investment portfolio. Thus, reciprocal international portfolio flows are explained by the opportunity to diversify risks [47, pp. 344-345].

International portfolio investment rises as investors seek to diversify their activities internationally to maximize the revenue with regulated risk. The volume of international market of portfolio investment is significantly greater than the international market's one of direct investment. More than 90% of international portfolio investment takes place among the developed countries.

#### **6.4. International loan capital flows**

##### **6.4.1. What is the nature of international loan capital flows?**

International loan capital flows are financial transactions, related to international loans, crediting, bank deposits and transactions, which cannot be characterized as direct, portfolio investment or reserve assets.

International crediting and loans are a movement of loan capital beyond the national boundaries of countries between the entities of international economic relations, providing currency and commodity resources under conditions of recurrence, urgency and interest payment.

Each country is an exporter and an importer of capital. International credit is involved in the turnover of capital in all stages, mediating its transition from one form to another one: from cash to a productive, then to commodity and to cash again.

International credit is considered as a special kind of international trade. This trade is not a one-time exchange of goods for goods, but supplying or receiving goods today in exchange for receiving or return of goods in the future. This exchange is called an intertemporal trade.

In economics, there is always a problem of choice between current and future consumption. As a rule, the produced goods are not consumed immediately, some of them are used as a productive capital for production expansion in order to

increase consumption in the future. In other words, it is a choice between the production of consumer products now and in the future.

International credit gives you an opportunity to trade in time. If a creditor-country provides a loan, it sells the present consumption for future consumption. A borrower-country, taking a loan, can spend today more than earned, in exchange for the obligation to pay compensation in the future for today's consumption. The countries, taking loans, and the countries, providing them, are determined by production capacity. Countries with good current investment opportunities take loans from other countries, which do not have such relative investment opportunities but have great current incomes.

Countries with relatively large financial resources in comparison to their profitable use internally can increase their national income by means of providing credit to the countries which have higher rate of income on capital (percentage, dividend). An importer-country of capital receives an opportunity to increase its national income at the expense of foreign investment received in more favorable terms in comparison with the internal terms of crediting. In general, through international credit there is a maximization of the world product at the expense of the general increase in world production.

The importance of international crediting lie in a fact that due to it there is the redistribution of capital among countries in accordance with the needs and opportunities of more profitable use. Creditors and borrowers are banks, firms, public institutions, governments, international and regional currency-credit and financial organizations.

The effectiveness of crediting is reached upon condition that there are:

- free movement of capital;
- stability and predictability of the development of the world economy;
- borrowers' implementation of their obligations, full payment of their debts.

Development of international crediting today is largely determined by the activities of TNCs and its role's enhancement in the evolution of international economic relations.

The time limits for performance of liability commitments (sale of property) play an important role in the capital movement. They can be the following:

- long-term (over 5-7 years);
- short-term (up to 1 year).

The main form of international long-term crediting is international loans. Depending on who is the creditor, they are divided into private, governmental credits, credits of international and regional organizations.

Private loans are provided by major commercial banks in the world from their resources. In recent years, the proportion of external credits in the total export of loan capital of these banks has declined, but they do not lose their status of major international creditors. Private long-term loans can be provided not only by the resources of banks. Banks use the means of renters of large countries for these

purposes with the help of the bond loans (external emissions). Investment banks place the securities (obligations) on the stock market of their countries, issued by private foreign companies or governmental agencies. Thus, creditors are big countries with a well-developed stock market and a significant surplus of loan capital. However, not all obligations of foreign loans are placed among other holders. Some part of the obligations with high reliability and profitability are left by the banks for themselves, receiving interest income from the loans (8-10% annually).

Governmental loans (intergovernmental, state loans) are given by government crediting institutions. A country assumes all the costs connected with the loan, it relieves expenditures in case of non-payment of debt.

Loans of international organizations are given mainly by: the International Monetary Fund; the structures of the World Bank; the International Bank for Reconstruction and Development; regional development banks and other credit and financial institutions.

It should be noted that the International Monetary Fund and the World Bank are not only the largest creditors, but also coordinators of international crediting.

For the purpose intended, international loans are divided into the following:

- production credits for the development of national economy, which are sent to industry, transport, agriculture (purchase of equipment, materials, licenses, productive services, etc.);
- non-production credits to provide the government, the army, the purchase of weapons, the payment of interest on foreign debts, etc. The share of credits of non-production character in the total amount of foreign credits increases.

The movement of short-term loan capital has the following forms:

- a) commercial and bank credit;
- b) current accounts in foreign banks.

Commercial (corporate) credit is widely used in foreign trade and given by an exporter of one country to an importer of another country in the form of a payment delay. In the commercial credit, a loan operation is combined with the sale of goods, and the movement of loan capital is combined with the movement of commodity capital.

Bank short-term crediting is the provision of funds in the monetary form on the security of goods, commodity documents and bills.

The cost of short-term credits is high enough (6-9% annually). Commercial loans are commonly used by English, German, French, Japanese firms for the purpose of foreign trade expansion.

Companies and banks use current accounts in foreign banks to attract free money capital of other countries. Current accounts in foreign banks are characterized by high mobility, variability, dependence on the economic and political conditions. Thus, countries can use them with a view to the exploitation of less developed countries (for example, to “freeze” the deposits that are formed as a result of goods delivery).

#### **6.4.2. Under what conditions does the international debt emerge?**

The practice of international crediting clearly shows how the actual development of international loan disagree with such conditions of normal work of the credit system as stability and timely payment of debts.

A tangible proof of mentioned above statement is the global debt crisis.

The main reason of the periodic occurrence of international debt crisis is a presence of strong motivation of sovereign debtors to refuse the payment of the debt. If the governments of the debt countries come to the conclusion that all payment obligations do not provide net inflow of funds in the future any more, there is an incentive to abandon some or all payments of the debts but to avoid outflow of resources from countries.

A reason to stop paying by the sovereign debtors helps explain some features of the behavior of international creditors. One of them is perseverance in establishing a higher interest rate in loans to foreign governments in comparison with the loans to private and public borrowers in their own country. The requirement for a higher interest rate is a way to get some kind of insurance award in case of non-payment of debts: while there is no crisis, creditors receive this award, but in case of a crisis they bear large losses.

What can solve the problem of non-payment? It may not be a traditional offer, linking new loans to the debtor with the requirement of "belt-tightening". To delay the time of non-payment of debts, new loans should cover at least the payments of interest and the principal sum of the loan. But even if the new loans are so high, their provision increases the total amount of debt, which a debtor can finally refuse to pay for, regardless of how long a new crediting lasts.

A reliable way to solve a problem of right of ownership of loans, granted to sovereign debtors, is the introduction of a pledge or security, i.e. the assets of any type, which may go into the ownership of the creditor in case of suspension of paying for the debt by the borrower. In transactions on loans within a country, a legal loan or security play an important role in maintaining of payments on debt and simultaneously strengthen the creditability of the debtor, allowing him to obtain loans at a lower interest rate and convenient temporary schema. In the past, the countries, paying for their debts on time, were those whose creditors were able to arrest the assets of the debtors in case of failure to meet the deadline of payment terms.

Despite the adoption of the measures by governments, the total debt of countries of the world in 2012 was amounted to \$69,080 billion (\$62,500 billion in 2011). Over the last 10 years, the total debt of all countries of the world increased by 2 times [78].

Thus, international debt is a serious problem in the world economy. The economic situation of a country, as a result of the globalization of financial markets, becomes more dependent on external resources, required to cover the budget deficit, domestic investment, socio-economic reforms and execution of debt obligations. Mobility and the scopes of capital flows depend on the level of the country's development. Financial resources, received in the form of loans on the commercial terms by a country, cause the incurring of external debt, since they require appropriate payment.

#### **6.4.3. What is the nature of external debt of the country and its restructuring?**

*External debt* is the amount of financial obligations of a country owed to foreign creditors for unpaid foreign loans and interests.

Long-term debt obligations of a country include the following:

- the external public (official) debt, which is the amount of obligations of central and local state bodies to external creditors for unpaid loans and interest. External creditors can be foreign governments, central banks, governmental bodies, international and regional monetary and financial organizations;
- the state-guaranteed debt, i.e. an obligation of private firms, banks, companies, where the guarantor of payment is the country;
- private non-guaranteed debt, i.e. a debt of private borrowers that is not guaranteed by a country. It occurs when a borrower receives bank and other loans by means of purchasing debt securities in the international stock market.

External debt service payments are usually made in a foreign currency.

Return of loans by sovereign debtors is the most possible in terms of their capacity to pay debt. Therefore, the creditors are ready for debt restructuring.

**Debt restructuring** is a rescheduling of debt obligations, which have an expired payment term. Debt restructuring is used to alleviate the debt burden of the least developed countries and countries with economies in transition. International practice accepted the concordance of this process within the Paris Club of official creditors and London Club of private creditors.

The measures of debt restructuring include transfer payments, reduction of the amount of debt or its full cancellation, conversion of debt into national assets of a debtor-countries and recapitalization. The mechanism of recapitalization involves exchanging debts for obligations of debtors, or providing them with new target loans to pay off former debts. Recapitalization is the most popular measure for restructuring the debt to commercial bank creditors. This mechanism was adopted in 1989, and is called the Brady Plan. According to the plan, banks restructure some part of the debt of the developing country (usually it is a lower interest payment) only if its government implements a more radical program of macroeconomic and structural changes.

Every creditor bank has the right to choose the methods of restructuring that are foreseen in the contract. However, on the basis of existing practice, banks choose an Advisory Committee that represents the interests of all creditor banks and negotiates with the debtor government.

Analyzing the results of the multilateral programs of overcoming the international debt crisis of the developing countries, the World Bank came to the following conclusions:

1. A major role in the economic development of a country is not played by external financing (loans and assistance), but by internal resources and a balanced economic policy.

2. The focus on external capital leads in the long term to a greater dependence of the socio-economic development of the country on unfavorable external events. External financing can play a positive role only when it complements and reinforces a healthy domestic economic policy.

Debt restructuring requires an economic policy, endorsed by the IMF, from a debtor-country. However, the practice of implementation of the IMF recommendations, without taking into account a country specificity, in many cases leads to a deterioration of the economy, causes social conflicts, forcing to abandon some of the requirements of the IMF and thus makes the debt crisis difficult to overcome.

## **Chapter 7. International labor migration**

### **7.1. What are the causes of international labor migration?**

International labor migration is the mobility of labor from one country to another for a period more than one year.

International labor migration covers the whole world: both the development part and the underdeveloped periphery. Currently there are more than 214 million of international migrants. International migration of the population has played an increasingly significant role in the development of societies and has become a global process that covered almost all the continents and countries, as well as various social strata. The total number of international migrants increases continuously.

More than half of migrants come from developing countries and countries with economies in transition. From these countries over the past 5 years, industrialized nations have taken 12 million migrants, in other words, the annual inflow of migrants is an average of 2.3 million people, of whom 1.4 million went into the North America and 800 thousand - into the Europe.

International labor migration is one of the objective bases of becoming an integrated international system. At the same time, the problem of free migration is the most dangerous for governments, both politically and in the social aspect. Ethnic and religious superstition and direct economic threat to the interests of particular groups who are afraid of competition from immigrants make this problem too spicy. For politicians, the issue of migration is a "hot potato that it is better not to take out of the fire" [8, p. 246]. Therefore, during the migration policy implementation is very important to know the nature and general economic and social implications.

The international migration consists of the two basic interdependent processes: emigration and immigration. *Emigration* is a departure of labor from one country to another, *immigration* is the entrance of labor to the receiving country. Also as part of international flows of people distinguish *remigration*, which is the return of the labor to the country of emigration.

The main forms of migration:

- *permanent migration*. This form of migration prevailed over others before World War I and is characterized by the fact that lots of people were left their countries for the permanent residence in the USA, Canada, Australia for ever;
- *time migration* providing the migrant's homecoming on the expiration of certain term. In this connection it is necessary to notice that modern labor migration has got rotational character;
- *the illegal migration*, which rather favorable to businessmen of the country of immigration and makes an original reserve of cheap labor necessary for them.

Differently directed flows of labor, which cross national borders, form the international labor market functioning in interrelation with the markets of the

capital, the goods and services. In other words, the international labor market exists in the form of labor migration.

The international labor migration is caused by both factors of internal economic development of each separate country and external factors: a condition of the international economy as whole and economic relations between the countries. During the certain periods as motive forces of the international labor mobility could be the political, military, religious, national, cultural, family and other social factors. The reasons of the international labor migration can be understood also only as concrete set of the named factors.

Traditionally (in the neoclassical theory) as the basic allocate the economic reason of the international labor migration connected with scales, rates and structure of accumulation of the capital.

1. Differences in rates of accumulation of the capital cause the differences between an attractive and the repulsive forces of labor in various regions of the world economy that finally defines directions of moving of this factor of production between the countries.

2. Level and scales of accumulation of the capital have direct influence on an occupation level of able-bodied population and, thus, on the sizes of a relative overpopulation (unemployment), which is the basic source of labor migration.

3. Rates and the sizes of accumulation of the capital, in turn, in certain degree depend on migration level. This dependence means that rather low salary of immigrants and possibility to reduce payment to domestic workers allows to reduce the production costs and thereby increase the accumulation of capital. The same purpose is reached by the organization of production in the countries with low-paid labor. Transnational corporations for the purpose of acceleration of accumulation of the capital use either the labor movement to the capital, or move the capital to the regions with excessive amount of labor.

4. The reason of the labor movement is changes in the pattern of requirements and the production caused by scientific and technical progress. The production cutback or liquidation of some out-of-date branches release labor which searches for its applications in other countries.

So, the international labor migration, first of all, is the form of movement concerning surplus population from one centre of accumulation of the capital to another. It is the economic nature of labor migration.

However in the international labor migration not only the unemployed, but also a part of the working population are involved. In this case, the driving motive of migration is the search of more favorable working conditions. The labor moves from the countries with a low standard of living and salaries to the countries with higher ones. So, an objective basis of labor migration is national distinctions in the level of wages.

## 7.2 What are the main stages of the international labor migration?

Historically, there are four stages of the international labor migration.

**First stage of the international migration** is directly connected with industrial revolution which was held in Europe from the end of the eighteenth century right up until the middle of the nineteenth. A consequence of this revolution was that accumulation of capital was accompanied by growth of its organic structure. The latter has led to formation of “the relative overpopulation” that caused mass emigration from Europe to the North America, Australia, and New Zealand. It has begun the formation of the world labor market.

Formation of the world labor market promoted:

- the economic development in the countries of immigration as satisfied the critical need of these countries for labor resources in the conditions of high rates of accumulation of the capital and the absence of reserves of attraction of labor;
- the colonization of earth's areas with few population and the new countries' retraction in the system of the world economy.

**Second stage of international labor migration** covers the period from 80' of the 19th century to the First World War.

The scales of accumulation of the capital considerably increase during this period. Also, this period is characterized by the strengthening of unevenness of this process within the limits of the world economy.

The high level of concentration of both production and capital in the advanced countries (the USA, Great Britain etc.) causes the increased demand for additional labor, stimulates immigration from less developed countries (the backward countries of Europe, India, China etc.). The general and qualifying structures of migrants change in this conditions. In the beginning of the 20th century the basic mass of migrants was formed by unskilled labor.

**Third stage of development of the international migration** covers the period between two World Wars.

The feature of this stage is the reduction of scales of the international labor migration, including intercontinental migration and even remigration from the USA as the classical country of immigration.

It has been caused by following reasons:

- 1) consequences of a world economic crisis in years 1929 — 1933, the nature of which was in the unemployment growth in the developed countries, and necessity of restriction of migratory processes;
- 2) closed-totalitarian character of development of the USSR, which excluded it from a circle of the countries of labor emigration.

**Fourth stage of development of the international labor migration** has begun after the Second World War to date.

This stage is caused by: a scientific and technological revolution; monopolization of the international markets of labor and capital; internationalization and integration processes.

Its characteristic features:

- growth of intercontinental migration, in particular in Europe and Africa;
- increase in demand from modern production on highly-skilled personnel, the occurrence of a new kind of the labor migration, which have received the name of "the brain drain";
- strengthening of the state and international regulation of labor migration.

Nowadays, such directions of the international labor migration were generated:

- migration from developing countries to industrially developed countries;
- migration within the limits of industrially developed countries;
- labor migration between developing countries;
- migration of scientists and the qualified experts from industrially developed countries to the developing ones;
- migration from the former Union of Soviet Socialist Republics to the developed countries;
- labor migration of within the limits of the former USSR.

### **7.3 What are the modern centers of labor migration?**

The international labor migration in modern conditions has got character of the global process. Migration captures the majority of the countries of the world. The quantity of the countries involved in the international migratory process, has essentially increased, first of all at the expense of Central and Eastern Europe, as well as CIS. According to the experts' forecast, the quantity of migrants which are accepted by the developed countries, will remain at high level in the nearest decades.

In 2011, countries leading in emigration were Mexico, India, China, Russia, Ukraine and, in turn, countries leading in immigration were the USA, Russia, Germany, Saudi Arabia and Canada.

As the major centers of gravity of foreign workers, which define modern directions of the international labor migration, can be identified: North and South America, Western Europe, South-East and Western Asia. In beginning of the 21st century annual inflow averaged 2,3 million people, 1,4 million people of whom went to the North America, and 800 million people - to Europe. The largest centers of attraction of migrants are the USA and Canada (their readiness to accept

foreigners is estimated accordingly in 1,1 million people and 211 thousand people accordantly).

The defying competition ones are countries of Western Europe, where the aggregate number of the people captured by migration during the post-war period, is estimated in 30 million people. It is characteristic that last 20 years over 1 million people annually moves, looking for a job, from one European country to another, i.e. take part in a intercontinental interstate exchange of labor. For modern European migrations such directions are characteristic: from less developed countries of Southern and Eastern Europe (Greece, Spain, Turkey, Poland, Hungary, etc.) to the advanced countries of Western and Northern Europe (France, England, Germany, Sweden, etc.); from the countries of North Africa, India, Pakistan to the West European labor market; labor movements from one advanced country to another.

Emigration in the countries of the European Union has increased. Number of the foreigners living today in the EU countries reaches 17 - 21million people, 12-14 million people of whom (about 4 % of the population of EU) arrived from the countries which are not members of the Union: 29 % of migrants are citizens of Turkey and former Yugoslavia; 20,7 % — citizens of the African countries, 7 % — Americas, 13,6 % — Asia, 7,8 % — the countries of Central and Eastern Europe. Among the EU countries which have accepted the foreigners, the first places occupy: Germany (over 7 million people); France (about 5 million people) and Great Britain (about 3 million people). The main countries of emigration to Germany are Turkey, the countries of the former Yugoslavia, Italy, Greece and Poland; to France — Algeria, Morocco and Portugal; to Great Britain — India.

The important centre of gravity of labor is Australia. The area of Persian Gulf became new point of concentration of international groups of labor, where in 1975 the aggregate number of nonlocal population in 6 countries (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates) id 2 million people, and in the beginning of the 21st century - 4 million people, or about 40 % of all population. The most part of the Arabian emigrants arrives from Palestine, Egypt, Iraq, Syria, Jordan.

On the African continent the centers of gravity are the countries of Southern and Central Africa. The aggregate number of migrants in all countries of Africa reaches 6 million people

Along with Western Europe, for last two decades the new centers of gravity of foreign workers reflecting labor migration from one developing country to another, moving of foreign labor from more developed to less developed countries, which in general was not characteristic for interstate migration in the past. These include, in the first place, “the new industrial countries” of Asian-Pacific region. And in Latin America they are Argentina, Venezuela, Brazil.

The largest direction of migration in the world is the Mexico - United States one: in 2011 the number of migrants amounted to 11.6 million people. The next ones by the volume are: Russia - Ukraine, Ukraine - Russia, Bangladesh - India; in

these directions, many indigenous people were migrants without moving to other countries, as a result of the establishment of new state borders [46].

As regards the structure of migrating labor, there are following main regularities. Structure of labor, which migrates to industrially developed countries and between the developed countries, is characterized by two moments.

***The first one:*** the necessity of a high share of the highly skilled and scientific personnel for development of new directions of scientific and technical progress. Industrially developed countries stimulate such moving of labor with the right of reception of the status of the constant resident. So, the share of foreigners among engineers in the USA is over 10 %, doctors – over 20 %. “The brain drain” in the USA occurs from both the developing countries and the countries with economies in transition. Within the EU the highly-skilled personnel concentrates in the most developed countries.

***The second one:*** there is a considerable share of labor for branches with physically heavy, low qualification and unattractive kinds of work. For example, in France emigrants make 25 % of all occupied in building, 1/3 – in motor industry. In Belgium they make half of all miners, in Switzerland – 40 % of building workers.

Migration of labor between developing countries is mainly migration between new industrial countries and OPEC member countries, on the one hand, to other developing countries, on the other hand. The basic structure of migrants from these countries is semi-skilled labor. Rather small flow of skilled labor goes from the developed countries to developing ones.

For migration within former world system of a socialism is characteristic the moving of labor from the countries with less favorable social and economic conditions to the countries with more stable economy and social conditions.

#### **7.4. What are the consequences of labor migration?**

Consequences of the international labor migration are various enough. They show up in the countries of emigration, as well as in the countries of immigration, bringing certain benefits and losses to both parties. However, as analysis shows, there are more benefits obtaining by countries of immigration, and losses exceed benefits in countries of emigration. The world as a whole wins, as migration freedom allows people to move to the countries where they can bring more significant contribution to world production.

***The countries of immigration obtain following benefits:***

- a) in the country of skilled labor immigration, rates of growth of economy are accelerated: additional demand for the goods and services of immigrants stimulates growth of production and creates additional employment in the country of their stay;
- b) there is the competitiveness increase of the goods made by the country owing to the reduction of the production costs connected with lower price of

foreign labor and possibility to contain growth of a salary of local workers due to increased competition on a labor market;

c) the host country wins at the expense of the taxes which size depends on qualifying and age structure of immigrants. The highly skilled experts already knowing language of host country become large taxpayers at once;

d) the considerable income brings a transfer of knowledge from the emigration country. When the host country imports the skilled labor and scientists, it saves expenditure for education and professional trainings. So, 23 % of members of National academy of Sciences and 33% of Nobel Prize winners are immigrants in the USA;

e) foreign workers are often considered as the certain shock-absorber on a case of growth of unemployment: they can be fired first of all;

f) immigrants improve a demographic picture of the developed countries, suffering population aging. In Germany, France and Sweden 10 % of all newborns appear in families of immigrants, in Switzerland — 24 %, in Luxembourg — 38 %.

***The countries of emigration also obtain certain benefits:***

a) decrease in a rate of unemployment and, as consequence, - social pressure in the country;

b) free labor training for countries of emigration (new professional skills, knowledge of high technology, the work management, etc.);

c) reception of incomes in hard currency as a result of remittances of emigrants.

The remittances of migrants are a considerable part of currency receipts of states that positively influences national income of the state. It is one part of consequences of migration for countries of emigration. On the other part, these countries sustain essential losses from labor export: a) reduction of tax revenues because of reduction of number of taxpayers; b) the constant migration caused an outflow of the qualified, initiative workers, called "the brain drain", leading to slowing down the rates of increase of scientific and technical and cultural level of the country. By estimates of experts, these losses reach about 76 billion dollars.

Such measures of the state can be possible ways of removal of negative consequences of labor emigration:

- an emigration interdiction;
- the tax introduction for the "brain drain" to compensate the state investments in emigrants;
- creation of the high profit branches which are carrying out export of labor.

## **Chapter 8. International technology transfer**

### **8.1 What are the essences and forms of the international technology transfer?**

The international technological exchange (technology transfer) is understood to be the complex of the economic relations of different countries concerning the transfer of scientific and technological achievements.

The scientific and technical knowledge being bought and sold in the world market, which is the result of scientific research, engineering and experience of their commercial exploitation, as well as engineering services for the use of scientific, technical, technological and managerial developments. They are the objects of intellectual property, possessing both scientific and commercial values. As commodities they include the following:

- a patent is a certificate, which is issued by the proper government agency to an inventor and certifies its monopoly for the use of the invention;
- a copyright is an exclusive right of an author of a literary, audio or video product for display and reproduction of the work;
- a trademark is a symbol (a picture, graphics, combination of letters, etc.) of a particular organization which is used to personalize the product manufacturer and which cannot be used by other organizations without the official permission of the owner;
- industrial designs, which must be new and original;
- non-divulged information (know-how), which is secret and kept in secret, has commercial value and is provided to the government and governmental organizations as a condition of approval for the marketing of certain products;
- a variety of technical, design, commercial and marketing documentation.

These products of intellectual work belong to so-called nonmaterial forms of technology, and trade operations in international practice are commonly referred to as international technological exchange. Thus, international technological exchange is understood to be the complex of economic relations between contractors of different countries for the transfer of scientific and technological achievements (nonmaterial types of technology) with scientific and practical values, on the commercial basis. It should be noted that there are also non-commercial forms of international technological exchange:

- technical, scientific and professional journals, patent publications, periodicals and other specialized literature;
- database and databanks;
- international exhibitions, fairs, symposia, conferences;
- exchange of delegations;
- migration of scientists and specialists;
- training of scientists and specialists in companies, universities and organizations;
- education of undergraduate and graduate students;

- activities of international organizations in the field of science and technology.

Under modern conditions, international technological exchange has certain features [8, p.264]:

1. *The development of market of high technologies.* The generally accepted classification of high technologies for exports and imports of products, containing new and leading technology, is the classification developed in the USA, which is used by international organizations for statistical comparisons of different countries. The classification system allows to explore the trade in products of high technology in 10 main technological sectors: biotechnology; human life science technology; optoelectronics; computers and telecommunications; electronics; computerized production; new materials; aerospace technology; armament; nuclear technology.

2. *The monopoly of large firms in technology markets.* Research and development are concentrated in the largest firms of the industrialized countries, since only they have sufficient financial means for expensive research. Transnational corporations actively attract for R&D their foreign subsidiaries, characterized by increasing the expenses for scientific research in the total amount of the expenses of TNCs.

3. *Technology policy of TNCs.* In recent years there have been changes in the trends of R&D of TNCs. Research moves to the industries that determine success in the production and marketing activities:

- enhancement of traditional kinds of products to meet the requirements of the world market concerning the indicators of in material intensity, energy efficiency, security, reliability, etc.;
- creation of innovative products, market research, where you can expect high returns;
- improvement of the existing technology and creation of a new one.

TNCs apply new approaches to the transfer of scientific and technological achievements:

- sale of licenses at the initial stages of the life cycle of products, in order to cover the expenses for R&D by incomes from realization of their results;
- establishment of exclusively high prices for the patented products, and limitation of the production and output of a new product by license buyers;
- agreement undertaking between TNCs to obtain exclusive rights to the patents for the most important inventions. The use of patents to control technique development or to hamper this development;
- deprivation of TNCs subsidiaries the autonomy in the choice of equipment and technology. They should be guided by the general licensing policy within the TNCs;
- TNCs transmission of licenses in non-commercial terms to their subsidiaries and affiliates;

- the establishment of strategic alliances between TNCs from different countries to solve jointly the scientific and technological problems.

4. Relationship between TNCs and the developing countries. TNCs try to create a structure of international division of labor, which would provide economic and technical dependency of the developing countries. For example, in these countries, TNCs create enterprises that produce components that are supplied to the subsidiaries in other countries. Transferring the technology for manufacturing intermediate products to the countries with cheap labor force, a TNCs reduces the cost of their goods.

TNCs often moves to the developing countries the production of goods, the lifecycle of which expired and the profit from sales gradually decreases. They receive these goods at low prices and then sell them through their marketing network under their well-known trademark, getting a higher profit.

A technology, which is transferred to the developing countries, is generally ill-adapted to their possibilities, because it takes into account the level of development and the structure of the industry in the developed countries.

The developing countries account for about 10% of international technological exchange due to the small capacity of their technological market.

5. *Participation in international technological exchange of “venture” firms* (small and mid-sized firms employing up to 1 thousand people). The advantage of these firms in the market of technologies is a narrow specialization. Producing a limited product line, these firms have access to highly specialized global markets; they do not bear additional expenses for market research, advertising; they pay more attention to the direct solving of scientific and technical problems.

6. *Development of international technical assistance.* This assistance is provided by the developed countries to the developing countries and countries with economies in transition in the field of the transfer of technical knowledge, experience, technologies, technology-intensive products, personnel trainings.

The main buyers in the market of technologies are as follows: foreign subsidiaries of TNCs; individual independent firms.

Transfer of TNCs’ new technologies to their foreign branches is conditioned by the fact that:

- overcoming the disagreement between the need for greater use of the latest technical developments with a view to maximize the profits and resulting therefrom threat of losing their monopoly for scientific and technological achievements;

- decreasing the specific costs for R&D;
- excluding the outflow of production secrets beyond the boundaries of TNCs;

- increasing the profit of the parent company (since in most countries the payments for the new technology reception are exempted from taxes).

Independent firms usually buy technology of the industries where the expenses for R&D are small (metallurgy, metal processing, textile and clothing industry).

Products of intellectual labor are sold in the world market through sales or by means of establishing the relations arising in connection with obtaining of a temporary right to use the results of scientific research and development on the basis of international licensing agreements, as well as contracts for engineering services.

## **8.2 What is the role of licenses in international trade?**

International license trade is the main economic mechanism of international technological exchange and currently has become widespread and rapid disseminated.

The growth of international license trade is due to a number of factors that encourage firms to sell and buy licenses in the world market:

- commercial interest in the technology transfer;
- increased competition in the world market;
- acceleration of the placing of new products in the market;
- gain of access to additional resources;
- penetration and winning of difficult markets in the countries with high tariff and non-tariff barriers;
- profits from the sale of licenses for the products that do not meet the new strategic priorities;
- countries with limited resources of scientific and technological development, participating in international technological exchange, have an opportunity to take a firm position in the world market without additional costs;
- licenses help to create advertising of domestic products and increase demand in other countries, as well as explore foreign markets;
- political and legal motivations.

International license relationships are mostly between the developed countries. The proportion of the developed countries is almost 98% in the total revenues from international license trade.

In general the turnover of license trade is about 30 billion dollars per year. However, the significance of this market is defined by the fact that the cost of products, manufactured in different countries with foreign licenses, is 330-400 billion dollars annually. The leading position in the market of licenses belongs to the USA (65% of income of the industrialized countries from license export).

**The objects of licenses** are as follows:

- a patented invention or technological process;
- technological knowledge and experience;

- know-how i.e. technical knowledge, practical experience of technical, commercial, managerial, financial and other character, which is commercial value, and is applied in production and professional practice and are not provided with patent protection;
  - copyright;
  - industrial designs (new art and design solution, which defines its outward appearance);
  - trademark.
- Licensing agreements are typically concluded for 5-10 years.

### **8.3 What is the role of international trade in engineering services?**

The common form of international technological exchange is engineering.

Engineering is a complex of engineering and consulting services for using technology and other scientific and technical developments.

The essence of international trade in engineering services is to provide on the basis of the engineering agreement by one party (a consultant) to the other one (a client) commercial engineering and design, consulting, construction engineering services. These services may include the following ones:

- preparation of production:
  - a) preliminary design services (socio-economic research, field studies, topographical survey, mineral exploration, feasibility studies, consultation and supervision of the work);
  - b) project services (master planning, preparation of diagrams, drawings, technical specifications, consultation, supervision, etc.);
  - c) post-project services (preparation of contract documents, supervision of construction, construction management, acceptance of delivery work etc.);
    - the process of production (services for organizing the production process, enterprise management, staff training);
    - the sales of products;
    - the construction and exploitation of industrial, infrastructural, agricultural and other objects [8, p.273].

All of these services are intellectual and aimed at optimizing the investment projects at all stages of their implementation.

The main factors, influencing the development of international market of engineering services are as follows:

- acceleration of scientific and technical progress, which can lead to significant shifts in the structure of international trade towards the increase of the trade in related types of equipment that need special knowledge to solve technological and organizational issues, ranging from the design of enterprise to its introduction into operation;
- increase in public and private investment, which allows to extend the

building and to introduce new objects, where engineering services are needed;

- free capital available in the market of engineering services;
- high demand for engineering services from the countries that started their independent economic development and do not have the necessary experience and experts for the exploration and exploitation of their natural resources, development of fuel-and-energy base, creation of heavy industry, etc.;
- striving of large TNCs for foreign economic expansion, i.e. to expand the spheres of influence. They use the technical services as a means of penetrating into the economies of other countries. For example, the provision of engineering services to any country subsequently causes the supply of machinery and equipment, whose value is 10-20 times higher than the cost of services for their delivery;
- increase in the number of major engineering firms with large turnover and broad field of activity, creation of national and international associations of engineering firms to promote engineering [8, p.273].

The characteristics of the market of engineering services are as follows:

- results of the trade in engineering services are not embodied in material types of product, but in some useful effect, which may or may not have a material object, i.e. engineering is an implicit form of technology transfer. For example, services of staff training, construction management do not have material objects;
- engineering services related to the preparation and provision of the process of production and realization, for intermediate consumption of material goods and services. Productive services are not engineering services;
- the objects of sales are services, adapted for the use in specific contexts and transfer of the average available scientific and technical, operational, commercial and other expertise.

## **PART III. INTERNATIONAL MACROECONOMICS: THE FUNCTIONING OF OPEN NATIONAL ECONOMY AND WORLD ECONOMY AS A WHOLE**

### **SECTION 4. THE INTERNATIONAL MONETARY SYSTEM: PRINCIPLES OF FUNCTIONING**

#### **Chapter 9. Currency and exchange rates**

##### **9.1. What is the essence of currency and exchange rates?**

The term "currency" in the broad sense is any product that is able to act as a medium of exchange in international payments. In a narrower sense, it is the available supply of money, which passes from hand to hand in the form of banknotes and coins.

Currency provides communication and interaction of national and world economy.

Depending on the belonging (status), currencies are divided into national, foreign and international (regional) ones.

**National currency** is the statutory means of payment of the country: the currency notes in the form of banknotes, bills and coins or other forms that circulate and are legal means of payment in the country, as well as payment documents and other securities (stocks, bonds, coupons for them, bills of credit (transfer note), loan notes, letters of credit, checks, bank orders, certificates of deposit, savings books and other financial and banking documents), denominated in the currency of that country.

The national currency is the basis of the national monetary system.

**Foreign currency** is the currency notes of foreign countries, credit and payment instruments, denominated in foreign currency units and used in international payments.

**International (regional) currency** is an international or regional monetary unit of account, means of payment and reserves. For example, the SDR (Special Drawing Right) is an international means of payment, which is used by the IMF for noncash international payments through the records in special accounts, and the payment unit of the IMF, the Euro is a regional international payment unit of the EU's countries.

In relation to the currency reserves of the country, there are distinguished the **reserve currency**. Under the reserve currency realize the foreign currency, in which the central banks of other countries accumulate and store reserves for international payments on foreign trade transaction and foreign investment.

In relation to other currencies distinguish **strong** (hard) and **weak** (soft) currency. Hard currency is characterized by a stable exchange rate. The concept of hard currency is often used as a synonym for convertible currency.

Under the usage mode distinguish **fully convertible currency** (currencies of countries that have abolished exchange restrictions and exchange them for any other currencies), **partially convertible currency** (currencies of countries, which keep exchange restrictions to a certain range of exchange transactions) and **non-convertible currencies** (currencies of countries that fully remained exchange restrictions concerning all transaction for both non-residents and residents).

On material form, the currency can be **cash** and **cashless**.

According to the construction principle, there are **the "basket"** and **the usual type** currency. The currency basket is a method of commensurability of average weighted exchange rate of one currency in relation to a specific set of other currencies. The important aspect of the calculation of a basket of currencies is to determine its composition, size of the foreign currency component, that is, the number of the units of the currency in the set.

Currencies usually exchange not only one for another, but also in a certain ratio, which is determined by their relative value and is called the exchange rate.

"The currency exchange rate" is:

- 1) the number of units of one currency required to purchase a unit of another currency;
- 2) the market price of one currency denominated in another currency;
- 3) the aggregate price of currencies, interconnected by a tripartite arbitration.

The subject of the currency operation is the exchange of currency of one country for the currency of another country. Each national currency has a determined price, which is denominated in currency units of the another country. This price is called the currency exchange rate. Prices of currencies are published daily. Prices for fully convertible currency are determined in the foreign exchange market and based on supply and demand for it, and in countries with a partially convertible currency, its price fixed by the central bank. Thus, the currency or exchange rate has a quantitative determinacy, which is the ratio of number of exchangeable currencies. Determination of the exchange rate is called the *quotation*. There are two methods of the foreign currency quotation to the national one: direct and indirect. With *direct quotation* the rate of one unit of foreign currency is dominated in the national currency (1 USD = 5.0 UAH). With *indirect quotation* the rate of one unit of national currency is denominated in the foreign currency (1 UAH = 0.20 USD).

In performing the quotation, it is set the base currency and the quote currency. *The base currency* is the currency, with respect to which other currencies are quoted, i.e. the currency with which it is compared a specific currency unit. *The quote currency* is the currency, which is quoted to the base one, i.e. the currency, the exchange rate of which is determined. The rates of currencies are set to the base currency, i.e. how much of the quote currency corresponds to a unit of the base currency. As a rule, all currencies (except the British pound sterling and a

basket of currencies) compared to the U.S. dollar. The use of the dollar as the base currency reflects the role of the dollar as a recognized payment unit.

By the analysis of dynamics of exchange rates it is accounted the quotation method. Since the exchange rate is the price of money, then its changes mean that prices get higher and the depreciation of money take place. The national currency becomes more expensive, if the exchange rate, determined by the method of direct quotation, gets lower (was 5.4010 UAH / 1 USD, became 5.1210 UAH / 1 USD), and becomes less expensive with exchange rate increasing.

## 9.2. Why it is necessary to use the calculating types of exchange rates?

To estimate the economic growth rate it is used the several calculating types of exchange rates.

**The nominal exchange rate.** This is the rate between two currencies, that is, the relative price of two currencies (the proposal to exchange one currency for another one). For example, the nominal exchange rate of the dollar to the pound sterling equals 2.00 USD / 1 GBP.

Determination of the nominal exchange rate coincides with the general definition of the exchange rate and is set on the currency market. It is used in the foreign exchange contracts and is the simplest and the most basic definition of the exchange rate. However, it is not very suitable for long-term forecasting, because the cost of foreign and national currencies are changing at a time with the change in the overall price level in the country.

