FINANCE AND INSURANCE SECTOR INDUSTRY

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PREFACE

Within the economic system, one of the most important subsystems is the financial system. The financial system is part of the economic system, and it is composed of several elements that enable a smooth flow of financial resources in a socio-economic community. The financial system is a mechanism and a guide, that is, a channel system that transfers financial funds between different groups and entities in the economy. It performs a huge number of functions in the economy: savings function, welfare function, liquidity function, credit function, payment function, risk protection function, macroeconomic function, transfer function of resources through space and time, providing information, money creation function. The most important features of the financial system are dynamics, openness and complexity.

The financial system and the financial market encompass a large number of participants. In theory and practice, there are great difficulties with their classification and classification. The financial system is quite complex and consists of different types of private financial institutions such as banks, insurance companies, investment funds, financial companies of investment banks and all regulated and supervised by the government. If you want to lend to a company, you will not go directly to the presidents of companies, but you will do so through financial intermediaries, institutions such as commercial banks, savings and loan co-operatives, savings banks, investment funds. All these institutions lend money to those who have saved it by placing it for those who need it business ventures.

Bank is a specialized economic organization, a financial intermediary, which collects free night funds on various bases and places these funds in various forms, primarily through the granting of loans and the purchase of securities, that is, providing other types of services to their clients, or performing financial and other transactions in order to generate income or profits on that basis.

The insurance industry has a very important role in the financial systems of countries around the world. The global insurance market is growing year by year, largely thanks to the opening of the insurance market for developing countries. Until recently, the insurance markets of developing countries were closed to foreign companies, and hence, due to the lack of competition and adequate knowledge in the management of insurance companies, they were inadequately developed. Today, the insurance industry, in addition to its great importance in developed parts of the world, is gaining increasing importance in the markets of developing countries. In developed countries of the world there is virtually no individual who does not have one or more insurance policies: life insurance, health, disability, auto-liability, casco, fire, etc. The insurance industry is also one of the largest employers in the world. The deregulation process that has affected financial markets around the world has caused enormous competition between

deposit and non-deposit financial institutions, so that commercial banks and brokerage firms began to enter into market segments that were traditionally reserved for insurance companies until recently.

Insurance companies are dealing with risk taking on behalf of their clients in exchange for a premium in the form of a premium. Insurance companies earn profits by collecting insurance premiums that are designed to be sufficient to pay the expected claims for damages and to achieve a certain profit.

Due to the fact that insurance forms the enormous capital that forms part of national savings for unforeseen cases, the importance of insurance for the economy of each country is enormous. The creation of such a fund, regardless of how it is organized, is the economic necessity of each country.

Authors

PART I. INSURANCE

IMPORTANCE OF ALLOCATION THE CAPITAL AT THE MAXIMUM VALUE OF INSURANCE COMPANIES

IMPORTANCE OF ALLOCATION THE CAPITAL AT THE MAXIMUM VALUE OF INSURANCE COMPANIES

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ABSTRACT

The problem of allocating the capital of an insurance company is closely related to the concept of "capital adequacy". Insurance companies have an important role both for individuals and for the entire community. For these reasons, the insurance company is expected to provide security and safety to its insured. This is achieved by ensuring the prescribed margin of solvency by law, while at the same time trying to satisfy the interest of clients, i.e. by facilitating the growth of the value of the shares themselves.
A higher demand for capital reduces the possibility of insolvency, but also an interest in investing in an insurance company. For the above reasons, it is important to carefully consider why this should allocate costs related to the possession of personal capital to individual types of insurance.
Estimating the value of the company's personal capital, intended for each business line, or a project that the company takes over is capital allocation.
The subject of this research is the interpretation of theoretical and methodological basics, as well as the actuarial and financial techniques for the allocation of capital of the company in the field of non-life insurance.
Key words: *capital allocation, insurance company, capital adequacy, solvency margin, company capital.*
JEL Classification*: G21, G22, G23*

INTRODUCTION

In resolving the problem of allocation of capital, it is important that the entire capital of insurance companies is available for the settlement of claims, based on any policy or type of insurance. If the insurance company is insolvent on the basis

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of one or more types of insurance, the whole company risks to bankrupt. The importance of capital allocation for insurance companies is multiple. The purpose of capital allocation is to determine the value of capital for each type of insurance, based on the amount of capital allocated to a certain type of insurance. Actuarial funded premiums of a kind of insurance depend on the total required capital and its allocation to insurance lines. Capital allocation is used to improve the process of measuring business performance. Errors arising from the allocation of capital result in stagnation in the field of non-profitable business and the loss of profitable operations of a particular insurance company in relation to its competitors. In this research discusses the role of capital allocation in relation to the maximization of value for the shareholders of the insurance company. Special attention is paid to the "capital-yield" concept, whereby, as a strong basis for making management decisions, a tailor-made risk of return on capital (Risk-adjusted return on capital-RAROC) and economic value added (EVA)) financial and non-financial companies. In this research, also discusses the basic techniques of capital allocation in insurance, such as risk-based techniques, such as risk-based, insolvency-based techniques and marginal capital allocation techniques. The comparative advantages and limitations of each of the techniques used to allocate capital are the topics that this paper also deals with.

Considering the multiple role of insurance companies in the development and state of the national economy and the need to protect the interests of the insured as much as possible, certain solvency standards have been established in the work.

Theoretical considerations by analyzing the problem of allocation of the capital of insurance companies, there was an answer to the question of how problems in the allocation of capital can be overcome and improved. Due to the unforeseen frequency and intensity of damage in non-life insurance, actuarial risks represent the most significant threat to the financial health of companies that deal with that type of insurance. By neutralizing real risks from the expected risk realization by the company, an additional amount of assets in the form of a solvency margin is required as a guarantee fulfillment of the obligations of the insurance companies.

Finding the key problems in the domain of the allocation of the capital of insurance companies, as well as possible ways of overcoming them, by special methods and techniques that are specific, applicable, and verified is the goal of the work. The research emphasizes the importance of capital allocation and provides insight into the importance of applying the appropriate allocation technique to the appropriate goal of improving the performance of the insurance company. The research has shown that the choice of a particular allocation technique is primarily dependent on the objectives of its application.

Basic hypothesis: Different capital allocation techniques provide different results. The compatibility of selected capital allocation technique with the aim of applying it is crucial.

THE IMPORTANCE OF ALLOCATING CAPITAL TO INSURANCE COMPANIES

Capital allocation for any individual business line within a particular entity should primarily be motivated by the maximization of value for shareholders, i.e. by increasing the market value of capital. The specific role of capital allocation in insurance companies arises from the specific nature of their business. Lending capital, i.e. insurance reserves are provided by the insured as the primary beneficiaries of the insurance companies services. Compared to classical investors, insured persons do not have the possibility of protecting against the risk of non-repayment of their claims by creating a diversified investment portfolio. As a consequence, the insurance company must fulfill the necessary condition, and this requirement is that it must possess the appropriate amount of capital that actually guarantees the settlement of the obligations assumed by its insured. The contribution of capital allocation to maximizing the value of an insurance company is achieved through training to see those business lines, which contribute to profit to the extent that they exceed their capital costs. Estimation of costs requires determining the required amount of capital for each individual type of insurance individually, while respecting the rule of direct proportional capital and risk values. The growth of the market value of capital contributes to the identification of new, profitable business lines and the abandonment of unprofitable existing business lines.

In order to take into account the specificity of the insurance business, it is possible to compare the insurance company and the investment fund. An insurance company can be compared with an investment fund that finances the purchase of certain financial assets by equity capital and, in part, debt capital that arises from the sale of insurance policies, and not from the capital market. From the aspect of the investment function, insurance companies are in a less favorable situation than the investment fund. They are less transparent and operate in less favorable tax conditions than investment funds. In this regard, it is difficult to create value through the investment function in insurance. On the contrary, the insurance company has the ability to generate lending in the insurance market, which is, objectively speaking, far less effective than the capital market. The value of the insurance company, for its clients, shareholders, has a tangible component (economic net worth) and an intangible component (intangible assets). Insuring the insurance company to create a new profit is reflected in the value of its intangible assets, is the present value of economic profits on future business. If an insurance company would sell policies of a certain type of insurance at a certain economic value, its capitalization on the market would be equivalent to the economic net worth. Insurance companies generally deal with a premium above the expected value in respect of insured damages. This premium reflects the current value of investors' expectations in terms of value creation through subsequent (future) insurance business. The profit margin required by investors for the use of their capital consists of the starting price of capital, i.e. the rates of return that the

investor could make by investing in the capital directly on the financial market, plus the compensation for transaction costs that are specific to insurance companies. By possessing certain capital in a financial institution, the amount of transaction costs of capital is additionally increasing, which gives a significance when considering the problem of allocation of capital. The existence of various market and institutional imperfections leads to transaction costs, therefore, they will not earn completely fair market returns by investing capital, needed to avoid financial losses for the insurance company.

Transaction costs include the opportunity costs of shareholders that arise when the capital is invested through an insurance company, and not directly in the financial market. Transaction costs do not occur when one and the same capital is invested through investment funds. There are four sources of transaction costs for capital for insurance companies, which reduce the returns on the investment of their capital:

1) Mediation costs and information costs

When shareholders invest assets through an insurance company, they entrust their capital to management, and management is then the entity that makes investment decisions and insurance in their favor. It is very well known that company managers can behave opportunistically, thus jeopardizing the achievement of the goal, which is the maximization of value for shareholders. Due to the main lack of transparency, management decisions are difficult to control. As a consequence, the situation arises that shareholders require an additional rate of return as a compensation for the possibility that management will not always make decisions in order to meet their interest. Reputations and transparency are critical factors for reducing mediation costs. A good reputation is very important for insurance companies and forms a significant part of the value of the company's intangible assets. This factor deserves special attention, because once lost trust in the management of shareholders, probably lost trust.

2) Double taxation

In contrast to the investment fund, the shareholders of insurance companies in many markets are exposed to double taxation on returns from investing their risk capital. These yields are first taxed when they exceed the tax-exempt tax and again, as part of the taxable income of shareholders when it is distributed in the form of a dividend. Double taxation reduces the returns of investments in securities through insurance companies in relation to potential returns that the investor could achieve by direct investment in the market. An insurance company can manage the cost of double taxation based on financial and investment decisions. It is possible, for example, to invest in certain hybrid actions, which have tax characteristics of debt, but also a risk that is typical of the actions. An insurance company can also invest in areas or forms of assets with a fairly favorable tax treatment. The choice of active or passive management also affects the tax burden of capital investment income.

3) Costs related to the risk of the business of insurance companies

The purpose of the insurance, which is reflected in providing adequate protection to the insured against the risk, induces potential costs of financial problems for the insurance company. (Piljan et all, 2017, pp.49) These costs include direct costs (costs of acquiring new capital, lawyers fees and loss of value due to sales) and indirect costs (primarily, loss of reputation). The resulting supplementary rate of return for shareholders is associated with a specific risk of insurance or the risk of bankruptcy of the company.

4) Costs of the regulatory restriction

Additional transaction costs of capital in insurance arise due to the request of the regulator, that the insurer keeps a minimum level of funds in order to secure fulfillment of obligations towards its insured. Regulatory constraints may take the form of a conservative reservation standard or minimum requirements for capital. These funds are not available in the domain of other business activities and can be used strictly in the area of support related to the core business of insurance. This stimulates the increase in costs as a result of the shortage of the liquid market of insurance liabilities. In addition, restrictions on rating companies can be similar to regulatory constraints. Existence of transaction costs explains the need which aims to provide shareholders with additional returns to their risk capital above the basic price of capital. Transaction costs affect the increase in the difference between the returns that can be generated from investments directly in the capital market and the yields that are taken into account when assessing whether certain business lines provide appropriate yield rates. Given that the capital supports all business lines, a particular problem for consideration is the determination of the value of transaction costs of capital that will be allocated to each individual business line or even to an insurance contract. Therefore, it is possible to identify two key channels through which insurance companies create value. Primarily, the insurance company has the opportunity to create value by the realization of its services with a premium of insurance that exceeds the amount of expected damage but also transaction costs of capital. Second, the source of the value could be the rate of return on investment above the benchmark rate contained in the basic price of capital. The insurance company has many options to manage the price of capital. Diversification and hedging are some of the examples that can be used to reduce the company's capital requirement that is needed for the risks assumed. (Piljan et all, 2015, pp.94-102)

CAPITAL - INSURANCE YIELDS

Most insurance companies use one easy access and allocate capital based on invoiced premiums and / or outstanding commitments in the current business year. It should be kept in mind that such an approach does not provide an appropriate way of determining marginal profit. The concept of "surplus-return framework" is one of the most commonly used methods for determining marginal profit by a large number of actuaries. (Hart et all, 2007, pp.2-3)

The form of this concept has three elements:

1. Determining and maintaining sufficient amount of capital for covering the risk;
2. Allocation of capital based on risk to business lines;
3. Evaluation of the performance of individual lines using a risk-adjusted yield rate. (Ishikawa et all, 2003, pp.84)

The two most important support methods are the level of capital allocated to individual business units, and the rate of return that is required on the equity to meet the expectations of shareholders. In the concept, capital yields, marginal profit is determined as the difference between the present value of the capital discounted at the rate of return on the assets to which the capital is invested and the present value of the capital discounted at the desired rate of return. In order to determine the appropriate profit premium within the gross tariff rate, using this approach, it is also necessary to determine the appropriate level of capital allocated to this type of insurance and the corresponding rate of return on that capital. Insurance companies have the ability to hold the required margin of solvency above the estimated capital. In addition, it is necessary to take into account the appropriate allocation of this capital to certain types of transactions. (Denault, 2001, pp.49) When we have determined the appropriate allocation of capital, we focus attention on the necessary rates of return on that capital, in order to determine an adequate marginal profit.

In many practical explanations, the actuary should determine the margin of profit in accordance with the target rate of return "the management has set." This rate corresponds to the expectations that shareholders have in the event of a joint-stock company. It should be sufficient to compensate shareholders for taking over the risk of investing in an insurance company. The target yield rate is a management decision, which requires the actuary to be informed of an adequate target rate from the aspect of management. In order to use the implemented capital allocation for the purposes of maximizing the value of a firm, adequate indicators are calculated for individual business lines, such as a custom risk capital ratio (RAROC) or economic value added (EVA). After selecting and applying a specific method of capital allocation, these indicators play a role as a decision-making criterion for the contribution of each business line separately, increasing the market value of the company.

Adjusted risk of return on capital (RAROC)

The adjusted risk capital ratio (RAROC) is the measure of the expected rate of return on equity during the policy term. For a given type of insurance, RAROC is, in fact, a net profit ratio of that kind of insurance and of the value of capital allocated to the same type of insurance. The insurance market implicitly discounts cash flows of future damages, which is why, for the most part, the insurance profits are negative. Negative insurance premiums, analogous to interest costs, should be deducted when calculating net profit by type of insurance. According to given types of insurance, calculated RAROC indicators should be compared with the price of capital for the given type of insurance. The value of capital can be determined using CAPM (Capital Assets Pricing Model). According to this method of valuation of capital, the rate of return expected on any asset is equal to the required market return of a risk-free investment, increased by the risk premium:

$$r_e = r_f + \beta(r_m - r_f)$$

where are:

$\mathbf{r_e}$ – rate of return on risk free assets;

$\mathbf{r_f}$ – the expected rate of return on the market portfolio;

$\boldsymbol{\beta}$**e** – beta coefficient (systemic risk measure).

The most commonly used systematic market risk, determined on the basis of CAPM, is used in determining the amount of capital by individual business lines. But, capital expenditures are not included in CAPM, and inevitably leads to an incorrect conclusion as to the cost of taking risks. A specific practical problem is in estimating the value of the beta coefficient of insurance risk. The application of the RAROC approach in non-life insurance is based on an assessment of whether the rate of return on the capital of each individual type of insurance is greater than or less than the amount of capital or the required rate of return. If RAROC is equal to or greater than the cost of capital, the continued allocation of resources for that type of insurance is consistent with the goal of maximizing the value. But, if RAROC is less than the amount of capital, the type of insurance reduces the market value of the firm. In this case, the firm should take certain measures in order to improve its own position, such as re-determining insurance prices, introducing more rigorous insurance terms or abandoning the given type of business. (Cumins, 2000, pp.8) In order to apply this approach, the procedure requires the pre-determination of the amount of necessary capital and the required rate of return for that type of insurance.

Economic Value Added (EVA)

Economic value added is a measure in which returns on one investment exceed the expected or required returns. This measure enables the identification of the type of insurance that creates value for the company. It's characteristics are the simplicity of calculation and the ability to determine the value of the company as a whole, but also its individual parts. The economic value added of the i-type insurance (EVAi) can be determined as follows:

$$\boldsymbol{EVA_i = Neto\ profit_{\ i} - r_i c_i}$$

where are:

$\boldsymbol{r_i}$ **–** the cost of capital for this type of insurance;

$\boldsymbol{C_i}$ **–** amount of capital allocated to this type of insurance.

If EVAi is ≥ 0, issuing a policy in a given type of insurance is in line with the goal of maximizing the value; otherwise, when EVAi <0, this type of insurance has an adverse effect on the value of the company. Therefore, the positive value of this indicator shows an increase, and the negative indicates a decrease in the value of a particular company. Improving the value of EVA indicators can be achieved by more efficient cost management, by increasing the sales capacity, by investing funds in instruments whose profitability exceeds the cost of capital and the adequate management of the capital structure. It should be remembered that an increase in the value of EVA can also lead to lowering the value of the company. If such an increase is associated with risk growth, it will affect the amount of capital,

which is why the value of EVA indicators in the future can be significantly reduced. Also, the growth of this indicator can be related to factors that have negative consequences in the long-term time perspective. Take, for example, a fall in the price of the reward system in the short-term perspective reduces costs and leads to profit growth, which can be reflected in the growth of EVA. In a longer-term perspective, there may be an outflow of experts, which can weaken the competitive position and reduce future EVA values. The form used to calculate the economic value added can be slightly modified to yield the results in the form of a rate of return, thus forming a measure called Economic Value Added on Capital (EVAOC). (Mitrašević, 2005, pp.20-21) The EVAOC indicator can also be defined as an EVA divided by equity allocated to the type of insurance:

$$EVAOC_1 = \frac{Neto\ profit_i}{C_i} - r_i$$

Here, it can be noted that the economic value added to equity in the type of insurance measures the deviation adjusted to the risk of capital ratios (RAROC) from the equity price for that type of insurance. The positive value of the EVAOC indicator shows that the insurance type in question contributes to value creation for the company. Because of the limited data we have available, determining the value of equity for type of insurance is a serious problem.

A possible approach to solving a given problem is the estimate of the price of a company's capital that offers only one type of insurance. Although such an approach is not fully applicable in practical terms, because it is very difficult to find a company offering only one type of insurance. Even in the case of its existence on the market, the insurance risk associated with such a company may be significantly different from the risk characteristics of a given business line within a company offering multiple types of insurance. One alternative technique is to use the so-called. "Full-information betas". (Kaplan, Peterson, 1997, pp.13) The data technique for estimating, using company data, having multiple types of insurance and, by regression, estimates the amount of capital for certain types of insurance.

TECHNIQUES FOR CAPITAL ALLOCATION OF THE COMPANY

The adequacy of the allocation of the capital of the insurance company by individual business lines is checked on the basis of the fulfillment of the requirements of an axiomatically defined approach to coherence. In order to consider the allocation of the capital of the insurance company as a coherent one, it is necessary to fulfill certain conditions.(Hart et all, 2007, pp.5-7)

Primarily, the amount of capital allocated to one business line within a company should not exceed the monetary amount that the same line would require

if it were to be viewed insulated from the rest of the company. Such a condition of symmetry implies a logical trace of things, that is, the same amount of capital must be allocated to two business lines with the same risk. Ultimately, according to the condition of risk-free allocation, the increase in the positive net cash flow of the business line corresponds to a proportional decrease in the amount of allocated capital. The problem of capital allocation can be presented on the basis of simple mathematical statements. The value of the allocated capital, to the type of insurance, indicated by Ci, is the product of the total capital of the company (C) and the proportion of capital allocated to the respective type of insurance (xi, where 0 <xi <1). The amount of capital allocated to all types of insurance operated by the insurance company should be less than or equal to the total capital of the company. If the company has N type of insurance, with the possibility of the entire amount of capital not being allocated to individual business lines, the following relations apply:

$$\sum_{i=1}^{N} x_i \leq 1 \quad i \sum_{i=1}^{N} C_i \leq 1$$

The actuarial approach to the allocation of the capital of insurance companies is based on the appropriate degree of risk that quantifies the risk of the entire company and its parts. The simplest would be if the total capital was allocated appropriately to the ratio of the risk measure of a specific business unit and the sum of the value of the risk measure of other units. Take, for example, capital can be allocated in proportion to the variation of the business results of each business line.(Venter, 2003, pp.462) A marginal impact, or more precisely, an increase in the value of the company's risk measure due to the increase in the exposure of the business line to a risk for one unit can be observed. Each business line is then attributed to capital only in the value of the increase in the required capital of the company that it creates. The development of financial models for the valuation of insurance, in contrast to the actuarial, is based on the observation of the insurance policy as a type of financial instrument. The presence of the risk of collapse and the simultaneous provision of several types of insurance by one insurance company are key tasks for the creators of the given models. The first financial models of the allocation of capital in insurance were based on CAPM models of discounted cash flows. But the main constraints on such models are to neglect the risk of collapse and transaction costs of the capital of the insurance company, as well as inadequate implementation in case of catastrophic risks. (Ibragimov et all, 2010, pp.553) Further contribution to solving the problems of insurance companies is ensured by applying the principle of valuation of options, first in the case of insurance companies that provide only one type of insurance. The risk of collapse of the company, which is endangered by insured persons, is viewed as a way of ownership-owned options, which ensures that the claims are not exceeded above the value of the property at the time of the downfall. The further development of this type of approach has begun to strive to include as many insurance types as possible of a company.

Value at risk (VaR)

A very prominent actuarial approach to the allocation of the capital of insurance companies is based on the selection and implementation of selected risk measures. The majority of well-developed solvency risk measures have various features that go in the appendix to make it difficult for one risk measure to be sufficient to communicate all the information needed to measure specific risks. Often, standard deviation, variance, VaR, Expected shortfall (ES) or tail at risk (Tail Value at Risk -TailVaR or TVaR) are often used as risk measures. The standard deviation takes into account the positive and negative deviation of the value of the observed random variable from its expected value. But the potentially negative deviation from the value we are aiming for has a relatively greater significance in risk management. Therefore, as a particularly popular measure of negative deviation, the value at risk VaR is defined as the maximum amount that a company can lose, in a predetermined period of time with a certain (usually very small) possibility. According to the generally accepted view, the foundations of this approach are related to investment banking. The use of VaR to trade currencies and securities rapidly expanded, primarily due to daily, as well as more frequent data on exchange rates and price instruments needed to calculate this indicator. This technique is also very important in the field of insurance, where its application is primarily in relation to accepted actuarial terms, such as probability of ruin and maximum probable loss.

The value at risk is defined by choosing two parameters, which is the time horizon and level of trust, and these are further dependent on the context in which they are applied. Generally, the time period can range from one day to the much longer annual and perennial periods, which are most commonly used in insurance. Regarding the level of trust, banks and investment companies usually choose the range from 95% to 98%, while insurance companies have a particular level of reliability of around 99%. (Dowd, Blake, 2005, pp.199)

For the probabilistic probability p€(0,1), the corresponding VaR labeled VaR [X; p] is characterized as an inverse function from the sum of the sum of the compensation claims (X):

$$\mathbf{VaR\ [X;p] = F^{-1}_{x}(p)}$$

where are they:

X – a random variable that describes the amount of claims;

Fx – the probability distribution function of a random variable X;

$\mathbf{F^{-1}_{x}}$ – the standard inverse random distribution function X for given p€ (0.1).

VaR represents the quintile order, p random variables X with the distribution function Fx. Applying value at risk in determining some required capital, the insurance company takes into account the inverse nature of their business cycle, that is, that insured persons pay premiums in advance while payment of insurance benefits is made if and when the provided insurance case arises under the conditions specified in the contract. With the purpose of protecting the insured,

supervisory bodies require that insurance companies ensure that their capital available, i.e., excess of assets over liabilities, at least equal to the estimated adequate capital level - ρ [X]. This capital is used to minimize the risk that premiums and reserves combined with investment returns will not be sufficient to cover future claims for insurant compensation. Essentially, ρ [X] will be selected so that it is satisfactory, there will be a high level of confidence that it will not occur that the level of claims is greater than a certain adequate level of capital, that is, the event {X> ρ [X]} will not be realized. One of the possible approaches to using VaR to allocate capital is to determine the probability of exceedance (Exceedence Probability).

The probability of exceeding is the probability that the losses in a certain type of insurance will exceed the expected loss plus the amount of capital allocated to this type of security:

$$\textbf{Probability of overrun} = P\{L_i > (L_i) + C_i\}$$

where are they:

L_i – loss in the type of insurance;

$E(L_i)$ – the expected value of the loss in the type of insurance;

C_i – capital allocated to the type of insurance.

Capital may be allocated by equalizing the probability of overdraft for certain types of insurance provided by the insurance company, in the case of case N type of insurance:

$$P\{L_1 > E(L_1) + C_1\} = P\{L_2 > E(L_2) + C_2\} = \ldots = P\{L_N > E(L_N) + C_N\}$$

If losses are different in size between business lines, the results can also be represented by the expected damage claims:

$$P\{\frac{L_1}{E(L_1)} > 1 + \frac{C_1}{E(L_1)}\} = P\{\frac{L_2}{E(L_2)} > 1 + \frac{C_2}{E(L_2)}\} = \cdots = P\{\frac{L_N}{E(L_N)} > 1 + \frac{C_N}{E(L_N)}\}$$

This formula expresses the required capital based on the ratio of allocated capital and the expected loss of each type of insurance. Something more risky types of insurance would require a higher amount of capital compared to the expected losses for achieving a certain probability of exceeding. It is possible to distinguish a number of problems related to the allocation of capital using VaR techniques. First of all, there is a possibility that the company will not have enough capital to ensure the appropriate likelihood of overruns for all types of insurance. In this case, it may increase the probability of overruns or increase the total level of capital. A reasoned approach to the probability of exceeding does not take into account the effects of risk diversification between certain types of insurance, which is why the reasoned concept of coherence isn't satisfied. In addition, the

probability of overrun doesn't provide information on the amount in which the losses most likely exceed the amount of available resources, in case of exceeding the level of overrun. An alternative risk measure that can remedy the aforementioned deficiency is the expected shortfall or tail value at risk (TVaR), which describes the expected loss under the condition of exceeding the value at risk. However, this is in line with the interests of shareholders, who aren't concerned about the size of the loss if the capital has already been spent.

This risk measure is given priority in the context of maximizing the value of the company. When calculating VaR, as with any statistical modeling, there are many sources of risk, and in particular are significant errors due to the selection of an inadequate model and an inadequate estimation of parameters. The size of the risk assessment of the parameters depends on the length of the time in which the assessment is made and the size of the accidental error and it must be taken into account in the VaR calculation. For the application of sophisticated VaR techniques, it is necessary to provide very frequent data, at least on a monthly basis. Premiums and insurance claims can not be viewed with sufficient frequency in a market context, since most of the insurance companies do not provide exactly this information. In order to incorporate VaR, RAROC and EVA methodologies, it is necessary for insurance companies to extend their information systems to include the data needed for their implementation. An insurance company should design information systems that can publish insurance results quite often, for example, on a monthly basis. The lack of quality data is a rather critical factor, because with inadequate or incorrect data, even the perfect model will not give good results.

Way the insolvency options

The starting assumptions of the original works, dedicated to the formation of prices in the case of multiple types of insurance, is the allocation of the capital of insurance companies in proportion to the share of each type of insurance in the company's overall obligations. According to many authors, it is incorrect to allocate capital to individual business lines, since the capital of insurance companies supports the settlement of liabilities in all policies of the company and is therefore indivisible.

According to the method of approach to valuation of insurance options, by issuing a policy, the insurance company equals issuance of corporate bonds. In exchange for a pre-charged premium, the insurance company is obliged to make payments to the insured on the maturity of the issued instrument. The value of the promise given to the insured can be viewed as the difference of the promised payment on the basis of the risk-free debt instrument (ie the present value of insured damages) and the value of the option path to the net assets of the insurance company. If we assume that the insurance company issues insurance policies at the moment 0 until the damages are due for payment at the moment 1, the sum that the debt owners (insured) receive on the maturity of the contract is equal to L - max {0L - A}, where L is the nominal value of the promised payment , and A is the value of the property of the insurance company. For determining the value of the

shareholder and insurer's requests for individual business lines, where potential cash inflows or outflows are viewed in a single period of time. If the premium exceeds the insurance claims incurred in the same type of insurance, the liabilities according to the insured will be paid and the shareholders will receive the rest of the value. Let Pi (τ) signify the insurance premium for the type of insurance, and Li (τ) marks the insurance obligations for the type of insurance in the period τ, more precisely the remaining time to the due date of obligations (τ = 1- t, 0 ≤ t ≤ 1). Then, the given cash flow can be modeled as the call option: Ci (Pi (τ), Li (τ), τ by the payout at the instant 1 equal to {Pi (0) -Li (0) 0,}.

There is also the possibility that cash based on premiums paid will not be sufficient to cover all obligations at the end of the period under review. Under the theoretical presumption, their unlimited liability, shareholders of a company will only use part or all of the assets to make up for that difference. This cash flow can be modeled as a path option that shareholders sell to insured persons in a certain type of security: Bi (Pi (τ), Li (τ), τ), whose payout at the moment 1 is equal to max {Li (0) -Pi (0) 0,}. If the property is less than the liability of the company under limited liability, the company faces failure, and the insured are paid in the amount of the asset value. The value of this possible cash flow in the period τ can be modeled as the path of an option known as the insolvency path (Phillips, 1996, pp.609) or the expected policyholder deficit (EPD):

$$I(\sum P_i(\tau)\, K(\tau), L_i(\tau), \tau) = I(A(\tau), L(\tau), \tau)$$

where are they:

$K(\tau)$– capital at the end of the period τ;

$A(\tau)$– assets at the end of the period τ.

The value for the path of the insolvency option depends on the total assets (A), i.e. property in the option option, the company's obligation (L), i.e. cost of option execution, deadline (τ), risk free rf reduced by the overall growth rate of rL liabilities and risk parameter σx, so-called. the process diffusion parameter showing the volatility of assets and liabilities, as well as their correlation (x = A / L). The sum of rL growth ratios is the weighted average growth rate by type of insurance individually. If it's,

$$w_{Li} = L_i I \sum i L_i$$

where: $\sum i L_i$- total company obligations, the data rate can be obtained as well, $r_L = \sum w_{Li}\, r_{Li}$.

For the allocation of costs the path of insolvency options for certain types of insurance, it is necessary to assume the priorities related to the bankruptcy of different types of insurance. Phillips, Cummins and Allen (1996) assumed that the insured share the insolvent insurance company's assets under the rule of equal priority, i.e. according to the value of their claims to the company. Therefore, each

class of insured will receive the wLi total assets of the company. The application of the rules of equal priorities results in the value of the claims of shareholders in the same type of insurance:

$$EH_i(\tau) = C_i(P_i(\tau), L_i(\tau),\tau) - B_i(P_i(\tau), L_i(\tau),\tau) + w_{Li} I(A(\tau), L(\tau),\tau)$$

Generally, the amount of claims of insured persons in the second type of insurance in the period τ, PHi (τ) is equal to the difference between the PHi (τ) premium and the shareholder's claims in relation to the type of insurance in the period τ, EHi (τ):

$$PH_i(\tau) = P_i(\tau) - EH_i(\tau)$$

According to equality (1) and (2), the amount of the insured's claims in one type of insurance is:

$$PH_i(\tau) = P_i(\tau) - [C_i(P_i(\tau), L_i(\tau),\tau) - B_i(P_i(\tau), L_i(\tau),\tau) + w_{Li} I(A(\tau), L(\tau),\tau)]$$

On the basis of the put-call parity, in particular by applying the equality rule between the difference in the value of the call option held by the shareholder and the path of the option he sells to the insured on one, and the insurance premium reduced by the discounted expected value of the insured damage at the moment 1, on the other hand, the previous relationship further reduces to form:

$$PH_i(\tau) = L_i(\tau) e^{-(rf-rLi)\tau} - w_{Li} I(A(\tau), L(\tau), \tau)$$

From the last equality, (4) it follows that the value of the insured's claims in the type of insurance is equal to the difference of the uncritical discounted value of the claims Li (τ) e- (rf-rLi) τ and the share of that type of insurance in the insolvency path wLi I A (τ), L (τ), τ). Equality proves that it is not necessary to allocate the company's capital by individual business lines in order to determine their insurance prices. This analysis shows that such an allocation of capital would be inconsistent with the mere formation of prices in an efficient, competitive insurance market. Such a conclusion can be justified only under the assumption that there are no transaction costs of the capital of an insurance company, which is not realistic. Capital allocation by individual business lines implies that there are no lines of access to capital that supports other lines, which is not the case in practice. The entire capital, serves to neutralize the deviations of the real from the foreseeable realization of risk across all business lines of the insurance company and, as such, determines the true market value of the insurance. To give an

approach, proceeds from the assumption that the claims for all types of insurance of the company are maturing at the same time, thus the risk of collapse is modeled simultaneously for all business lines of the company. Regardless of the similarity, the approach outlined provides more information than the value-at-risk methodology, because it considers the expected value of the amount that can be lost, and it is not limited solely to determining the probability of exceeding a certain value of the loss. In addition to the above advantages, the main drawback of the technique of the insolvency option is the neglect of the effects of risk diversification between business lines. The technique does not solve the problem of allocating the transaction costs of the capital of the insurance company.

Marginal allocation of capital

Marginal analysis, as part of this analysis, the risk of an insurance company is measured in the presence, but also without the presence of each individual business line. The total required capital for covering the risk is the marginal capital of the given business line. The company's capital allocation is carried out in accordance with the marginal capital ratio of the line and the sum of the marginal capital of all other business lines within that company. The common feature of all marginal capital allocation techniques is the use of an option valuation approach. The marginal capital for one business line is determined on the basis of the capital determination for each group of lines to which it may belong and the calculation of the acquired values. A basic complaint, which is often referred to with marginal capital allocation techniques, is the lack of a direct link between the amount of capital allocated to a business line and the risk of that line. Likewise, the assumption that insurance claims have a normal or log-normal distribution of probability, as a prerequisite for applying an appropriate option evaluation form, is often not met in practice. The specific problem of applying a marginal capital allocation approach is the accuracy of measuring the correlation between different business lines.

Merton - Perold approach

In terms of accessibility of calculating the marginal cost of capital developed by Merton and Perold, the business unit of the insurance company is treated as a separate entity, supported by a financial guarantee of the company. The payment of the damage at the level of a business unit is provided by the entire capital that the insurance company has in case of insufficiency of its premium and investment income. In return, the insurance company takes the profit that the unit generates. The theory of valuation of options is used to determine the amount of the financial guarantee and the profit of a business unit. For insured business units, the financial guarantee provides the option to transfer all damages above the funds of the business unit to the insurance company. Bearing this in mind, the limited resources of the company and the value of the guarantee represents the difference between the present value of the expected amount of the payment of the damage and the path of the insolvency option. On the other hand, the insurance company has a call option on the profit of a business unit, with a cost of execution equal to zero. If it's value is greater than the value of a financial guarantee, the business unit contributes to the creation of value for the insurance company. Practical

application of the approach is achieved through several phases. Assuming that the insurance company has a N business line, it is first necessary to determine the required capital to cover the risk (value of the insolvency route) of the hypothetical companies that cover the N-1 business lines, leaving out every successive step for one business line. Then the capital requirement of the entire portfolio is determined, after the inclusion of the omission of the business line. The difference in the required capital amount between the two steps is actually the marginal amount of capital that should be allocated to the i-th business line. The essential advantage of access is reflected in the appreciation of the effects of risk diversification between individual business lines. In a situation where the business lines are not perfectly interconnected, the total required capital for covering the risk at the level of the company providing multiple types of insurance is lower than the sum of the required amount of capital isolated from the observed business lines. The approach is suitable for applying when deciding whether to introduce a new one or to eliminate an existing line in the portfolio of an insurance company, or to consider possible mergers and acquisitions. The main drawback of the approach is the possibility that a part of the total capital of an insurance company will not be allocated to its business lines. Since the sum of marginal cost of capital may be lower than the overall costs of the company's capital, it may be that the marginal profit is greater than the marginal cost of the capital of each unit, and that it is not the same at the level of the entire company. In order to overcome this type of situation, the increase in business units is used, or the ability to merge business units.

Muers-Read approach

The capital allocation technique developed by Meyers and Red is aimed at addressing the issue of scheduling the transaction costs of the capital of the insurance company to it's individual business lines, rather than determining the profitability of these lines in relation to the necessary capital for covering the risk. The initial approach is the assumption that the transaction costs of the capital of the insurance company are borne by the insured, which causes the need for their allocation. As previously explained, this approach is based on the value of the option by which the insurance company provides the right to transfer the costs of the collapse to the insured. The percentage participation of the value of the company's insolvency option (D) in the expected amount of damage (L) is pre-determined at a level that needs to be kept constant. Increasing the risk exposure for each individual business line (or insurance policy) leads to an increase in the given ratio, while the increase in the amount of capital allocated to that line decreases. Consequently, the additional unit of damage to the business line is burdened with the amount of capital required to maintain the target value of the D / L. The capital allocation factor for individual business lines is determined so that two conditions are met. If ciLi denotes the amount of the required capital of the business line, the expected amount of Li's loss, then the total amount of the company's capital may be presented in the form of a sum of individual burdens: $\sum c_i L_i = cL$. Therefore, the amount of capital allocated to each line is directly proportional to its damages expected. It is also required to incrementally increase

the expected amount of damage for each line of business and be accompanied by sufficient capital increase so that the ratio D / L remains unchanged at the company level, i.e. $\partial D / \partial L_i = D / L$. Of crucial importance for the application of the approach is the correct assessment of the volatility and mutual correlation between the assets and liabilities of the insurance company. The appropriate risk measure of the insurance company's portfolio is the volatility of the asset's assets and liabilities (assuming that their joint distribution is log-normal):

$$\sigma = \sqrt{\sigma^2_{A'} \_ 2\, Cov_{A,\, L} + \sigma_{L}}$$

where: with σA, σL and CovA, L marked volatility of assets, volatility of liabilities and covariants of the logarithmic values of assets and liabilities of the company, respectively. By using Black-Cols, the formula for determining the price of options, the value of the option of insolvency was given:

$$D = L[\Phi(z + \sigma) - (1 + c)\Phi(z)]$$

Where: : $z = - \frac{ln\,(1+c)}{\sigma} - \frac{\sigma}{2}$; the Φ (z) denotes the distribution function of a random variable with a standardized normal distribution. Determining a partial statement of the value of the insolvency option in relation to the expected amount of damage by individual lines, while respecting the two conditions mentioned above, results in a form for calculating the factors of the capital allocation of the business line:

$$c_i = c - \left(\frac{\partial d}{\partial c}\right)^{-1} \left(\frac{\partial d}{\partial \sigma}\right) \left[\frac{1}{\sigma}\right] \left((Cov_{LiL} - \sigma^2_{L}) - (Cov_{LiL} - Cov_{AL})\right)$$

The amount of allocated capital per unit of expected claims of the i-th business line is the function of the total capital and liabilities ratio (c = C / L), the value of the insolvency option per unit of total expected damages (d = D / L), asset volatility and liabilities (σ). Furthermore, the capital allocation factor depends on the covariant of the logistic value of the damage to the business line and the damage to the total portfolio (CovLiL), or the logarithmic value of the company's assets (CovLiA). Finally, the determinants of the capital allocation factor are the volatility of the company's liabilities (σL) and the covariant of the logarithmic values of assets and liabilities of the company (CoAL). An important implication of the presented form for calculating the marginal capital allocation coefficient is related to the explicit appreciation of the effects of risk diversification between the lines of business. Adding business lines characterized by a low level of correlation with other line obligations or a high degree of correlation with yields on total assets leads to a reduction in the total required capital of the company. In line with

the previously discussed approach, the approach takes the view that the portfolio risk (and the amount of capital needed to cover it) may be lower than the sum of the risk of individual business lines.

CONCLUSION

The insurance companies provide a full amount of personal capital with a guarantee for the settlement of the obligations assumed under each insurance policy separately. Therefore, the allocation of capital in the insurance is only a hypothetical distribution of the company's resources between its parts. The allocation is not an end in itself, but rather supports a number of decision-making processes, such as price formation, performance measurement, or risk management.

The development of capital allocation techniques in insurance is directed towards the adoption of as rational assumptions as reflecting more specific characteristics of insurance activity and taking the effects of risk diversification. Modern capital allocation techniques are characterized by relatively more complicated accounting procedures, a relatively larger number of parameters to be evaluated, as well as a greater number of information that results in their use. Different techniques of capital allocation give different results and it is very important to be familiar with their mutual differences, shortcomings and advantages.

A comparative analysis of the developed capital allocation techniques has resulted in a number of guidelines. The inverse relationship between risk and equity is the basic principle of determining an adequate amount of capital and is subject to allocation. In order to meet the need for equity allocation to be fair, it is necessary to adequately include the risk variability, both on the liabilities side and on the assets side of the company concerned. In determining the variability of each individual element, one should bear in mind that all risks are not in perfect relation. Security in the results of the allocation process itself depends on the availability of frequent data. Therefore, it is necessary to avoid the situation where the capacity of the company's information system dictates the choice of technique to be used for capital allocation.

When selecting the allocation technique in a particular case, there is a potential problem for the insurance company to face a compromise between the interests of both parties, insurers and shareholders, but again between the requirements for the simplicity of the applied technique on the one hand and the reliability of its results on the other pages. Based on the appropriate degree of risk, the allocation of capital is accessible in a methodological sense, characterized by a high degree of subjectivity when selecting a given risk measure. The "Myers-Read" approach, on the other hand, has a stronger foothold in the theoretical sense, causing a number of important difficulties in terms of the necessary accounting.

Of crucial importance is the coincidence between the selected capital allocation technique for the purpose of its application. The evaluation of the final results is primarily conditioned by the goal of implementing the allocation. For example, Merton and Perold's approach is not quite appropriate in forming prices for individual insurance contracts, providing a fairly good basis for deciding on the retention or withdrawal of an insurance company from certain types of insurance. Compared to that, the "Myers-Read" approach exhibits some weaknesses in terms of assessing the economic performance of certain business units, as well as the benefits that exist in determining the price of their services.

In the extreme case, the criterion for selecting the technique must first of all be the maximization of value as the global purpose of capital allocation. By incorporating these recommendations into the decision-making and risk management system, insurance companies provide a solid basis for generating value for shareholders.

On the basis of all the indicators in the paper, the general hypothesis is confirmed: Different capital allocation techniques provide different results. The compatibility of the selected capital allocation technique with the aim of applying it is crucial.

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LIVING STANDARDS AND MICROINSURANCE

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ABSTRACT

Risks of a different kind are an objective category, and the occurrence of some of them shows zero correlation with regard to the level of economic development and the level of living standards. This makes it difficult to manage them, with particular emphasis on economically less developed, developing countries and poorer population structures. The demand for insurance as a basic strategy for risk management is mainly determined by the level of living standard and the possibility of purchasing insurance services by socially vulnerable categories of the population. Such a correlation, in turn, leads to that situation, that uninsured risks, regardless of the type of risk in question, especially badly affect poorer categories of society which cannot cope with the catastrophic losses from negative shocks. This applies to all types of risks that are a threat to the population and businesses, but especially to a large number of risks that people even in modern conditions cannot resist. In this category the greatest threats are so-called catastrophic risks in which there are two main categories: (1) Climate changes; and (2) Natural disasters (earthquakes, floods, etc.).
This paper elaborates mutual relations among mentioned categories, i.e. living standards and the need for developing microinsurance services, make analysis of the socially vulnerable strata of the population and the microinsurance models that could be applied in countries that have not still developed this form of insurance.
Key words: *living standards, vulnerable strata of the population, poverty, risks management, microinsurance*
JEL Classification: *G22, O11, O31, E71*

INTRODUCTION

When talking about living standards, it's a complex concept. Basically, the standard of living refers to the use and enjoyment of tangible and intangible goods

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and services, whether the individual provides them for themselves or they are provided by the wider social system. The basic factors that condition the living standards are as follows: (1) the level of the country's economic development (in this context we should mention labor productivity); (2) macroeconomic (in) stability in the country; (3) allocation policy, etc. The higher the level of development is the higher is the average level of living standard of the population as a whole (which of course does not exclude differences between the individual classes of the population). On the other hand, in countries with low levels of economic development, less opportunity for personal consumption exist, as the level of GDP per capita is less. Macroeconomic stability in the national economy is the second factor which affects the level of living standards. It is enough to mention that the volatility of prices, i.e. high inflation can significantly erode the wages and other incomes, and that will have a negative impact on the level of the population personal consumption. Allocation policy is the third factor that has adequate impact on living standards. Of course, wages are formed on the labor market, but must not be forgotten its specifics, and the fact that there is an impact of the Unions and the state too. Within the collective negotiation, the Unions can provide higher or lower wages for workers, and thus can significantly affect the opportunities for personal consumption. On the other hand, the state in the context of fiscal policy, using taxes or other public charges, may collect more or less part of the newly created value, which will create additional minor or major opportunities to meet the needs in public consumption. Realization of that task is in conditions of many risks that appear, such as: operational risks; financial risks; market risks (interest rate risk and currency risk); credit risk; inflation risk; country risk - sovereign risk; etc., and it is a necessary requirement for understanding the reasons that cause them, and the consequences arise from them in direction to find methods and techniques for dealing with those consequences (Karadjova, 2012, pp. 99).

The question of the living standards is not only of interest for economic science and economic policy. Sociology and social policy also analyze the level of living standards and the factors that determines it. In fact, in every country there are certain differences in the achieved level of living standards between the individual classes of the population, which in the professional terminology are known as social differences. Social differences should be accepted as inevitable fact, especially in the conditions of market economy and private property. They arise as a result of the inventiveness, the ability of each individual and his success in the market. That's why the state should not be committed to their elimination and leveling, because it means losing the motivation for success and for improving the level of their own standard of living among individuals (even in socialism despite clearly proclaimed egalitarian aspirations, the state failed to eliminate social differences). On the other hand, their excessive expansion means increasing the contradictions in society and the danger of disruption of the social peace. Because of that, the state can only using the economic policy (primarily tax policy) to distribute tax burden according to economic power of individuals, and also using the measures of the social and economic policy to take care of creating conditions for increasing the level of living standards for socially disadvantaged

individuals. This issue is also connected with the category known as “economy of happiness”, and the index of happiness measured by the World Happiness Report as a landmark survey of the state of global happiness.

Depending on the manner in which the material and spiritual goods that are subject of use and enjoyment will be provided, living standards can be considered as a whole made up of two parts: personal consumption and public consumption (in the last economic system was used the term social standard). Personal consumption represents that part of the standard of living that includes spending and enjoyment of tangible and intangible goods and services that are personally acquired. Social standard or public consumption means the wastage of material and spiritual goods and services provided by the state, so that citizens can use them individually or collectively without paying anything or paying only partial compensation for them. But, often in practice it is difficult to make a clear distinction between private and public consumption. The point of this paper is to consider the level of living standards in correlation with insurance, that is, to emphasize the need for insurance from different types of risks, regardless of the achieved level of living standard. Moreover, the emphasis is put on the need for insurance in conditions of low and extremely low standard of living by developing a special insurance product, microinsurance. The term "microinsurance” usually refers to insurance services offered primarily to clients with low income and limited access to mainstream insurance services, regardless of whether we are talking about developed, undeveloped or developing countries. In fact, the microinsurance from one hand have social dimension that refers to providing protection of low-income population from certain specific types of risks, but on the other hand realizes significant economic effects on the development and expansion of the insurance services market by inclusion of economically disadvantaged strata of the population on the insurance products demand side. The main difference between traditional insurance and micro insurance is in the way of targeting the low-income population. In that direction, some specific risks for the low-income population are highlighted (health insurance, insurance against unemployment, insurance against catastrophic risks, etc.). The concept of microinsurance is based on the idea of merging the necessary and useful, or merging the business and the social responsibility. In other words, it is about linking the offer of insurance products and socially vulnerable categories of the population, where insurance products are offered at extremely low prices. Thus achieves significant expansion of the sales on the market of insurance products, but also ensure an opportunity for risk management of a large part of the population which cannot afford using of insurance in order to provide health care, quality education or compensation for damages caused by catastrophic risks.

THE NEED FOR INSURANCE AS RISK MANAGEMENT STRATEGY AND MICROINSURANCE

Insurance as one of the ways to manage risks gives the opportunity to transfer the risks to another entity, which has a higher capacity for submission. Typically, insurance is a very suitable risk management tool for all entities at risk of loss, whose probability of occurrence is small, but if it happens, the loss would be large. In any case, insurance as a way to manage risks can be used to manage the pure risks, but not the financial risks and in this sense is available to all entities. The problem of availability is not legal at all (legal framework - compulsory and optional insurance) or about the practical availability of insurance services in all countries of the world, but stems from the level of awareness for the need of buying insurance services (especially if it comes for types of risks that the frequency of occurrence is not extremely expressed), and the level of the living standard, or the availability of insurance services for socially vulnerable categories of the population in a national economy.

The key elements that need to pay attention when risk is managed through the strategy of insurance are: (Ostojić, 2007, pp. 123).

- to choose the amount of the insured amount;
- to choose an insurance company;
- to choose the conditions and types of insurance;
- check whether data for damage compensation is available;
- periodically check the insurance program.

In the multitude of arguments for and against the use of insurance as a method for risk financing, it is primarily that it reduces the uncertainty and the risk of financial losses, but also that the paid insurance premium is a big expense (the possibility of consumption or saving on available funds is gone) or, in the worse case, there are insufficient funds available for the purchase of insurance. In that sense, the concept of microinsurance appears as a reconciliation of the two conflicting situations that arise in almost all economic realities - the arguments for the need for insurance and the limited funds for the use of insurance products by the low-income population.