**The real exchange rate.** This is the nominal exchange rate adjusted for relative level of prices in home country and in that country, to whose currency the local currency is quoted. The real exchange rate is a comparison of purchasing power of the two currencies.

For its calculation the following formula is used:

$$S_r = S_n \frac{P^1}{P}, \quad (9.1)$$

where  $S_r$  - the real exchange rate;

$S_n$  - the nominal exchange rate;

$P^1$  - the price index of a foreign country;

$P$  - the price index of home country.

The real exchange rate is the ratio of the consumer goods basket abroad, transferred from a foreign currency into the national one with help of the nominal exchange rate (the nominal exchange rate multiplied by the price index of a foreign country) and the prices of the consumer goods basket of the same goods in home country.

The index of real exchange rate shows its change adjusted for inflation rate in both countries. If the rate of inflation in home country is higher than foreign one, then the real exchange rate will be higher than nominal one.

**The nominal effective exchange rate.** It is calculated as the ratio between the national currency and the currencies of other countries, weighted with accordance to the share of these countries in the currency operations of this country. It is represented by the formula:

$$S_n^e = \sum_i (P_n^s \times W_i), \quad (9.2)$$

where  $S_n^e$  - the nominal effective exchange rate;

$\sum_i$  - the summation sign of indicators for  $i$ -countries;

$i$  - the country, which is the trade partner;

$P_n^s = \frac{S_{n_1}}{S_{n_0}}$  - the index of the nominal exchange rate of the current year ( $S_{n_1}$ )

compared to the base year ( $S_{n_0}$ ) of each country, which is the trade partner;

$W_i = \frac{X_i + IM_i}{X_{total} + IM_{total}}$  - the share of each country in the trade turnover of the given

country with the countries that are major trading partners.

The nominal effective exchange rate shows the average movement dynamics of the national currency in relation to several currencies, and reflects changes in price levels in any of the countries.

**The real effective exchange rate.** This is the nominal effective exchange rate, adjusted for the change in the level of prices or other indicators of production costs, which shows the dynamics of the real exchange rate of the country to the currencies of countries, which are the major trade partners.

It is represented by the formula:

$$S_r^e = \sum_i (P_r^s \times W_i), \quad (9.3)$$

where  $S_r^e$  - the real effective exchange rate;

$P_r^s = \frac{S_{r_1}}{S_{r_0}}$  - the index of the real exchange rate of the current year compared to

the base year of each country, which is a trading partner.

The index  $S_r^e$  is considered to be a major indicator of the generalized dynamics of rates of major currencies and, the trends of their development are forecasted on its base.

If  $S_r^e$  of the national currency rises, exports become more expensive, its volume reduces and imports become more expensive and its volume increases, that is, the competitive position on the world market deteriorates. Therefore,  $S_r^e$  is an indicator of the country's competitiveness in the world market.

### 9.3. Why does the cross-rate and tripartite arbitrage need to be known?

Each currency has as many exchange rates, as there are currencies. Currency exchange rates, having different numerical expression, are interrelated and constitute an aggregate of prices, interconnected by the tripartite arbitration. The tripartite arbitration is an exchange operation of two currencies through a third one in order to get profits by using the difference between the exchange rate and the cross rate.

Cross rate is called the exchange rate of two currencies (A and B) through a third currency (C). Determination of the cross-rate is done by the conversion of the currency "A" into the currency "C" first, and then - the currency "C" into the currency "B":

$$(A / C) \times (C / B) = A / B \quad (9.4)$$

Arbitrageurs' actions create additional supply of one currency and the additional demand for another currencies. Competition between arbitrageurs causes that profit from arbitrage is so small that practically exchange rate and cross-rates are equal. However, the tripartite arbitration creates a mechanism that equalizes the demand and supply for currency in all currency markets. Consequently, the export always increases the value of a country's currency when it is measured in the currencies of other countries, and imports reduces the value of the currency no matter what country the export goes to and what country the import goes from.

Cross-rates are a secondary measure and is calculated through the ratio of major currencies to the dollar.

The next cross-rates are calculated most commonly: the pound sterling to the Japanese yen, the euro to the Japanese yen, the euro to the Swiss franc.

### 9.4. What are the types of exchange rates according to the degree of flexibility?

There are such major exchange rate regimes in the international practice: fixed, floating (flexible) and pegged.

**The fixed exchange rate regime** is a system in which the exchange rate is fixed, and its changes under the influence of fluctuations in supply and demand eliminated by government stabilization measures. The classic form of fixed rate is the currency system of the "gold standard", when each country sets the gold content of its currency. Exchange rates in this case are fixed ratio of the gold content of currencies.

The fixed exchange rate can be fixed in different ways:

1. Fixation of the national currency to the exchange rate of the most significant currencies of international payments.
2. Using the currencies of other countries as a legal means of payment.
3. Fixation of the national currency to the currencies of other countries, which are the main trading partners.
4. Fixation of the national currency to the collective currency units, such as SDR.

The advantages of fixed exchange rates should include the fact that when the rate is stable, it: provides companies with a sound basis for planning and price formation; limits domestic monetary policy; has positive impact on the underdeveloped financial markets and financial instruments.

Disadvantages of fixed exchange rates are as follows:

- if they are not trustable, they can succumb to speculative activities, which can further cause the rejection of a fixed exchange rates;
- there is no reliable way to determine whether the chosen rate optimal and stable;
- the fixed rate provides the readiness of the central bank to carry out the currency intervention in order to support it .

The whole system of fixed exchange rate can only solve short-term problems associated primarily with high inflation and instability of the national currency. In the long run such a currency regime unacceptable, because the differences in the growth rate of production capacity is not being adequately reflected in the changes in relative prices and the allocation of resources among different groups of goods and services, resulting in accumulated imbalances in the structure of the national economy.

In countries with market economy and a high level of income, as a rule, there are market (floating) exchange rates.

**Flexible or freely floating exchange rates** mean the regime, whereby exchange rates are determined by the untrammelled play of supply and demand. The currencies market is balanced by means of the price, i.e. rate mechanism.

Advantage of market exchange rates is that they, because of free fluctuations in the demand for the currency and its supply, are automatically adjusted in such a way that eventually unbalanced payments are eliminated; the black marketeers have no possibility to make a profit at the expense of the central bank; the central bank does not need to carry out currency interventions.

The disadvantages are the fact that markets do not always work with a perfect effectiveness, and therefore there is a risk that the exchange rate will be on the unreasonable by economic forecasts level for a long time; the uncertainty about the future exchange rate may create problems for the company in the field of planning and price forming; the freedom of an independent domestic monetary policy may be compromised (for example, if the government does not have the

means to resist the currency depreciation, it can pursue the inflation, fiscal and monetary policies).

**Compromise exchange rates** mean the regime, at which the elements of fixation and free floating of exchange rates are combined, and regulation of the foreign exchange market only partially implemented by the movements of the exchange rates by themselves. It can be:

- the support for the fixed rate by making minor changes in the economy, and in case of their insufficiency through currency devaluation and the determination of a new official fixed exchange rate;

- the regulated float of currencies, when the authorities change the exchange rate gradually until it reaches the new parity. It can be: a) "sliding peg" - daily devaluation on predesigned and declared value, and b) "crawling peg" - the drop in the exchange rate with a pre-announced intervals by a certain value, and c) a "dirty float" - the daily devaluation on not previously declared value. However, the government is taking steps to adapt to the new economic situation.

If the supply does not meet the demand for a given official exchange rate, the currency is traded illegally at the exchange rate of the black market. Offshore exchange rate refers to the unofficial price of regulated currencies, whose transactions are carried out in the offshore areas.

### **9.5. How does the demand and supply for the foreign currency appear?**

The demand for the foreign currency appears from the need to buy goods and services abroad. The demand for the currency of any country in the foreign exchange market indicates that there is a demand of foreigners for goods and services of this country. The level of demand for the currency depends on the price of the offered good. With the decline in prices of goods more buyers are willing and able to buy it.

Buyers who want to buy foreign goods, will need a currency of the selling country in exchange for local currency at the price prevailing in the market, that is at the exchange rate. The demand for currency of the seller of goods will depend on the price of foreign currency (the exchange rate). The supply of currency by the selling country appears, in its turn, due the necessity to buy the goods (i.e. the demand for the product) in the purchasing country of its products.

In market economy currency price fluctuates under the influence of supply and demand. If the exchange rate is too high, the currency supply exceeds demand, and price of the currency will decline. If the price is too low, demand will exceed supply, and the rate will increase. Due to these fluctuations it is composed the price equation of currency or the market price. The market price is the exchange rate at which the supply of currency in the foreign exchange market is equal to the demand for it.

## **9.6. Does the price depend on the exchange rate changing?**

Understanding of the exchange rates essence and types of their quotation allows you to compare the export price of the good to the price of the domestic market, and thereby find out how profitable is the sale of a particular product or service in a particular foreign market

The reduction in prices of the national currency reduces prices of national products, which are denominated in foreign currency (the goods become cheaper for foreigners). This contributes to the growth of exports, which is becoming more competitive. At the same time, the price of foreign goods, which are denominated in local currency, rises and their imports decline. The rise in the exchange rate of national currency makes domestic goods more expensive, the prices of which are expressed in foreign currency (the goods become more expensive for foreigners). Their exports decline and become less competitive. At the same time, the price of foreign goods, which are expressed in national currency, reduces and imports rise.

## **9.7. What factors are affecting the exchange rate?**

The long-term fundamental factors, determining the exchange rate movements, are the processes in the area of national production and circulation. This, above all, the relative (relative to the world level) labor productivity and, respectively, production costs, the long-term growth rates of the GNP, the place and role in world trade and the export of capital. The relatively faster productivity growth in one country (the relative increase in labor productivity) in the long run leads to higher relative purchasing power of national currencies in relation to the goods and therefore to the increase of the exchange rate of the country. This makes it possible to predict the long-term development of the exchange rates.

The higher production costs and prices in the country (less than labor productivity) compared to the world ones, the more imports rise in comparison with exports, leading to a depreciation of the currency, and vice versa. This factor is called "purchasing power parity" (PPP). Currency on world markets compared to international value of certain amount of goods and services, presented by one or another currency unit. There is a relationship of two currencies, in which a certain amount of money can be exchanged for the "market basket" of goods and services with same composition and volume in both countries in the process of the international and global economic relations. This will be the purchasing power parity, that is, a level of the exchange rate of two currencies that equalizes the purchasing power of each of them all other things being equal.

The growth of national income of the country, leading to increased demand for imported goods, generates demand for the currency of the importing country and the tendency to the depreciation of the national currency. And the rise in

exports associated with the growth of national income in the other country, generates an upward tendency of the national currency of the exporting country.

In the field of management of the factors determining the long-term trend of movement of the exchange rate, there are: the inflation, its rate compared with the rate of depreciation of major currencies. The higher rates of national inflation, other things being equal, lead to a decrease of the exchange rate of the country in relation to countries with relatively low rates of depreciation of money. In the case of inflation, the exchange rate change is purely nominal, and is opposed to the real exchange rate in the case of the relative change in labor productivity. If in the first case it is possible to influence the exchange rate towards its improvement by using monetary policy (the reduction of emission of money, the increase of lending rates, etc.), then in the second case - by means, directed on the increase of labor productivity to a level that ensures competitiveness in the world market.

One of the factors that determines the exchange rate movements, is the relative level of real interest rates, that is, the nominal interest rate adjusted for the inflation rate. The relative level of real interest rates regulates the flow of capital between countries. The increase in interest rates makes the country attractive for investment funds, thereby increasing the supply of foreign currency and the demand for the national currency. Low interest rates limit or cause the capital outflows, in consequences of which the demand for foreign currency increases. Accordingly, the exchange rate has the same behavior. In the first case, it has a tendency to increase, and in the second - to decrease. Thus, a stronger inflation and lower real interest rates lead to a depreciation of the currency.

The balance of payments of the country also affects the exchange rate. Generally, the passive balance worsens the situation in the world market of a particular currency, as the demand for foreign currency exceeds its offer, and the active balance - improves, as the supply of foreign currency exceeds the demand for it.

Short-term fluctuations in exchange rates depend on the psychological factor - market "expectations" of participants of the foreign exchange market (guesses of bankers and dealers concerning the prospects of the dynamics of the rate of a particular currency, currencies interventions, etc.), generating all kinds of speculation in the currency markets, including speculative capital flows. Expectation of a further decrease (increase) of the exchange rate creates longing to get free (or buy) from this currency, which leads to an even greater decrease (increase) of the exchange rate.

Currency intervention, that is the intervention of central banks and treasuries into the currency operations, conducted to both improve and reduce the exchange rate of their country or foreign currency. If it is set the objective to increase the exchange rate of the national currency, the banks and the treasuries recourse to massive sales of foreign currency and purchase of the national currency. If the country is interested in reducing the rate of its currency, the opposite process happens - massive buying of the foreign currency and selling of the national

currency. The currency intervention can only temporarily affect the movement of exchange rates. The extent of its effectiveness depends on the amount of finance of ad hoc currency funds.

The decline in the national currency promotes the dumping of goods. However, currency dumping brings additional revenue only when the external depreciation of currency, i.e. reduction of its exchange rate, is ahead of internal depreciation, i.e. decline in the purchasing power of money in the country. Only in this case, the product selling for the same (or lower) price in a foreign currency, the exporter swaps this currency to more of his own national currency as a result of the drop of the latest one. This allows him to buy more domestic equipment, raw materials and labor for the production expansion.

### 9.8. How is the exchange rate forecasted?

The forecasting of the exchange rate is performed by banks, firms and TNCs. The aim of forecasting is to improve the insurance of exchange risks and to make solutions more effective in the field of international financial management. Forecasting enables to make the correct choice of the currency of price and the currency of payment in foreign trade contracts; currencies of both international credit and payment; the currency in which the account of corporations is maintained in the bank; the currency in which the foreign investments of companies are denominated or the foreign assets of the bank.

The band of forecasts is used by foreign exchange dealers, brokers, i.e. the professional currency speculators, playing on the difference in the exchange rates.

Forecasts on tendencies of the exchange rate changes, first of all, should be built on the basis PPP, which links the price in the national currency with exchange rates. There are theories of absolute and relative purchasing power parity.

*In theory of the absolute purchasing power parity* states that the exchange rate between the currencies of the two countries is the ratio of price levels in these countries:

$$R_{d/f} = \frac{P_d}{P_f}, \quad (9.5)$$

where  $R_{d/f}$  - the exchange rate;

$P_d$  - the domestic price level (the price of the customer goods basket in their country)

$P_f$  - the price level abroad (the price of customer goods basket in a foreign country).

The *theory of relative purchasing power parity* states that the exchange rate between the currencies of the two countries is in proportion to the relative change in price levels in these countries, i.e. the inflation is taken into account.

$$R_{d/f}^1 = R_{d/f}^0 \times \frac{P_d^1 / P_d^0}{P_f^1 / P_f^0}, \quad (9.6)$$

where  $R_{d/f}^0$  and  $R_{d/f}^1$  - exchange rate in the base and the current year;

$P_d^0$  and  $P_d^1$  - the level of domestic prices in the base and the current year;

$P_f^0$  and  $P_f^1$  - the price level abroad in the base and in the current year.

Another way to determine the exchange rate on the basis of the theory of relative purchasing power parity is a comparison of the rates of inflation domestically ( $i_d$ ) and abroad ( $i_f$ ) with the change of the exchange rate of national currency:

$$i_d - i_f = \frac{R^1 - R^0}{R^0} \quad (9.7)$$

.In other words, the expected changes in the exchange rate due to changes in interest rates depend on the forces that influence the interest rates themselves. First of all, it concerns the inflation.

The relationship between interest rates and inflation was proved by the American economist Irving Fisher.

According to his theory, the increase in the inflation level leads to a proportional increase in the level of interest rates and vice versa. This pattern is called "Fisher effect".

"Fisher effect" sets the ratio between the nominal interest rate ( $p$ ), the real interest rate ( $P$ ) and inflation ( $i$ ) in the country:

$$(1 + p) = (1 + P) \cdot (1 + i) \quad (9.8)$$

For two or more countries apply a *generalized Fisher effect*: the difference between the rate of inflation in the countries being compared equals to the difference of their nominal interest rates, that is:

$$i_d - i_f = p_d - p_f \quad (9.9)$$

The transition from interest rates to the exchange rates explains the "*International Fisher Effect*," which shows that the expected percentage change in the exchange rate is a function of the different interest rates in two countries.

The international Fisher Effect is expressed by the following equation:

$$\frac{R^1}{R^0} = \frac{1 + p_d}{1 + p_f}, \quad (9.10)$$

where,  $P_d$  - the interest rate on the national currency;

$P_f$  - the interest rate on the foreign currency;

$\frac{R^1}{R^0}$  - the percentage change in the exchange spot rate.

The Fisher's theory shows a direct relationship between the nominal interest rate, inflation and the exchange rate [12, p. 27, 64, p. 113]:

$$p_d - p_f = i_d - i_f = \frac{R^1 - R^0}{R^0}. \quad (9.11)$$

When the inflation rate in the country is higher than abroad, it forces local banks to fix higher interest rates in comparison with foreign ones, because they contain inflation expectations. This leads to a depreciation of the national currency.

As it is known, the nominal interest rate is the sum of the real interest rate and expected inflation rate ( $p = P + i$ ).

From this formula it follows that the level of nominal interest rates can affect both the change in the inflation rate and the change in the real interest rate. The exchange rate of the national currency will increase or decrease depending on which component of the formula ( $P$  or  $i$ ) has an impact on the change in the nominal interest rate. If the increase in the nominal interest rate is explained by the growth of the real interest rate, it will lead to the increase in the rate of the national currency, and if it is affected by the inflation rate, this will also cause the drop in the rate of the national currency.

Forecasting of the exchange rate contributes to the analysis of the balance of payments.

Forecasting of changes in exchange rates on the basis of the balance of payments is based on the forecast of revenue and spending changes in reserves of the foreign currency, the detection of the discrepancy between forecast income and expenses.

International trade affect the exchange rate through the relationship of imports and exports. Imports of goods and services generates the supply of currency of that country, and exports out of the country leads to a demand for the currency of the country in the monetary exchange market. The increase in imports leads to the drop in the exchange rate, the reduction of import - to its growth.

Forecasting of the exchange rate changes can be based on any factors affecting the increase or decrease in imports to the country: the phase of the business cycle, taxes, tariffs, import quotas, the regulation on the part of government, etc.

Key factors, influencing the changes in exchange rates, are also factors of confidence in the reliability of the currency, the amount of spread by which the market rate exceeds the official rate and the number of technical factors, such as the publication of national statistics, seasonal demand for currency, the currency strengthening after its prolonged weakening and vice versa.

## Chapter 10. Currency relations and the balance of payments

### 10.1. What is the essence of currency relations and exchange rate policy?

There is a necessity to exchange the money of one country for the money of another country due to the international payments for world economic turnover and the credit, foreign direct investment and other international relations. On this basis there are currency relations as a set of monetary relations, mediating the payment transactions between agents (entities) of the global economy. Participants of these relationship are banks, financial institutions, departments of large companies and brokers. The currency relations is an essential element of modern market relations, that's why they are adjustable by such factors as profit maximization and competition (supply and demand).

The place of currency relations in the world economic system is determined by the fact that they mediate the relationship of international trade, the international movement of factors of production, acting, on the one hand, upon these relations, on the other hand being under their influence. Speaking about the final causes of processes occurring in the currency sphere (mainly exchange rate movements), they are determined by processes in the sphere of production, and are developed under the influence of changes in the ratio of economic forces between countries or groups of countries.

**The exchange rate policy** is an important instrument for the expanding of world economic relations and is a combination of economic, legal and organizational measures and forms that are used by the government, central bank and financial institutions, international monetary and credit institutions in the field of the currency relations.

The exchange rate policy is determined by the currency legislation, which includes a set of legal rules on the regulation of the procedure for operations with currency values in the country and abroad, as well as exchange-control agreements between states on monetary problems (bilateral and multilateral).

The main element of exchange rate policy is the exchange regulation. **The exchange regulation** is the state regulation regime of currency transactions, international payments, and the definition of common principles of exchange control regulations, the powers of government bodies and functions of banks and other financial institutions in the regulation of currency transactions, the rights and duties of entities of currency transactions, the procedure for the exchange regulation, the responsibility for currency offenses.

The exchange regulation is carried out on the interstate, regional and national levels.

The necessity of the exchange regulation on the interstate and regional levels is caused by the processes of integration and transnationalization, the development of international economic relations, the emergence of world economic division of labor. Interstate and regional exchange regulations are

focused on coordinating monetary and fiscal policies of individual countries and economic integration organizations; on the development of common measures to overcome the currency crisis; on the development of common approaches to monetary policy. Such coordinated foreign exchange regulations helps to reduce the degree of autonomy of national economic policies and to increase interdependence of the different currency areas of national economies.

The exchange regulation on the national level takes into account the requirements of the IMF and the regional associations, which include the particular states. Its strategy and tactics is fixed in the legal and regulatory methodical documents.

The national system of exchange regulation, in general, determines the entities of exchange regulation, the procedure for operations with currency values, the status of the currency and the exchange rate, the powers of the government and functions of the banking system in the sphere of the exchange regulation and exchange control.

The exchange rate policy, depending on its objectives and forms, are divided into current and long-term policy.

**The current exchange rate policy** is a set of short-term measures aimed at daily operational control of the exchange rates, currency transactions, foreign exchange market activity by instrumentality of interest rate policy and the policy of foreign exchange market intervention. The purpose of the current exchange rate policy is to ensure the normal functioning of international and national mechanisms for the global currency system, as well as the balance of payments equilibrium.

**Long-term (structural) exchange rate policy** provides long-term structural measures based on the serial changes in the exchange mechanism. In order to implement it, interstate negotiations and agreements, particularly within the IMF and on the regional level take place. The currency reforms, including measures directed to the change of the key elements of the monetary system, such as the order of international payments, the exchange rate regime and the par of exchange, the usage of gold and reserve currencies, international means of payments, functional tasks of international and regional monetary and financial institutions, are used too.

The main forms of exchange rate policy are the interest rate policy and the policy of foreign exchange market intervention.

**The interest rate policy** is a system of economic, legal and institutional measures directed on the use of the interest rate of return for investments traffic control and balancing payment obligations, oriented exchange-rate adjustments.

**The policy of foreign exchange market intervention** is a system of regulation of the exchange rate by buying and selling foreign currency by government agencies. Its varieties are currency intervention, currency restrictions, diversification of foreign exchange reserves, regulation degree of currency convertibility, the exchange rate regime, devaluation and revaluation.

## 10.2. What are the essentials of international payments?

The main form of currency relations is international payments, which are based on international economic transactions and are summarized in the balances of payments of all countries. International payments are:

a) commercial payments on monetary claims and liabilities arising between companies, banks, institutions and individuals from different countries, which are involved in international trade, international loans and foreign direct investment;

b) non-profit payments related to the transfer of passengers, insurance, tourism, transfer money abroad, etc.

A lot of factors have influence fully on the condition of the payments:

- economic and political relations between the countries;
- the position of the country in the commodity and monetary markets;
- the extent of use and the effectiveness of government interventions on the foreign economic regulations;

- international trade rules and customs;
- the regulation of interstate trade, service and capital flows;
- differences in inflation rates across countries;
- the balance of payments position;
- banking practices;
- the conditions of foreign trade contracts and loan agreements;
- currency convertibility, etc.

Features of international payments are following:

1. Importers and exporters and their banks take certain relations, which are isolated from the foreign economic contract relation, and are related to the shipment, handling of title and payment documents, with the conduction of the payment. The scope of obligations and division of responsibilities between them depend on the form of the payment.

2. International payments are governed by national regulations and legislation, international banking rules and practices.

3. International payments are the subject of unification. This is due to the process of internationalization of economic relations, the universalization of banking operations. For example, the unification of the legislation of the bill, the Uniform customs for documentary credits and collection of payments, Uniform customs for contractual guarantees.

4. International payments are generally documentary, it means that they are carried out in response to the financial and commercial documents.

5. International payments are carried out in different currencies, therefore, first of all, their efficiency is influenced by the dynamics of exchange rates; second of all, the normal functioning of the international commodity-money relations is possible only with the free exchange of the national currency to other countries. In other words, the most effective participation of a country in the

international trade payments is possible only on the basis of convertible currency. In modern practice, the payments between banks in different countries on debt claims and liabilities are mostly conducted in fully convertible currency. In countries with a partially converted currency state uses exchange restrictions, which directly affect the foreign trade payments.

International payments may be bilateral, when they are carried out between two countries, or multilateral, when the sum of money received from the sale of goods in one country are used to make payments to third countries.

The overwhelming majority of international payments is carried out as non-cash payments through banks of various countries that support mutual correspondent relations, it means that they open up accounts for each other, keep cash in the relevant currency and perform billing and other tasks on the principle of reciprocity. The procedure is following: the bank in the importer's country withdraws the payment amount from the account of his client and transfer it (or its equivalent in foreign currency) to the account of a foreign correspondent bank, and bank in the country of exporter withdraws that amount from the account of the correspondent and place it on the account of his client, who exported the goods.

Cash payments on international payments are mainly conducted due to travel abroad by delegations, tourists or individuals, who exchange currency in the banks of the country to the relevant foreign currency.

International payments on capital movements are connected with the functioning of financial markets, with the movement of the securities in the form of both direct and portfolio investment.

The main forms of international payments in international trade are a commercial letter of credit and the acceptance of the documents submitted to the bank for the collection of payments.

**The letter of credit** is the payment or financial document, which is the order of one credit institution to another, to carry out, due to the specifically reserved funds, the payment of all documents related to the delivery for shipped goods or to pay a certain sum of money to the bearer of the letter of credit. The letter of credit assures the exporter that the bank will pay the transported goods. It also assures the importer that payment to exporter will not be made without checking that all the documentation meets the terms and conditions of the letter of credit.

**The collection of payments** is a banking operation, through which the bank on behalf of the client (exporter) receives on the basis of payment documents the payment from the importer for shipped material goods or services to his address and transfer the funds to the exporter's account in the bank.

This form of payment is widely used, as is cheaper than the letter of credit.

### **10.3. What is the nature of the balance of payments?**

The balance of payments is one of the most important concepts of the international economics. Its study provides a generalized estimator of the economic situation of the country, the effectiveness of its international economic relations. Functionally, the balance of payments plays the role of the macroeconomic model that systematically reflect economic transactions which is carried out between the national economy and the economies of other countries. Such a model is established to develop and implement reasonable exchange rate and foreign economic policy; to carry out the analysis and forecasts of the commodity and financial markets, to carry out bilateral and multilateral comparisons; to do scientific researches, etc. On the basis of actual data of the balance of payments, the international financial institutions, particularly the IMF, make a decision on the providing the particular countries with financial assistance for the stabilization of the balance of payments and to deal with its deficit.

**The balance of payments** is a statistical report that in a systematic way includes a summary of data on economic transactions between residents of a given country and the residents of other countries (non-residents) for a certain period of time.

The balance of payments fulfils the following functions:

- it is a source of information, as it gives an opportunity to get an idea of the country's international relationships, structural changes of international transactions;
- the characteristics of the balance of payments has both the practical and the scientific value, as far as it allows to simulate the processes of macroeconomic development of an open economy;
- it serves as a reference point for the government, which is responsible for the economic policy, since monetary and fiscal measures as well as measures to promote competition, are often the result of the balance of payments, the result of international influence, which is fixed by the balance of payments.

### **10.4. What are the compilation principles of the balance of payments?**

The balance of payments is based on certain principles derived from its purpose, which is to consider foreign trade operations. The economic operation is considered to be a foreign one, if it is carried out between the economy of a particular country and the economies of the rest of the world. Economic transactions that take place between residents and non-residents cover the dealings, the subject of which are goods, services, incomes, external financial assets and liabilities. **Economic transactions**, by the definition of IMF, are the economic flows that reflect the transfer of real resources (transactions in goods, services and income), and the creation, liquidation of foreign financial asset or liability and / or the transfer of ownership to the existing external financial asset and liability (transactions with external financial assets and liabilities).

There are exchange and unilateral foreign economic transactions.

Most economic transactions which are recorded in the balance of payments are exchange, and presuppose that one transactor transfers the economic value to another one and receives its value equivalent. There are three types of international exchange transactions: 1) the exchange of goods and services for other goods and services (the barter transactions, because both sides of these transactions are real), and 2) the exchange of goods and services for cash or other financial claims, where one side of the transaction is real, the other one is financial, and 3) the exchange of financial instruments for other financial instruments, in other words both of sides are financial transactions.

The transactions whereby one side of an agreement provides economic value to another side without the return of value equivalent are called unilateral. This absence of value on one side is represented by an entry referred to as a *transfer* - is made as the required of offsets. Transfers act usually in the form of cash or goods. A particular foreign transaction is recorded in the balance of payments depending on which of these species it belongs to.

Defining the subject of the foreign economic transaction is based on such a concept as "*economic territory of the country*" that is identical to the concept "economy". Economic territory, by IMF definition, is a geographic territory administered by a government; within this geographic territory, persons, goods, and capital circulate freely. However, this territory does not always coincide with the geographical boundary of the state, because its boundaries include the territorial enclaves outside the main border: embassies; consulates; military bases; scientific stations; information, immigration or aid agencies, located in other states and used by governments that own or rent them.

The concept of economic territory plays a significant role in determining the first principle of the balance of payments, namely *the residence principle*. The concept of residence in the system of the balance of payments is not based on the criteria of national identity or the legal criteria for the determination of residents of a particular state.

The economic entity ( the economic unit), the center of economic interest of which is in the economic territory of the country, is a resident of that country. The economic entity has a center of economic interest in a country, if it has already engaged in economic activities and transactions on a significant scale in the country for one year or more, or if the unit intends to do so. The establishment of resident units is crucial in terms of registration and classification of transactions within a particular economy. Position of working one as a resident and non-resident defines different entries in the balance of payments.

According to the classification of the IMF, to the residents of the economy include the following business units:

- households and individuals who make up a household;
- legal and social entities (companies of different legal forms);
- non-profit institutions;

- the public authorities of that country.

The second principle of the balance of payments is *the principle of double entry*. Since the balance of payments is based on the principles of accounting, each recorded transaction must be represented by two entries with equal values: a credit entry and a debit entry. A credit entry has a positive arithmetic sign (+) and displays the transaction of "export type", due to which foreign currency are received or earned. A debit entry has a negative sign (-) and reflects the transaction of "import type", in which the foreign currency is spent. A credit side shows the foreign exchange earnings (its supply) and a debit side shows the spending of foreign currency (demand for it). So, according to the double-entry system the reduction of international assets of the country or the increase in its foreign liabilities are recorded on the credit side; the increase of international assets or reducing of its external obligations are recorded on the debit side. Each change on the debit side must be accompanied by a corresponding change on the credit side, and vice versa. Thus, the total debit and the total credit of the balance of payments are always equal.

The third principle of the balance of payments is *the principle of the uniform system for valuation of transactions*, recorded in the balance of payments. The essence is that market prices that are aligned with economic transactions are used for the evaluation of transactions in real recourses and financial assets and liabilities. The market prices, as defined by the IMF, are the amounts of money that willing buyers pay to acquire something from willing sellers. The exchange are made between independent parties and on the basis of commercial considerations only. The market price refers only to the price for one specific transaction. The market price is clearly distinguished from a price quoted in the market, a world market price, a going price, i.e., the price that is not a price actually applying to a specific exchange. There are some situations, when the market price in accordance with the above-mentioned criteria cannot be defined. This occurs in the case of: the barter transactions; a transaction between separate legal entity that are not independent (affiliated enterprises); goods transferred under a financial lease arrangement), etc. In these cases, the valuation of transactions is performed at the prices of similar transactions.

Compliance with the given principle ensures comparability of the balance of payments in different countries, as well as comparability of accounts of the balance of payments of the particular country.

The fourth principle of the balance of payments is *the principle of timing*. Each transaction should be reflected in the balance of payments on the credit side and on its corresponding debit side at the same time, and both parties of the transaction should record the operation under the same number, which corresponds to the date of its execution. To implement such an approach it is necessary to determine the time of transactions' recording in the balance of payments. Such a moment can be the time of conclusion of the contract or time of transference of legal ownership on the assets. If the moment of the transfer of ownership is

difficult to determine, then it is considered to be the time corresponding accounting entry in the accounting of counterparts.

During the compilation of the balance of payments, it is important to establish the monetary unit, in which it should be kept a record, that is, to define **the unit of account**. The unit of account must be stable enough, in order that the change of its course during the reference period could not reflect on the bottom line, in addition, it should be stable for the largest possible number of accounting periods to ensure comparability and analysis of their dynamics. In the preparation of the balance of payments it should be used the unit of account used by them in the internal payments and accounting. However, it is necessary to note that the balance of payments in most countries is kept in U.S. dollars.

### 10.5. What standard components does its structure consist of?

Development of the balance of payments is based on the methodology, which is regulated by international standards "Balance of Payments Manual", prepared by the IMF. It is periodically updated, revised and published. Last, the sixth edition of the Recommendations is published in 2007. Basic standard components of the balance of payments are presented in table 10.1.

Table. 10.1

#### The standard components of the balance of payments (according to the IMF)

	Credit	Debit
<b>1. Current Account</b>		
<i>A. Goods and services</i>		
1. Goods		
2. Services		
<i>B. Income</i>		
1. Compensation of employees		
2. Investment income		
<i>B. Current transfers</i>		
1. General government		
2. Other sectors		
<b>2. Capital and Financial Account</b>		
<i>A. Capital account</i>		
1. Capital transfers		
2. Acquisition / disposal of nonproduced, nonfinancial assets		
<i>B. Financial account</i>		
1. Direct investment		
1.1. Abroad		
1.2. In reporting economy		

2. Portfolio investment		
2.1. Assets		
2.2. Liabilities		
3. Other investment		
3.1. Assets		
3.2. Liabilities		
4. Reserve assets		

Division of the balance of payments on standard components (entries) is based on the following approaches:

- each item should have the distinctive characteristics. The economic factor that influence the item should be different from those that influence other items, or the items should respond differently to the same factor or combination;
- the item in both the dynamics and the absolute value should be important for a number of countries. In other words, if an item of the balance of payments varies significantly over a period of time in a group of countries, it should be highlighted as a separate item;
- it should be possible to collect statistics for the item without difficulty;
- the structure of the balance of payments should be such that its performance combine with other statistical systems, such as the System of National Accounts;
- the list of standard components should not be unduly long and the items themselves should be the subject to consolidation in the components of a higher level.

The standard components of the balance of payments are divided into two groups of accounts: the current account, which covers economic transactions on the international movement of material assets; and the capital and financial account, which covers the international operations, related to the transfer of ownership on foreign financial assets or liabilities of the country (above all, these are the transitions, the essence of which consists in both requiring and payment of financial claims of one country to other countries and vice versa).

**The current account** reflects the economic relations of the country to the outside world for a certain period of time, and also is a balance of domestic investment and savings. It includes all transactions that involve economic values and occur between resident and nonresident entities, as well as offsets to current economic values provided or acquired without a quid pro quo. There are four main components in the structure of the current account: goods, services, income and current transfers. Export transactions are recorded on the credit side, import – on the debit side. The current account includes transactions that are completed during the given period. They, being reflected in the balance of payments, have no influence on it in subsequent periods.

Let's consider in more details the main types of current operations.

**1. Goods.** Goods means a group of items of the balance of payments, which sums up the market price of conventional *general merchandise*; *goods for processing* ( export of goods crossing the border for processing abroad and subsequent re-import of the goods, which are valued on a gross basis before and after processing); *repairs on goods* (the repair activity on goods provided to or received from nonresidents on ships, aircraft, etc.), *goods procured in ports by carriers* (covers all goods such as fuel, food, stores, supplies); *nonmonetary gold* (exports and imports of all gold not held as reserve assets by the authority).

**2. Services.** This is a group of items of the balance of payments, reflecting the different types of services provided by residents to non-residents and vice versa. It includes:

- transportation;
- travels (value of all goods and services purchased by visiting);
- communications services;
- construction services;
- insurance services;
- financial services;
- other business services.

**3. Income.** This group of items includes payments between residents and nonresidents, and is connected with both the payment for work of nonresidents and income from investment.

Payment for work includes wages and other benefits received by workers and employees, outside of the country of which they are residents, and performs for residents of other countries.

Investment income consists of:

- direct investment income (from the equity share of the company, dept dividends);
- portfolio investment income;
- other investments income.

**4. Current transfers.** This item reflects the operation of interstate transmission of material resources and does not involve a quid pro quo in economic value (when country receives no value equivalent in exchange). Depending on the direction, transfers are only to be recorded either on the credit side or on the debit side

**The capital and financial account** records the movement of capital, which is funded by the export and import of goods and services. It is divided into the capital account and the financial account.

**The capital account** includes capital transfers and acquisition/disposal of nonproduced, nonfinancial assets.

*Capital transfers* consist of those involving transfers of ownership of fixed assets; transfers of funds linked to, or conditional upon, acquisition or disposal of

fixed assets; or cancellation, without any counterparts being received in return, of liabilities by creditors.

*Acquisition/disposal of nonproduced, nonfinancial assets* cover tangible assets that may be used or necessary for production of goods and services but are not actually produced (e.g., land and subsoil assets) and transactions associated with nonproduced, intangible assets (e.g., patents, copyrights, trademarks, franchises, etc. and leases or other transferable contracts).

**The financial account** shows all transactions in the result of which is happened the transfer of ownership on external financial assets and claims of the country (it means the creation and payment of financial obligations between residents and nonresidents).

The financial account is divided into two groups of classification-transactions in financial assets (assets) and financial obligations (liabilities). Both groups were further divided into three functional categories: direct, portfolio and other investments.

The most important part of the financial account is a *reserve assets*, which include the external assets of the country under the control of monetary authorities and can be used for direct financing of the balance of payments deficits or for intervention in the foreign exchange market to support the national currency at any time.

Reserve assets include:

- monetary gold, which is at the disposal of the central bank or the government of the country and can be implemented in the global gold markets or international organizations in foreign currency;
- special drawing rights (SDRs), which are the reserve asset issued by the IMF and allocated among the member states in accordance with their quotas. It is used for the purchase of foreign currency, credit extension and effecting of payments;
- the reserve position in the IMF that is an amount of the country's reserve share in the IMF's capital (25% of quota of the country in the capital of the Fund);
- foreign exchange assets, which consist of foreign currency, bank deposits, government securities, shares in companies, financial derivatives. Foreign exchange assets in the structure of reserve assets have the highest proportion;
- other claims, including the claims of the remainder in foreign currency.