Microinsurance differs considerably from classical, traditional insurance. Although at first glance it is quite clear what is and who is the subject of microinsurance, in the theory and practice of insurance there is no single, universal definition of the term. The first definition appears to have been published in 1999 by David Dror as part of “Microinsurance: Extending Health Insurance to the Excluded” where he defined “micro” as “the level of society where the interaction is located, i.e. smaller than national schemes, and ‘insurance’ refers to the economic instrument”. In 2002 he continued to focus his definition, stating “microinsurance units [are] community-funded health insurance schemes that are neither commercial nor national. These microinsurers do not have access to

resources and financial techniques of commercial insurance". (Dror, Preker, 2002, pp. 103-106). However, as microinsurance developed, it grew beyond the local level, especially through the involvement of commercial insurers. Microinsurance Innovation Facility (International Labour Office, Microinsurance Innovation Facility) defines micro-insurance as a mechanism for protection of the poor against the risks (accident, illness, death, natural disasters, etc.) in exchange for the payment of insurance premiums, which is adapted to their needs, income and level of risk. So, microinsurance is used in order to protect low income people from some specific risks for them, while as low income or poor are considered those which live below $4 per day (between $1 and $4 per day). The price of that insurance is a regular premium which corresponds to the probability and costs of the involved risks. Having in mind the mentioned definition, it is clear that the concept of microinsurance is named not because of the scope of the risk, institutions or delivery channels, but due to the fact that this type of insurance is adapted to the needs of people with lower incomes. Microinsurance is intended for people who do not have access to the "traditional" insurance and which are excluded from the national social security programs, often employed in the informal sector of the economy. The essence is in need for providing fast, cheap and simple insurance coverage for individuals who dispose with modest financial funds (Karadjova, Dicevska, 2016, 525-527).

Microinsurance is targeting to poor and socially vulnerable categories of the population gives specific topics, primarily of social character despite its economic dimension. Among the basic specificities of microinsurance can be cited:

The target groups of microinsurance are persons with low income, poor or at risk of poverty who have not knowledge of the concept and the effects of insurance or insurance consider as the need of the rich. At the same time the most vulnerable categories of the population are exposed to a number of risks and with an inability to independently cover any possible incurred damages;

Microinsurance is sold at very low premium (taking into consideration the users for which it is intended), which further emphasizes the law of large numbers and the principles of reciprocity and solidarity as fundamental principles of insurance. The low premiums are an advantage for users of this service, but causes numerous pricing challenges for companies that offer this kind of service;

In the multitude of products that microinsurance offer, most often it is about a group insurance, which means the insurance policy covers a larger number of insurees;

The need to reduce the price of this type of service at the lowest possible level and structure of the target group for which these products are intended creates a need of intense creativity and innovation of a subjects that offer microinsurance products, primarily in respect of information channels and channels of products distribution;

Microinsurance policies usually are prepared in simplified form, brief, clear, precise and understandable for people with lower levels of education. Often there is an opportunity to pay the premium in installments, in cash, at irregular intervals

(according to the income frequency of the insured) in unequal amounts, all in order to approach the product to wider groups of population.

Question that many are researched, but about which there are still many inconsistencies is the question of the client value of microinsurance. Emerging evidence on the impact of microinsurance shows that it can, and often does, provide value for low-income people. Microinsurance protects clients from financial losses, reduces their vulnerability, and improves their health. The value of microinsurance according to Microinsurance Centre, either direct or indirect, represents the added value in comparison to other available risk coping mechanisms, of having insurance either when claims are made or as a result of the changed behavior caused by owning a policy and trusting that it will be honored. Client value is comprised of: (http://www.microinsurancecentre.org/milk-project/client-value.html).

Expected value: the value clients may get from a product through behavioral incentives and "peace of mind", even if claims are not made

Financial value: the value of the product when claims are made as it compares to other coping strategies

Service quality value: the externalities created by providing access to product-related services.

But high-value products are not achieved instantly anywhere in the world. In new microinsurance markets, the easiest and fastest way to push a new product is starting by the basic products, which offer simple and limited benefits to clients. As the market develops and clients and providers become more familiar with microinsurance, more complex products, such as health and agriculture microinsurance, become possible. These in turn have a much higher impact on the lives and livelihoods of low-income people. Microinsurance protects clients from financial losses. Clients bear fewer expenses when they experience a shock. In the case of health insurance, a number of studies demonstrate that cashless schemes, which do not require clients to pay on receiving the service, reduce out-of-pocket health expenditure (International Labour Office, Annual Report 2013, pp. 25-26). Since insurance covers (part of) the expenses incurred following a shock and hence reduces the overall financial burden of the adverse event, dissaving stops being the only option left to the household (De Bock, O., Ontiveros, D., 2013, pp. 4-5). In this sense, microinsurance is not an end in itself and at the same time achieves macro-economic and micro-economic goals. Besides the economic dimension, encouraging entrepreneurial ideas and development acceleration, microinsurance accomplished also a number of broader social goals such as: poverty reduction, increase of health care, reduce deaths (mostly from lack of access to adequate levels of health care), increasing productivity in agriculture, favoring some important but not attractive economic activities (branches of branches of livestock, agriculture, fisheries etc., connected and dependent on weather conditions, and so on).

THE SITUATION OF POVERTY IN THE WORLD

The concept of microinsurance is tightly connected with the state of poverty. Determining the term poverty, Eurostat definition is used, according to which: for poor people are considered persons, families and groups of persons whose resources (material, cultural and social) are at a level that excludes them from the minimum acceptable manner of living in the country in which they live. In any case, the "treatment" of the poverty problem requires its precise definition and measurement. Poverty, as defined by economics, is a state or condition in which a person or community lacks the financial resources and essentials to enjoy a minimum standard of life and well-being that's considered acceptable in society. Poverty can be also defined as a condition in which needs are not properly provided, or if households lack resources for meals, activities, and living conditions and arranging, that are commonly or widely supported and approved by the society to which they belong. Living below the poverty threshold, which occurs in a number of citizens reflects an inability to settle their basic needs, or to cover the cost of normal living (electricity, water, etc.). Poorer countries, also lack modern energy services to fuel their houses, because they lack access to electricity and clean cooking facilities, that helps prevents air pollution in houses that causes chronic diseases. Energy poverty means that the household is unable to provide the energy needs in order to provide a decent life and equal opportunities in a given society and space. For example, access to Water for everyday living is a struggle for 783 million people, who do not have access to clean water and almost 2.5 billion do not even have access to adequate sanitation. Due to the lack of infrastructure in most countries, 6 to 8 million people die annually from the consequences of disasters and water-related diseases. Over, 38 countries in Africa, children live without electricity; yet without the continent's natural resources, many nations's economically or socially, would be facing a crisis (https://worldtop20.org/world-poverty-rate).

Considering poverty as a category, overwhelmingly acts data that almost half the world - over three billion people - live on less than $2.50 a day. At least 80% of humanity lives on less than $10 a day (http://www.globalissues.org/article/26/poverty-facts-and-stats#fact1). Over 80% of the world population lives in conditions of strong stratification, if we consider the average income. The poorest 40 percent of the world's population accounts for 5 percent of global income. The richest 20 percent, accounts for three quarters of world income. Rural areas account for three in every four people living on less than US$1 a day and a similar share of the world population suffering from malnutrition. However, urbanization is not synonymous with human progress. Urban slum growth is outpacing urban growth by a wide margin (UN Development Program, 2007, pp. 25). Approximately half the world's population now lives in cities and towns. In 2005, one out of three urban dwellers (approximately 1 billion people) was living in slum conditions (UN, Millennium Development Goals Report 2007, pp. 45). Thinking about living standards in 2005

the wealthiest 20% of the world accounted for 76.6% of total private consumption while the poorest fifth just 1.5%. The poorest 10% accounted for just 0.5% and the wealthiest 10% accounted for 59% of all the consumption (World Bank, World Development Indicators 2008). The GDP (Gross Domestic Product) of the 41 Heavily Indebted Poor Countries (567 million people) is less than the wealth of the world's 7 richest people combined (World Bank, World Bank Key Development Data & Statistics).

Following are a few more facts that reflect the state of poverty in the world: (https://www.dosomething.org/us/facts/11-facts-about-global-poverty).

Nearly 1/2 of the world's population — more than 3 billion people — live on less than $2.50 a day. More than 1.3 billion live in extreme poverty — less than $1.25 a day.

1 billion children worldwide are living in poverty. According to UNICEF, 22,000 children die each day due to poverty.

805 million people worldwide do not have enough food to eat. Food banks are especially important in providing food for people that can't afford it themselves. Run a food drive outside your local grocery store so people in your community have enough to eat.

More than 750 million people lack adequate access to clean drinking water. Diarrhea caused by inadequate drinking water, sanitation, and hand hygiene kills an estimated 842,000 people every year globally, or approximately 2,300 people per day.

In 2011, 165 million children under the age 5 were stunted (reduced rate of growth and development) due to chronic malnutrition.

Preventable diseases like diarrhea and pneumonia take the lives of 2 million children a year that are too poor to afford proper treatment.

As of 2013, 21.8 million children under 1 year of age worldwide had not received the three recommended doses of vaccine against diphtheria, tetanus and pertussis.

1/4 of all humans live without electricity — approximately 1.6 billion people.

80% of the world population lives on less than $10 a day.

Oxfam estimates that it would take $60 billion annually to end extreme global poverty--that's less than 1/4 the income of the top 100 richest billionaires.

The World Food Programme says, "The poor are hungry and their hunger traps them in poverty." Hunger is the number one cause of death in the world, killing more than HIV/AIDS, malaria, and tuberculosis combined.

The concept of living standards is closely linked to the poverty problem. In the same time, macroeconomic stability, i.e. price stability is one of the primary factors that determine living standards. So, unstable prices, i.e. inflation in conditions of constant nominal wages or in conditions when wages grow slower than the rise in prices, reduce their real value. Therefore, whenever we analyze the level of personal consumption and the living standard, must be taken into account the movement of prices. More specifically, for the purpose of analysis very useful are data for real net-wages movement, instead of the nominal net-wages movement. Statistical methodology goes one step further and calculated not only indices of nominal and real net-wages, but CPI indexes too. Stems from the fact that personal consumption consists of various items i.e. tangible and intangible goods and services, all in order to satisfy various human needs. Of course, as time goes, there are some changes in people's tastes, and even some changes in human

needs (arising of new needs). With the help of the CPI index, statistics takes into account these changes, because they are doing surveys on family budgets of typical families, including the quantity and diversity of commodities and services (consumption basket). During the time, some changes are made in a structure of the commodities and services which are previously included in a survey, in order to embrace the changes already occurred in reality. Related to living standards, usually low-standard countries, i.e. developing countries are often placed in the category of poor. But it does not link the notion of poverty exclusively to countries with an average low standard of living. Specifically, to the poor layers of the population do not mean a lot the very high degree of development of the country they live in, while they are struggling to survive. In that sense, there is a close connection of the problem of poverty with the distribution, equity and effectiveness, and an explanation in that direction is followed in the continuation of this section. For now it is sufficient to mention that the successful development of the economy also includes an improvement in living standards and access to all basic needs such that a person has enough food, clean water, clothing, health, education; equitable ownership of land and property; or to have appropriate "Human Development" in accordance to United Nations terminology.

To the poverty problem also closely linked is the problem of distribution, fairness and efficiency. In doing so, one has to take into account the distinction between two related concepts that appear to be identical, but in fact are very different: equality (i.e. the imperative of moving towards substantive equality of opportunity and outcomes for all groups), non-discrimination (i.e. the prohibition of discrimination against individuals and groups on the grounds identified in international human rights treaties) and the broader concept of equity (i.e. fairness in the distribution of costs, benefits and opportunities). In addition, within the UN, the said terms have the following explication: (UN, A Shared United Nations System Framework for Action, 2017, pp.32).

Equality in opportunities and outcomes - Equality requires both formal and substantive equality in opportunities and outcomes (see below). This can be linked to the concept of horizontal and vertical inequalities. Horizontal inequalities are the inequalities that exist between ethnic and other population groups. Vertical inequalities are the inequalities between individuals or households that are not related to group-based distinctions. While horizontal inequalities have been shown to be correlated with a higher risk of violent social conflict, the data suggest that extreme vertical inequalities (e.g. extreme income inequalities) risk destabilizing political, economic and social systems.

Discrimination and multiple and intersecting forms of discrimination - Discrimination is the inequitable treatment of individuals on the grounds of gender, race, age, ethnicity, disability, indigenous identity or any other status identified in international treaties. Many individuals face multiple and intersecting forms of discrimination that exacerbates their disadvantage. For example, an elderly, indigenous woman with a disability may face intersecting and overlapping forms of discrimination on the basis of her gender, age, indigenous status and disability, which will result in greater marginalization and exclusion from social, economic and political life.

Equity and fairness - Equity can be understood as the fair treatment of all population groups in society and fairness in the distribution of costs, benefits and opportunities. This overlaps with the concept of "equality" but is not identical to it. While the concept of "equity" brings a helpful focus on "fairness", the concept of "equality" brings an additional focus on legal protection, particularly for groups that are discriminated against; for example, gender equality and racial equality are

legally binding obligations institutionalized in most national and international legal systems.

When it comes to distribution, fairness and efficiency, the following data can also be mentioned as an illustration. World gross domestic product (world population approximately 6.5 billion) in 2006 was $48.2 trillion in 2006. The world's wealthiest countries (approximately 1 billion people) accounted for $36.6 trillion dollars (76%). The world's billionaires - just 497 people (approximately 0.000008% of the world's population) - were worth $3.5 trillion (over 7% of world GDP). Low income countries (2.4 billion people) accounted for just $1.6 trillion of GDP (3.3%). Middle income countries (3 billion people) made up the rest of GDP at just over $10 trillion (20.7%) (World Bank Key Development Data & Statistics, World Bank).

A basic indicator of the standard of living of a given country very often is used GDP per capita is often, as it reflects the average wealth of each person in a country. It is therefore the standard method used to compare how poor or wealthy countries are in relation to each other. In the beginning of 2018 "Focus Economiscs" as a Economic Forecasts from the World's Leading Economists make forecasts for GDP per capita from 2018 to 2022 for the 127 countries in the world. The mein purpose of such a forecasting was to get information about poorest currently in that moment and about perspectives in direction of their crossing in wealthier in the coming years. The projections used in this study are Consensus Forecasts based on the individual forecasts of over 900 world renowned investment banks, economic think tanks and professional economic forecasting firms. Focus Economics Consensus Forecast experts project GDP growth of 3.9% in 2018 and 4.7% in 2019. According to the same prediction, the following table provides an overview of GDP per capita for the period 2016-2022, ranging from the poorest to the richest countries in the world.

Table 1. GDP per capita 2016-2022

2018 Rank	Country	GDP per Cap 2018 (projected)	GDP per Cap 2016 (Actual)	2016 Rank	GDP per Cap 2022 (projected)	2022 Rank
1	DRC	468.2076	440.9842	2	631.9861	2
2	Mozambique	485.6679	383.1195	1	578.8407	1
3	Uganda	737.8687	694.2869	3	897.6487	3
4	Tajikistan	835.9737	806.0073	6	1085.773	4
5	Haiti	873.9934	705.3676	4	1153.522	5
6	Ethiopia	938.1304	883.8655	7	1253.024	6
7	Yemen	998.4961	761.088	5	1501.568	9
8	Uzbekistan	1025.504	2144.655	22	1646.637	10
9	Tanzania	1112.21	975.859	8	1362.394	7
10	Kyrgyzstan	1221.712	1080.689	9	1446.402	8
11	Myanmar	1432.801	1231.791	10	2134.979	15
12	Zambia	1461.506	1299.422	12	1665.591	11
13	Cambodia	1494.199	1268.826	11	1967.887	12
14	Pakistan	1609.103	1465.591	14	2004.865	13

15	Banglades h	1618.685	1371.748	13	2374.252	18
….						
36	Azerbaija n	4153.154	3507.727	30	5658.588	42
37	Georgia	4198.04	3946.083	39	5993.943	44
38	Sri Lanka	4282.559	3811.488	37	5544.294	40
39	Venezuela	4368.119	4778	48	4925.365	36
40	Iraq	4436.796	4547.616	46	5046.504	37
41	Kosovo	4495.335	3672.294	33	6024.757	45
42	El Salvador	4509.722	4226.656	44	5135.928	38
43	Paraguay	4516.276	3991.964	40	6169.961	46
44	Belize	4651.313	4630.585	47	4799.132	33
45	Guatemal a	4703.326	4125.903	42	5548.938	41
46	Angola	4725.743	3721.601	36	4903.343	34
47	Albania	5192.632	4142.339	43	6824.766	50
48	Bosnia	5209.645	4517.359	45	6757.568	48
49	Jamaica	5374.142	4968.894	50	6209.366	47
50	Iran	5727.839	5231.508	52	7048.236	52
51	Jordan	5904.414	5541.111	55	6768.028	49
52	Belarus	5979.214	4914.952	49	7400.126	54
53	Macedoni a	6112.687	5212.371	51	8016.382	56
54	Ecuador	6140.741	5966.118	57	6850.166	51
55	South Africa	6342.13	5335.191	53	7127.819	53
56	Colombia	6671.489	5800.91	56	7880.529	55
57	Serbia	6755.329	5446.652	54	9017.78	59
58	Thailand	6965.455	5969.76	58	8322.678	57
59	Peru	7049.746	6178.552	59	8361.598	58
60	Dominica n Republic	7334.704	6766.407	60	9159.166	60
61	Turkmeni stan	7456.266	6921.015	61	10311.37	62
62	Botswana	8512.711	7297.961	63	9574.504	61
63	Monteneg ro	8585.437	7022.697	62	10909.39	63
64	Bulgaria	9210.746	7507.744	64	12281.7	66
65	Kazakhsta n	9374.124	7852.118	65	11848.74	65
66	Mexico	9706.379	8796.565	68	12668.89	67
67	China	9766.357	8103.066	66	13108.97	68
68	Brazil	10199.39	8720.176	67	11815.55	64
	…					
75	Croatia	14729.96	12230.22	75	18340.22	77
	…					
95	Slovenia	26332.4	21719.96	92	33070.55	96
	…					
112	Germany	49082.64	42270.89	110	59385.92	112
113	Finland	50559.41	43557.5	113	60133.76	113
114	Austria	52284.4	44907.32	114	62176.49	114

115	Netherlands	53339.85	45746.92	115	64251.35	115
116	Australia	57432.85	51899.34	117	66695.32	116
117	Singapore	58090.72	55163.19	119	67629.88	117
118	Sweden	58429.58	51480.74	116	73332.43	121
119	Qatar	59074.09	58211.29	121	72813.63	120
120	Denmark	60789.46	53907.48	118	71931.15	119
121	United States	62009.81	57607.78	120	70437.55	118
122	Ireland	77182.55	64907.43	123	93344.89	123
123	Iceland	77314.73	59523.81	122	95788.6	124
124	Norway	79214.45	70875.86	124	101150.4	125
125	Switzerland	82188.71	81245.83	125	90239.11	122
126	Luxemburg	117274.8	102230.9	126	136074.3	126

Source: https://www.focus-economics.com/blog/the-poorest-countries-in-the-world (10.07.2018)

Based on the presented data which cover the 15 poorest and the 15 richest countries in the world (with predictions for a change in rank by 2022), it is evident that most of the countries in Central and Eastern Europe are in the middle of the list. More precisely on the list of countries according to the poverty indicator, Macedonia is at the 53rd place, Serbia at 57, Montenegro at 63, Croatia at 75, Slovenia at 95, and so on. It must be borne in mind that these are average data and that also those who belong among the richer countries in the world still have a greater or lesser percentage of the population below the poverty threshold, which emphasizes the question of microinsurance development as a category that exists in the world, but which is not present in this region.

Having in mind equity and fairness, the fundamental question that arises when distributing the gross domestic product is the question of the fairness of the distribution, and given the fact that people have a different kind and size of production factors. Some have only their own labor and knowledge; others own land and /or capital and receive income on many basics. Those who are not employed and do not have other productive factors definitely can not earn income and will find themselves in the category of the poor. In such a situation one of the roles of the state appears, through the policy of redistribution, taking in the form of taxes and other duties from those who have income and giving in the form of various social transfers to those who have no income. In this sense, it is one of the goals of the World Bank in the direction of overcoming the extreme poverty in the world, which refers to Addressing income inequality through financial services. In addition, the annual report for 2017 states: "Countries across the globe are facing new challenges that threaten to undermine the equity gains in past decades. Income inequality, for example, threatens to derail progress against poverty. One way to address income inequality and unlock economic opportunity is to bring "unbanked" individuals into the formal and regulated financial system. Access to financial services allows people to start and expand businesses, invest in education,

manage risk, and weather financial shocks" (WB Annual Report 2017, pp. 24). Another objective of the World Bank in the fight against poverty concerns Promoting universal social protection. In September 2016, the heads of the World Bank Group and the International Labour Organization announced a historic push to work toward universal social protection. While many developing countries are implementing such programs, only one in five poor people in the lowest-income countries is currently covered by any form of social protection. Around 1.5 billion people in the world, most of whom belong to the poorest and most vulnerable groups, lack the official identification needed to access basic services and opportunities in health care, education, jobs, financial services, or social benefits. The mission of the Bank's Identification for Development initiative is to foster inclusive development by helping countries to build secure and efficient ID systems (WB Annual Report 2017, pp. 24). The World Bank also has embraced the mission of assisting countries in their progressive realization of universal health coverage (UHC). Customer support focuses on three key areas: ensuring effective health service delivery; promoting protection against financial risk; and mobilizing the efforts of other sectors to improve health and nutrition outcomes. Together with the World Health Organization, the Bank has committed to produce every two years, since 2015, a Global Monitoring Report focused on UHC (WB Annual Report 2017, pp. 24). The state can apply a policy of covering some types of insurance for vulnerable categories of population (unemployment insurance, primary health insurance, etc.), but such serious budgetary efforts can only be allowed by developed economies. At this point, microinsurance can be followed up, especially in underdeveloped countries and developing countries.

The global poverty rate has been halved since 2000. But, despite this fact, increased efforts are needed to increase incomes, reduce suffering, and build resilience for those people who still live in extreme poverty.

Social protection systems need to be expanded and risks should be mitigated for countries with disasters, which also tend to be the poorest. In 2013, some 767 million people lived below the international poverty line of $ 1.90/ a day, and tha is a reduction from 1.7 billion people compared to 1999. That figure reflects a decrease in the global poverty rate from 28 percent in 1999 to 11 per cent in 2013. The largest decrease was recorded in East and Southeast Asia, with a sharp decline in the rate of 35 percent in 1999 to just 3 percent in 2013. Quite to the contrary, 42% of people in sub-Saharan Africa continued to live in extreme poverty in 2013. The figures for 2016 show that only 10 percent of world's workers lived with their families with less than $ 1.90 per person per day, which is a reduction for 28% from the year 2000. Taking into account relevant preliminary data from 2016, they show that only 45% of the world's population is effectively protected by a social protection system, and also that the coverage varies greatly across countries and regions of the world. In 2016, only 68% of people over retirement age received a pension. But one must bear in mind that this global average masks large regional differences. In Oceania, with the exception of Australia and New Zealand, and in sub-Saharan Africa, only 10% and 22% of people over retirement age respectively, received a pension in 2016. Also, the data for 2016 show that only 28% of people

with severe developmental disabilities received disability benefits, only 22% of unemployed people in the world received unemployment benefits, and only 41% of women who gave birth received maternity benefits. Building the resilience of the poor and strengthening disaster risk reduction is a core development strategy for ending extreme poverty in the most afflicted countries. Economic losses from disasters are now reaching an average of $250 billion to $300 billion a year. Disaster risk globally is highly concentrated in low- and lower-middle-income countries. In relation to the size of their economies, small island developing States have borne a disproportionate impact (UN, 2017, pp. 2-3).

Even this categorization of socially vulnerable part of the population gives an initial starting point for targeting the potential need (and possibly demand) on the microinsurance market. The ability to deal with unforeseen (or hardly predictable) risks, whose probability of occurrence is very small, is far beyond the financial capacity of this category of people. For its part, the application of microinsurance offers the opportunity for achieving the overarching objective of reducing poverty and social exclusion by including these layers of the population in financial flows and covering any eventual damages by the insurance industry, and not by the state budget.

PREVALENCE OF MICROINSURANCE IN THE WORLD

Having in mind the features and benefits of the microinsurance and the presence of the poor in the population structure in the world, it can be concluded that the microinsurance market has a great potential. However, the presence of microinsurance on the global insurance market is currently limited to the world regions that are recognized by the international institutions as the most vulnerable as poor. In any case, it is a market in underdeveloped and developing countries, in most cases refers to the rural areas, customers at a lower educational level, on the bottom of the economic pyramid, a market that is poorly served and is not integrated into the national and global market economy.

A number of international organizations and institutions (Munich Re Foundation in collaboration with the MicroInsurance Centre, the ILO's Impact Insurance Facility, the Microinsurance Network, the World Map of Microinsurance (WMM) and other organisations) work on developing, disseminating and implementing of the microinsurance products. For instance, The MicroInsurance Centre (MIC) is a consulting firm dedicated to generating access to valuable microinsurance products to 3 billion low-income people across the globe. The operation of this system is through cooperation with regular insurance companies and appropriate delivery channels that provide simple and market-responsive micro-insurance products. The clients include commercial insurers, foundations, and bi- and multi- lateral development agencies, regulators, NGOs and others. These organizations work with the mentioned Centre (MIC) to ensure the best potential for success with their microinsurance activities. Their work with

clients includes various aspects of microinsurance, from product development and training, to research and advocacy. The team of MIC has implemented microinsurance activities in over 70 countries during the last twenty years and their mission is: to get SUAVE (simple, understood, accessible, valuable, and efficient) microinsurance products in the hands of 3 billion people across the globe (MicroInsurance Centre, Annual Report 2015, pp. 4). So far, microinsurance products are successfully implemented in Africa, Latin America and the Caribbean, Asia and Oceania. However, there is a difference in the structure of microinsurance markets analyzed according to countries and regions worldwide. Thus, some countries make up the segment of people with the lowest income, such as Nigeria, while other countries such as Ukraine covers poor with higher income. Asia and Africa make up the rural market segment of low-income and Eastern Europe, Latin America and the Caribbean include the urban segment of this market. Microinsurance already covers around 135 million people, or around 5% of the potential market. In many countries, annual growth rates are 10% or higher (MicroInsurance Centre, Lloyd's 360° Risk Insight, pp. 3). In the same direction is the statement of Premasis Mukherjee, Senior Manager, Social Security and Insurance: "Microinsurance is the next wave of financial inclusion. With the advance of digital finance and convergence of government social security in favour of social microinsurance, the market is ripe for innovations. Besides, there is lot of scope for innovation in microinsurance in terms of behavioural understanding of the potential clients and strategic understanding of emerging distributions in microinsurance/mass insurance. These are reasons for exciting times ahead in the sector", (Microinsurance Network's Annual Magazine, 2016, pp. 45-46).

Table 2. MicroInsurance Worldwide

Regional landscape	Lives insured (in mn)	Total microinsurance premium (in mn USD)	Total microinsurance coverage ratio
Latin America and the Caribbean – 2016	51.49	480*	8.52%
Asia and Oceania - 2015	181.6	797.2**	6.96%
Africa – 2014	61.76	756***	5.43%
Total:	294.85	2.033.2	

Source: Microinsurance Network, http://worldmapofmicroinsurance.org

* Microinsurance Network, The World Map of Microinsurance, (2018), The Landscape of Microinsurance in Latin America and the Caribbean 2017 Final report, April 2018, pp.4

** Munich Re Foundation, (2014), Premasis Mukherjee, Arman Oza, Lisa Chassin, Rupalee Ruchismita, Landscape of Microinsurance in Asia and Oceania,

pp. 26

*** Microinsurance Network, The World Map of Microinsurance, (2016), The Landscape of Microinsurance Africa 2015, pp. 7

In 2015 the Microinsurance Network and Munich Re Foundation launched the World Map of Microinsurance (WMM), an interactive online map that provides key global data on microinsurance. Via this map, can be followed the current situation and prevalence of the microinsurance worldwide. The landscape studies which are part of WMM have been led by the Munich Re Foundation in collaboration with and support from the ILO's Impact Insurance Facility, the Inter-American Development Bank, the African Development Bank, the Asian Development Bank, and Making Finance Work for Africa (MFW4A), GIZ on behalf of BMZ, and the Microinsurance Network. This pioneering research has been carried out by the MicroInsurance Centre (Landscape study of 100 poorest countries 2005, Africa 2010, Latin America and Caribbean 2011, Africa 2012, MicroSave Asia 2013, Asia and Oceania 2013, Latin America and Caribbean 2014, Africa 2015, Sri Lanka 2016 and Latin America and Caribbean 2017). The mission of the WMM programme is to collect factual sector data in an unbiased manner, with the objective of promoting transparency, monitoring growth, identifying trends and inspiring innovation. The map enables insurers and microinsurance practitioners to gain a birds-eye view of the landscape of microinsurance worldwide, and search and extract sector-specific data by region to gain insights into trends for decision making (Microinsurance Network's Annual Magazine, 2016, pp. 48). Based on the previous 3 regional landscapes (Latin America and the Caribbean - 2014; Asia – 2013 and Africa – 2012), total self-reported coverage of microinsurance in three major microinsurance regions of Africa, Asia and Latin America stands at 263.4 Million lives and properties which (based on self-reported data) generated microinsurance premiums worth USD 2.1 billion (http://worldmapofmicroinsurance.org). Tables 2 and 3 show the latest available data on microinsurance coverage in the same micro insurance regions (Latin America and the Caribbean - 2016, Asia and Oceania - 2015, Africa - 2014).

Table 3. Sumary by regions and microinsurance position

Coverage	Latin America and the Caribbean – 2016	Asia and Oceania - 2015	Africa – 2014
Life coverage (excluding credit life)	21.26%	2.81%	4.08%
Credit life coverage	8.78%	/	1.44%
Total microinsurance coverage	**8.52%**	**6.96%**	**5.43%**
Life and accident coverage (excluding credit life)	6.92%	/	3.56%
Accident coverage	5.44%	4.00%	1.15%

Property coverage	4.11%	0.06%	0.40%
Agriculture coverage	2.54%	0.05%	0.10%
Health coverage	0.42%	0.74%	0.74%

Source: adapted according to Microinsurance Network,

http://worldmapofmicroinsurance.org/#view/global/all/total-microinsurance-coverage-ratio

However, in Asia, insurance is emerging as one of the fastest growing financial services that satisfy the poor due to the large population and thanks to relatively developed insurance market and regulations in some countries. Microinsurance is most prevalent in India and the Philippines, which have specific regulations. Between 2010 and 2012, Asia's microinsurance market grew by 30% annually in terms of people covered, and 47% in premiums generated, according to a 2014 report by Munich Re Foundation and Germany's GIZ aid agency. More than 170 million people in Asia had some form of microinsurance at the end of 2012. However, that is still only 4.3% of the population in a region where frequent natural disasters often propel already vulnerable people into destitution. Africa and Latin America each had about 44 million people covered by insurance (https://www.theguardian.com/global-development/2015/sep/01/micro-insurance-families-poorer-countries-protection-destitution). The latest available data presented in Table 2 shows further upward trend in the development of microinsurance.

In any case it must be emphasized that landscape studies for microinsurance refer to several previously mentioned regions of the world (Latin America and the Caribbean; Asia and Oceania; and Africa). In Europe, microinsurance is extremely poorly addressed and till now has not been prepared relevant study for the presence and potential claimants of these products, besides that The World bank provides data monitoring of world poverty (In this context Table 4 presents data on the countries of Europe and Central Asia - the context in which these data are monitored, the coverage stands at Eastern Europe). According to the presented data, about 14.10 million people in Europe and Central Asia (2012) are living in households with consumption or income per person below the poverty line.

Table 4. Global poverty monitoring – Europe and Central Asia

Country	Pov.line (PPP$/day	Mean ($/Day)	Headcount (%)	Pov.gap (%)	Squared pov. gap	Gini Index	Population (mil.)	Survey year
Albania	1.90	229.82	1.02	0.2	0.07	28.9605	2.9	2012
Armenia	1.90	187.46	2.24	0.52	0.18	30.5797	2.89	2013
Azerbaijan	1.9	465.6	0.00	0.0	0.0	16.635	9.42	20

	0	4		0	0			05
Belarus	1.90	620.56	0.00	0.00	0.00	26.5751	9.47	2013
Bosnia and Herzegovina	1.90	565.99	0.14	0.05	0.02	n/a	3.6	Interpo-lated
Bulgaria	1.90	534.31	1.72	0.7	0.43	36.572	7.27	2013
Croatia	1.90	516.87	0.75	0.46	0.34	31.9947	4.26	2013
Czech Republic	1.90	805.69	0.00	0.00	0.00	26.4723	10.51	2013
Estonia	1.90	766.74	0.98	0.62	0.52	35.079	1.32	2013
Georgia	1.90	211.07	6.88	1.71	0.66	38.3501	3.78	2013
Hungary	1.90	589.95	0.24	0.00	0.00	31.5028	9.89	2013
Kazakhstan	1.90	369.7	0.02	0.00	0.00	27.0631	17.04	2013
Kosovo	1.90	257.85	0.29	0.07	0.03	26.3066	1.82	2013
Kyrgyz republic	1.90	153.54	3.26	0.48	0.13	28.8155	5.72	2013
Latvia	1.90	600.1	1.23	0.62	0.46	35.4994	2.01	2013
Lithuania	1.90	629.26	0.74	0.47	0.39	35.3103	2.96	2013
Macedonia	1.90	296.31	6.01	2.81	1.98	36.8939	2.08	2013
Moldova	1.90	291.82	0.08	0.01	0.00	28.5342	3.56	2013
Montenegro	1.90	420.01	1.04	0.23	0.05	32.4429	0.62	2013
Poland	1.90	502.28	0.01	0.00	0.00	32.5495	38.04	2013
Romania	1.90	266.58	0.00	0.00	0.00	27.4507	19.98	2013
Russian Federation	1.90	756.42	0.01	0.00	0.00	40.8844	143.51	2013
Serbia	1.90	343.71	0.29	0.04	0.01	29.0171	7.16	2013
Slovak Republic	1.90	682.02	0.24	0.16	0.1	28.0849	5.41	2013
Slovenia	1.90	998	0.00	0.00	0.00	26.2402	2.06	2013
Tajikistan	1.90	178.21	5.04	1.13	0.39	n/a	8.18	Interpo-lated

Turkey	1.90	517.27	0.33	0.06	0.02	40.1785	75.79	2013
Turkmenistan	1.90	229.21	4.91	0.82	0.23	40.7654	5.37	1998
Ukraine	1.90	398.43	0.00	0.00	0.00	24.555	45.49	2013
Uzbekistan	1.90	115.64	19.09	5.17	2.11	35.2688	30.24	2003
Europe and Central Asia	1.90	/	1.59	0.42	0.18		482.34	2013

Where:

"PPP" - refers to Purchasing Power Parity. The default option is the PPP rates for consumption in 2011 estimated by the World Bank's Development Data Group.

"PL" - Poverty line. The default poverty line is $1.9 per day.

"Mean$"- The "Mean$" is $ the average monthly per capita income/consumption expenditure from survey in 2011 PPP.

Headcount (H) - % of population living in households with consumption or income per person below the poverty line.

Poverty Gap (PG) - mean distance below the poverty line as a proportion of the poverty line.

"Survey year" The "Survey year" is the year in which the underlying household survey data were collected.

Source: adapted according to The World Bank IBRD-IDA (Working for a World free of poverty) PovcalNet: an online analysis tool for global poverty monitoring http://iresearch.worldbank.org

An overview of the structure of the world's population by region it belongs to, using the lowest poverty line of $1.9 per day (The World Bank IBRD-IDA make analysis on $3.2/day and $5.5/day also) is given in the following Table 5. The table also contains summary data for the whole world. What makes the connection to the level of living standards, poverty and microinsurance is the fact that according to the World Bank nearly 800 million people in the world are below the poverty threshold of $1.9 per day. These are people, who still face an extremely low standard of living and a daily struggle to settle basic needs, and they are hugely exposed to various risks (health risk, risk of natural hazards, catastrophic risks, etc.) which if they happen, they could not individually compensate the damages. Although the world's poor population is predominantly dominant in Africa, Asia and Latin America, the data show that millions of extreme poor people also live in other parts of the world, including in countries in Europe and other countries with an average high income.

Table 5. Regional aggregation using 2011 PPP and $1.9/day poverty line

Region (Data for 2013)	Pov. line (PPP$/day)	Headcount (%)	Pov. Gap (%)	Squared pov. gap	Num of poor (mil.)	Population (mil.)	Survey coverage
East Asia and Pacific	1.9	3.64	0.69	0.23	73.17	2,007.50	97.7
Europe and Central Asia	1.9	1.59	0.42	0.18	7.67	482.34	90.66
Latin America and the Caribbean	1.9	4.54	1.75	1.06	27.8	612.87	91.62
Middle East and North Africa	1.9	2.66	0.53	0.17	9.55	358.35	77.65
Other high Income	1.9	0.61	0.45	0.38	6.38	1,046.38	76.05
South Asia	1.9	15.14	2.79	0.79	257.32	1,699.31	98.11
Sub-Saharan Africa	1.9	42.29	16.51	8.7	400.79	947.63	69.06
World Total	1.9	10.94	3.31	1.57	782.68	7,154.37	88.83

Source: adapted according to The World Bank IBRD-IDA (Working for a World free of poverty) PovcalNet: an online analysis tool for global poverty monitoring http://iresearch.worldbank.org

While there have been many breakthroughs in microinsurance market penetration in recent years, there are glaring geographic disparities, with oases of success amid vast deserts without coverage. The insurance industries in many countries have not been able to fulfil their potential to support economic development. Although a few countries are pushing ahead, the majority remain in the first two stages of development. There is currently an urgent need to accelerate the growth of emerging insurance markets in these countries. In 2015, 70% of natural and man-made catastrophe losses were not insured. When there is a disaster such as an earthquake or a hurricane, it is the low income people that are most affected and pushed back into poverty (Microinsurance Network's Annual Magazine, 2016, pp. 44-45). Insurers recognize this need. In 2016 The Economist's Intelligence Unit's survey of insurers found that nearly one-half (45%) of respondents said that supranational organizations should work with developing countries to inform policymakers better of the value of catastrophe insurance and other forms of insurance as a top priority (International Labour Office, Annual Report 2013, pp. 38).

CONCLUSION

Living standards, the state of poverty and idea of microinsurance are closely connected. From its part, living standards as a complex concept is determined by a number of factors - macroeconomic stability, the level of the country's economic development and primarily by the allocation policy. Less developed countries, or those who have a need for rapid development and greater investments (those that require the allocation of a greater % of GDP for productive consumption) are facing the problem of poverty and the problem of low standard of living. Therefore, during talking about public spending can not be avoid the problem of efficiency in public services and activities, that it related to the issue of cost-effectiveness of public expenditures.

This means that each national economy should pay particular attention to the decision making of the problem of increase the levels of efficiency, economy and quality of services offered to its citizens. It is here that the concept of microinsurance can find its application, in a sense of replacing part of public spendings, and in order to fund the damages caused by a number of risks. In a multitude of risks, underdeveloped countries and developing countries and their populations are particularly affected by a number of catastrophic risks that the state budget does not have the capacity to withstand. The essential function of insurance in order to be used as a strategy for managing pure risks, have some specifics in managing catastrophic risks. Namely, talking about catastrophic risks first of all there is a difficulty in the assessment of the probability for their occurrence in a given location and precise determination of the time of their occurrence (despite their statistical monitoring and the methodology for processing available data). Mostly it is talking about natural phenomena (floods, earthquakes, tsunamis, hurricanes, etc.), and despite the overall development of science and technology still there are not existing any precision measuring instruments with which these can be accurately predicted. In that direction this paper analyzes the need for expanding the range of microinsurance use as a protection against numerous risks, with emphasis on countries with a lower standard of living or socially vulnerable categories in countries with a higher standard of living.

In contemporary conditions, globally there is an initiative for convergence of financial services to persons from socially vulnerable groups, i.e. those with low incomes which were excluded from the financial markets. Their inclusion in financial markets goes by using microinsurance. The inclusion of people with low incomes and those at risk of poverty in formal financial flows, realize economic benefits for the insurance industry too, and for development of the financial system as a whole. The category of people with low incomes are seen as potential consumers who aspire to join the group of people with middle and high income and that in the long run will bring profit to those entities which in this moment have the will to invest in this market of the future.Microinsurance enters within the financial services market, which experienced expansion in recent years.

Today, more and more emphasis is put on the fight against poverty and reducing the number of people with low incomes in the world. The largest contribution to this has the World Bank which cooperates with the governments of the countries that need the greatest help. Microinsurance offers a visiable alternative for low income households to manage their risks. At the same time, it is increalingly untapped growth segment for the insurance sector.Having in mind the analyses of the World Bank, in the last decade about 500 million people crossed from the group of low-income into the group of people with average income, which goes into direction of the thesis that the economic dimension of microinsurance is pronounced and there is great potential for expansion of the insurance market. Although the microinsurance business at first glance looks like a business with low incomes, yet it is a potential generator of long-term incomes in the future.

The potential market for insurance in developing economies is estimated to be between 1.5 and 3 billion policies. There is a considerable demand for a wide range of insurance products from health and life, agricultural and property insurance, until to coings for catastrophe disasters. Regarding the potential for development and distribution of microinsurance products in Europe, the data show that especially in Eastern Europe, significant percentage of the population is at the poverty line and there are social and economic reasons for the implementation of these products. In any case, it is a large potential market that can be developed through multiple modalities, starting from state subventions, through public private partnership, up to commercial microinsurance.

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PENSION REFORM AND THE LONG-TERM LABOUR FORCE PROJECTIONS IN SERBIA: THE A P.P.LICATION OF THE COHORT-SIMULATION MODEL

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ABSTRACT

In 2014 the Government of Serbia has adopted a law that postponed both the minimum age for early retirement for men and women and the minimum age for old-age retirement for women. The measures were introduced in order to address high inactivity of the elderly, especially among women, while, at the same time, addressing the problem of the increasingly aging population and heavily burdened pension system. We use the Cohort Simulation Model and the Labour Force Survey data to investigate the medium- and long-term effects of the retirement reform on the projected activity rate of men and women in Serbia,. The results indicate that the activity rate of older workers would increase by 1.9 percentage points by 2026 and by 3.9 percentage points by 2060 even without the introduction of the pension reform, merely as the result in the activity trends. On the other hand, the introduction of the pension reform increases the activity rate by additional 2.2 percentage points in 2026 and by 2.9 percentage points in 2060. Additionally, the results suggest that the large gender gap in the activity rates will be significantly reduced. However, the growth of the activity rate suggests that the Europe 2020 target of 75% 20-64 activity rate will be reached in Serbia only in 2060.

Key words: *labour market activity, pension reform, projection, Serbia*
JEL Classification: *J14, J26, H55*

INTRODUCTION

Serbia's labour market is characterized by low activity, especially since the onset of the 2008 economic crisis (Arandarenko et all, 2012). The activity rate for

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the age group 15 - 64 in Serbia in 2017 stood at 66.7% (SORS, 2018), while on average the activity rate for the same age group in the EU was at 73.6% (OECD, 2017). The effects of the inactivity are similar to those of the unemployment: besides the financial ones, long-term absence from the labour market lowers the skills of the workers, and consequently their chances for future employment. In addition to the effects on the individual socio-economic position, low activity represents great untapped potential for the Serbian economy, as well as for every other country (Arandarenko et all, 2012). Having this in mind, the European Commission had, in the Europe 2020 strategy for sustainable growth and employment, set the goal of increasing employment rate of the population aged 20-64 to at least 75%.

The inactivity rate in Serbia is particularly high among the elderly (55-64) - 51.0% in 2017 (SORS, 2018), compared to the 39.3% in 2017 in the EU (Eurostat, 2018). As in many other transition countries, high inactivity in this age group is partially due to the process of privatisation and reconstruction which destroyed many jobs in the last two decades, while at the same time, they were facing demands of a rapidly changing technological and work environment (Žarković-Rakić & Vladisavljević, 2014). Given their tough position on the labour market, many elderly workers decided to remain inactive and wait for retirement, rather than to face the process of job search. Within this age group inactivity is particularly high for elderly women (61.5 % vs. 40.8 % for men in 2017). Lower activity rates of elderly women are partially due to differences in gender roles, which put higher pressure on women to perform unpaid home labour (Avlijaš et all, 2013), but also due to differences in the retirement system, which sets a different age of retirement for women and men (World Bank, 2016).

On the other hand, Serbia is also a country with an ageing (and shrinking) population, which coupled with the low activity presents a challenge to the social protection system, especially the pension system. In 2014, 13% of GDP was spent on pensions, which was one of the highest shares in Europe, while the ratio of pensioners to workers stands at 1.2 since 2012 (PIF, 2018). Numerous studies have indicated that the spending was not sustainable, and that there was a need to encourage active aging in order to extend the service life of the elderly population (e.g. World Bank, 2009; Fiscal Council, 2012).

The reform of the pension system has been suggested as one of the measures to tackle lower activity of the elderly, and particularly older women in Serbia, while, at the same time addressing the problem of the increasingly aging population and heavily burdened pension system. Unanimous conclusion of the number of studies dealing with the issue of the inactivity of older workers is that it is necessary to postpone the age at which people are allowed to go to early retirement (e.g. Aranderenko et all, 2012; Žarković-Rakić and Vladisavljević, 2014). At the same time, similarly to many other countries, it has been suggested that the retirement age for men and women should be equalized (Fiscal Council, 2012),

In 2014 the government of Serbia has adopted a law that postponed both the minimum age for early retirement for men and women (2015 – 2023) and the

minimum age for old-age retirement for women (2015 – 2032), having in mind the existing gender gap in the retirement age.

In this paper we investigate, ex ante, the medium- and long-term effects of the retirement reform on the projected activity rate of men and women in Serbia. We project the values of activity rates by using the Cohort Simulation Model – CSM (Burniaux et al, 2003; Carone, 2005) together with the Labour Force Survey data from 2008 to 2016. In order to measure the effects of the retirement reform, we compare the results of the activity rate projections without and with the reform of the pension system.

This paper is structured as followed. After this introduction, in the next chapter we are describing, in detail, the retirement system in Serbia and the reform that has been introduced by the government. In the section 3 we present the methodology, including the Cohort Simulation Model, while in section 4 we present the results of the simulation. Section 5 concludes.

THE REFORM OF THE PENSION SYSTEM

The Serbian pension system

The Serbian pension system is a Pay as You Go system and it is regulated by the Law on Pension and Disability Insurance which was adopted in 2003 and amended last time in 2014. The pension system consists of one pension fund which covers all employees, self-employed persons and farmers and is administered by the Republic Fund for Pension and Disability Insurance. There are three different pension schemes in Serbia and these are old age retirement scheme with early retirement options, disability pension and survivor pension. In 2014, 57.8% of pensioners had an old-age pension, 20.0% had a disability pension and the remaining 22.2% had a survivor pension (PIF, 2018).

Old age retirement scheme

Prior to the 2014 reform, the old age retirement scheme set the minimum retirement age at 65 for men and 60 for women while the minimum contributory years were set at 15. Early retirement for men was possible at the age of 60 years and 40 years of contributions and for women at the age of 54 years and 36 years of contributions. The amount of the pension benefit is calculated based on a point system so that personal points are multiplied with a general point value. The general point value is set by the government and announced by the Republic Fund for Pension and Disability Insurance. The personal number of points is determined as the product of the average personal coefficient and total insurance period.

The average personal coefficient is the sum of average annual personal coefficients divided by the respective period for which value points are taken into account (only earning history after 1970, which may be shorter than the total contribution period). The annual personal coefficient is calculated by taking the gross or net earnings of the person concerned in each calendar year divided by the

national average gross or net annual earning of all employed persons in the same year. In other words, the annual personal coefficient puts the earnings of the person in relationship to the average earning and when they are, for instance equal, the coefficient equals one, when the earnings of the individual are double of the average earnings in a year, it's equal to two, etc. There are penalties for early retirement which amount to 0.34% of reduction for each month of anticipation below the statutory retirement age and the reduction is capped at 20.40%.

Disability pension scheme

There is no minimum retirement age in the case of disability pension. The disabled person retires when the disability is officially confirmed. Minimum qualifying period if disability is not work related is 5 years of insurance for persons above the age of 30. Insured persons aged below 30 years are entitled under more favourable conditions. (Up to 20 years: at least 1 year of insurance; up to 25 years: at least 2 years of insurance; up to 30 years: at least 3 years). The same method of calculation as for the old age pension is used for the disability pension scheme, however, the number of contributory years needs to be calculated based on whether the injury was work related or not. For work-related injuries the contributory years are set to 40, whereas for not work related disability the calculation is somewhat more complicated and less contributory years are generally used. (The total qualifying period for calculation of disability pension for persons whose disability is not related to work comprises of: actually completed insurance period and additional hypothetical period. Additional hypothetical period is determined as 2/3 of the period starting with the age of the person concerned on the date of contingency up to the fictive age of 53, plus 1/3 of the hypothetical period from the fictive age of 53 to the fictive age 58 (2.5 years) for women and 60 for men (3.5 years)).

Survivor pension scheme

The survivor pension scheme constitutes the right to receive the pension of the deceased person for his or her eligible survivors. Eligible survivors are widow/widower, children and parents. Survivors' pension is defined according to the number of eligible family members (including the spouse). The pension is based upon the general invalidity or old-age pension the deceased would have been entitled to at the time of death. The survivors' pension is calculated as a percentage of the pension to which the deceased would have been entitled, according to the number of eligible survivors (One survivor: 70%, two survivors: 80%, three survivors: 90%, four or more survivors: 100%) and it amounts to at least 70% of the old-age pension of the deceased.