Foreign exchange reserves determine the extent of the financial solvency of the country in relation to other countries.

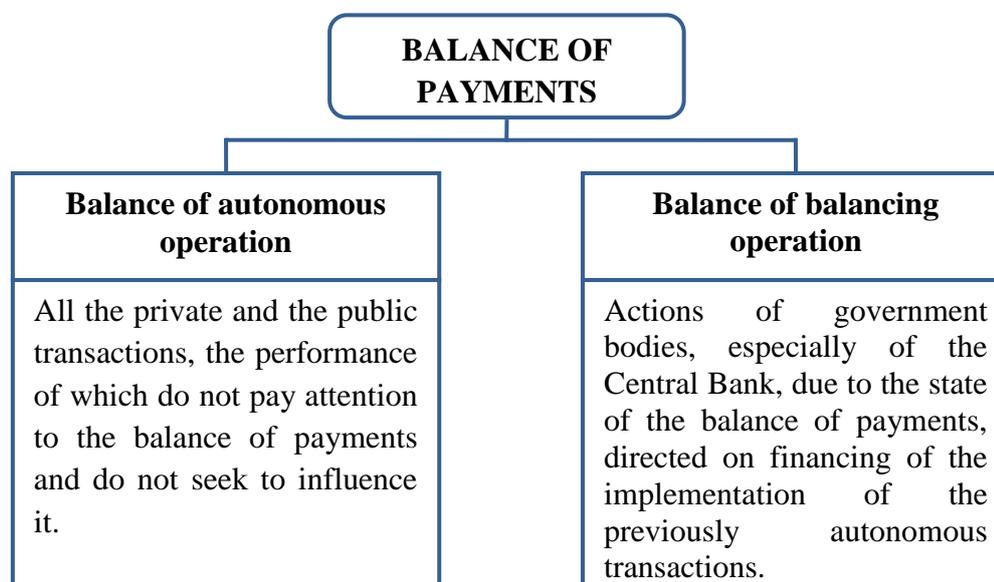
Since the balance of payments is a financial report of double-entry system, the debit of all structural parts of the balance must precisely meet the credit. However, in practice because of incorrect recording or not recording certain transactions such correspondence is rare. To achieve balance and to maintain a double-entry system the item "net errors and omissions" is used. This item is

balanced and represents the difference between the sum of all credit entries and the sum of all debit entries that reflect the time and cost differences.

### 10.6. How are the balance of payments' items compensated?

The principle of composition of the balance of payments, when debit equals credit, often does not satisfy economists. They need the aggregated groups of operations balance in the total balance to develop specific measures. Therefore, the balance of payments could be made not only in the neutral form (in accordance with standard components), but also analytically. The balance of payments surplus is the main index, which is used for analysis.

We can use such terms as the "active (surplus)" or the "passive (deficit)" balance of payments in order to analyze it. The method of determining the deficit or surplus was proposed by the International Monetary Fund on the basis of the division of its articles into the autonomous (main or "article above the line"), and the balancing (offsetting or "article below the line") (Figure 10.1.).



**Figure 10.1. Two main parts of the balance of payments**

Thus, criterion for their motivation is a main one on which distribution of transactions is based. The balance of autonomous articles is called "the net balance of payments". The balance of payments is divided in active or passive, depending on positive or negative meaning of its value. Balancing items are used to cover the balance of payments. So, the concept of the net balance of payments does not apply to the entire balance of payments, but to its components, in other words to the balance sheet of total specific set of transactions.

There are following analytical groups of the balance of payments, which result in the following balances:

- the trade balance;
- the service trade balance;

- the current account balance;
- the basic balance;
- the overall balance or the balance of official payments.

**The trade balance** derived by computing the net exports (imports) in the merchandise accounts. It characterizes the relationship between the state's imports and exports. A positive balance is known as a **trade surplus** if export's value is more than import's one; a negative balance is called a **trade deficit** or, informally, a trade gap.

In the most general form, the assets and liabilities of the trade balance are connected with increased or decreased demand for products of the country in the global market, e.g. with the economic situation in the world market. The excess of exports over imports shows that increasing global demand for commodities of the country, and buyers within the country prefer to national goods, indicating a good state of its economy. On the contrary, the deficit (negative balance) indicates the lack of competitiveness of the country on the world market and the preference of imports within the country.

However, the trade balance may impact other factors such as a favorable investment climate, which can cause a flow of investment into the country. It could be the reason of the increasing of purchasing of equipment abroad, which could lead to a trade deficit. In this case, the trade deficit is accompanied by economic growth. The trade deficit could be covered by the following points: the revenues from license sales, tourism and remittances of foreign workers.

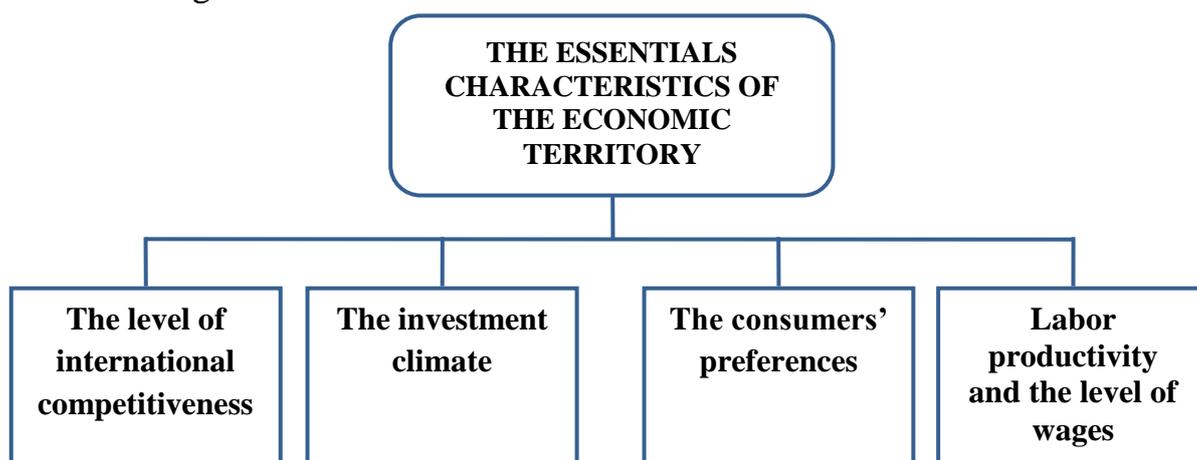
**The service trade balance** is the movement of services and non-commercial payments, which are classified as "invisible" exports and imports. Their comparative forms are the balance of the "invisible" transactions.

**The current account balance** is the most informative one. It reflects all the flows of assets associated with the movement of goods, services, investment income and current transfers. The balance on current account balance provides a link between the international transactions of the country and its national income. Surplus on the current account means that the country is a net investor in relation with the other countries. The negative balance indicates that the country is a net debtor, as it should pay for the net imports of goods.

Balance-of-payments deficit on current account is mainly covered by capital inflows. Conversely, the balance-of-payments surplus on current account is used to buy real estate or securities in other countries.

The balance on current account and the balance of the capital and financial instruments, except the short-term capital and the reserve assets, are basic balances. Basic balance surplus is defined as the sum of the surplus of the balance sheets. Balance can be either negative or positive. Negative balance often leads to a depreciation of the currency and reduction of reserve assets. All the transactions of the balance on current account and the balance of operations with long-term capital are autonomous (main) and are reflected in the respective autonomous articles. The

basic balance reflects the essential characteristics of the economic territory, represented in figure below.



**Figure 10.2. The Essential Characteristics of the Economic Territory**

Operations with reserve assets are the balancing ones and form the balance of official settlements. The overall balance on the current account and capital movement is balanced at the expense of reserve assets (compensating articles) or foreign loans. If the payments of the country (debit transactions) are not covered by the proceeds of foreign currency (credit transactions), then the a negative balance shows the deficit of the balance-of-payments of the country. This deficit must be compensated by equal credit balance in the balance of official reserves. The amount of deficit 'coverage by the reserves shows a decrease of foreign exchange reserves of the country. The balance-of-payments surplus (total credit exceeds the total debit) must be compensated by equal debit balance of official reserves.

The balance of payments is in equilibrium when the national economy is well suited to the global economy. The equilibrium means stable relationship between such economic indicators as demand, supply, the price of the certain good. Despite the fact that balance of payments is a balance sheet, but it is not always in a state of equilibrium. In case of disequilibrium of the balance-of-payments, the price level, the level of income, exchange rates and other macroeconomic indicators change to restore a stable relationship with the rest of the world. Thus, the equilibrium concept of the balance of payments is the concept of alignment of the market.

The data of the balance on current account, the basic balance and the balance of official settlements is the basis one for the analysis of the equilibrium of the balance of payments.

Major economic factors affecting the balance of payments are: inflation, real GDP growth, the interest rates and the “spot” exchange rate [6, p.417].

Comparative increasing of the price level in the country affects the competitiveness of its products and services. Goods and services produced within the country, may be expensive for buyers abroad. This results in the reduction of

exports. However, the imports increased due to higher prices for domestic goods. This means the decreasing of the inflow and the increasing of the outflow of currency.

High rates of GDP also lead to the increasing of imports of goods and services. This is because the high GDP growth tends to raise the income level in the country, some of which will be spent on imports. At low rate of GDP growth has been declining imports of goods and services.

Levels of interest rates affect the capital movement. Rising of the interest rates causes capital inflows, falling - the capital outflow.

The exchange rate affects both the relative cost of foreign goods relatively to the cost of national products, and the relative value of exported domestic goods relatively to the cost of goods from other countries. Under floating exchange rates high current rate "spot" of foreign currency impedes the import operations and has a positive impact on export operation. The low exchange rate of foreign currencies facilitates imports and hinders exports.

The balance of payments cannot be constantly in a state of disequilibrium and, therefore, is the subject of state regulation. In the short term, the country can compensate for the lack of balance of payments at the expense of official reserve assets, and if they are not enough - by attracting short-term capital into the country. If it is not possible to overcome the deficit of the balance of payments by using of external financial sources, the government may take measures aimed at promoting exports, reducing imports, attracting capital into the country and limiting the outflow of capital [6, p.418]. These measures include:

- carrying out of the deflationary policy, the goal of which is to reduce domestic demand by fiscal restraint, mainly to civil needs, the freezing of wages and prices;
- devaluation of the national currency;
- the introduction of exchange controls and restrictions on foreign exchange transactions;
- financial and monetary policy (budgetary export subsidies to exporters, raising of the import duties, the abolition of the tax on interest paid to foreign holders of securities for capital inflow into the country, etc.). Government uses a variety of financial, credit, foreign exchange, including currency appreciation, measures to promote the growth of imports and reduce exports of goods and services, increase exports and restrict imports of capital to eliminate the excessive balance of payments surplus.

The government cannot always settle the balance of payments, resulting in delay of payments and terminates of funding. There is the balance of payments crisis. In this case, the country may resort to *exceptional financing*, which means the transactions carried by countries, experiencing difficulties with the financing balance of payments deficits, in coordination and support of its international partners in order to reduce the balance of payments deficit to a level that can be financed by traditional means [6, p.418]. The main exceptional

financing transactions include debt cancellation, exchange of interestedness for shares, borrowings for balance of payments regulation, debt restructuring, delay of payments on interestedness.

### **10.7. What is the national currency's convertibility?**

Convertibility or exchangeability of the national currency is an opportunity for the participants of foreign economic transactions freely and without restrictions to exchange it for foreign currencies for the performance of all types of international transactions.

The degree of currency convertibility is inversely proportional to the volume and rigidity of practiced foreign exchange restrictions in the country. On this basis, the currency may be fully convertible, partially convertible and non-convertible.

The exchange restrictions are any actions of the official instances which lead to a narrowing of opportunities, increase costs or cause undue delays in the implementation of foreign exchange and international payments. The main principles of foreign exchange restrictions are:

- centralization of foreign exchange transactions in the central and authorized banks;
- licensing of foreign exchange transactions;
- full or partial blocking of foreign currency accounts;
- limited convertibility of currencies.

The degree of currency convertibility depends on the scope of exchange restrictions: on the current account of the balance of payments or on capital transactions.

**Current account convertibility** is the absence of restrictions on international transactions related to trade in goods, services, income and transfers transferring. The following forms of currency restrictions are used on the current account of the balance of payments: the blocking of foreign exporters' income from the sale of goods in the country, the limiting of their abilities to dispose of these funds, surrender of foreign exchange proceeds of exporters to the central banks and authorized banks, limited sale of foreign currency to importers, restrictions on forward purchases of foreign currency by importers, the prohibition of the sale of goods abroad in the national currency, the prohibition of any import of certain goods in foreign currency; regulation of the terms of payment for exports and imports, etc.

**Capital account convertibility** is the absence of restrictions on international transactions which are associated with the movement of foreign direct and portfolio investments, capital grants. In the case of the passive balance of payments, foreign exchange restrictions are used that limit the outflow of capital and stimulates the inflow of capital in order to support the exchange rate. It is the limiting of export of local and foreign currency, gold, securities, loans, supervision

of credit and financial markets; limiting of the participation of national banks in the provision of international credits in foreign currency; compulsory withdrawal of foreign securities, which belong to the residents and their sale to currency; total or partial cessation of external debt payment or settlement of its national currency without the right to transfer abroad, etc.

When the balance of payments is active, in order to deter capital inflows into the country and to improve the exchange rate of national currency, it can be used the depositing on non-interest bearing account with the central bank of new foreign banks' liabilities; the prohibition on investments of non-residents and the sale of national security to foreigners; mandatory conversion of foreign currency loans in the national central bank; the prohibition on the payment of interest on time deposits of foreigners in the national currency; the introduction of negative interest rates on deposits of non-residents in domestic currency (interest is paid by the depositor of banks or by the bank, which is interested in attraction of foreign currency deposits and pay by itself to the state monetary institutions); the limit on the import of currency into the country, limits on forward sales of foreign currency [6, p. 421].

**Currency exchangeability** is not a purely technical category of the possibility of its exchange. In essence, it is a special bond character between the national and world economies, the deep integration of the first into the last one. The exchangeability of the national currency gives the country long-term benefits of participation in the multilateral system of global trade and investment, as follows:

- free choice of producers and consumers of the most profitable markets and procurement within the country and abroad at any given time;
- empowerment to attract foreign investment and to invest abroad;
- stimulating impact of foreign competition on efficiency, flexibility and adaptability to changing business conditions;
- tightening of domestic production to international standards on prices, costs, and quality;
- possibility of international payments in national currency;
- specialization for relative advantage, efficient and economical use of material, financial and human resources at the level of the economy as a whole.

Convertibility of the currency in terms of the relationship to the currency by residents and non-residents may be internal or external. When there is the internal convertibility, the residents have the right to buy and carry out transactions in the country with a currency, bank deposits, which are denominated in foreign currencies. Internal convertibility covers current and capital transactions. It exists in all developed countries. Foreign currency can be a means of payment, if buyer and seller want this. When there is external convertibility, residents have the right to deal in foreign currency with non-residents.

## **Chapter 11. The evolution of the world monetary system**

The world monetary system is a functional form of the organization of international currency relations, that is a set of methods, instruments and bodies (institutions), due to which cash payments are made within the global economy. Its main elements are: national reserve and supranational (collective) currency unit (SDR, the euro); the conditions of mutual convertibility of currencies; unified regime of exchange rate parities; regulation of exchange rate regimes; interstate regulation of foreign exchange restrictions; harmonization of international payments; the regime of the global foreign-exchange market and gold markets; interstate regional and supranational bodies involved in the management of monetary and financial relations.

The evolution of the world monetary system is defined by the development and the needs of both national and global economy, changes in the world economy and the periodic emergence of currency crises as well. The currency crisis is an explosion of monetary antagonism, disruption of the functioning of the world monetary system, which results in non-compliance of the principles of structural organization of the world exchange mechanism with the new conditions of production and world trade. Currency crises is accompanied by: the violation of the stability of the exchange rate; the redistribution of international reserves; exchange restrictions; the deterioration of the international currency liquidity.

The development of the global monetary system had a few stages, which took relatively long historical periods. There was the difference between one or another world monetary system. The essence of the difference depends on a reserve asset, which provided the balance-of-payments equilibrium (in different periods it was gold, the dollar, which was convertible into gold at a fixed rate, a currency fulfilling the function of international means of payment) [7, p. 84].

### **11.1. What are the features of the gold standard and the gold exchange standard?**

The first world monetary system was the **Paris monetary system**. It was legalized by international agreement at a conference in Paris in 1867. The base of the monetary system was a gold-coin (gold) standard: gold was recognized as the only form of world money. According to the gold content of currencies, their gold parities were established (ratio of currency units of different countries on their gold content). In other words, according to the system of “gold standard”, all national currencies had the fixed content of gold. For example, from 1821 one pound sterling had a gold content equal to 7.322385 grams of gold, 1 Deutschemark - 0.385422 grams of gold (from 1873). The exchange rate was determined by the ratio of the gold content of currencies. In this case, it was 1:20,3.

The gold standard was the system of hard currency, as it was based on the direct connection with gold. According to this system:

- currencies are freely convertible into gold;
- gold bullion freely exchanged for coins;
- gold freely exported, imported and sold in the international markets, that is gold markets and currency markets were interdependent;
- all countries maintained strict correlation between their gold reserves and the amount of money in circulation.

It was the regime of freely floating exchange rates between gold points (gold points were equivalent to the parity of the national currency with the addition or subtraction of transport and insurance costs due to the material transfer of gold). Currency control authorities pursued a policy of regulation which ensures stability of the currency and the balance-of-payments equilibrium.

International transactions of gold-coin standard were carried out mainly by using a bill of exchange which is issued in the national currency, mostly in the English one. Gold was used only for the payment of the passive balance of payments of the country. At the end of 19th century, the part of gold in the money supply significantly decreased and credit money of exchange gradually force the gold out of circulation. At the beginning of World War I, the gold standard collapsed because of the impossibility to respond to expanded scopes of both economic relations and conditions of regulating of the market economy.

In 1922, the second world currency system (the **Genoese monetary system**) was legally formalized due to the interstate agreement at the Genoa conference. It was based on a gold-exchange standard, which was based on gold and on the leading currencies convertible into gold. There are following characteristics of the Genoese monetary system:

- gold and exchange instruments (paper exchange) were in the basis of the system. The monetary systems of 30 countries were based on the gold-exchange standard. As an international payment and reserve funds were used national credit money. None of currency had no the status of reserve currency in the inter-war period;
- gold parities were saved. Currency conversion into gold was carried out through foreign currency;
- freely fluctuating of exchange rates;
- the exchange regulation was in the form of international conferences and meetings.

From 1922 to 1928 the relative exchange rate stabilization was observed in the world, but it has been undermined by the global economic crisis of 1929 - 1933. Due to the crisis the gold-exchange standard has collapsed. The exchange rate of several currencies decreased by 50 - 84%, the accumulation of gold by individuals increased, external payments stopped, a lot of "hot" money, which spontaneously move from one country to another in order to obtain profits, were formed. It caused the currency war, where the currency intervention, the currency dumping, currency restrictions and currency blocks were used.

There were a new economic crisis and a mass devaluation of currencies in 1937. There was none of a stable currency before the Second World War.

## **11.2. What is the essence of the Bretton Woods Monetary System?**

Development of new, more efficient international monetary system began in April 1943. At the international conference in Bretton Woods in 1944, leading Western countries agreed on the main principles of the Bretton-Woods monetary system. The International Monetary Fund (IMF) was established, the "duty" of which is to ensure the proper functioning of the system and compliance with the principles of the general international agreement.

Basic principles of currency relations management according to the Bretton Woods monetary system are:

1) The Bretton Woods system was based on the gold-exchange standard, the foundation of which was gold and two currencies - the U.S. dollar and the pound sterling, which were considered as the equivalent to gold in international payments and can function as a reserve currency;

2) the establishment of fixed parities agreed under the IMF on the basis of which the currencies were compared and exchanged.

To provide the correspondence between the real exchange rate of the currency and the announced parity, each country could:

- or guarantee the convertibility of their currencies into gold at the official parity (this option was selected by the U.S., by establishing in 1945 the next parity: \$ 35 for an ounce of gold);

- or maintain market rate of its currency in relation to other ones within the oscillation maximum of 1% of its parity (this option was selected by other countries).

Exchange rates fluctuated significantly from their parities, as they were under the state and interstate influence. The IMF controlled the mechanism of international payments, resorting to currency interventions, mainly in U.S. dollars. At the fundamental disequilibrium, by agreement with the IMF, the devaluation and revaluation of currencies of the developed countries were carried out.

3) convertibility of currencies, freedom and versatility of payments on current account transactions.

The Bretton Woods system functioned for nearly 30 years. It was the time of economic recovery in Western Europe and Japan, the "economic miracle" and the relatively moderate inflation in the industrial countries.

However, the Bretton Woods monetary system satisfied the needs of the international trade and capital flows less and less due to the growth of the world economy, the competition increasing and the inflation increasing, a sharp increase in the volume of financial transactions not related to a specific trade transactions, as well as in connection with the crisis of the key currency of the system - the U.S. dollar.

The fact is that the inequalities of currencies had place within the Bretton Woods system. The U.S. dollar took a privileged position. This allowed the U.S. to cover the current account deficit is largely due to short-term liabilities of U.S. banks to foreign government agencies and individuals. U.S. became a debtor. Investment balance (the capital flow balance) also was not in favor of the U.S.. There was an outflow of capital, and as a result, a negative balance of payments was formed. Chronic deficit of the balance of payments had meant that the amount of dollars abroad far exceeded the U.S. gold reserve. There was a lack of confidence in the dollar and the desire to exchange dollars for gold. U.S. began to lose its dominant position in the global production and international trade. The role of EU, Japan and other countries grew up due to the positive balance of payments. In this situation, to overcome U.S. current account deficit would reduce international liquidity, which would impede the international payments. U.S. faced a choice: to incur large costs or change all the rules of the currency system. U.S. chose to change the rules by breaking the connection between dollar and gold in 1968 and then by implementing of floating rate of the dollar in 1971. Furthermore, the principles of the Bretton Woods system undermined the development of the Euromarkets and Eurodollar markets, on which a lot of dollars was circulated, which, in turn, almost fell out of the regime of restrictions imposed by the national currency authorities and the IMF. All this factors created a favorable environment for currency speculations. In such conditions, the system of fixed exchange rates could not function effectively enough. Afterwards, it was started the transition to the new monetary system, known as "the **Jamaica one**" as the name of the country where the basic principles of the system were created.

### **11.3. What is the specificity of the Jamaica monetary system?**

The transition from the gold-exchange standard to a new system of currency relations took several years. After the first significant step - the stop exchanging dollars for gold - followed the next steps. In March 1973 floating exchange rates were introduced. Since 1974, all major currencies (the dollar, the pound sterling, the German mark, the yen, the French franc) floated freely in relation to each other. In the same year, "Special Drawing Rights" (the "SDR basket") has become the new standard of value of the currency. In 1976, the IMF decided not to fix the official price of gold by ceasing operations on it within the IMF, giving the right to national monetary authorities to manage their own gold of their own free choice. Finally, in 1978, the charter of the IMF has fixed the rejection of the fixed parities and the Jamaica monetary system was officially launched.

The main differences between the Jamaica monetary system and the Bretton Woods monetary system are as follows:

1. The carrier of world money has changed. If the Bretton Woods system used gold and reserve currencies as a final means of payment, then the new currency system bases on both the SDR (the collective currency of the IMF) and the ECU (the collective currency of the EU). These currencies have become an element in the structure of international liquidity.

2. The new currency system allows both fixed and floating exchange rates or their mixed version.

3. The presence of closed currency blocs, which, on one hand, are members of the world monetary system, and on the other hand, have special relationships between the member countries within them. The most typical example is the European Monetary System (EMS), which is a product of the EEC.

4. In the Jamaica monetary system the IMF's rights to oversee the exchange rates are extended. The IMF has developed the basic principles to be followed by the member countries during the exchange rate policy, so that the world monetary system as a whole functions effectively. The essence of these principles is as follows:

- the exchange rate should be economically justified. Countries should avoid manipulating exchange rates in order to avoid the need to regulate the balance of payments or gain an unfair competitive advantage;
- to intervene in order to smooth short-term significant chaotic currency fluctuations;
- to consider the interests of other countries during the interventions.

The main criteria for determining whether a country satisfy these principles were developed.

The specific responsibilities were assigned to the IMF members: when selecting a new exchange rate regime it is necessary to inform the IMF; the cooperation between member countries and the IMF and between each other in solving of monetary problems; the national economic policy of the member states should contribute to the stabilization of exchange rates.

The Jamaica system provides the abolition of gold as an official international means of payment and a measure of value. The official price of gold has been abolished and demonetization of gold has begun, that is gold loses the function of money. Gold could be the national reserves, but all payments between the IMF and national monetary institutions are implemented only in SDR.

The principle of exchange rates regulation by market forces (supply and demand) was proclaimed as the theoretical basis of the Jamaica system. However, the free float (under the influence of market forces only) exchange rates were no longer able to function, as the integration process has led to entwinement of national reproduction processes; to an increasing subordination of national economies to the laws of the world economy; to the dependence on the processes occurring in the world economy, as well as in the monetary sphere. In such circumstances, it became impossible to create an optimal framework for the development of international trade without the coordination of the exchange rate policy. With "clean" floatation the balance-of-payments equilibrium has not been achieved as well. It also concerns the achievement of the autonomy of domestic economic policy. On the contrary, freely floating exchange rates have strengthened the relationship between exchange rates and domestic economic processes. Therefore, in the actual practice, the Jamaica monetary system operates as a system of managed floating exchange rate (with a tendency to increase in the monetary policies of individual countries the elements of "control").

Despite the fact that the Jamaica monetary system has a number of negative aspects, its operation has a significant impact on accelerating the pace of development of industrialized countries and many developing countries in the direction of further socio-economic integration.

## **SECTION 5.THE WORLD FINANCIAL SYSTEM**

### **Chapter 12. Characteristics of the world financial system**

#### **12.1. What is meant by the international financial flows?**

The overflow of money capital from one country to another within world economy creates the world's financial flows.

International financial flows are a set of financial transactions, the object of which is the money capital.

These flows serve both international trade in goods and services and reallocation of capital between countries.

The main channels of financial flows movement are:

- the monetary and settlement services for trading in goods and services;
- foreign investment in fixed and circulating capital (FDI);
- transactions with securities and different financial instruments;
- currency transactions;
- the assistance to the developing countries and state's contributions to the international organizations.

The volume and direction of financial flows depend on various factors. They are:

1. the state of the world economy. Thus, the economic recessions in the industrialized countries usually cause declines in the growth rate of world trade, and vice versa;
2. the reduction of trade barriers;
3. the different rates of economic development (synchronous or asynchronous in the economies of advanced countries);
4. the restructuring of the economy of a country;
5. differential gap in inflation and interest rates;
6. the rapid growth of international capital flows in comparison to international trade. This influences the size of the international financial markets;
7. the transition of industrialized countries from labor-intensive to knowledge-intensive production;
8. the increase of the diversification activity of TNCs, including international investment in joint ventures. Joint ventures reduce the need to send the products from one country to another. This reduces the volume of international trade, but increasing international investment. In addition, TNCs carry out the massive transfer of low-technology productions abroad;
9. the increase of the balance of payment deficits as a result of the imbalance of international payments.

International financial flows are directed to those areas and regions where is the demand for them and there is an opportunity to get the greatest return.

Flow of funds (in the form of money, in the form of various kinds of finance and credit instruments) carry out through banks, specialized financial and credit institutions, stock exchanges, which form the global financial market.

Financial flows are enormous. According to some estimates, the daily transactions of the global financial markets is 50 times higher than the transactions of world trade.

## **12.2. What is the nature of the world financial market?**

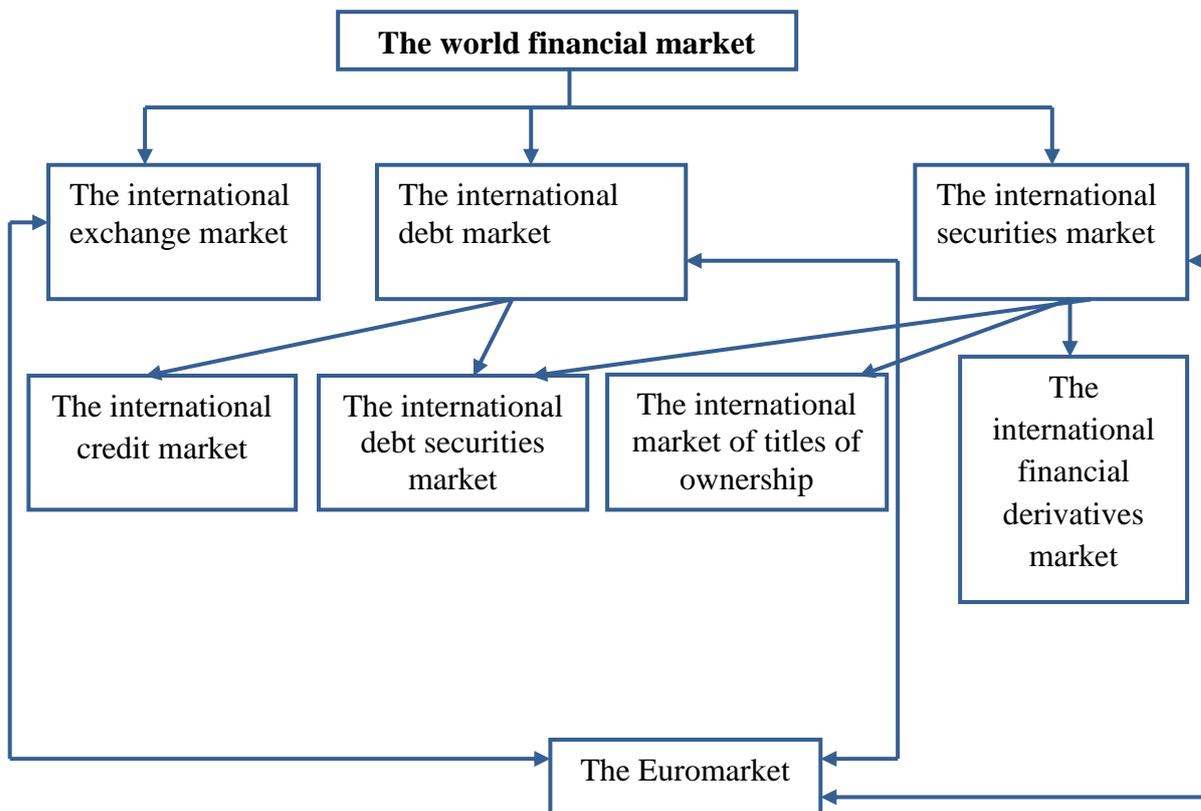
The world financial market is traditionally divided into the international exchange market, the international debt market and the international securities market, each of which includes Euromarkets (Eurodeposit, Eurocredit, Euroequity, Eurobond and Eurobill markets, etc.). According to another model, the world financial market, depending on the timing of property rights, is divided into the money market and the capital market (stock market) [6, p. 436]. The simplified structure of the world financial market is shown in Fig. 12.1.

The structure of the world financial market is very complex and the strict line between its components cannot always be drawn. Thus, the international bond market is a part of the international securities market by one criteria and is a part of the international debt market by another criteria; the international market of titles of ownership is an element of the international securities market and the international capital market as well.

The purpose of financial markets is to ensure the efficient allocation of the available spare capital between final consumers (investors). Financial markets are the mechanism that drives for transactions of those who offer money to those who are looking for them. To increase the efficiency of allocation of available funds, there are financial institutions - the intermediaries between lenders and end-use borrowers. They offer a professional service based on the connection of supply and demand for capital to firms, citizens and governments and operate in the particular legal and tax space. It should be noted that the financial institutions, in the narrow sense, are considered as financial organizations, and in a wide sense - the normative regularity, the system of monetary and financial operations of these organizations.

The current world financial market is characterized by:

- a significant amount of financial resources and the transactions carried out around-the-clock, most of which are unified and to which entities with a high rating are attracted;
- the abolition of restrictions on financial flows across borders, such as capital controls and limit circulation of foreign currencies; high use of information technologies, which reduce transaction costs between countries;
- using a variety of financial instruments.



**Figure 12.1. The structure and the components connection of the world financial market**

International capital flows is 5 times higher than the international flows of goods and services. Due to the fact that the monetary means are moving faster in relation to changes in interest rates and foreign exchange rates, the international mobility of capital intensifies the instability of exchange rates. Foreign exchange rates have become more volatile in the national macroeconomic policies. The high mobility of capital has led to increased interdependence of national economies, weakened the autonomy of national policies, despite the existence of floating exchange rates.

The main trends, observed in world financial markets, are:

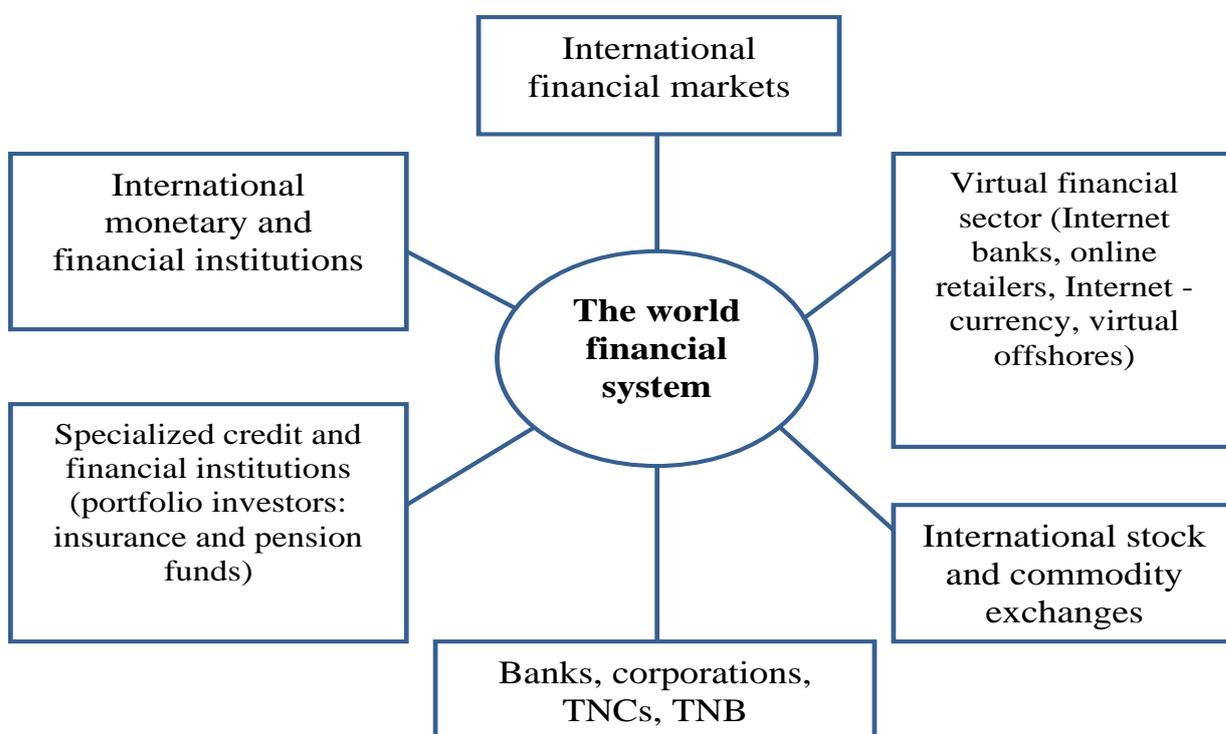
1. The creation of currency blocs around the major currencies of the world.
2. Changes in the structure of financial market instruments in favor of instruments of the real sector - the corporate securities and their derivatives.
3. Stock markets are the main structural element of the financial sector. The banking sector cedes a role of a redistribution mechanism of financial assets to the stock market.
4. Growth of the interrelation of the financial and real sectors of the economy.
5. The growth in technological modernization of financial markets based on the Internet technology.

6. Changes in the ideology of the international financial institutions. These organizations have focused on increasing the responsibility of developing countries for the stability of the national markets, and have refused to act as a guarantor of stability in their financial markets.

7. The sharp increase and dominance in global financial markets of speculative transactions, which account for over 95% of all financial transactions.

### 12.3. How does the world financial system develop under the modern conditions?

The set of financial markets and financial institutions that operate in the legal and tax environment of international business, creates the world financial system (figure 12.2).



**Figure 12.2. Main components of the world financial system**

The participants of the world financial system, which mediate the main part of the international financial flows, include:

- national participants - corporations, banks, specialized credit and financial institutions, including insurance and pensionable companies, stock and commodity exchanges, the state;
- international participants - international corporations, transnational corporations, international banks, transnational banks, specialized credit and financial institutions, large stock and commodity exchanges, international monetary and financial institutions.

The core role in the world financial market belongs to the commercial banks as a result of the wide sphere of their financial activities. The bank's liabilities consist mainly of deposits with different terms, assets: loans (corporations, states), deposits in other banks and bonds.

Corporations (especially TNCs) conduct operations to attract foreign sources of capital to finance their investments: selling shares, loans, sale of the corporate's proof of indebtedness in the international capital market.

Non-bank financial organizations conduct transactions in order to diversify their portfolios of foreign assets.

Central banks are included into the global financial markets indirectly through currency interventions. The government bodies borrow money abroad, release the government bonds. The governments of the developing countries and state owned companies take loans from commercial banks of the foreign countries.

The current world financial system operates and develops in the context of **financial globalization**. Globalization is an objective process of integration of the considerable part of the capital from different countries, strengthening of their interdependence. The driving forces of financial globalization are deepening of international financial integration, the formation of a system of international financial institutions, the development of financial innovations.

The **international financial integration** is the process of alignment of financial services, banking transactions, liberalization of customs procedures, harmonization of coordination system through the international financial and credit institutions, the electronic system of payment means; movement towards the global monetary system with the common world money. In recent years, significant legal restrictions on the movement of capital were eliminated. Financial markets of the developed countries were united in the global financial system, which allows sending more and more significant amounts of capital, not only to its economy but also to the economies of developing countries and countries with economies in transition. The greatest progress in financial integration has reached the European Union. Its concept of a common financial space includes:

- full liberalization of payments and the migration of capital;
- open access for companies and individuals of the EU countries to the market of banking, insurance and other financial services;
- harmonization of banking, tax and other legislation on investment;
- increase of control over the activities of national credit and financial institutions and the protection of investors' interests;
- providing publicity and transparency of existing legal norms.

Financial integration with the openness of the financial markets is beneficial to the countries:

- countries are proposed to more sources of investment finance to supplement domestic savings;

- open capital markets contribute to the improvement of the effectiveness of domestic financial institutions and maintaining of the well-grounded macroeconomic policy;
- by reducing financial constraints, the open capital markets give countries time for the conduction of settlement of payments in order liquidate the imbalances caused by external shocks;
- creditor countries have more opportunities for diversification of investment and as well as risks;
- the multilateral trading system is supported because of the expanding of the range of opportunities for both the diversification of the portfolio of securities and the efficient allocation of global savings and investment.

Elimination of barriers between national and international financial markets, the free movement of international capital from domestic to global financial markets and vice versa, the development of relationships between the two sectors of the market are the distinctive features of the international financial integration. In terms of financial integration financial institutions establish their branches in major financial centers to execute the borrowing, lending, investment services, and the provision of other financial services.

The system of international financial institutions consists of the world-class organizations (the International Monetary Fund, the World Bank, the International Bank for Reconstruction and Development, etc.) and regional financial institutions. The financial resources of these institutions make up a significant part of the international flows of official international aid.

The globalization of financial markets is characterized by the development of financial innovation, that is, the creation of new financial instruments (Eurodollar certificates of deposit, foreign exchange swaps, zero-coupon Eurobonds, consortium loans in the Eurocurrency, Euronotes, etc.) and technology. Technological innovations increase the speed of international financial transactions and their volumes. Telecommunications help banks to attract savings from the whole world and to send funds to the borrowers under the conditions of highest profits and lowest costs. Using the SWIFT allows investment banks to conclude transactions as in the bonds, as well as in the foreign currency. Commercial banks can send letters via electronic payment systems from their headquarters to foreign representative offices.

The growth of global capital flows increases the financial competition between countries that affects reduction of government interference in the operation of domestic financial markets and leads to the liberalization of international capital movements. Thus, the global financial system becomes almost independent from government control and regulation. Less than 30% of the securities market of the "seven" is controlled by the state or is the subject to the interest of the state. In global financial markets from one country to another moves more than 3 trillion dollars a month. Therefrom, 2 trillion dollars is the money not controlled by the state or other official institutions [7, p. 106]. The private capital has more resources than the central banks of major developed countries. Therefore, the situation on the global financial market is defined by the private capital, but not the national government.

## Chapter 13. World financial centers

### 13.1. What is the specificity of main world financial centers?

National currency, credit and equity markets are participating in the transactions of the global financial market, which are closely intertwined with similar world markets. With that, on the basis of large national markets for international transactions, such world financial centers as New York, London, Zurich, Luxembourg, Frankfurt-am-Main, Singapore, Hong Kong, Bahamas, Panama, Bahrain have developed. The international banks, consortiums of banks, the stock exchanges are concentrated in these centers and carry out the international currency and credit transactions, as well as transactions with securities and gold.

World financial centers arise in the countries that have:

- sustainable monetary and economic situation;
- the developed credit system and a well-organized market;
- reasonable taxation;
- preferential currency legislation, which allows access to foreign borrowers and securities to the stock-exchange quotation;
- convenient geographical location;
- relative stability of the political regime;
- high degree of standardization and information technology paperless transactions.

The most influential world financial centers are London, New York and Tokyo [7, p. 108].

Feature of **New York** as a financial center is that it is only the international capital markets and the basic source of Eurodollars. The main place among components of this financial center belongs to the market of the bank credits. The international activity of large American banks is connected not only with credit transactions, but also with investment. They offer the clients various transactions with securities, place securities in primary market, operate as brokers in the secondary market.

The efficiency of the New York capital market is reached at the expense of issue of new bonds by internal financial institutions at lower price in comparison with other foreign markets.

The currency market is developed poorly, but in accordance with such indicators as "the volume of turnover", "quantity of circulating currencies" it is considered as the world largest center on trade in currency.

The important place is taken by the securities market, which connects the American financial markets with the international financial markets. On the New York Stock Exchange are turning 2768 shares of companies with a total value of 19.8 trillion doll., and the daily trading volume is around 47 billion dollars [51]. In 2012 net income of the stock exchange was 2324 million dollars, that increase of

13% compared to 2011 [83]. In this market the wide choice of financial instruments is presented: shares, bonds, shares of unit funds, depository receipts, convertible debt papers, index shares, forwards, swaps, warrants, etc.

The securities market of New York, as well as the common stock market of the USA, is attractive to investors of the whole world by lack of the taxation for nonresidents of the USA. Where the resident will pay 35%, the nonresident won't pay anything. The most essential characteristic of the stock market is the adjusted mechanism of the regulable legislation. It is the most effective and the most rigid in the world. Investment companies and funds are constantly regulated by the organizations granting licenses. The market of gold doesn't play a significant role.

**London** is a financial center of Europe. It is the greatest national financial center in the world with the equally well developed markets of the short-term credits and long-term loans, the powerful exchange, the high-organized insurance and freight business.

A characteristic feature of London is the domination of actually international components over national ones. In contrast to national ones, the foreign exchange market and the loan capitals market is a basis of its financial power. One of the features is considered the ability of banks, the exchanges, bill brokers to react quickly to any new situation and financial innovations. London as world financial center includes four markets: gold, currencies, short and medium-term crediting, insurance.

The market of gold is valid from 1919 that was a consequence of gold demonetization. Gold received property to be a mainly usual good with the price which is expressed in credit and paper money.

The London exchange market is the greatest in the world. Through its currency exchange passes 30% of all contracts with currency, and the volume of currency transactions makes about 1000 billion dollars a day.

Transformation of London into the leading world exchange market was promoted by the maximum freedom of currency transactions. Restriction of such freedom in other world financial centers didn't allow the exchange markets to develop to competitive level.

The market of the bank credits takes a leading place in the world. In London a large number of foreign banks is located, and English banks have a wide network of the foreign branches. Thanks to concentration of large banks of the world in London, this financial center became the main one on credit operations where borrowers can receive any sums. The main borrower of the London international credit market is Great Britain. English firms and the companies receive from the American banks in London 4 times more foreign currency, than from clearing English banks. Orientation of the London international credit market to needs of Great Britain causes its specialization in the area of mainly shortly – and medium-term crediting. In the sphere of international trade in securities London successfully competes with other markets. It was provided by transformation of the

London stock exchange into the international stock exchange in 1986. The London stock exchange plays a role of the quotation center in the international sphere.

The London stock exchange is the most international one in the world by number of the foreign companies trading on it: more than 445 international companies from 63 countries have listing in London. The exchange includes some markets: market of governmental securities, the equity market and the bond market of local firms and companies, the market of foreign securities, the market of the South African gold-mining companies, etc.

The total volume of trading with the assistance of the international companies exceeds volumes of the leading world exchanges, including the New York stock exchange. The average trading volume makes 199 thousand transactions daily, and the average day turnover reaches 22,5 billion US dollars [53].

**Tokyo** becomes the international financial center after 1970. The strengthening of its positions was promoted by:

- growth of issue of the government bonds that caused development of their secondary market;
- bonds issue by foreign borrowers in Tokyo in yens, and later – in foreign currency;
- liberalization of the markets of yen and the capital that gave the chance to foreign banks and the companies on trade in securities actively to work at securities market;
- increase in foreign capital investments in Japanese bonds and shares;
- growth of openness of the monetary market. The greatest activity of foreign participants is observed in the market of on-call loans (it is the short-term commercial credit which is paid by the borrower for the first requirement of the creditor), deposit certificates and short-term commercial bills.

Tokyo is the large foreign exchange market thanks to a big daily turn of foreign currency, especially in transactions yen/dollar.

The Tokyo stock exchange is one of the greatest exchanges of the world but as the trading floor gradually loses popularity. In 2012 the total volume of transactions in the shares of the main trading floor amounted to approximately 3.6 trillion U.S. dollars. This indicator is 10% lower compared to 2011, a marked decline over the last 5 years. The result in 2012 was less than half of the maximum rate achieved in 2007. Total number of the companies registered in it doesn't change decade. Foreign investors consider that listing rules on the exchanges too rigid and observance of rules of the publication manage expensively. As a whole the exchange carries out functions of the quotation of securities.

In Tokyo financial center authorized Japanese banks (currency banks) and foreign banks which are engaged to crediting of the industry and trade in yens and foreign currency, granting the credits to the foreign Japanese enterprises through the parent banks, the accounting of export bills, etc.

Financial centers work round the clock, directing movement of the international financial flows. Efficiency of the international currency, credit and payment transactions is provided by the Society for Worldwide Interbank Financial Telecommunications which doesn't recognize national limits (SWIFT).

### 13.2. What is the place of offshore zones in the system of world financial centers?

Offshore zones are distinguished among financial centers. Offshore zones (jurisdictions) are called the countries or certain territories of the states where at the state level for a certain type of the companies which owners are foreigners, the considerable privileges in the taxation are established, the requirements to accounting and audit are partially lowered or cancelled, customs and trade limits are partially or completely lifted. Offshore zones are the non-national financial centers which are carrying out considerable volumes of crediting and financing in currencies of other countries (Eurocurrencies). They are characterized by:

- the liberal currency and credit legislation which protects interests of investors, without imposing thus excessive restrictions on financial institutions (low taxes, insignificant state intervention);
- implementation of currency and credit transactions generally with foreign currency for this country;
- legislative assumption of sale of currency at street prices when the official exchange rate is lower from market, and currency purchases when the official rate of currency is higher than the market.

A characteristic feature of the offshore center is that the deposited capital in it does not lie motionless, but is designed to invest in high-yield areas with a small tax abroad.

Offshore must legitimize itself - and in general and, in particular, in relation to other states, getting them to agree to low taxation. This is an important, but not their only feature. The main are: the political and economic stability in the country, guarantying the protection of the financial and banking secrecy, lack of foreign exchange restrictions and modern means of communication and well-equipped communications network, convenient legal system, execution of the individual needs of investors.

To other specific requirements of clients of offshore centers typically include: relatively low administrative costs required for current activity, good language services of the interpreters, the services of professional advisers, favorable taxation, the ability to acquire citizenship, the purchase of real estate, as well as low prices for goods necessary for the life of personnel and their families.

There are many criteria for the *classification of offshore centers*. The basis of the main criteria used by representatives of the business world in the selection of such centers in order to minimize tax liabilities, is the final volume and the character of the privileges offered to clients.

In this approach, offshore centers are usually divided into two main types [9, p. 168].

**The first one** is actually an offshore territory officially recognized in the world, and jurisdictions relating to "tax harbors". It is predominantly a country with a small population and small land area. According to the terminology used in the UN, they are called mini-states. They are characterized by the lack of income tax for foreign "privileged" companies. However, this advantage is largely worthless in the eyes of customers in such a serious disadvantage as the lack of tax treaties with other countries, especially agreements on avoidance of double

taxation. This type of jurisdiction is a large number of offshore centers, such as the Isle of Man, Gibraltar, Panama, the Bahamas, Turks, Kaykos and others.

Jurisdictions with "moderate" level of the taxation are carried to **the second type**. Such states aren't considered as typical offshore territories though some of them are in some cases included in "black lists" of tax harbors. Here, the most frequently is raised "moderated" (and from time to time and rather considerable) a profit tax. But such "shortcoming" (from the point of view of wishing to minimize the tax obligations) is completely compensated to that such jurisdictions are connected by numerous tax agreements with other states. Except that, considerable privileges for the companies of a certain kind of activity, first of all, holding, financial, license are provided here. Such companies are used in quality of intermediate points for the interstate translation of the income and the capitals. At the same time as the end point of such transfer is an offshore company registered in the well-known tax havens. The "moderate" tax zones is generally considered fully "respectable" Western European countries - Switzerland, the Netherlands, Austria, Ireland and Belgium.

There is also a number of the "combined" jurisdictions in which signs of two mentioned types are combined. It is possible to carry such "optimum" jurisdictions to them, as Cyprus and Ireland.

However not all offshore centers of the first type "are separated" completely from possibility of the conclusion of tax agreements. Some of them have contracts on prevention of the double taxation with the certain countries (Mauritius, the British Virgin Islands treat such offshore jurisdictions Madeira, Dutch Antila). All this creates one more convenient "opening" for concealment from taxes of the income and the capital.

If to consider the offshore centers only from the point of view of a fiscal situation, i.e. from specifics of various benefits and advantages to different categories of taxpayers, such centers are divided into a few groups.

These are the countries and territories:

- which don't assess the residents with any taxes (Andorra or the Bahamas);
- which tax only the profit got in this country, but exempt the income which arrive from abroad (Costa Rica, Hong Kong) from taxes;
- in which the profit got there isn't taxed, but the profit got from abroad (Monaco) is assessed;
- where the profit got abroad is taxed, however tax rates is very low - lower than 1% (the islands of Guernsey or Jersey Shark);
- which tax the saved-up riches (material values), instead of the current profit (Uruguay);
- in which it is allowed to apply different combinations from preferential tax rules which create especially favorable conditions for individuals. Their income here is completely exempted from taxes or separate types of income use tax privileges. In Europe such centers are Andorra, Ireland, Monaco, Kampone de Italy, outside Europe — Bahamas, Bermuda, Cayman Islands, French Polynesia and the island of St. Bartholomew.

## **SECTION 6. INTERNATIONAL FINANCIAL MARKETS**

### **Chapter 14. The foreign exchange market**

#### **14.1. What is the peculiarity of the foreign exchange market?**

The foreign exchange market is the largest financial market of the world and plays an important role in the co-operation providing between the components of the world financial market.

The exchange market is the system of economic and organizational relations, related to the buy/sell transactions of foreign currency and payment documents in foreign currency, as well as transactions on investing of currency capital.

The peculiarity of this market consists in that:

- it is non-material;
- it does not have a concrete location, a single center;
- a mechanism of its functioning is an exchange of currency of one country for currency of another country;
  - there is complete freedom of the instantaneous opening or closing of any position, possibility to trade round the clock in the on-line mode;
  - it is an interbank market;
  - it has the flexible system of organization of trade and flexible strategy of paying for the conclusion of transaction;
  - it is one of the most liquid markets due to possibility of work with different currencies within it;
  - it is global due to the process of telecommunication and informatics.

Main participants of foreign exchange market are commercial banks, corporations, engaged in international trade, non-bank financial institutions (firms on the management of assets, insurance companies), central banks.

The central link of the foreign exchange market is the commercial banks, as most transactions with currencies foresee exchange by bank deposits, denominated in different currencies.

The basic commodity of this market is foreign currency in different forms: currency deposits, any financial requirements, denominated in foreign currency. The currency demand deposits are the most preferential in the exchange market.

Demand deposits are the facilities, which are used in trading in currency between banks, working in the exchange market. Bank dealers hold demand deposits in foreign currency in the bank-correspondents, located in countries, where this foreign currency is national. A bank in some country can sell foreign currency, making an order to foreign employees to transfer a demand deposit the buyer. The purchase of currency is carried out in the same way. In this case, a seller transfers it to the bank, being abroad, on the buyer's account. A currency transaction takes a place as follows. For example, the American firm must pay 200 thousands of euro the German firm for the delivery of goods. A firm charges its

bank to debit the dollar account and to pay this sum, by transferring it to the account of supplier in the German bank. The American bank transfers from the account of the American firm into the debit of the German bank dollars at the current exchange rate in an exchange for a deposit in Euros, which will be used for payment to the German supplier.

The foreign exchange market consists of great number of national currency markets, which in one or another degree are incorporated in the world system with three levels:

1st level: the retail trading. The transactions in one national market, when a bank-dealer directly cooperates with clients.

2nd level: wholesale interbank trade. The transactions in one national market, when two bank-dealers cooperate through mediation of currency broker.

3rd level: the international trade. The transactions between two and more national markets, when the bank-dealers of different countries cooperate with each other. Such transactions often include arbitration operations in two or three markets. Process of arbitration, when market participants buy currency the cost of which falls, and sell currency the cost of which is exceeded the exchange rate in other market centers, generates the tendency of law of one price.

Depending on the level of organization of the exchange market, it is distinguished an exchanging currency market and the non-exchanging currency market. *An exchanging currency market* is presented by currency exchanges, and *the non-exchanging currency market* - by banks, financial institutions, enterprises and organizations.

The functions of the exchanging market consist in determination of demand and supply of currency, establishment of exchange rates, forecasting of its dynamics, determination of reference rates of currencies, as well as in forming of certain strategy and tactic of the central bank of the country on a fiscal policy and system of the currency adjusting. Both the current and futures transactions are concluded on the currency exchanges. In terms of volume an exchanging market is small, as it functions mainly as a national exchange market (approximately 10% of all currency transactions are concluded).

Functioning of the interbank market is directly related to realization of currency transactions. There is an about 90% turnover of foreign currency in it.

Most currency transactions are concentrated on interbank trade. The exchange rates, published in newspapers, are interbank, that is the rates which banks are inquired for each other. Interbank “wholesale” rates are below than “retail” rates for clients. A difference between them is the profit of the bank for provided service.

In transactions with foreign currencies can take part any two currencies, however most of interbank transactions consist of exchange of currency for the U.S. dollar, which is considered to be the key currency. An important role in the foreign exchange market is played also by an euro, Japanese yen, Swiss franc,

English pound sterling. Demand on these currencies exists every second, unlike other currencies.

The foreign exchange market operates the extraordinarily large amount of money. Its volume exceeds 700 bill \$. per year, and a daily turnover made in 2010 about 4 bill \$., in 2011 - 5 bill \$., and in 2020 forecast the increase of volume of transactions to 10 bill \$. per day, moreover there are about 20% of all transactions in the Asiatic market, 40% – in European and 40% – in American [65].

By the nature of transactions, an exchange market is divided into following markets: spot, forward, market of the currency futures and options.

Different types of transactions on conversion operations are concluded in the foreign exchange market. Conversion operations are transactions, concluded in the exchange market on the buy/sell of certain sum of currency of one country on currency of other country at the concerted rate upon the certain date. The purpose of conversion operations is:

- the exchange of currencies at international trade, realization of tourism, migration of capital and labor force;
- speculative operations (for generating profit from a change in the exchange rates);
- hedging (protecting from a currency risk, potential losses from the change of exchange rates), which improves the terms of conclusion of international trade and investment transactions. Thus, hedging is the stimulation of international flows of goods and capital.

There are such conversion operations as:

- operations with immediate delivery of currencies (current conversion operations) which are divided on the operation of "tod" with the date of value dating today (today), "tom" with the date of value dating tomorrow (tomorrow), "spot" with the date of value dating in two banking days (spot);
- terminal currency conversion operations, which are divided on forwards, swap deals, futures and options.

#### **14.2. What is the specificity of transactions in the spot market?**

A spot market is a market, on which the transactions of current, terminal and immediate (or cash) exchange of currencies between two countries are carried out. Two sides negotiate about an exchange of the bank deposits and immediately carry out a transaction. Presently, at will of the client, by electronic facilities, converting of currencies takes a place in the day of conclusion of the transaction.

The rates of immediate exchange of currencies are called current (spot) rates, i.e. according to it currencies are exchanged during no more than two workings days from the moment of its accordance. And transactions form the cash foreign exchange market by themselves.

A spot transaction traditionally is a base currency transaction, and a spot rate is a base rate, on the basis of which other rates of transactions are calculated in the exchange market (cross-rates, rates of forward and future transactions).

For the exchange of foreign currencies two prices (rates) of currencies are used: the buying rate and the selling rate. When buying the currency in a bank or in a dealer, it is necessary to pay the higher price for currency, than that price for which it is possible to sell the same amount of currency to that bank or a dealer.

Bank and dealer *buying rates* are those prices, which both the bank and the dealer are ready to pay for foreign currency. *Selling rates* are prices, on which both the bank and the dealer are ready to sell foreign currency. These two rates are quoted by the pair. A difference between these rates is called the *absolute spread*. It serves for coverage of charges of the bank and for insurance of the currency risk. At instability of the exchange market or in the period of currency crisis, the spread can be increased from 2 to 10 times as compared to “normal” spread – 0,05-0,09% from the quoted rate.

It is possible to calculate the *relative spread* as a difference between quotations of salesman and buyer, calculated in relation to the selling price:

$$\frac{\text{Selling price} - \text{Buying price}}{\text{Selling price}} \times 100.$$

The following factors influence on the size of spread: status of the contractor and the character of relations between contractors (the size of spread is greater for the clients of the bank, than for other banks at the interbank market; at steady relations between banks-contractors the size of spread is more narrow); market conjuncture (the size of spread, as a rule, is greater at the rapid change of the exchange rate); quoted currency (the size of spread is greater at quotations of rare currencies); sum of the transaction (at transactions on large sums less spread is used).

Currency transactions with immediate delivery are most widespread and amount to approximately 60% of the volume of currency transactions of the interbank market. These transactions are subject to the obligatory implementation by sides. They are used, foremost, for the immediate receipt of currency for realization of foreign trade payments.

Using the spot transactions, banks provide the clients with necessary foreign currency, carry out flowing of capitals, and conduct arbitration and speculative transactions as well.

### 14.3. What is the nature of forward transactions?

A forward market is a market, where the terminal currency transaction with foreign currency are carried out. The terminal (forward) transaction are contracts, according to which two sides negotiate about supplying with the stipulated amount of currency in a certain term after the conclusion of transaction at the rate, fixed in the moment of its conclusion. Forward transactions conclude out of the exchange and are obligatory for execution unlike the futures or options.

An interval in time between the moment of conclusion and execution of the transaction can be from 1–2 weeks, from 1 to 12 months, to 5–7 years. The exchange rate on terminal transactions is called the forward exchange rate. It is fixed in the moment of conclusion of the agreement.

The exchange rate on terminal transactions differs from a spot rate. Difference between the spot and forward rates is determined as a discount (discount – dis or deport – D) from a spot rate, if the rate of the terminal transaction is below, or the premium (pm or report – R), if it is higher than the spot rate. A premium means that currency is quoted more expensively on a terminal transaction than on the current transaction. A discount means that an exchange rate on the forward transaction is below than on a spot transaction.

The annual size of forward premium(discount) is determined on a formula:

$$FD = \frac{(FR - SR)}{SR} \times \frac{360}{t} \times 100, \quad (14.1)$$

where  $FR$  and  $SR$  – a forward rate and a spot rate accordingly;

$t$  is a term (in days) of the forward contract validity.

The exceeding of the spot rate above the forward rate is calculated in the same way, except the fact that the amount will be negative, meaning a discount.

The terminal transactions are carried out for achievement of following aims:

- exchange of currency for commercial purposes, the early sale or the purchase of foreign currency in order to insure a currency risk;
- ensuring of portfolio or direct investments against a risk, related to lowering of the exchange rate;
- receipt of speculative income due to an exchange rate difference.

Speculative transactions can be carried out without the presence of currency.

A forward market is more narrow, than market of cash transactions (to 10% of trading in currency values). In general, terminal transactions are carried out with leading currencies, large corporations or banks with the stable credit rating.

When the forward transactions are concluded, rate expectations (increase or decrease of the rate) are not always justified. Consequently, terminal contracts not always suit or not always accessible by all types of business. Quite a bit types of business and most individuals search the alternatives to the forward contracts.

One of such alternatives is a *swap transaction*, which is the combination of a current (cash) and a terminal transaction. Currency swap transaction combines the purchase/sale of two currencies under the terms of immediate delivery (sale) of currency at a spot rate with a simultaneous forward transaction on the purchase of the same currency at the rate taking into account a premium or a discount depending on the change of the exchange rate. The swap transactions are used for:

- execution of commercial transactions: a bank simultaneously sells foreign currency under the conditions of spot and buys it on a term;
- the bank's acquisition of necessary currency without a currency risk;
- mutual bank crediting in two currencies.

The swap transaction is essentially hedging, that is the insurance of currency risks by creation of claims in a return and obligations in foreign currency. A market of currency swaps is approximately 20% from the whole volume of currency trade.

#### **14.4. What is the specificity of currency futures?**

The currency futures are a contract, which notarizes an obligation to buy or sell currency on the standardized requirements in the future on the pre-arranged rate. These contracts are concluded in the exchange market. Thus, a market of the currency futures is the market of foreign exchange derivatives (obligations). Futures currency transactions are a special form of both speculating transactions and the hedging of currency risks by large banks. The transactions with the currency futures amount to about 15% of the volume of currency trade.

The currency futures in fact are forward contracts that foresee a future exchange rate. However, time limits, and most of all, the terms of exchange differ from the terms of forward contracts that allows to avoid currency risks more flexibly.

A difference consists in the following:

- transactions are concluded only on separate currencies;
- the currency futures are liquid, they can be bought and sold by most business entities in the exchange market;
- the futures contracts can be resold in the futures-trading market at any time before their execution;
- the buyer of the currency futures assumes an obligation to buy, and salesman - to sell currency during a certain term at the rate, fixed in the moment of contract conclusion;
- the futures contracts are standardized (for example, the futures contract of on the English pound sterling is concluded to the amount of 62,5 thousands of pound, on the Canadian dollar – 100 thousand dollars, on the Japanese yen – 712,5 million yen) and their implementation is assured due to

guarantee payment in a calculation-clearing house (calculation-clearing pay). It is a deposit, which is brought by clients in cash;

- goods delivery takes a place only in concrete days;
- the standard sum of the futures contract is less than the sum of the forward contract. In the case of exceeding of standard sum of the contract, a buyer concludes a transaction on the purchase of a few contracts;
- the price of futures contracts is determined by demand and supply on them and on currency that is a subject of the contract.

Efficiency of the future transaction is determined by spread after every work session at the exchange. The salesman of the currency futures wins, if with the transaction maturity, he sells currency for more than the quotation rate on the day of its implementation, and carries losses, if the rate of the day of transaction conclusion will appear to be lower than the rate of its implementation.

$$M = pK(C - C_T), \quad (14.2)$$

where  $M$  – spread (positive or negative).

$p = 1$  in the process of selling;  $p = -1$  in process of buying currency;

$K$  - the number of contracts;

$C$  - the exchange rate on a day of the transaction conclusion;

$C_T$  - the rate of currency quotation of current work session (on the day of implementation of transaction).

For each open transaction, even if its participant did not carry out the transaction on a current work session, spread is counted.

$$M = p(C_n - C_T), \quad (14.3)$$

where  $C_n$  is a rate of quotation of previous work session.

#### 14.5. What features do the currency options have?

A market of currency options, as well as market of the futures, is the market of foreign exchange derivatives. Currency option is a contract in obedience to which one side gives other side *a right* to buy or sell the standard sum of foreign currency at price fixed in a contract within defined period of time. So, as per the contract, *a vendor of an option* for a money bonus is under an obligation to buy or sell the certain sum of currency at set price before the end of the term of the contract. *The purchaser of an option* acquires a right to buy or sell currency at set price only in case if it is in his favor to do so, i.e. he is not under an obligation to buy or sell currency. Thus, if on the futures contract an exchange of currency is obligatory even in a case, when an transaction appeared for the buyer as unprofitable, an option foresees the right of choice: if a transaction is advantageous – to carry out an exchange, if a transaction is not advantageous – to refuse it. The

buyer of the option has greater right less duties, and a salesman has more duties and less rights.

Currency option contracts look fairly similar to the futures contracts. The amount of currencies, the period of repayment and exercise price are determined in them. As well as futures, options, which are traded on an exchange, require the standardized form of contracts and the guarantee of their implementation. The amount of currency, with which every option operates, equals a half to that which is set for the futures contracts.

There are two basic types of options: *call option* (option on a purchase) and *put options* (option on a sale). Call option gives the buyer of option a right to purchase the standard amount of currency, and a salesman of option is under an obligation to sell it, i.e. it is assumed to make two transactions: the first one is the acquisition of the call option, the second one is the acquisition of currency from the salesman of the option in accordance with his terms, however, it is not obligatory and carried out at will of the buyer of the option. Put option gives buyers a right to sell the standard amount of currency. Two transactions are also possible here: the first one is acquisition of the put option, the second one is a sale of currency to the salesman of option, but this transaction is not obligatory and realized only at will of the buyer of the option. Thus, the buyer of an option acquires rights for a purchase (call) and right for the sale (put) of currency.

There are the option, which can be executed at any time before the deadline (the American option), and the option, which can be executed only on the deadline date (European option).

The option as type of hedging is more attractive than forward and futures contracts, but they have a high exercise price, i.e. the price, by which the supply of the standard amount of currency is carrying out. The buyer of the option must pay a high premium (raise) to options, which is fixed in an option contract.

An option will bring the income to the holder in following cases:

- for a call option, when the exercise price is below than the price of standard amount of currency on the option in the market;
- for a put option, when the exercise price is higher than the price of standard amount of currency on option in the market.

Options are used for hedging of currency risks and the carrying out of speculative operations.

#### **14.6. What is the difference between the speculative operations and arbitrage operations in the foreign exchange market?**

**Speculative operations** are carried out in both the spot market and the terminal market. A currency profiteer is not interested by reality of exchange rates or by consequences, which the speculative operations may lead to. To him, the currency is the same exchange commodity, as shares, raw materials etc. A speculator is interested by possibility of receipt of maximal income as a result of

change in the short-term prospect of the exchange rate. To him, the source of receipt of income is a currency risk.

The currency profiteers influence on a exchange market condition purposefully, buying or selling the currency in order to obtain the decline of the exchange rate or its increase. Playing on an increase or a decline of the exchange rate, they can get an income or bear losses. The currency speculation sometimes reaches such scales that currency interventions of central banks have nothing to do to resist, though they can be carried out on a few milliards of dollars in a day.

In the spot market, if a speculator plays on the increase of the exchange rate (buy a bull), he buys and holds it on a deposit in a bank in order to sell it at the increase of the exchange rate. The income of speculator will equal a difference between a primary low spot rate, at which he bought currency, and a higher present one, at which he sold currency.

If a speculator speculate for the decline of the exchange rate (sell a bear), he takes a loan in foreign currency on a certain term, sells it at a high exchange rate (exchange for national currency), and puts the funds received on the bank deposit in order to get dividends. On the termination of loan, if the spot rate of foreign currency fell down, a speculator bought foreign currency at a low rate for returning of loan. The income of speculator in this case equals a difference between a spot rate at a sale and a purchase of foreign currency.

Speculation in the forward exchange market is more widespread and is based on the assumption about an increase or a decrease of spot exchange rates in the future as compared to a forward rate.

If a speculator considers that the spot rate of foreign currency in 3 months will be higher as compared to its current forward rate, he conducts such operations: he buys foreign currency in the forward market with delivery in 3 months; on the condition that his forecast will come true, in 3 months he gets foreign currency at low price of the forward market and resells it at the high rate of the spot market. An income of the speculator is a difference between a forward rate and the spot rate, and if his expectations did not come true, he experienced losses.

If a speculator expects that the future spot rate of foreign currency will fall down in relation to a current forward rate, he conducts such operations: he sells foreign currency in the forward market; he buys foreign currency in the spot market at a low spot rate and resells it in the forward market at the higher rate. The income of speculator is also determined as a difference between a spot rate and a forward rate [6, p. 465].

In order to avoid the risk of mistake in relation to a future spot rate, a professional speculator makes thousands of forward exchange rate contracts, and, if the assumption about the general character of changes of exchange rates will be true, his operations will appear profitable.

The currency options are used for speculations too. Both a speculator and a buyer in one issue, as mentioned previously, can either to use an option, or to allow

a term on it to over. He uses the option, when it is advantageous him, that is when an exercise price will be higher than a market one.

Speculation on the exchange rates is one of legal forms of currency business, but it often negatively influences a monetary sphere and the economy in a whole. Speculation destabilizes an economy, when speculators sell currency the rate of which is low, hoping that it will fall down more, or when speculators buy foreign currency at growth of the exchange rate and in expectant of its growth in the future.

At the same time speculative operations can be stabilizing, i.e. when they weaken the vibrations of exchange rates in time and promote the stabilizing of the exchange market. It takes a place, when speculators will: a) buy foreign currency at its internal price abatement or at its low level in expectant of growth and b) sell currency, when the exchange rate grows or is at the high level and its decline is soon expected.

In the exchange market with a speculative purpose **arbitration operations** are carried out too. Arbitration is the operations of purchase and sale of currency in order to get profits. In contrast with speculative operations, arbitration operations always are stabilizing, as they promote the smoothing of exchange rates in the short-term in different exchange markets.

The basic varieties of arbitration in the exchange market are currency and interest arbitrages.

A *currency arbitrage* (a simple one) is a purchase of currency in one market at low price with its simultaneous sale in other market at higher price in order to get the income due to the difference between the exchange rates. A currency arbitrage could be difficult in the case of the use of a few currencies in different exchange markets.

In the exchange market, where currency has a low rate relatively, arbitration operations increase the demand on it and the currency exchange rate begins to rise, and in the market, where currency has a high rate, such operations increase its supply and the rate goes down.

An arbitration operation, which is carried out by an arbitrageur, offers the possibility of income's getting almost without a risk and is unneedful of investments. A currency arbitrage is temporal and spatial. At a spatial arbitrage, an arbitrageur gets an income due to a difference in "spot" prices in markets, located in "different spaces", i.e. in two different distant markets. At a temporal currency arbitrage, the profit is received due to the difference of exchange rates in time (for example, currency is bought at the spot rate, takes a place on a certain term on a deposit and upon termination of this term is for a sale in the same market at other spot rate).

*Interest arbitrage* is related to the transactions in the market of capitals and is based on the use by banks the difference between interest rates in different markets. Interest arbitrage is based on the aspiration of economic entities (investors) to put money into currency, which earns a biggest profit. Interest rates

in different countries rarely coincide in size. Their range in the different markets of the world are enough wide. Investors aim to move facilities from a market with a low interest rate to the market with the higher one. Which is exactly why, they carry out the transaction of interest arbitrage. If investors want to save a capital and get an income, they will make the covered (well-fixed) arbitrage, foreseeing the exchange of one currency for another one. There is a process of borrowing of money facilities in one country and converting them in currency of other country, in which these facilities are provided in terms of credit. Providing means that risk of the reverse converting in currency, in which a loan was done, for payment of loan at the maturity, is removed by the acquisition of this currency in the forward market. The simultaneous purchase of currency under the terms of spot and its forward sale, that is the swap transaction diminishes or removes an operating risk. A swap has a price. This price (costs) must be subtracted from the difference of interest rates of currencies which an arbitration is carried out with in order to get a net income.

So, interest arbitrage consists in taking in loans in one currency and allotting a credit in other one. Risks from the change of exchange rates can be decreased by the conclusion of forward contracts on the exchange of currency for the term of action of loan or deposit.

#### **14.7. Do the governments intervene into the exchange markets?**

Governments can influence the exchange rate of the their currencies through:

- a) buying and selling of large parties of foreign currency in the exchange market;
- b) pursuing of an economic policy, influencing on changing of demand and supply of national currency;
- c) concluding of international contracts, relating to the exchange rates.

The support of the exchange rate at certain level can be carried out by a central bank by means of currency intervention. For this purpose, a central bank must carry on the currency trading on the fixed rate with the private agents of the foreign exchange market. For example, in order to retain the rate of dollar to the hryvnya at the level of 7,89 UAH for a 1 USD, the National bank of Ukraine must have the opportunity to buy hryvnias at this rate on its dollar reserves in any volumes which are dictated by a market. If it is needed to prevent growth of cost of national currency, a central bank must sell its enough amount in order to satisfy surplus demand.

To be in a position to conduct currency interventions, a country must have sufficient reserves of foreign currency, gold reserve, international money (SDR, euro). Central banks, conducting currency interventions, aim to slow the changes of exchange rates, to prevent sharp changes of the competitiveness of export sectors of economy, to prevent fluctuation of level of employment and inflationary biases.

Governments can influence the exchange rate by using two types of public macroeconomic policy:

- the monetary policy, affecting the exchange rate through the mechanism of change of money supply;
- the fiscal policy, affecting the exchange rate by means of change of the government spending and taxes.

The temporal increase of money supply is caused by depreciation of currency and by growth of the output of products. Rapid depreciation of currency results in reduction of prices of national products as compared to imported. Therefore, there is an increase of the aggregate demand on it, which must be covered by the increase of the production turnout. Permanent growth of money supply has a strong impact on the exchange rate and the output of products.

The disadvantage of the application of monetary policy in order to influence the exchange rate is that the large vibrations of money supply in a country can result in inflation or deflation. It limits possibility of the use of credit and monetary policy for adjusting of exchange rates.

A fiscal policy is a policy of change of level of taxation and governmental charges, causing budgetary deficits or surplus.

A fiscal policy can be restrictive and expansionist.

A restrictive fiscal policy is conducted by cutting of costs of government or by the increase of taxes, or by the use of these two methods. The carrying out of restrictive fiscal policy results in the increase of cost of currency. Both slowdown in expenditure of government and increase of taxes reduce the budget deficits. There is also a decrease in demand for goods and services, that is reflected in the import decrease, that, accordingly, causes the decrease in supply of currency and the growth of its cost.

Expansionist fiscal policy in the form of increase of the government spending or maintenance of taxes, or as result of any combination of these two directions, leads to the increase of the aggregate demand. It results in growth of imports and, accordingly, to greater currency supply, which causes the decline of the exchange rate.

In order to achieve the macroeconomic stabilization, a central bank at the fixed exchange rates cannot use a monetary policy. However, a fiscal policy is more effective at the fixed rates, than at floating.

To affect the exchange rate, a government can also by official statements about the intentions to conduct certain strategy in regard to the exchange rate. Purpose of these statements is to have influence on expectations and behavior of participants of the exchange market. Efficiency of such statements depends on the degree of trust of participants the exchange market to the statements of government.

In countries, where a currency exchange rate is fixed, a government from time to time makes a decision about an immediate cost change of national currency, expressed in units of foreign currency.

When a central bank promotes the cost of unit of foreign currency in national currency, the devaluation takes a place, and when a central bank reduces the exchange rate – the revaluation. Devaluation or revaluation means the willingness of the central bank without restriction to trade in national currency in an exchange on foreign one at the new exchange rate without restriction

The change of the exchange rate at the floating exchange rate, as a result of joint influence of market forces and government, designate terms “depreciation” and “rising” in the price of currency.

#### **14.8. What is the nature of the Eurocurrency market?**

The Eurocurrency market (the Euromarket) is the specific sector of the exchange market. If the exchange market is a market, where a sale and purchase of currency is carried out in the country of its origin, an Eurocurrency market is an international market of deposit and loan operations in foreign currency outside the country of origin of this currency.