The reform of the pension system

In 2012 - 2014 the public pension expenditure reached 13% of GDP and this constituted an increase of 2.1 percentage points compared to the period 2005 - 2007 prior to the economic crisis (World Bank, 2015). Responding to the high share of the pension expenditure in the GDP, the Government of Serbia has in 2014 introduced a pension reform, which main goal was to reduce the pension expenditure to 11% of GDP. This was to be achieved through a reduction of the

number of early retirees by increasing the minimum early retirement age for both men and women, by gradually aligning the statutory old age retirement age of women with the retirement age of the men and by a reduction of the pension benefit. In terms of pension schemes, the reform affects the right to the old-age pension scheme and the average pension for all schemes.

In what follows, we explain the main elements of the reform.

1. Gradual increase in early retirement age for men and women

— The early retirement age for men increases from 55 years in 2015 by 8 months each year until 2021 and then by 6 months until 2023 upon reaching 60 years in 2023. The second requirement for early retirement is that a person has a minimum of 40 years of insurance period and this condition does not change.

— The early retirement age for women rises from 54 years and 4 months in 2015 by 8 months each year until 2021 and then by 6 months until 2023 upon reaching 60 years in 2023. In addition, the second requirement for early retirement related to total insurance period rises from a minimum of 36 years and 4 months by 8 months in 2016, and then each year by 6 months until 2020 when it reaches 39 years. From 2021 until 2023 the minimal total insurance period rises by 4 months upon reaching a minimal insurance period of 40 years in 2023.

The reform of the early retirement scheme is presented in Table 1.

Table 1. Gradual increase in early retirement age for men and women

Year	Men	Women
2015	55 years and 40 years of insurance period	54 years and 4 months and 36 years and 4 months
2016	55 years and 8 months and 40 years of insurance period	55 years and 37 years of insurance period
2017	56 years and 4 months and 40 years of insurance period	55 years and 8 months and 37 years and 6 months of insurance period
2018	57 years and 40 years of insurance period	56 years and 4 months and 38 years of insurance period
2019	57 years and 8 months and 40 years of insurance period	57 years and 38 years and 6 months of insurance period
2020	58 years and 4 months and 40 years of insurance period	57 years and 8 months and 39 years of insurance period
2021	59 years and 40 years of insurance period	58 years and 4 months and 39 years and 4 months of insurance period
2022	59 years and 6 months and 40 years of insurance period	59 years and 39 years and 8 months of insurance period

2023	60 years and 40 years of insurance period	59 years and 6 months and 40 years of insurance period

Source: Law on Pension and Disability Insurance (2014)

2. Gradual increase in the statutory retirement age for women

— The pensionable age for women is being gradually increased by 6 months every year from 1 January 2015 onwards until 2020 and then by 2 months every year until 2032, upon reaching 65 in 2032. These changes are presented in detail in Table 2.

Table 2. Gradual increase in statutory retirement age for women

Year	Statutory retirement age for old age pensions	Year	Statutory retirement age for old age pensions
2015	60 years and 6 months	2024	63 years and 8 months
2016	61 years	2025	63 years and 10 months
2017	61 years and 6 months	2026	64 years
2018	62 years	2027	64 years and 2 months
2019	62 years and 6 months	2028	64 years and 4 months
2020	63 years	2029	64 years and 6 months
2021	63 years and 2 months	2030	64 years and 8 months
2022	63 years and 4 months	2031	64 years and 10 months
2023	63 years and 6 months	2032	65 years

Source: Law on Pension and Disability Insurance (2014)

3. Reduction of pension benefits

— Pensions up to 25,000 RSD remain unchanged.

— Pensions between than 25,000 and 40,000 RSD are taxed at a rate of 22% and the tax applies only on the amount above 25,000 RSD.

— Pensions above 40,000 RSD are taxed at a rate of 22% on the amount 25,000 to 40,000 RSD and the amount of the pension above 40,000 RSD is taxed at a rate of 25%.

DATA AND METHODOLOGY

Data

The Labour Force Survey in Serbia is conducted since 1994, but the survey has undergone a number of changes to be adapted to the EU-LFS methodology.

The most important changes were those introduced in 2008 and in 2014 (SORS, 2017).

The change in 2008 included the shift to ILO definition of employees, and therefore included informal and temporary workers to a greater extent. Additionally, the change included a shift to bi-annual collection of data, instead of annual, as well as a change in the sampling procedure. Therefore, the data series available from the LFS are not comparable before and after 2008.

The change in 2014 included a change in the data collection frequency to 4 times per year, as well as significant changes in the post-stratification procedure. Therefore, the data series available from 2008-2013 and 2014-2016 periods are also not fully comparable (SORS, 2017). According to the SORS, the currently produced labour market indicators are in line with those for other European countries which use EU-LFS.

Employment, unemployment and inactivity in LFS data are defined by the International Organization of Labour (ILO). According to this definition, all those who worked at least one hour a week within the previous week are considered as employed. This means that employment includes workers working for wage as well as self-employed, both full time and part time workers, as well as workers from both formal and informal economy. Among those who do not work, the unemployed are defined as those who are actively looking for work and who are ready to start working within two weeks. Employed and unemployed are considered active, while those who do not belong to these groups are inactive (if they are aged over 15). Inactivity rate represents the share of inactive in the total working-age population, while they also can be defined for a specific age cohort.

Methodology for the activity rate projection

The estimation of the total labour force is defined in accordance with the Cohort Simulation Model (CSM). The CSM methodology is used in a number of studies which seek to perform medium- and long-term projections of the activity rates in a country. The methodology is first developed for the OECD by Burniaux et al (2003) and further adopted by Carone (2005). In this paper, we follow the methodology described in the Ageing report (DG ECFIN & AWG, 2014). The methodology consists of several steps:

1. The starting point of the projection

The starting point of the projection of the labour force trends is the calculation of the participation rates by gender and single age cohort for the last year available – for Serbia this is 2016. We calculate the rates using the Labour Force Survey data, provided by SORS.

2. Calculation of the entry/exit rates

In the next step, we calculate the entry/exit rates by gender and single age cohort, based on the formula provided in the Ageing report (DG ECFIN & AWG, 2014, p. 98). For the cohorts with the increasing participation rates, the entry rate Ren_{x+1} is calculated as

$$Ren_{x+1} = \frac{Pr_{x+1}^{t+1} - Pr_x^t}{1 - Pr_x^t}, \quad (1)$$

where Pr_x^t is the participation rate of people aged x years in the year t, and Pr_{x+1}^{t+1} is the participation rate of the people from the same age cohort a year later. Since we monitor their participation in year t+1 they will be aged x+1 years. Therefore, the expression $Pr_{x+1}^{t+1} - Pr_x^t$ indicates the annual rate at which the people aged x years in the year t enter the labour market in the following year.

On the other hand, if the participation rate for a specific age cohort is decreasing, the exit rate is calculated as:

$$Rex_{x+1} = \frac{Pr_x^t - Pr_{x+1}^{t+1}}{Pr_x^t}, \quad (2)$$

where Pr_x^t again represents the participation rate of people aged x years in the year t, and Pr_{x+1}^{t+1} is the participation rate of the people from the same age cohort a year later. The expression $Pr_x^t - Pr_{x+1}^{t+1}$ therefore represents the annual rate at which the people aged x years in the year t exit the labour market in the following year.

In the Ageing report (DG ECFIN & AWG, 2014), entry/exit rates are calculated as the average rates for the specific gender and age for the last ten years (2004-2013). For Serbia, as mentioned before, LFS data are comparable with the ILO definition only since 2008, with another significant change in the methodology in 2014. Therefore, having in mind that the data are fully comparable from 2008 to 2013 and from 2014 to 2016, we will calculate the exit and entry rates as averages for the comparable periods (i.e. averages of 7 yearly exit and entry rates).

The Cohort Simulation Model assumes that the exit/entry rates by gender and age cohorts will remain the same throughout the projection period. This assumption will later be relaxed to accommodate for the effects of the pension system.

3. Projection of the activity rates

After obtaining the entry and exit rates in the second step, in this step we calculate the projected activity rates from 2016 onwards. The projection of the participation rates for the cohorts with increasing participation is calculated as (DG ECFIN & AWG, 2014):

$$Pr_{x+1}^{t+1} = Ren_{x+1}(1 - Pr_x^t) + Pr_x^t \quad (3)$$

where Pr_{x+1}^{t+1} is the projected participation rate of the people aged x+1 years in year t+1. Therefore, for example, the participation rate for persons aged 20 years in 2017 is the function of the actual participation rate for those aged 19 years in 2016 and the average entry rate for this group in the 2008-2013 and 2014-2016 periods. Similarly, the participation rate for persons aged 21 years in 2018 is the function of the projected participation rate for those aged 20 years in 2017 and the average entry rate for this group in the 2008-2013 and 2014-2016 periods. For cohorts with decreasing participation the projection is calculated as (DG ECFIN & AWG, 2014):

$$\mathrm{Pr}_{x+1}^{t+1} = (1 - \mathrm{Rex}_{x+1}) * \mathrm{Pr}_{x.}^{t} \quad (4).$$

Similarly, to the situation with entry rates the participation rate for persons aged 56 years in 2017 is the function of the actual participation rate for those aged 55 years in 2016 and the average exit rate for this group in the 2008-2013 and 2014-2016 period, while the participation rate for persons aged 57 years in 2018 is the function of the projected participation rate for those aged 56 years in 2017 and the average exit rate for this group in the 2008-2013 and 2014-2016 period.

The impact of the retirement reform

As mentioned in the previous section, the exit rates for older workers (55-64) represent the average historical exit rates for 2008/2013 and 2014/2016 period. As it has been established in a number of previous research (e.g. Duval 2003; Bassanini and Duval, 2006) the reform of the pension system has significant effects on the older workers' activity. Following Ageing report (DG ECFIN & AWG, 2014), we take into account the changes of pension system by adjusting the exit rates of the workers. Exit rates for people aged between 55 and 74, calculated separately for both genders, are 'shifted' forward according to the expected effects of pension reforms. We perform these adjustments in three steps, corresponding to three different changes of the pension system: change in the male early retirement options, change in the female early retirement options and change in the female old-age retirement options.

The rules of the changes of the retirement system are fully described in Chapter 2. Here we describe how we implemented these changes in the projection of the activity rate.

1. Changes in the male early retirement schemes

As already mentioned, for men there is a gradual increase of the early retirement options between 2016 and 2023. The process of including these changes into the projection of the activity rates first includes the calculation the average male pre-early retirement exit rate based on available data on the exit rate for men aged between 52 and 54 (for 2008-2013 and 2014-2016 periods) as the ages preceding the early retirement according to the current rules.

According to the rules described in the chapter 2 the male exit rates will be changed for the following groups:

— For those aged 56 years in 2016 exit rates will not be changed, as they are already eligible for early retirement

— Those aged 55 years in 2016 will become eligible for early retirement at the age of 56 in 2017, and for them we do not change their exit rates.

— Those aged 54 in 2016 will become eligible for early retirement in 2020, when they are 58 years old. Their exit rates are changed with the pre-early retirement exit rate when they reach 56 (2017) and 57 (2018) years, as in these years they cannot go to early retirement, unlike the previous generations

— Those aged 53 in 2016 become eligible for early retirement in 2023 when they reach 60 years of age. Their exit rates are changed with the pre-early retirement exit rate when for the ages between 56 (2017) to 59 (2018) years, as, unlike the previous generations, in these years they cannot go to early retirement

— Those aged 52 or less in 2016 become eligible for early retirement at the age of 60 years when they reach this age. Similarly to those aged 53 in 2016, we change their exit rates for the ages between 56 to 59 years with pre-early retirement exit rates

— The full scheme of the changes is presented in table 3.

Table 3: Changes of the early retirement options for men

2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
56											
55	*56*										
54	55	**56**	**57**	*58*							
53	54	55	**56**	**57**	**58**	**59**	*60*				
52	53	54	55	**56**	**57**	**58**	**59**	*60*			
51	52	53	54	55	**56**	**57**	**58**	**59**	*60*		
50	51	52	53	54	55	**56**	**57**	**58**	**59**	*60*	
49	50	51	52	53	54	55	**56**	**57**	**58**	**59**	*60*

Note: The numbers in the table represent the age of the workers in the years presented in the first row. The grey area indicates the person is not eligible to go to early retirement in that year, while the white area indicates that they are. The numbers in bold indicate the difference in the early retirement years between the current rules and rules according to the new pension scheme. Source: Own elaboration based on Table 1.

2. Changes in the female early retirement schemes

Similar to men, there is a gradual increase of the female early retirement options between 2016 and 2023. We calculate the average female pre-early

retirement exit rate based on available data on the exit rate for women aged between 51 and 53 as the years preceding the early retirement according to the current rules.

According to the rules described in the chapter 2 the early retirement options will be changed for the following groups:

— For those aged 55 years in 2016 exit rates will not be changed, as they are already eligible for early retirement.

— Those aged 54 years in 2016 become eligible for early retirement at the age of 56 in 2018. For this group, we change the exit rates when they reach 55 years (in 2017), with the female pre-early retirement exit rate, since they, unlike the previous generations, cannot go to early retirement at this age.

— Those aged 53 in 2016 become eligible for early retirement at the age of 58 in 2021. For this group, we change the exit rates for the ages 55 to 57 (2018 - 2020), with the female pre-early retirement exit rate, since they, unlike the previous generations, cannot go to early retirement at these ages.

— Those aged 52 or less in 2016 become eligible for early retirement at the age of 59 years and 6 months when they reach this age. We change their exit rates from 55 to 59 years with the female pre-early retirement exit rate.

— The full scheme of the changes is presented in table 4.

Table 4: Changes of the early retirement options for women

2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
55												
54	**55**	*56*										
53	54	**55**	**56**	**57**	*58*							
52	53	54	**55**	**56**	**57**	**58**	**59**	*60*				
51	52	53	54	**55**	**56**	**57**	**58**	**59**	*60*			
50	51	52	53	54	**55**	**56**	**57**	**58**	**59**	*60*		
49	50	51	52	53	54	**55**	**56**	**57**	**58**	**59**	*60*	
48	49	50	51	52	53	54	**55**	**56**	**57**	**58**	**59**	*60*

Note: The numbers in the table represent the age of the workers in the years presented in the first row. The grey area indicates the person is not eligible to go to early retirement in that year, while the white area indicates that they are. The numbers in bold indicate the difference in the early retirement years between the current rules and rules according to the new pension scheme. Source: Own elaboration based on Table 1.

3. Changes in the female old age retirement schemes

Old age retirement scheme will be gradually changed for women between 2015 and 2032. In order to account for this change we calculate the average female pre-old age retirement exit rate based on available data on the exit rate for women aged 59 as the year preceding the early retirement according to the current rules.

The full scheme of the changes is presented in table 5. In what follows we explain these changes in detail:

— Those aged 59 years in 2016 will become eligible for retirement at the age of 62 in 2019 (we change the exit rates for the ages 60 and 61 (2017 and 2018), with the pre-old age retirement exit rate, since they, unlike the previous generations, cannot go to old age retirement at these ages.

— Those aged 58 years in 2016 will become eligible for retirement at the age of 63 in 2021. Therefore, we change their exit rates for the ages 60-62 (2018-2020), with the pre-old age retirement exit rate

— Those aged 57 years in 2016 will become eligible for retirement at the age of 63 in 2022. Therefore, we change their exit rates for the ages 60-62 years (2019-2021), with the pre-old age retirement exit rate

— Those aged 56 years in 2016 will become eligible for retirement at the age of 64 in 2024. We change their exit rates for the ages 60-63 years (2020-2023), with the pre-old age retirement exit rate.

— Those aged 55 years in 2016 will become eligible for retirement at the age of 64 in 2025. We change their exit rates for the ages 60-63 years (2021-2024), with the pre-old age retirement exit rate.

— Those aged 54 years in 2016 will become eligible for retirement at the age of 64 in 2026. We change their exit rates for the ages 60-63 years (2022-2025), with the pre-old age retirement exit rate.

— Those aged 53 years in 2016 will become eligible for retirement at the age of 64 in 2027. We change their exit rates for the ages 60-63 years (2023-2026), with the pre-old age retirement exit rate.

— Those aged 52 years in 2016 will become eligible for retirement at the age of 64 in 2028. We change their exit rates for the ages 60-63 years (2024-2027), with the pre-old age retirement exit rate.

— Those aged 51 years in 2016 will become eligible for retirement at the age of 65 in 2030. We change their exit rates for the ages 60-64 years (2025-2029), with the pre-old age retirement exit rate.

— Those aged 50 years or less in 2016 will become eligible for retirement at the age of 65. We change their exit rates for the ages 60-64 years, with the pre-old age retirement exit rate.

Table 5: Changes of the old-age retirement scheme for women (2016 - 3032)

2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
60																			
59	**60**	**61**	62																
58	59	**60**	**61**	**62**	63														
57	58	59	**60**	**61**	**62**	63													
56	57	58	59	**60**	**61**	**62**	**63**	64											
55	56	57	58	59	**60**	**61**	**62**	**63**	64										
54	55	56	57	58	59	**60**	**61**	**62**	**63**	64									
53	54	55	56	57	58	59	**60**	**61**	**62**	**63**	64								
52	53	54	55	56	57	58	59	**60**	**61**	**62**	**63**	64							
51	52	53	54	55	56	57	58	59	**60**	**61**	**62**	**63**	**64**	65					
50	51	52	53	54	55	56	57	58	59	**60**	**61**	**62**	**63**	**64**	65				
49	50	51	52	53	54	55	56	57	58	59	**60**	**61**	**62**	**63**	**64**	65			
48	49	50	51	52	53	54	55	56	57	58	59	**60**	**61**	**62**	**63**	**64**	65		
47	48	49	50	51	52	53	54	55	56	57	58	59	**60**	**61**	**62**	**63**	**64**	65	
46	47	48	49	50	51	52	53	54	55	56	57	58	59	**60**	**61**	**62**	**63**	**64**	65
45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	**60**	**61**	**62**	**63**	**64**

Note: The numbers in the table represent the age of the workers in the years presented in the first row. The grey area indicates the person is not eligible to go to old-age retirement in that year, while the white area indicates that they are. The numbers in bold indicate the difference in the old-age retirement years between the current rules and rules according to the new pension scheme.

Source: Own elaboration based on Table 2.

RESULTS

Figure 1 presents the average entry rates for each year by gender. As expected, the entry rates are distinctly positive for youth, i.e. until the age of 28. The entry rates are especially high at the age of 19 (the entry rate at this stage amounts to 16.2% for men and 9.7% for women), age at which the secondary school ends, and around at the age of 24 (8.4% for men and 9.6% for women), after the completion of the tertiary level of education. The ages between 29 and 48 can be described as ages with zero entry/exit rates. For these ages the entry/exit rate are either close to zero or alternate between positive and negative values. The rates are negative (exit rates) after the age of 49, and peak between the age of 56, when early retirement options are available and 60 for women and 65 for men, when regular retirement options are available for women and men respectively.

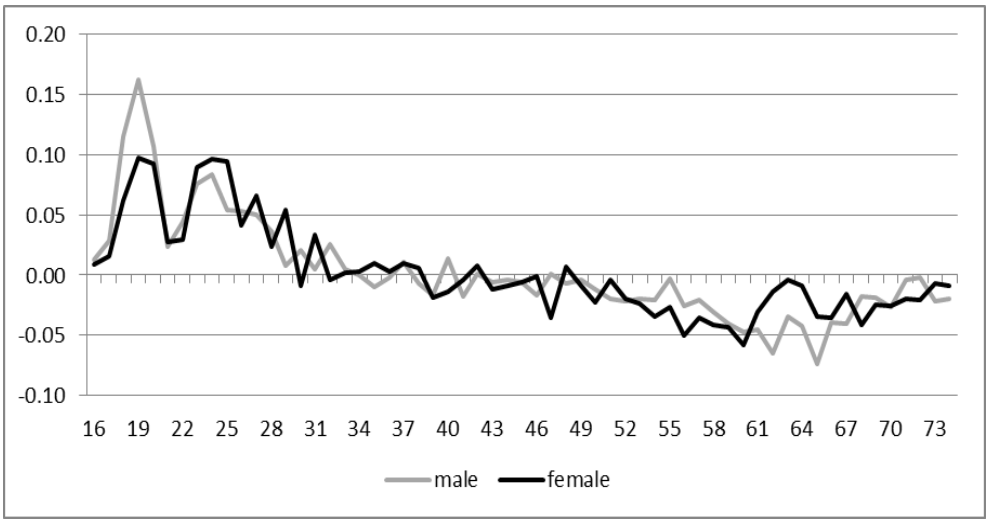


Figure 1: Average entry and exit rates for men and women, by age cohorts
Source: Own calculations based on the LFS data

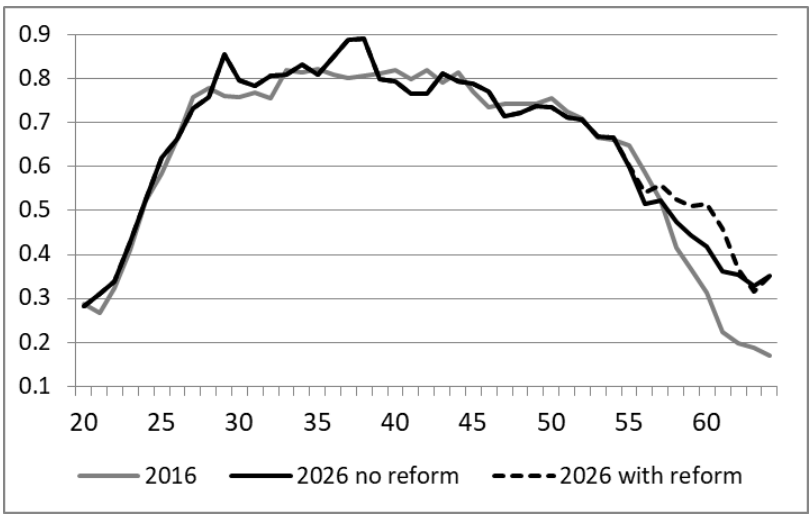
Based on the participation rates for 2016 and the calculated entry/exit rates, we project the participation rates until the 2060, by using the equations (3) and (4) from the methodology section. For the simplicity of the presentation we limit our results only to the projection for 2026, which serves as medium-term projection, and 2060, which is our long-term projection. For both medium and long-term projections, we present the results (1) without pension reform, which reflect the demographic trends and the trends in the activity rate captured by the entry and exit rates from 2008-2013 and 2014-2016 period; and (2) with the pension reform, which reflect the demographic trends, trends in the activity rate and further

expected shifts in the activity rate which are due to changes in the pension schemes.

The projected activity rates and impact of the retirement reform for women

Figures 2 presents the projected changes in the participation rates of women in all age cohorts, in 2026 (top panel) and 2060 (bottom panel). The results of the projection indicate that both in the medium-term and in the long-term, we can expect the increase of the activity of older women, regardless of the pension reform (comparison between the grey and black full lines in Figure 2, top and bottom panel). This result fits well with the general trend of the stronger inclusion of the older population in the labour force and the future development of gender equality in the country. Additionally, both medium- and the long-term projections indicate an increased participation of younger women (around the age of 30) and women in prime-age group (between the ages of 35 and 40), which again fits well with general trend of stronger inclusion of women in the labour force.

The main question of our research was related to the effect of the pension reform on the activity rates. Figure 2 indicates that projected female activity rate for older women is further shifted upwards as a result of the pension reform (comparison between the solid and dashed black line in Figure 2, top and bottom panel), from the age of 55 to the age of 64 in the medium-term and 55 to 64 in the long-term. This difference is expected as the old-age pension reform for women is set to be complete only in 2032, which is six years after our medium-term projection year – 2026.



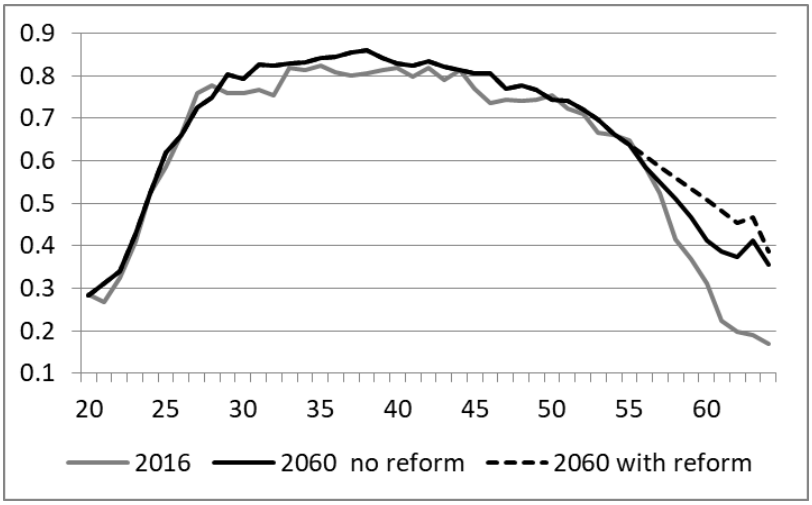


Figure 2: Participation rates in 2016, 2026 (top) and 2060 (bottom panel) for women, with and without the pension reform by age cohorts
Source: Own calculations based on the LFS data

The described results from the Figure 2 are summarized in Table 6. In 2016 female activity rate in Serbia for the 20-64 age group stood at 62.1%. Our medium-term projection indicates that without the pension reform the 20-64 female activity rate would rise to 65.1% in 2026 (by 3 percentage points compared to 2016), merely as the result of the demographic trends and the trends in the activity rate captured in the entry/exit rates. With the pension reform included in the projection the female 20-64 activity rate rises to 66.0%, i.e. it increases by 0.9 percentage compared to the projection without the pension reform.

On the other hand, in the long-run (2060), female 20-64 activity rate increases to 67.7%, or by 5.6 percentage points, compared to the 2016, even without the pension reform. Projected growth of the participation rates is in line with the rates reported in the Ageing report, where the overall growth of the female 20-64 activity rate in the EU on average is 5.8p.p. (DG ECFIN & AWG, 2014; p.58). When we include the pension reform in the projection, the projected activity rate is further shifted by 1.1 percentage point to 68.9%.

Table 6: Projected participation rates for the 20-64 and 55-64 age groups, women

	20-64			55-64		
	Without the reform	With the reform	Difference	Without the reform	With the reform	Difference
2016	62.1%	-	-	35.3%	-	-
2026	65.1%	66.0%	0.9 p.p.	43.6%	47.3%	3.6 p.p.
2060	67.7%	68.9%	1.1 p.p.	47.1%	52.4%	5.3 p.p.

Source: Own calculations based on the LFS data

As the pension reform presumably has an impact only on the activity of older women we also analyse the trends of the female activity rate for the 55-64 age

group (Table 6). The activity rate for this age group in 2016 stood at the very low level of 35.3%, being lower than the one for men by 23 percentage points (compare Table 6 and Table 7). Our medium-term projections indicate that this rate in 2026 will increase significantly even without the pension reform and that it will reach 43.6%, while by 2060 the rate will increase to 47.1%. This increase of 8.3 and 11.8 percentage points for 2026 and 2060 respectively is expected due to the labour market trends which fits to the general trend of the stronger inclusion of the older female population to the labour market and is again in line with the predictions from the Ageing report (DG ECFIN & AWG, 2014; p.58).

Pension reform, which proposes to postpone the ages at which women can go to early and old-age retirement further increases the activity rate by 3.6 percentage points to 47.3%. In the long run, female 55-64 activity rate is projected to increase to 47.1% (by 11.8 percentage points) without the pension reform, and is further increased by 5.3 percentage points (to 52.4%) when the pension reform is included in the projection.

The projected activity rates and impact of the retirement reform for men

Similar to Figure 2 which presents the changes in the activity rates for women, Figure 3 presents the projected changes in the participation rates for men for each age cohort in 2026 (top panel) and 2060 (bottom panel). The figure indicates that in the medium-term the projected participation rates will increase for younger men, between the ages of 27 and 32, as well as for older men (aged 62 to 64), only as a consequence of the projected trends in the activity rates. At the same time, the rates for men in the prime-age group, around the ages of 45 and from 50 to 54 will be lower in 2026 than in 2060 (the comparison between the grey and black solid lines in Figure 3, top panel). The effect of the changes in the early retirement scheme are present for the men between 56 and 60 years of age (comparison between the solid and dashed black line in Figure 3, top panel) although they appear to be much lower than for women.

In the long run, the projections indicate an increase of the male participation rates at the ages from 27 to 38, while the decreasing trends for the prime-age group mentioned previously will disappear (the comparison between the grey and black solid lines in Figure 3, bottom panel). Similar to the medium-term projections, we observe an increase of the activity rates for older workers (aged between 56 and 60 years of age), due to the effects of the retirement reform which are slightly higher, compared to the medium-term projections (comparison between the solid and dashed black line in Figure 3, bottom panel).

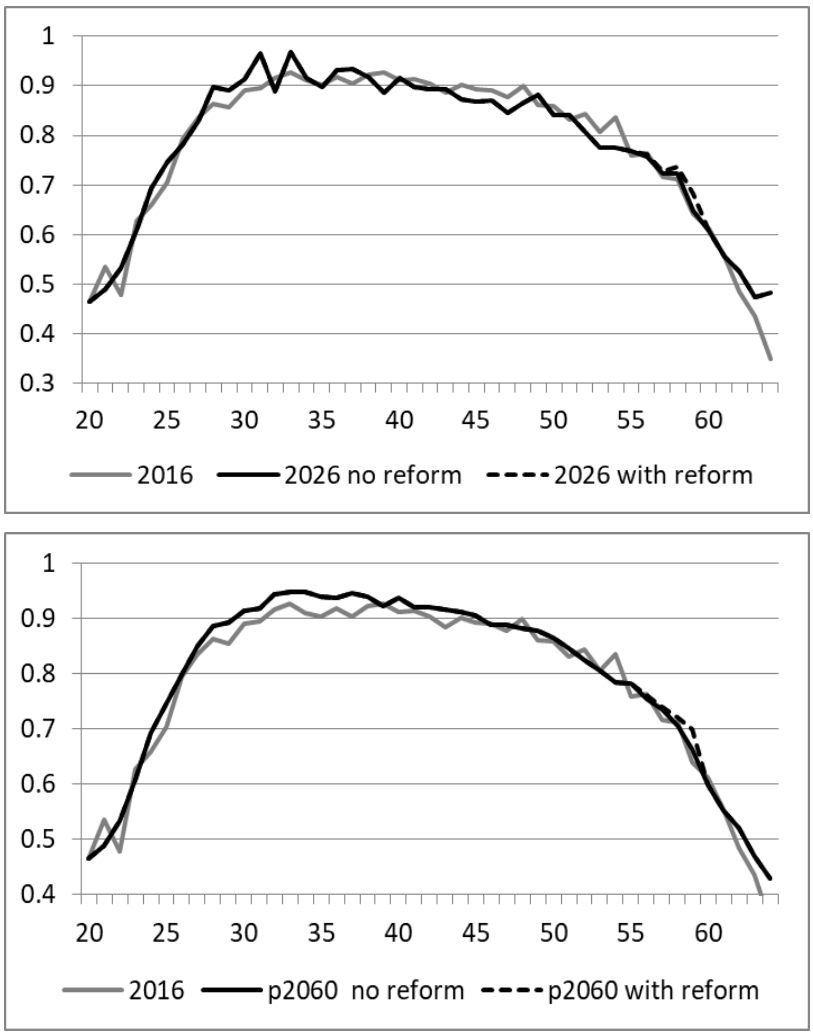


Figure 3: Participation rates in 2016, 2026 (left) and 2060 (right panel) for men, with and without the pension reform by age cohorts
Source: Own calculations based on the LFS data

Participation rate projections for each age group presented in the Figure 3 are summarized in the Table 7. In 2016 male activity rate in Serbia for the 20-64 age group stood at 78.1%. According to our medium-term projection, the 20-64 male activity rate would rise to 78.9% in 2026, or by 0.8 percentage points compared to 2016. This rise is merely the result of the demographic trends and the trends in the activity rate captured in the entry/exit rates. With the reform of the early retirement scheme included in the projection the rate rises to 79.0%, i.e. it increases only by 0.1 percentage compared to the projection without the pension reform.

In the long run, male 20-64 activity rate increases to 80.0%, i.e. it increases or by 1.9 percentage points, compared to the 2016, if the effects of the pension reform

are not included in the projection. The projected increase of the male activity rate is also in line with the results from the Ageing report, in which the growth of the male 20-64 activity rate in the EU on average by 2060 is estimated at 1.1p.p. (DG ECFIN & AWG, 2014; p.58). When we include the pension reform, the projected male 20-64 activity rate is, similarly to the medium-term projection, further shifted by 0.1 percentage points to 80.1%. The fact that the effects of the changes in the early retirement scheme do not change between the medium-term and long-term projections is expected as the reform is going to be fully introduced by 2023.

Table 7: Projected participation rates for the 20-64 and 55-64 age groups, men

	20-64			55-64		
	Without the reform	With the reform	Difference	Without the reform	With the reform	Difference
2016	78.1%	-	-	59.8%	-	-
2026	78.9%	79.0%	0.1 p.p.	62.9%	63.5%	0.6 p.p.
2060	80.0%	80.1%	0.1 p.p.	62.5%	63.1%	0.6 p.p.

Source: Own calculations based on the LFS data

Since the reform of the early retirement scheme has impacted primarily the activity of older male workers we also analyse the trends of the 55-64 male activity rate. The activity rate for this age group in 2016 stood at 59.8%. Medium-term projections indicate that this rate will increase to 62.9% in 2026, even without the pension reform. The increase of 3.1 percentage points is expected due to the labour market trends which indicate a trend of higher participation of older workers. The reform of the early retirement scheme, which pushes the age for male early retirement forward, increases the activity rate by additional 0.6 percentage points to 63.5%.

Male 55-64 activity rate is projected to be 62.5% in 2060 (without the pension reform) which is an increase of 2.7 percentage points compared to the 2016, although the rate is on the slight downward trend when compared to 2026. This decrease can be the result of the higher participation rates of the generation which will be in the 55-64 age bracket in 2026. Similarly to the medium-term projections the participation rate is increased by 0.6 percentage points (to 63.1%) when the pension reform is included in the projection.

Total projected activity rates and impact of the retirement reform

In the previous part of the text we analysed the activity rate projections separately for men and women. Now we join these results to monitor the overall results of the activity projections without and with the pension reform (Table 8).

In 2016 total participation (activity) rate in Serbia for the 20-64 age group stood at 70.1% and is below the Europe 2020 goal of 75% by almost 5 percentage points. According to our medium-term projections this goal will not be reached in

2023, since the estimated value of 20-64 activity rate in 2026 is 72.0%. This rise, of 1.9 percentage points is merely the result of the demographic trends and the trends in the activity rate captured in the entry/exit rates. When we include the pension reform in the projection the 20-64 activity rate further increases by 0.6 percentage points to 72.6%, still below the 75% threshold.

According to our projections, by 2060, the total activity rate will increase by almost 4 percentage points to 74.0% (without the pension reform), result similar to the 3.5 percentage points average EU 20-64 activity rate increase until 2060 (DG ECFIN & AWG, 2014; p.58). When we include the pension reform, the projected 20-64 activity rate increases by 0.7 percentage point, to 74.7%. Therefore, only in 2060 will Serbia, according to our projections approximately reach the Europe 2020 goal of 75% activity rate for the age group 20-64.

Table 8: Projected participation rates for the 20-64 and 55-64 age groups

	20-64			55-64		
	Without the reform	With the reform	Difference	Without the reform	With the reform	Difference
2016	70.1%	-	-	47.0%	-	-
2026	72.0%	72.6%	0.6 p.p.	52.9%	55.1%	2.2 p.p.
2060	74.0%	74.7%	0.7 p.p.	55.0%	57.9%	2.9 p.p.

Source: Own calculations based on the LFS data

As the reform of the early and old-age retirement schemes will affect the possibility of the 55-64 age groups to withdraw from activity to retirement, and therefore primarily affect their activity, we separately analyse the projected 55-64 activity rates. In 2016, the activity rate for this age group stood at 47.0%, the result of the much higher activity rate for men than for women (59.8% vs. 35.3%). According to our medium-term projections the 55-64 activity rate will increase to 52.9%, or by 5.9 percentage points, until 2026, even without the pension reform. The growth in this period, according to the activity rate trends, captured in the entry and exit rates, will be much more under the influence of the growth of the female than of the growth of the male 55-64 activity rate (8.3 vs. 3.1 percentage points). When we include the effects of the pension reform in the projection, the 55-64 activity rate in 2026 increases to 55.1%, i.e. by additional 2.2 percentage points.

Long-term projections suggest that the 55-64 activity rate will be 55.0% in 2060 (without the pension reform) which is an increase of 8 percentage points compared to the 2016 and is again is the result of the higher increase of the female and lower increase of the male activity rate (11.8 vs. 2.7 percentage points), therefore contributing to the lower activity gap between the genders in this age

group. The 55-64 participation rate is further increased by 2.9 percentage points (to 57.9%) when the pension reform is included in the projection.

DISCUSSION AND CONCLUSIONS

Besides high unemployment, Serbia is also a country with high labour market inactivity. Older workers (55-64) activity rates, which stood at 47.0% in 2016 are much lower than for the working age population (20-64), which stood at 70.1% in the same year. As such, older workers are identified as one of the key groups for which the measures of activation policy should be addressed to. Additionally, female 55-64 activity rate stood at 35.3%, and it was lower than male (59.3%), by 23 percentage points. The gender difference is partially due to the differences in gender roles, but also due to the difference in regular retirement age for men and women, which in 2016 was 60 years for women and 65 years for men.

The pension reform in Serbia, introduced in 2014, which included the change in the early retirement schemes for both men and women (until 2023), and the equalization of the retirement age for men and women by increasing the old-age retirement conditions for women (by 2032). The expected outcome of the pension reform was that it will increase the participation of older workers and lower the gap between the genders in this age group.

To our knowledge this is the first paper to investigate ex ante the effects of this reform on the participation rate of the working age population and older workers using the Cohort Simulation Model. We project the activity rates in two scenarios: without and with the pension reform and compare the results to obtain the effects of the pension reform.

Our activity rate projection, based on the Cohort simulation model and the Labour force survey data from 2008 to 2016, suggests that the activity rate in the 55-64 age group will increase by 5.9 percentage points until the 2026 and by 8 percentage points until 2060, merely as the result of the demographic trends and the trends in the activity rate captured in the entry/exit rates and without the inclusion of the pension reform in the projection. This growth is much higher for women than for men (8.3 vs. 3.1 percentage points by 2026; and 11.8 vs. 2.7 percentage points by). This result fits well with the current labour market situation and expectations. Firstly, much lower female activity rates in 2016 suggest that women have much more “room” to increase their activity than men. Secondly, recent development of gender equality in the country is expected to have medium- and long-term consequences on the higher inclusion of women in the labour market.

Our projection indicates that the pension reform will increase the 55-64 activity rate by additional 2.2 and 2.9 percentage points for 2026 and 2060 respectively. Given the design of the reform, which includes change in the early retirement options for both genders, but the change of old-age retirement conditions only for women, majority of this effect is again due to the increase of

female 55-64 activity rate. As a consequence of the pension reform, the female 55-64 participation rate will increase by additional 3.6 percentage points in 2026 and by additional 5.3 p.p. in 2060, while the increase of the male rate amounts to 0.6 percentage points for both years. Overall, due to the activity trends and the pension reform, the gender gap in the 55-64 activity rates will be reduced from 23 percentage points in 2016 to 16.2 percentage points in 2026 (63.5% vs. 47.3%), and 10.7 percentage points in 2060 (63.1% vs. 52.4%).

Overall activity rate for the working age population (20-64) will increase to 72.6% in 2026 and to 74.7%, indicating that the Europe 2020 target of 75%, given the demographic trends, trends in the activity rate and the pension reform will approximately be reached only in about 40 years in Serbia. This result, of course, has to be taken with caution, because our model assumes that the entry and exit rates will be stable throughout the period. However, we believe it represents a good indicator of the future trends if these trends remain the same.

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THE IMPORTANCE OF INSURANCE FOR THE DEVELOPMENT OF AGRICULTURE

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ABSTRACT

Insurance in agriculture is a special type of property insurance that applies to agricultural producers in order to prevent the loss of income from agrarian activities. Insurance in agriculture is not limited to crops and fruits, but also applies to livestock, domestic and wild animals, and can also be applied to greenhouses, forestry and aquaculture.

In this research presents the characteristics of the insurance of crops and fruits, as a risk management instrument, which is applied in Europe and Serbia. Different insurance systems, with a focus on insurance from one type of risk, combined insurance and yield insurance, were analyzed. An overview of different forms of insurance of crops and fruits in European countries is given, with a special emphasis on the share of insured areas, the participation of insurance premium in the insured sum, the achieved technical result expressed through the ratio of claims paid and insurance premiums collected by the insurer, as well as the amount of subsidies the state partially compensates farmers for insurance premiums.

Direct insurance premiums in agriculture have rapidly increased over the past few years. Although insurance in agriculture is essentially a commercial activity, it is quite common for governments of countries around the world to take an active role in this industry. In the World Bank study, which covered the situation analysis in 65 countries, different approaches were noted in cases where the state decides to intervene in the insurance market segment in agriculture.

Agriculture as a sector of the economy is of vital importance for the Republic of Serbia and its overall social and economic development. The position of the agricultural sector is specific, because apart from the economic one, it has a special social and ecological significance, and at the same time it is the bearer of rural development.

Key words: *insurance in agriculture, property insurance, paid claims, subsidies, insurance of crops and fruits, risk management.*

JEL Classifications*: G21, G22, G23, Q19*

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INTRODUCTION

In principle, insurance is a form of risk management used to limit potential losses. By conventional definition, insurance transfers the risk of loss from one entity to another, in exchange for a premium or a guaranteed, measurable loss that prevents higher or possible irrecoverable loss.

The last decade has been recognized by numerous weather disasters that have caused major damage to agricultural holdings. Due to global warming, the climate has changed considerably, and unfortunately, experts estimate that in the coming years there will be more and more weather disasters, and man in these situations is helpless. In order to protect himself from such hazards that he cannot influence, or to protect his property, crops and animals should provide them. Almost all insurance companies offer insurance for farmers, insurance of crops and fruits and animal insurance. The damage that can arise in agriculture from the hail, wind, flood, fire, have a major impact on the entire economy of the country, whose negative consequences are large, especially in countries where agriculture is a primary branch and has a large percentage of participation in gross national income.

Insurance in agriculture, as a special type of property insurance, applies to agricultural producers in order to prevent the loss of income from agrarian activities. When insurance is concerned, particular attention is paid to ensuring agricultural crops and fruits and animal insurance. (Erić-Jović, 2012, pp. 37)

There aren't restrictions when insurance in agriculture is concerned, that is, not only crops and fruits are concerned, but also livestock, domestic animals, and not often the object of insurance can be greenhouses, forestry and aqua culture cultivation.

Insurance in agriculture represents a technically very complex activity and implies the understanding of complex biological processes and causative relationships in agriculture (which are not always easy to see) by insurers, with the need to determine the link between the loss being secured and the cause of that loss. Bearing in mind the specificity of this type of insurance, insurance companies operating in the insurance market in agriculture, as a rule, have special organizational units that deal with it, while in the world there are cases of entrusting these jobs to specialized agencies.

In the EU countries, insurance in agriculture (insurance of crops, fruits and animals) is regulated by law, while in our country, producers still have a decision whether to bear the risk or provide agricultural goods and livestock. The regulations on the conditions, manner and form of the request for regression the right to compensation for premiums for insurance of crops, fruits, perennial plants, nurseries and animals, are more precisely defined conditions for the premium. According to the conditions prescribed by law, the right to use the regress is usually the owner or holder of the

agricultural holding. The law also determines incentives in agriculture and rural development, whether the bearer has secured it's assets against the risk of reducing yields, nurseries and young perennials planted before the incidence of the risks prescribed by the conditions of insurance companies and animals against the risks prescribed by the terms and conditions of insurance companies. (SGRS, 2016, N. 48/16)

Under the insurance of crops and fruits, it is implied that a large number of field, vegetable, fruit and vine cultivation crops are protected from various risks that they may be affected. The most frequent hazards threatened by crops and fruits and why they are ensured are floods, hail, fires, drought, winter frost or heavy precipitation.

The amount of insurance premiums for crops and fruits depends on which plant is the subject of insurance, then the risk is protected, the contracted amount of coverage, the location where the plant is located, the yield planned for that period and the price at which the plant is planned continue to sell. It is permitted to pay the premium even after harvesting, harvesting without interest payment and these are so-called "agro-deadlines".

INSURANCE IN AGRICULTURE ON THE WORLD MARKET

Direct insurance premiums in agriculture have rapidly increased over the past few years, and, for illustration purposes, world-wide growth has increased from a total of $ 8 billion in 2005 to an estimated $ 18.5 billion premium in 2008. Regarding the geographical dispersion of these global premiums in 2008, the main part relates to the USA and Canada, while Europe with about 17% of its share in the total premium is ranked third behind Asia, which has about 18% share. According to the World Bank data, the 2008 premium structure is dominated by the insurance of crops and fruits that are 90% of the premiums, while all other types of insurance in agriculture account for only 10% of premiums. Agricultural insurance products that exist on the world market can be classified into three main groups based on the method by which the sum insured is paid:

1) the payment of the insured sum is performed according to the realized harmful event,

2) the payment of the insured sum is measured using the index i

3) payment of the sum insured shall be determined on the basis of realized yields and price of the product.

Characteristics of individual crop insurance systems in different countries of the world

Today there are several systems of insurance of crops and fruits, and according to one classification insurance can be divided according to the number of risks for insurance of one, a large number or all types of risks. Also, universal and specialized types of insurance are different.

Crop and fruit insurance systems can also be divided into:

— insurance related to results on individual farms and

— insurance based on data relating to a specific region or administrative unit.

Based on the method of risk compensation, insurance against damage to crops and fruits is distinguished, that is, insurance against reduction of yield, insurance of guaranteed yield and insurance based on time indexes.

The most widespread system for the insurance of crops and fruits in Europe is insurance from the hail, which most often contains other individual risks such as fire. This type of insurance is called insurance from one type of risk and is present in most European countries, but in several European countries, agricultural producers can only be provided from the hail.

In insurance the return of a large number of risks, two systems are distinguished and for the first system it is characteristic that the compensation depends on the estimated damage caused by weather conditions, and on the other hand, in Spain, the United States and Canada, the insurance of several types of danger excludes the assessment of damage and implies determining the difference between the guaranteed and the realized yield, and the possible reduction in the yield is compensated to farmers.

The European system requires higher costs of compensating for losses, but avoiding the existence of moral hazard that is one of the biggest problems of the US insurance system. Insurance from all sorts of risks allows farmers to be provided with all the dangers that can damage their crops and fruits, and this insurance system exists in the US and Spain.

Combined insurance represents a shift from insurance of one type of risk to a system of insurance against a number of risks, and in this case the insurance policy covers the risk of hail and a limited number of other hazards.

Most of the former socialist countries, now members of the European Union, apply this insurance system, while in the past this insurance system in these countries was under state control and insurance was compulsory.

With the transition to the market economy system, privatization has begun and such systems are further developed with the support of the state (Czech Republic, Slovakia, Hungary, Romania, Bulgaria) or somewhere built on completely new bases (Poland). Such a system of insurance has existed in Serbia for many years.

Weather-indexed insurance refers to the appropriate meteorological parameter and in this case, compensation is made if a certain limit value

has been transferred or not reached. In this category of insurance, time derivatives could be classified, and time derivatives were created in the mid-1990s in the United States, and in recent years they have been used in developed countries of Western Europe.

THE ROLE OF THE PUBLIC SECTOR IN AGRICULTURAL INSURANCE

Although insurance in agriculture is essentially a commercial activity, it is quite common for governments of countries around the world to take an active role in this industry. The state here has a clear interest to maintain the overall productivity of the country's economy, and to work for the benefit of the rural community. By doing so, the state thus fills a void left by the private sector that often does not want to enter this segment of the market due to high start-up costs, administrative and distribution costs, as well as due to the lack of financial capacity due to difficulties in obtaining reinsurance characteristic for this type of insurance. In addition, the private sector's private market presence often means high insurance premiums in agriculture, making it inaccessible to smaller producers.

Support of the state in the insurance of agriculture

In the World Bank study of 2009, which included the analysis of the situation in 65 countries, different approaches were noted in cases when the state decides to intervene in the insurance market segment in agriculture:

—Subsidizing premiums - this is the most common type of support of the state in insurance in agriculture, according to the above study, as much as 63% of countries decided on this type of support for crop insurance, while 35% decided on this type of support for livestock insurance.

—Investing in research and product development, training and information gathering - 41% of countries surveyed in this study, decided on this type of support for crop insurance, while 37% decided on this type of support for livestock insurance.

—Development of legislation related to insurance in agriculture - according to the same study, 51% of countries decided on this type of support for crop insurance, while 33% decided on this type of support for livestock insurance.

—Public sector reinsurance - according to the same study, 32% of countries decided on this type of support for crop insurance, while 26% decided on this type of support for livestock insurance.

—Subsidizing administrative costs for issuing insurance policies in agriculture this is the least used type of support, and only 16% of countries decided on

this type of support for crop insurance, according to the same study, while only 11% decided on this type of livestock insurance support.

Models of the agricultural insurance market

In principle, three basic market models can be identified through which insurance in agriculture can be made available:

1. **Systems fully controlled by the state** - characterized by very intense support from the government with the existence of a unified insurance product that is usually commercialized through a state-owned state with a monopoly position. These systems are distinguished by the anticipated large penetration of the market due to commitments and good diversification of the portfolio, but they also imply high fiscal costs, often a worse service that is caused by a monopoly position, and there is a neglect of technical ones in relation to the social components of insurance and the assumption of complete responsibility by the state .