An Eurocurrency market (in broad meaning) includes the markets of eurodeposits, eurocredits, eurobonds, euroequities, eurobills etc. In practice often under the Eurocurrency market (in the strict sense) understand the mechanism of realization only of short-term operations in the Euromarket. The Euromarket is an universal international market, combining the elements of currency, credit transactions and transactions in securities.

In the Euromarket deposit and loan operations are carried out in eurocurrencies, that is the currencies which are transferred on the accounts of foreign banks and are used by them for transactions in all countries, including the issuer country of this currency.

Eurocurrencies, functioning in the world financial market, keep the form of national monetary items, and prefix of “euro” testifies only that national currency is not under control of national currency bodies.

The Eurocurrency market arose up due to the necessities of firm of investors, some countries, but not to the decisions of governments. It began to function from middle of 50s, when the eurodollar market has appeared in Western Europe. There are following preconditions of development of this market:

- possibility of branches of the American banks in Europe and European banks to pay for dollar deposits the higher percents, than in the USA. In addition, dollar credits, which were given out in Europe, costed cheaper;
- surplus of facilities in dollars at the exporting countries of oil from Middle East and from countries, which gave advantage placing of facilities in the European banks;
- demand on dollar credits from the side of developing countries;
- removal of currency limitations at moving of capital of West European countries.

It resulted in establishment in the national European exchange markets of favorable terms for realization of transactions with the deposits of nonresidents. The countries of Western Europe felt a sharp dollar deficit and in every way encouraged the wave of facilities in the accounts of nonresidents in their banks, as such deposits serve as a currency credit for countries, accepting these deposits. The accounts of foreigners were exempted from taxation and obligate reservation of the part of facilities in a local central bank. In order to distinguish the arrived in the accounts of nonresidents in the European banks “ownerless” currencies from monetary items, which are controlled by their issue central banks, they got prefix of “euro”, which first began to be added to the dollars of the USA, and only after that, as far as they were mastered by the Euromarket, and to other freely in-use currencies.

The abandonment of the currency adjusting and tax legislation of this country induced international banks to the comprehensive assistance of the Eurocurrency market development.

The participants the Eurocurrency market are central banks and governments of countries, which operate mainly in the eurobonds market; commercial banks, being the main participants of this market and actively operating both in the market of short-term and long-term operations; private establishments and investors (mainly TNCs), having in an order substantial sums of facilities and playing a considerable role in the world financial market.

The specificity of the Euromarket consists in the following:

1. Multinational character of functioning.
2. An institutional feature is the category of the European banks and international bank consortia, basis of which is formed by transnational banks (TNBs).
3. Restriction of borrowers access. Major borrowers are TNCs, governments, international currency, credit and financial organizations.
4. The usage of convertible currencies of leading countries: eurodollar (60%), euroyen (6%), euro (3%) and others.
5. The use of the newest computer technologies.
6. Specificity of interest rates:
  - relative independence in relation to national rates;
  - the possibility to set the higher rates on eurodeposits, and the lower rates on eurocredits as compared to national rates, as the system of obligatory reserves does not spread on eurodeposits, which commercial banks are under an obligation to hold on an interest-free account in a central bank, as well as payment of tax does not spread on percents. Therefore, transactions in eurocurrencies are more profitable, than in national currencies.
7. Emission and operations with eurobonds (from 70s), eurobills (since 1981) and euroequities (since 1983).

A main attractiveness of the Eurocurrency market is the absence of government control that enables the European banks to offer on eurocurrency the

deposits of higher interest rates than on holdings, done in domestic currency, and also allows banks to take from borrowers the higher percent for using eurocurrency than for a loan in domestic currency. In addition, in foreign currency transactions banks get far greater freedom of actions. At the same time, an Eurocurrency market has failings. So, at the managed banking system probability of loss of holdings at bankruptcy of bank is insignificant, and at the unregulated system, what is the Euromarket, such probability grows. In the market of currency exchange borrowing of facilities by a company in eurocurrencies can be risky. It is possible to insure from a risk, concluding a forward contract, however, it does not give an absolute guarantee.

In our days, an Eurocurrency market has got enormous scales (its annual volume about \$ 700 bln.). Considerable mobility of facilities in this market due to the large scales of operations substantially influences the currency state of world financial environment. A market covers all the large international banks, financial centers of the whole world and all of convertible currencies.

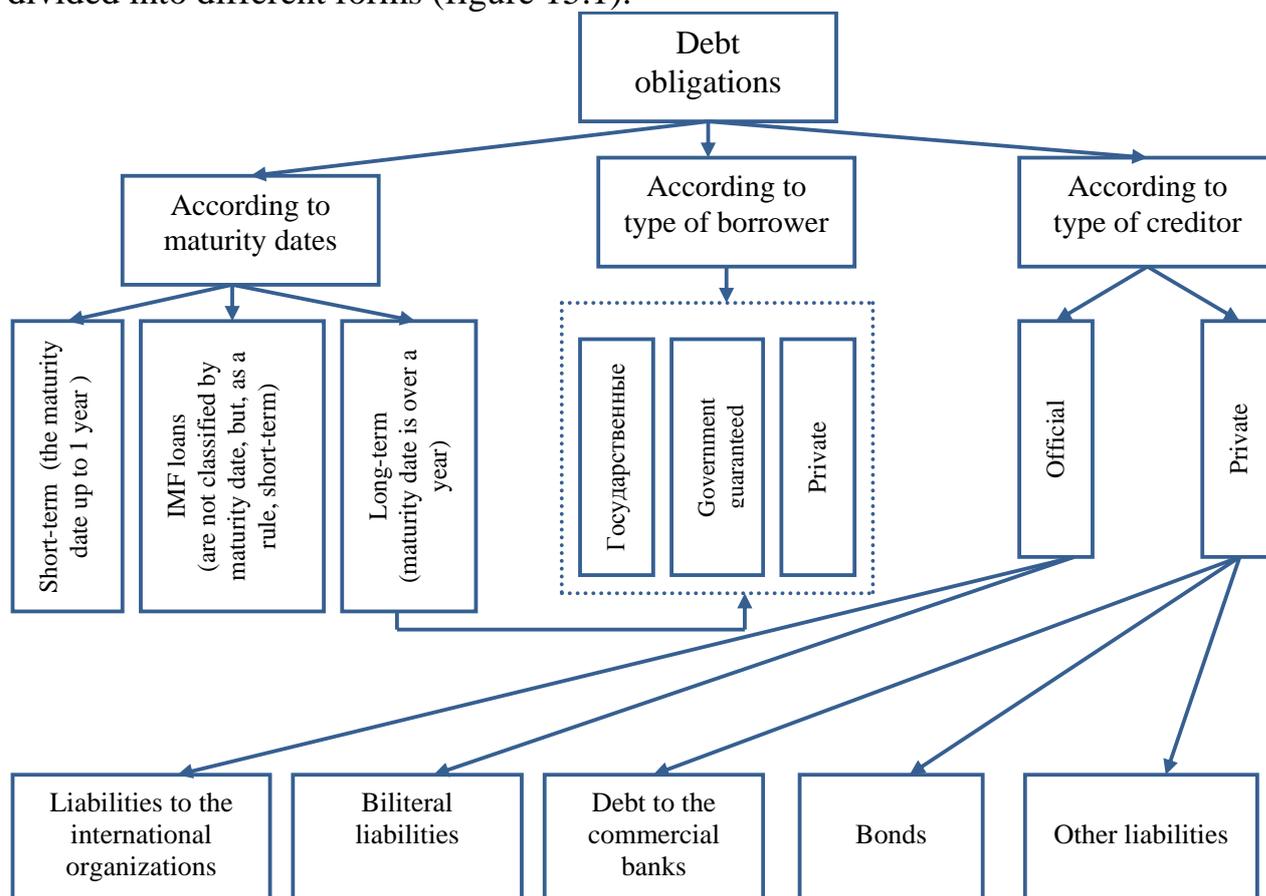
There are about 50% transactions of the Eurocurrency market are carried out in Europe. The main financial center of the Eurocurrency market is London (over 20% of world volume of transactions in eurocurrencies). Over 35 centers of the Eurocurrency market are presently counted. Except London, there are such huge centers as Tokyo (about 20% of the volume of market transactions ), New York, Frankfurt-main (10% per each), Paris (7%), Zurich - Geneva (6%), Luxemburg (4%), Amsterdam, Brussels belong (3% per each).

## Chapter 15. The international credit market

### 15.1. What is the essence of the international credit market?

One of the components of the world financial market is the global debt market (the loan capital market). It is a specific sphere of market relations, relating to the circulation of debt obligations, guaranteeing a creditor a authority to collect debts from a debtor.

Debt obligations according to the methodology of the World Bank are divided into different forms (figure 15.1).



**Figure 15.1. Forms of the debt obligations in the global debt market**

The global debt market is classified into two markets: an international credit market (the market of bank loan liabilities) and an international market of the debt securities, on which financial instruments, certifying debt relations between a creditor and borrower (bonds, notes, commercial papers etc.) are circulated. The main feature of such division is possibility or impossibility of free purchase and sale of financial obligations or financial instruments (transactions on the exchange of today's cost for the future one are designed as securities, which can be the object of free purchase and sale, and in turn, the credit transactions, i.e. the obligation of the borrower before a creditor, is not the object of free purchase and sale). Each of

markets includes the Euromarket as a part of international market of loan capitals [7, p. 152].

The entities of the international credit market are: commercial banks, corporations, financial intermediaries, nonbank financial institutions (insurance companies and pension funds), central banks and other public bodies, governments, regional international banks of development, international financial institutes. However, in most cases the crediting is carried out by the international banks.

International banks are classified according to the share of international transactions and incomes in the general volume of transactions and incomes on the followings groups:

- national banks, having a small foreign branch, which provided an insignificant share of assets and incomes;
- banks, the international transactions of which are accounted from 5 to 10 percents of their incomes;
- transnational banks, wherein the level of international concentration and centralization of capital allows them to take part in the economic distributing of world market of debt obligations;
- offshore banks, incorporated in offshore zones and using the special tax and other privileges in the carrying out of financial and credit transactions. None of transactions of TNBs are carried out without them.

The Bank for International Settlements includes such specific types of activities of banks in the sphere of international credit transactions, as [7, p. 152]:

- loans and credits, which are provided by banks for each other both up-country and outside its national territory;
- loans and credits, provided by nonbank establishments both up-country and outside its national territory;
- the new interbank depositing (transactions with Eurocurrencies, transactions in offshore bank markets).

The international transactions of banks are characterized by following basic features:

- transactions on crediting take into account currency, credit and regional risks, which can be avoided by implementing of different protective measures;
- the greater part of credit operations of international banks is made by credits to the foreign banks, which are not their branches;
- the international crediting is mainly oriented to the grant of short-term credits to foreign banks, which are not the branches of this bank;
- the districts of the short-term crediting are more various geographically, than areas of the long-term crediting.

The international crediting is carried out in different forms. They can be classified according to a few features, characterizing the separate sides of credit relations [6, p. 480].

*According to the sources*, there are the internal and foreign crediting of foreign trade.

*According to the object of the foreign trade transaction*, there are distinguished:

- commercial (commodity) credit, which is directly related to foreign trade. It is provided in order to buy certain commodities or to pay for services and, usually, has a tightly earmarked character, fixed in a credit agreement;
- financial credit. It provides the carrying out of trade in any market, which gives wide possibilities for the choice of business partners. But, mostly this type of credit is used not for trade deliveries, but for direct capital investments, building of investment objects, additions to the accounts in the foreign currency, external debt liquidation, support of the exchange rate etc.

*According to the type of provision*, credits are subdivided into a commodity ones, which are provided to the importers by exporters, and currency ones, provided by banks in a money form.

*According to the terms*, international credits are divided into short-term – up to 1 year (as a rule, used in foreign trade for the noncommercial, insurance, speculative transactions), medium-term – from 1 to 5 years (sometimes to 7-8 years) and long-term – over the 5 years .

*According to the currency of loan*, credits could be provided in currency of the borrowing country, the creditor country, the third country or in international payment units (SDR, euro).

*According to the providing*, there are secured and unsecured credits. Securities for credit are commodities, the title and commercial documents, securities, bills of exchange, immovable property etc. A blank or unsecured credit is provided to a debtor under his obligation to liquidate him in a certain term, and a document on this credit-side is a solo-bill of exchange with a signature of only debtor.

*According to the technique of grant*, credits classify on cash, transferred to the account of debtor in his order; accepted in form accept bills of exchange by an importer or bank; deposit of, bond loans and others.

*According to the type of creditor*, credits are divided into private, provided by firms, banks, brokers; governmental; mixed, in which take part both private firms and the state; intergovernmental credits of international and regional currency-credit and financial organizations.

In practice of the international bank crediting in the field of foreign trade such alternative forms, as international factoring, forfeiting and leasing are used.

## 15.2. What are the currency and financial terms of the international credit?

There are following terms of the international credit obtainment: the cost and credit period, the credit currency and the payment currency, the type of providing and methods of insurance. The row of factors influences these terms: direction of the use of credit resources, the character of entities of credit relations, the level of internationalization of credit markets and their subordination to the national credit control.

The credit cost, that is the expenditures of borrower on a credit, consist of sum of credit, the interest rate, commissions and other fees. It is determined from a formula:

$$S = \frac{Lim \times R \times T_{mt}}{100}, \quad (15.1)$$

where  $S$  is a total cost of credit;

$Lim$  is a credit sum;

$R$  is a general interest rate (basic rate on credit, commission and insurance fees, payment of legal and any other services);

$T_{mt}$  is a middle term of credit.

The major element of the credit cost is an interest rate.

Interest rates are formed on the base of interest rates of countries – leading creditors (The USA, Japan, Germany and others) in the world market.

The range of interest rates is enough wide (an average of 7-18%). The difference of interest rates is determined:

- by a risk degree for a loan;
- by a term, which a loan is provided on;
- by the size of loan (the higher one – on whichever is lower, all other things being equal);
- by the size of taxation (for example, 7% lending interest rate on an untaxed bond is preferably than the 9% rate on a taxable bond);
- by the terms of competition in the markets of loan capitals.

A substantial indicator upon the provision of credit is a credit sum (limit). It is part of loan capital, provided to a borrower. When the company crediting is carried out, a credit sum is specified in a credit agreement. The credit can be provided in the form of tranche of shares, which differentiate according to the terms.

The following statements influence the term of an international credit: the lending purpose, the supply and demand situation concerning analogical credits; the contract size; a national legislative base; the intergovernmental agreements.

There are distinguished the full and intermediate term of credit. A full term includes: the period of the use of the provided credit, favorable period (the period of grace of the used credit), the redemption period (when payment of basic debt

and interests is carried out). It is calculated from a moment of the beginning of drawdown to its final redemption.

The intermediate term of credit includes: the full favorable period and half of term of the use and redemption of credit. It is used for comparing of efficiency of credits with different terms and shows, with an eye to what period on the average there is the total amount of loan.

According to the terms of redemption, credits are:

- with uniform redemption in equal shares during the agreed period;
- with non-uniform redemption;
- with bullet repayment of the entire amount;
- with equal annual installments of principal and interests.

When the credit is provided, the type of security for a loan is discussed. It can be the opening of rubricated accumulation accounts or floating charge or the factoring as well.

In the case of international crediting, it is important to define in what currency the credit will be provided and in what currency the credit debt will be repaid. Due to the right choice of credit currency, it depends whether a creditor will carry losses or not. Credit currency must be stable enough, therefore crediting is carried out in freely convertible currency (FCC). The credit can be provided in national currencies, Eurocurrencies, international payment units. The choice of credit currency is affected by the level of interest rate, practice of international transactions, the inflation rate, dynamics of the currency exchange rate. A credit debt can be repaid in other currency, i.e. it is assumed the difference between the payment currency and the credit currency.

There are contractual and hidden elements of the credit cost.

Contractual elements are the credit costs, conditioned by an agreement. They are divided into basic and additional ones. The basic elements include: amounts, which are directly paid by a borrower to the creditor; interests; expenses on the securitization of commission. The additional elements of the credit cost include: amounts, which are paid by a borrower to the third (for the guarantee). Except the basic interest, a bank commission is collected: for negotiations, for participation, for a management, for an obligation to provide necessary facilities in the order of a borrower, the agent's commission.

The hidden elements of the credit cost include: costs of obtaining credits, which are not fixed in the agreement (unreasonably high prices of commodities on the trade credits, forced deposits in certain sizes in relation to a loan; overvaluation of the collection commission of documents by a bank etc.).

### **15.3. What is the nature of the Eurocredit market?**

The Eurocredit market is the important source of debt funds. Banks provide the short-, middle- and long-term credits in Eurocurrencies. The use of Eurocurrencies, as currencies of loan, is conditioned by such advantages as considerable sizes, facilitated access, short time of mobilization, less cost, as far as national credit restrictions are absent. The operation of Eurocurrencies in the international credit market contributes to the formation of the credit mechanism of greater efficiency and capacity.

The international interest rates are used for eurocredits and are relatively independent in relation to the national rates. The interest rate of Eurocurrencies as a variable one includes the LIBOR (the London Inter Bank Offering Rate) on short-term interbank transactions in Eurocurrencies and the raise to the base rate, that is the bonus for bank services. The interbank interest rate of demand on short-term transactions in the Euromarket in London is called the LIBID (the London Inter-Bank Bid Rate). As the European banks are not the subjects to local law and pay no income taxes, they can reduce interests on the credits, saving high incomes.

Short-term eurocredits, as a rule, are provided on a hard rate for the whole time period in the total amount. It is the simplest type of the credit agreement. The middle- and long-term eurocredits, which serve the reproduction of the fixed assets, the export of machines and equipment, realization of industrial projects, take a form of roll-over and syndicated credits.

The characteristic feature of roll-over eurocredits is the fact that interest rate is not fixed for the whole period of credit, and is reviewing regularly (each 3 or 6 months) in accordance with the change of base rate (the rate of LIBOR). The major forms of roll-over credits are the renewable roll-over credits and the support roll-over credits (under the conditions of “stand-by”).

The roll-over credit under the conditions of “stand-by” is a backstop credit, i.e. when concluding a credit agreement, a loan actually is not provided. A bank undertakes an obligation to provide the eurocredit during the action of agreement on first demand of a borrower.

Renewable roll-over credits do not have the set size of credit amount. It foresees only a maximal limit within the framework of which a borrower has a right to get a credit in necessary sizes at the beginning of every intermediate term of its use. The date of change of interest rate and credit volume is fixed in a credit agreement, that is made each 3 or 6 months within the limits of timeframe of the credit provision. The obligatory conditions of roll-over credit agreements are the following ones: description of partners; the amount, the purpose and the currency of the credit; the plan and period for repayment; cost of credit and the guarantee for it.

Nowadays, the most widespread type of the international credit is the syndicated eurocredits. The sources of eurocredits are resources of the Eurocurrency market. As a rule, such credits are organized by large commercial

banks, which head a consortium (syndicate) and coordinate the terms of crediting with a borrower.

The total cost of the syndicated eurocredit includes:

- interest payments (an interest rate is corrected each 3 or 6 months on the basis of changes in the benchmark price);
- tax payments to the banks, included in a syndicate;
- selling concession to the banks, included in a syndicate.

The general size of commissions is from 0,50 to 1,25% nominal sum of credit.

The major features of the eurocredit are [7, p.168]:

- sum of credits – from \$ 20-30 million to \$ 1-2 billion;
- terms – from 10 months to 12 years;
- interest rates – are reviewed regularly and are calculated on the basis of the base rate (LIBOR, SIBOR, which is the Singapore interbank offered rate, the U.S. Prime Rate) plus a difference (spread). In other words, due to the fact that the floating interest rates are used, the risk of change of interest rates is transferred to a borrower;
- commissions for a management, participation, the loan servicing;
- the used currency is a U.S. dollar, English pound sterling, Japanese yen, euro, Swiss franc and others;
- access to facilities – rapid;
- the right to prepayment – on condition of the compensation payment;
- guarantees and insurances - governments, companies, central and commercial banks provide the guarantees on credits; different state and private agencies carry out insurance on foreign credits and investments.

Advantages of syndicated eurocredits consist in that they are able to distribute a credit risk between the participants of a syndicate; in crediting can take part banks regardless of their sizes; a borrower gets a large credit due to pooling of resources a certain quantity of banks; the difference between rates on credits considerably lower, than in national markets; credits are provided in any freely convertible currency and it enables a borrower to use facilities at own discretion, not limiting the economic decisions.

The disadvantages of syndicated eurocredits are related foremost to that they, in general, are provided on more short periods in comparison with the national bank crediting.

#### **15.4. What is the essence of official development assistance for developing countries?**

One of the major channels of movement of world financial flows is a redistribution of the part of the national income through a budget, in a form of the

assistance to developing countries, the purpose of which is the liquidation of backwardness.

Developing countries get an international official assistance mainly as favourable credits and irretrievable subsidies, as well as in a commodity form.

The entities of the international assistance in a recipient country are governments; executive authorities, authorized by a government; central and export-import banks; legal entities.

A recipient country gets the principal sum of credits and subsidies from the industrially developed countries, international financial organizations, multilateral funds, integration associations, which play the role of foreign donors.

An international official assistance to countries is classified into a project and the off-design assistance .

The project development assistance of the country includes: the system projects (macroeconomic stabilizing of economy), the structural projects (structural transformations in the separate sectors of economy), the investment projects, the technological support projects.

The off-design development assistance includes: the commodity assistance; grants for the support of reformative actions of the government; non-credit instruments of international official development assistance (ODA).

An international official development assistance is carried out on both bilateral (intergovernmental) and multilateral basis, moreover bilateral flows exceed multilateral by more than twice.

During the realization of ODA on bilateral basis, the donor countries allot the credits and irretrievable subsidies from a budget and control strictly their expense. The donor countries must provide funds on ODA in size of 0,7% of GNP, that is fixed in a number of international documents. However, leading donor countries (the USA, Japan, Germany, the Great Britain and others) supply the funds in a less volume: 0,25% - 0,35%.

Basic criteria when ODA distributes is: the level of economic development of the recipient country; the military, strategic, political and socio-economic circumstances.

The greater part of the allocated resources is related to financing of the concrete objects. On favourable terms, the crediting of construction of infrastructure facilities (transport, connection, energy), the social programs ( the education, the health care) and of the agriculture is carried out. An important role belongs also to the food assistance.

During the realization of ODA on the multilateral basis, the funds come from the international financial organizations: IBRR, regional banks of development, IMF, different funds within the framework of the UNO and the EU.

An international official assistance, provided by countries, which are the members of the Development Assistance Committee (DAC), account for more than 133 milliards of doll., that equivalently to 0,31% of the common GNP of these states.

The assistance within the basic programs of development has increased by 9% in the last year. The overwhelming part of the ODA increase is due to the decrease of the debt for foreign lenders. In connection with this component, the foreign support grew in 3 times. The other constituent is a humanitarian help, which grew on 15,8% and attained 8,7 milliards of doll.

ODA, provided by the countries of the EU within the framework of the DAC, grew on 28,5% (to 55,7 milliard of doll.). Its basic part was directed on the decline of debt obligations of recipient countries.

For the last decade with the active involvement of OECD, the number of international agreements, directed on the increase of efficiency of the assistance, were conducted. Five base principles of an international official assistance supply are fixed in these documents:

- recipients must develop own national development strategies;
- donors must support national strategies, developed by the assistance recipients;
- donors should seek the harmonization and coordination of the actions;
- national development strategies must contain clear aims, and achievement of these aims must be controlled;
- donors and recipients are jointly responsible for achievement of aims of development.

## **Chapter 16. The international securities market**

### **16.1. What is the essence of the international securities market?**

The important segment of world financial market is an international securities market.

The issue of securities gives the possibility: to raise a loan for a long period (for a few decades, bonds, for example), i.e. investment in the instruments of a loan; of unlimited use of financial resources (shares), i.e. investment in the instruments of property (title of ownership); to reduce a financial risk, i.e. investment in the instruments of trade in the financial risk (financial derivatives).

The market of long-term securities is called a stock market. Together with the short-term debt instruments of the money market (bills of exchange, certificates), a stock market forms the securities market.

Thus, the international securities market unites the part of the global debt market (namely: international debt securities market, which is mainly presented by the international bonds market), international market of legal titles (property rights) and international market of financial derivatives.

There are following instruments of the loan: bonds, bills of exchange, saving certificates. The instruments of property include all types of shares and depositary receipts. There are also so-called hybrid instruments, securities, which have features of both bonds and shares (for example, preferential shares and convertible bonds) and derivative instruments - warrants, options, futures etc.

Market of loan instruments deals with a loan capital, and market of property instruments - with parts (by shares) of property within a firm capital.

The Bank for International Settlements distinguishes such types of security issues in the international market:

- the security issue by nonresidents in national or foreign currency in the internal financial market of the country;
- the security issue by residents in foreign currency;
- the security issue by residents in national currency, which are intended for a sale to foreign investors [7, p. 175].

The international securities market is divided into two structural segments:

– the foreign securities market. It is a financial market of the states, in which the transactions with financial assets of nonresidents (foreign securities) are conducted;

– the securities Euromarket. It is a market, in which the securities expressed in Eurocurrencies are: produced, bought and sold. The definition of europapers is given in the Council Directive 89/298/EEC of the European Commission, according to which europapers are being in circulation securities, which:

- a) pass underwriting and are placed through mediation by a syndicate, at least two participants of which are incorporated in different countries;

b) are offered in considerable volumes in one or more countries, except the country of registration of the issuer;

c) can be initially purchased (including the subscription way) only through mediation by the credit organization or other financial institution.

The level of development and the role of the stock market differ countrywide. This is because the differences in the ownership structure of the stock capital and in the control system above companies. A stock market is more developed in the countries, where the *"outsider" model of the capital supervision* is implemented (in the USA, Great Britain and in other Anglo-Saxon countries). This model is characterized by following features:

- the capital of stock companies belongs to the large group of individual and institutional interest holders;
- there are effective defense mechanisms of investors' rights and the information disclosure system. If the management of company hurts the investors' rights or works ineffectively, interest holders will realize their securities, and because of large dispersed share ownership, a company can become the object of hostile takeover;
- certain apartness of the company's management from shareholders due to that a stock ownership is distributed between plenty of interest holders, who have some difficulties with the actions' coordination.

For the countries of Europe, Japan and developing countries, the *"insider" model of the capital supervision* is characteristic. This model is characterized by the following features:

- the shareownership is concentrated in large blocks;
- the crossholding of papers is widespread;
- a stock market is less developed in comparison with the "outsider" model. Its volume is less due to lower capitalization of companies and less of papers, circulating in the market
- large shareholders have the possibility to work effectively with each other for the control implementation above the company's management;
- the interests of minority shareholders are protected worse;
- it is almost impossible to carry out the hostile takeover.

The outsider model is considered to be more modern and flexible and has better reaction to the changes of the market environment.

The basic function of the stock market consists in the redistribution of money facilities. In countries with the "insider" model, the role of the stock market in the redistribution of free money facilities is relatively below than with "outsider" one, as in these countries economic entities emphasize the bank crediting.

## 16.2. The international market of legal titles

The international market of legal titles is divided into the equity market, which accounts for about 80% of all new international primary distribution of legal titles, and the market of depositary receipts, which accounts for about 20%. Legal titles are the instruments, confirmative participating of the investor in the capital of the company.

### 16.2.1. What is the nature of the international equity market?

**The equity or the share** is a security without the set term of circulation, certifying the participation interest in the authorized fund of the joint-stock company, which confirms the membership in a joint-stock company and the right to participate in its management. Besides that, it gives a right to the shareholders to receive the share of profits as a dividend, and also the right to participate in the distributing of the property at liquidation of the joint-stock company.

The international equity market depending on the level of economic development of countries is divided into mature markets and emerging markets.

**Mature markets** are the equity markets of the developed countries, characterized by the high part of the organized trade through the exchanges, by the high level of market capitalization, by the developed system of the organizational and legislative provision of dealing in shares. The mature equity markets are considered to be the markets of the USA, Japan, EU countries, Canada, Australia and others.

The aggregate index of capitalization of mature markets is 93% from the general volume of the world equity market.

The *capitalization of the market* is understood to be an index, which reflects the market value of all companies and takes part in transactions in the stock market. *The market value of the company* is determined as the product of share price by the amount of circulating shares.

**Emerging markets** (markets, which are being formed) are the equity markets of developing countries and countries with the economies in transition, which are characterized by the high rates of growth, high risk, low level of market capitalization and mechanism of the legal adjusting, which is still being formed (see table 16.1).

Table 16.1

### The largest emerging equity markets

Countries	The number of companies, which are quoted	The volume of trading per month, millions of U.S. dollars	Market capitalization billions of U.S. dollars
SAR	472	6520	184,6
Brazil	399	3242	123,8
Mexico	166	1212	108,1
South Korea	1518	58721	248,5
Malaysia	865	1245	123,9
Taiwan	638	45179	251,5
China	1235	20692	463,1
Russia	196	2711	124,2

Source: [7, c. 195]

In 2012 the emerging equity markets grew on 18% as compared to 2011. The country with the record world growth in the stock market became Venezuela, the basic index of which grew on 342%.

The structure of capitalization of the international equity market is characterized by such information: there is 91% for all mature markets, including the USA (50, 5%), Japan (8, 3 %), and 9 % for all emerging markets.

The international equity market has two structural segments: the foreign equity market and the Euroequity market.

**The foreign equities** are the equities, which are issued by the nonresident corporation to the stock market of other country in its national currency.

**The Euroequities** are the equities, which are placed simultaneously on a few national stock markets by the international syndicate of financial institutions, which sell them for Eurocurrencies.

The mobilization of financial resources by means of Euroequities, as a rule, is carried out by the TNCs of the developed countries, the stake of which in the general volume of emission is about 50%.

The Euroequities market is characterized by the increase of volumes of emission, expansion of composition and amount of participants, but its scales are relatively insignificant (4-7% of the combined volume of emissions in the Euromarkets of securities).

The international equity market occupies one of central places among other financial markets and its volumes increase. The share trading volume in 2011 was 8 755 billion euros, having grown by 32% as compared to 2010. In this case, the London Stock Exchange had 31% of total trade, NYSE Euronext - 20%, Deutsche Borse - 16%, Spanish stock exchanges - 13%, the Swiss stock exchange - 8% [52].

The regional structure of the equity market is the following: there is 45% accounted for by the USA, Europe - 28%, Japan - 10%, China - 4%, other countries - 13% [52].

The major factors of internationalization of the equity market are:

- internationalization of the corporate property;
- the expansion of the stockholding by nonresident companies through the registry of their shares on the markets of other countries. This is due to that the share registry in the foreign market, as a rule, is preceded the issue of equities in this market with the purpose of receipt of additional capital. Nonresidents use liquidity of foreign markets and in this way increase present facilities for investing and bring down value of capital for a firm. Placement of shares on the foreign market facilitates the acquisition of foreign companies in future;
- a nonresident company can use the foreign equities for payment of labor of local managers, office workers; their holding helps to create positive appearance of company in the eyes of local consumers and suppliers of investment capital;
- the decrease in the financial risk by diversification of their share portfolios in different countries.

### **16.2.2. What are the specifics of the international market of depositary receipts?**

*Depositary receipts* are the derivative securities (in the form of the certificate), issued by the national bank of global significance, confirmative its right to a stockholding of foreign companies and being in its trust management. Every depositary receipt testifies to the holding one or a few foreign shares.

The primary purpose of issue of any securities of companies is the attraction of additional capital for development. It not always can be obtained due to the resources of the internal market. The issue of depositary receipts allows to obtain considerably greater results and has a number of advantages:

- the group expansion of the potentially informed investors due to development of infrastructure of foreign markets;
- improvement of the image and building of trust to the issuer, increase of circle of persons, owning positive information about an issuer;
- the company's fame, its image abroad and reputation of active participant of world financial market allows to negotiate effectively with other companies on financial matters;
- an issuer can avoid in some countries the active constraints on the export of securities abroad, as well as to sell securities to foreign investors, when their sale is forbidden or limited or regulated superfluously hardly;
- an issuer has a right not to follow the legislative requirements of the country, in which the produced through depositary receipts equities are circulated;

- possibility to avoid the problem of reflux of capital, which appears at the direct issue of foreign equities;
- investors are easy to diversify the portfolio of securities;
- investment in depositary receipts has low transaction costs;
- dividends, which are paid on depositary receipts, are more than those, which are paid on equities. So, according to the calculations of Morgan Stanley, a middle rate of dividends on the equities of the American companies is 1,7%, while in Europe - 2,9%, in Great Britain - 3,3%, in the leading Asiatic countries, except Japan, - 3,6% [7, p.199];
- the liquidity of depositary receipts as compared to equities is on the whole much higher.

The basic types of depositary receipts are the American depositary receipts (ADR), European depositary receipts (EDR) and Global depositary receipts (GDR).

*The American depositary receipts* are the circulating securities, issued by the American banks, which have bought large amounts of foreign equities, depositing them on trust accounts. Then they sell their shares in property in a trust, which are called ADR, to the investors. The number of issued ADRs can equal the number of the issued equities or be less, then every ADR is equivalent to one or a few equities of foreign capital. When a foreign company pays a dividend, a bank converts it in dollars at the current rate of exchange and distributes the received funds among the holders of ADRs proportionally to the amount of receipts per each of them.

The cost of ADRs is closely related to the value of foreign shares, represented by

them:	Price of the foreign equity in dollars	×	The number of equities, which are included into ADR	+	Transaction costs, related to the ADRs' sale
The ADR price =					

Among institutional investors, the basic holders of ADRs are mutual and pension funds, to some of which it is forbidden to buy directly the shares of foreign companies. So, from 2469 institutional investors, which manage facilities in an amount of 9,525 trillion US dollars and have assets in foreign securities, 1839 (74%) invest in ADRs and 630 (26%) invest directly in the equities of foreign companies.

According to the data of the Bank of New York Mellon, one of basic world depositaries, the volume of transactions with American and global depositary receipts on the shares in 2011 was 3,8 trillion US dollars and in 2012 - 2,79 trillion US dollars. During 2012 companies all over the world had registered 213 new programs of depositary receipts.

### 16.3. What is the essence of the international bond market?

For mobilization of financial resources of corporations, central and local authorities put bonds into circulation to the securities market. A **bond** is a debt investment security, certifying the deposit of cash resources by its holder and confirming an obligation to recover him in the foreseen terms the nominal value with payment of the fixed percent from the nominal value of the bond. A bondholder (an investor) is not the joint owner of equity capital, he is a creditor and has a right to receive the hard profit and returning in the certain term of the nominal value of the bond or other property equivalent.

A market of international bonds is the source of middle- and long-term capital in an international financial environment.

International bonds are subdivided into foreign ones and Eurobonds.

**Foreign bonds** are securities, issued by a nonresident in the national bond market of other country and shown in national currency of this market.

Basic distinctive features of issue of foreign bonds are:

- 1) the issue of bonds is emitted by a foreign borrower;
- 2) currency of bonds issue is foreign for the issuer of currency;
- 3) flotation of bonds is carried out in the market of other country and is guaranteed by a bank syndicate.

Foreign bonds are issued on separate national long-term loan capital markets, therefore interest rates on their issues are determined at the level of rates of the proper markets. There is a rule in obedience to which interest rates on bonds in hard currencies below, and in unstable currencies - the higher. Interest rates on the bond markets of world financial centers are set by local demand and supply.

Basic investors in the foreign bond market are those, who want the maximal decline of riskiness of investments. Among these are the provident banks, insurance companies and pension funds.

The access to the foreign bond markets is provided not to all borrowers and it is far more difficult to get it as compared to the Eurobond market. So, there are governmental limitations on terms, sums which can get foreigners, and directions of their use. The received capital can be limited only by the local use by means of currency control. The access to these markets is gotten only by international investors with the high credit rating. Developing countries have a limited access to this market. Such selection of investors results in that borrowers with the low credit rating disappear from the foreign bond markets.

The issues of foreign bonds are realized by underwriting (the underwritten placing). The borrower together with a managing bank plan the issue of bonds on the most advantageous terms: term of redemption, coupon profit, possibility of the advance redemption, bonus on condition of the premature revocation, repayment conditions.

The foreign bonds have the long maturity - 20-30 years.

**Eurobonds** are long-term debt securities, which are placed simultaneously in a few markets by transnational syndicates, and currency of their emission is foreign for investors, which they are bought by.

The Eurobonds have the range of valuable features.

1. They provide the right to choose the currency. A currency factor plays an important role in the issue of Eurobonds. But not the any currency is appropriate for s for expression of Eurobonds. Currency must be freely convertible and payments on liabilities should be expressed without a risk within it. From the borrower's point of view, too hard currencies are undesirable, and from the creditor's point of view - the soft ones. When choosing between two variants of expression of Eurobonds, there is a compromise between an interest rate and

hardness of currency. In some cases, Eurobonds are issued in a few currencies. It allows a creditor to require payment in one of a few currencies that reduces a risk, related to the exchange rate, and extends the circle of investors. At the same time, in most cases both the dividends and principal sum on Eurobonds are paid in the dollars of the USA.

2. Bonds have a high degree of currency elasticity both on composition of currencies of expression and on specific gravity of Eurobonds, expressed in one or another currency, in their general mass.

3. Eurobonds provide large mobility of capital in an international scale, as they attract the greater amount of borrowers and investors than other international financial instruments.

4. Eurobonds provide investors with the large diversification of the portfolio and with higher profits, than investments in domestic bonds.

5. There is close connection between an international Eurocurrency market and the Eurobond market. For example, the dealers of Eurobonds can get loan for financing of their transactions in Eurocurrencies.

6. The incomes received on Eurobonds are not taxable. Eurobonds are especially attractive for investors, who pay relatively high taxes on the declared profits and less attractive for investors, the activity of whom is not taxed (insurance companies, pension funds, etc.).

The Eurobond market does not have a concrete geographical location, although new issues usually take a place in London, Luxemburg. A Eurobond market is multicurrency and in a high degree anonymous, as Eurobonds are issued "in bearer form", which are fine with many investors. The terms of redemption of Eurobonds are shorter (5, 10, 15 years) than foreign bonds'. The Eurobonds interest rates have a tendency to be determined by rates on the same currency in the internal capital market, but often are below due to the higher efficiency of the Eurobonds market. Eurobonds are issued with the fixed and the floating interest rate. The total amount of loan is from 50 to 100 thousands of U.S. dollars. The quotation is carried out in world financial centers.