2. **Public - private partnerships** - have high penetration and a well diversified portfolio, technical criteria dominate over commercial, there is competition in service provision, where the state strengthens system stability while the private sector provides knowledge and technology, with reasonable fiscal benefits.

3. **Clean market systems** - have low to moderate penetration and low level of risk diversification, commercial criteria dominate over technical, with the achievement of price competition and without fiscal costs.

Penetration of the market for insurance of agriculture

There seems to be a correlation between the level of support of the public insurance sector in agriculture and market penetration by this type of insurance. Examples of the USA, Canada and EU countries, where this support is significant, confirm such a finding by their high earnings share in insurance premiums in agriculture, while in Africa, Australia and New Zealand, where there is no state participation in this issue, the level of realized participation in the total amount of premiums is evident at a very low level. The model of public-private partnership proved in practice as the most successful for the development of the insurance market in agriculture, since public sector participation proved to be crucial for establishing the development and proportional increase of insurance programs in agriculture, while the private sector, through its own contribution, provided the necessary skills, expertise and innovations on the market.

AGRICULTURE INSURANCE IN THE EU AND SERBIA

As the most common agricultural insurance products, ‘’Single-Peril’’ or ‘’Named-Peril’’, products of individual coverage (cover for one type of risk, usually a city), are present, while in some more developed countries there are "Multiple Peril" products combined coverage (combined coverage for multiple

types of risk). A significant number of EU member states, although not belonging to a group of developing countries, allow their farmers to subsidize insurance premiums in order to encourage the rapid development of this type of insurance. Hungary is a good example where the impact of subsidizing the premium on the development of insurance in agriculture is clearly seen. Since the year 2004, the state abolished previously introduced premium subsidies, many farmers have not secured their production, which further resulted in an increase in the overall risk and a significant drop in the insurer's income. In line with this situation, Hungary decided to re-take an active role and develop an insurance model in agriculture modeled on Spanish. A frequently mentioned model from the EU territory that could be seen by developing countries is exactly the Spanish insurance model, which includes a specially created public-private partnership model.

Spanish model

It involves cooperation between the private and the state sector through the participation of the agency of the Ministry of Agriculture "ENESA", then the associations of private insurance companies "AGROSECURO" and, finally, the state-owned company "CSS" under the control of the Ministry of Economy providing reinsurance. The main tasks of the mentioned institutions are: "ENESA" - adopts the annual insurance plan in agriculture, participates in deciding on the amount of subsidy premiums, coordinates cooperation with associations of farmers, prescribes general insurance conditions, cooperates with the insurance companies' association on the theme of insurance plans. "AGROSECURO" - prescribes special conditions and insurance tariffs, controls sales channel, premium payment and damage processing. "CSS" (Concorsio de Compensacion de Seguros) - has the role of a chief reinsurer, participant is in the fund and controls the damage processed. This model is characterized by the fact that insurance companies manage risk by means of a fund based on the co-insurance principle. The fund is under the control of "AGROSECURO", while it is re-secured by "CSS".

Situation in Serbia

Agricultural production is not only considered cultivation of plants but also animals, as their keeping, although indirectly related to fields. In the chain of food production from land to the end consumer of human beings, plants and plant products are only the first ones, while animals and their products produce a different link. (Prostran, 2016, pp. 29)

Agricultural manufacture includes two main fields, which are:

— cultivation of plants or plant manufacture and
— animal breeding or cattle breeding.

Common for one and the other activity is that they are the subject of the work of living beings, that is, plants and animals, and because of this, these activities are connected in one whole that can only be artificially separated. Plant livestock production provides the necessary animal feed and vice versa, livestock manufacture of plant production returns the necessary organic fertilizers, that is, plant nutrients.

Under the potential of agricultural insurance, the whole cultivated area is considered, is arable land, gardens, orchards and vineyards. However, arable land is distinguished from the total agricultural land, first of all, under the total agricultural land, meadows and pastures that do not belong to arable land are also classified, and therefore are not subject to insurance. In the period from 2006 to 2014, the percentage share of insured areas in the total agricultural area of the Republic of Serbia amounted to an average of 6.32%, and in the total arable area of the Republic of Serbia was on average 9.32%. (Cogoljević, Piljan, 2015, pp. 435-451)

Agriculture as a sector of the economy is of vital importance for the Republic of Serbia and its overall social and economic development. The position of the agricultural sector is specific, because apart from the economic one, it has a special social and ecological significance, and at the same time it is the bearer of rural development. Agriculture contributes to national wealth by significant share in GDP creation (estimated at 9.6% for 2010) and in total employment of the population (around 20%). (www.rzs.gov.rs 15.03.2018). It's importance is also reflected in the export potential of our country, the share of total exports was 9.9% in the first half of 2012, with a surplus of 6.8% in the same period. In this sector, export growth of 40% was achieved, as well as an increase in the share in total exports of 25% in relation to the same period of the previous year. At the same time, we are witnessing numerous weather disasters that in the previous period caused major damage to agricultural holdings. Unfortunately, due to global warming, climatic conditions have changed considerably, and in the future, even more unpredictable disasters are expected, which can't very often affect a person. However, what each farmer can and should do to protect his crops and animals is to ensure them.

Forms of insurance in agriculture in Serbia

There are two basic form of insurance in agriculture that currently exist in the insurance market of Serbia:

1. The insurance of crops and fruits is covered by loss of yield as a result of damage (destruction) of the agricultural culture from the insured risk, the standard and, most of all, the coverage of the prevailing risks: city, fire and lightning strikes, the accent is most often on protection from the city. The risks of storms, floods, frost, as well as the loss of seed quality, loss of quantity and quality of fruits of fruit and table grapes and others can be associated with this.

2. In the case of animal insurance, we have the basic cover for the risk of an accident and disease that can be provided to the animals individually or on a flotation basis. For this type of insurance in agriculture, the risks of death or forcible slaughter in predefined cases can be additionally covered, as well as the risks of illness caused by improper diet, swallowing of foreign bodies, loss of sperm and calves during delivery or loss of breeding ability of livestock.

In addition to the above, the risk of drought for certain crop-based crops, as well as the insurance of crops from excessive precipitation, can be found from time to time. Although these types of insurance in agriculture are still in decline, it can

be said that in our market the supply of insurance houses in agricultural insurance is continuously improving and that this kind of insurance is gradually being paid more and more attention. (Marković, 2008, pp. 111)

Subsidies

The subsidy of the insurance premium is the most widespread model for stimulating the development of insurance in agriculture, which, by the state, stimulates the protection against the risk of loss of income in the agrarian sector. This year, the Republic of Serbia approved the subsidies for insurance premiums by the Regulation on the regeneration of insurance of animals, crops, fruits, nurseries and young perennials, which is a significant incentive, especially in the conditions of a large budget constraint. Under this Regulation, registered farmers have the right to registration of insurance in the amount of 40% of the amount of the insurance premium, excluding the non-life insurance premium, provided that they have provided animals, nurseries, young perennials, crops and fruits of risk. The right to use funds for the regeneration of insurance of animals and areas under plant crops declared in 2012 has a natural person - the holder of the agricultural holding registered in the Register and who is in active status, and the request is submitted from June 15 to October 31, 2012. years. Despite this incentive, penetration of the market in Serbia remains at an extremely low level, almost negligible, indicating that the insurance premium itself is not sufficient to increase insurance coverage in agriculture in our market.

Development directions of agricultural insurance in Serbia

In our country, agricultural production is based on the structure of the estate, where mostly semi-sustainable agricultural holdings prevail. About 47% of agricultural holdings use up to 2 hectares of arable agricultural land, while in the European Union the average size of agricultural holdings is about 20 ha. This directly reflects on the competitiveness of agricultural production, on realized revenues, as well as on the payment ability of agricultural holdings. From this it follows that all the listed facts influence primarily the demand for agricultural insurance in Serbia. Insufficient demand also has the influence and poor association of agricultural producers, and therefore it is impossible to achieve more favorable conditions of insurance. (Žarković, 2016, pp. 82)

For the development of agricultural insurance in Serbia through a necessary new platform on the basis of which farmers would more adequately stimulate in order to ensure their own production. It is necessary to create long-term solutions that would include: stable portfolio (with risk diversification), adequate system of subsidies (at an acceptable level for all parties), development of preventive funds (as risk mitigation measures), products tailored to the needs of the insured (with the necessary levels of coverage) and programs that will increase awareness of the risks in the agrarian sector and improve the availability of this type of insurance. (Manić, 2012, pp.11-13) One of the similar solutions that could accelerate the market is a model in which the obligation of pre-contracting the appropriate insurance coverage as a condition for obtaining subsidies in agriculture by the state. This would have a multiplier effect, on the one hand, they would have predictable revenues of agricultural producers, while, on the other hand, the state

would protect investments in the form of subsidies in agriculture, and also provide the state budget from further unplanned expenditures. No positive effect on the insurance industry in general, but also the return effects in terms of development of preventive measures and education on the present risks of agrarian production and measures for their overcoming should not be neglected.

Only mutual engagement and synchronized operation of the public sector and the insurance industry can make visible positive progress in this area: insurers in their domain should offer an adequate product in terms of comprehensiveness (covering multiple risks), clear and as simple as defining the conditions of insurance and tariffs, and making it easier for insured persons to access, which will be unambiguous to everyone, including agricultural producers, the public sector and the insurance industry. Following the example of developed world markets, the second part of the work must be taken over by the state through appropriate subsidization schemes, public-private partnership models and the adoption of appropriate legal and sub-legal regulations in this field. Joint engagement must also work on developing awareness through intensive education of potential insurers on the existence of risks in agriculture, as well as on the importance of insurance in the protection and improvement of agrarian production. In the coming time, precisely establishing good cooperation between the insurance industry and the public sector to improve the situation that is currently in the Republic of Serbia will be crucial for the exploitation of development opportunities that certainly exist in this extremely important area.

INSURANCE OF CROPS AND FRUITS

Apart from the hail, fire and lightning strikes, crops and fruits can also be provided from storms, autumn and spring frost, floods, as well as from loss of quantity and quality.

The amount of insurance premium depends on several factors, some of which are: plant species, location where the crops and fruits are found, selected types of risk for coverage ...

The insurance premium is paid on the sum of insurance, which is determined on the basis of expected yield per hectare and one kilogram.

Some insurance companies also offer certain benefits for owners of registered agricultural holdings. The payment of the insurance premium for crops and fruits is facilitated by subsidies provided by the state, Ministry of Agriculture of the Republic of Serbia. By the registered agricultural holdings, the state repays a part of the insurance premium paid. (Piljan et all, 2015, pp.94-102)

Animal insurance will provide financial protection against various types of animal-related risks. The insurance covers the risks of death or forcible slaughter as a result of an accident or animal disease.

The amount of premium depends on several factors, such as: the type of animal, the number of insured animals, the conditions and the method of breeding animals, the contracted level of risk coverage ...

As with the insurance of fruits and crops, the payment of the animal insurance premium is facilitated by subsidies granted by the state to registered agricultural holdings.

Crop and fruit insurance - existing European models

A significant problem in plant production since ancient times is the risk of occurrence of some harmful event (hail, flood, storm, drought, cold…), often with catastrophic consequences. Such events impair continuity or interrupt the production process and require large financial and material resources to establish a further production flow. Despite significant advances in science and technology in all areas of human activity, it is observed that man's impact on the dangers that endanger plant production is much lower than in other activities. Based on the prediction of climate change researchers, in addition to global warming and changes in precipitation, in the future, the occurrence of severe weather disasters, which could severely damage agricultural crops, must be considered. Therefore, for each agricultural producer, it is an extremely important question, in which way to protect the crops and fruits from some harmful event.

Insurance is probably the best instrument for risk management. It appears as an important factor in the stability of each production, even the plant because it compensates for losses in production and allows its continuous process. Research on the issue of crop and fruit insurance in Europe has long been actualized, while in our country a small number of papers are dedicated to this topic. (Piljan et all, 2017, pp. 98)

The fact is that after a strong storm, flood or drought, discussions about the insurance of crops and fruits are growing, which can reduce the risk of farmers income. The economic attractiveness of various risk management instruments, including insurance, depends on the exposure of farmers to various risks. Different causes of economic instability in plant production include various forms of natural disasters caused by climate change and various plant diseases. By looking at individual risk management instruments in agriculture, insurance is considered as the most effective economic risk mitigation measure. To date, there has been a general discussion of classical insurance against damage arising from one risk, and for this type of insurance the insurance companies were the most determined. More recently, there is a lot about the insurance of a yield of more than or all the types of risks that are present in developed countries of Europe and North America, about ensuring the value of production and income that is mainly present in the United States, as well as on time indexing, where the possibility of using weather products in agriculture is primarily considered. The authors analyze the existing insurance systems in Europe and investigate certain parameters related to crop and fruit insurance functions: the volume of insured areas, the share of insurance premiums in the insured sum, the technical result as a ratio of claims paid and insurance premiums collected, and the scope of state subsidies for the reimbursement of insurance premiums.

CONTRACTING OF INSURANCE OF CROPS AND FRUITS

Insurance of crops and fruits provides the possibility of insurance: agricultural and vegetable crops, fruits, grapes, planting material, trees and fruit seedlings.

Rows and fruits are provided with the following risks: hail, fire and lightning strikes, storms, loss of quantity and quality of fruits and table grapes, winter frost, drought, floods, loss of income (due to natural risks or falling prices).

In order to preserve and secure their painstaking work, many producers are deciding to contract crop and fruits insurance. This is certainly a good choice, but as with all other types of contract, in this case it is necessary to pay attention to the contractual provisions and be well acquainted with the insurance conditions of the company with which the insurance is concluded.

It is important to emphasize that it always starts from basic risk insurance, and additional risks are specifically concluded, so after the conclusion of the insurance contract, the subject of insurance (wheat) is insured from hail, fire and lightning, as well as from, for example, storm.

In addition to the basic terms that farmers encounter when concluding an insurance contract, it should be known that the insurance contract is concluded on the basis of a written or oral offer with the insurance agent representing the insurance company. Depending on the Insurance Terms and Conditions of most insurance companies, the contract is considered concluded or by itself signing the insurance policy, or most often eight days after the sending and acceptance of the insurance offer by the insurer. Policy certainly must sign. In order for the insurance to start running and covering the subject of insurance, it is advisable to enter the contract closing date on the policy beside the date. If this does not appear, the coverage of the insurance shall start only after the expiration of 24.00 hours of the day of the conclusion of the insurance contract. This is especially important to know about insurance from the city because after signing the policy if the city falls on the same day, and the hour of signing is not stated, the insurer is not obliged to compensate the insured because the coverage starts only from midnight.

In order for an insurer to assume obligations, the insured is obliged, after signing the insurance policy, to pay the premium, in full or at the rate (as agreed by the parties).

There are many more fines under the conditions of insurance of crops and fruits and the insurer is obliged to inform the insured with all the details. However, it is a recommendation that the insured themselves are also interested in looking for insurance conditions for inspection, so that they are well studied, because this will best help themselves.

The contract for the insurance of crops and fruits lasts most often until the end of the vegetation season, but it can also be concluded a multi-year insurance, for which the most frequently received a commercial discount.

The insurance of the insurance can be crop and vegetable crops (including porcine crops, lakes and interiors), orchards and vineyards, young orchards and

vineyards before entering the crop, fodder and forest planting material, meadows, medicinal herbs, ornamental plants, etc.

When talking about basic risk insurance (hail, fire and lightning), what is provided varies from crop and fruit types:

— in the case of cereals, oil plants and other seedlings, only grain is ensured (both from loss of quantity, not from quality), and in particular, the insurance of straw, broom in sorghum, for example, is provided. and similarly.

— in fruits and vegetables, insurance goes towards the purpose of cultivation - fruit, leaf, tree, root, etc. (detailed in terms of insurance); In this case, the quality is most often assured.

The amount of insurance is the amount of crop, that is, the fruits are secured. The amount of insurance is expressed per unit area and represents the maximum liability of the insurer.

The rate depends on the Tariff of insurance, the building lot, on which the plot is located, and some other conditions (long-term trend of insurance of one insured without damages).

The construction site is considered the one on which the phenomenon of the hail is frequent and, consequently, frequent damages from the city; In such moves, the insurance rate is high. In some parts of the hail, the hail is very rare, and consequently a low premium rate.

As stated above, the premium can be paid in full at the beginning of the insurance, or at rates, if agreed by the parties. If the insured event does not occur by the end of the coverage period, the insurer retains the entire insurance premium.

During the insurance period, the insurer has the right to inspect the condition of the insured crops, to monitor the applied measures of agro-technology and measures of care and protection of crops. After the inspection of the condition of the crop, a record is signed, both signed by the assessor and the insured, and the record becomes an integral part of the policy. This is very important, because if it is determined that the crop is in a bad condition, it is uncoordinated, it is clear that high yield will not be achieved; if the reported yield on the policy is high, it is subject to correction. In this way, the company is protected from the eventual case that if a risk is created (for example, a city with a high percentage of wages, the company is obliged to compensate for the real sum, that is, if a high return is reported, and it is realistic by 30% lower, which must be stated in the minutes and agreed with the insured and the amount of insurance will be lower, of course, the calculated premium). Both these provisions differ with different insurance companies, and this should be specifically notified in particular from the Crop and Fruit Insurance Clauses.

Of course, there is the opposite case when the insured reports a lower yield than the real one. In this case, if, during the life of the insurance, and before the risk is incurred, the insured determines to increase the amount of insurance to the real, the insurer may accept it and make the necessary correction. The insured, regardless of the real high yield, can be secured on a lower yield (this is called a

subinsurance) and will therefore be charged a lower premium, but accordingly, the sum insured is lower. This option is left to the selection of the insured.

If there is a risk, e.g. fallen city, the insured is obliged to report the damage as soon as possible. Some companies insist on a written application, some can also by phone, or verbally at company counters where officers further fill out the necessary forms.

After reporting the damage received by the insurer, the obligation of the insurer arises to approach the establishment and assessment of damages. The damage assessment is carried out by an agricultural expert - an appraiser of an insurer. The damage assessment may be attended by the insured person or his representative, which in practice proved to be desirable, in order to provide the necessary data for determining the amount of damage; after the assessment or pre-estimated damage is made, the minutes are to be signed by both parties. The damage assessment can be preceded ie estimated and final.

In the case where the estimate is previous . Pre-estimated - the final amount of damage is not determined, but only the descriptive condition of the crops and fruits, the nature and degree of damage, and other elements of relevance for the subsequent final determination of the damage are determined.

Pre-assessment is carried out during vegetation, when a risk occurs (e.g., the city in July for corn or soy). Then the record consists, photographs, the date of the hail, the state of crops, fractures, leaf damage, broom, flywheel, hail thickness, density and intensity of fall, time of fire, etc. should be recorded in the record. It is mandatory to mention the phenomenon in which the crop is located because the damage varies depending on the development phase of the crop (for example, the soya will be more regenerated if the hail appears before flowering, if the hail has appeared when the beans have already been formed, the damage is much higher).

Example of the most common cases:

1. In the case that the hail has fallen on the mentioned crop only once, the final assessment shall be carried out before the harvest or harvest. Then, a crop review is carried out, taking into account the record from the pre-estimation. The degree of regeneration is determined and a final estimate of damage is made.

2. In the case that the town has fallen several times on the same parcel, then a crop inspection is carried out after each fall of the hail and records are made in the same way. The final assessment is also prior to the removal of crops, taking into account all previous pre-estimates.

3. In the case that in addition to the contractual insurance of the basic risk (the hail, fire and lightning strike) and contracted and insurance for additional risk, for example, from storm, if both risks are realized, pre-estimation and damage assessment of both risks is carried out. The final assessment is as in the previous cases.

4. If the risk is not covered by the insurance (for example, the loan), the insurer is not obliged to compensate for this risk.

5. If the risk of the hail and the storm is ignored, where the policy is covered only by the risk of the hail, but not by the storm, then the estimate of damage from

the storm is approached, and this is rejected by the final damage. The insurer acknowledges only the amount of damage caused by the hail, but not the damage caused by the storm.

6. The estimate of damage can be final and unprecedented in the case that the risk is achieved at the end of the vegetation (for example, when the hail falls before the wheat harvest itself), and the second case is when the hail is of such a high intensity that undoubtedly causes total damage, and the crop he has to go.

It is relatively easy to estimate direct damage (for example, the number of broken sunflower heads, or spilled soybean or wheat grains), it is much more difficult to estimate the indirect damage caused by destruction or damaging leaf mass, trees, later an attack of a disease that would not otherwise attack the plants in the plant through the wounds of the hail), etc. However, on the basis of years of experiments in which various crops were artificially damaged in the moments of all phenomenon, and comparing the obtained results with control parcels that were not damaged, along with the same agro-technology, these are the tables that are most closely able to express the rate of damage.

Certainly, in agriculture, it is very difficult to determine the exact percentage of damage, since each year is different from the previous one and in each individual vegetation, there is a completely unique set of weather conditions, agro-technology, plant plants, pheno-phases and other influences.

However, based on empirical results, experiences, agricultural experts can estimate the very exact amount of damage. For example, if it is a matter of estimating damage to the hail on wheat that is before harvest, it is certain that the city will blow the grain from the class with it's impacts and this is a direct damage; therefore the damage is determined by the fact that on several sites on the plot the number of grains extracted per square meter is counted and the damage is calculated accordingly. The same goes for soy.

After assessing the damage, the insured, if it does not agree with the appraisal, has the right to appeal within 3 - 8 days (depending on the company), and the insurer is obliged to re-evaluate this time, commission. If the insured at that time is not satisfied with the appraisal, he may regret again, when the insurer and the insured are obliged to collect together an agricultural expert of an independent house, who did not participate in the previous procedure for the assessment of the damage.

When the damage is established, the insurer is obliged to compensate, in cash, to the insured within 15 days from the liquidation of the damage.

The damage estimated at 5% and less is most often not compensated by all companies (5% is considered as an integral franchise). Accordingly, only 6% and more damages are paid. For example, if the damage is estimated at 100%, the insured will be paid 95% of the insurance sum. This may also depend on the conditions of the insurer, or from the contract itself, where an additional clause can be agreed differently. This should certainly be well informed before signing the insurance contract.

In societies that have a developed tradition of insurance in the final product price, insurance costs are included; they make an average of about 7% of all costs. Every individual has the right to choose whether he will bear the risks that he / she does not have influence on his own, or will risk the risk of jointly entering the insurance, and for a relatively low price (insurance premium) to have security. By the law of large numbers it is common to pay premiums over the lifetime of the premium for years, and the risk is not realized, but the risk is realized to some other member of society, and the overall tolerance is divided, solidarity. Because of the uncertainty factor, it's never known when and if the risk will come true with you.

The idea of insurance is not to get the damaged individual enriched (this is often the subject of fraud), but to fail financially because of "bad luck" during a catastrophe (fire, city, flood, etc.)

Examples of agricultural insurance in Serbia

Every year, agriculture is endangering the more frequent weather conditions, and insurance of snowflakes could find it’s place in the market, if the insurance companies decide to include it in their offer.

Insurance in agriculture has great potential for development on the Serbian market, as only nine to ten percent of arable agricultural land is now secured. Because of the more frequent weather conditions, there is a need for new types of insurance, which is also a new business opportunity for insurance companies. This is confirmed by the recent example when snow in May surprised raspberry producers and destroyed a large part of the genus, and did not have the necessary insurance that would compensate for that damage.

Farmers then stated that the problem is that they don’t have the insurance of fruits from damage from snow. But no one hoped for the snow in May, no farmers, and no insurance company.

So inexperienced farmers are faced with the problem of choosing appropriate insurance and predicting which weather will affect the genus and at what time. Those who decide to secure their own plantations, and for now they are few, are mainly secured from the hail or floods.

For raspberries, the fruit is provided mainly from the hail, as a primary risk, while, as stated in insurance houses, snow insurance is not offered by any company in Serbia. The reason is, as they explained, a small demand for such a type of service. However, if the interest of farmers is higher, insurers are willing to consider including such types of insurance in their offer.

Raspberry manufacturers have announced that they will ask the insurance companies to offer them before this year's offer of offerings and insurance against damage caused by other natural disasters, and not just from the hail. In the Ministry of Agriculture, according to the data of insurance companies, about 90 percent of insurance belongs to basic insurance, that is, in crops and fruits insurance from the hail, fire and lightning. Supplementary insurances are mainly from storms, spring frost, floods and loss of quality, most commonly in fruits and vegetables.

The state and insurance companies should work on educating the population about the importance of insurance, both crops and households. Knowing about insurance options often leads farmers to the wrong path, so they don't know when they have provided birth, and when planted.

Experts suggest compulsory insurance in agriculture

Experts advocate that insurance in the field is legally mandatory, primarily for agricultural producers who use subsidies from the state, as this would avoid any doubts as to what, when and how to ensure it. In this way, it runs away from risk, and the producers are protected from bankruptcy. Producers in Serbia mainly provide a genus and a final product, and they rarely or at all insure the plant, that is, culture and fruit, and not a tree, for example raspberry. In the opinion of experts, very often in fruits and vineyards, in the growth stage, the fruit is not as a final product, but in the stage of vegetation, and this is a big problem. Experts estimate also that the best solution was found when a large part of the production within the cooperative, that is, the state sector, was obliged by law to provide. About 90 percent of insurance in agriculture belongs to basic insurance, that is, crops and fruits insurance from the hail, fire and lightning.

The real question is, according to experts, whether it is possible in some way to introduce insurance as mandatory. They advocate that, first and foremost, users of state funds or subsidies, with the help of the state, must be provided. This way, we will always keep polemic about what to secure and when to secure. In the opinion of experts, the law should regulate completely and what is the natural disaster and when it is proclaimed. Such criteria must be specified by law and should not be put to full volunteerism, since there will always be a controversy which part of the genus is ensured and what is the cause of the damage, for example, the snow in May that damaged raspberries.

Mostly, when snow damage occurs, it is applied to the plants, because snow usually does not fall at the time when the fruit came to birth. Last year, when the snow in May fell in Western Serbia, it is polemic because it is provided with a fruit for reading, but not parts of the fruit bearing plant have been secured since it was in the beginning.

CONCLUSION

Insurance has one goal, which is the economic protection of property and persons and it is realized by paying compensation for damages for damaged and failed things, payment of contracted amounts for insurance of a person when the insured case arises, and on the other hand has a psychological effect, because it creates a feeling security. Insurance also includes preventive measures, and on that basis insurers are obliged, when determining the conditions of insurance, or when concluding a contract with the insured, to provide for measures aimed at eliminating the causes and reducing the damage. The concluded insurance contract can't produce the effect forever, it's effect depends on the period to which the

contract itself has been concluded, and weather conditions have been a source of great concern for agricultural producers since ancient times. In the future, significant climate change can be expected that could cause enormous damage to agricultural crops.

Serbia has subsidized insurance premiums for a very high amount for years, and this subsidy significantly contributes to the growth of insurance in agriculture. The extent of coverage is still far from satisfactory. It is important to know in advance what is insured and what risks. Insurance beneficiaries may be satisfied with their insurance, or they may have fulfilled insurance expectations only if they are acquainted with all the limits and limitations of their insurance coverage before the occurrence of the damage. Bearing in mind the importance of agriculture for the overall economy of Serbia, it can be said that there is an obligation to find the appropriate model of insurance growth in this area.

If more coverage is needed for insurance, it is necessary to liberalize the sales network in terms of creating the conditions for capillary access to each individual insurer. For a long time, the Serbian Chamber of Commerce has already initiated initiatives to allow natural persons not registered in the register of entrepreneurs to perform advocacy activities as a subsidiary, if they have a contract with an insurance company, in their capacity as deputy agents. In this way, conditions would be created for expanding the distribution network of insurance, that is, a capillary access to the insurance market would be provided, which is the goal of every insurance company, and the costs of obtaining insurance would be reduced to the lowest level.

According to the data of the Association of insurers of Serbia in Serbia, the state subsidizes 40% of the insurance costs to farmers when purchasing a policy. The condition is that agricultural holdings are registered, and the area is limited to 20 hectares.

In the UOS, emphasizes that Serbia is one of the few countries that, besides subsidies for purchasing policies, compensates for the damage caused by weather disasters to farmers. Everywhere in the world is a legal obligation for farmers to provide crops. A good example is Romania where farmers lose the right to subsidies unless they are insured. They think we should follow them. Then, in our country of 3,700,000 hectares, as much as it is processed, it would be secured much more than the present 250,000 to 300,000 as much as it is. With us insurance premiums in agrarian are only two billion dinars. They account for only 3% of non-life insurance.

The reasons for such a situation are, as they say in UOS, a low standard of living, the lack of awareness of the farmers about the benefits of insurance, and a strong opinion that the state should compensate for the damage caused by natural disasters. The damage should compensate the insurance companies, and the state is only there to help.

Of course, if the insured is offered real risks!

The awareness of farmers about the need for insurance in Serbia is still low, and the problem is the lack of information from producers who often do not know

which insurance they would need to protect in the best way. Despite the weather conditions that hit Serbian agriculture almost every year, producers still "look to the sky" and hope that trouble will not hit them. The farmers still have to decide to secure their own planting, and on insurance companies to adapt their offer to their needs.

Insurance companies come to the farmers meeting by allowing them to pay the crop only after harvesting or harvesting.

For risk management in plant production, the best instrument is insurance of crops and fruits, and within the insurance itself, there are different systems that represent a more and more efficient instrument for risk management for agricultural producers in various countries of the world. The insurance of plant production and its growth are conditioned by the measures of the state's economic policy in the field of agriculture in general and the measures that the state will take in order to provide economic protection against the risks that endanger agricultural production.

Therefore, the perspective of the development of crop and fruit insurance depends directly on the prospects of agricultural development as a branch of the economy, and all of the aforementioned insurance systems are mainly related to the developed countries of Europe and North America, while developing countries and former socialist countries should use, on the one hand, existing systems in developed countries, and on the other hand they need to develop new concepts of crop and fruits insurance that correspond to the agrarian structure of those countries.

For both farmers and the state, it is the worst when it comes to purchasing and tying up the policy, but it does suffer damage that is uninsured. Drought, as well as cold, is something that we are facing with climate change: farmers will definitely be more interested in defending them and over the policy.

The importance of agricultural insurance is also reflected in the provision of economic protection to farmers against various adverse effects arising from the risks involved in insurance. Agricultural insurance is an important factor in the protection and improvement of agricultural production.

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ANALYSIS OF THE ATTITUDES OF THE POPULATION ON THE NEED FOR ANIMAL INSURANCE

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ABSTRACT

Agriculture in the Republic of Serbia is a sector of economy that is vital for the overall social and economic development of the country. The position of the agrarian sector in Serbia is specific, since, besides the economic importance, there is also a special social and ecological significance, and agriculture contributes to the national wealth with significant participation in the creation of GDP.

There are no restrictions when insurance in agriculture is concerned, that is, not only crops and fruits are provided, but also livestock, domestic animals, and not often the object of insurance can be greenhouses, forestry and aquaculture farming.

In the EU countries, insurance in agriculture (insurance of crops, fruits and animals) is regulated by law, while in our country, producers still have a decision whether to bear the risk or provide agricultural goods and livestock.

Animal insurance involves a large number of risks and is classified as risk insurance. It can occur in several different forms: basic insurance, a large number of supplementary and special insurance, sample insurance for certain types of animals that are being insured for the first time, or the risks for which the insured is covered for the first time. It belongs to the group of short-term insurance or insurance for up to one year, and even shorter. The subject of insurance is the animal itself, and not just certain parts of the animal's body or manufactures that can be obtained from it.

The subject of this research is to examine the attitudes of the respondents regarding the necessity of animal insurance and the problems that arise in this case.

***Key words**: agriculture, insurance of agricultural, insurance of animals, risk, policy.*

***JEL Classifications**: G21, G22, G23,Q19*

INTRODUCTION

Animal insurance in recent years is an increasingly frequent topic in agricultural holdings and farms. Despite careful and diligent breeding of domestic animals, farmers face a large number of unwanted events. Animals are prone to injuries, illnesses, and often occur and die. Also, in recent years, Serbia has been struggling with floods (floods in May 2014), and a large number of animals have been struck by water torrents. This is a big loss for farmers, or it causes high costs.

These circumstances can't be prevented, but domestic animals can be secured, and thus the farmers are provided with losses. The object of insurance of animals will be all domestic animals, cattle, sheep, goats, pigs and more often pets and dogs and cats are provided. Only healthy animals, that is, able-bodied animals for a

particular purpose, are in good physical condition, animals that live in normal conditions and eat healthy, but above all the animals that are identified.

Livestock insurance belongs to the insurance of agriculture. This type of insurance is carried out by insurance companies that deal with non-life insurance. In Serbia, livestock insurance is underdeveloped. In general, a very small number of agricultural holdings are deciding on the conclusion of a livestock insurance contract. (Cogoljević et all, 2017, p. 155)

Livestock manufactures is exposed to different dangers compared to plant production. An insurance contract is concluded on the basis of an oral or written offer, and it is concluded when the contractors sign the insurance policy. Animal insurance contracts are signed for a shorter period of up to one year or for a period longer than one year and are long-term animal insurance contracts. It often happens that contracts are signed for a shorter period of time, then they are extended from year to year.

The insurance contract provides adequate coverage while the insured animals are in the place specified in the policy as the place of insurance, or in the facilities, the place of their regular residence and the food. Animals are also insured during their stay in the landowner's holdings, regular meat and livestock fairs, as well as during landing and transport, and this place and back, and no more than 20 km from the place specified in the policy as a place of insurance.

The subject of the research in this research is the insurance of domestic animals. This insurance area in our country has not yet been developed individually. More attention is paid to ensuring crop protection than animal protection. In recent years, owners of dogs and cats have been increasingly choosing to provide their pets. It should be borne in mind that every larger farm should ensure its herds and in this way secures itself from possible risks or losses. The insured is entitled to receive compensation, if the secured case is realized. When the insured event occurs, the owner is obliged to take appropriate actions, both for the purpose of treatment, and in order to maximize the utilization of the saved remains in death / forced slaughter.

The main goal of the research is to show what people think about the insurance of domestic animals. It should also show the percentage of insured domestic animals in recent years in Serbia.

The basic task of this research is to find the answer to the question why there is no interest of the owners of domestic animals for their insurance? It should also be determined why this type of insurance is still linked to insurance in agriculture. It is then necessary to explore what role a state can have to contribute to the owners' interest in securing their domestic animals.

Independent variables in the survey are the owners of domestic animals by gender, age, education level and professional education. Dependent variable are the views on the need for domestic animals in the Republic of Serbia. Whether domestic animals will be insured depends primarily on the needs of the owner, conditions in which animals are raised, financial resources, offers of insurance companies, climatic conditions, etc.

The general hypothesis can be defined as: Insurance companies in Serbia should, through various insurance policies, motivate primarily farmers, and then the owners of pets to ensure their domestic animals from possible damage.

Specific hypotheses:

— Animal insurance provides financial protection against various risks characteristic of livestock production.

— It is necessary to harmonize domestic regulations on the insurance of domestic animals with the regulations of the European Union

— The state must provide assistance when it comes to insurance of animals, through various subsidies and tax cuts for farmers

— Farmers must take into account that their domestic animal insurance can greatly benefit and reduce the damage that is caused by any form of animal loss

— With the entry of foreign insurers, the level of quality of insurance services raises and the conditions for further liberalization of the market are created

— Changes in insurance can have a positive impact on the further development of the insurance market in Serbia and contribute to its accelerated approach to the European Union.

THE CONCEPT OF ANIMAL INSURANCE

Animal insurance means the financial protection of the owners of animals from the various risks that occur in the breeding of animals. The subject of this insurance is all farmed domestic animals (cattle, sheep, goats, pigs, poultry, horses), as well as pets such as dogs, cats, parrots. The insurance covers the risks of death or forcible slaughter of animals caused as a result of: an accident (basic narrow cover), an accident or illness (a basic wider coverage). (Kočović, Šulejić, 2006, pp. 121)

The amount of insurance premiums will depend on the type of animal that is the subject of insurance, the number of animals to be insured, the conditions and the method of breeding the animal, the risks for which the animals are insured, as well as their estimated value and amount of coverage as defined by the contract.

Payment of the insurance premium can be done on a monthly basis, then quarterly, semi-annually or advance. If contracts and participation are detrimental when it comes to the normal death of the animal, it is possible that the owner will receive a discount on the insurance premium up to 50%. Then, depending on the number of insured throats and the method of payment of the premium, it is possible to achieve a discount of up to 30% on the basic insurance premium. (Piljan et all, 2015, pp.94-102)

In the case of animal insurance, a number of additional benefits can be achieved. For example, for owners of animals who conclude an insurance contract

and premium pay advance above a certain amount, additional benefits are provided in the form of free insurance against the consequences of an accident. This insurance is usually given for a period of one year, and from the consequences of the accident, it is ensured by the complete agricultural holding or all it's members.

The state also encourages animal owners to provide them by subsidizing this type of insurance. To the registered farms, the state repays a certain portion of the paid premium insurance, where the provisions are more closely defined by the competent ministry.

Risks in animal insurance

Animal insurance involves a large number of risks and turns into risk insurance. It can occur in several different forms: basic insurance, a large number of supplementary and special insurance, sample insurance for certain types of animals that are being insured for the first time, or the risks for which the insured is covered for the first time. It belongs to the group of short-term insurance or insurance for up to one year, and even shorter. The subject of insurance is the animal itself, and not just certain parts of the animal's body or products that can be obtained from it. Insurance coverage is provided only for animals up to a certain age, which are primarily healthy, in the age of physical fitness and which are carried out in good and quality conditions. (Žarković, 2016, pp. 83)

Often the question arises, why is animal insurance still underdeveloped in Serbia? The first reason is primarily the low payment power of agricultural producers, then the lack of information about the importance of animal insurance, as well as the decline in livestock production in recent years.

DOMESTIC ANIMAL INSURANCE

Livestock insurance belongs to the insurance of agriculture. This type of insurance is carried out by insurance companies that deal with non-life insurance. In Serbia, livestock insurance is underdeveloped. In general, a very small number of agricultural holdings (5-10% of the total number) are deciding on the conclusion of a livestock insurance contract.

When it comes to insurance of livestock in Serbia, the general conditions for livestock insurance adopted by a more successful insurance company are analyzed, while paying special attention to the way subsidies for insurance premiums for agriculture and livestock insurance are supported by the Government of Serbia.

On the other hand, considerable attention is paid to livestock insurance in Mongolia, India, Mexico and Ireland, which have defined livestock insurance programs that have contributed to the number of contracts concluded in this area. In Mongolia, this program is implemented through integrated risk insurance, in India this insurance is implemented at the level of the local community (villages), in Mexico through self-insurance funds and the so-called. Stop-loss reinsurance,

and in Ireland, various programs for controlling animal diseases and their eradication are defined. (Manić, 2012, pp.11-13)

It should be said that livestock insurance does not have the place that it should have in the field of agricultural insurance. And in the world, livestock insurance represents a relatively small segment of total agricultural insurance, even in highly developed countries.

Subject of insurance

In the case of plant manufactures, the subject of insurance is usually a product or a product, and in rare situations and a tree, in the case of animal protection, the animal is ensured in its entirety, and not products that give it to us, such as milk, eggs, wool, and skin.

Therefore, in the case of animal insurance, the animal itself is the subject of insurance, and not certain parts of the body or products that animals give us. (Brkanić, Katrinka, 2006, pp.12)

The subject of insurance is all kinds of domestic animals (cattle, sheep, goats, pigs, bees, dogs, trout, pheasants, rabbits, turkeys, seas, peacocks and poultry); wild and exotic cats in zoos and beyond.

There aren't restrictions when it comes to animal insurance. All domestic animals that a person is cultivating or owned by a person as an individual or a farm, a farm, etc. can be provided. Only healthy animals can be provided, with the verification of the veterinarian, i.e. a check-up performed prior to the signing of the insurance by professional veterinarians.

Sick animals or animals that are prone to illness, as well as extinct and exhausted animals can't be provided. Also, the subject of insurance can't be domestic animals that are not in good physical condition or their living conditions are poor. (Stojković, 201, pp. 64)

Types of insurance

Animal insurance is a special branch of insurance for agriculture. Given the many types of animals and the risks involved in cultivating them, this insurance occurs in various ways: (Žarković, 2016, pp. 88)

— basic insurance of animals,

— supplementary and special insurance and

— sample insurance for those types of animals and the risks that are being secured for the first time.

Preventive and repressive measures

The aim of animal insurance is the economic protection of the owner of healthy animals, where normal conditions for livestock and economic exploitation of the animals and products we receive from them are provided. Regardless of the fact that the animals are insured against possible risks, this does not give the owner the right to approach the production with additional care as prescribed in the Law on Obligations.

According to the insurance contract, the owner or the insured is obliged to implement all the measures prescribed in order to prevent the occurrence of the insured event. If it happens that the insured event occurs, the insured should do everything necessary and be able to count it down. This is why an insurance company's obligation arises that the owner compensates for the costs incurred in trying to prevent the insured case, even when this is not feasible.

The damages that occur in livestock can be direct and indirect. Advantageous damage is the loss of an animal by death or forcible slaughter, in the amount of its actual market value, while the indirect damages are the damage in which the expected benefit or profit that the owner could achieve by exploitation of it would be lost.

Since the insurance reimburses only direct damages, the insured at the very beginning has an economic interest not to come to the insured event, or to take preventive and repressive measures.

There are several groups of preventive and repressive measures: zoo hygienic, veterinary and zoo technical measures.

Supplementary types of animal insurance

Additional insurance of animals includes insurance of animals for which there is very little interest, that is, animals that are not covered by basic insurance, or specific situations in which animals can be found and which can be risky for their lives (death of animals during labor, etc.). (www.generali.rs, 06.22.2018)

ANIMAL INSURANCE STATUS IN THE REPUBLIC OF SERBIA

On a global scale today, plant production insurance accounts for 90 percent of the total agricultural insurance premium.

Due to the emergence of new diseases that are currently present in animals, the need for livestock insurance is growing. In order to achieve complete economic protection, "a stronger link between farmers, insurance companies and the state is needed in order to create an integrated risk management system in livestock breeding". (Marković, Jovanović, 2010, pp. 292)

It is considered that the costs of insurance of agriculture, that is crops, fruits and animals are almost negligible compared to the benefits of the farmers or the insured. Although theoretical views are different, in practice, in a large number of countries, animal insurance as a part of agricultural insurance is underdeveloped. The same situation is in Serbia where the insurance of animals is underdeveloped both in terms of volume, but also by type of protection.

Opportunities for insurance development in Serbia are much higher than the current level of development. The development of animal insurance in Serbia is now at a very low level, regardless of the support of the state and the introduction of subsidies on the insurance premium. It further indicates that the subsidy it holds

is not sufficient to achieve a greater expansion of animal insurance in our market. (Cogoljević, Piljan, 2015, pp.435-451)

Insurance is primarily necessary for the development of agriculture in general, but also for rural development of the country, but above all in order to ensure food safety. This is especially important in domestic conditions, primarily due to the fact that rural areas make up as much as 85% of the total area of our country, that the percentage of agriculture in the gross domestic product is large, but also in the export and overall employment of the population.

The results of the last census in agriculture in 2012 show that there are 631,522 agricultural holdings in Serbia, of which 99.5% are family farms that are also food security operators.

Looking objectively, the need for animal insurance exists and is very pronounced, given the fact that plant and animal production in Serbia is exposed to numerous risks, which are increasing year after year, especially when it comes to climate change.

The subjective need for securing agriculture in domestic conditions isn't sufficiently developed due to low payment power, that is, economic underdevelopment of agricultural entities, as well as low awareness of the importance of insurance. The underdevelopment of agricultural insurance on the micro level determines its underdevelopment in the macro level, as a result of the underdevelopment of agriculture, as an economic activity of national importance.

Analyzes of the four largest insurance companies in Serbia that together cover the entire agricultural insurance market in the Republic of Serbia, in addition to the basic conditions, there are also numerous conditions for insurance of crops and fruits, but also for animal insurance.

Regarding the special conditions for the insurance of crops and fruits, it is necessary to look at the insurance of seed corn from the loss of seed quality due to autumn frost, the insurance of table grapes from loss of quantity and quality, ensuring the trees of fruit trees and vineyard vineyards, as well as in the genus, and there is also a trial of rapeseed winter rape.

Based on this analysis of agricultural insurance in our market, we come to the conclusion that the most significant risks of plant and animal production are covered by the conditions of insurance of agriculture of insurance companies operating in the territory of the Republic of Serbia. What can be said that the lack of these insurances is the insurance against drought and loss of income due to drought, which is offered only by one insurance company in the Republic of Serbia.

The state of Serbia, in cooperation with the Ministry of Agriculture, regress the agricultural insurance premium starting in 2006. Number of agricultural holdings, which are in the period from 2006-2015. used the right to a premium for agricultural insurance premiums, it was very variable. In the last observed year, 2015, the right to regress insurance premium was realized by 19,799 agricultural holdings, 18,268 farms for insurance of plant production, and only 1,531 farm for animal insurance.

It is clear that 19,799 agricultural holdings were provided in 2015, which represents only 3,13 percent of the total number of agricultural holdings in the Republic of Serbia. The total number of agricultural holdings in the Republic of Serbia was determined in the last agricultural census in 2012 and amounts to 631,552 households.

In order to develop insurance in agriculture in the territory of our country, it is necessary to introduce partially compulsory insurance in agriculture. It is therefore necessary to define this type of insurance legally as partially mandatory, as well as to adopt a strategy for the development of agricultural insurance in the Republic of Serbia. The proposed model of partially compulsory agricultural insurance is based on public-private partnership, and its implementation would enable the development of agricultural insurance, but also provide the necessary financial resources for ongoing and investment financing of this important economic activity.

Partially compulsory insurance of agriculture implies compulsory insurance of agriculture for all agricultural entities, users of some state resource, from those risks that are most represented in a certain area.

According to the suggested model, insurance of agriculture should be mandatory:

a) for users of incentive funds for the development of agriculture that are paid from the republic, provincial or local government budgets;
b) for users of loans that are granted with subsidized interest from the state budget;
c) for users of loans approved by state financial institutions and which are placed at low (subsidized) interest;
d) for tenants of state agricultural land.

It is also necessary to say that, according to the current policy of commercial banks, now only the obligatory insurance of animals exists, and if the borrower intends to realize these purchases with such financial means. In accordance with the proposed model of partially compulsory insurance of agriculture, agricultural entities (legal entities and natural persons) should, when applying for state subsidies, apply for the loans with subsidized interest, as well as for the leasing of state agricultural land, the insurance policy in the framework of compulsory tender documents .

Agricultural insurance should take place in Serbia in the modern market economy. Modern, market-oriented agriculture can not even be imagined without well-organized and developed insurance. The perspective of the development of agricultural insurance in domestic conditions should imply a much more active role of the state than so far.

The state role could also be seen in the introduction of partially compulsory insurance of agriculture, as well as in securing funds from the agrarian budget for higher subsidies of insurance premiums. At the same time, insurance companies should play a key role in the domestic agricultural insurance market through the development of supply and demand, as well as in informing and educating agricultural entities on the importance of economic protection of their production.

EXAMINATION OF POPULATION ON ANIMAL INSURANCE AND PROBLEMS WITH ANIMAL INSURANCE IN THE REPUBLIC OF SERBIA

For needs of this research was carried out on the attitude and opinion of the citizens of Lazarevac regarding the insurance of an animal. The survey was conducted at the territory of Lazarevac municipality, by survey method. The aim of the survey is to find out how much animal insurance is in our country, primarily in this city. 70 people were surveyed, 38 of whom (54%) were men and 32 (46%) women. Of the 70 respondents, aged 20-30, there were only 14%, aged between 31-40 years 19%, age 41-50 years 31%, then 51-60 years old 26% and age 61-70 years 10% which implies that the highest percentage of surveyed mature people. Regarding education in the sample, 4% were interviewed with elementary education, 29% had secondary education, 40% were with higher education, and 27% had higher education. 10% of students participated in the survey, 54% were employed, 20% were surveyed and 16% retirees.

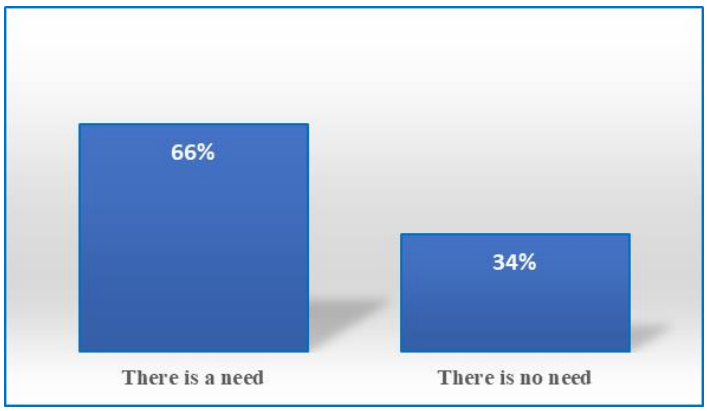


Figure 1. Needs for animal insurance
Source: author

The first question was about attitudes on animal insurance. 66% of the respondents expressed their opinion on the need for animal insurance, while 34% of the respondents considered it unnecessary to provide cattle, which is, first of all, not profitable for the owner of the agricultural household. Respondents who believe that there is a need to provide animals, primarily cattle on farms, do not see much benefit from it, but it is definitely one type of protection for the owner.