The main actor in the Eurobond market, as well as in every security market, is an issuer (an emitter). The structure of this market according to the categories of

issuers is as follows: corporations - 56%, banks - 25%, sovereign borrowers - 7%, supranational institutes - 7%, others - 5% [7, p. 208].

The international bond market is characterized by the data, set out in table 16.2 and 16.3 [6, p. 525].

Table 16.2

**The volume of the international bond market (US trillion) in 1993-2011**

Types of bonds	1993	1999	2003	2004	2010	2011
Corporate bonds	11,7	20,5	30,8	31,5	60,8	68,3
Government bonds	10,5	14,5	20,5	21,2	32,4	34,3
Total	22,2	35,0	51,3	52,7	93,2	102,6

Table 16.3

**The regional structure of the international bond market**

Countries	Corporate bonds (US trillion)	Government bonds (US trillion)	Market size	
			US trillion	%
USA	36	12	48	20,1
The Euro Zone	29	21	50	21,0
Great Britain	30	7	37	15,4
South Europe	3	20	23	9,6
Japan	12	35	47	19,7
China	5	6	11	4,6
India	1	22	23	9,6
Total	116	123	239	100

Today, 80% of the general structure of international bond market are formed by markets of the USA, Europe, Great Britain and Japan.

Due to globalization processes, growth of government and corporate liabilities, the securities market becomes more transparent and more liquid.

The bond market develops dynamically and has grown in 2,5 times over the last 10 years.

**16.4. What is the nature of the international market of financial derivatives?**

Over the past three decades, many new financial instruments, which are called derivative securities or derivatives, have appeared in the financial markets.

*The financial derivatives* are understood to be the trade instruments of the financial risk, the prices of which are tied to another financial or actual asset. The derivative is a standard document, certifying the right and/or obligation to buy or sell the underlying asset on certain conditions in the future.

If classical securities are designed to attract long-term capital, then derivatives are a means of hedging, i.e. the insurance against price risk. Derivatives stand first among different risk management tools in the financial markets.

Terms of derivatives are determined by agreement of the parties.

According to the classification of the Bank for International Settlements, there are four types of underlying assets, each of which the derivative can be linked to:

- goods (price of the derivative is linked to the price of a particular good or movement of the index on a group of products);
- equities (price of the derivative is linked to the price of a particular equity or price index movement on a group of equities);
- foreign currency (the derivative price is tied to the rate of one or more currencies);
- the interest rate (the price of derivative is linked to a fixed, floating, the combined interest rate).

Key derivative securities include options and futures on commodities, securities, currencies, interest rates and stock indices, swaps on interest rates and currencies, forward contracts.

When buying and selling of derivatives, counterparties do not share assets, but the risks that arise from these assets.

Price of derivatives is determined by the movement in commodity prices, financial instruments or indices of prices or differences between the two prices.

Derivative contracts are closed by the cash settlement. Un this case, the change in ownership or supply of goods is not provided.

The objectives of derivatives are:

- fixing of the future price of any asset today, which is achieved by the conclusion of a forward or futures contract;
- exchange of cash flows or exchange of assets (swaps);
- acquisition of the right, but not the obligation to carry out the transaction (the option type of the contract).

According to the way of the financial organization of the international derivatives trading, there are two main types of contracts: the forwards and options contracts [7, p.213].

The international derivatives market is characterized by the increase in the volume of derivative transactions. So, over the past 5 years it has grown by 125%. This is due to significant instability of quotes and increased risks of loss in the face of exchange rates' declining. Recently, the derivatives market was filled with new participants. Except the institutional investors, management companies and corporations are participated in this market. The possibility of insurance and risk minimization of loss from the devaluation of basic financial assets in the derivatives market, helps to avoid further devaluation and a significant reduction in the volume of transactions with them in the stock markets. The turnover of the

derivatives market is 8 times higher than the global GDP. According to the Bank for International Settlements, the total volume of international derivatives market is about \$300 trillions, and the size of the market with the currency basis exceeds \$6.5 trillion [7, p.217].

International trade in derivatives is conducted on the exchanges (15% of global derivatives trading), and outside the exchanges (on curb) (85%). This led to the separation of these financial instruments into derivatives, which are sold on the stock exchange (interest rate futures and options, currency futures and options, futures and options on equity indices), and the derivatives that are sold outside the exchange (currency and interest rate instruments).

Virtually the entire exchange trade by derivatives has focused on trade in interest rate futures and options (91%). The second place is taken by trade in futures and options on stock indexes (7.4%), the third place - by trade in currency futures and options (1.6%). In 2011 the trade turnover amounted to 11.2 billion futures contracts and 11,1 billion option contracts.

Turnover of exchange-traded derivatives trading is growing as a whole in the world market, and in some regions as well. In 2011, 8.86 billion contracts accounted for the Asia-Pacific region, 7,17 billion - for North America, 4,42 billion - for Europe, 1,53 billion - for Latin America. The biggest stock exchange in the world by the number of transactions in derivatives has become the Korean exchange, on which 3,8 trillion contracts are processed over the year.

Exchange derivatives trading is concentrated in a few leading countries: Great Britain, USA and Germany.

The stock market provides, in contrast to the over-the-counter market, most standardized trade; greater consistency of accounting mechanisms that reduce the degree of financial risk; the developed interbourse system of electronic communication.

The growth of derivatives trading is mainly due to the over the counter market, which is 7 times bigger than the stock exchange. The bulk of the contracts concluded in the OTC market accounts for foreign exchange and interest rate derivatives. The advantages of the OTC market in comparison with the exchange is more flexible contract system, more rapid introduction of new financial instruments, organized system of bilateral bank accounts.

## SECTION 7. MACROECONOMIC POLICY IN OPEN SYSTEM OF INTERNATIONAL ECONOMY

### Chapter 17. Targets and instruments of macroeconomic policy in open economies

#### 17.1. What system of national economic accounting is used in international exchange?

Macroeconomic analysis assumes the usage of multitude of economic indicators which are calculated by statistical agencies and are included into the national accounts system (NAS).

*National accounts system* is a system of interconnected macroeconomic indicators, classifications and groupings which characterize production, distribution, redistribution and reproduction, formation of national wealth for market-oriented economies. Accounts are combined into tables by balance method of accounting of economic operations between economic entities or state institutions. They also reflect foreign economic and financial relations with other countries. National income accounts (for open and closed economies) show that aggregate amount of expenses on produced goods and services equals to aggregate income in national economy.

There is data of the most important indicators in the center of the system: gross national product (GNP) and gross domestic product (GDP).

*Gross national product* indicates the market value of all the products and services produced in one year by labor and property supplied by the country's residents both abroad and at a home-country.

*Gross domestic product* indicates income received inside a country. This indicator includes income received by foreigners inside the country, but excludes income received by citizens of this country outside. The difference between these two indicators is caused by the fact that production factors do not always belong to the residents.

Thus, gross domestic product is one of the most substantial macroeconomic indicators. The analysis of its dynamics lets to estimate the general efficiency of economy and to define the relative consistency of economic policies conducted by the government. This indicator represents the value of final goods, which are used for final consumption, saving and export. The value of intermediate goods and services that are equipped in production process are not included into GDP (raw materials, fuel, advertising, freight and other services) as, otherwise, the indicator would contain double count. While calculating the GDP the amortization of capital assets is subtracted from the value.

GDP measures the amount of the annual national production, it serves as a source of growth of national wealth, which is the total value of the property (assets) belonging to residents. Residents include all entities (enterprises, households), regardless of their nationality and citizenship, having a center of economic interest on the economic territory of this country.

In a closed economy, all produced goods are sold within the country, and all costs are divided into three components: consumption, investment and government spending. In an open economy one part of the production amount is sold domestically, while the other part is exported for the sale abroad, consequently, the cost of domestically produced goods in an open economy can be divided into the four components:

$$Y = C_d + I_d + G_d + EX, \quad (17.1)$$

where  $Y$  — gross domestic product;

$C_d$  — consumption of national goods and services;

$I_d$  — investment spending on national goods and services;

$G_d$  — governmental purchases of national goods and services;

$EX$  — export of goods and services produced within a country.

The sum  $(C_d + I_d + G_d)$  indicates domestic spendings on national goods and services.  $EX$  indicates foreigners' spendings on goods and services produced within the country. The amount of domestic spendings on all goods and services consists of the sum of domestic spendings on national goods and services and domestic spendings on goods and services produced abroad. That is why the total amount of consumption ( $C$ ) is equal to the sum of the amount of national goods and services consumption ( $C_d$ ) and the amount of the consumption of good and services produced abroad ( $C_f$ ); the total amount of investment ( $I$ ) is equal to the sum of the amount of investment spending on national goods and services ( $I_d$ ) and the amount of investment spending on goods and services produced abroad ( $I_f$ ); the amount NT of governmental purchases ( $G$ ) is equal to the amount of governmental purchases of national goods and services ( $G_d$ ) and the amount of governmental purchases of goods and services produced abroad ( $G_f$ ), i.e.:

$$\tilde{N} = \tilde{N}_d + C_f; \quad (17.2)$$

$$I = I_d + I_f; \quad (17.3)$$

$$G = G_d + G_f. \quad (17.4)$$

We put these explicit expressions into equation (18.1):

$$Y = (C - C_f) + (I - I_f) + (G - G_f) + EX. \quad (17.5)$$

After conversion we get:

$$Y = C + I + G + EX - (C_f + I_f + G_f). \quad (17.6)$$

The sum of domestic spendings on goods and services produced abroad ( $C_f + I_f + G_f$ ) is the amount of spendings on import (IM). Thus, we have the basic identity of national accounts:

$$Y = C + I + G + EX - IM. \quad (17.7)$$

The difference between export and import ( $N_{ex}$ ) indicates the net export. While calculating GDP it is necessary to take into account all costs related to purchases of final goods and services produced within the country, including the costs of foreigners (i.e. the value of export) and at the same time to subtract those goods and services produced abroad (i.e. the value of import):

$$Y = C + I + G + N_{ex}. \quad (17.8)$$

This equation shows that the amount of costs on goods produced within the country is the sum of consumption, investment spendings, governmental purchases and net export. In this case the flow of goods and services are regarded. But markets of goods and services are associated with financial markets in every economy. In order to consider the correlation between the markets we write the basic identity of national accounts, including investments and savings. We subtract  $C$  and  $G$  from both parts of equation 17.8:

$$Y - (\tilde{N} + G) = C + I + G + N_{ex} - (C + G); \quad (17.9)$$

$$Y - \tilde{N} - G = I + N_{ex}. \quad (17.10)$$

According to the definition, **savings** are represented as income minus consumption. Consequently, the expression  $Y - \tilde{N} - G$  represents as national savings ( $S$ ):

$$S = I + N_{ex}. \quad (17.11)$$

Moving all components of the equation to the left side we get:

$$(I - S) + N_{ex} = 0. \quad (17.12)$$

This form of the basic identity of national accounts shows the (relationship) correlation between international flows of funds for capital accumulation ( $I - S$ ), and international flows of goods and services ( $N_{ex}$ ). In the system of national accounts ( $I - S$ ) is called as the capital account of balance of payments. **Capital account** represents the excess of domestic investment over domestic savings. Investments may exceed the savings of the country, as investors can finance investment projects with funds borrowed in the global financial markets. Thus, the capital account is equal to the internal capital accumulation financed by foreign loans.

$N_{ex}$  it is a current account of balance of payments. The current balance of payment includes exports and imports of goods and services, income from foreign investments and current transfers. It reflects the operations completed within the period for which a balance is calculated, the effect of which does not affect the balance of payments in subsequent periods. According to the basic identity, the capital account and the current account of balance of payments are equalized. This means that the sum of the capital account's (account) balance and the current account balance's (balance) is zero.

If the value of ( $I - S$ ) is positive, and the  $N_{ex}$  is negative, we have a surplus in the capital account and a deficit in the current account of the balance of payments.

This means that we take loans in the world financial markets and import more goods than export. If the value of  $(I - S)$  is negative and the (positive)  $N_{ex}$  is positive, we have a deficit in the capital account and a surplus of the current account. This means that in the global financial markets we act as a lender and export more goods than import.

## 17.2. What is the essence of internal and external equilibrium?

The problems of *macroeconomic equilibrium* is in the centre of economic theory since the Great Depression of 1929-1933. John Maynard Keynes determined the achieving of «full employment» by the means of aggregate demand regulation as a priority of the economic policy. Monetarists determined the economic growth without inflation as a main goal of the economic policy and proposed the monetary rule as a means of achieving it. Proponents of the theory of rational expectations believed that the lack of confidence in the government is the main obstacle for achieving the potential level of output together with the lowest level of inflation.

Maintaining internal and external balance still remains a major challenge for macroeconomic regulation. The solution of this task requires proper attention to the correlation between the main macroeconomic variables that characterize the internal state of the economy and are mediated by external processes. At the same time, the economic variables that reflect the external sector state is under the influence on internal variables. All this makes it more difficult to carry out macroeconomic policy, which requires the increasing number of factors to be taken into account.

In various models of an open economy there are different interpretations of the internal and external balance, but the meaning remains the same. In a broad sense, *the internal equilibrium* is the equilibrium of the national income, and *the external equilibrium is the* equilibrium of balance of payments.

*The internal equilibrium* require the balance of supply and demand together with full employment and absence of inflation (or its stable low level). In the short term, this problem can be solved by regulation of aggregate demand through fiscal and monetary policy. According to the approach of the classical school, the internal equilibrium means a stable state of income ( $Y_n$ ) on a certain "natural" level that indicates the availability of capital and labor resources. In the Keynesian theory the "natural" level of income is understood as the non-inflationary rate of unemployment.

The external equilibrium means a maintenance of a zero balance of payments in terms of a certain exchange rate regime. The maintaining of external equilibrium may reflect two main objectives: to achieve a certain state of the current account and to maintain a certain level of foreign exchange reserves. Macroeconomic regulation is provided by monetary and fiscal policy. The goal of

the external equilibrium is complicated by *capital mobility* - intensity of the cross-country mobility of capital in response to interest rate fluctuations.

In fact, the maintenance of internal and external equilibrium refers to the functioning of three markets: goods, money and foreign exchange markets.

### **17.3. What tools of economic policy are used for balance in economy?**

The functioning of the market does not always lead to a satisfactory equilibrium (balance). Government intervention becomes necessary to regulate the economy. The government is developing the economic policies to achieve macroeconomic equilibrium.

*An economic policy* is a set of various measures taken by the government in order to achieve the specific goals of economic development, which is a complex social mechanism. It aims to reach the following objectives:

- economic growth, determined by the rate of GDP growth;
- full employment, defined by the level of unemployment;
- price stability, defined by the rate of inflation;
- external account balance that is reflected in the accounts of balance of payments.

There are two main types of economic policy depending on the purpose pursued by the government:

- cyclical policy, which is used to compensate the temporary reduction in economic activity;
- structural policy, which is used to change the economic and social structure.

Long-term goals are laid down in the basis of the structural policy. It contains measures affecting employment, tax policy, industry and agriculture, health care system, environmental policy, the system of social protection of the population, etc., which give results only in the long term.

The economic policy is more effective when the decisions are taken by the government with a focus on specific current conditions - production and technical potential, the state of the social structure, the institutional order of national and local government, etc.

For the implementation of economic policy by the state, the following macro-economic instruments are used:

- fiscal policy;
- monetary policy.

*Fiscal policy* represents as measures affecting public spending, taxation and the government's budget in order to ensure full employment, an equilibrium of balance of payments and economic growth.

Instruments of fiscal policy are the costs and revenues of the state budget: public procurement, taxes, transfers. In this regard, there are two types of fiscal policy - facilitating and moderating policy.

*Facilitating fiscal policy* (expansionary fiscal policy) aims at overcoming the cyclical downturn of the economy in the short term, implies an increase in government spending, tax cuts or a combination of these measures. In the long term, such policy leads to the growth of the economic potential of the country.

*Restrictive fiscal policy* in the short term is to reduce inflationary demand and slowing the decline in production. For this purpose, measures such as: reducing government spending, tax increases, and the combination of these measures are used.

*Monetary policy* represents as measures of authorities to influence on money supply, interest rates, and through them - on investment and real GDP using direct and indirect instruments of regulation.

*The direct instruments* include administrative measures such as directives of the central bank. Credit limits and direct regulation of interest rates provide the most rapid economic effect. But usually, in a market economy the implementation of monetary policy is provided by indirect instruments.

*The indirect instruments* include such measures as changes of reserve requirements, interest rates and open market operations.

Reserve requirements are determined as a percentage of total deposits. The central bank manipulating the statutory reserve ratio affects the ability of commercial banks to lend .

Raising reserve rate increases the amount of required reserves that banks must hold. This tool affects the decline in bank lending due to the loss of excess reserves, or forcing banks to reduce deposits and thus the money supply. Decrease in reserve rate moves required reserves in excess and increases the ability of banks to create new money by lending.

One of the traditional functions of a central bank is providing loans to commercial banks, and the interest rate, which the loan is issued at, is called the discount rate. Changing the discount rate affects the volume of reserves of commercial banks, reducing or increasing their ability to lend. Thus, the increase in the discount rate leads to a decrease in reserves, thereby reducing the ability of the bank to create money by lending.

For countries with developed stock market transactions in the open market are the most important means of controlling the money supply by the central bank. Application of this method is difficult in the emerging stock market. This tool involves the buying and selling of government securities by the central bank. A purchase of securities is accomplished by transferring the securities portfolios of commercial banks to central banks which in their turns pay for these securities by increasing the reserves of commercial banks in the amount of the purchase. A sale of securities is fulfilled by transferring securities from the central bank to commercial banks, that reduces their reserves.

Monetary policy, as well as fiscal, has two types: expansionary and contractionary.

*Expansionary monetary policy* is called as a policy of "cheap" money. Among its tasks are making credits cheaper, facilitating access to it, in order to increase aggregate demand and employment. For this purpose the reduction of reserve ratio, lowering the discount rate and the purchase of securities are used.

*Restrictionary monetary policy* (a policy of "expensive money") aims to reduce the money supply in order to reduce costs and curb inflation. To maintain such a policy it is necessary to raise the reserve requirement and the discount rate, and also sale government securities.

Most economists believe that monetary policy is an important part of the economic stabilization policies, some of the scientific schools pay more attention to fiscal policy.

In the Keynesian model fiscal policy is seen as the most effective instrument of macroeconomic stabilization, as government spendings has a direct impact on the value of aggregate demand and multiplicative effect on consumer spendings. At the same time taxes are quite effective) influence on consumption and investment. In the classical model fiscal policy plays a secondary role in comparison with the monetary one. Moreover, fiscal measures cause crowding-out effect and enhance the increase in the rate of inflation, that significantly reduces its incentive effect.

In the Keynesian model monetary policy is seen as a secondary towards fiscal, because the monetary policy transmission mechanism is very complex: the change in money supply leads to changes in GDP through the mechanism of change in investment spendings, which respond to the dynamics of the interest rate. In the classical model it is assumed that the change in the money supply directly affects aggregate demand and, consequently, the nominal GDP.

In the modern market economy it is taken as a rule, first of all, to consider monetary measures, and then - fiscal. This is due to the fact that the implementation of monetary policy to a greater extent reflects the typical balance of the market and the state origins in the economy.

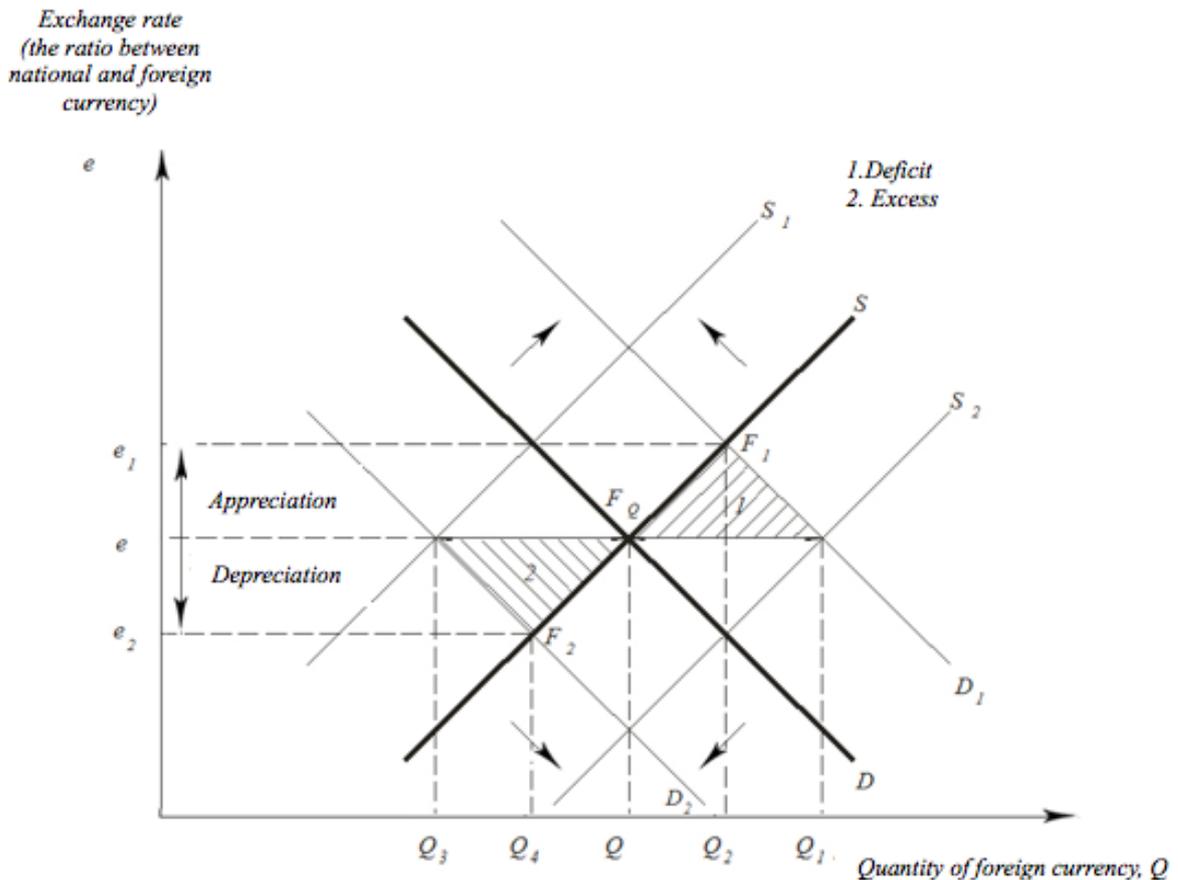
In various models there are different approaches to macroeconomic equilibrium due to the objectives and instruments. Dutch economist J. Tinbergen worked out the rule that to achieve  $N$  goals it is necessary to use  $N$  different instruments. Thus, if there is a double set of objectives of macroeconomic equilibrium, such as income and balance of payments, it is necessary to use two independent instrument of economic policy.

#### **17.4. How do fluctuations of nominal exchange rate influence on both current balance of payments and balance of foreign trade?**

Exchange rates have a significant impact on foreign trade of different countries, affecting the level of prices, wages, interest rates, employment, investment decisions and competitiveness of the economy overall. Supply and demand for foreign currency is constantly changing under the influence of various

factors that reflect changes in the country's place in the global economy. Consequently the exchange rate of the national currency is changed. To understand the impact of the exchange rate on the balance of payments and foreign trade balance, let's examine the changes in the economy in terms of the changes in the value of national currency.

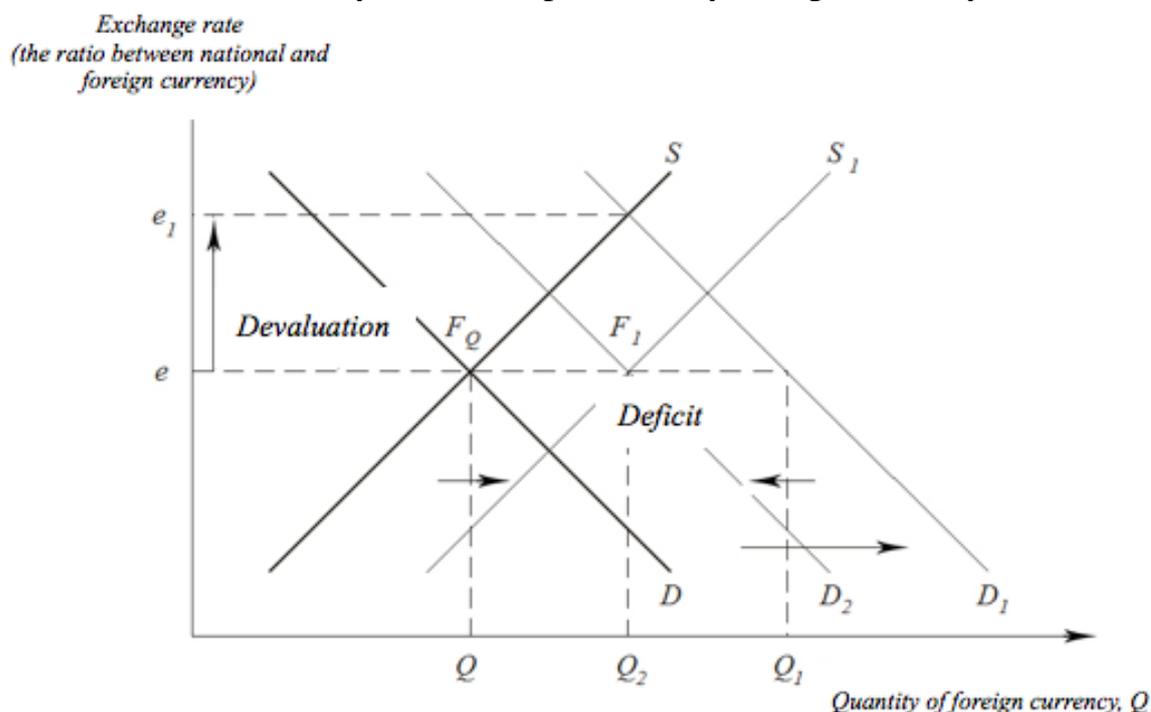
If a country adheres to a *system of floating exchange rates*, the exchange rate is set by floating of supply and demand as the equilibrium price of the currency on foreign exchange market. In this case demand ( $D$ ) and supply ( $S$ ) depend on the volume of foreign trade operations. Let's examine two cases of depreciation and appreciation of the national currency (Fig. 17.1).



**Figure 17.1. The establishment of the exchange rate under a regime of floating exchange rate**

Initially, the exchange rate ( $e$ ) was in equilibrium at point  $F_0$ . Due to the increase in imports, the demand on foreign currency increases, i.e.  $D$  curve will shift to the level of  $D_1$ , the shortage of demand on foreign currency will shift the equilibrium level of the exchange rate to  $F_1$ , which means its growth rate. Similarly, the drop in demand on foreign currency by reducing the size of the import results in movement of the demand curve to the level of  $D_2$ , there is excess supply of foreign currency, resulting in a balance of supply and demand set at a lower level of  $F_2$ , which means the fall in the exchange rate of the foreign currency. Similar effects are occurred by changes in the volume of exports.

Under a system of fixed exchange rates, the exchange rate is set by the central bank, which assumes responsibility to buy and sell any amount of foreign currency at a fixed exchange rate (Fig. 17.2). In the case of growth in demand on foreign currency the central bank begins to sell foreign currency from its reserves to keep the exchange rate at the level of  $F_0$ . With an increase in imports, the demand on foreign currency is also increasing, and the demand curve shifts to the level of  $D_1$ , while the supply remains the same -  $S$ . To keep the exchange rate at the level of  $F_0$ , the central bank sells foreign currency and its supply increases and the supply curve shifts to the level of  $S_1$ . Together with the sale of foreign currency a reduction of the volume of currency in circulation takes place. Decreasing in the money supply leads to a reduction in expenses, including spendings on imports, as residents have less currency in their disposal to buy foreign currency.



**Figure 17.2. Exchange rate adjustment by the central bank**

As a result, the demand curve  $D_1$  shifts back gradually to the level of  $D_2$ . The adaptation process takes place as long as the supply and demand curves do not intersect at the point of  $F_1$ , at which the exchange rate will remain the same  $F_0$ .

Typically, economists point to the impact of the exchange rate on the balance of payments. A significant impact on the exchange rate has a current account balance that characterizes the flow of real values. (In) the balance of current account reflects trade in goods and services, net income on investments, and transfer payments of the population and the state. Depreciation of the national currency allows the country's exporters to reduce their prices in foreign currency, to receive the same amount in the national currency during its exchange. This increases the competitiveness of the goods and creates opportunities to increase

exports. Imports in this situation slow down, as foreign exporters are forced to raise prices to obtain the same amount in their currency, which reduces demand on goods. At the same time there is an increase in import prices (if import demand is inelastic at prices). Together With the strengthening of the national currency the reverse situation is observed - the decline in exports due to the increase in export prices and reduction in demand on it as well as an increase in imports.

Net effect of exchange rate on the trade balance will depend on price elasticity. At constant price levels in the domestic market and abroad the net export of goods depends on two variables - the real national income and the nominal exchange rate.

With the growth of real income households increase demand not only on domestic but also on foreign goods, so net export of goods decreases. The impact of the nominal exchange rate on net export of goods depends on the ratio of the elasticities of export and import:

$$\varepsilon_{ex} = \frac{dQ_{ex}}{de} \times \frac{e}{Q_{ex}}; \quad (17.13)$$

$$\varepsilon_{im} = \frac{dQ_{im}}{de} \times \frac{e}{Q_{im}}, \quad (17.14)$$

where  $\varepsilon_{ex}$  — the coefficient of export elasticity;

$Q_{ex}$  — the volume of export;

$e$  — the nominal exchange rate;

$\varepsilon_{im}$  — the coefficient of import elasticity;

$Q_{im}$  — the volume of import.

If the exported goods are elastic at price, their quantity will increase faster than prices fall, and the total revenue from export will increase. Similarly, if the imported goods are elastic, total expenditure on import will decrease. Then, at a given real income the net export of goods that was measured in local currency ( $N_{ex}(e)$ ), is estimated by formula:

$$N_{ex}(e) = Q_{ex}(e) - eQ_{im}(e) \quad (17.15)$$

where  $Q_{ex}(e)$  — the volume of export in national currency;

$Q_{im}$  — the volume of import.

In this case the increment in net export ( $\Delta N_{ex}$ ) is defined by formula:

$$\Delta NE = \frac{dQ_{ex}}{de} \Delta e - e \frac{dQ_{im}}{de} \Delta e - eQ_{im} \quad (17.16)$$

As

$$\frac{dQ_{ex}}{de} = \varepsilon_{ex} \frac{Q_{ex}}{e}; \quad \frac{dQ_{im}}{de} = \varepsilon_{im} \frac{Q_{im}}{e}, \quad (17.17)$$

then

$$\Delta NE = \left( \varepsilon^{ex} \frac{Q^{ex}}{e} - \varepsilon^{im} Q^{im} - Q^{im} \right) \Delta e = \left( \varepsilon^{ex} \frac{Q^{ex}}{Q^{im}} - \varepsilon^{im} - 1 \right) \Delta e Q^{im} \quad (17.18)$$

In other words, the increase in the exchange rate leads to a rise in net export of goods, if the amount of the price elasticity of export and import in absolute value is more than one, i.e. the devaluation of the national currency should improve the current balance.

$$\left| \varepsilon^{ex} \frac{Q^{ex}}{\varepsilon Q^{im}} + \varepsilon^{im} \right| > 1 \quad (17.19)$$

### 17.5. What is the main point of the Marshall-Lerner condition?

The expression 18.19 is called *the Marshall-Lerner condition*. The general sense of the elasticity approach to the analysis of trade balance is that for certain values of the elasticity of export and import devaluation or depreciation of the currency has a positive effect on the balance of payments. Application of this approach has its practical limitations. This is due to the fact that the model does not take into account other factors of influence on the balance of payments, such as monetary policy, the expectation and behavior of economic agents, wage policy and other factors. But empirical studies have shown that in most cases, in the medium term, the Marshall-Lerner condition occurs [24, c. 358].

However, in the short term, many goods can be inelastic, because the implementation of quantitative changes as a result of price changes the lag time (up to 1 year) is necessary. This is due to the lack of an immediate response of quantitative supply and demand of currency on exchange rate changes. It is explained by multiple time lags. For market acceptance for currency rate change takes time on:

- decision to change the quantities of import and export under new exchange rate,
- (conclusion of) contracts and the supply of goods at new prices,
- change of the parameters of production, its adaptation to the new prices.

As a result, for almost all countries short-term elasticity of export and import is significantly lower than the long-term one. So devaluation even in a stable foreign exchange market and in the Marshall-Lerner condition may initially cause a deterioration of the trade balance, improving it only after a certain time. In this case we say about the effect of the curve «J». The name of this economic effect was due to its graphic form, which resembles the letter «J» of English alphabet.

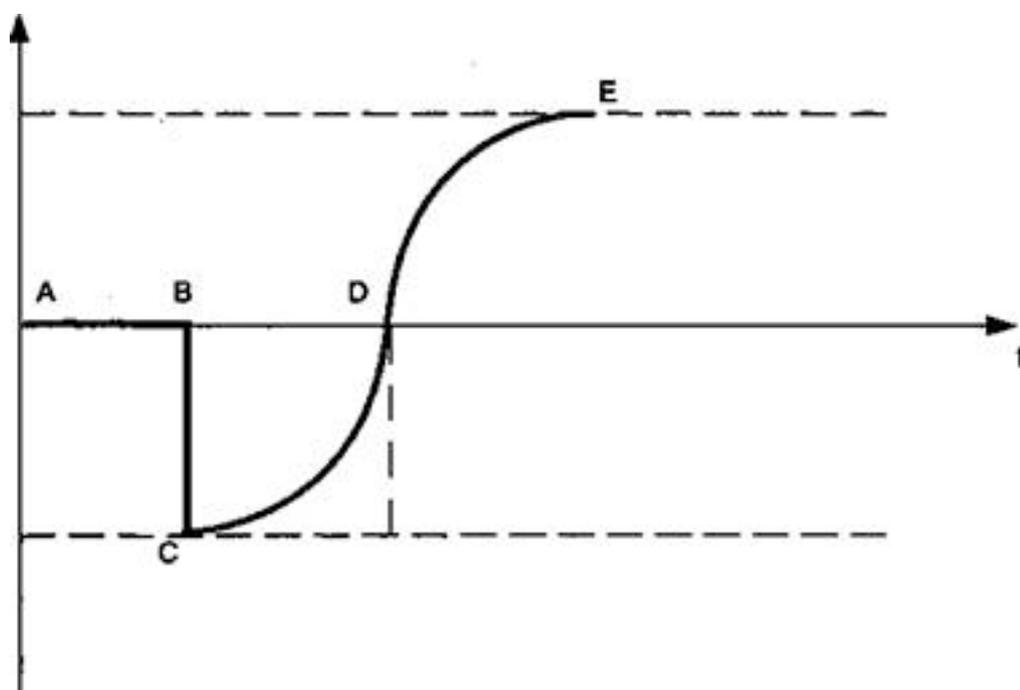
### 17.6. What does J curve testify?

J-curve is a curve which reflects a temporary deterioration in the trade balance as a result of depreciation of the real exchange rate of national currency, leading to its subsequent improvement [24, c. 359]. In economics, there are several stages of adaptation balance of payments to the depreciation of the national currency (Fig. 18.3).

In Phase I (AB) the rate is stable and does not change.

In Phase II (BC), devaluation of the currency takes place. But at the moment of exchange rate changes in the global economy export-import contracts with fixed terms have already been drawn up, and the change of rate has no effect on these contracts. In this phase, there may be changes in the balance of payments as well as the price of the national currency in terms of foreign currency changes.

In Phase III (CD) new agreements with taking into account the changes in the exchange rate are concluded. The economy adjusts to new prices, the trade balance as well as the current account balance is gradually (aligned) equalized to the pre-devaluation level .



**Figure 17.3. J-curve**

In the long term (phase IV - DE) with an increase in the elasticity of demand quantitative changes in export and import are expected. Import demand is reduced due to the increase in import prices, it stimulates the improvement of the current account. At the same time, the demand for export increases, since at constant prices in the national currency the price in foreign currency reduces and also causes the improvement in current account transactions.

So, devaluation can be used as a tool of economic policy in the context of stable foreign exchange market. Under successful devaluation worsening balance of payments will occur temporarily, but over time it will improve. The reverse

situation is also true: the revaluation of national currency in the short term can lead to improvement in the long-term deterioration of the balance of payments.

## **Chapter 18. Macroeconomic balance in cases of the fixed and floating exchange rates**

### **18.1. What does the T. Swan diagram represent and what is it used for?**

In the open economy in case of the development of macroeconomic policy it is necessary to solve two main problems. One of it aims to achieve an internal balance, and the second - to achieve an external balance.

The internal balance of the government is a state of economy which is at the level of potential production volume, i.e. it supports a full employment in the country and the internal price level is stable. The external balance is reached when it isn't observed an excessive deficit of current account and balance of current account equals or is close to zero.

According to Tinbergen's Rule, provision of the internal and external balance requires two independent instruments of economic policy. There are two types of economic policy for achieving a balance: expenditure changing policy and expenditure diversion policy. Expenditure changing policy is a policy of demand management which is directed on income and employment changes, and is performed in the form of fiscal or monetary policy. Expenditure diversion policy is a policy of demand management which is performed through management of the exchange rate and it influences structure of expenses on foreign and domestic goods. It influences not only on account balance of current transactions, but also on overall demand.

Expenditure changing policy provides change of government expenditures, taxes and change of money supply in the country, that later influence the interest rates. Expenditure diversion policy uses devaluation and revaluation of currency for the purpose of influence on balance of the current balance. Devaluation raises internal prices of import and reduces foreign price of export that leads to improvement of the account of current transactions. Using such instrument as devaluation/revaluation for improvement of balance of the current balance it is necessary to consider a condition of Marshall – Lerner [24 , p. 326].