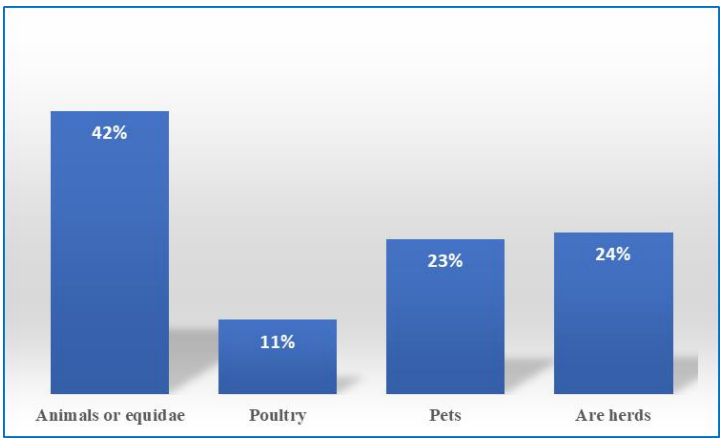


Figure 2. Animals that are subject to insurance
Source: author

The next question was about which animals are the subject of insurance, or which animals are most often insured with us. The situation is as follows: 42% of the respondents consider that the most commonly used are domestic animals or equidae, primarily horses, which are among the most expensive animals on the farm, then cows and cattle. The following species of animals, which are most often assured in the opinion of the respondents, are herds (sheep, goats), and 24% of those who are washed out have been declared for this. The following group includes pets, above all dogs, which in recent years are increasingly subject to insurance when the animals are in question and that is considered by 23% of those surveyed, and finally, the last group is poultry or feathered animals, or 11% of the respondents said that way.

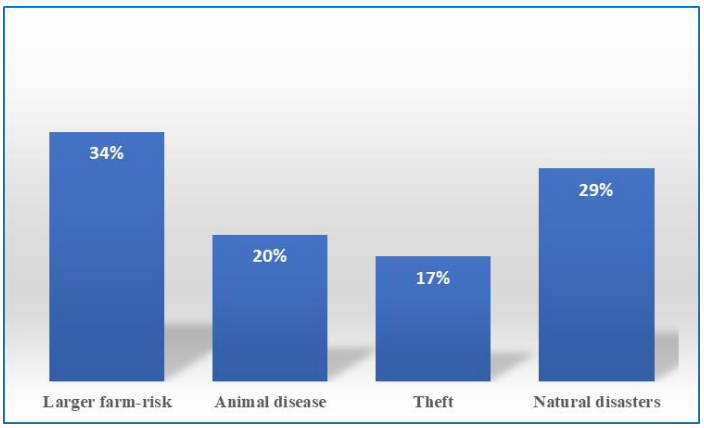


Figure 3. Reasons why owners decide to insure animals
Source: author

Some of the most common reasons why owners decide to secure their animals are the following: the risks of large farms, animal diseases, theft and weather. 34% of the respondents consider that the main reason why the owners insure their animals is to cover the loss, especially when it comes to larger farms with a large number of animals. The following reason is a natural disaster. We are witnesses that in recent years our country has often been hit by floods and landslides. After the May 2014 floods that affected our country, most notably the Municipality of Obrenovac, many owners of the households wondered if they could find themselves in such a situation tomorrow. A large number of animals were killed in May's floods, and even less than 2% of them were insured. 29% of the respondents consider that the reason why it is necessary to provide animals of natural disasters. The next reason is animal disease, and 20% of the respondents said that, while the theft of domestic animals is the last one for a variety of reasons, which is why it is necessary to ensure that 17% of the respondents consider it.

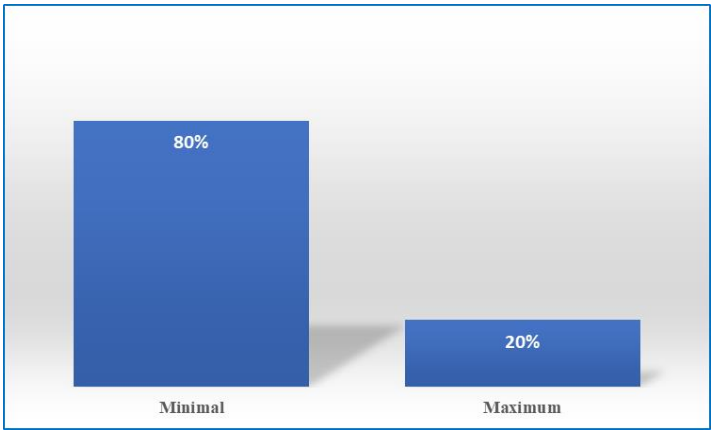
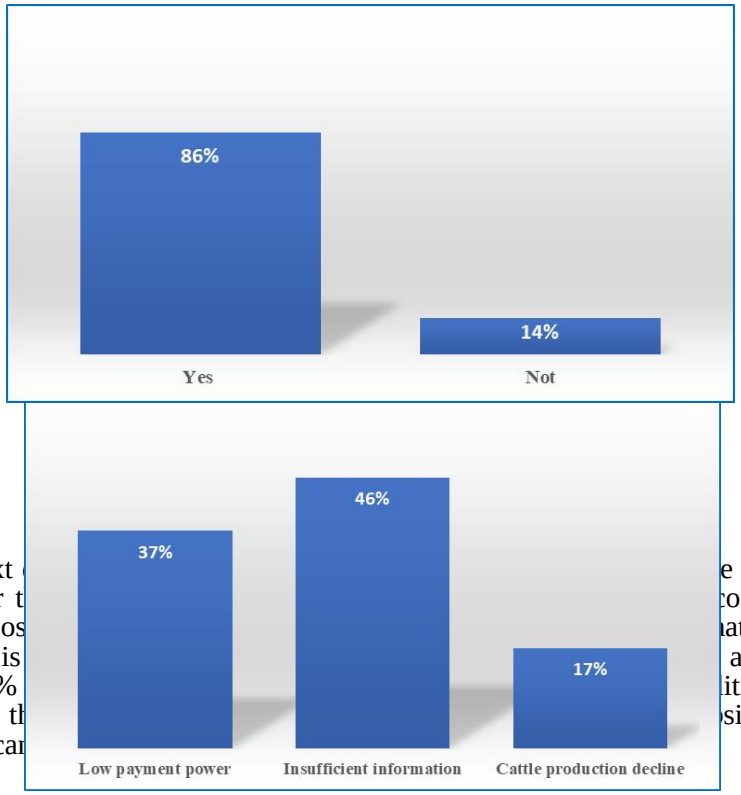


Figure 4. The degree of popularity of animal insurance in Serbia
Source: author

The next question in the survey concerns the "popularity" of domestic animal insurance in our country. The question arises, is the insurance of animals in our country in general. According to the data 80% of the respondents believe that the insurance of animals in our country is at the minimum, while 20% of the respondents consider that domestic animals are often provided as part of insurance in agriculture, but only in serious agricultural farms, which animals exploit the animals .



The next e animals and whether t concerned about the pos nation we received, it is and thus consider 86% litions are specified by th sidies, so that people can

Figure 6. The reason for insufficient development of animal insurance in Serbia
Source: author

What is the biggest reason why owners do not insure their animals was the next issue. Out of the total number of examinees, 46% think that one of the main reasons is insufficient information about the importance and need for animal insurance. The next reason is a relatively low payment power, and this is considered by 37% of respondents, while 17% consider it to be the reason for the drop in the volume of livestock production. All of the above reasons lead to the fact that the insurance of animals in our country is negligible, and that in a number of agricultural insurance, it is much more popular and demanding insurance of crops and fruits. That people aren't informed about how much animal insurance is needed and useful, is the fact that they often do not know that this type of insurance exists. Insurance companies, in cooperation with the state that would subsidize this type of insurance, should organize education and lectures on the topic of usefulness of animal insurance, in order to teach the owners of all the positive aspects and benefits that they can have.

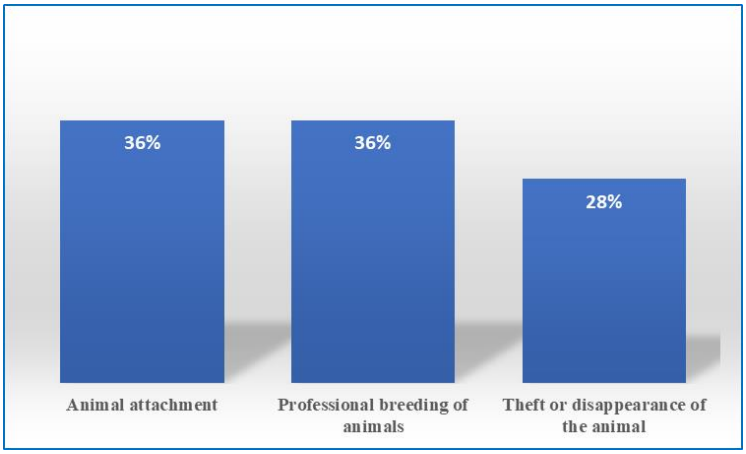


Figure 7. Why owners insure pets (dogs)
Source: author

In recent years, it has become increasingly common for owners to provide their pets, primarily dogs. What are the reasons why owners insure pets was a question in the survey. Opinions on pet insurance were given, so 36% believe that the main reason for animal attachment, that is, personal reasons, the same percentage 36% believe that the reason is in fact professional breeding of animals, and 28% of the respondents consider that the reason for the insurance of pets theft or the disappearance of an animal.

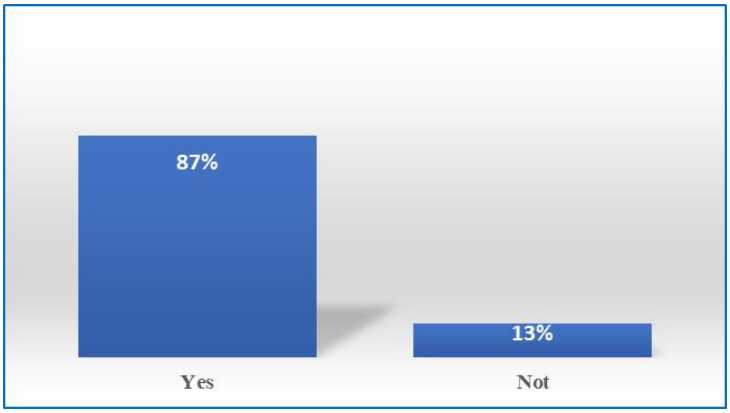


Figure 8. The state encourages owners to insure animals
Source: author

The next question was whether the state was involved when it comes to animal insurance, or whether it encouraged owners to insure animals. The subsidies given by the state to farmers in agricultural holdings are State aid and this is the reason why 87% of the respondents stated that the state is helping the

owners, while 13% think that the state is not involved or not sufficiently and that is the main reason why animal insurance in our country on the other.

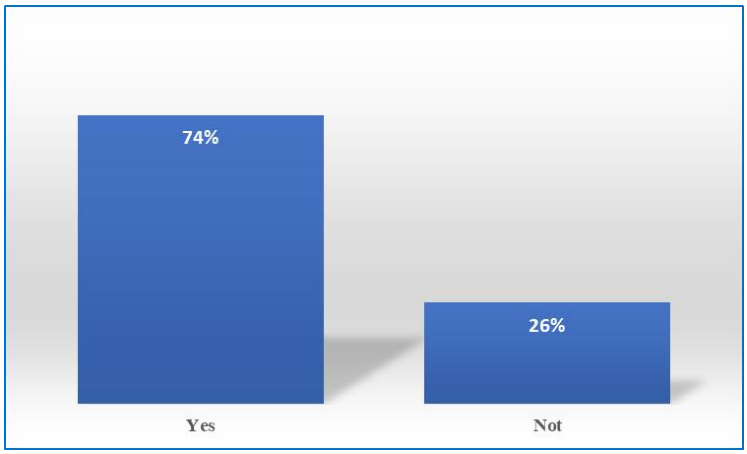


Figure 9. The need for changing the legal regulations
Source: author

The next question was whether there was a change in legislation when the insurance of animals concerned helped. If it is necessary to change the laws or certain legal items when the insurance of animals is in question, 74% of the respondents consider it, while 26% think that there is no need to change the law, but that the state needs to influence the change of attitudes of the farmers, take the measures needed to motivate owners and see the need for animal insurance.

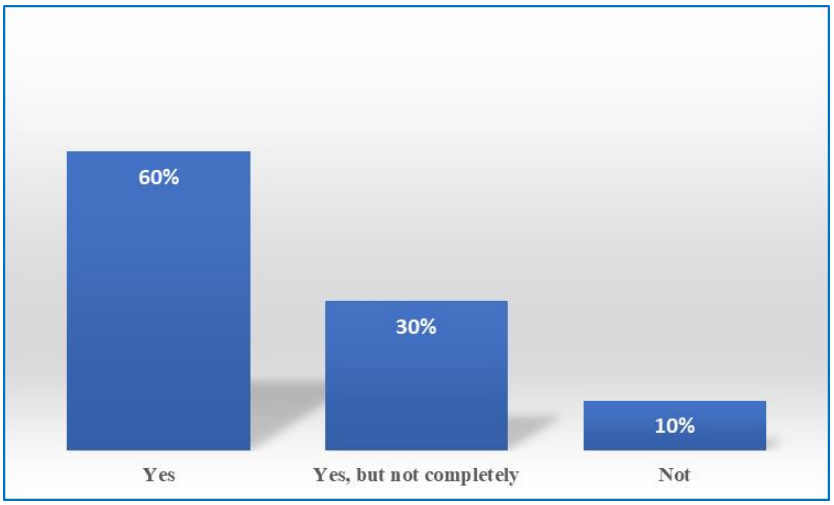


Figure 10. State subsidies solve the problem

Source: author

One of the last questions in the survey was whether subsidies given by the state would solve the problem. The answers we received from the respondents say that 60% of the respondents consider the influence of the state, ie the subsidization, will help and encourage farmers to ensure the animals, 30% think that the situation would change for the better, but not to a large extent, and 10% of the respondents think that the state's influence would not help solve this problem, due to the underdevelopment of agricultural production or the small profits that farmers have.

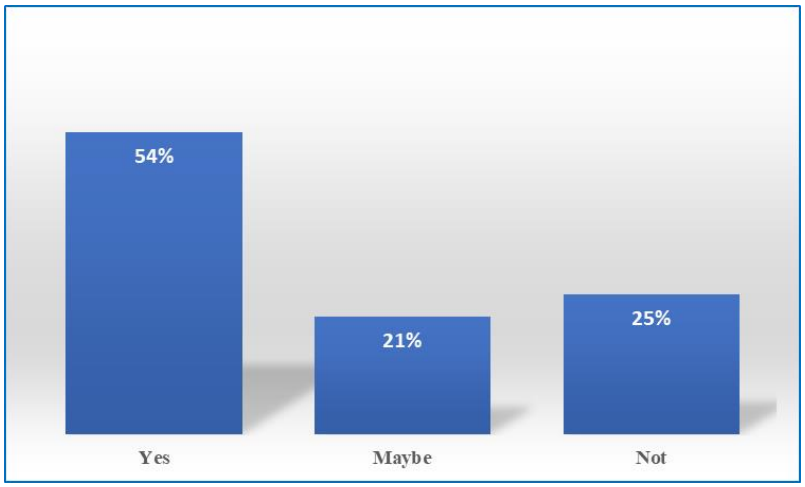


Figure 11. Improvement of animal insurance in the future
Source: author

In the end, the last question in the survey was the attitude of the respondents about the improvement when the insurance of the animals concerned. In the future, the situation in this area will change for better considered 54% of respondents, 25% think that nothing will change greatly from the current situation, while 21% of the respondents remain optimistic about the insurance of animals in our country.

CONCLUSION

In the Republic of Serbia, insurance of agriculture is in the category of insufficiently developed insurance. The perspective of its development in domestic conditions should also imply a much more active role of the state than so far.

The main objective of animal insurance is the economic protection of animal owners who keep healthy animals, while ensuring that all conditions are met for the quality cultivation of animals and the exploitation of their products.

Although the animals are insured against certain risks, this doesn't relieve the insured of the obligation to approach the production with the care of a good host, as the Law prescribes as obligatory relations.

Due to the many risks and types of animals, animal insurance occurs in various forms: basic insurance, a large number of supplementary and special insurance, sample insurance for certain types of animals that are being insured for the first time, or for the dangers for which the insured is covered for the first time.

Animal insurance belongs to short-term insurance that lasts a year or less and is usually linked to a single production cycle. The subject of insurance is an animal in its entirety, and not a product or part thereof. Insurance coverage can only be provided for animals of certain ages, which are healthy, in good condition and cultivated under acceptable conditions.

The importance of agricultural insurance is also reflected in the provision of economic protection to farmers against various adverse effects arising from the risks involved in insurance. Agricultural insurance is an important factor in the protection and improvement of agricultural production.

One of the good solutions that could accelerate the market is a model in which a country's obligation to obtain a subsidy in agriculture by the state would be obliged to pre-contract appropriate insurance coverage. This would result in a multiplier effect, on the one hand, the income of agricultural producers would be predictable, while, on the other hand, the state would protect investments in the form of subsidies in agriculture and also provide the state budget from further unplanned expenditures. Also, one should not neglect the positive effect on the insurance industry in general, but also the return effects in terms of development of preventive measures and education about the present risks of agrarian production and measures for their overcoming.

It concludes that only positive engagement and synchronized action by the public sector and the insurance industry can make visible positive progress in this area. Insurers in their domain should offer the market an adequate product in terms of comprehensiveness (higher risk coverage), clear and simpler definition of insurance and tariff conditions and easier accessibility for insureds, which will be unambiguous to everyone, including agricultural producers, the state sector and the industry insurance.

Following the example of the developed world markets, the second part of the job would have to be taken over by the state through appropriate subsidization schemes, models of public-private partnership for the adoption of appropriate laws and by-laws in this area.

In the coming time, the establishment of quality cooperation between the insurance industry and the public sector to improve the current situation in the Republic of Serbia will be crucial for the exploitation of development opportunities that certainly exist in this extremely important area.

The state role could also be seen in the introduction of partially compulsory insurance of agriculture, as well as in securing funds from the agrarian budget for higher subsidies of insurance premiums. At the same time, insurance companies

should play a key role in the domestic agricultural insurance market through the development of supply and demand, as well as in informing and educating agricultural entities on the importance of economic protection of their production.

The proposed model of partially compulsory agricultural insurance is based on public-private partnership, and its implementation would enable the development of agricultural insurance, but also provide the necessary financial resources for ongoing and investment financing of this important economic activity.

Through empirical research, a general hypothesis was confirmed that insurance companies in Serbia should, through various insurance policies, motivate farmers, and then pet owners to provide their domestic animals against possible damage.

In addition to the general hypothesis, research has also confirmed the specific hypotheses that animal insurance provides financial protection against the various risks characteristic of livestock production, that it is necessary to harmonize domestic regulations on the protection of domestic animals with EU regulations, that the state must provide assistance when the insurance of animals is concerned , through various subsidies and tax deductions for farmers, that farmers must take into account that their domestic animals can benefit greatly from them and reduce the damage caused by any form of animal loss, that the entry of foreign insurers raises the level of quality of insurance services and creates the conditions for further liberalization of the market, that changes in insurance can have a positive impact on the further development of the insurance market in Serbia and contribute to its accelerated approach to the European Union.

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PROFESSIONAL INDEMNITY INSURANCE FOR ACCOUNTANTS

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Milica Živković[12]

ABSTRACT

Accounting means collecting and processing data, preparation and bookkeeping, preparation of business financial statements, as well as collecting and processing information about the preparation of reports for statistical, tax and other purposes. Accounting system, as one of the components of the control system has a special place in the management of companies and entrepreneurs. Accountants are expected to be accurate, reliable, responsible and systematic in order to avoid errors when processing data and compiling the report. An accountant is expected to be a person of trust, respect, with high ethical standards and procedures, to be correct and honorable, a trustworthy person whose work is subject to control by the legislative authorities. An accountant shall not undertake any work for which he is not competent, and shall work on his professional development. Accounting reports must be objective and realistic. Practice, however, shows that there are cases where accountants take action or make an omission in the work, which causes damage to the client.

The current Law on Accounting has not appointed a professional body (chamber, association) that would grant licenses for accountants in a form of a public document that would represent an operating license, as it is regulated in some other professions, such as lawyers, doctors, engineers and others. As a consequence of such legal solution, there is no obligation to ensure professional responsibility of accountants that would cover liability toward legal entities or entrepreneurs for which the accountant performs the accounting tasks, while the insured case is considered to be one or more acts, omissions or errors of the insured resulting in emergence of damage for which the injured party could demand compensation.

The objective of this paper, based on a survey conducted among accountants and users of accounting services, is to find out whether the quality of services provided by accountants would be better if the legislator, through authorized professional bodies, would introduce professional indemnity insurance for accountants as compulsory insurance.

Key words: *accountant, professional responsibility, quality of service, omissions in work, Insurance.*

JEL Clasification: *G22, M41*

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PROFESSIONAL INDEMNITY INSURANCE FOR ACCOUNTANTS

Accountant is an expert person who has professional skills and knowledge, self-management of business books, preparation and writing of financial statements, as well as provision of other accounting services. Professional knowledge, skills, values, ethics and attitudes of the accountant for self-management of business books, preparation and compilation of financial reports, include knowledge of legal, professional and internal regulations, accounting and auditing, management accounting, accounting information system, international financial reporting standards and international accounting standards for the public sector, tax system and application of regulations on taxes and other public revenues, financing of business acts accounting and accounting policies, management accounting and internal reporting, business decision making, international audit standards, procedures for preparing and drafting audit reports, corporate finance, theory and policy capital structure, comparative tax systems, debt and trade law, financial markets, etc. This includes the skills for self-management of business books, preparation and compilation of financial statements which include assessing the position of financial statements in accordance with the relevant regulations, creating and rational organizing of the flows of accounting documents of the business entity in accordance with the relevant accounting regulations, organization of keeping the general ledger, daybook and auxiliary ledger, in accordance with the relevant regulations, preparation of the analytical chart of accounts of the business entity, organization and realization of accounting procedures, preparation of financial statements for the needs of internal users, preparation of financial and other reports in accordance with the relevant regulations for external and internal users, preparation of individual and consolidated financial statements, harmonization of financial statements in hyperinflationary conditions with current regulations, preparation of planned financial statements. "The process of improving and harmonizing (adjusting)of economic systems and business practices between some countries, including the accounting and financial reporting system, is getting more and more intensified as a result of the globalization process. Improvements and harmonization first started in the developed Western countries, to continue in other countries in the 1990s, especially those in which the transition of the economy started during those years, followed by radical reforms of economic and legal systems.This process is subject of very complex theoretical studies, which aim to contribute to the convergence of accounting systems with the gradual introduction of generally accepted professional rules and advanced accounting practice. (Stanić, 2018, pp.34) There are several reasons justifying the need for a continuous theoretical study of the reform process of accounting systems and a comparative analysis of the degree of harmonization of these systems in some countries. (Vojteški-Kljenak, Pavlović, 2013, pp.87) In order for accountants to successfully accomplish all these activities, the proffession needs constant improvement, both

from the aspect of the quality of the services provided, and from the point of view of the legal and internal regulations editing this field.

ACCOUNTING AND INSURANCE

There is a great number of accountants in Serbia. While in the World, this profession occupies a high position in the hierarchy of the employees of each company, in our country, this job is often underestimated, and wages are often very low. Prevailing opinion is that accounting is just a mere obligation, fulfilling a particular form, satisfying the minimum requirements set before the accountants by the management of business entities on one hand, and state authorities on the other. By contrast, international accounting organizations have regulated the performance of this activity in a completly different manner. For example, the International Federation of Accountants (IFAC) prescribed the following seven obligations for all members of this organization: quality control, international standards of education for professional accountants, international standards of auditing, code of ethics for professional accountants, international accounting standards for the public sector, research and discipline and international financial reporting standards. Research has shown that in our country, the implementation of these obligations is still possible only if they are accompanied by an adequate sanctioning system for all members of the profession that violate the principles of the profession and the prescribed regulations. Performing accounting jobs is increasingly demanding the top expertise of accountants, certified by competent professional bodies. Accountants need a broader global perspective to better understand the context in which business entities operate.The reason for this requirement is based on the fact that the accounting profession is, more than any other profession, subject to public interest, especially in current conditions of globalization and internationalization of business operations. Accountants' financial statements no longer satisfy solely the needs of managers, creditors and state authorities, but increasingly become the subject of much wider circle of individuals and institutions. In such conditions, the accountants' responsibility grows, and therefore, the aims to harmonize and standardize accounting are justified.

A large number of accountants in Serbia has patiently waited for the state to change the existing laws, or to adopt new legal solutions, to create the basis for regulating this area. It can often be heard that this profession requires "no vocation and knowledge". The proposal of the new Law on Accounting from 2013 was perhaps the most promissing one. It was expected that the changes to the provisions of the previous Law on Accounting and Auditing would solve the accumulated problems in the field of accounting, and above all the fact that it gave free hands to those not qualified for the job tokeep the business books. The status of accountants is not regulated by law, which is bad for the State, too, because bad regulations can lead to illegal or unprofessional accounting practices. The expectations were, above all, that the issue of licensing of accountants and the

institution that will issue these licenses will be settled. However, the adopted Accounting Law at the time was the least concerned with this aspect of accounting. That is, only one article (Article 14) stipulates that A legal entity or entrepreneur, by a general act, regulates the level of education, work experience and other qualities of the person responsible for conducting business books and preparing financial statements" (Accounting Act, 2018, No. 30/2018). The law was adopted, but, according to accountants, the disputable issues remained. Association of Accountants considered that the accountant must be a person who has appropriate education, who passed a professional examination and had adequate experience in the field.

They considered that these conditions had to be included in the Accounting Act, since many uneducated personnel established the bookkeeping agencies, thereby lowering the quality and cost of accounting services. They also stated that accounting situation can not be qualified as quality, expert or professional, and that educating professional accounting staff, their work and position in society, is of a paramount importance for the state. The big problem, according to them, is that anyone can work as an accountant, while at the same time the profession of tax advisor is introduced with the proposal of the Law on tax advice, which, some would say, is only a German name for accountants.

The basic objective of financial reporting, and therefore accounting, which compiles and presents the financial statements, is to make all transactions occurring in the business of the company transparent, and to clearly state in the financial statements their consequences for property, financial and yield position of the company. The internationalization of financial markets has accelerated the introduction of numerous financial innovations, including modern techniques of trading in financial instruments, the dematerialization of securities and the introduction of new financial instruments, the so-called financial derivatives. It is understood that all this has to be followed by the development of new accounting techniques, the methods of assessment and valuation of these instruments and their objective expression in the balance sheets and the financial statements (Vojteški-Kljenak et all, 2018, pp.33). In order to realize this task, accountants, legislation and the state have seeked for decades to establish the rules to be applied and to create mechanisms and institutions that will supervise their full and proper application. The serious concern dedicated to financial reporting at international level has resulted in adopting International Accounting Standards, International Standards on Auditing, the Code of Ethics for Professional Accountants and the formation of numerous bodies with the primary task to take care of the quality of financial statements. The reason for such a significant engagement of international institutions, such as the World Bank, the International Financial Reporting Standards Committee, the International Federation of Accountants, the European Accounting Association, the Securities Commission and others, as well as those at the national level, should be sought in the amount of damage which may arise if the accountant does not meet his / her basic goals.Errors in accounting, especially in case of large companies, can be fatal both for employers and employees. Lack of transparency in business reduces management efficiency, creates the

preconditions for corruption and the execution of various types of fraud. No country in the world has been spared from the existence of corruption, misappropriation of property, and false financial reporting. (Piljan et all, 2014, pp.63)

The countries of the region in which we live belong to a group of countries in transition and when it comes to building of accounting systems, it is noticeable that they have many characteristics in common. They do not have an institution that is completly capable of handling the quality of accounting services and accounting reports, and the accepted International Standard Financial Reporting and International Auditing Standards, despite the enormous efforts of the profession, are not fully implemented.

In addition, the circumstances in which business was conducted in this area during the last two decades did not contribute to the development of awareness of professional and civic responsibility. If this is added to a low level of economic development and associated significant poverty then it becomes clear that all the conditions for corruption and all other types of fraud that can be extinguished or concealed with the help of accounting are fulfilled. Regarding the relationship between accounting and fraud, we can say that accounting occurs in a dual role: it can be used as an instrument for fraud, but it is also a very effective instrument for detecting them. Incorrectly presented information on the company's yield, financial and property position may be the result of errors noted in the accounting inclusion of economic changes or in the preparation of financial statements. In order for mistakes, misapplication of accounting policies or incorrect interpretation of facts to be classified as errors, it is important that there is no intention to present the wrong information. In the International Standards of Audit, fraud, or a criminal offense is defined as an intentional act committed by one or more persons, from the management board, employees or third parties, which results in the presentation of inaccurate information in the financial statements. Procedures that qualify as scams or criminal acts include: manipulation, forgery or alteration of documents and records, unlawful appropriation of funds, prevention or failure to record the occurrence of business events both in the documentation and in the records, bookkeeping of incidents that have not occurred and misapplication of accounting policies.

It raises the question of liability towards a legal entity or entrepreneur for whom the accountant performs accounting work and makes a mistake or error that results in the occurrence of the damage. "Insurance is a social activity that increasingly plays a significant role in all social trends. It is present in everyday life of people. Without the insurance policy, it is not possible to provide property security in case of natural and other hazards, perform professional activities, use a vehicle, provide decent health care or supplement the income in old age. With the policy of travel insurance we feel safer on a vacation, etc.All economic and other socially useful activities, with the insurance policy, ensure business safety regardless of the risks that can arise. (Piljan et all, 2017, pp.92) . Insurance will not prevent an adverse event, but will provide indirect economic protection. The word

insurance, in its etymological sense, indicates that it is a specific type of protection, security, trust in something, security. (Marovic et all, 2009, pp.133)

OPINION OF ACCOUNTS AND USERS OF THEIR SERVICES ON THE PROFESSIONAL INDEMNITY INSURANCE FOR ACCOUNTANTS

For the purpose of this paper, a survey was conducted in order to find out about the necessity of compulsory insurance of the accountants' professional responsibility, if such insurance would increase the confidence of the users of accounting services, and whether the professional indemnity insurance for accountants would improve the quality of their services. Important parameters in the survey were the workplace (accountant or user of accounting information), education, work experience, age and gender. The answers were offered: I do not agree, I mostly disagree, I neither agree nor disagree, I mostly agree and I agree completely.

Zero hypothesis was set up: It is necessary to introduce professional indemnity insurance for accountants, and

The first hypothesis - The misconduct of an accountant can cause great damage to his client

Second hypothesis - Introducing compulsory professional indemnity insurance for accountants will not increase the trust of users of accounting services .

Third hypothesis - Professional indemnity insurance for accountants will improve the quality of their services.

In order to prove these hypotheses, the questionnaire was made, containing 13 questions:

The accountant's work is very responsible.

Despite the efforts to work in accordance with rules and regulations, unforeseen circumstances, omissions and mistakes in the work of an accountant are always possible.

Professional indemnity insurance for accountants does not provide an accountant with financial protection due to damage that may be caused to a third party.

The damage to a client’s businsess is not imposed by the accountant, but rather by the client himself, in his wrong business activities.

Wrong and untimely activity of an accountant can be detrimental to a client.

The profession of accountants is not as well organized as the profession of lawyers, doctors and engireers.

Professional indemnity insurance for accountants is aimed at protecting the accountant from damage that may arise from their professional activity.

Lack of professional indemnity insurance for accountants causes many problems in the work of accountants.

It is not necessary to introduce the professional indemnity insurance for accountants..

Professional indemnity insurance for accountants should be regulated on a voluntary basis.

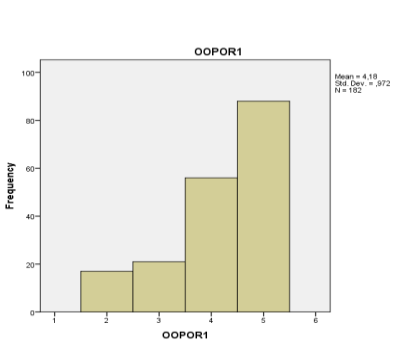
Employers choose their accountants, therefore they should bear the damage resulting from the wrong activities.

Professional indemnity insurance for accountants will increase confidence in this profession.

A total of 182 respondents were surveyed, 107 of which were accountants and 75 were users of accounting services. There were 2 persons with elementary education, 55 with secondary education, 23 with applied studies degree, 61 university graduates, 36 with master's degree and 5 PhD's.

When asked if "The accountant's job is very responsible" (Figure 1), over 70% of respondents agreed with this claim, and about 9.3% of respondents disagreed. The respondents with higher level of education, especially those respondents who perform the tasks of the accountants, think that the work of the accountant is very responsible. No significant differences were observed depending on gender, age and work experience.

"Despite the efforts to work in accordance with rules and regulations, unforeseen circumstances, omissions and mistakes in the work of accountants are always possible" (Figure 2), over 80% of respondents agree with this attitude, and 2.7% the respondents consider that this is not the case. Even with this issue, the respondents with higher level of education, especially those respondents who perform the tasks of the accountants agree with this information. There were no significant differences in gender, age and work experience.



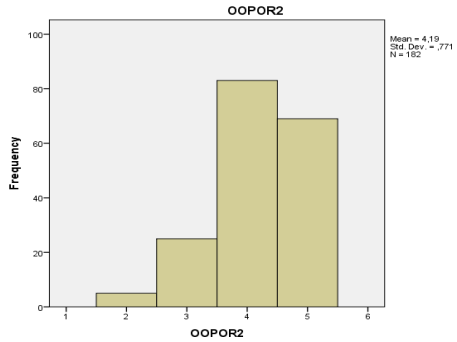
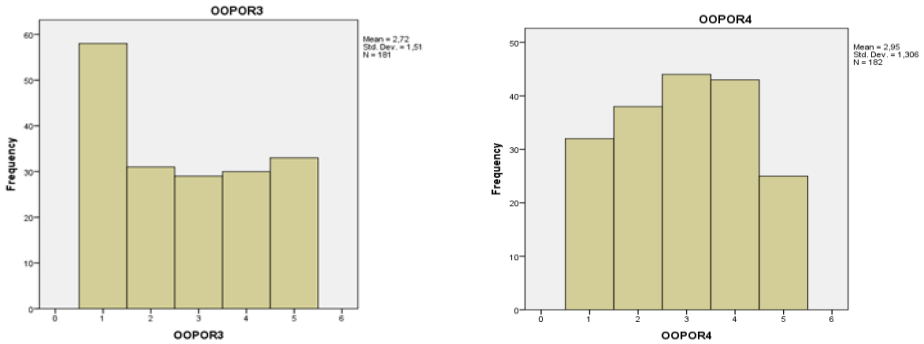


Figure 1 and 2: Frequency of response histogram

In the case of "professional indemnity insurance does not provide an accountant with financial protection due to damage that may be caused to a third

party."(Figure 3), none of the offered responses specifically distinguished itself. The majority of respondents (58) answered that they disagreed with this position, but the differences in the number of given responses were very small. A positive attitude to this thesis grew with years of life, and especially with the level of education.

In the case of "The damage to a client's business is not imposed by the accountant, but rather by the client himself, in his wrong business activities." (Figure 4) there were also very small differences in the individual responses offered. The highest number of responses (44) is "neither agree nor disagree", but the differences in the number of given answers were minimal, so the smallest number of answers was "I agree completely" with 25 responses. Significant differences in this issue were noticed between accountants and users of accounting services. A large number of users of accounting services disagreed with this claim, while most accountants agreed.



Figures 3 and 4:Frequency of response histogram

"Wrong and untimely activity of an accountant can be detrimental to a client." (Figure 5), almost 90% of respondents agreed with the statement, less than 5% thought that this was not true (9 respondents). Users of accounting services were highly consonant with this statement, but so were most of the accountants. A positive attitude on this issue is growing with the level of education and age.

In the case of "The profession of accountants is not as well organized as the profession of lawyers, doctors, and engineers. " (Figure 6), over 80% of respondents expressed their agreement with the statement, and less than 5% did not agree with the statement. Accountants were very much in linewith this attitude, slightly less users of accounting services. A positive attitude is growing with the level of education, and there were no significant differences related to gender,age and work experience.

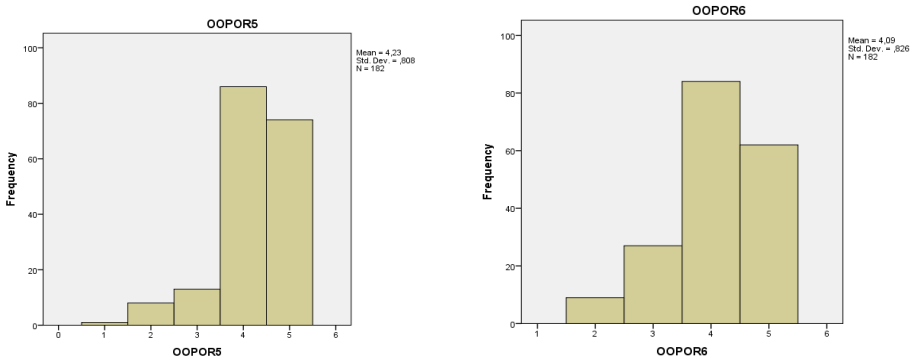


Figure 5 and 6: Frequency of response histogram

With the view expressed through the statement"Professional indemnity insurance for accountants is aimed at protecting the accountant from damage that may arise from their professional activity." (Figure 7), a 109 respondents agreed, which is about 60%. Over 15% of respondents disagreed with this position, and 25% of them did not have a say on this issue. The largest differences were expressed depending on the level of education. The agreement increased with the increase in the level of education, as well as with age and work experience.

About the question "Lack of professional indemnity insurance causes many problems in the work of accountants." (Figure 8), the majority of respondents did not have a clear position and answered with"neither agree nor disagree", whilethe number of respondents who agreed with this statement was significantly higher than the number of those who disagreed.

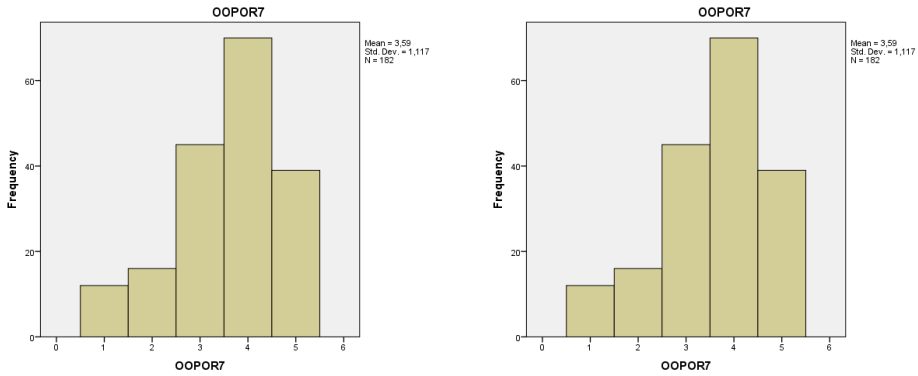
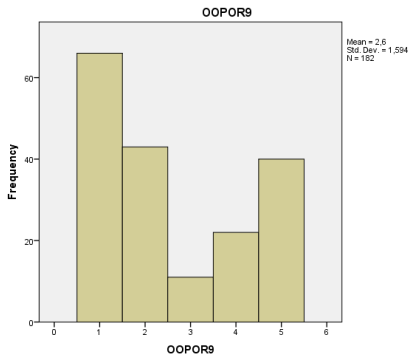


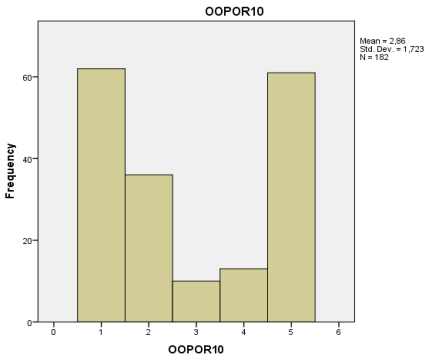
Figure 7 and 8: Frequency of response histogram

With the view that "It is not necessary to introduce the professional indemnity insurance for accountants „(Figure 9), 60% of respondents disagreed, a small number of them (11) had no clear position, and 34% of respondents agreed with the statement. Respondents with a higher level of education tend to agree more with this statement, that is, with the increase in the level of education a more negative attitude was expressed on the claim that it was not necessary to introduce professional indemnity insurance. The negative attitude is more pronounced

among the respondents with several years of work experience and those with many years of life. No significant differences were reported among members of the different sexes.

When asked if "Professional indemnity insurance should be regulated on a voluntary basis" (Figure 10), the majority of respondents answered that they disagreed (53.9%) and 40.6% agreed. There was a discrepancy in this issue with accountants and users of accounting information. That professional indemnity insurance is regulated on a voluntary basis, accountants were more compliant than some users of accounting data. In this regard, there were no significant differences between members of different sexes, different levels of education and different age.

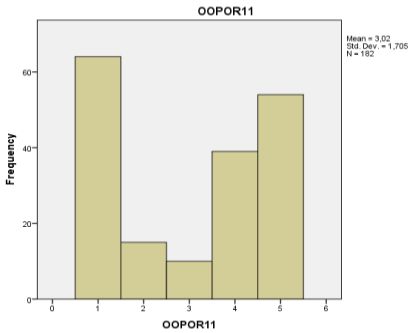


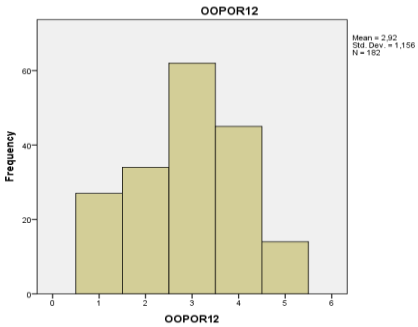


Figures 9 and 10: Frequency of response histogram

With the statement that "Professional indemnity insurance for accountants should be a legal obligation" (Figure 11), 51.1% of respondents agreed, and 43.4% disagreed. There are no significant differences among members of different sex, different levels of education and age, but it is noticeable that the users of accounting services, and less the accountants themselves, agreed with this view.

When asked, " Employers choose their accountants, therefore they should bear the damage resulting from the wrong activities." (Figure 12), the majority of the respondents disagreed (61). 59 respondents agreed, and 62 respondents did not have a clear position on this issue.





Figures 11 and 12: Frequency of response histogram

That "Professional indemnity insurance for accountants will increase confidence in this profession." (Figure 13) 54.9% of respondents agreed , while 24.1% disagreed. 21% of respondents did not have a clear opinion on this issue. A positive attitude on this issue grew with an increase in the level of education and work experience. There were no significant differences between members of different sex and different age. Both accountants and users of accounting service agree that ensuring the professional liability of accountants will increase confidence in this profession.

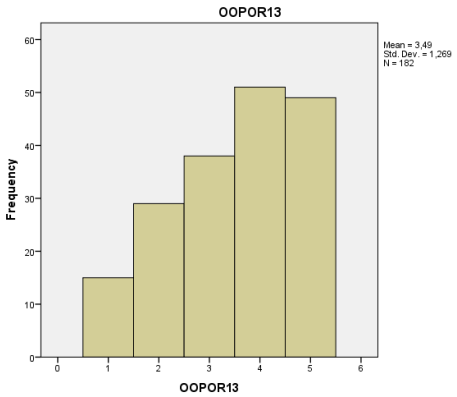


Figure 13: Frequency of response histogram

CONCLUSION

Based on the analysis of the data obtained in the conducted survey, it became clear that the accountant's work is very responsible, and that in addition to the fact that accountants work in accordance with current regulations, there are also unforeseen circumstances, faults and mistakes of the accountants. That professional indemnity insurance for accountants provides some financial protection for the damage that can be caused to third parties. By their misconduct both accountants and the users of their services can harm the business operations. It is indisputable that the accounting profession is poorly organized in relation to some other professions. The professional indemnity insurance for accountants is aimed at protecting both the accountants and the users of their services from the damage that may arise from the professional accounting activity. It is necessary to introduce the insurance of the professional indemnity insurance for accountants, but not on the voluntary basis, but as a compulsory type of insurance. The employer alone should notbear the consequences of mistakes in the work of the accountant. The professional indemnity insurance for accountants would significantly increase the quality and safety of business and accountancy and the users of this service. As the first hypothesis proved that the misconduct of an accountant might cause great damage to his client, the second one was dismissed, that by introducing compulsory insurance of professional indemnity for accountants, the trust of the users of accounting services in the work of the

accountant will not incrase, and thirdly that the professional indemnity insurance for accountants will improve the quality of their services, the zero hypothesis was confirmed - it is necessary to introduce the professional indemnity insurance for accountants.

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PART II. FINANCE AND BANKING

INVESTMENTS AS AN ELEMENT OF FRAUD IN FINANCIAL REPORTING

Nenad Kaludjerovic[13]

ABSTRACT

Releasing funds for financial support of a business entity or vice versa is a common activity where this money was never granted, while the transaction was entered in business books and this is the reason for this research. Financial investments are a common business transaction and we start from that assumption, regardless in which form and with which airm they are given. However, when financial investments are deprived of the above mentioned essential point on one hand, and entered as the so-called „release of funds" in business books on the other hand, there occurs creativity in financial operations with economic effects that are most often not recorded in the financial statement. This paper explains, on the selected sample, how this phenomenon, i.e. simulated financial investments is used in financial reporting as apparent receivables or payment instruments that have never been given to the partners. Such occurence of financial investments without actual cash flow or coverage creates an imitation of good business operation in total. On the contrary, they mostly represent a part of the information in financial statements on which creative accounting is applied. Such phenomena result in the subsequent write-off (frequent adjustments) of financial investments of the business entity before bankruptcy, i.e. create losses in the bankruptcy procedure. These losses can be above the equity value. The time of creation of a creative combination is closely related to some target phenomenon. From 1990 to 1996, it is related to the period of transition, from 1994 to 2003 to the period of privatization and nowadays it is related to intensive borrowings from banks with the aim to avoid repayment, conceal actual state of business, evade tax payment, seizure of property,deceive etc.

Key words: *creative accounting, short-term investments, fraudulent financial reporting, loss above capital value, fraud*
JEL Clasification: *G20*

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INTRODUCTION

The aspiration for rapid enrichment of individuals or group of people is realized through imitated activities with the aim of representing the company as solvent to the banks, in bidding documents and to other companies, whereas banks and local communities do not suspect a fraud in such activities etc.

The procedure and essence of implemening the intended goal of rapid enrichment is explained by the method of case studies. This imitation process, i.e. fraudulent financial reporting is represented by functioning of the so-called "Archimedes' principle". It is the moment when the data which do not belong to a primary entity are detected in the analysis of total data given in the financial statement. A body (in our case = another datum) is immersed in a fluid (in our case = the parent company environment) after which the fluid runs out (in our case = change of the business result) and effects belong to the „NN" management or creators of fraudulent financial statement. The reasons of such change of business results were not interesting for further check to the observers (whether management, auditor, tax authority or other control authority). This proves that creators have been achieving their goal, this is, they have withdrew money for years in the absence of the control system. Business entities on which the accounting creation was implemented opposite to standards were closed gradually. This kind of „final action" – a business entity liquidation has not been analyzed in the context of determining a cause of that act. It has not been discovered why these activities were not detected (from macroeconomic level), what was the destiny of impaired assets and where they ended up. The consequences of fraudulent financial reporting are not only problematic for management, but also for all participants in business operations, namely for creditors, banks, stock exchanges, community etc. The only conclusion possible is that the method of financial reporting has to be changed, new rules for control established and certain international standards defined more clearly.

SUBJECT OF RESEARCH

The subject of this research is the analysis of non-existing, non-monetary financial statements that represent a basis for **application of creative accounting in fraudulent financial reporting.**

Research problem

The basic research problem is data showing, directly or indirectly, the application of creative accounting as a legal and regular procedure in presentation of financial statements.

Research goal

The research goal is detecting the application of creative accounting through representation of financial investments without cash flow.

Research method

Fraudulent financial reporting was analyzed on the selected sample of detected cases. The first step was to assess if total outflow of funds could be evaluated in the given interval and for the entity concerned by the application of a direct method of presenting the statement of cash flows. Direct method of presenting the statement of cash flow was used as a basis for discovering the funds' "destiny". It was found out that there was a difference that was manifested in presentation of reduced outflow of funds in relation to the outflow indicated in the Balance Sheet. Furthermore, the emphasis was put on the items in the Balance Sheet (Assets), where this difference was manifested. Upon determination of the place of occurence of less recorded outflow of funds, the analysis was directed to presented Balance Sheets of active companies and the companies that went bankrupt. They were observed collectively, in a series of intervals (per years), regardless of their status. The Balance Sheet item that participated in the application of creative accounting, namely short-term financial investments that were not financially covered, but just entered in Balance Sheets, was analyzed separately.

In this research, we focused on the companies from Table 4 and 5 (given below in this paper) which had published financial statements. Fifteen companies was selected (categorized as medium-sized and big companies). The focus was on the companies in which bankruptcy procedure was not finished. In addition, we introduced the criteria for selection of companies, namely the companies with large assets, being active for at least 20 years and registered for production and services, with private equity, organized as joint-stock companies or limited liability companies. A special emphasis was put on the companies that were obliged to submit the financial statement including Cash Flow Statement. Financial statements per years were downloaded for all above mentioned companies. Most common business activities performed by the companies (from the selected sample) are electric assembly, mechanical engineering, trade etc. A significant number of the analyzed companies (12 out of 15) was transformed through the process of privatization, where socially-owned property and state-owned property turned into private equity. Three (out of 15) companies are private and they were established after 1990. There were more private companies concerned, but only three were taken into consideration in this paper.

Tabela 1. Samples in the research

Number of sampled companies before and after bankruptcy.

Years	Number of active companies	Number of companies that went bankrupt	Total number of companies
2004	14	1	15
2005	14	1	15
2006	13	2	15
2007	13	2	15
2008	8	7	15
2009	6	9	15
2010	3	12	15
2011	1	14	15
2012		15	15
2013		15	15
2014		15	15
2015		15	15

Source: Data published by the NBS until 2008 and BRA from 2009 to 2015 due to change of jurisdiction

RESEARCH FACTS

Speaking of macro economic analyses, significant financial statement frauds have not been detected or identified. The enclosure of this paper (THE IMPACT OF CREATIVE ACCOUNTING ON THE QUALITY OF FINANCIAL REPORTING) (Kapapavlovic, 2011, pp.155-168) should also be taken into consideration, as it describes a general, negative impact of creative accounting on financial reporting. This paper does not describe key elements – where such impact occurs and when creative accounting is applied, whether some case of financial statement fraud is disclosed or not, etc. In addition, in this paper the author explains the significance of the existence of creative accounting in terms of its impact on the quality of financial reporting from the point of view of the management in decision making. World tendencies in researching this field of business focus on the financial statement fraud in the context of corruption.