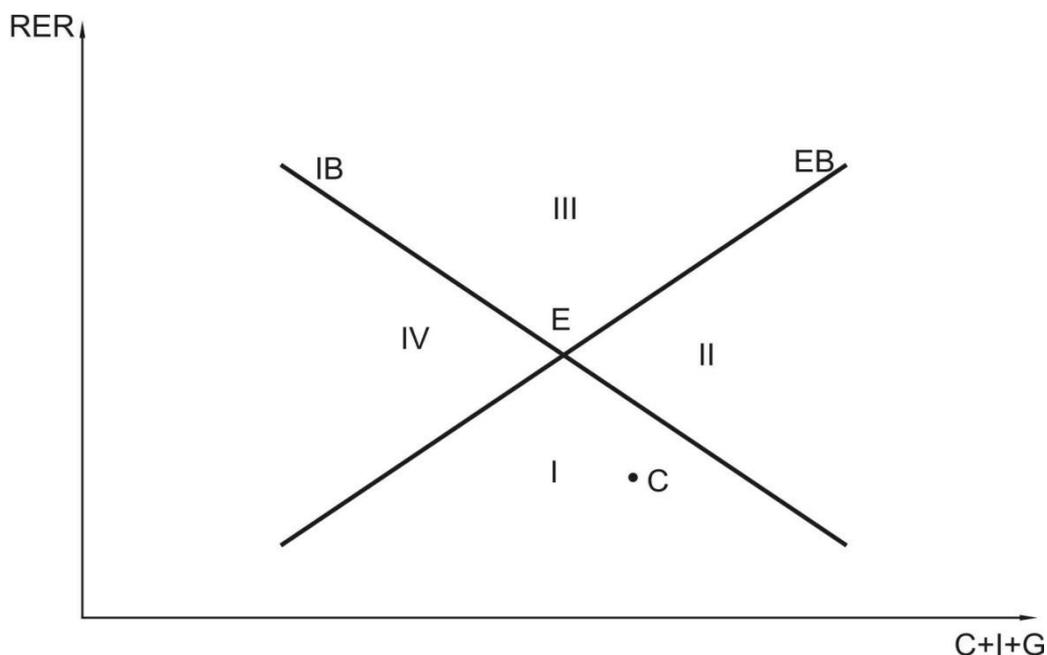
Sometimes, in order to achieve internal and external balance is not enough to implement one of these policies. For example, it is impossible to use the expenditure diversion policy in case of fixed exchange rate. As a result there is the expenditure changing policy for achievement of internal and external balance. Using Swan diagram it is possible to determine a combination of the expenditure changing policy (fiscal and monetary) and the expenditure diversion policy (changes of currency rate) which are necessary to reach internal and external balance at the same time.

There are several assumptions in Swan diagram: in the economy two goods

are made and consumed by domestic and foreign trade; a good of domestic trade isn't a good of international trade; it is considered a small open economy which has no effect on the level of world prices (level of goods); goods are ideal substitutes in the total demand and they are usual substitutes in production [24; c.327].

Let's investigate fig. 18.1, that represents the Swan diagram (presented) [38, p. 449]. With its help It is possible to analyze a process of achievement of internal and external balance (with its help) in case of implementation of the expenditure changing policy and the expenditure diversion policy.

The vertical axis RER measures a real exchange rate of foreign currency. The horizontal axis measures real internal expenses or absorption ( $C+I+G$ ), where C – consumption, I – investments, G – government expenditures. The curve EB represents various combinations of exchange rates and real internal expenses for achievement of external balance. A positive slope of the curve EB is explained by the fact that higher RER level (devaluation) will improve a trade balance under the condition of Marshall – Lerner that is balanced with growth of internal expenses ( $C+I+G$ ) to cause the sufficient growth of import for safety of external balance.



**Figure 18.1. Swan diagram**

The curve IB represents various combinations of exchange rates and real internal expenses which lead to internal balance (that is a full employment and absence of inflation). The curve IB has a negative slope as lower RER level (revaluation) worsens a trade balance reducing internal expenses. Therefore preserving internal balance requires increasing of real internal expenses. Simultaneous internal and external balance is reached at the point E that is at point of intersection of the curves IB and EB. All the points that are above the curve EB, corresponding to a positive account balance of current transactions of the balance of payment, those that are below - correspond to negative balance. All the points

that are above the curve IB mean internal inflation, and the points that are below - mean availability of unemployment.

To analyze the state of the economy of the country we use the chart that illustrates 4 possible situations. The I area reflects a situation of a negative account balance of current transactions and unemployment, II area – a negative balance of current account and inflation, III area – a positive balance of current account and inflation, IV area – a positive balance of the current account and unemployment. The final goal is simultaneous achievement of internal and external balance at the point E. This requires the changes in government expenditures and the influence on the level of exchange rate.

And now there is an example when the economy is not in a point of balance, but at the point C (I area) where there is observed a deficit of the current account and unemployment. In order to achieve a balance, it is necessary to use two instruments of economic policy. Otherwise, using only the devaluation, it is possible to reach only the external balance equilibrium in terms of unemployment, i.e. it is impossible to reach an external and internal balance at the same time. Thus, to achieve the balance at the point C, except devaluation, it is necessary to use an increase of the government expenditures.

So, Swan diagram shows how to reach an internal and external balance at the same time by combination of policies, if one of the instruments of macroeconomic regulation is the exchange rate (i.e. the exchange rate is not fixed). The actual use of expenditure diversion policy is impossible in case of the fixed exchange rate. As a result, the country has only expenditure changing policy for achievement of internal and external balance. The solution of this problem was proposed by R. Mundell, (showing) he proved how it is possible to reach the internal and external balance at the same time in case of the fixed exchange rate without implementing the expenditure diversion policy.

## **18.2. What is the essence of R. Mundell Model and what is it used for?**

R. Mundell discovered that a certain combination of fiscal and monetary policies allow to maintain macroeconomic balance because these policies have different influence on the internal and external balance.

Graphical representation R. Mundell Model (Fig. 18.2) assumes that two main instruments of economic policy are directly set on axes of coordinates: a level of government expenditures (G) and an interest rate (r), that are necessary in order to support objectives. Movement to the right on the horizontal axis G means expansionary fiscal policy, and movement to the left on the axis G means restrictive fiscal policy. Movement on a vertical axis r displays expansionary monetary policy if we move up on an axis and restrictive if we move down on the axis.

The curve BP represents a set of combinations of instruments of monetary and fiscal policies that provide an external balance, i.e. situations when balance of payments equals to zero ( $BP=0$ ). Any point that is situated more left and above curve BP reflects a positive balance of payments ( $BP>0$ ), and any point that is situated more right and lower reflects a negative balance of payments ( $BP<0$ ). Expansionary fiscal policy shifts the curve BP, and it leads to a negative account balance of current transactions. In order that economy remained on the line BP, it is necessary to raise an interest rate for attracting of the foreign capital, which would block a current account deficit.

The angle of slope of the curve BP depends on a degree of capital mobility: than capital is more mobile, it is required the smaller amount of capital inflow for financing of the current account deficit, i.e. the curve BP will be more flat, and vice versa.

The curve IB represents such combination of fiscal and monetary policies, which leads to internal balance. All the points that are on the right and below of this curve are in a zone of excess demand, and the points that are on the left and above of this curve are in a zone of the excess supply (unemployment) that is explained by reducing government expenditures (G) and increasing of an interest rate (r). The set of combinations of the government expenditures (G) and interest rate (r) maintaining an internal balance, provide curve IB with a positive slope.

In order to maintain internal balance in case of expansionary fiscal policy the higher level of budget expenses must be compensated by stricter monetary policy, this shifts the curve IB to the right. In practice it appears that the curve BP can't be steeper than the curve IB. It is connected with changes in interest rate as it has a direct impact on internal balance (its growth leads to a reduction of investments), and also direct and indirect impact on the external balance. In this way, a monetary policy that manipulate of an interest rate is more effective for achievement of external balance, and fiscal policy is more effective for internal balance. As it is known from the behavior of the curve BP within the model IS-LM-BP, the most reaction to changes of percent is reflected in case of its approach to a horizontal axis.

Thus, a monetary policy in the conditions of fixed exchange rate is more connected with problems of external balance. In this case, the Central Bank needs to support a certain level of exchange rate. Fluctuation of money supply is often caused by the necessity to maintain external balance regardless of whether these fluctuations correspond to requirements of internal policy. It is related to the problem, as the changes that happen in money supply are reflected in the emergence of deficit or surplus in the balance of payments. Then, the Central Bank must reduce or increase reserves for the purchase or sale of assets to restore external balance and maintain an exchange rate thereby withdrawing part of money from circulation or replenishing amount of their supply. The Central Bank can use sterilization of monetary flows for leveling of influence of balance of payments on the money supply.

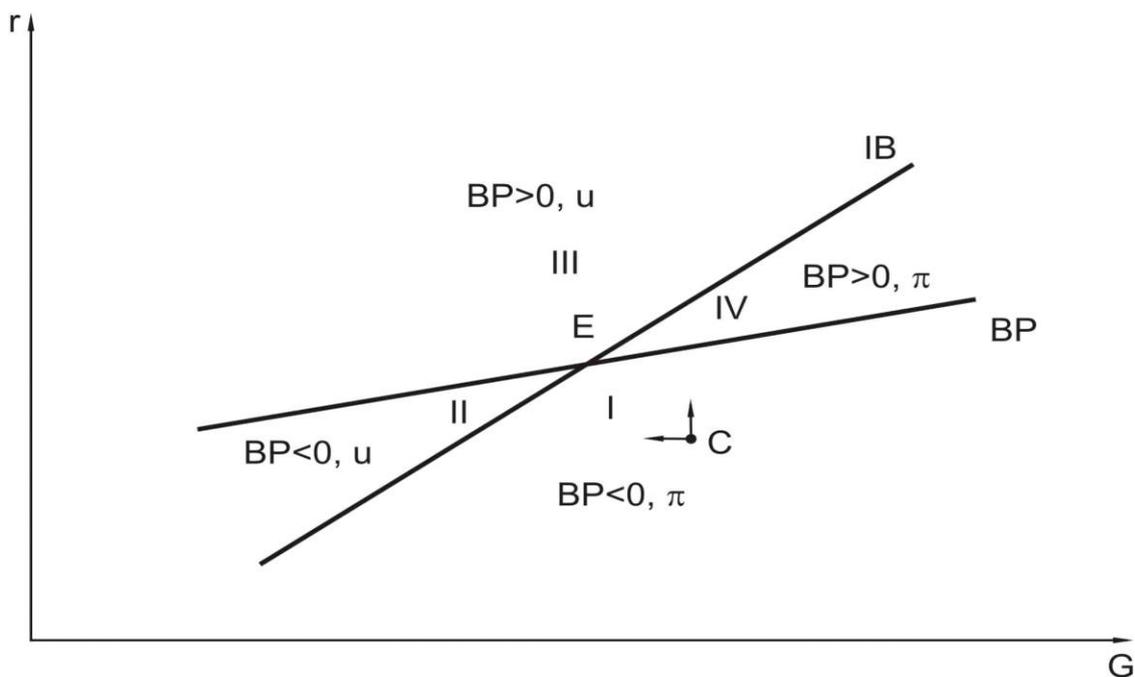
Sterilization of monetary effects – it is maintenance of steady money supply in case of a fixed rate. There are used several instruments for implementation of sterilization: open market operations, management of reserve requirements, and also deposits of a public sector. As a rule, sterilization is used to maintain short-term imbalances, however its opportunities are limited. If balance of payments deficit remains for a long time, a decline in currency reserves can lead to their complete exhaustion. A country will be forced to refuse the fixed rate or to allow a money supply decreasing. It is necessary in order to neutralize the decreasing tendency of the exchange rate and to prevent the money outflow abroad. In case of steady positive balance of payments (surplus) the amount of reserves can become so large that domestic credit will take a zero value.

Thus, even sterilization doesn't protect money supply from influence of the balance of payments. It severely limits the possibilities of impact of monetary policy on internal balance, and leaves its regulation to fiscal policy.

The effectiveness of fiscal policy in case of a fixed exchange rate is directly connected with capital mobility. Growth of government expenditures leads to increase of interest rate that stimulates capital inflow from abroad. Thus, in case of the fixed rate a fiscal policy, unlike of a monetary policy, can successfully influence on a level of income and, therefore, can influence on internal balance. And in such case a degree of influence expands together with increasing of capital mobility.

Now we are going to examine the interaction of policies (using) by means of the Mundell diagram (fig. 18.2).

In the Mundell diagram, also as in the Swan diagram, it is possible to distinguish 4 sectors which have different economic content: sector I – a gap in the balance of payments ( $BP < 0$ ) and inflation ( $p$ ), sector II – a gap in the balance of payments ( $BP < 0$ ) and unemployment ( $u$ ), sector III – a positive balance of payments ( $BP > 0$ ) and unemployment ( $u$ ), sector IV – a positive balance of payments ( $BP > 0$ ) and inflation ( $p$ ).



**Figure 18.2. Mundell diagram**

Choose a point C which is located in sector I where it is observed a balance of payments deficit and a high level of inflation. To achieve an overall balance in the point E, it is necessary to reduce the government expenditures in order to overcome inflation, and to increase an interest rate to equalize the balance of payments. In the Figure it corresponds to movement up to the left from the point C

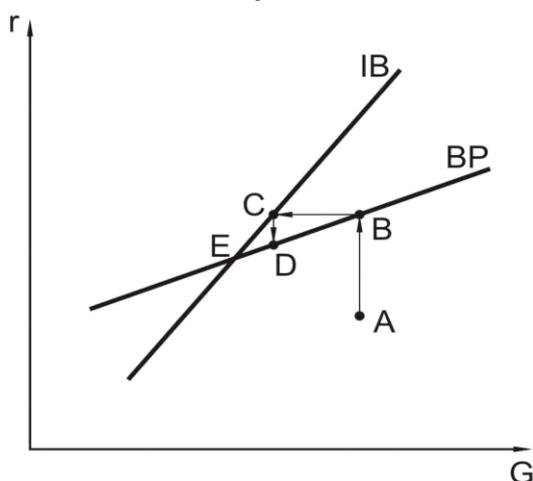
In sectors I and III changes of fiscal and monetary policies depend on the relative size of a macroeconomic imbalance. In sectors II and IV it is possible to determine the directions of both instruments (G and r). In sector II unemployment and the balance of payments deficit always require a fiscal expansion and a get-tough monetary policy. The growth of interest rate compensates the balance of payments deficit by means of capital inflow, preventing the establishment of full employment. Similar considerations are also valid for sector IV.

The conclusions from the R. Mundell diagram say that it is entrusted to the Central Bank to provide an external balance. In such case, the interest rate is reduced in case of a positive balance of payments and increases in case of its deficit. The Ministry of Finance that is responsible for fiscal policy provides internal balance, using the increase in government expenditures in the conditions of unemployment and their decrease in the period of an inflationary pressure.

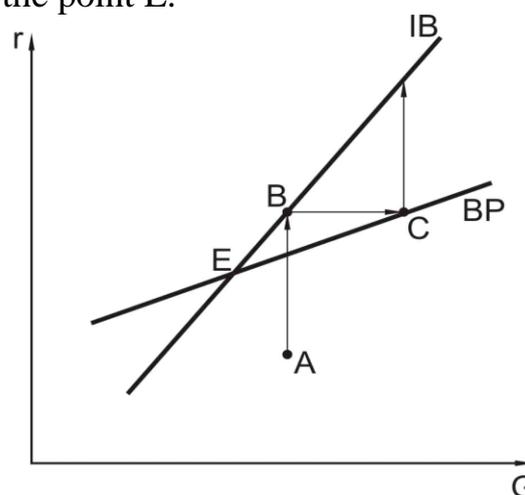
This diagram is connected with "the rule of roles distribution". Consider two situations with a various delegation of authorities to the Central Bank and the Ministry of Finance. In both cases the initial point is the state of the economy that is described by the point A (the balance of payments deficit and inflation), in case of a fixed exchange rate.

In the first case it is delegated authority to the Central Bank to control the external balance, and to the Ministry of Finance to control the internal balance

(Fig. 18.3). To exit from a state of the point A, the Central Bank raises an interest rate ( $r$ ) to achieve the external balance at the point B. This leads to decrease in a rate of inflation, but doesn't eliminate it completely. For the impact on inflation it is necessary to reduce government expenditures ( $G$ ) that is in competence of the Ministry of Finance. The economy moves to a new point of balance C where there is also an external imbalance in the form of positive balance of payments. In order to this, the Central Bank reduces an interest rate ( $r$ ), and the economy moves to the point D. Thus, gradual actions of the Central Bank and the Ministry of Finance will lead the economy to the initial balance in the point E.



**Figure 18.3. Distribution of roles:**  
**The Central Bank – external balance,**  
**The Ministry of Finance – internal balance**



**Figure 18.4. Distribution of roles:**  
**The Central Bank – internal balance,**  
**The Ministry of Finance – external balance**

In the second case the Central Bank is responsible for control of internal balance, and the Ministry of Finance is responsible for control of external balance (Fig. 18.4). As well as in the first situation, the point A is the initial. The Central Bank raises the interest rate ( $r$ ) to overcome the imbalance. The economy is displaced from the point A to a state which is characterized by the point B where the economy reaches the internal balance. At the same time there is a positive balance of payments for neutralization of which the Ministry of Finance needs to increase the government expenditures. As a result, the national economy will move to a new point C, where the external balance is reached. Thus, the points that characterize a state of the economy, shift away from the point of balance E, i.e. in case of such delegation of authority the economy won't be able to reach a balance.

Therefore, every governmental body, having certain instruments of economic regulation, should be responsible for the solution of those tasks with which it copes better. The given model shows that in case of the fixed exchange rate the monetary policy is connected with maintenance of external balance, and fiscal policy is connected with maintenance of internal balance. In case of the floating exchange rate a distribution of roles is opposite: fiscal policy is used for regulation of external imbalance, and monetary policy is used for regulation of

internal imbalance.

### 18.3. How is reached the macroeconomic balance in the Mundell — Fleming Model?

The impact of monetary and fiscal policy on macroeconomic indicators significantly differs depending on the exchange rate regime. But even within the system of fixed exchange rate, there are the differences that related with capital flows.

The Mundell-Fleming Model is the transformed IS-LM model that is applied to the open economy and includes, in addition to the variables that interact in a closed model, also the exchange rate and the foreign exchange market.

For the analysis we will use the Mundell-Fleming Model for a small open economy. It means the independence of income in the world market  $Y^*$  and the world price level of  $P^*$  from the economic policy of this country. The definition as dependent variable of external factors significantly affects (on) the interpretation of monetary policy. The dependent variables for the fixed exchange rate are  $Y$ ,  $r$ ,  $M$ .

The Mundell-Fleming Model consists of three equations [24, p.334]:

$$Y = C (Y-T) + I (r) + G + Nx(e) \quad \text{IS} \quad (18.1)$$

$$M/P = L(r, Y) \quad \text{LM} \quad (18.2)$$

$$Nx(e) = CF (r) \quad \text{BP} \quad (18.3)$$

The equation 18.1 (the equation of curve IS) describes a commodity market. The total revenue equals to the sum of the total demand (C), investments (I), government purchases (G) and net export (Nx). The demand volume is in direct linkage with a net income (Y-T), (an) investments is in indirect linkage with an interest rate (r), and net export is in indirect linkage with the exchange rate (e).

The money market is described by the equation 18.2 (the equation of the curve LM), where M – money supply, which is controlled by the Central Bank, and P - price level. The supply of money in real terms (M/P) is equal to demand for them (L). The demand for money is in direct linkage with income (Y), and in indirect linkage - with an interest rate (r).

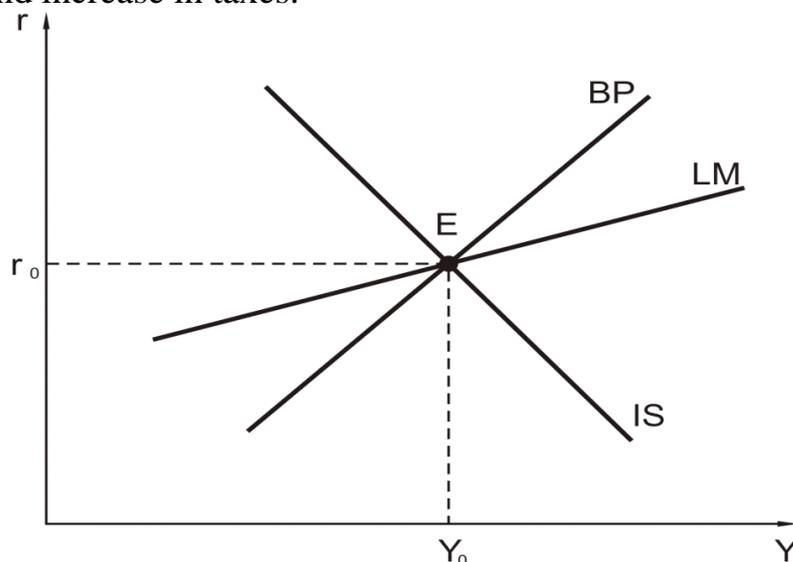
The equation 18.3 of the balance of payments curve BP points to the external balance, that is the amount of an account balance of current transactions (Nx) and an account balance of capital movement (CF) should be equal to zero.

As we are considering a small economy that receives and provides loans in the world financial market, it is unable to affect a world interest rate, the internal rate of percent (r) is determined by a world interest rate ( $r^*$ ):

$$r = r^* \quad (18.4)$$

But the Mundell-Fleming Model is easier to analyze graphically (Fig. 18.5). The curve IS represents a correlation of interest rate and equilibrium amount

of the aggregate demand, in which there is a balance in the commodity market. The slope of the curve is negative as with a growth of interest rate the investments (fall) decrease and (over time) the total revenue also decreases in time. The curve IS on the diagram shifts to the right (increase in total demand) in case of increase in government expenditures (G) and decrease in taxes (T). And the shift of the curve IS to the left (decrease in total demand) – in case of reduction of the government expenditures and increase in taxes.



**Figure 18.5. Mundell-Fleming Model**

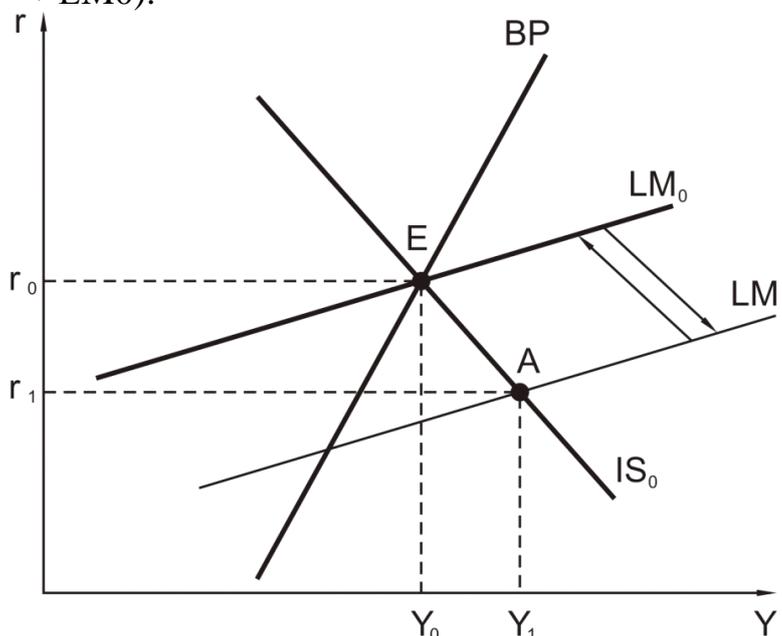
The curve LM has a positive slope, as the interest rate and the level of income make the opposite impact on demand and supply. The increase in the national income raises the money demand, because population transact more deals. If there is no corresponding increase in the money supply, the interest rate will rise, returning the money demand to the previous level. If money demand doesn't depend on an interest rate, the curve LM becomes vertical. In case of ideal capital mobility, the curve LM occupies a horizontal position, thus there is a "liquidity trap", revealed by J. M. Keynes. In this case it is necessary to use a fiscal policy for income increasing, because a monetary policy becomes ineffective. The curve LM shifts to the left in case of reducing of money supply and to the right in case of its increase.

The curve BP is responsible for the equilibrium of the balance of payments accounts. The slope of the curve BP is positive, because the growth of income promotes increase of import and worsens the current account, which must be compensated by the growth of an interest rate for attraction of the foreign capital to provide the balance of payments equilibrium. The slope of BP depends on the capital mobility. If the mobility of capital is absent, the curve BP occupies a vertical position. In case of ideal mobility the curve BP is horizontal. The curve BP of the balance of payments in the conditions of limited capital mobility is shown in Fig. 18.5.

Internal balance in the model IS-LM-BP is expressed in the form of balance

of commodity and money markets (IS and LM), and external balance – BP. Thus, the macroeconomic balance is reached in the point E.

Let's consider a problem of the effectiveness of monetary policy in case of the fixed exchange rate. The influence of expansionary policy on the expansion of total demand in the model IS-LM-BP is shown in Fig. 18.6. Let's assume that the economy is in a state of macroeconomic balance at the point E. But the Central Bank makes the decision to increase the money supply for stimulation of income growth, and the curve  $LM_0$  shifts to the right to the level of  $LM_1$ . At first, it will increase the household income ( $Y_0 \rightarrow Y_1$ ) and will reduce the interest rate ( $r_0 \rightarrow r_1$ ). In case of a constant position in the commodity market the macroeconomic balance will temporarily move from the point E to the point A (where the internal balance is reached). But the growth of money supply will provoke the growth of the balance of payments deficit and increase in demand at foreign currency. Then the Central Bank will be forced to sell the national currency to support a fixed exchange rate. It will reduce the money supply and will return the curve LM to the initial level ( $LM_1 \rightarrow LM_0$ ).

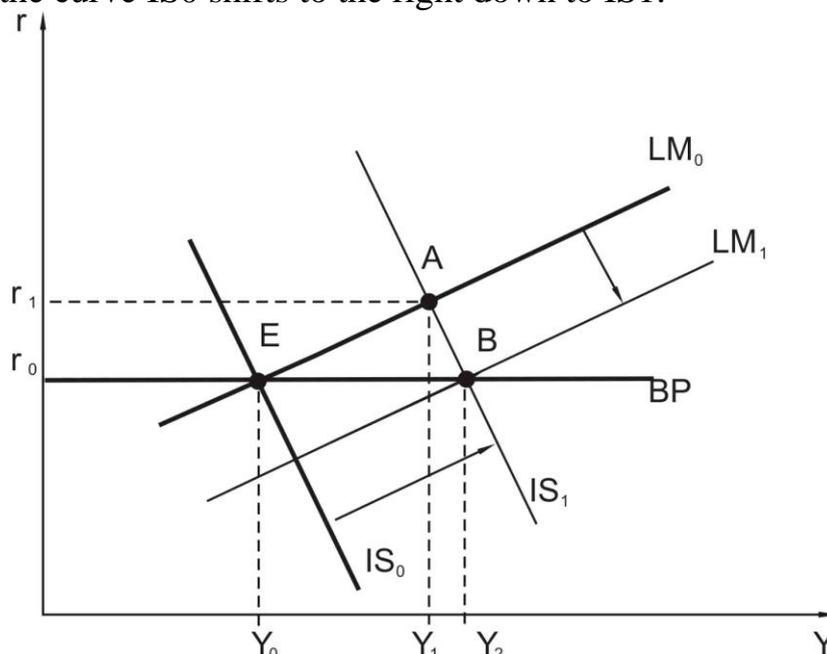


**Figure 18.6. Effect of expansionary monetary policy in case of the fixed exchange rate**

The monetary policy in case of the fixed exchange rate and any capital mobility is not the effective instrument of macroeconomic adjustment. In this case, it doesn't influence on macroeconomic indicators, so carrying out a fiscal policy will be the most effective.

Let's consider the dependence of fiscal policy on the degree of international capital mobility. As it was already noted, the influence of monetary policy was ineffective in case of the fixed exchange rate. Let's see how a fiscal expansion influences macroeconomic balance. To do this, we will consider three cases with different degree of capital mobility: ideal, limited and lack of capital mobility.

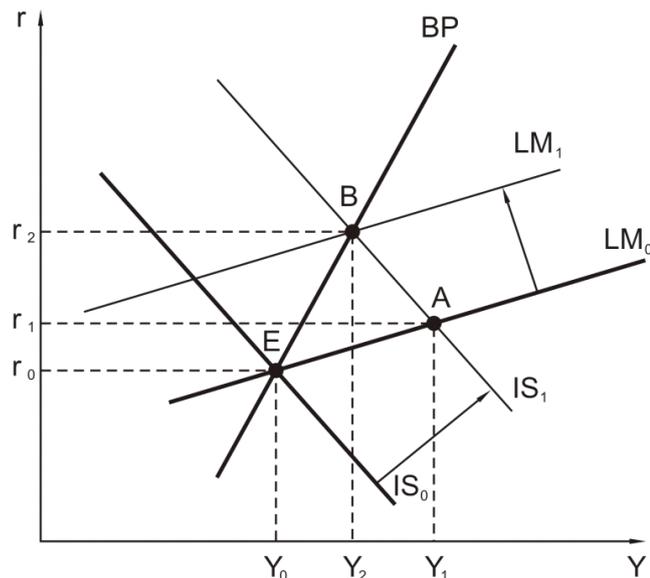
At first, the economy is in an equilibrium state in the point E. But the government accepts the social program that leads to increase in the government expenditures. The increase in expenditures expands the total demand which affects real sector, and the curve  $IS_0$  shifts to the right down to  $IS_1$ .



**Figure 18.7. Effect of fiscal expansion in case of the fixed exchange rate and complete capital mobility**

The I case – ideal or complete capital mobility (Fig.18.7). As the capital completely reacts to an interest rate and there are no restrictions on its flows, so in the case when an interest rate increases, the following its inflow will exceed the requirement of economy for a covering of the import expenditures, caused by the income growth ( $Y_0 \rightarrow Y_1$ ). Internal balance moves to the point A. In order to maintain a fixed exchange rate, the Central Bank will buy out a surplus of foreign currency, increasing a money supply ( $LM_0 \rightarrow LM_1$ ). It will lead to reducing an interest rate to the previous level  $r_0$ . But as a result, the income  $Y_2$  will increase. Thus, the economy will come to a new balance in the point B in case of a constant interest rate with high level of income.

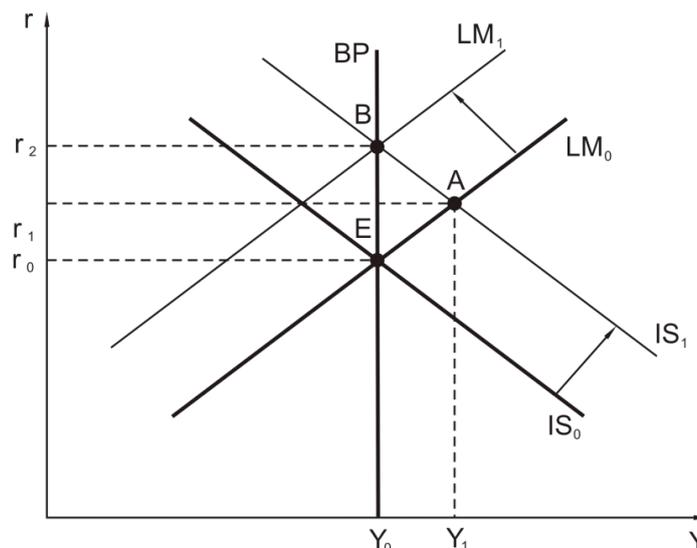
The II case – limited capital mobility (Fig.18.8). The total demand provoked the growth of an interest rate ( $r_0 \rightarrow r_1$ ) and a level of income ( $Y_0 \rightarrow Y_1$ ). The internal balance shifts to the point A, where there is a deficit of the account of current transactions of the balance of payments. The increase of an interest rate provides a capital inflow for leveling of the current account deficit. That is why, the Central Bank enters the exchange market for the sale of foreign currency in order to maintain the exchange rate that reduces the money supply and shifts the curve LM ( $LM_0 \rightarrow LM_1$ ). It will lead to the growth of an interest rate ( $r_1 \rightarrow r_2$ ) and the reduction of income ( $Y_1 \rightarrow Y_2$ ). Such actions will equalize the balance of payments, and the economy will come to a new equilibrium state at the point B.



**Figure 18.8. Effect of fiscal expansion in case of the fixed exchange rate and limited capital mobility**

Finally, it will lead to the growth of income ( $Y_0 \rightarrow Y_2$ ), but to a lesser extent, than in case with complete capital mobility.

The III case is the absence of capital mobility (Fig. 18.9). In this case, the capital doesn't react on the changes in a interest rate. With the growth of total demand there will be the growth of household income ( $Y_0 \rightarrow Y_1$ ) and import will increase. There will be a balance of payments deficit (point A). The excess of demand over supply of foreign currency will reduce a money supply, due to actions of the Central Bank ( $LM_0 \rightarrow LM_1$ ). It will lead to the growth of an interest rate ( $r_1 \rightarrow r_2$ ), and the income will be reduced to the previous level ( $Y_1 \rightarrow$  by  $Y_0$ ).



**Figure 18.9. Effect of fiscal expansion in case of the fixed exchange rate and lack of capital mobility**

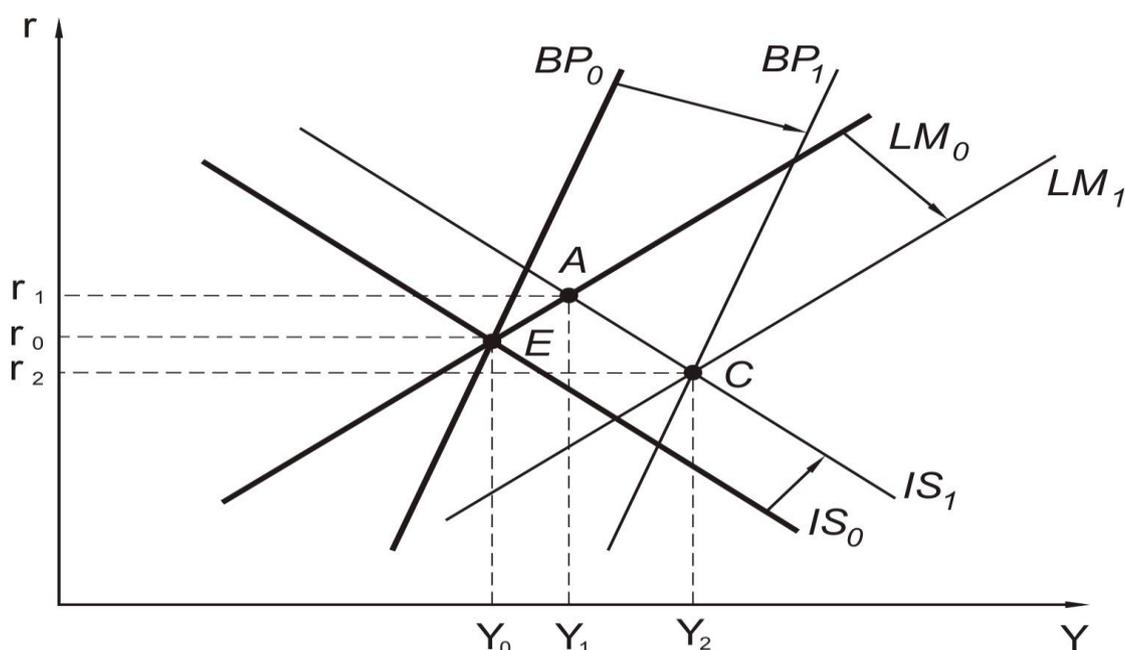
Thus, it is possible to make a conclusion that in case of the fixed exchange

rate the greatest efficiency of a fiscal policy is reached in case of complete capital mobility, i.e. in the absence of restrictions for its flows.

#### 18.4. What are the consequences of foreign trade policy and currency devaluation / revaluation in case of the fixed exchange rate?

A foreign trade policy is one of the instruments of the economic policy that allows influencing a macroeconomic balance by changing a volume and a structure of foreign trade by usage of tariff or non-tariff instruments. As an example let's examine the consequences of increase of custom duties on import (Fig. 18.10).

Limitation of imports as a result of increase of the custom duties leads to the growth of net export. Consumers buy less import goods and more domestic goods, and the aggregate demanded increases. The curve  $IS_0$  is shifted to the position of  $IS_1$  under the influence of these factors. In such case, a level of income increases ( $Y_0 \rightarrow Y_1$ ), and the interest rate increases ( $r_0 \rightarrow r_1$ ). The growth of net export shifts the curve  $BP_0$  to the right.



**Figure 18.10. Influence of devaluation on a foreign trade balance in case of complete capital mobility**

The state of both balance of payments accounts improves due to increase in custom duties and growth of an interest rate. So, there is a considerable positive balance of payments. As a result, demand for the national currency increases. As there is a surplus of the balance of payments in the point A, in order to maintain a fixed exchange rate the Central Bank buys up a foreign currency, thus increasing a money supply ( $LM_0 \rightarrow LM_1$ ) and stimulating (still) the bigger growth of income.

As a result, the interest rate will decrease that will lead to equilibration of the balance of payments and restitution of the external balance at the point C.

The influence of a foreign trade policy in case of complete capital mobility is almost the same as in case of limited capital mobility. The difference is in the depth of the balance of payments imbalance. In case of complete capital mobility the balance of payments will be higher, than in case of limited mobility, so it will be made the larger amount of interventions and increase of money supply. Therefore, the considerable increase of national income ( $Y_0$  to  $Y_2$ ) becomes a result of a protectionist foreign trade policy in case of the fixed exchange rate and high capital mobility as the effect of growth of net exports is complemented by the effect of increasing the money supply.

The effect of devaluation of national currency is similar to influence of a foreign trade policy on the open economy.

Let's examine its results in the model IS-LM-BP. The real exchange rate depreciates together with the nominal exchange rate as the internal prices don't react to the currency devaluation. Export from the country becomes more competitive in the world market while import relatively rises in price. As a result, the trade balance improves and the total demand increases for each level of interest rate. Thus, the curve IS shifts to the right ( $IS_0 \rightarrow IS_1$ ), as it is shown in Fig. 18.10.

The growth of the exchange rate shifts the curve BP to the right. As it is observed a surplus of balance of payments in the point A, the Central Bank buys up foreign currency in order to maintain a fixed exchange rate, thus increasing a money supply ( $LM_0 \rightarrow LM_1$ ). The Central Bank will buy foreign currency that will increase the supply of national currency. As a result, the curve LM shifts to the right.