Creative accounting technique

The first step of „creative accounting combination“ is selection of an experienced accounting expert. The second step is selection of the item in the financial statement which will be simulated. The third step of the creation is preparation of documents – specification of entities and arrangement of creation. (Enclosure 2)

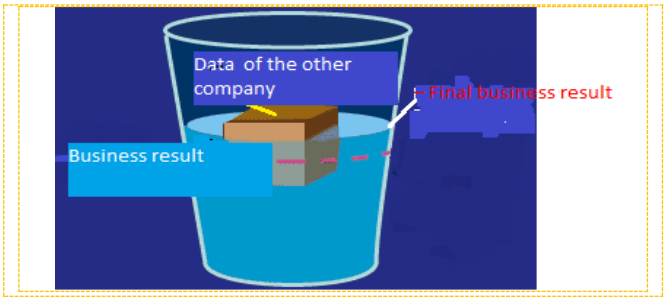


Figure 1. Deviation from the actual business result using documents of the other business entity

The first reason – creators of accounting combinations choose the assets because they are transferable. **The second reason** is the absence of a centralized database that makes discovering of the truth more difficult. **The third reason** is rapid manipulation through transformation in operating funds.

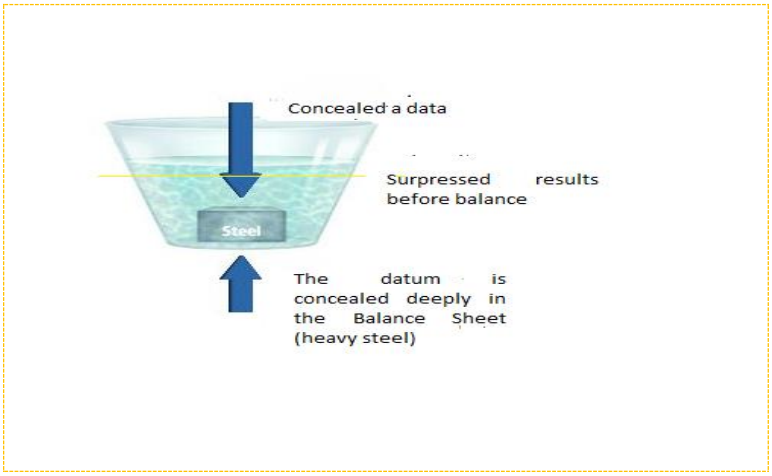


Figure 2. Concealed data – documents in Balance Sheet indicators (immersed weight) as an element of fraudulent financial statement or a provoker.

Business result: The data of some other company is entered in the Balance Sheet – Liabilities (weight), at the bottom of the vessel (Figure 2), and then the basis is shown for presenting that as an investment in the Assets (Figure 1, floating body). In both cases, the shown results change as water runs out. This change cannot be detected as a business effect at first glance (increased water level).

The „body" floating in water (registered investment) and the body at the bottom (liability of some other company) are the case for correlation analysis, as it is concluded that there is no correlation between liability that is taken over and receivables for funds that were never granted. It is detected by the heavy body **that**

increases the water level (in the total balance). The new water level represents correlation of only one data and that is the body at the bottom of the vessel. This displacement is the result of data change.

In our case, the alleged investments had liabilities of some other company or adjustment in the assets as a balance. Upon expiration of a certain time, liabilities of some other company were shown as income and adjustment appropriated. The write-off of liabilities resulting in the increase of income was mostly done after the expiration of a certain time. Received income resulted in the increase of business result and therefore was manifested as a non-covered profit that could be transfered to „NN“ person without his/her knowledge. The investment still remained in the Assets for the purpose of further manipulation. The manipulation was reflected in conversion of the structure of assets that were alienated and replaced by investments. As a result, total Assets remained the same. The business entity lost its fixed assets which were replaced by investments that were never covered.

RESEARCH RESULTS

Documentation as the integral part of creative accounting (imitation etc.)

Publishing of financial statement in this paper was observed taking into consideration the documentation that accompanied the application of creative accounting in financial statements. Creative accounting was shown in the documents as the “imitation“ of the original economic activity. The method which managers used for this is very common. Primarily, it was reflected in the preparation of a classic document on “business cooperation or taking over of liabilities“. This was done in accordance with the Law on Obligations. When the actual turnover was not shown in a document (in our case, there were no tangible assets), that turnover was treated differently. Therefore, imitation was first done during taking over of liabilities (shown in Liabilities) and after that in presentation of receivables (without actual exchange of goods etc.) through investments (without realease of funds). Speaking of the documents related to Liabilities, there were only incoming invoices or the so-called „receipts“. As for the documents related to Assets, there was an Agreement on business cooperation including the alleged investing, with assignment of a fixed asset or property for a certain period in return. Analyzing the sample of 15 companies, we noticed that all deadlines expired, assets disappeared and investments were never returned. A creator provided documents that proved the facticity of business ventures. The facticity can be explained as the economic essence. In order to explain where the economic essence disappeared, it is necessary to describe which documents were used for observing the existence of the economic essence. In our case, the term „economic essence“ should be described more closely.

In the basic case, when funds are released to other companies for financing of a joint venture (such as production of agricultural crops, residential construction, joint services, etc.) through investments, the documents used are:

— Programme,
— Investment plan
— Cost structure and the method of their settlement

— Managing authority's decision
— Agreement (with clearly defined rights, obligations and warranties)

In addition to these documents, it is primarily necessary to provide data that show at least: if the programme (or programmes, products) has its economic essence, material evidence on the existence of this essence (location, name of product, place of origin, time of production, market, physical indicators etc.), implementation of the programme and if it is related to business activities of the company. In our case, the Agreement on transfering funds for investing existed and all conditions were met. When liabilities of other companies are taken over, the condition that proves the connection between liabilities and some joint owned property (the existence of the programme, building, product etc.) is not met. The product represents a connection with the liabilities that are taken over. These liabilities and programme are implemented in other companies. When these assumptions do not exist, documents that are used for performance of the activities are created. Regardless the created document, the activity had to direct the employer on taken over liabilities and their presentation in the financial statement. When the documents used for transfering of data from the Balance Sheet of one business entity into another are created, qualification can be different. This is especially true for the qualification not having the essence, but having the purpose. Therefore, the basic assumption that characterizes an intentional task is confirmed. We repeat that the intentional task has its path to achievement of the general goal. This path is closely related to activities directed to the essence of the task. In our case, it is essential to find a way to indemnify the founder by factual taking over of liabilities which he cannot service for sure. The founder's indemnity is reflected in presenting liabilities from dividends. The path „intentionally" ends with the projected goal. It can be concluded that it is profitable to establish more affiliates through financial statement fraud, that can survive based on various arguments. **It is the obligation of an auditor, forensic scientist, control system to detect and take measures in order to protect other participants in the business chain.**

Published financial statement

Active companies that published their financial statements for the period from 2004 to 2015 / Assets

Table 2.

No.	Description of the position	NBS - report – preliminary data from the financial statement					BRA - report – data from the financial statement						
1	Business indicators per years, Balance Sheet	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
2	Number of companies	75,885	55,503	56,286	64,439	65,908	65,514	87,284	88,306	88,354	94,362	92,842	92,595

Table 2 shows the number of companies that published their financial statements per years. Based on the published data, we singled out certain items in Balance Sheets in which frequent application of creative accounting was detected. In our case, it is the item „Investments".

Chart 2 shows that non-returned funds on behalf of „given investments" increased the loss above the equity value year after year. It was not effective

money that was written-off, but creative investments. Creative accounting was used for reduction of fixed assets in favour of the increase of liabilities from the so-called „given investments“. According to the data analyzed on the selected samples, in the period from 2010 to 2015, the presented reduction of liabilities from investments was not a product of refund, but of their write-off.

Characteristically, an active company which is not capable of paying its regular liabilities goes bankrupt. But, when bankruptcy occurs as a result of a deliberate activity, in order to conceal the consequences of the application of creative accounting, the aim of our research was to point out to certain items in the Balance Sheet where such creations occur, while the executors of bankruptcy deliberately conceal them in order to avoid detection of the economic essence of these creations. Table 3 shows the number of companies that went bankrupt and the increase of this number in the period from 2004 to 2015.

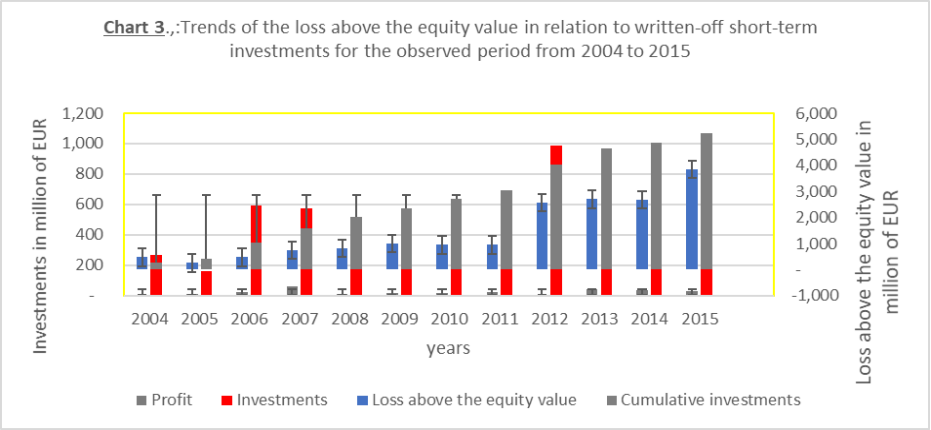
Review of the data published in financial statements of the companies that went bankrupt in the period from 2004 to 2015 / Assets.

Table 3.

No.	Description/ positions in the financial statement	Data source: NBS-report – preliminary data from the financial statement					Data source: BRA-report – data from the financial statement						
1	Number of companies that went bankrupt:	1005	1186	1470	1792	1884	2470	2483	2852	4719	3927	4252	3266
2	Years of financial statement publishing:	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015

Table 5 shows the number of companies that went bankrupt and published their financial statements per years. Based on the published data, we singled out two items in Balance Sheets in which the application of creative accounting was often detected. This refers especially to the data which we observed in financial statements and which disappeared in the meantime. There are many reasons for this. In our case, the destiny of given investments is such that they are rapidly written-off in bankruptcy and they are not shown in the inventory. More importantly, their collection is not claimed.

Chart 3, Loss above the equity value (blue colour – right scale in million EUR) increases progressively from 2009 to 2015. This data is important for observation of non-returned funds from the given investments. Given investments are written-off permanently in bankruptcy. As a result of financial operations, the companies that went bankrupt have great loss above the equity value. This is characteristic for active companies. The so-called „write-off of given investments“ participates significantly in the loss above the equity value.



Source : Author

DISCUSSION OR RESEARCH RESULTS

The presented research results point out to the fact that dynamic presentation of investments and loss above the equity value are in correlation as a result of business activity itself. This correlation reflects the following: the greater write-off of investments, the greater loss above the equity value.

CONCLUSION

Research results point out that no correlation between creative indicators, such as data taken over from other companies (weight in water) and given investments (sponge at the surface) without cash flow, can be detected. Naturally, this phenomenon leads to a conclusion that these are indicators of creative combinations in financial statements. Financial investments without cash flow, that are shown in business books, serve for withdrawing a „healthy“ part of the assets from the company. The assets that disappear just before bankruptcy are concealed in financial statements, i.e. shown as loss above the equity value. Loss above the equity value is a hole without bottom, representing an „infected terrain“ for any new owner of the company or a creditor’s representative. The only correlation that can be detected in bankruptcy is between loss above the equity value and write-off of non-existing investments.

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TRENDS IN PROFITABILITY OF BANKS IN SERBIA THROUGH RATIONAL ANALYSIS

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ABSTRAKT

In this paper we analyzed the trend of profitability ratios of the 10 largest banks in the Republic of Serbia according to the balance sheet assets for the period 2010 – 2017. Goal of the paper is to find out why oscillations occur and their movement. The analysis was conducted on the basis of publicly published regular annual reports of 10 banks operating in the Republic of Serbia and quarterly reports of the National Bank of Serbia. The subject of research in this paper is a comparative analysis of profitability, since it is generally known that the business policies of banks are mostly aimed at increasing net profits. Given that the global economic crisis was at its peak, in the observed period in our country, we will briefly show the impact of the global economic crisis to the serbian banking sector. The participation of the 10 largest banks is shown according to the the amount of the balance sheet assets is 44% at the beginning of the observed period, up to 77% at the end of 2017, the average values of their performances largely approximate the performances of the entire banking system of the Republic of Serbia.

Key words*: banking business, rational analysis of profitability, return on assets, balance sheet assets, financial reporting, global economic crisis*

JEL Clasification: *G21, G24, E40, E47, P51*

INTRODUCTION

In contemporary global world the economy is characterised by general economic crisis, insufficient money, devastated industry, low GDP, high unemployment rate, high inflation rate, and low living standard (Spahic, Tomic, 2005, pp. 400-404). The bank business nature is built of monetary means that are collected from economic subjects with financial surplus and landing such money to those who are with deficit. All economic subjects are both, from surplus and deficit sides – citizens, companies and state. Bank is obliged to pay passive interest rate to deposited assets and to collect from approved loans the active interest rate, thus

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achieving the largest part of profit through difference between active and passive interest rate. Banks usually deal with large amounts of the money, so their business is a subject of permanent and detailed monitoring by regulatory establishments. In this regard, they have legal obligation to report on daily basis. In order to keep their licences, banks have to secure needed level of assets and liquidity adequacy, as well as to follow up with all requests imposed by the National Bank of Serbia.

Particular attention is paid to specific nature of bank`s business though they perform essential function in one market economy. Banks deliver specific financial statements providing detailed analysis of the content and structure on that base. For successful analysis of the financial statement of banks it is critical to identify and define special indicators pointing to performance and success in their business. Interpretation of selected indicators will contribute to efficient identifying of failures in the bank business and will point to elements that should be changed in order to improve their performances.

SUBJECT, PROBLEM, AIMS AND HYPOTHESES OF RESEARCH

This research problem relates to uniqueness of bank financial statements and special problem is a new scheme established in 2014 according to which banks are obliged to demonstrate their financial statements so comparison is quite harder. In order to achieve transparency in their business banks are obliged to issue financial statements annually and to submit them to the National Bank of Serbia for review and validation. Such validated statements represent official indicators of financial stability or assets and sources of companies on date (balance sheet), and flow of monetary assets input and output, or expenditures, incomes and results (profit and loss). On the basis of such official indicators, and periodical financial – bookkeeping reports, we will analyse in this paper indicators moving from balance sheet and profit and loss, as well as compare the positions of balance sheet and profit and loss (ratio numbers), all in order to make information support in decision making process of internal and external users.

This research subject is comparative analysis of published regular annual statements of 10 biggest banks in Republic Serbia according to the criterion of net balance assets using profitability indicator ratios. Significance of this research is in more detailed understanding of indicator ratios interpretation due to financial planning, while its relevancy is in the fact that Republic Serbia during observed period was also affected by the global economic crisis that naturally caused regional and global, general market illiquidity so the need for financial means is increasingly noticeable. The consensus was in agreement of leading market economies and multilateral financial organizations, such as World Bank, that growth of an economy and development can be accelerated on the basis of liberalization, privatization and deregulation (Sljivic, Vojteski-Kljenak, 2017, pp. 52-64). The role of a business bank and the very subject of our research hereby,

gain in the significance in this moment for quality interpretation of ratio profitability indicators offering possibility for insight into general financial situation in Republic Serbia.

Scientific aim of this research is to point to significance of the financial statements of a bank, relation between positions in financial statements through ratio indicators with decision making point of view of a business bank regarding entering into business and financial relationships with clients. Financial reporting represents an obligation of all economic and other subjects whose activities have monetary outcome. Bookkeeping records represent certain backing for financial reporting (Andjelic, Vesic, 2017, pp. 9-21).

Social aim of this work is calculation and interpretation of mentioned indicators and planned balance positions regarding business banks which objection is to support decision making process on entering into credit and other financial relationships with clients.

General hypothesis this work is based on is the following: Banking sector in period 2010-2017 is stable, including special hypotheses we hereby worked on:

Business efficiency within banking sector in Republic Serbia improves with foreign banks joining the market.

Long-term balance assets amount records growth with the highest participation in total foreign balance assets.

Credit ability monitoring of present and potential bank clients in Republic Serbia should be upraised to the higher level.

Comparative analysis applied in this work will result in information about significant material balance positions of the banks in RS. Presented research results will achieve primarily established aim of the work. Secondary, analysis will also investigate fluctuations and trends within banking system in the country.

CREDIT ACTIVITY TODAY AND REGULATORY FRAMEWORK FOR THE BANK ASSETS

Banking sector may be described as one of few economic areas with quite cautious approach. It is interesting that even with such cautious and conservative approach the banking sector was faced with the global crisis and in many aspects had contributed its manifestation. The world economic crisis soon has reached global proportions and some of its negative impacts affected business activities of companies, banks and individuals. Regardless the crisis started in it has rapidly spread and included even the economy in Serbia (Ljubic, 2009, pp. 77-80). After USA transition process commenced, Serbia had, inter alia, constant surplus of capital account, as well as instability and frequent exchange rate overvaluation (Zivkovic, Njegic, Papic-Blagojevic, Petronijevic, 2016, pp. 5-18). Due to negative impact of the crisis in Serbia it is slow-down the credit activity but not ceased. One of the reasons is lover availability of the foreign assets.

Banking sector is specific for it is under monitoring by regulatory bodies to larger extent than other corporative sectors. High level of curiosity of the regulatory bodies regarding this sector is embedded mostly in its public function for banks save and place the assets of their deponents, they approve loans to their clients and they are carriers of the payment turnover in the country and within relationships abroad. The assets is the primary position that assurances solvency of the banks and it is requested to secure corresponding level of the assets adequacy represented in the form of coefficients (Djukic, 2011, pp. 201).

$$\text{CAR} = \frac{available\ capital}{risky\ assets} \text{x}100 \quad (1)$$

We also should bear in mind that coefficient of total assets represents sum of the level one and level two of the capital of the bank. As an example, the coefficient of total bank capital of 10% marks that levels one and two of the capital is 10% of total risky assets.

The first Basel Act has prescribed that available total bank capital shall be minimum 8% of the total risky assets of the bank. Regulatory bodies of the national banks can also prescribe even higher criteria for levels of the assets adequacy if estimate that it could be useful for the financial system. Many regulatory bodies do not take as sufficient the coefficient of the level for capital one below 6%. There is a management ought to define targets of the bank capitalization above the minimal values according to the said rules. The quoted level one coefficient of the bank assets of 6% requests the agency rating in order to approve high debtor rating such as A+ or Aa (Fitch Ratings, 2018). Complying with the Basel Act the banks shall continually keep technically harmonised business with defined rules on adequacy of assets. As result, the regulatory bodies request reporting from the banks, monthly or quarterly, on compliance with rules on the capital adequacy.

CURRENT SITUATION IN THE BANKING SECTOR IN REPUBLIC SERBIA

The banking sector in Serbia has been exposed to intensive shockwaves during the crisis, but thanks to relatively conservative politics of the National Bank of Serbia it was sufficiently resistant and accumulated reserves were sufficient to bear all current and potentially negative effects of the crisis. In order to get hold of better insight into the current situation in the banking sector in Republic Serbia this part of the paper will offer a review of the number of the analysed banks and their organizational networks as well as balance sheet assets and bank capital, and review of the banking sector capital adequacy. The said review is systematized per ownership structure of the banks and it illustrates the period from 2010-2017 (NBS, 2017).

NUMBER OF THE BANKS AND ORGANIZATIONAL NETWORK

There has been total number of 34 banks in the business at the beginning of 2010 in Republic Serbia, so the organizational network included total number of 2.635 branch offices, subsidiaries, business units, exchange offices, and agencies. At the end of 2010 in the banking system of Republic Serbia has been 33 banks in total as illustrated in the Table 1.

Table 1. Review of banks in RS according to type of ownership structure 2010-2017

YEAR Number of banks	2010	2011	2012	2013	2014	2015	2016	2017
Banks owned by local persons	12	12	11	9	8	7	8	9
State	8	8	8	6	6	6	6	6
Private	4	4	3	3	2	1	2	3
Banks owned by foreign persons	21	21	21	21	21	23	22	21
Italy	2	2	2	2	2	2	2	2
Austria	4	4	3	3	3	3	3	3
Greece	4	4	4	4	4	4	4	4
France	3	3	3	3	3	3	3	2
Other	8	8	9	9	9	11	10	10
TOTAL	33	33	32	30	29	30	30	30

Source: *Calculations and illustrations by the author based on data from the NBS*

There are 12 of the total number of the banks owned by domestic persons and 21 banks by foreign persons. Foreign banks originate from 11 different countries with share between 70% and 75% in total value of the assets, capital and employees prevailing in our banking sector. All up to 2015 the number of foreign banks was unchanged and total number of banks gradually decreased due to reduced number of banks in ownership of domestic persons because of the

revocation of their licences done by the National Bank of Serbia. By October 2012 National Bank of Serbia withdrew the licence of the Nova Agrobanka a.d. Beograd explaining that within foreseen period of 6 months after obtaining the licence it had not performed business conformity with regulations of the Law on Banks regarding capital and business indicators. By April 2013 the National Bank of Serbia withdrew the licence of the Razvojna Banka Vojvodine a.d. Novi Sad and during October the same year the Privredna Banka a.d. Beograd lost its licence too. By January 2014 the National Bank of Serbia issued licences for the Mirabank a.d. Beograd and for the Bank of China a.d. Beograd in 2016.

The KBC Banka a.d. Beograd changed its name into Telenor Banka a.d. Beograd during 2014, and later, in 2015 the Dunav Banka a.d. Beograd became MTS Banka a.d. Beograd, and Cacanska Banka a.d. Cacak changed into Halkbank a.d. Beograd additionally reducing the number of domestic banks. By 2016 the Hypo Alpe Adria Bank a.d. Beograd became Addiko Banka a.d. Beograd, and KBM a.d. Kragujevac changed its business name into Direktna Banka a.d. Kragujevac. As of December 20, 2016 the Banka of China got its licence but data about its business were not included in this analysis since there were no published data for its operations in the moment of this paper writing.

The number of organizational networks of the banking sector in the observed period slowly decreased. By the end of 2012 there were 2.234 organizational units and in 2013 the number was reduced to 1.989 units. By the end of 2015 there were 1.730 business units and in third quarter of 2016 only 1.717 units where the neutral trend was recorded: with 5 banks was reduced the number of business units for 13, while 3 banks opened new 13 business units.

ASSETS OF THE BANKING SECTOR

Total net assets with banks in 2010 were RSD 2.534 billion. Growing trend of the banking sector assets since then until today we can review in the Table 2. Faster growth of assets achieved banks owned by foreign persons, but growth of total assets, in spite of reduced number of banks, was present with banks owned by domestic persons. In the observed period, according to the share in total assets, there prevailed banks owned by the foreign persons with more than 75% of the net assets value in total assets of the banking sector in Serbia. Banks owned by domestic private and state bodies participated in total assets with about 25% of the value.

The highest share in total assets value of the sector with banks owned by the foreign persons have banks originated from Italy and Austria, followed by Greece, France and other countries.

Regarding concentration within the banking sector having in mind large number of banks with small share in total assets value, but also in total incomes, loans and deposits, we can say that sector is fragmented to a great extent. The level of concentration according to the HHI is not in any of the quoted categories above 1000, which marks just moderate level of concentration. According to the National Bank of Serbia data by the end of 2015 the participation of ten largest banks in accordance with net balance assets criterion is 76.8%. In regard to this criterion, the largest bank in Serbia is Banka Intesa a.d. Beograd with market participation of almost 15%.

Table 2. Review of total net assets per years in RSD billions within the banking sector Republic Serbia 2010-2017

YEAR	2010		2011		2012		2013		2014		2015		2016		2017	
Bank assets in RSD	Billion	Share (%)	Billion	Share (%)	Billion	Share (%)	Billion	Share (%)	Billion	Share (%)	Billion	Share (%)	Billion	Share (%)	Billion	Share (%)
Banks owned by local persons	671	26	685	26	716	25	730	25,6	758	25,6	729	23,9	756	23,3	795	24,2
State	454	18	472	18	522	18	534	18,8	571	19,3	550	18,0	561	17,3	539	16,4
Private	217	.9	213	.8	194	.7	196	6,9	187	6,3	179	5,9	195	.6,0	256	7,8
Banks owned by foreign persons	1862	74	1965	74	2163	75	2117	74.4	2210	74.5	2319	76.1	2486	76.7	2498	75,8
Italy	526	21	591	22	657	23	679	23.8	738	24,9	796	76,1	884	27,3	919	27,9
Austria	469	18	493	19	449	15	429	15.1	440	14,8	453	14.9	494	15,2	411	12,5
Greece	427	17	393	15	426	15	409	14.4	418	14.1	395	13.0	403	12,4	328	9,9
France	202	8	263	.10	287	10	299	10.5	304	10.2	316	10.4	327	10,1	350	10,6
Other	238	.9	225	8	345	12	301	10.6	310	10.4	359	11.8	378	11.7	490	14,9
TOTAL	2534	100	2650	100	2880	100	2846	100	2969	100	3048	100	3242	100	3293	1100

Source: Calculations and illustrations by the author based on data from the NBS

BANK CAPITAL ADEQUACY AND BANKING SECTOR CAPITAL

Capital of any company is always a sensitive issue due to it primarily represents basic business assumption and warranty substance for the obligation payments. Regarding this plan, the banking sector of Serbia can boast with very

good level of capitalization and capital adequacy. Financial risk is the risk that occurs as a result of changes in the capital structure of the companies or investors (Njegic, Petronijevic, 2015, pp. 365-385). In this regard, by the end of 2010 there have been executed changes related with the bank capital applying the Law on amendments of the Law on Banks. The capital request for the credit risk represented at least 12% of assets weighted by the credit risk.

Capital adequacy ratio (CAR), as relation between capital and risk weighted assets, represents, in some wider sense, ability of a bank to absorb losses, or the higher the bank capital the greater the capacity for losses absorption occurred by poor placements. Defined as such, the adequacy of the capital protects clients, primarily savers against terrible payers. It is also a synonym for financial strength of an organization, but also entire banking system (Karavidic, Ivkovic, Vojteski-Kljenak, 2014, pp. 109).

Based on the Chart 1 we can conclude that banking system of Republic Serbia is well capitalized since there was achieved capital adequacy far above the minimum stipulated by the National Bank of Serbia (12%), and also above the minimum defined by the Basel Standards (8%) confirming one of the above defined hypotheses.

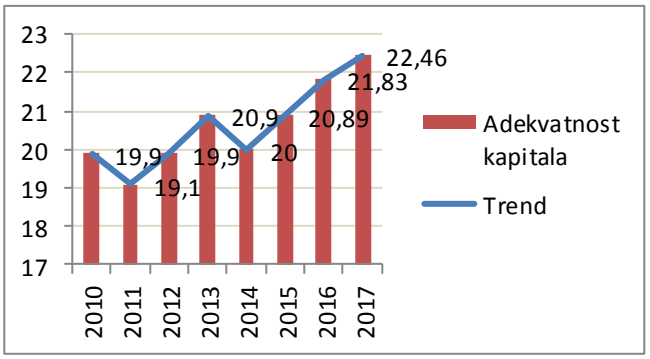

Chart 1. Banking sector capital adequacy in Republic Serbia 2010-2017

(Legend: Red line: Capital adequacy; Blue line: Trend)

Source: Calculations and illustrations by the author based on data from the NBS

RATIO INDICATOR SPECIFICITIES IN BANKING

Influenced by globalisation all over the world occurred shift within regulations and liberalization of people and capital move including trend of performance modernization of banking business. All these changes directly impose modifications with the business result evaluations. It is also often discussed about different indicators of success and the best reference point when evaluate business

banks success. The discourse imposed ever present dilemma which banks are more successful – those with accent on efficiency and permanent and careful control of business costs in order to reduce it to the lowest level, or those with accent on profitability trying to achieve as better as possible yield for owners of deposited means. Until present it is not attained consensus on the success evaluation system and whether the concept of profitability or efficiency is better. In the literature increased attention is paid to indicators expressing those concepts of success. There is abundance of various indicators based on which it is attempted to give as better as possible evaluation of success with banks performance and this number of indicators permanently increases. Reasons to pay increased attention to these problems lie in the fact that number of financial institutions always grows developing their services faster, and, as consequence, there are requested more complex procedures for evaluation of business successfulness.

In order to understand, as precise as possible, successfulness in the business banking experts, mathematicians and economic analysts developed and designed many indicators. The nature of the banking is different when compared with companies within non-financial sector, so different are also financial statements and their structure and content that must reflect all specificities with banking business. Based on different structures of financial bank statements there are different indicators of success, primarily ratio indicators. Ratio indicators are calculated as sensible relation between position of financial statements and for the analysis of successfulness of the bank business they must be adjusted to specificities of the banking sector financial statements. Ratio represents an index to measure one variable in relation with other variable and usually is calculated as percentage or rate (Karavidic, Vojteski-Kljenak, 2016, pp. 197).

Variances between financial statements of banks when compared with those of non-banking sector are strongly expressed, and we can say that beyond basic book equality between assets and liabilities in the balance sheets that must be valid with both groups of financial statement, all other are different; including difference between structure of positions and their presentation in the balance sheets, and difference between structure of results segmentation.

On the side of assets there is differentiated the principle of liquidity dictating schedule of positions (Miljkovic, Ristanovic, 217, pp. 382-291). In other words, bank is using principle of decreasing liquidity putting in the first plan cash. Elementary division of assets in basic and current that is applicable in the financial statements of non-banking sector with business leverage depending on further relations, while it does not appears in the banking statements; lack of division on basic and current assets excludes possibility to use ratio indicators taking into account relations between positions of these assets and they are strongly applicable in the ratio analysis of non-financial sector. In the bank financial statements dominant role play monetary assets and their positions, so the share of fixed property in the assets amount is negligible. Positions of monetary assets also have dominant role in the ratio indicators.

On the side of liabilities there is differentiated the principle of maturation dictating schedule of positions. Economic subjects of non-banking sector on the

side of liabilities emphasize capital because it has large share in the liabilities total value. The banks make their financial statements according to the principle of decreasing maturity and the capital comes at the end with small share, while banks, on this basis, use effects of leverage that is attempted to be evaluated as exact as possible by the ratio analysis.

Financial statements of the financial sector are different than those of non-financial sector according to the income and loss, including difference in ratio indicators concerning positions of such statement. Ratio indicators primarily are indicators relate with efficiency and profitability evaluation, and must be conceptualized with specificities of positions from the balance sheet of the bank; therefore elements of the ratio indicators use the most essential positions of the income and loss statement such as: total income, total expenditures, income without interest, expenditures without interest, net profit, etc.

Due to aforementioned differences between financial statements between banks and non-banking sector, the ratio indicators used in the non-banking sector are not convenient for the success evaluation of the business with the banks. For the success evaluation with banks there are applied specific indicators and they represent one sensible relation between positions of the financial bank statements including all specificities of these financial statements.

Many research works related with evaluation of bank business successfulness are focused on the ratio indicators profitability evaluation. Different kind of banks deal with different banking businesses, and on this base they have different input and output elements in their operations with variations in the income and expenditures structure based on different banking products and services. All these differences in bank operations should be included when interpreting ratio indicators. Output of banks is their income: with commercial banks this is income based on credit cards, consumer, economic, mortgage, and other loans; while, for example, output of the mortgage banks is income from mortgages. Investment and other banks have other income. Input elements in banking operations are expenditures for different banks have different expenditures; for example, earning of a credit officer is quite different than earning of one investment analyst including fixed costs, rental costs, etc.

Ratio indicators are designed to evaluate successfulness of business in non-banking sector, and although they are not applicable with banking sector business, they are used in the banking sector pretty much. Banks apply such indicators for financial performance evaluation of their clients when approving loans. Banks must evaluate whether their clients fulfill liquidity requests and must be positive if the client is able to service approve loan and corresponding interest. For evaluating financial performance of their clients, banks apply many ratio indicators.

RATIO INDICATORS CONTENT WITH BANKS

Ratio analysis is one of techniques for the evaluation of solvency or bank performances (Vojteski-Kljenak, Lukic, Jovancevic, 2015, pp. 59-79). Information base for the ratio analysis is in the financial statements and this analysis essentially represents sensible relation between positions in the financial statements. Ratio analysis of the banking sector is far more complex and demanding in comparison with non-banking sector. Complexity of the ratio analysis with banks is embedded in complexity of the banking business and its higher risk exposure in comparison with other economic subjects.

Ratio analysis with the banks includes three steps. First, it is necessary to select relevant ratios, among many ratio indicators, that will contribute achievement of analysis aims in the best way. In our analysis there are selected ratio indicators able to calculate on the basis of available information from the banks financial statements published on the National Bank of Serbia web page. Second, there is to be calculated the ratio itself. Third step, or the most important one, means interpretation and commenting of obtained ratio numbers because for successful ratio analysis is not sufficient just to calculate the ratio, thus it is important to compare achieved results in the past with anticipated results in the future as well as with results of similar and competitive banks and define d standards and recommended values. In order to obtain as better as possible insight regarding dynamic of bank performances moving the ratio analysis is to be done for the period of five years or longer.

In order to evaluate bank solvency there are used numerous indicators and all are joined in several groups as follows: (Filipovic, Mirjanic, 2016, pp. 16-31)

Liquidity and portfolio management

Loan portfolio – credit risk

Management of obligations and capital – leverage

Efficiency and productivity

Profitability

Bank performances can be influenced with many factors such as: assets quality, management quality, out-of-balance operations, volume economy, cost control, internal and external environment, etc. Our analysis is focused on the ratio profitability with 10 biggest banks operating in Republic Serbia.

CALCULATION METHODOLOGY FOR SELECTED RATIO PROFITABILITY INDICATORS

Core of the profitability analysis put the result of business or profit in relation with different positions from financial statements and for such purposes there are

used numerous indicators. From profitability indicators there are calculated profit rate, assets yield, shares capital yield of the bank, and net interest rate. Due to lack of information, there are not calculated indicators in the financial statements interesting regarding shareholders such as yield of regular shares and income per share.

This part of work illustrates which positions within the financial statement schemes are used for calculation of each of actual profitability indicators in order to make as noticeable as possible obtained results.

The bank profit rate we obtain as relation between net profit and total incomes and it shows which part of the income is kept after deduction of all business costs:

$$\text{Profit rate} = \frac{\text{net profit}}{\text{total income}} \quad (2)$$

The old income and loss schemes do not show net profit so due to comparability of indicators we have used here the result before deduction the value of which is under the number XIII: profit/loss before deduction, while from the new scheme we use results value under the number XVI: profit before deduction or XV2: loss before deduction, if there is achieved loss. Total profit according to the old income and loss scheme we obtain as sum of position values under the number PR1: income from interest; PR2: income from fee and commission; IX: income from dividend and downpayment; and X: other business income; while in accordance with the new scheme, we obtain total profit as sum of position values under the number Ia: income from interest; IIa: income from fee and commission; and IX: other business income.

The yield to the bank assets we obtain as relation between net profit and average total assets representing a complex indicator of the bank profitability and showing how much yield is achieved per unit of engaged capital:

$$\text{Assets yield} = \frac{\text{net profit}}{\text{average total assets}} \quad (3)$$

Positions of the result are explained with the profit rate. Average total assets from the old scheme we obtain as average value of the position from the beginning and end of the calculation period under the number A: assets (sum of the positions A.I – A.XIII), while from the new scheme we use the average value of the position under the number A: total assets.

The yield on shares capital we obtain as relation of the net profit and shares capital. Due to known positions of the result, there is to be said that average net value in accordance with the old scheme of the balance sheet is average value of the position under the number PKXXI: total capital.

$$\text{Shares capital yield} = \frac{\text{net profit}}{\text{shares capital}} \quad (4)$$

We obtain net interest bank rate as relation between net income based on the interest and average total assets and it shows management ability and readiness to

administer the relation between income and expenditure of interests. Net income based on the interest, or difference between interest income and interest expenditure from the old scheme of the profit and loss we take as value of the position under the number I: net profit/loss based on interest; while from the new scheme we take value of the position under the number I1: net profit based on interest. The total assets average is considered with indicators yield from bank assets.

$$\text{Net interest rate} = \frac{\text{net interest}}{\text{average total assets}} \quad (5)$$

EMPIRICAL ANALYSIS OF PROFITABILITY

Our analysis of the banking sector we conduct for the period 2010 – 2017 on the basis of the financial statements on financial position and statements on the total result of banks collected on the web page of the National Bank of Serbia. Additional difficulty for the analysis is the fact that until 2013 there was used one certain scheme for the financial reporting, and after 2014 there is another scheme through which banks compile their financial statements.

It is well know the rule when calculation ratio indicators, whenever it includes one position from the income and loss covering certain period, and second position from the balance sheet showing the situation in certain moment, there is performed calculation of positions average from the balance sheet on the basis of values from the beginning and end of the year. Using average value when analysed for longer period of time there is applied ironing of the indicators dynamics. In our analysis with indicators using both these positions from the balance sheet there are not applied average values because we conduct our analysis for 7 years and main idea was to obtain as noticeable as possible indicators moving dynamics.

Profit ratio presents relation between net profit and total profit. On the Chart 1 we can see that in average 10% more bank income stays in the bank in the form of final result. The business result with 90% of observed banks is positive. Values above average, in the most of the cases, have banks owned by the foreign capital such as Banca Intesa and Raiffeisen Bank with profit rate that was not negative in the subject period contrary to the domestic banks having negative profit rate for all these years – Vojvodjanska Banka had almost 3 times negative profit rate, Komercijalna Banka 2 times and Postanska stedionica 1 time.

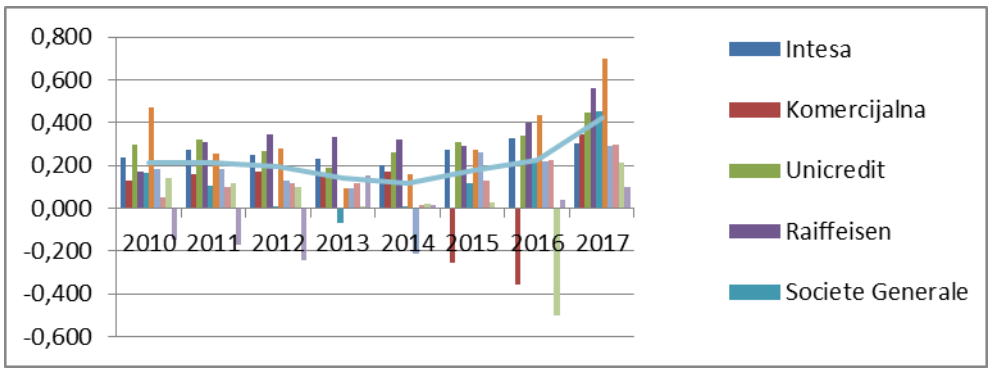

Chart 2. Profit rate, relation between net profit and total income

Source: Calculations and illustrations by the author based on data from the NBS

Net interest rate represents share of difference between active and passive interest rate in average total assets and it is illustrated in the Chart 3. The average has mild decrease from 5.3% to 4.4%. Deviation from average value at the beginning of the subject period had the Postanska stedionica while at the end of the period majority of the banks had near the average values.

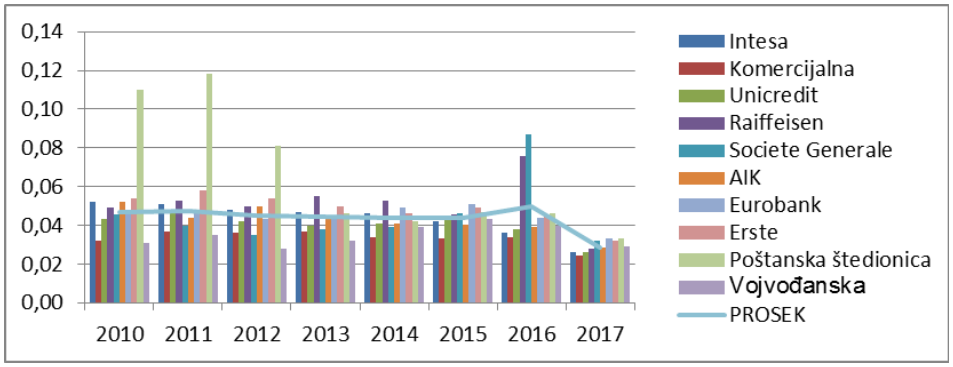

Chart 3. Net interest rate or relation between net interest and average total assets

Source: Calculations and illustrations by the author based on data from the NBS

All-over evaluation of profitability tells that there are banks performing losses especially among banks that are not in the 10-biggest-group according to the amount of assets, but entire banking sector is profitable and banks achieving positive results justify expectations of their stakeholders.

The yield on assets represents relation between net profit and average total assets. Indicator is illustrated in the Chart 4 below and their values and average follow the profit rate dynamics. The yield on assets in the subject period is in average in somewhat higher than 1% including certain decline until 2015 when started to grow again. According to this indicator above the average are mostly foreign banks. When considering domestic banks, the AIK Banka a.d. Beograd and Postanska stedionica had values higher than average until 2013.

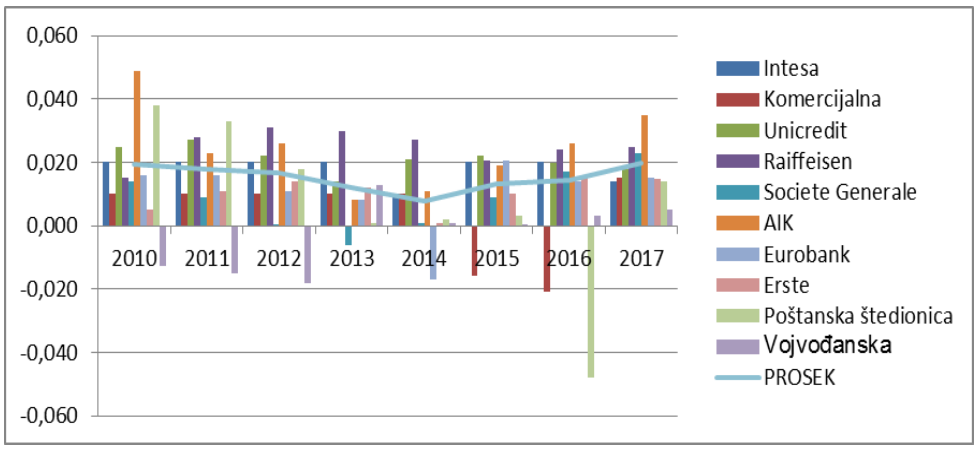

Chart 4. Yield to assets

Source: Calculations and illustrations by the author based on data from the NBS

The yield to shares capital represents base for calculating efficiency of the bank business on the base of assets at the bank disposal (Lukic, 2009, pp. 245). As relation between net profit and shares capital, ROA follows the yield to assets dynamics. The average value of indicator with 8.6% in 2010, declined until 2014 when achieved minimum value of 3.7% and after 2015 grew to 4.8%. Almost 60% of illustrated banks have their yield from net value above the average; and there are more foreign banks having these above the average results. In the group of 10 illustrated banks each year one bank had performed loss. Except the banks illustrated in the Chart, four of them, Piraeus Bank, KBM, Telenor and Alpha Bank had loss in 4 of 5 observed years. The biggest loser in the subject period is the bank Postanska stedionica a.d. Beograd in 2016 with loss that also reflected to the (non-yield) yield per share.

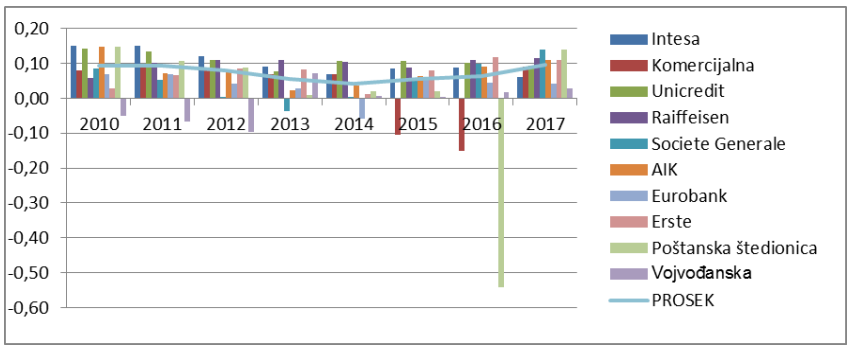

Chart 5. Yield to shares capital

Source: Calculations and illustrations by the author based on data from the NBS

The yield to assets (ROA) and yield to shares capital (ROE) reflect profitability of the banking sector. Within all banks relation between capital and

assets is quite stable and moves in the same relation, the both profitability indicators, ROA and ROE, move in about the same way, and until 2013 they pointed to profitable business of the banks. Banks profitability after the world economic crisis was not at the satisfying level. Investors even had loss because ROE (with constant fall since 2008) had lower yield than it was possible to obtain for long-term RSD government bonds. By the 2013 that difference was even 4.10% (8.89% - 4.79%). The ROA also recorded continual fall of the yield to the assets since 2008. The rule is when the bank business efficiency falls, or if the income production to the placed means decreases (ROA falls), then such bank is forced to undertake higher risk through debt in order to achieve the planned yield rate to the capital (ROE), which actually is expected by the stakeholders. Growing business risk the banks covered by the means from the capital. This endangered liquidity so many banks were forced to make capitalization in order to keep mandatory level of the capital adequacy. This also had negative result to profitability because the capital grew, reservation costs grew and profit fell. (Ristanovic, 2017)

CONCLUSION

During the transition process when our country opened to the foreign capital with critical ownership transformation, the ownership structure of the banks changed. Foreign banks became majority owners of one part of the state banks improving the banking sector efficiency because they brought their own paradigm of efficient business together with their capital investments, so in regard to the number, dominant are the foreign banks. When the global economic crisis occurred, the National Bank together with the business banks continually worked on mitigation of effects to the banking and financial sectors in our country. During the crisis the National Bank of Serbia conservative policy secured sufficient resistance of the banking sector in order to bear all negative the crisis caused consequences.

In the subject period for our analysis, the banking sector structure change occurred. There was the number of banks reduced including cut offs in the banking sector. The amount of the balance assets recorded growth and the highest participation in the total assets of the banking sector belongs to the banks with mostly foreign capital. The project with the higher ratio has higher priority for realization (Cebic, Zekic, Petrovic, 2015, pp. 26-30). The capital amount at disposal of the banking sector grows and dominant participation in the total capital amount belongs to the banks owned by the foreign capital. Capitalization of the banks is on the high level and in the subject period has stable movement. The level of the capital adequacy significantly overcomes requests of the National Bank of Serbia that had been imposed by the Basel Committee.

Using innovations on daily basis, banks attempt to improve their efficiency and productivity and final effect of such measure is profitability because the banks

main motif is realization as higher as possible profit. The problem is seen in the uncollectable investments because on such base banks experience growth of non-interest costs within the amount of total costs and incomes. The final result is in lower profits and yields that banks achieve.

The problem in the bank businesses arises during collection of their loans because clients harder can pay their obligations on time and fully due to slow-down economic activity. Because of high costs of uncollectable loans the bank profits are cut into halves and one part of the banks suffered losses. The solution of this problem would be more active policy when approving loans and better monitoring of the reliability and credit history of current and prospective clients.

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TERMINATION AND VOIDNESS OF CREDIT AGREEMENT WITH CURRENCY CLAUSE

Vladimir Kozar[16]

ABSTRACT

The Law on Contracts and Torts (LCT) does not prescribe other legal consequences of the termination of the contract due to changed circumstances, with the exception of the obligation of the plaintiff to compensate the other party for the fair part of the damage it suffers. The issue of the effect of termination has gained importance by passing a final verdict on the adoption of a claim for termination of a loan agreement with a currency clause due to changed circumstances, which did not decide on the legal consequences of the termination. The paper analyses the current court practice, above all the final verdict of the Court of Appeal in Novi Sad on the termination by which the court, adopting the claim, pronounced the termination of the contract on a long-term housing loan "due to significantly changed circumstances", as well as the opposing legal view, expressed in another judgment of the same court, according to which "the increase of the Swiss franc exchange rate relative to the moment of conclusion of the contract ... in the sense of Art. 133 para. 1 LCT does not constitute a valid reason for the termination of the contract requested. " Also, presented were the views of the Supreme Court of Cassation from the decision Rev 321/2016 of 25.01.2017 issued in the dispute over termination of the loan agreement, then the latest "pilot" verdict of the Appellate Court in Belgrade for a loan agreement in Swiss francs, as well as the decision of the Appellate Court in Novi Sad, Gž. 4345/17 of 13 April 2018, in which the position on the validity of the simultaneous contracting (cumulation) of the currency clause in EUR was expressed and interest at a rate higher than the default interest.

Key words: *termination of contract, changed circumstances, loan, currency clause, Clausula rebus sic stantibus, Swiss franc*

JEL Clasification: *G21, G24*

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INTRODUCTION

The currency clause is the contracting of the value of the obligation in foreign currency (the currency of the obligation), but the payment and collection under these contracts is done in dinars (currency of payment), in accordance with the Foreign Exchange Act (FEA). The currency clause does not represent the method of measuring the dinar amount (not the valorimetar) that the borrower received and who should return, but represents his foreign exchange obligation, which is as such expressed in the business books of the bank (Ćatić, 2016a, pp. 439), that is, it represents the foreign currency assets of the bank (Decision on capital adequacy of the bank, Art. 363, para. 3. The currency clause, therefore, is not a valorimetar, which measures the amount of liabilities of the contracting parties, but is the taken obligation. The currency clause in loan agreements, especially in Swiss francs, has caused a large number of disputes about the validity of this clause or legal transaction as a whole due to a violation of the principle of equal value of payment due to a sharp increase in the Swiss franc exchange rate against the euro and dinar. Also, the question of the possibility of applying other legal institutes to loan agreements with foreign currency or similar clauses (index, foreign exchange) was raised, above all the termination of the contract due to changed circumstances, as well as the annulment of the contract due to excessive damage, as well as the nullity of the loansharking agreements. LCT and FEA allow contracting a currency clause.

The legal position on the validity, i.e. the permissibility of contracting a currency clause in the loan agreements indexed in the CHF currency, and in particular in the cumulation with the contractual interest, is taken up by domestic courts (Kozar, 2017, pp. 143 - 157), with the note that in the case of " the enormous exchange rate fluctuation, the purpose of such a provision may be violated, and then the agreed currency clause may lead to the non-equivalence of the mutual giving of the contractor, to the detriment of the borrower "(Answers to Commercial Court Issues - Court Practice of Commercial Courts - Bulletin (2015), 4). The position on the lawfulness of foreign currency clause is also taken in the judicial practice of neighbouring countries. Namely, the Supreme Court of the Republic of Croatia confirmed a final decision confirming that the foreign currency clause is legal (even in CHF), but also that the unilateral change in the interest rate, without previously established criteria, is illegal (Kačer & Ivančić Kačer, 2016, pp. 190).

CLAUSUS REBUS SIC STANTIBUS IN THE FUNCTION OF THE PROTECTION OF THE PRINCIPLES OF EQUIVALENCE

Termination of contract due to changed circumstances (Clausula rebus sic stantibus) is the possibility for a contracting party to seek a change in its consideration (giving, acts, defaults) due to the occurrence of circumstances that jeopardize the original will of the contracting parties, and which could not have been foreseen, all in order to achieve the equivalence of mutual payments. According to the clause rebus sic stantibus each contract is valid only until the circumstances that existed at the time of its conclusion are significantly changed. The principle of equal value of giving, as the basic rule of double-sided onerous contracts, is protected, apart from excessive damage and banning of loansharking contracts, also by the possibility of termination or change of contract due to changed circumstances. While in the case of excessive damage the disparity of mutual restrictions is assessed at the moment of conclusion of the contract, here the hypothesis is that this discrepancy occurred after the conclusion of the contract, in particular during its execution (Perović, 1986, pp. 421 and 422). This principle has the character of assumption. Namely, it is assumed that subjects, when establishing obligatory relationships, place the content of these relations on the principle of equal value of giving. This assumption is precarious (praesumptio iuris tantum), which means that an interested person can prove, in cases where this is not excluded by law, that there is no equality of value of giving (Djordjevic & Stanković, 1986, pp. 61). In modern legal theory, the prevailing concept is that the clause rebus sic stantibus should be treated as a remedy, whose function is the protection of the principle of equivalence when it is disturbed by the changed circumstances (Ibid, pp. 61). The Institute of termination or modification of the Contract due to changed circumstances, which is accepted in our law (Art. 133 - 136 LCT) is contrary to the principle pacta sunt servanda. Principle pacta sunt servanda is one of the basic principles of contract law, according to which the parties are obliged to fulfil their obligations as they have agreed upon, whenever possible. Principle pacta sunt servanda is contained in Art. 17, para. 1 of the LCT, which stipulates that the parties in the obligation are obliged to fulfil their obligation and are responsible for its fulfilment. This principle is the basis for the safety of legal transactions (Ibid, pp. 266).

JUDGENTS OF THE APPELLATE COURT IN NOVI SAD FOR THE CANCELLATION OF THE LOAN AGREEMENT WITH FOREIGN CURRENCY CLAUSE IN CHF DUE TO CHANGED CIRCUMSTANCES

By comparing the currency exchange rate RSD, CHF and EUR, it has been established that in the period from September 2008, when the contract was concluded, until October 2015,when the findings and opinion of expert witnesses were filed in the litigation procedure, the CHF exchange rate increased by 129% against the RSD, and that the euro exchange rate rose by 57% in relation to the RSD, that is, "the level of appreciation of the CHF against the euro is in the amount of 1.46 which means that the CHF exchange rate increased by 46% over the increase of the euro exchange rate in the same period. Courts took a legal view that the conditions laid down by law for terminating a long-term housing loan contract were met due to significantly changed circumstances, on the grounds that "after the conclusion of the agreement, a large increase of CHF has occurred ", which is why the amount of the obligation of the borrower ... of the plaintiffs, which is conditioned by the CHF exchange rate, is increased to the extent that it does not correspond to the expectations of the plaintiffs as borrowers because it aggravates the fulfilment of their contractual obligations, and therefore it questions the purpose of the contract in question ... " (Judgment of the Appellate Court in Novi Sad, Gž no. 1781/16 of September 1 2016).

Although it took the view that, at the time of the conclusion of the contract in question, the contracting of a currency clause was allowed, and that the contract was not null and void from the conclusion, that is to say, it is a fully legitimate legal business, the court, using the institute "Termination or modification of the contract due to changed circumstances" from Art. 133 - 136 LCT, by the decision approving the claim, annulled the contract on a long-term housing loan "due to significantly changed circumstances", concluding that because of the growth of the CHF exchange rate in relation to EUR and RSD, the conditions for termination of the contract referred to in Art. 133 para. 1 LCT were fulfilled (that after the conclusion of the contract there were circumstances that aggravate the fulfilment of the obligation of one party - the borrower, and because of which the purpose of the contract cannot be realized, that the contract no longer corresponds to the expectations of the borrower). This final decision did not decide on the legal consequences of the termination (Kozar & Aleksić, 2017a, pp. 83).

The way in which courts have applied legal standards and principles of the law of obligations is controversial. Namely, without determining the general opinion on the unfairness of the maintenance in force of such a contract, and without taking account of the general interest, the court applied the rules of Art. 133 para. 1 and Art. 135 LCT and only certain provisions, i.e. conditions, and not as a whole, as prescribed by the law (Vrhovšek & Kozar, 2017, pp. 469-483). For the institute of termination of the contract due to changed circumstances, known

even in Roman law, is an exception, which must be interpreted very restrictively. Introduction of a clause rebus sic stantibus can be useful only if it is applied in cases where there are justifiable reasons for derogating the principle pacta sunt servanda. In this case, all legislation, including the LCT, allow the application of this clause only if very strict conditions are met (Djordjevic & Stanković, 1986, pp. 267) In Art. 133 para. 1 LCT prescribes four conditions for termination, but at least three must be met for the adoption of a claim for termination of the contract. The first two are in an alternate relationship (the "circumstances that make it difficult to meet the obligations of one side" or "If the purpose of the contract cannot be achieved due to them") while the other two are in a cumulative relationship mutually and with one of the first two (" and in one and the other case to the extent that it is obvious that the contract no longer corresponds to the expectations of the contracting parties " and in general, it would be unfair to keep it in force as it is"). (Kozar, Aleksić, & Pantelić, 2017, pp. 13). In the comparative law of countries in the region, such as, for example the Republic of Croatia, where the issue of loans in CHF is even more pronounced, compared to our LCT from 1978, shows a smaller number of assumptions for termination. The Law on Obligations in Art. 369 does not prescribe the impossibility of attaining the purpose of the contract, and does not require that it is obvious that the contract no longer corresponds to the expectations of the contracting parties and that, in the general opinion, it would be unfair to maintain it in force as it is. But it introduces the application of excessively large loss, as an alternative condition with excessively difficult fulfilment of the obligation (Kozar & Božić, 2017, pp. 277).

In the second decision of the same court, the opposite legal position was taken, according to which "the increase in the Swiss franc exchange rate relative to the moment of conclusion of the contract on November 13, 2007."..."in the sense of Art. 133 para. 1 LCT does not constitute a valid reason for the termination of the contract requested..." According to the position taken up in this second-instance judgment: "The change in the Swiss franc exchange rate is not the circumstance that the plaintiff could not expect and anticipate at the time when it concluded the loan agreement and the annex thereto, since the change in the foreign exchange rate against the dinar is not unusual occurrence in the domestic foreign exchange market. By choosing the Swiss franc for the currency of bonding the amount of monthly annuity of repayment of its RSD loan, the plaintiff consciously accepted the risk that during the subsequent repayment period of 204 months, there may be a change in the exchange rate, so that the circumstance of the sudden swing of the CHF against the dinar and other currencies, contrary to the conclusion of the first instance court, in the sense of the provision of Art. 133 para. 1 LCT does not represent a justified reason for the requested termination of the contract due to the difficult fulfilment of the obligation, nor is the condition for terminating the contract fulfilled because of the impossibility of achieving the purpose of the contract, since the plaintiff has achieved the purpose of the contract by purchasing the house by the funds of the loan in question." (Verdict of the Appellate Court in Novi Sad Gž. no. 3042/2015 from November 3 2015, unpublished, from the archive of the author).

POSITIONS OF THE SUPREME COURT OF CASSATION ON PRE-ASSUMPTIONS FOR TERINATION, CAUSES OF CONTRACTS AND FINANCING SOURCES

In the review procedure, the Supreme Court of Cassation, by decision Rev 321/2016 of January 25, 2017 abolished the quoted verdict of the Appellate Court in Novi Sad Gž 3042/2015 of November 3 2015 and returned the case to the same court for reconsideration (http://www.vk.sud.rs/ 23.06.2017). In the repeated proceedings, the second instance court has not yet made a new decision (http://www.portal.sud.rs 10.05.2018). The Supreme Court of Cassation did not take a position on the merits or groundlessness of claims for termination of a loan agreement with a foreign currency clause in Swiss francs. Instead, it abolished the second instance verdict returned the case to the same court for re-trial, on the grounds that "since the second instance court did not have in mind the aforementioned legal provision and accordingly did not fully and accurately determine the factual situation, therefore the decision of that the court had to be abolished on the basis of Art. 416, para. 2 of the Civil Procedure Code (CPC). In the retrial, the second instance court will have in mind all that is stated above, so it will by itself or through the first instance court, by the correct application of the substantive right, complete the factual state, that is, it will reliably determine whether and to what extent there have been changed circumstances since the conclusion of the disputed contract between the parties and, taking into account all the other circumstances of the concrete case and the mutual agreement of the parties, assess whether the conditions have been fulfilled to terminate it and, in accordance with that, adopt a law-based decision."

On the other hand, the court of second instance in the said decision gave certain interpretations of legal norms, which lower courts should be guided by in deciding on requests for termination of the contract, i.e. when determining the fulfilment of cumulative legal requirements for termination, which will be analysed at this point:

"The correct application of the cited legal provisions requires that, before concluding that there is no basis for terminating the contract, it first finds whether there has been a change in circumstances, and if so, is it therefore obviously unfair that the contract shall remain in force because it no longer corresponds to the expectations of the contracting parties or because of the changed circumstances the purpose of the contract cannot be achieved. In Art. 135 the law also determined the circumstances of relevance to the court's decision and these are the principles of fair trade, the objective of the contract, the normal risk for a certain type of contract, the general interest as well as the interest of both parties."

Also, the Supreme Court of Cassation declared that the changed circumstances cannot lead to a loss of causation which represents the legal objective of the contract, that is, the objective of contracting which both parties have in mind and it forms an integral part of the contract, concluding that the

second instance court rightfully did not accept the decision of the first instance court in a part that is "primarily based on the loss of contract cause." Namely, in the case of double-sided obligatory contracts, the obligation of one party has for its cause the obligation to the other party. The obligation of one side is the basis of the obligations of the other party. Cause is one of the essential conditions for the creation of a valid contract (Perović, pp. 325, 331, 333). In other words, the cause is the legal objective of the legal transaction - the reason for the obligation in the contract, therefore the reason why the contract is concluded, or because of which a certain contractual obligation is assumed (Đorđević & Stanković, 1986, pp. 88, 226).

The courts of first instance, in the reasoning of their judgments, do not, as a rule, refer to sources of financing, i.e. "in which way the bank has acquired the funds that were approved to the plaintiff", although the respondent banks are referring to the fact that they withdrew funds in CHF and were indebted in CHF abroad and similar ... However, the highest court instance took the view that "In order to respect the principle of equal value it is certainly important to determine and in what way the bank has acquired the funds that were approved to the plaintiff." Banks in Serbia, when approving loans with a currency clause in CHF, could not act in some other way in accordance with the regulations governing banking operations, but to borrow via interbank credit lines in Swiss francs. Banks that could not satisfy credit activity from the existing deposit base, satisfied their need by withdrawing classical interbank credit lines in Swiss francs. The development of financial markets has enabled all participants, through derivative transactions, to substitute liquidity surpluses of one currency for some other deficient currency. Currency exchange is done in a way of simultaneous mutual buying and selling of two currencies in two different periods of time. This kind of derivative work is called currency swap. The same procedure was followed by banks in Serbia that had a surplus of euro foreign currency liquidity, which was swapped into the Swiss franc through swap transactions. " (Pantelić, 2016, pp. 443 - 458) Thus, for each approved loan with a Swiss franc currency clause, the bank had to provide a source of financing in Swiss francs, in one of the three following ways: either from deposits in that currency (which also represents a form of borrowing of the bank, as the bank has a liability to depositors, to return the deposit after expiry of the deposit term), and if it did not have deposits in Swiss francs, the bank had to take a Swiss franc loan itself from another domestic or foreign financial institution, or had to exchange - buy a currency Swiss franc against the sale of the euro or other currencies. There was no fourth way or source of financing. For the above reasons, the attitudes of the legal theory cannot be accepted, according to which "A particular problem related to these contracts is the fact that banks did not generally borrow in Swiss francs, or that these placements did not have adequate sources in the same currency." (Opačić, 2015, pp. 328) The above position is not acceptable, because it is based on one-sided data, i.e. only on data on the amount of banks' liabilities based on their borrowing in Swiss francs, while it did not consider the third source of financing in Swiss francs - currency swap.

"PILOT" JUDGMENT OF THE APPELLATE COURT IN BELGRADE ON THE PREDEICTABILITY OF GROWTH OF THE EXCHANGE RATE OF THE SWISS FRANC

The first, or "pilot" verdict of the Appellate Court in Belgrade, G 1751/18 of 15 March 2018, dismissed the appeal of the plaintiff and confirmed the first instance verdict rejecting the claim for termination of the housing loan agreement in Swiss francs due to changed circumstances, along with the explanation that neither the objective nor the subjective conditions for the termination of the contract have been met. Regarding the claim that, due to the changed circumstances, demanded the termination of the housing loan agreement in Swiss francs in RSD counter value at the bank's purchase rate on the day of the release of the loan into the exchange rate, on January 3, 2008, the Court of Appeal concluded that the change in the Swiss franc exchange rate " not an unusual phenomenon in domestic or international foreign exchange market." The court also concludes: "The growth of the exchange rate of any currency, and even the Swiss franc against the dinar, which had already occurred in the past, could have been anticipated. This especially when considering the historical trend in the value of dinar in relation to German and other currencies over the past decades, because it is widely known that the depreciation of dinar during hyperinflation in the period from 1992 to 1994 was on a daily basis and amounted to over 300,000,000%. With such a history of the exchange rate of the dinar against the world currencies in the recent past, the depreciation of the dinar against the Swiss franc is not unpredictable, and this fact could have been predicted at the time of the conclusion of the contract. This means that the fact that the Swiss franc exchange rate against the dinar has been increased was insufficient in order to conclude that there are changed circumstances, but it was necessary to determine whether the increase in price was occurring in the same period. It was also necessary to prove the existence of subjective circumstances which made it obvious that the present contract no longer corresponds to the prospects of the plaintiff and that it would be unfair to keep it in force, and which facts of the plaintiff did not prove until the conclusion of the main hearing. In these circumstances, the plaintiff proposed new evidence in the appeal (poor economic status), but they cannot be the subject of consideration by the second instance court because it has not been made probable that the plaintiff could not have presented them in the first instance proceedings. "(http://www.bg.ap.sud.rs/cr/articles/sluzba-za-odnose-sa-javnoscu/aktuelni-predmeti/drugostepeno-gradjansko/dg-donete-odluke/ 18.04.2018).

In this judgment, the basic argument in favour of the unfounded claim for termination of a loan agreement in Swiss francs, invoking the institute of changed circumstances, is the predictability of the depreciation of the dinar exchange rate, based on historical experience, that is, the growth of the exchange rate of any currency including the Swiss franc in relation to the dinar, which had already occurred in the past, could have been predicted at the time when the disputed contract was concluded. The Court therefore applied the rule of Art. 132. Para. 2

ZOO, which stipulates that the cancellation of the contract cannot be requested if the party referring to changed circumstances was obliged to take into account those circumstances at the time of conclusion of the contract. Also, for the termination, it is necessary for the plaintiff to prove the existence of objective and subjective circumstances, which is also pointed out in the legal theory (Kozar & Aleksić, 2017b, pp. 279-303), i.e. the legal assumptions referred to in Art. 133 para. 1 LCT, which were referred to, which, according to the court, the plaintiff did not do.

THE DEPRECIATION OF SWIS FRANC RELATED TO EURO AND RSD DURING 2017 AND 2018, AS THE REASON AGAINST THE APPLICATION OF THE INSTITUTION OF THE TERMINATION OF CONTRACT DUE TO CHANGED CONDITIONS

The depreciation in the exchange rate of the euro against the RSD since the beginning of 2017 is shown in table no. 1:

Table 1. Depreciation of the euro exchange rate against the RSD since the beginning of 2017

Source: https://www.kamatica.com/kursna-lista/analiza-eur, 05/10/2018.

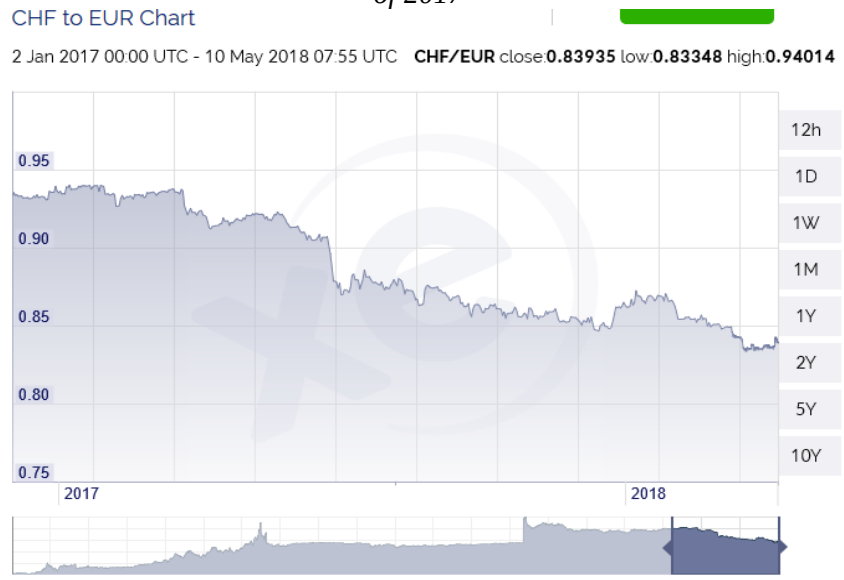
The fluctuation of the franc exchange rate against the euro over the last 10 years has been characterized by oscillations. There was growth, with pronounced peaks and fall of the exchange rate of the franc against the euro. In the last two years, the franc is down relative to the euro, which is shown in the following table no. 2.

Table 2. Decrease of the CHF exchange rate against the euro in the last two years

Source: https://www.xe.com/currencycharts/?from=CHF&to=EUR&view=10Y, 05/10/2018.

The decrease of CHF against the euro has been expressed since the beginning of 2017, as shown in table no. 3.

Table 3. Decrease of the CHF exchange rate against the euro since the beginning of 2017



Source: https://www.xe.com/currencycharts/?from=CHF&to=EUR&view=2Y, 10.05.2018.

The decline in the franc in relation to the dinar since the beginning of 2017, is even more pronounced than the decline in the euro relative to the dinar. The decline of the franc, or the growth of the dinar, is clearly visible in table no. 4:

Table 4. Decrease of the CHF exchange rate against the dinar since the beginning of 2017

Source: https://www.kamatica.com/kursna-lista/analiza-eur, 05/10/2018.

Over the last 10 years, there has been growth, as well as sharp declines in exchange rate of francs over the dinar, but since the beginning of 2017, the franc is in constant decline, as can be seen from table no. 5:

Table 5. Fluctuation of the CHF exchange rate against the dinar during the last 10 years

Source: https://www.kamatica.com/kursna-lista/analiza-chf, 05/10/2018.

The conclusion is that both the franc and the euro have been declining since the beginning of 2017 against the RSD, although the decline in the exchange rate of the franc is more pronounced, from which it follows that the rates of loans (annuities) repaid in the dinar counter value are much less than last and last year. Therefore, it is not established an attempt by individual loan beneficiaries with a currency clause in CHF that the current peak in the exchange rate against the euro and RSD used as a reason for terminating the contract due to changed circumstances. Because a current situation, which existed in 2016, ceased to exist from the beginning of 2017, since the franc is constantly falling, and with it the reasons for the possible termination of the contract, which is unfounded also due to the absence of other cumulative legal reasons. Changed circumstances must be observed during the entire contract period of the loan, i.e. the duration of the contract, rather than at one moment of fluctuation of the exchange rate of certain currencies in the foreign exchange market, which plaintiffs are attempting to exploit unfoundedly as a ground for termination.

RESTITUTION AS A CONSEQUENCE OF A CONTRACT TERMINATION

The LCT does not prescribe the legal consequences of the termination of the contract due to changed circumstances, except for the special rule on compensation for the fair part of the damage to the other party, which it suffers due to that (Art. 133 para. 5), which excludes the application of general rules on contractual liability, since it is based on the idea of justice (Šolaja, pp. 308). On that issue, there is almost no settled court practice, since during the 40 years of validity of this Law, there is no record of adoption of claim for termination of contract due to changed circumstances, including the issued relevant decisions on the consequences of termination.

In case of dispute on legal consequences of termination, the courts should use the analogy in order to fulfil the legal void. The closest item to termination of the contract due to changed circumstances is the effect of the termination of the contract due to default from Art. 1322 LCT, which prescribes the obligation of returning the given, with that the party returning money is obliged to pay the default interest since the date it received the payment. Also, after the termination, a legal-technical situation that corresponds to acquiring without a basis arises (the contract as the basis of acquisition has fallen), in the sense of Art. 210, para. 2 LCT (Ćatić, 2016a, pp. 437). In this case, the rule on the scope of the return referred to in Art. 214 LCT applies which stipulates: "When items that have been acquired without the basis are returned, the fruits must be returned and the default interest paid, and, if the acquirer is unconscionable, from the date of acquisition, or from the date of the application." (Kozar, Aleksić, & Pantelić, 2017, pp. 28.)

In disputes in which one of the litigious parties pointed out the request for restitution of the given, the courts did not explain the merits and the amount of such a claim, i.e. they did not definitively decide on the right to restitution as a result of the termination, but the claim was rejected "as premature" on the grounds that in the concrete case the contract was terminated in the court procedure, by changing the previous legal relationship between the parties, by a non-final ruling, and the legal consequences of the termination of the contract and the request for the return of what was received and possible claims for fair compensation of damages, will come into effect with the legality of a judgment, from which time these claims may be considered mature. By the judgment of the Basic Court in Šabac 3P 73/14 of 12 April 2017, a possible claim was adopted, by terminating by the virtue of paragraph II of the enacting clause a housing loan contract concluded in August 2007 between the respondent bank and the plaintiff - natural person D.J. from Š ..., because of significantly changed circumstances. However, paragraph IV of the pronouncement has dismissed as a premature "claim by the plaintiff to oblige the plaintiff and the respondent to return to the opposite party what they had received under the housing loan agreement, and that the plaintiff returns to the respondent the amount of 3,688,206.95 RSD and the prosecuted to the plaintiff the amount of 1,930,780.00 RSD." After the adoption of the first instance verdict, the procedure was terminated by withdrawal of the lawsuit. The Court, rejecting "as a premature" claim for restitution or restitution, essentially applied the rule in Art. 343, para. 1 CPC, which prescribes that "the court may order the respondent to perform certain act only if matured before the conclusion of the main trial." Even though the law does not make difference between the rejection of a claim "as ungrounded" from the rejection of a claim "as premature", the court practice knows such difference, and it requires the introduction of reason into the enacting clause of the judgment. In the legal theory, there is an opinion that the redundancy in the enacting clause of the judgment is that the request for an unsuccessful act is dismissed "as premature", because the sentence of ill-foundedness is related to the moment of the conclusion of the main trial on the basis of which it is decided. And the facts that occur after that moment, which change the material-legal state, open the possibility of a new lawsuit. Maturity is such a fact. (Poznić, 1987, pp. 281) Therefore, a new lawsuit filed after the maturity of the claim or performance could not be dismissed because of the adjudicated matter, irrespective of whether the phrase "as premature" was included in the enacting clause of the judgment for which rejected the claim due to the immaturity of the act at the time of the conclusion of the main hearing, ", or not. Consequently, there was no obstacle for the court to rule on the merits of the first-instance, ineffective, judgment, on the request for termination of the contract, as well as on the basis of the request for restitution - for restitution of what was given in the fulfilment of such a contract, because if such a judgment becomes legally effective, at the same contract and its legal consequence - restitution also become effective. And both the termination of the contract and the restitution are the consequences of the material finality of the judgment, its effect - validity as a legal act (Kozar & Božić, 2017, pp. 266).

Contrary to the presented position on the "prematurity" of the restitution request, a new, first instance decision was issued by the Higher Court in Kraljevo 1

P. 5/1 dated January 29, 2018, on the claim for restitution of the given, as the consequence of the termination of contract, by "appropriate" application of the rule from the quoted art. 132 LCT on termination of contract due to default. The Court determined that "the difference between the received and returned loan on the day of the findings and opinion of the expert witness November 28, 2017, in Swiss francs is 28,138.00 CHF or 2.880.126,89 RSD... Bearing in mind that the difference between the received and returned loan in CHF is 2.880.126,89 RSD or 28.138,00 CHF, that in this particular case are the claims of the respondent towards the plaintiff as it was determined by the possible claim un the stated amount with legal interest as it was decided in paragraph 3 of the enacting clause". The Court, therefore, from the amount of the loan (principal) of CHF 74,722.58 which the respondent bank paid to the plaintiff, by the commencement on December 28 2007 reduced the amount of CHF 46,584.58 which the plaintiff paid - returned to the respondent bank until the day of the expert examination on November 28, 2017, concluding that the plaintiff should only return the bank to the difference between the "received and repaid loan" ... which is CHF 28,138.00. In addition, in paragraph III of the enacting clause of the judgment, the court found "that there was a claim" of the respondent bank against the prosecutor, in the name of the return of the given due to the termination of the Housing Loan Agreement for the construction of real estate dated December 27 2007, in the amount of CHF 28,138.00 in RSD counter value, at the middle exchange rate of the euro on the day of expertise of November 28 2017, with a default interest at the rate prescribed by Art. 4. Para. 1 of the Law on Default Interest, which has to be calculated starting from November 29 2017, until payment. So the court grants the respondent bank the right to any interest (in the particular case at default interest) only from the day of the expert examination, that is from November 29 2017, until the payment, thus enabling the prosecutor to "free money" in the period of almost 10 years, or giving the plaintiff the right to use without any fee the funds that were paid to him on December 28, 2007 (from the assets of the bank, and indirectly from the assets of the depositors - citizens of the Republic of Serbia, whose deposits amount to about EUR 9 billion or other depositors, as well as the owner of the capital of the respondent bank), for 9 years and 11 months. Such a decision of the first instance court is not only unfair, but also in direct contravention of the provisions of Art. 132 LCT, which regulates the effect of termination. Namely, the Court referred to the provisions of this Article, stating: "In accordance with the provisions of Art. 132 LCT, by termination of the contract, both parties were exempted from their obligations, and in paragraph 3 it is stipulated that if both parties have the right to request the return of the given, the mutual returns shall be made according to the rules for the execution of bilateral contracts. "However, the court has applied the provisions of para. 1 and 3, but did not apply the provision from para. 5 of that Article, which reads as follows: "The repaying party shall pay default interest from the date on which the payment was received." Despite the fact that the court correctly established that the prosecutor received the full amount of the money - loan by payment performed on December 28, 2007, in the amount of CHF 74,722.58 in RSD equivalent, he gives the respondent bank the right to default interest only from the day of the expert examination in the procedure, i.e.,

from November 29 2017, and until the payment was made, which incorrectly applied the material right, the provision from the cited paragraph 5, Art. 132 LCT, referred to in the reasoning of the appealed judgment, since it was supposed to grant the respondent the right to default interest starting from December 28 2007.

Also, the question arises as to the consequences of the termination of the contract on mortgage loans and other collaterals (Vrhovšek & Kozar, 2015, pp. 463 - 476), as well as relations between banks and the National Housing Loans Insurance Corporation (NKOSK). (Ćatić, 2016b, pp. 124) The NKOSK secured 90,000 loans worth 3.35 billion euros. For ten years, as this institution exists, it has taken over the payment for 1,300 matured loans. So far, about 240 real estates have been sold. The fact is that there are more and more debtors who have problems in repaying housing loans because, in the last two years, their number has doubled. However, such loans make up only 1.45% of secured loans, which means that they are a small number of matured loans outstanding in relation to the total portfolio. There is no actual information about the number of activated mortgages in Serbia, because not all loans are secured by NKOSK. This institution insures only housing loans, but not business loans, where someone, as a security, has provided apartment, house, business premises (https://www.kamatica.com/vest/na-dobos-otislo-1300-stanova/54349 August 18, 2017).

RIGHT OF PROPERTY ON IMMOVABLE PROPERTY WHERE THE PURCHASE IS FINANCED BY THE CREDIT ASSETS AND EQUITY

What is obvious is that the termination of the loan agreement does not affect the acquired right of ownership of real estate whose purchase is financed by the loan funds, because the basis for acquiring property rights is another contract - a contract of sale, to which the termination of the loan contract has no effect. The property right could, however, cease if the bank does not require execution on the real estate for the purpose of realizing the mortgage as a means of securing its claims.

However, in deciding whether the legal requirements for termination have been fulfilled, one should also bear in mind the "purpose of the contract" or the purpose of the loan agreement, which is, in many cases, the purchase of an apartment ("housing loan") or other immovable property. In a small number of cases, it is a loan for refinancing loans with another bank or loans granted to entrepreneurs to finance the purchase of working capital. The user of the loan has fulfilled the purpose of the loan by purchasing the apartment. The same applies to the purchase of working capital or the refinancing of a loan with another bank.

Alternative assumption for termination under Art. 133 para. 1 LCT (relative to "circumstances that make it difficult to meet the obligations of one side ") is that

after the conclusion of the contract, circumstances arise due to which "the purpose of the contract cannot be achieved". For purpose-built mortgage loans indexed in CHF, the purpose of the contract was realized because the beneficiaries became owners of apartments purchased from the funds from the approved loan, so in the disputes for termination of the contract, it is not possible to talk about the fulfilment of this assumption. Also, in the described situation, in view of the contract on dedicated housing loans indexed by CHF, it would be difficult to conclude "that in the general opinion, it would be unfair to maintain it in force as it is" which with the obvious: "that the contract no longer corresponds to the expectations of the contracting parties", is the second cumulative assumption for termination under Art. 133 para. 1 of the LCT. Thus, in Art. 133 para. 1, the LCT prescribes four conditions for termination, but at least three must be met for the adoption of a claim for termination of the contract. The first two are in an alternate relationship (the "circumstances that make it difficult to meet the obligations of one side" or "If the purpose of the contract cannot be achieved due to them") while the other two are in a cumulative relationship mutually and with one of the first two (" and in one and the other case to the extent that it is obvious that the contract no longer corresponds to the expectations of the contracting parties " and in general, it would be unfair to keep it in force as it is").

According to preliminary calculations, in case of mutual repayment given due to termination, with the obligation to pay the legal default interest from the date of withdrawal of funds, that is, from the date of payment of the annuity, the bank would have to write off 65% of its receivables from the loan agreement indexed in CHF.

By these judgments, users of loans indexed in the CHF are placed in the position as if they were granted dinar loans with interest rate of 2% per annum. In this way, users of loans indexed in the CHF are privileged because they are brought into a significantly more favourable position compared to the beneficiary of real dinar loans with contractual interest rates that have followed the inflation rate since 2005 and the margin. Also, the borrowers whose liabilities are indexed in euros are in a much more unfavourable position, where the dinar depreciated by 100% in the past seven years and the average interest rate on the euro from that period was 8%. This inequality questions the principle of equity, and the principle of equal value of benefits, on which the referred judgments on termination of a loan agreement indexed in CHF due to changed circumstances are based on.

In addition, it is necessary to compare the price of an apartment or other real estate, whose purchase was financed with funds from a dedicated loan granted by banks to customers during 2008, and at the time of granting loans (when real estate prices grew in some cities in the interior of Serbia reached the peak, and have not recovered to this day), with the amount owed to the bank by a beneficiary from the loan agreement indexed in CHF, as well as the amount that the beneficiary should return to the bank due to the termination of the contract due to changed circumstances. Namely, in the situation of write-off of 65% of the bank's claims due to the termination of the contract, it would be difficult to conclude "that in the

general opinion, it would be unfair to maintain it in force as it is" which is a cumulative assumption for termination under Art. 133 para. 1 LCT.

Because the loan beneficiary will keep a flat or other immovable property in his property, for which the purchase was decided at the 2008 prices (apart from the fact that the prices of residential real estate in Belgrade, with certain decreases and oscillations, are constantly increasing and are higher than in the time when they were purchased from the assets of the loan), and after ten years of using the apartment and assets, the bank will be returned the nominal amount of the principal, therefore, without the fee for using the funds (the contractual interest to be calculated on the basis expressed in CHF, which is the currency of obligations, in accordance with the currency clause) over a period of ten years. Also, in assessing whether "it would be generally considered unfair to maintain it in effect such as it is " it is necessary to bear in mind that for ten years the beneficiary of the loan benefited from the whole legal transaction (a contract on a dedicated loan, which was followed by an agreement on the purchase of an apartment), because he used the purchased real estate during the whole period, whether for his own needs, or for earning rental income.

The price of a square meter of residential space in Belgrade currently stands at 217,701 dinars (1,814 euros), which is five percent less compared to the end of 2016 when the square meter of the new building cost 228,684 dinars (1,905 euros). The prices of new buildings in Belgrade since 2000 has almost constantly increased, in the second half of 2016 by as much as 22%. The last drop occurred at the transition from 2012 to 2013, as shown in table no. 6:

Table 6: Prices of square meters of residential space in Belgrade

GODINA	CENA KVADRATA
2000.	50.374
2005.	106.730
2010.	195.112
2014.	167.658
2015.	175.328
2016.	228.684
2017.	217.701

Source: https://www.kamatica.com/vest/pale-cene-stanova-u-bg-za-kvadrat-11000rsd-manje/54815, 03.10.2017.

VALIDITY OF SIMULTANOUS CONTRACTING OF CURRENCY CLAUSE IN EUR AND INTEREST AT RATE HIGHER THAN THE DEFAULT INTEREST RATE

In the case law of the specialized commercial courts, the legal position on the permissibility of the cumulation of a currency clause (CHF or EUR) and contractual interest in loan agreements is taken: "There is no unlawful conduct of the bank in contracting the value of the obligation in foreign currency (the currency of obligation) while concluding that payment and charging such a contractual obligation shall be performed in dinars (currency of payment), nor in indebting the borrower by the agreed amount of interest. (Response determined at the meetings of the Commercial Disputes Division of the Commercial Court of Appeal dated November 3, 2015, November 4, 2015 and November 26, 2015, and the Department for Economic Offenses and Administrative Disputes of 30 November 2015). For adjudication in the dispute over the validity of a loan agreement or a clause on a currency clause concluded between a bank and a legal entity or entrepreneur, the court of competent jurisdiction is actually the commercial court which will apply special rules of procedure in commercial disputes in Chapter XXXIV CPC (Vrhovšek & Kozar, 2005, pp. 87-104; Kozar, 2005, pp. 399-414). The legal representative of a legal entity may be only an attorney or a lawyer with a passed bar examination who is employed in that legal entity (CPC, Art. 85, para. 4), which introduced a qualified representation of legal entities in civil proceedings (Kozar, 2012, pp. 877 - 890; Kozar & Počuča,2014, pp. 469-492).

The position on the allowed cumulation of the currency clause with the agreed interest, at a rate higher than the rate of statutory default interest, was also applied in the practice of courts of general jurisdiction, when deciding in the specific dispute about the validity of the claim for nullity of the contractual clause on currency clause in EUR and the consequences of nullity - request for the repayment of "overpaid" loan amount, or more paid annuities, as well as repayment of collateral - pledge statement and bill of exchange: The judgment of the first instance court adopted a claim and it was established that the provisions of the housing loan in 2002 on currency clause in EUR are void, i.ee that the provision which reads as follows is invalid: "The adjustment of the annuity with the rise in the average exchange rate for the euro is made every 1st in the month only if the exchange rate variation of the euro is higher than 5% compared to the last change in the annuity." Also, the respondent bank is obligated to pay the plaintiff, the loan beneficiary, the amount of RSD 460,355.26 in the name of the higher paid annuities, with a default interest as of December 1, 2015, until payment, and to present to the plaintiff all the original copies of the pledge statement ... and original copies of the bill of exchange signed by the plaintiff personally and by third persons for the purpose of securing the claims under the

said contract ... and it is established that the same do not produce legal effect after the validity of this judgment.

The Court of Second Instance concluded that the appeal of the respondent bank was established. The Court of First Instance, with reference to the provisions of Art. 103, para. 1 and Art. 1065 LCT and Art. 20 Law on Foreign Exchange Operations (Official Gazette of FRY, no. 23/02) fully accepted the claim, believing that in the concrete case the rate of the agreed interest was higher than the default interest rate and at the same time the currency clause was agreed, and the entire currency risk was transferred to the client, thereby violating the principle of equality of the parties and the principle of equal value of mutual benefits, and the validity of contractual provisions that determine the obligation of the client to return the dinar equivalent of foreign currency amount cannot be recognized, and as a consequence of the nullity, the respondent is obliged to provide the plaintiff at the account of overpaid annuities, the amount of 460.355,26 dinars, as well as to give the plaintiff all original copies of the security. In reaching the appeal decision, the first instance court failed to fully determine the factual situation due to the incorrect application of substantive law. The court of first instance finds that it is in accordance with the provisions of Art. 1065 LCT the plaintiff was obliged to pay the respondent the agreed interest and to return the received amount of money in time and in the manner determined by the contract, and that the provisions of Art. 20 of then valid Law on Foreign Exchange Operations (Official Gazette of FRY, no. 23/2002 and 34/2002) prescribed that an authorized bank cannot approve a foreign currency loan to a resident. However, in accordance with the provisions of Art. 21 of the same law, it was allowed to contract in foreign currency in the country, but payment and collection are made in dinars. Therefore, the respondent was authorized to contract a currency clause when concluding a loan agreement, the purpose of which is to preserve the value of mutual receivables. Contrary to the position of the Court of First Instance, contracting a currency clause and an interest rate higher than the statutory default interest rate does not represent a double security of the value of the loan. Namely, the currency clause, as stated above, is a safeguard clause whose purpose is to preserve the value of the loan, while the agreed interest rate is paid by the borrower to the bank as the cost of using the funds of the approved loan. In doing so, a bank can freely contract an interest rate with a natural person, which rate must only be determined and determinable, and it is not contrary to the compulsory regulations that the rate of the agreed interest is higher than the statutory default interest rate. The position of the court of first instance cannot be accepted for the time being that the loan in full has been paid and that the plaintiff paid the defendant more than his contractual obligation, since the first instance court, based on the misapplication of substantive law, did not establish all the facts of relevance for adjudication. Thus, there is no finding as to when the plaintiff declared the loan to be due and what was the amount of the debt of the respondent calculated on that date in accordance with the contractual provisions, taking into account the payments made in the name of the loan annuities. In the repeated proceedings, the first-instance court will clarify all the above circumstances and re-decide on the claim, as well as the costs of the entire

proceedings. (From the decision of the Appellate Court in Novi Sad, Gž. 4345/17 of 13 April 2018).

The expressed position of the court is of great importance for the entire banking sector, because in our country the largest number of loans is granted with a currency clause in EUR, and therefore, far outweighs the significance of the individual dispute, in which it is expressed. When considering the currency structure of loans of the Serbian banking sector, at the end of the first quarter of 2017, the share of foreign exchange and foreign exchange indexed loans amounted to 69.7%. The dominant indexing currency in Serbian banks is the euro, with a share of 63.0% (or 90.3% of total gross foreign currency and foreign currency indexed loans), which represents, in addition to the nominal and relative decrease compared to the end of 2016. Following are loans in Swiss francs and US dollars with shares of 4.9% (7.0% of total gross foreign currency and foreign currency indexed loans), i.e. 1.6% (2.3% of total foreign currency and foreign currency indexed loans), respectively, relative and a nominal reduction in Swiss franc loans and an increase in US dollars loans. (https://www.nbs.rs/internet/latinica/55/55_4/kvartalni_izvestaj_I_17.pdf, 05/23/2018).

Position on the validity of the contract on dinar loans with a currency clause was also accepted as the conclusion of the panel - "On controversial issues of the application of law in civil matters" - Banking agreement on a dinar loan with a currency clause - The validity and termination, according to which: "With regard to the determination of nullity of these contracts as a whole, the case law is uniform, by the courts considering that the contracts for dinar loans with a currency clause, concluded between commercial banks, as creditors and natural or legal persons, as the borrowers, are valid because they fulfil the conditions prescribed by the Law on Obligations regarding the form and content of the contract (Subić, 2016).

The position on the lawfulness of foreign currency clause is also taken in the judicial practice of neighbouring countries. Namely, the Supreme Court of the Republic of Croatia confirmed a final decision confirming that the foreign currency clause is legal (even in CHF), but also that the unilateral change in the interest rate, without previously established criteria, is illegal (Kačer & Ivančić Kačer, 2016, pp. 190).

CONCLUSION

The currency clause is the contracting of the value of the obligation in foreign currency (the currency of the obligation), but the payment and collection under these contracts is done in dinars (currency of payment). The currency clause does not represent the method of measuring the dinar amount (not the valorimetar) that the borrower received and who should return, but represents his foreign currency obligation.

The principle of equal value of payments, as the basic rule of double-sided onerous contracts, is protected, apart from excessive damage and banning of loansharking contracts, also by the possibility of termination or change of contract due to changed circumstances.

The court practice on requests for termination of the loan contract due to changed circumstances is not uniform. There is the final verdict on the termination by which the court, adopting the claim, pronounced the termination of the contract on a long-term housing loan "due to significantly changed circumstances", as well as the opposing legal view, expressed in second final judgment, according to which "the increase of the Swiss franc exchange rate relative to the moment of conclusion of the contract in the sense of Art. 133 para. 1 LCT does not constitute a valid reason for the termination of the contract requested.

The law does not prescribe the legal consequences of the termination of the contract due to changed circumstances. There is no settled court practice on this issue. In one opinion, the claim for restitution of the given should be rejected "as premature" until the termination decision becomes legally effective. On the other hand, there is a contrary position, according to which the return of the given is decided at the same time with the request for termination of the contract, in accordance with the application of the rule on the termination of the contract due to non-fulfilment.

In the loan agreements, cumulation of a foreign currency clause (CHF or EUR) with a contractual interest rate is permitted at a rate higher than the default interest.

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EFFECTS OF FOREIGN DIRECT INVESTMENTS ON THE PRODUCTIVITY OF SELECTED COUNTRIES OF CENTRAL AND EASTERN EUROPE

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ABSTRACT

Intense globalization in the last twenty-fifth years has led to a strong increase in international business activities, and foreign direct investment (FDI) has become a key feature of global economic flows. It is considered that the inflow of FDI is an important channel for the diffusion of new knowledge, technologies and different skills across national borders. In addition, FDI contributes to new employment, transformation of the production structure, improvement of production process technologies, and help in the diversification of the export structure, resulting in overall economic growth.

The integration of former centrally planned economies of Central and Eastern Europe (CEE) into global financial and trade flows is an interesting case for analyzing the multiple impact of FDI. Respecting exceptional economic and institutional transformations and the initial decline in economic activity at the beginning of transition process, these countries achieved exceptional growth rates in the mid-1990s. The most important factor that explains recovery and growth is the initial conditions, macroeconomic policies and structural reforms.

The objective of this paper is to quantify productivity because it is used as an important tool for assessing different policies. The paper will analyze the impact of FDI in the automotive industry of the Visegrad Group countries (Czech Republic, Poland, Slovakia and Hungary) on labour productivity. Using statistical analysis we conclude that automotive FDI inflow to the V4 countries increases labour productivity of the industry under study.

Key words: *foreign direct investment, labour productivity, production function, automotive industry, Central and Eastern Europe countries*

JEL Classification: *E23, E24, F21, F43, L62*

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INTRODUCTION

The past twenty-fifth years have seen a dramatic transformation in Europe's former communist countries, resulting in their reintegration into the global economy, and the task of building full market economies has been difficult and extended. Institutional reforms in areas such as governance, competition policy, labor markets, privatization and enterprise restructuring, often faced opposition from vested interests. In the first years of transition all countries suffered high inflation and major recessions. Initial conditions and external factors played a role, but policies were critical too. In contrast to first decade of transition, the early and mid-2000s saw uniformly strong growth. With macroeconomic stability and key market-based frameworks, the region experienced large capital inflows, supported by a global environment and increasing confidence, especially for countries that joined the EU during this period.

With the development of multinational corporations (MNC) and economic globalisation, studies on foreign direct investments have made some major contributions to the finance and management or even the economic literature since the 1960s. In the past 20 years, FDI has rapidly increased to exceed other international transactions such as world output and world trade flows. As more and more MNC tend to explore every single opportunity to invest overseas, FDI is turning into a very important source of economic growth in both developing and developed countries. Consequently, many countries have taken various measures to attract foreign investment.

In global economy, FDI represent the most important form of international business activities. Not only do they represent a cross-border movement of capital, but they also include transfer of knowledge and technology, and thus contribute to the economic growth of the beneficiary country. In contemporary stage of development, FDI are taking over the function of the key development factor and, along with trade, are becoming the basic mechanism of globalisation of world economy (Nestorović, 2015). FDI have strong development potential: firstly, they are an additional inflow of investment capital, especially important for countries that have a low rate and scope of domestic savings; second, they trigger a new economic activity or increase the existing, in the production or service sector; third, one of the most significant effects is the overflow of technologies, knowledge and productivity.

Recently, foreign capital globalisation, particularly FDI inflow has increased significantly in developing countries, due to the fact that FDI is the most stable and predominant component of foreign capital inflows (Adams, 2009). The importance of FDI has emerged from the role played by MNC in creating positive externalities in economic growth through providing financial resources, creating jobs, transferring technological know-how, managerial and organisational skills, and enhancing competitiveness (Kobrin, 2005; Adams, 2009).

The objective of this paper is to quantify productivity because it is used as an important tool for assessing different policies. The paper will analyze the impact of

FDI in the automotive industry of the Visegrad Group countries (Czech Republic, Poland, Slovakia and Hungary) on labour productivity. Using statistical analysis we conclude that automotive FDI inflow to the V4 countries increases labour productivity of the industry under study.

REGION OF CENTRAL AND EASTERN EUROPE

The CEE countries (Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia) vary in terms of area, population, urbanization and the stage of economic development. Nevertheless, they have much in common, including geography, culture, history, and growth models. With regard to the growth model, all CEE countries have, since the 1990s, moved from state-controlled economies to open, free-market economies. Five countries (Czech Republic, Hungary, Poland, Slovakia and Slovenia) achieved reforms that qualified them for membership in the European Union in 2004. They were followed by Bulgaria and Romania in 2007 and Croatia in 2013. All CEE economies experienced a boom before the global economic crisis, with an average GDP growth of more than 5 per cent per year (from 2004 to 2008) and rapid progress. It is clear that a large part of this growth has been fueled by consumption, which is made possible by borrowing and capital inflows from EU-15 countries (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and the United Kingdom). Over the past twenty years, the CEE economies have achieved growth and economic prosperity that can be compared to some of the world's regions. Emerging from the decades of socialism, the CEE countries quickly released the inherent advantages of their economies: privatized state-owned enterprises and implemented serious reforms, which attracted large capital and FDI, and helped boost productivity and increase GDP. Despite the impact of the global financial crisis, felt by Western Europe and the United States, the key strengths and benefits of the CEE economies have remained intact (Radić, Popović, 2015):

• **Highly-qualified labor.** About 22 per cent of the total workforce has a higher education, and 29 per cent of those aged between 25 and 34 have completed a faculty. The number of graduates in the fields of science, technology, engineering and mathematics grew from 6.6% in 2005 to 6.6% annually, so it is estimated that there are 600.000.

• **Strategic position.** The region is located close to a large consumer market and new sources of global growth (Figure 1). The furthest CEE countries are less than 1,500 kilometers from Germany and other West European countries and represent one of the most important markets in the world with nearly 400 million inhabitants and 8.8 trillion euros per year of consumption. On the eastern side of the region are Russia and other CIS countries (the Commonwealth of Independent States), as well as Turkey and the Middle East.

Figure 1. Strategic position of CEE countries
Source: Author's drawing

• **Stable macroeconomic environment**. CEE economies have "enjoyed" the relatively stable macroeconomic climate since the EU accession, even during the global crisis.

• **The exchange rate rarely varied outside the framework of ± 15%** (compared to the euro), and public budget deficits averaged around 3% of GDP between 2009 and 2012 (which is about half the level of the EU-15 countries in the same period) . The total public debt in 2004 did not exceed 60% of GDP (except in Hungary), while the average of EU-15 countries (other than Greece) in 2011 was about 85% (Anderson, Gonzales, 2012).