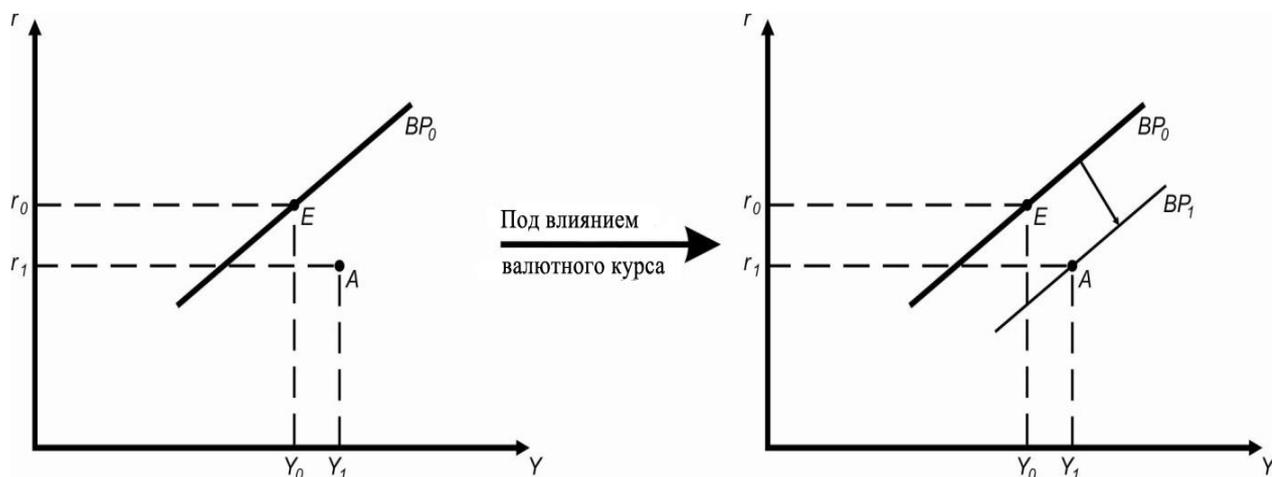
The balance will pass from the point E to the point C, where the curves IS, LM and BP are crossed. Thus, the total demand will increase. In this case, the devaluation is a measure of increase of aggregate demand, and in case of revaluation there is an opposite situation.

### **18.5. How is the model IS-LM-BP used for the analysis of economic policy?**

The principle of usage of curves IS, LM, BP for the analysis of macroeconomic balance in case of the floating exchange rate practically does not differ from the analysis of balance in case of the fixed regime, but with one addition. In the IS-LM-BP model in case of the floating exchange rate the rate acts as a factor of rebalancing the economy and the money supply remains unchanged. The Central Bank doesn't interfere in trades at the foreign exchange market and the adjustment of the positive or negative balance of payments happens automatically.

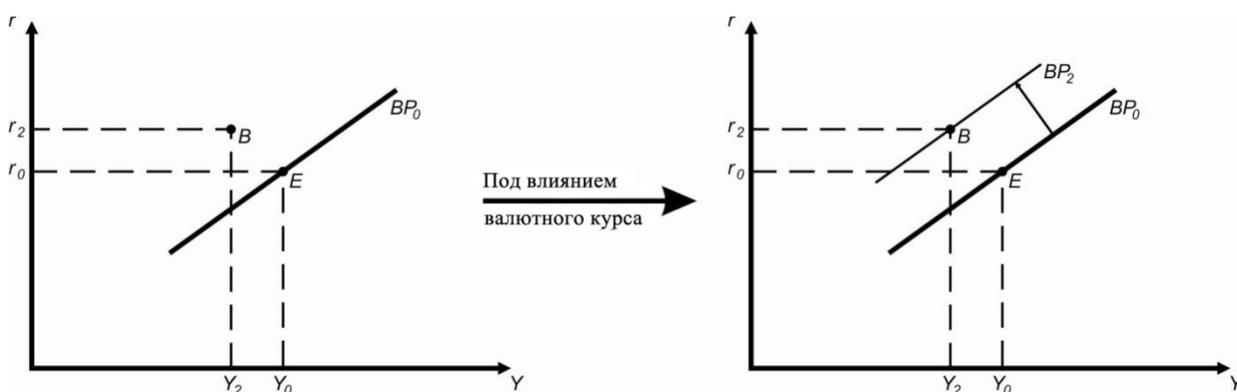
And now let's examine two situations when in the country there are deviations in external balance. The first situation characterizes a possible balance

of payments deficit (Fig. 18.11a), and the second situation characterizes a surplus (Fig. 18.11b). In the first case the point A indicates a balance of payments deficit, but as soon as the economy starts being under pressure of a deficit (on the economy), the change of the exchange rate leads to currency depreciation, the balance of payments is improved and the equilibrium shifts to a new point A which corresponds with a new level of income  $Y_1$  and an interest rate  $r_1$ . Thus, the curve  $BP_0$  shifts to a position  $BP_1$ .



**Figure 18.11a. Influence of the exchange rate on the balance of payments deficit**

In the second situation it is observed a surplus in the point B. There is a rise in price of national currency, the curve  $BP_0$  shifts to  $BP_2$ , and a new point of equilibrium B corresponds to a new level of income  $Y_2$ , and an interest rate  $r_2$ .



**Figure 18.11b. Influence of the exchange rate on the balance of payments surplus**

So, in case of external imbalance in terms of the floating exchange rate there is its change and a shift of the curve BP, while in case of the fixed exchange rate there is a change in money supply and a shift of the curve LM.

As well as in case of the fixed rate, macroeconomic adjustment has a different character depending on the instruments of economic policy and the degree of capital mobility.

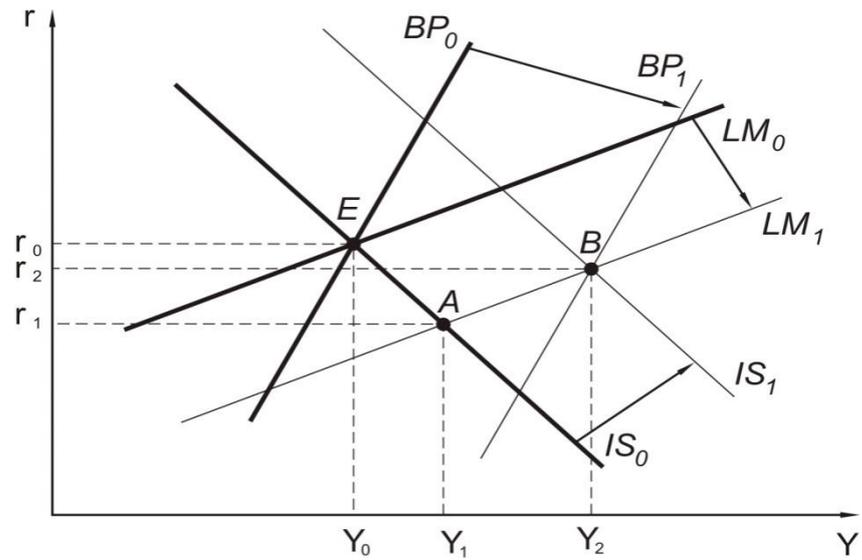
### **18.6. What should be monetary and fiscal policy in case of the floating exchange rate and various degree of the international capital mobility?**

Changes in the money market have a direct impact on the economy. The monetary policy in case of the floating exchange rate reacts to changes in the economy most effectively, unlike to its action in the conditions of the fixed exchange rate.

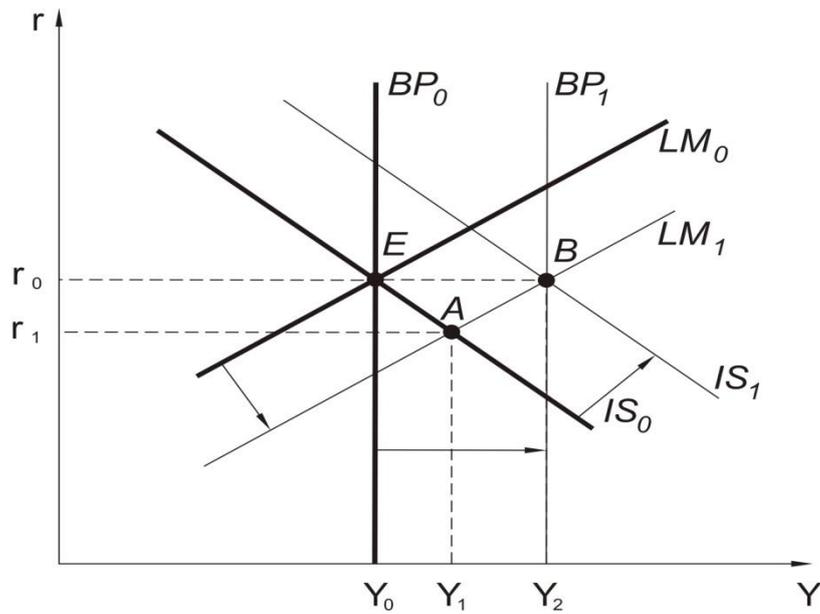
Effect of monetary policy in case of the floating rate and limited capital mobility is shown in Fig. 18.12. The increase in money supply from LM0 to LM1 reduces an interest rate ( $r_0 \rightarrow r_1$ ) and increases the income ( $Y_0 \rightarrow Y_1$ ). In the point A, corresponding to internal balance, there is a deficit in the balance of payments. In case of limited capital mobility its outflow and decrease of an interest rate will cause depreciation of national currency and improvement of balance of the current account, and as a result there will be a shift of curves (of) BP ( $BP_0 \rightarrow BP_1$ ) and IS ( $IS_0 \rightarrow IS_1$ ). Thus, a transition to a new point of balance B will be reached, where the economy is in a state of external and internal balance, but in case of higher level of income Y2, growth of which is caused by the depreciation of the currency.

Effect of monetary policy in case of the floating rate and lack of capital mobility is shown in Fig. 18.13. In case of implementation of the expansionary monetary policy by the government, the growth of income leads to increase in import and deterioration of the current account, and a decrease of an interest rate leads to a deficit in the account of capital flows and financial transactions. In case of non capital mobility, i.e. impossibility of its outflow abroad, the increased income stimulates import that provokes a depreciation of a national currency. As a result, export increases and import reduces, the balance of payments improves ( $BP_0 \rightarrow BP_1$ ), and the growth of income leads to increase in consumption ( $IS_0 \rightarrow IS_1$ ). The economy turns into a new balance – point B, where there is observed the increased income and depreciation of national currency in case of an invariable interest rate.

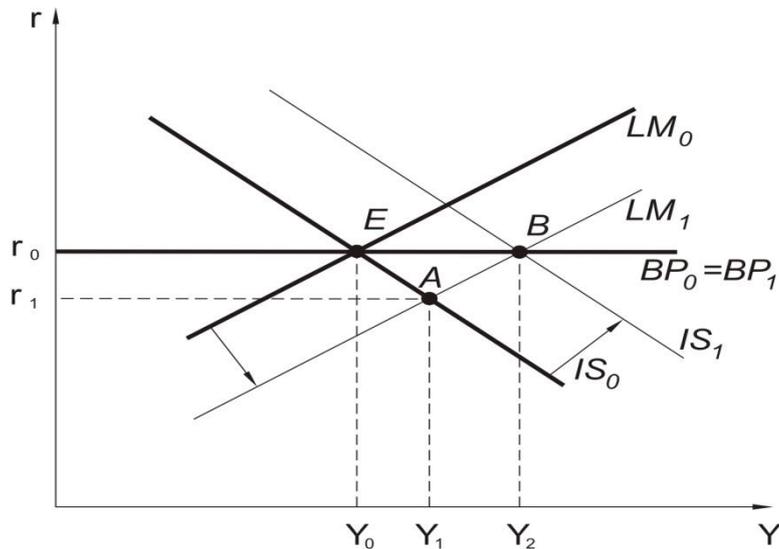
Effect of monetary policy in case of the floating rate and complete capital mobility is shown in Fig. 18.14. In case of complete capital mobility a growth of money supply will lead to interest rate reduction that will provoke a bigger capital outflow abroad, than in the first case. The capital outflow will lead to a depreciation of national currency that will help to improve the balance of payments, and it means a growth of income and consumption. As a result, the economy will pass to a new point of balance with higher level of income ( $Y_0 \rightarrow Y_2$ ) in case with a constant interest rate.



**Figure 18.12. Influence of monetary policy on economy in case of the floating exchange rate and limited capital mobility**



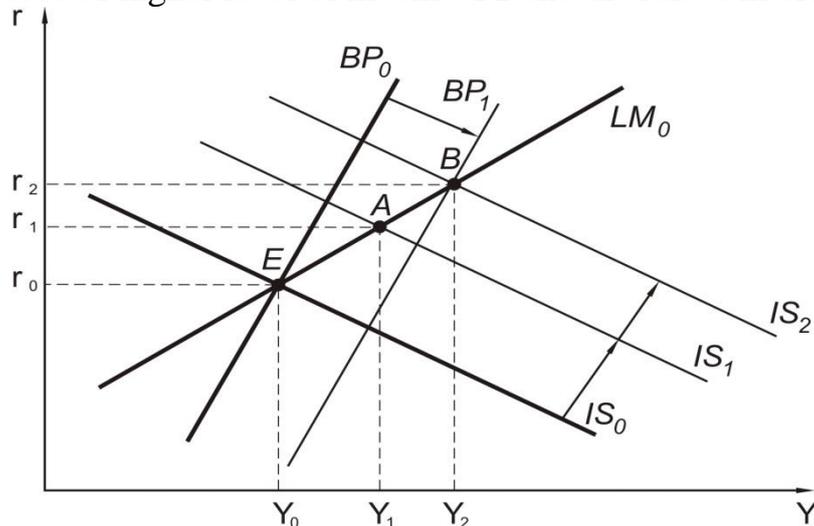
**Figure 18.13. Influence of monetary policy on economy in case of the floating exchange rate and lack of capital mobility**



**Figure 18.14. Influence of monetary policy on economy in case of the floating exchange rate and complete capital mobility**

Expansionary fiscal policy leads to stimulation of the total demand and changing in the commodity market, the curve  $IS_0$  shifts to the  $IS_1$  level, raises the income ( $Y_0 \rightarrow Y_1$ ) and an interest rate ( $r_0 \rightarrow r_1$ ) that corresponds to the point A. Further corrective actions will depend on capital mobility.

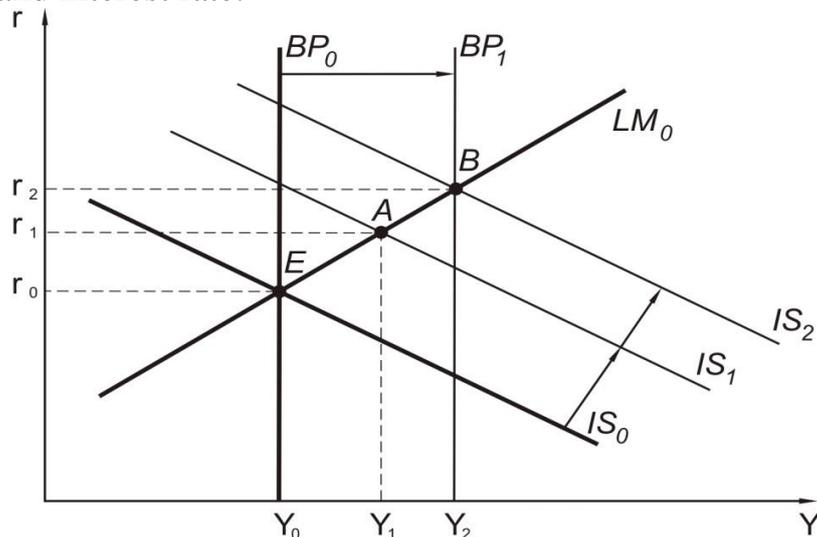
Effect of fiscal policy in case of the floating exchange rate and limited capital mobility is shown in Fig. 18.15. There is a negative account balance in the point A. The excess of demand over supply of foreign currency promotes a depreciation of national currency, improving the balance of payments ( $BP_0 \rightarrow BP_1$ ) and stimulating demand ( $IS_1 \rightarrow IS_2$ ). Macroeconomic balance is reached in the point B in case of higher level of income  $Y_2$  and the raised interest rate  $r_2$ .



**Figure 18.15. Influence of fiscal policy on economy in case of the floating exchange rate and limited capital mobility**

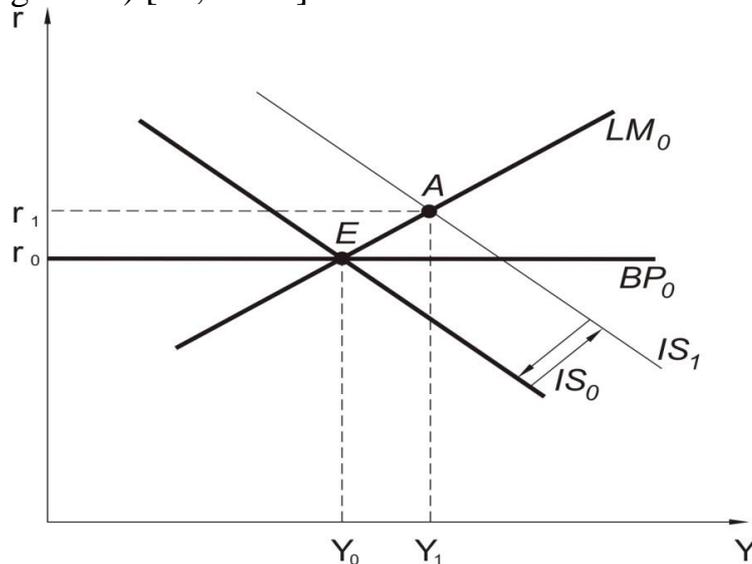
Effect of fiscal policy in case of the floating exchange rate and lack of capital mobility (Fig.18.16). As the capital is completely immobile, import increases with

the growth of income that causes depreciation of currency. Depreciation of national currency helps to improve the balance of payments ( $BP_0 \rightarrow BP_1$ ) that generates an additional impulse to increase income and consumption ( $IS_1 \rightarrow IS_2$ ). Thus, balance was established because of change of the exchange rate at higher level of income and interest rate.



**Figure 18.16. Influence of fiscal policy on economy in case of the floating exchange rate and lack of capital mobility.**

Effect of fiscal policy in case of the floating exchange rate and complete capital mobility (Fig.18.17) [24, c.346].



**Figure 18.17. Influence of fiscal policy on economy in case of the floating exchange rate and complete capital mobility**

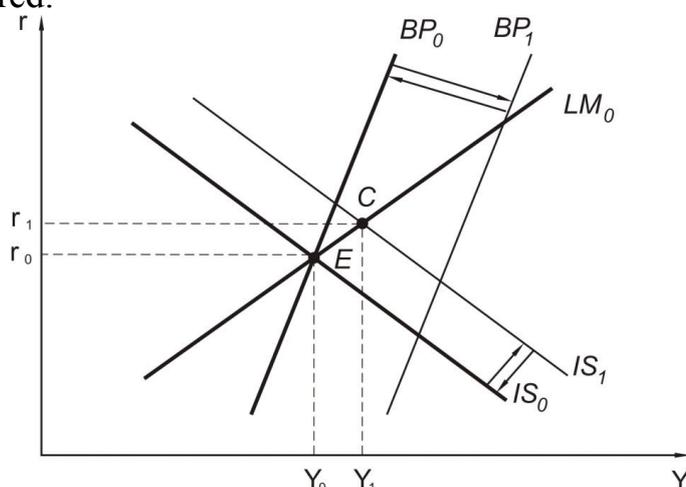
In these conditions the curve  $BP_0$  will merge with the curve  $BP_1$ . The growth of interest rate will lead to capital inflow from abroad and to the growth of national currency rate. Intermediate balance in the point A will not stay long so far as the growth of a rate will negatively affect trade balance. As a result, the curve  $IS_1$  will shift to the initial  $IS_0$  level. Macroeconomic balance will be established at

the initial level at the point E and in such case level of income and interest rate will not change.

### 18.7. How does a foreign trade policy influence on the economy in case of the floating exchange rate?

A protectionist foreign trade policy (together with monetary and fiscal policy) may have a stimulating impact on the economy. The government purposefully changes the size of net export, limiting import or encouraging export. And as a result it helps to increase a total demand. Such policy is justified in the conditions of fixed exchange rate and finally it leads to growth of total income.

In Fig. 18.18 it is shown that government impact changes the size of total demand (the curve  $IS_0$  shifts to the right in the position of  $IS_1$ ). Increase in exports change the condition of the balance of payments (the curve  $BP_0$  shifts to the right in the position of  $BP_1$ ). The growth of total demand leads to increase of interest rate and capital inflows come to the country. As a result both accounts of balance of payments are improved. They raise pressure on the national currency rate that will continue to increase until (there will be an equilibration of) the balance of payments will be in equilibrium. In the process of growth of exchange rate of national currency export will be reduced, and import will increase. It will start decreasing after increase in net export that finally will shift the curves  $IS_1$  and  $BP_1$  to the left to their initial position. Only in the point E the net balance of payments will be equal to zero, a growth of exchange rate will stop and macroeconomic balance will be restored.



**Figure 18.18. Influence of a foreign trade policy on economy in case of the floating exchange rates in the conditions of limited capital mobility**

In terms of complete mobility or in case of its absence, all processes in the economy will be performed similar to a case with limited capital mobility. The difference will be only in the degree of (rise in price of) national currency value appreciation and in rate of return of the economy to the initial balance.

So, in the conditions of the floating exchange rate a foreign trade policy has no effect on the income and consumption, and it is not the effective instrument of macroeconomic regulation.

## **Chapter 19. The application of the IS-LM-BP model to analyze the impact of external shocks in an open economy**

### **19.1. What are the effects of foreign trade shocks under floating and fixed exchange rates?**

An open economy is influenced by the changes in monetary and fiscal areas and other factors that until now were regarded as unchangeable. These factors distort the balance in the economy, and therefore they are called as macroeconomic shocks.

The development of a mechanism of adaptation to shocks is one of the main tasks of every government. For this, it is important to classify the macroeconomic shocks, because different shocks require different responses. Macroeconomic shocks are divided into two main types: shocks of the real sector and monetary shocks.

The real shocks belong to current account transactions, and monetary shocks - to capital account transactions and financial transactions. Prior to 1970s, most of macroeconomic shocks occurred in the real sector, but over time shocks associated with the capital flows began to acquire greater importance. The real shocks are longer in time and affect both aggregate demand and aggregate supply .

The shocks of the real sector can be divided into changes in world prices and changes in tastes and preferences of consumers. The change in the price level can be affected by the decline of production in developed countries (which is accompanied by a decline in demand for raw materials and a reduced rate of its price) increase in oil prices (increase the cost of production), volatility of inflation in developed countries and other factors.

The real shocks often are changes in the export or import of the country that are taking place, for example, because of changes in the real income of the country itself and its trading partners. Most of these shocks of export and import countries of vital goods (raw materials, coffee, sugar and etc.). The most common shock of such type is a change in the price of oil.

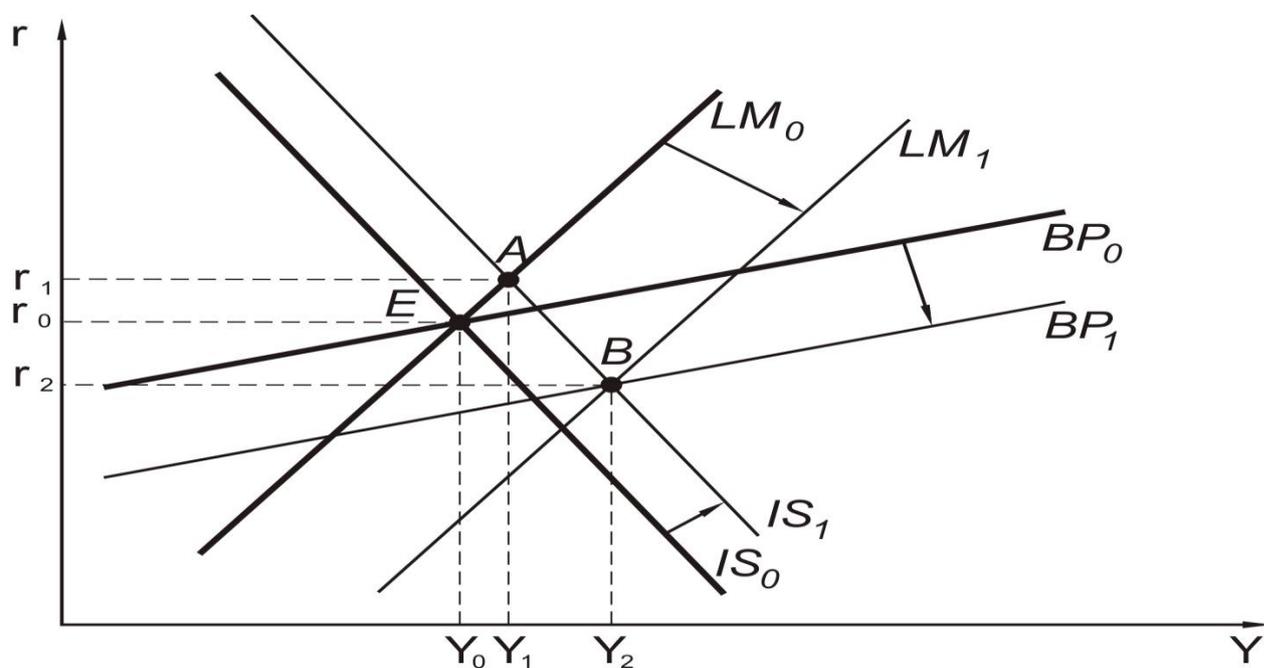
Price changes can occur in two ways: the shock of foreign prices and the shock of the domestic price.

The shock of the foreign prices- it is the adjustment that takes place in an open economy due to the sharp change in the balance between world and domestic prices that are caused by the increase or decrease in the world prices.

The shock of the domestic price - it is the adjustment that takes place in an open economy due to the sharp change in the balance between world and domestic prices that is caused by the increase or decrease in domestic prices.

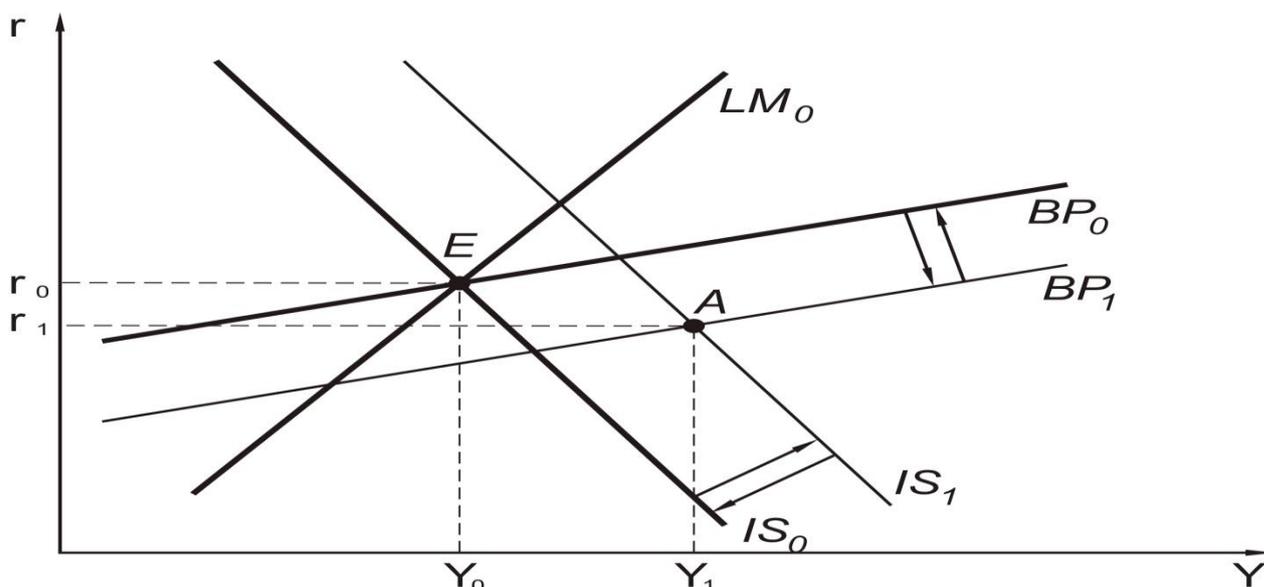
Suppose, on the world market the price of a certain product has increased. For a given country this product is exported. Rise in price of this product leads to an increase in export,  $BP_0$  curve shifts to the right to a new level  $BP_1$ . Export expansion requires a corresponding increase in production, which will mean a shift

to the right by  $IS_0$  to  $IS_1$  level and there will be an intermediate equilibrium at point A. The inflow of foreign currency (from export revenue) increases the demand on the national currency. If the exchange rate is fixed, then to support it the Central Bank is buying up excess of foreign currency, increasing the supply of domestic currency and moving  $LM_0$  curve to the right at the level of  $LM_1$  (Fig. 19.1) Macroeconomic equilibrium shifts to point (A) B, where an increase in income from  $Y_0$  to  $Y_2$  is noticed, that at the same level of domestic prices means an increase in aggregate demand.



**Figure 19.1. The influence of real shocks on an open economy with a fixed exchange rate**

With a floating exchange rate (Fig. 19.2), the displacement of the curve  $IS_0$  to the level of  $IS_1$  to point A leads to a positive balance of payments. As a result the national currency rate starts to rise, export reduces and import increases, that will lead to a deterioration of the balance of payments, so that the curves  $IS_1$ , and  $BP_1$  shifts to the initial level to  $IS_0$  and  $BP_0$  respectively, and macroeconomic equilibrium returns to the point E. Thus, both income and aggregate demand returned to the level corresponding to equilibrium at point E. In practice, the equilibrium may not return to the original point of E, because there are other influencing factors, such as the mobility of capital and the cost of inflation, but it will be as close as possible to it.



**Figure 19.2. The influence of real shocks on an open economy with a floating exchange rate**

The changes of tastes and preferences within the country that are taking place in the real sector of the country, are the changes of tastes and preferences of consumers in favor of national products. As usual it is promoted by government programs to support domestic producers that encourage consumers to buy domestic goods.  $IS_0$  curve shifts to the right, and the reduction of import leads  $BP_0$  to shift to the right. With a fixed exchange rate this will lead to a positive balance of payments, and the growth of the money supply and the shift of curve  $LM_0$  to the right. Automatic adjustment will end when all three sectors will come in simultaneous balance at a higher level of income. In this case, the income increases at a constant price level (Fig. 19.1).

Under a floating exchange rate regime a potential positive balance of payments will increase the rate of national currency. Costs will turn from foreign goods to the domestic ones, demand for the national currency will increase. With the growth of the exchange rate curves  $IS_1$  and  $BP_1$  will begin to move back to the left, to its initial position ( $IS_0$  and  $BP_0$ ) and automatic correction will end at the same level at which it began before changes in tastes and preferences within the country (Fig. 19.2 ). Short-term surge in aggregate demand will quickly run out.

So we see that in each of the two cases, regardless of the shock reasons in the real sector under the fixed exchange rate macroeconomic shock has led to long-term growth of income and aggregate demand in the country, while the floating exchange rate has caused a correction of the relative value of the national currency and has led to continuing growth of revenue and aggregate demand.

## 19.2. What are the effects of external shocks associated with the international capital movement?

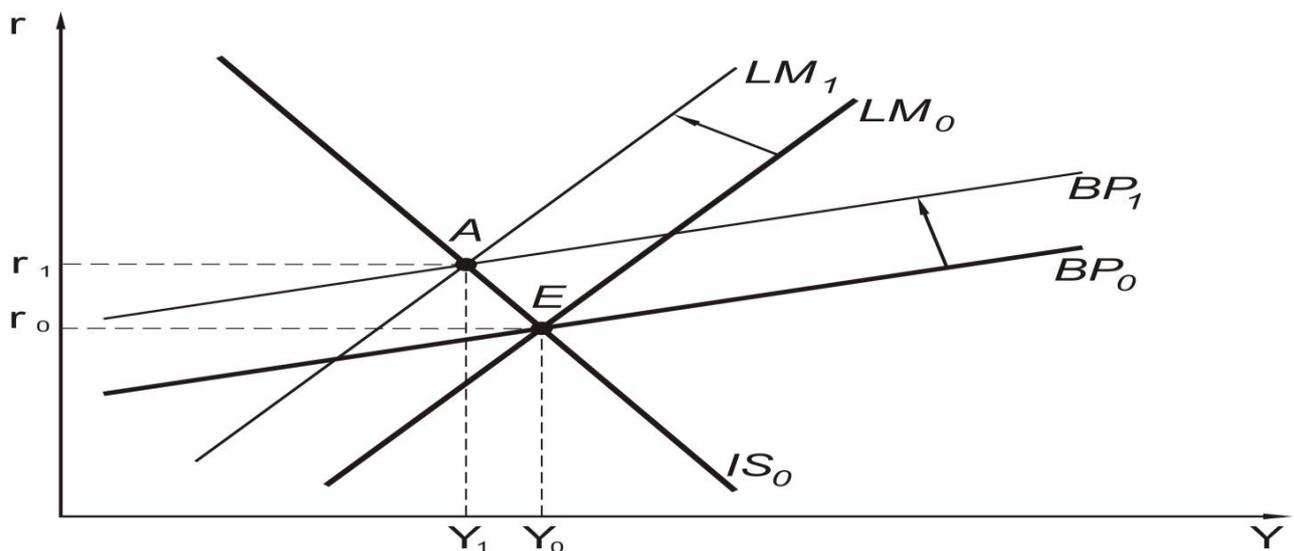
Capital flow shocks can occur as a result of political changes or changes in conditions of ownership of international assets. They are random, probabilistic in nature and affect only aggregate demand. Monetary shocks in an open economy can be independent, and can be caused by shocks in the real sector.

Monetary shocks in an open economy are related to changes in world interest rates and changes in the domestic interest rate.

The shock of the change in the foreign interest rate - it is the adjustment in an open economy due to the abrupt change in the proportions between global and national interest rates that is caused by increasing and decreasing interest rates globally.

The shock of the national interest - it is the adjustment in an open economy due to the abrupt change in the proportions between global and national interest rates that is caused by increasing and decreasing national interest rate.

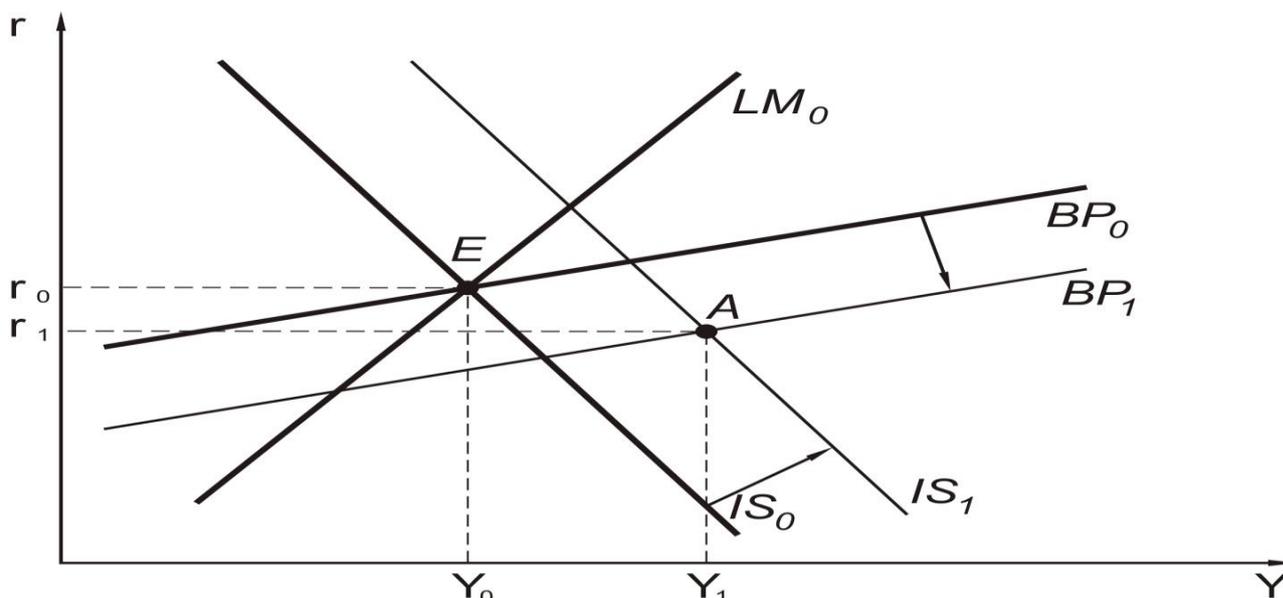
The equilibrium in the economy may be broken by changes in interest rates abroad. If it increases, investments abroad will become more attractive than investments in national economy, capital flows abroad is accompanied by balance of payments deficit, and leads to a shift of the curve to the left  $BP_0 \rightarrow BP_1$ . To support the exchange rate the Central Bank buys foreign currency and reduces the supply of domestic currency,  $LM_0$  curve shifts to the left - to the level of  $LM_1$ . From the graph we can see that there was a reduction of income  $Y_0 \rightarrow Y_1$  at an unchanged price level (Fig. 19.3).



**Figure 19.3. The impact of rising world interest rates on an open economy with a fixed exchange rate**

With a floating exchange rate smoothing of current account deficit occurs automatically by currency depreciation that makes national products more

competitive. Depreciation of the domestic currency leads to increased exports and reduced import, there are shifts of curves  $IS_0$  and  $IS_1$  to the right according to  $BP_0$  and  $BP_1$ . As a result of increased revenue ( $Y_0 \rightarrow Y_1$ ) we will see an increase in aggregate demand at a constant price level. Appropriate measures in response to the shock of the change in world interest rates are opposite under fixed and floating exchange rates. In terms of decreasing of global interest rates automatic adaptation of an open economy takes place in a «mirror image»(Fig. 19.4).



**Figure 19.4. The impact of decreasing world interest rates on an open economy with a floating exchange rate**

The increase of national interest will put pressure on the exchange rate. In this case the capital flows abroad is reduced, the balance of payments will improve with a fixed exchange rate, BP curve shifts to the right. In case of floating exchange rate the capital outflows creates opportunities for the positive balance of payments. In case of fixed exchange rate, the LM curve shifts to the right that stimulates economic growth and, consequently, the growth of aggregate demand. In the case of floating exchange rate the increase of national currency rate will worsen the current balance that will shift the BP and IS curves to the left. This will mean a drop in revenue and a reduction in aggregate demand.

The influence of these shocks on aggregate demand depends critically on nature of the exchange rate that exists in this country. Shocks in the real sector will have a direct effect on the level of demand in an open economy with a fixed regime, and does not affect the aggregate demand in the regime of floating exchange rates. Shocks that lead to a change in the scale of capital flows, such as increasing global interest rates affect aggregate demand under any exchange rate regime, so that an income at a fixed exchange rate is reduced, and at floating - is increased.

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