• **A favorable business environment.** CEE economies have become much easier to operate and in the World Bank survey in 2013, countries of Eastern Europe and Central Asia ranked as the second region in the world for business convenience, passing eastern Asia and the Pacific. The average profit tax rate is 18 per cent (compared to an average of 26 per cent in the EU-15, 22 per cent in Asia, 28 per cent in South America, and 29 per cent in Africa). In terms of corruption, CEE countries lag behind the EU-15, but are far ahead of BRIC countries (Anderson, Gonzales, 2012; Klingen et all, 2013; Bijsterbosch et all, 2009). The average for the CEE countries was 50, which is comparable with the EU-15 countries (72), Brazil (43), China (39), India (36) and Russia (28).

THEORETICAL BACKGROUND

FOREIGN DIRECT INVESTMENT

The end of the era of socialism opened the economies of the CEE countries to access foreign investment, and the governments of these countries were rapidly moving away from state control of their economies. Foreign companies and investors quickly took the opportunity to position themselves in new markets. Companies from Western Europe, the United States and Asia were set up to exploit the knowledge and cheap labor of the region. They acquired the property, built factories, distribution centers and invested in other businesses, launching foreign direct investments at a level much higher than in BRIC countries. At the peak (2007), net flows of foreign direct investment in CEE economies amounted to € 33 billion or 5 per cent of region's GDP – twice the average of BRIC countries (Anderson, Gonzalez, 2012). Investments are focused on several sectors, including finance, automotive industry, outsourcing and offshoring.

In the automotive sector, West European companies and Asian companies invested in local manufacturers and established new factories. In 1992, Fiat bought Polish FSM, Volkswagen took Škoda in the Czech Republic in 1991, and in 1998 Renault bought Dacia in Romania. Audi, Opel and Suzuki opened factories in Hungary, Peugeot, Toyota and Hyundai started operations in the Czech Republic (Guidote, 2008; Pavlinek et all, 2007; Pavlinek et all, 2010; Pavlinek et all, 2011; Pavlinek, 2012; Pavlinek, 2015; Pavlinek, et all, 2016; Pavlinek et all, 2017; Domański et all, 2013; Sass et all, 2013; Sass et all, 2014; Than et all, 2016; Rosemain et all, 2014; Luptačik et all, 2013), and the Peugeot-Citroen group invested in Slovakia. Automobiles also came with automotive suppliers, creating autoclusters across the CEE region. Domestic car sales have been rising, with a growth of more than 20 per cent between 2003 and 2007 (compared to 5 per cent in the EU-15 countries). However, most of the products in this sector are export oriented – almost two thirds of car exports are on the EU-15 market, with 60 per cent of sales concentrated in Germany, France and the United Kingdom.

The inflow of foreign investment has helped raise productivity. In the early 1990s, productivity in the CEE manufacturing sector varied from 10 to 30 per cent of the EU-15 average. Before 1990, productivity was limited due to poor management, limited exchanges and lack of market competition that forced companies to improve business efficiency (Radić, Popović, 2015). National productivity rates were also low due to the large number of employees in the public sector and state-owned enterprises. Foreign companies have brought not only money for capital-endangered industries, but also technologies, managerial expertise and the ability to use economies of scale. All these factors helped to increase productivity. In the automotive segment, for example, the total production of vehicles in the CEE countries has more than doubled – from 1.5 million units a

year in 2000 to 3.4 million in 2011, while employment in automobile production grew by 60 per cent – to 535,000 in 2010.

The international movement of investment capital is related to the development of international trade, and the process of globalization. The emergence of MNC has enabled not only a larger volume of transactions, but also the emergence of new forms of international investment capital. Regardless of the emergence of different forms, in theory, several key forms of international investment are distinguished, which are characterized by certain regularities and legalities.

The most complete and the most widespread classification of international investments was developed by the IMF. In the last sixth edition of the BMP6 methodology, the IMF has divided all international investments into five new categories:

— direct investments,
— portfolio investments,
— financial derivatives,
— other investments and
— reserve assets (IMF, 2009).

There are several definitions of FDI, but the definitions developed by the Organization for Economic Co-operation and Development (OECD) and the IMF are used as an international standard.

He OECD (2008) defines a direct investment as a category of cross-border investment by a resident of an economy (a direct investor) in order to establish a lasting interest in the company in which it is invested and which has its headquarters in another country in relation to the country of origin of the direct investor. The aim of the direct investor is to establish a strategic long-term relationship in order to provide a significant degree of influence in the management of the direct investment company. A lasting interest exists when a direct investor owns at least 10 per cent of the voting rights of a direct investment company.

A similar definition was formulated by the IMF (BMP6, 2009). According to this piroche accepted definition, "direct investment is a category of cross-border investment linked to a resident in an economy that has control or a significant degree of influence over management in a company that is a resident of another economy." The IMF further forecasts "it is established that there is control if a direct investor owns more than 50 per cent of voting rights in a direct investment company, "while" there is a significant degree of influence if a direct investor owns 10 to 50 per cent of the voting rights in a direct investment company. " The direct investor can be: a natural person, a group of natural persons, a company, an investment fund, a government or an international organization, an institution, etc.

In addition to other divisions, by type, drivers and investment purposes, FDI can be (Filipović, Petrović, 2015):

— market-seeking,

— resource-seeking,
— export-seeking,
— efficiency-seeking, and
— strategic asset-seeking.

Market-oriented FDI represent investment in overseas production that are focused on markets with significant growth potential. The main determinants of the location selection for the FDI are the size of the market, the potential of its growth, the GDP level and the distance from the home country.

Resource-oriented FDI are defined by the availability of natural resources, low labor costs, geographical proximity, whereby regional economic integration can be an additional incentive.

Export-oriented FDI are a qualified combination of the aforementioned FDI forms. Production serves a large integrated market, primarily at the local level, but the location mapping across the region is based on cost considerations.

FDI focused on **increasing efficiency** through product differentiation, fragmentation of production and its geographical distribution are directed in accordance with the comparative advantages of the host country, with the local human capital playing a dominant role.

FDI focused on **increasing strategic advantages** are mainly characteristic of MNC's operations and their long-term strategies. Their goal and purpose is to increase and diversify asset portfolios, as well as strategic positioning in target markets.

However, empirical research shows different results. Thus, Choe (2003); Mullen and William (2005); Bhattarai, Ghatak (2010) empirically found a positive link between FDI and economic growth. Turkcan et all (2008) applied the panel data model for the period 1975-2004. On the sample of 23 OECD countries, they proved an endogenous link. Some authors were doing analyzes individually across countries and empirically established a positive impact (Yao, 2006; Gursoy, Kalyoncy, 2012).

According to some authors, the positive impact of FDI on economic growth can exist only if there are adequate human resources in the host country, ie the recipient of investments (Alfaro et all, 2004; Borensztein et all, 2008). In addition, the literature often indicates the importance of FDI in the transfer of new knowledge and technologies (Bajo-Rubio et all, 2010); Vadlamannati, Tamazian, 2009), productivity improvement, competition and export growth (Lee, Chang, 2009; Mastromarco, 2008). Temiz, Gokmen (2014) divided all positive effects of FDI into short-term and long-term ones. Short-term are: the advancement of technology, knowledge and know-how, the improvement of managerial skills, and the growth of physical and financial capital. Long-term are: growth in production, employment and exports, foreign exchange inflows, competition improvement and economic development.

However, one should not neglect the negative effects that FDI have, especially in developing countries. Thus, as the negative effects of FDI, the most common is

the transfer of obsolete technology, i.e. dirty technologies, negative externalities and the exhaustion of natural resources (Duttaray et all, 2009; Thangavelu et all, 2009). In addition, there may be a change in the structure of production and employment towards lower stages of processing and finishing, ie less professional activities and professions, lowering prices and wages in the host country, and the possibility of forming a monopoly structure (Tang et all, 2008).

Lipsey (2002) classifies the range of potential effects of FDI on direct and indirect. Direct positive effects include capital inflows, productivity growth and employment growth (for example, greenfield investments in propulsive industries). The negative effect can be the loss of jobs based on restructuring, that is, the privatization of previously inefficient state-owned enterprises. Spillover effects are transmitted directly, but their significance is no less. Indirectly, FDI can lead to employment growth (through linking with domestic suppliers) and expanding business to an entire chain of domestic companies. The negative effect may be the decision of the investor to import raw materials and semi-finished products from the country of origin or some other country, to lower labor costs, to lose jobs due to discontinuation of connection with previous domestic suppliers or closing because they have not managed to withstand the pressure of competition, etc.

Foreign direct investment brought many changes to the region of Central Europe. Gradual growth of FDI inflows in the last twenty years has led to the emergence and expansion of new industries, often not present in these countries before. A good example is the automotive industry, which belongs today in Central Europe to the principal industries. Automotive industry development has brought many well-documented benefits to Central Europe – growth in industrial production, employment and export. This is confirmed by Dudas (2013), who notes that the impact of FDI in automotive industry significantly decreased unemployment in some regions of Slovakia and the industry has become the major employer in this region. However, there are some other benefits that have not yet been examined sufficiently empirically in the V4 region.

The effects of FDI for the host country. Technology transfer is most often referred to as a factor of importance for the host country. But transfer of technology does not necessarily mean the transfer of highly developed technology to the host country. The impact of FDI on the structure of the economy of the host country depends, above all, on the specific competitive advantages of the host country, on the basis of which the investor has chosen for that location. If there are conditions, the investor can develop an entire network of suppliers (eg auto parts in the automotive industry) and thus stimulate the further development of the structure of the economy. On the other hand, the investor can endanger local businesses if they are not ready for a market game or they can import semi-finished products without relying on the offer of local suppliers (Filipović, Petrović, 2015).

The effects of FDI on the host country are perhaps the most obvious in the labor market. The arrival of the FDI has positive effects in terms of opening new jobs, changes in the structure of demand for certain occupations, changing conditions and working methods (e.g. introducing new occupational safety

standards). However, effects can also be negative if the host country does not have labor legislation defined, so labor, labor market demand, low unemployment, certain categories (older workers) or unemployment in some parts (regions) of the country can occur.

Potential effects of FDI are shown in Table 1.

Table 1. Potential effects of FDI

Positive	**Negative**
Balance of payment level	
Financial inflows as FDI comes in Higher exports from multinational companies	Repatriated profits Higher imports from makret-seeking investors
Enterprise level *Privatisation specific*	
Survival; access to capital, technology, know-how, distribution networks Increased R&D	Closure of privatised enterprises to eliminate competitors; labour shedding, reduced production Centralisation of functions in centres
Greenfield / General	
High-tech activities, higher skill levels, hihger productivity, wages Benefits from multinational company network	Concentration on low.skilled, labour intensive activities External control, dependance on decisions made abroad
Whole-econommy level	
Spillovers to local firms of higher productivity, wages, management methods Development of new activities, leading to higher competitiveness	Attraction of skilled workers away from local companies Local firms unable to compete with multinational companies (+ multinational companies enjoy government incentives) Subordination of economic development to strategies of multinational companies Multinational companies may favour home base when difficulties arise

Source: Adapted from Myant, Drahokoupil (2011)

PRODUCTIVITY

It is well known that productivity is the key to economic growth. One of the most important lessons in economics is that productivity is key to economic growth. Productivity was a main concern of the fathers of modern economics, A. Smith and D. Ricardo, in the eighteenth century, as they considered the advantages of specialization and trade. In the twentieth century, J. Hicks and J. Schumpeter emphasized productivity in a context in which developed countries were in the "Great Depression". Recently, productivity has been a focus of economists concerned about developing countries in their search for sustained growth. For example, a study based on a large sample of countries by W. Easterly and R. Levine (2001) shows that economic growth is mainly explained by productivity growth.

Productivity is defined in economic theory as the ratio of output over input. This translates into how efficiently input resources such as capital and labor are used to produce economic output. Productivity is driven by four components, which are interconnected and interacting with one another (Figure 2):

— innovation,
— education,
— efficiency, and
— infrastructure.

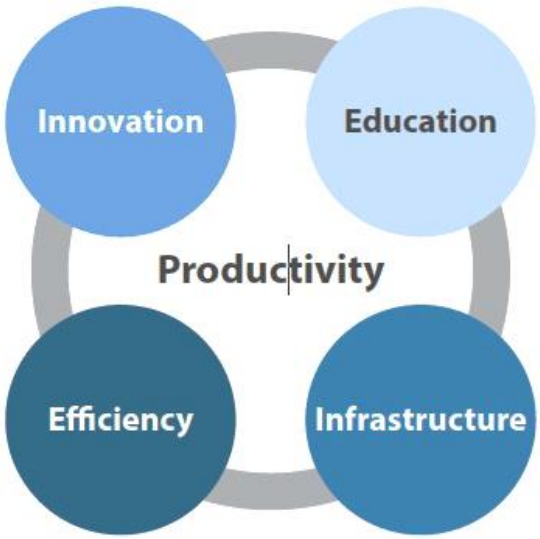


Figure 2. Main components of productivity
Source: Development Research Group, the World Bank, 2016.

Innovation consists of creating new technologies, new products, and new processes, which is characterized by sufficient and sustainable investment in research and development, a creating of competent scientists and engineers, high-quality research institutions, collaboration between academics and industries, and the protection of intellectual property.

Education develops human capacity by teaching knowledge and skills required for economic activities.

Efficiency can be defined as the effectiveness and timeliness with which capital and labor are allocated through the constant renewal of businesses.

Infrastructure, both physical and intangible, is the fourth component promoting productivity (Rivera-Batiz, 2002). Physical infrastructure includes transport, telecommunications, and energy supply systems; intangible aspects include public institutions and the macroeconomic environment. Good public institutions are those that protect the intellectual property of individuals and companies, and make their policy decision making transparent.

The investment needs and level of urgency for reform in the components of productivity depending on the stage of economic development. Developed countries need to prioritize promoting innovation, while also alleviating the regulatory burden. Developing countries need to improve physical and institutional infrastructure and education system. Every country is in a different stage of development and has its own strengths and weaknesses in terms of the drivers of productivity. Governments may use this information to set their priorities and design policies and programs to target these drivers, especially where productivity gains depend on collective action and public goods.

Productivity can be achieved in any industry. However, this paper analyzes the increase in productivity in the automotive industry. There are a number of studies which examine the link between foreign capital and labour productivity in the automotive sector. Thus, for example, Raluca (2010) discovered that higher productivity results in higher wages for employees. FDI increased labour productivity in the short and the long term. Study of FDI impact on automotive labour productivity of Visegrad group was conducted by Dudas and Lukac (2014). The athours have hypothesized that inflows of FDI in the automotive sector of these countries increases labour productivity, and obtained results showed positive correlation. Wang et all (2013) carried out a similar study in China for the period of 1999 to 2008, and found that FDI had a negative role in China's automotive industry. Barrios and Strobl (2002) investigated the impact of FDI on a firm's productivity for the period 1990 to 1998. They found that, in Spain, only firms with sufficient levels of such capacity experienced positive spillovers. Demir and Su (2015) carried out a firm-level panel study for the period of 1998 to 2007 with the intention of exploring three questions regarding FDI in China's automotive industry. One of the question was: "Does foreign investment increase future productivity levels compared to public and private investments?" A non-linear model and the Cobb–Douglas production function were employed, and the results

shows that the FDI into China did improve productivity levels by statistically and economically significant levels. Subash (2006) studied the horizontal and vertical spillover effects of FDI in Indian manufacturing industries over the period of 1994 to 2002, and found positive horizontal spillover for those domestic firms supplying to foreign subsidiaries. However, the author could not find evidence of significant horizontal spillover effect. Negative vertical spillover effects were found in the study, but they were not statistically significant. The results of the study showed that the local firms were not benefiting from the contacts with the foreign firm. Javorcik (2004) indicated that positive spillovers are associated with projects with shared domestic and foreign ownership, but not with fully-owned foreign investments. A survey carried out by Griffith et all (2004) to examine the relationship between foreign ownership and productivity focused mainly on the service sector in Britain. He found that multinational companies played a vital role in the service sector, and that the entry of foreign multinationals by takeover is more prevalent than greenfields investment.

Pavlinek (2014) conducted a firm-level survey to establish the role of the state in the development of the automotive industry in Slovakia. The findings showed that the state had played an important role by accommodating the strategic needs of foreign capital through neoliberal economic policies. Firm-level interviews suggested that long-term state investment in higher education and vocational training is important for maintaining and improving the competitiveness of Slovak-based automotive firms, and it is crucial for the development of higher value-added functions in both foreign subsidiaries and domestic firms. Bruhn and Calegorio (2013) found positive and negative effects arising from FDI on Brazilian industries' productivity. Their results showed that inward FDI leads to positive spillover effects in high-absorption industries and to negative effects in labour-intensive industries

Smarzynska (2002) analyzes the issue of the relationship between FDI and productivity growth of companies on the example of Lithuania. She concluded that the occurrence of spillover can be seen more at vertical level through feedback (cooperation of domestic and foreign companies at different levels of production) than at the horizontal level. Based on quantitative research, Smarzynska concluded that the 10% increase in foreign presence in the downstream industry induces 0.38% production increase of domestic companies. Bijsterbosch and Kolasa (2010) used data on the industrial level to research the relationship between productivity growth and the FDI inflow. The authors concluded that there is a strong convergence effect in productivity at both country level and at industry level.

All previous analyses demonstrate through research of individual economies (industries) positive correlation between FDI inflows and productivity growth in a domestic economy. While examining the issue, many pitfalls are found in many cases, including, for example, the lack of available data, causing not completely clear confirmation whether the total productivity growth is due to productivity spillover from foreign companies directly to individual domestic companies with lower productivity or the presence of highly productive foreign companies in the

economy induces better productivity for the whole economy averaging less productive domestic companies and more productive foreign companies.

Increasing labour productivity is not only a tool to increase efficiency and competitiveness of companies, but has a far greater impact on increasing the economic well-being in a particular state. Labour productivity is also related to many other economic indicators, such as economic growth, competitiveness and the living standard of inhabitants in the economy. Labour productivity growth will be automatically reflected in the growth of labour costs – wage growth, which directly affects the growth of living standards of the population.

Labour productivity growth in one sector has also a spillover effect on other sectors, resulting in labour productivity growth in them too. The means of labour productivity growth (as well as the overall productivity in a sector) are the inflow of new technologies, know-how, new production methods etc. Along with the continuous increase in human capital, these factors create the basis for the growth of the overall labour productivity, growth of the productivity of production factors and ultimately the growth of the entire economy.

A large number of the above effects comes into the economies of the V4 region in FDI from foreign automakers. The share of the automotive production sector for FDI in the industry is in Czech Republic – 25%, Hungary – 23% and 11% in Slovakia (Dachs et all, 2012). Due to the fact that in this region there is only one quasidomestic automaker clearly internationally – Skoda (which also falls under the German company Volkswagen), it is possible to observe the occurrence of spillovers in productivity.

An increase in labour productivity is associated with the inflow of advanced manufacturing technologies, which are carried out by the FDI. Automotive industry is particularly vulnerable to this effect given the high degree of production automation in this sector. However, the level of production requires a quality workforce, on one hand, qualified professionals to control the production technology and on the other, in terms of work efficiency within a smaller finishing and partial works to be manually done by labour force. In both cases labour productivity is reflected.

The transition to a market based economy in CEE countries was characterised by deep structural and institutional reforms. These reforms, particularly the liberalisation of trade and capital flows, played a prominent role and enabled the entry of these countries in the "FDI market". It was expected that the entry of MNC into these countries would foster firm restructuring, change the export structure and generate knowledge spillovers. Therefore, CEE countries provided various incentives to attract FDI. This would enable them to increase their productivity and achieve higher rates of growth that would result in convergence with more advanced countries.

The breakup of the central planning system was in major part the consequence of its lower productivity levels and technological obsolescence. Since productivity growth is regarded as probably the most important single indicator of a country’s economic progress, it is only through increases in productivity that domestic firms

may increase competitiveness on domestic and international markets. Integration of formerly centrally planned economies of CEE into global financial and trade flows provides an interesting case for the analysis of the multiple impact of FDI.

The FDI inflow, in the first place, raises the level of investment and general economic activities in a country or region. Direct consequences are the growth of production or service volumes, and most often, but not necessarily, employment growth. In general, the FDI inflow from abroad does not differ from the placement of domestic investment capital, unless we consider changes in the balance of payments. Often the question of whether foreign investment reduces the domestic investment capital stock has been denied in a number of empirical research. "New Evidence from the analysis of US multinational firms suggests that they are instead larger foreign investments are associated with a higher level of domestic investment. This one the estimated complementarity implies that companies combine domestic production with foreign production to generate final production at a lower cost than it would have been possible with the production in only one the country, making every stage of the production process more profitable, and so, at balance, more abundant." The growth of investment equals both the rich and the poor so the FDI inflow is particularly important for countries with poor capital, because it can not be provided by domestic sources to the extent necessary (Antevski, 2009).

Motives to attract FDI vary among countries depending on their own developmental level. Undeveloped countries count on the positive effects that FDI gives, accepting often the costs of negative ones, such as is environmental pollution, extinguishing or eviction from the domestic market manufacturers and similar. The largest volume of FDI flows is between developed ones industrial countries, which are usually abundant with investment capital. Positive the effects (Choe, 2003; Alfaro et. all, 2004); Mullen & William, 2005; Yao, 2006; Borensztein et all, 2008; Gursoy & Kulyoncy, 2012) that they expect to take advantage of, and for what they offer to foreign investors various types of conveniences and facilities can be:

— raising or maintaining a general one level of business activity (thus preventing stagnation or recession);
— development of less developed regions;
— development of certain industries or maintenance their level of production (eg. automotive);
— downloading new ones knowledge and technology, productivity improvements, most often related to the new, especially information and communication technologies;
— connecting and involving domestic companies in international technological, production and distribution networks of MNC.

When it comes to FDI, it is always a matter of fact which factors influence the decision of the investor to select the destination of the investment. A number of factors have been analyzed in the literature, which can be classified into several categories. Empirical analysis (Filipović, Petrović, 2015) has shown that all factors

that influence investors' decision to invest precisely at a particular location, or in a particular country, can be mistakenly divided into three large groups that are related to:

— basic structural characteristics of the economy,
— general regulatory frameworks of the country and
— policies that define the investment climate in the country.

The basic structural characteristics of the economy include a group of factors that define (Filipović, Petrović, 2015):

— market (market size, per capita income, speed and potential for further market growth, access to regional and global markets, etc.),
— availability, quality and cost of production factors (labor, raw materials and other inputs),
— technical and technological development,
— infrastructure development, etc.

The general regulatory framework of the country implies elements that determine the economic, political and social stability of a country. The investment climate policy implies fiscal policy measures, various administrative measures, trade and customs policies, regulations in the field of labor market, etc.

A.T. Kearney (2005) lists the following factors which significantly influence the choice of FDI country placements:

— market size,
— market growth and market potential,
— access to export markets,
— state subsidies,
— production / labor costs,
— development of infrastructure,
— financial / economic stability,
— economic reforms,
— quality of life,
— political / social stability,
— tax regime,
— the presence of competition,
— consumer sophistication, regulatory environment,
— cultural barriers,
— transparency,
— the rule of law,
— highly educated workforce and others.

Together with trade, FDI are the basic mechanism of globalization of the world economy. FDI play a key role in economic development, and many economies have based their model of economic growth and development on attracting FDI. Generally, FDI flows are expected to have positive effects on economic growth through spillover effects, technology transfer, productivity improvement, and product quality.

RESULTS AND DISCUSIONS

The global economic trends, as a result of dynamic changes in the international environment, certainly resulted in changes in FDI flows, both in terms of their volume and structure and geographical distribution.

Following the escalation of the global economic gains, global economic activity has slowed down, and trade flows have been reduced. Thus, in 2009 for the first time since 1982, a global trade drop of 11% was registered. With the collapse of world trade, the slowdown in domestic demand and a sharp reduction in access to external financing, the global economy has recorded the slowest growth since the outbreak of World War II (Filipović et all, 2011). Data on annual changes in the growth rate of GDP and foreign trade in the period following the escalation of the global economic crisis are presented in Table 2.

Table 2. Review and projections of world economic trends (%)

	2009.	**2010.**	**2011.**	**2012.**	**2013.**	**2014.**	**2015.**
World's GDP	-0,6	5,0	4,4	3,4	3,3	3,3	3,8
Developed economies	-3,4	3,0	2,5	1,2	1,4	1,8	2,3
Euro zone (EU 16)	-4,1	1,8	1,5	-0,7	-0,4	0,8	1,3
Developing and transition countries	2,6	7,1	6,5	5,1	4,7	4,4	5,0
Central and Eastern Europe	-3,6	4,2	3,6	1,4	2,8	2,7	2,9
Commonwealth of Independent Countries (CIS)	-6,5	4,2	4,7	3,4	2,2	0,8	1,6
World trade of goods and services	-10,7	12,0	7,1	2,9	3,0	3,8	5,0
Import							
Developed economies	-12,4	11,1	5,5	1,2	1,4	3,7	4,3
Developing and transition countries	-8,0	13,8	9,3	6,0	5,3	4,4	6,1
Export							
Developed countries	-11,9	11,4	6,2	2,0	2,4	3,6	4,5
Developing and transition countries	-7,5	12,8	9,2	4,6	4,4	3,9	5,8

Source: IMF (2015), World Economic Outlook Update (2015)

The latest projections of the IMF in January 2015, indicate that during 2014, the world economy grew by 3.3%, industrial production has increased by 15%, while global trade has recovered and grew by 3.8 %. The growth rate in developed economies was around 1.8%, while developing countries and transition countries together in 2014 grew by 4.4%.

The global economic crisis has had a serious impact on investment flows. According to World Investment Report data, total FDI, after a steady increase since 2003, were reduced by 16% in 2008 to a record level of $ 1,979 million in 2007. In 2009, the decline was deepened so that inflows fell by 37%, amounting to $ 1,114 billion. A gradual recovery was recorded in 2010, when the value of total FDI was estimated at about US $ 1,200 billion, or $ 1,700 billion in 2011. However, already in 2012, the total value of FDI was reduced, but after that a positive trend was recorded (Figure 3).

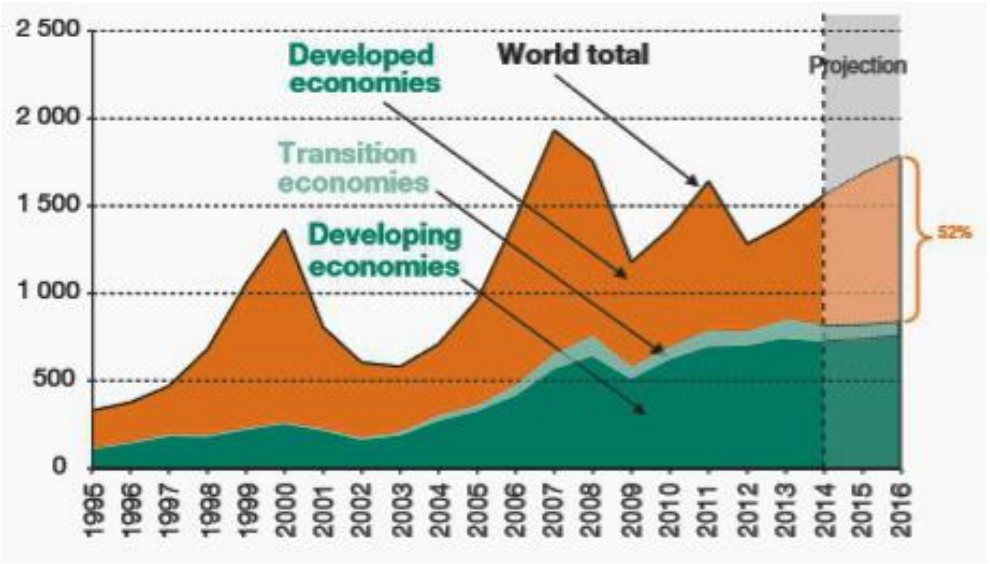


Figure 3. FDI inflows, global and by group of economies, billions of US dollars
Source: UNCTAD, 2014.

The developed countries have so far been affected by the drop in FDI inflows mainly due to the slowed down market. Global FDI inflows rose by 38 per cent overall in 2015 to $1,762 billion, up from $1,277 billion in 2014, but with considerable variance between country groups and regions (Table 3)

.

Table 3. FDI inflows and outflows, billions of US dollars

Region	FDI inflows			FDI outflows		
	2013.	**2014.**	**2015.**	**2013.**	**2014.**	**2015.**
World	1.427	1.277	1.762	1.311	1.318	1.474
Developed economies	680	522	962	826	801	1.065
Europe	323	306	504	320	311	576
North America	283	165	429	363	372	367
Developing economies	662	698	765	409	446	378
Africa	52	58	54	16	15	11
Asia	431	468	541	359	398	332
East and South-East Asia	350	383	448	312	365	293
South Asia	36	41	50	2	12	8
West Asia	46	43	42	45	20	31
Latin America and the Caribbean	176	170	168	32	31	33
Oceania	3	2	2	2	1	2
Transition economies	85	56	35	76	72	31

Source: UNCTAD, 2016.

Half of the top 10 largest recipients of FDI were from developing economies (Figure 4).

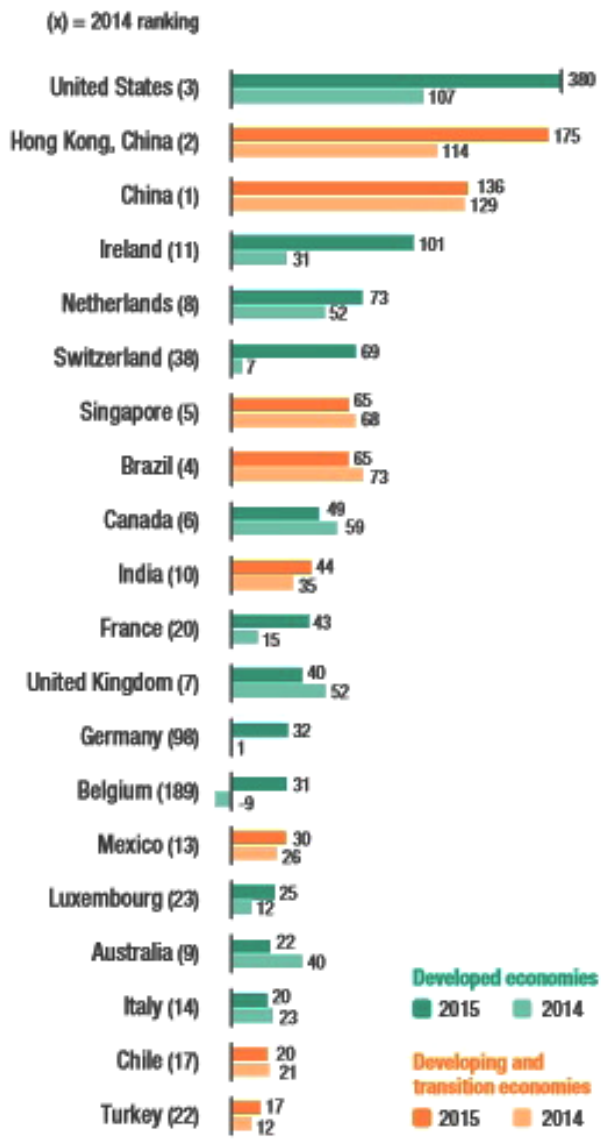


Figure 4. FDI inflows, top 20 host economies (billions US dollars)
Source: UNCTAD, FDI/TNC database, 2016.

The FDI geographical distribution has been changing in recent years. The EU and North America will remain on the list of top three destinations, but investors move the sphere of interest as BRIC countries (Brazil, Russia, India and China). The reason for this is certainly the size of their market, as well as the potential of market growth, the liberalized industry and huge natural resources. The growing interest of the MNC for fast-growing economies and developing countries is justifiable from the point of cheap and highly qualified labor force. Accordingly, FDI in these countries will not only be focused on labor-intensive components of

low added value, but will increasingly move towards innovative and technologically-intensive activities.

In 2014, services accounted for 64 per cent of global FDI stock, followed by manufacturing (27 per cent) and the primary sector (7 per cent), with 2 per cent unspecified (Figure 5).

Figure 5. Global inward FDI stock by sector (trillions of dollars and per cent)
Source: UNCTAD, FDI/TNC database, 2016.

The overall sectoral patterns of inward investment are similar in developed and developing economies, but with a pronounced variations among developing regions (Figure 6).

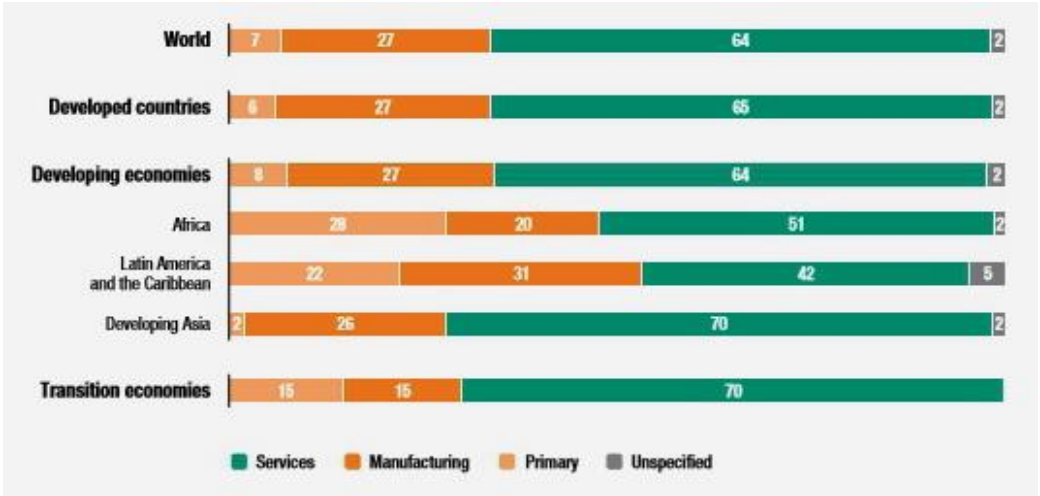
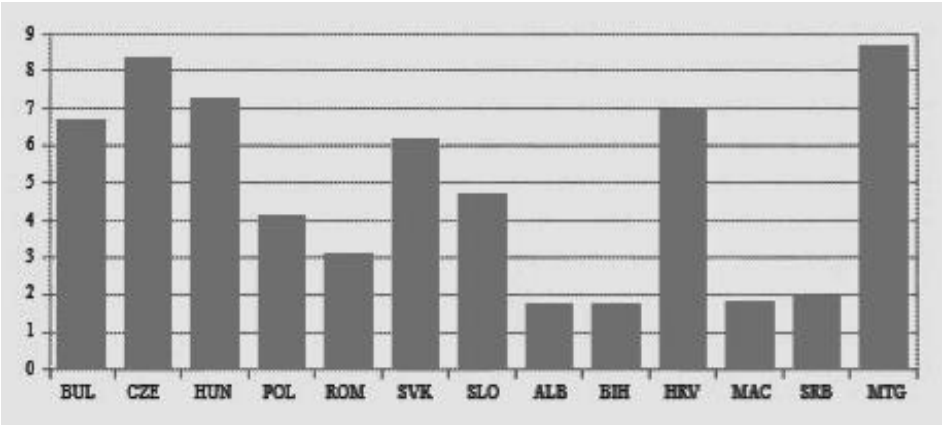


Figure 6. Global inward FDI stock, sectorial distribution by grouping and region (per cent)
Source: UNCTAD, FDI/TNC database, 2016.

After 2000, countries in transition have been the most important destination for FDI, both past and developed, and developing countries. During the period 2000-2013. In the same year, the FDI in these countries grew ten times faster than at the general level. And the outflow of resources from countries in transition has increased by more than 17 times for the same period, which was not achieved by any other group of countries. Individually observed by country, the most annual FDI inflows were advanced transition countries (Poland, the Czech Republic and Hungary), which, despite growing outflows (Hungary and Slovenia), continue to be a significant net recipient of FDI. Observed per capita, the highest inflow of FDIs was achieved by the Czech Republic, Slovakia and Hungary (Figure 7).



Note: *BUL – Bulgaria, CZE – Czech Republic, HUN – Hungary, POL – Poland, ROM – Romania, SVK – Slovakia, SLO – Slovenia, ALB – Albania, BIH – Bosnia and Herzegovina, HRV – Croatia, MAC – Macedonia, SRB – Serbia, MTG – Montenegro*

Figure 7. The cumulative net FDI inflows per capita 1990-2010, thousands US dollars
Source: Derado, 2013, pp. 235.

The countries of Southeast Europe had a much lower inflow of FDI, primarily due to slow economic liberalization and institutional reforms, as well as slow EU accession process. Croatia and Serbia recorded the biggest inflow, but if FDI are per capita, Croatia and Montenegro had the highest inflows that exceeded the average of the countries in transition.

The type of FDI is the largest share of equity investments, while significant amounts of retained earnings occur only in the Czech Republic, Estonia, Lithuania and Slovakia. According to the structure of the situation of incoming FDI by activity, there are some differences between the countries that have become members of the EU and the countries of Southeast Europe in the meantime. New EU member states accounted for about a third of incoming FDI in the manufacturing industry, followed by investment in real estate, financial intermediation and trade. Among the countries of Southeast Europe, Bosnia and Herzegovina and Macedonia (30%) had the highest share of FDI in the processing

industry, which is comparable to the average of the more advanced countries in transition. Investments in Southeast European countries were mainly focused on lower value added, such as the food industry, the metal industry, the processing of non-metallic mineral products, and in some cases oil refineries. At the same time, advanced transition countries have invested in the production of transport equipment, electrical and optical instruments, machinery and equipment.

The FDI trend in the automotive industry of the V4 region can be traced in Table 4. Czech Republic has the largest volume of FDI, which also corresponds with the largest number of cars produced in this region (Dudas, Lukac, 2014).

Table 4. Evolution of FDI in the automotive industry in the region V4, millions US dollars

	CZ	HU	PL	SVK
2001	1705,22	2508,663	1991,40	126,484
2002	2140,906	3358,003	2213,90	-27,95
2003	3953,771	4705,955	3307,10	565,697
2004	4273,45	5926,051	5687,30	1229,641
2005	5452,641	5676,031	5594,70	1920,877
2006	7377,152	7410,622	6990,80	2964,494
2007	10166,765	9439,077	9421,70	3460,08
2008	9745,339	5600,057	6715,00	4293,595
2009	10459,25	4801,415	8385,20	3280,507
2010	9620,053	3665,106	8654,80	3391,235

Source: Dudas and Lukac, 2014.

FDI stock in the automotive industry is a more appropriate indicator to express the relationship between FDI and labour productivity, whereas the flow of FDI is highly volatile and does not reflect the actual amount of FDI in the country, which determines the increase in labour productivity. Table 5 expresses labour productivity in the automotive industry of the V4 (Dudas, Lukac, 2014).

Table 5. Labour productivity in the V4 region in the production of motor vehicles, trailers and semi-trailers as a share of gross value added per employee, thousands EUR

	CZ	HU	PL	SVK
2002	21,9	33,8	19,6	22,4
2003	23,6	36,6	21,0	25,2
2004	25,1	39,1	25,9	23,7
2005	27,8	41,3	28,3	24,5
2006	32,5	43,4	28,8	26,9
2007	35,4	48,2	29,3	37,9
2008	29,0	47,3	33,5	22,5
2009	29,3	33,2	26,0	23,0
2010	37,1	43,9	29,7	31,3

Source: Dudas, Lukac, 2014.

Figure 8 shows a graphic representation of labor productivity in the V4 region.

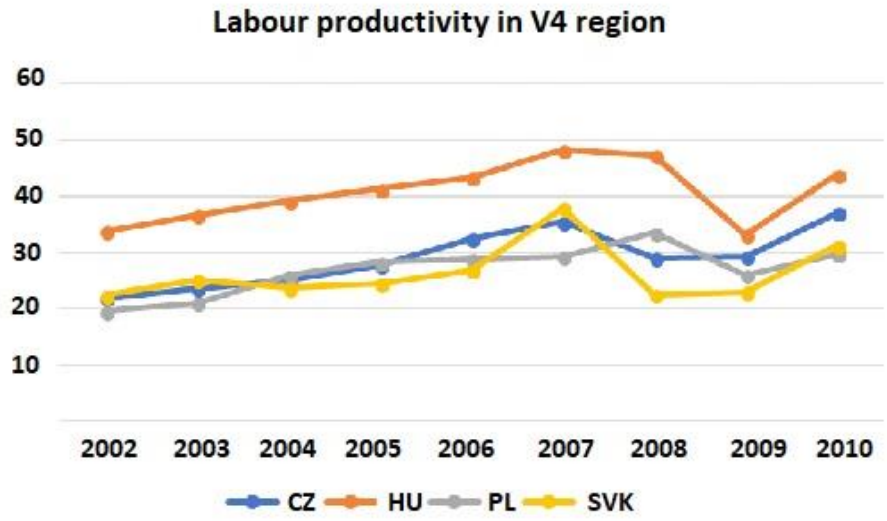


Figure 8. Labour productivity in the V4 region
Source: Author's view based on data Dudas and Lukac, 2014.

Using the statistical methods of time series, Dudas and Lukac proved the hypothesis they set at the beginning of the research, that the FDI into the automotive industry in the V4 region increases labor productivity in this industry. Based on their research, they confirmed the correlation between an independent variable (FDI in the automotive industry) and dependent variables in the same industry (productivity). With regard to the substance of the facts established, it should be noted that the given effect is logically resulting from the nature of production in the sector. Many authors have shown the link between FDI growth and productivity growth. Today automobile production is largely based on automated production, which increases productivity per employee. Physical work of employees within car production processes is mainly used in finishing work and fine tuning the car after work performed by a production line. Given the high division of labour, or implementation of various sub-activities of various employees, there is an increase in workers performance, or their productivity. Large production capacity of automotive factories is reflected in labour productivity.

CONCLUSIONS

The aim of this paper was to examine the potential spillover effects of FDI on productivity of domestic enterprises in CEE countries which are among the most developed New Member States of the EU. The inflow of foreign direct investment at the beginning of transition from centrally planned to market economies was one of the main impetuses to economic and institutional restructuring in these

countries. MNC played an important role in the privatisation process, the subsequent enterprises restructuring, changes in export and market structures, the development of service sector and technological upgrading. Apart from direct effects, MNC are also a major source of technology spillovers to indigenous enterprises.

In the potential host country, FDI bring different resources (capital, technology, management, marketing, organizational knowledge, training of workers, etc.) which serves as an alternative to labor migration and stimulus to economic development. The investment package complements the available domestic factors of production, creates conditions for new employment and work, stimulates the growth of the host country through technology transfer, training of workers, establishing links with the rest of the economy and opening roads to domestic producers towards the world market. By opening branches in the host country, MNC bring in modern technology and other necessary knowledge. They train the local workforce to work at the level of modern technology, educate staff for the functions of managing and organizing modern production processes.

Without the import of foreign capital, companies in less developed countries (countries in transition and developing countries) would greatly hamper the realization of their development goals and aspirations, because it would be more difficult to come up with modern technologies and the necessary knowledge to organize the production process. It can be concluded that FDI, as the largest component of long-term capital flows in transition and developing countries, strongly contribute to the growth and development of the host country's enterprises when its economic policies are sound. The impact of FDI on enterprises and on the economy in general varies depending on the sectors in which FDI have entered, the size and openness of the market, and the quality of the environment created by economic policies. The positive link between foreign firms and total productivity is stronger in countries with more open trade regimes. Also, these countries have a higher positive correlation between FDI and the social product, as well as a higher share of high-tech products in exports.

The Central and Eastern European conutries have recorded impressive productivity gains over the past twenty years. Manufacturing has been the main driver of productivity convergence, whereas gains in services have been less pronounced. Productivity catching-up has been accompanied by substantial inflows of FDI, particularly to financial and business-related services and, to a lesser extent, to industry. However, these general trends mask important differences at the country and industry level. The empirical results point to three main conclusions: there is a strong convergence effect in productivity both at the country and at the industry level; foreign capital plays an important role in accounting for productivity growth in the Central and Eastern European region; and the impact of FDI on productivity critically depends on the absorptive capacity.

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THE ROLE AND IMPORTANCE OF LOCAL ECONOMIC DEVELOPMENT PLANNING - A CASE STUDY FROM SERBIA

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ABSTRACT

Local economic development (LED) is a concept that was launched in the world in the 60s and 70s of the last century, but popularity and special attention from economic policy makers, as well as economic development theorists, has been gaining since the 1990s. Thus, the process of the ever closer connection of economic and social flows on a global scale takes place alongside the increasing turn to local: local resources and comparative advantages as the basis for the development of local communities, and through the "bottom-up" approach, of the society as a whole. This concept allows economic development to be more tailored to local needs and possibilities and, in this sense, to be truly sustainable on the long run. The paper presents the theoretical and methodological basics of creating strategies and policies of the LED. The current theoretical approaches in this field have been pointed out; also the current methodologies developed within international institutions (such as the World Bank, International Labour Organization) and finally, some international experiences related to the practice of implementing LED in some countries in the world have been presented. In Serbia, the concept of LEDs has been initiated in a significant way in local governments since the beginning of this century, and it can be said that today it has become an almost commonly accepted concept in municipalities and cities in Serbia. Related to this in the second part of the paper, practical experience of local self-governments in Serbia in the implementation of the concept have been presented and some of the most important positive as well as negative experiences pointed out.

Key words: *local economic development, methodological basics, development projects, local community, local development funds*
JEL Classification: *R11, R12, O12, O21, O22*

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INTRODUCTION

In the process of transition to free market institutions, by implementing the principle of decentralization, decision-making is lowered from the state level to the level of the local community and the individuals who manage it. Under market conditions, local governments are those who need to actively participate in the process of attracting capital and other productive factors. Their local economic development will depend on their success.

The concept of local economic development first appeared in the early 1960s when local authorities in the western countries realized that their local communities abandoned mobile capital and that their economic potentials and space for employment of citizens narrowed. This created the need for a serious analysis of local economic potentials to be undertaken for the first time and the need to determine the ways in which they can be best used, retained and developed, as well as the analysis of obstacles that stand on this path, in order to achieve the economic progress of the local environment.

Later on, the concept of local economic development is increasingly being applied in the context of the need for economic empowerment of underdeveloped countries and developing countries, where LED is recognized as a key approach in the fight against poverty. It includes the proactive efforts of all actors in weak or underdeveloped communities focused on attracting foreign investment, encouraging economic activities, creating jobs, improving living standards and eradicating poverty. Bearing in mind the importance of LED, the paper analyses the basic concept of local economic development and points out the instruments and techniques that local governments have at their disposal for encouraging local economic development. Based on the longstanding experience of the author on LED projects and programs in local self-government units, the paper presents an overview of local economic development in the Republic of Serbia and points to the current state and main challenges.

The work is divided into three parts. In the first part of the paper, through the literature review the very concept and importance of local economic development is defined. The second part of the paper provides an overview of one of the most commonly used methodologies of LED that was developed by the World Bank. After that, four areas of development and intervention measures directed towards the LED in the Republic of Serbia are shown.

THEORETICAL BACKGROUND

In order to understand the concept of local economic development, we must first define it in a satisfactory way. The broadest definition is the one offered by Coulson, which under local economic development implies any intervention aimed at strengthening the local and regional economy (Coulson, 1997). On the other hand, the World Bank under the concept of local economic development implies a set of activities aimed at building the capacity of the local community to improve its economic future and quality of life for all (Swinburn et all, 2006). Bryant and

Cofsky, when defining LED focus on activities that are carried out in a particular area in order to achieve sustainable socio-economic development (Bryant, Cofsky, 2004). For Čapkova, the local economic development represents a broad strategy through which local actors and institutions try to make the best use of local resources in order to preserve existing jobs and create new ones, as well as to increase the volume of economic activities (Čapkova, 2005). These definitions are well expressed by the modern concept of local economic development that is not limited to economic issues, but which puts the development into the context of the overall quality of life in the first case, i.e. socio-economic development in the second case.

According to the definition of an international organization, local economic development implies general local involvement in the process of development that fosters partnership in a defined space between key actors from the private and public sectors, enabling the joint development and implementation of a unique development strategy, using local resources and competitive advantages in a global context, an involvement which has an ultimate goal of creating acceptable jobs and stimulating economic activity. Some authors see the key role of local authorities in managing existing resources and partnering with the private sector, with the goal to open up new jobs and encourage economic activity (Blakely, Bradshaw 2002). In accordance with the local planning, the strategic orientation of community is to revitalize the population increase trend by applying various measures that would stimulate its economic development (Đukić et all, 2016). Developing the previous definitions, we come to the conclusion that local economic development can be defined as the growth of the capacity of the local economy to generate wealth for the population that makes up one local community, and thus to improve their quality of life by increasing employment, real salaries, value of personal assets, the scope and quality of public services etc. Finally, local economic development is understood as a strategic planning process through a partnership between local governments, the private commercial sector and the non-governmental sector focused on boosting investment that will ensure high and long-term economic growth of the local community. Although there are clearly visible differences among the above definitions, their basis is the same, local economic development is aimed at strengthening the economic potentials of the local level.

In developed European countries, in the local economies that entered the process of local economic development in the early 1960s, the focus of dealing with the local economy has changed over the years. From the very beginning of the study of local economic development, three waves of local economic development have been identified since the 1960s. The following table in a simple way illustrates the peculiarities of each relevant period.

Table 1. Through the history of local economic development

Wave	Focus	Instruments
First wave: 1960 - 1980	Initially, local economic development had the goal: - attracting investments in the field of primary production - attracting foreign direct investments - the improvement of basic infrastructure	The goals were realized through: - investments in infrastructure - large grants / donations - a subsidized loan - tax reliefs - reduced production costs through techniques such as cheap labor
Second wave: 1980 - 1990	Focus is gradually changing and goals become: - retention and connection of existing local business branches - attracting investments by targeting specific sectors and countries	In order to achieve the goals, the cities: - provided direct financial resources for the economy - established business incubators - provided advisory support to the SME sector - provided business start-up support. · invested in the infrastructure
Third wave : 1990 – present day	In the third wave, the focus is shifted towards creating a generally positive business climate, and the goals are: - provision of secondary infrastructure - launching private-public partnerships - directing private investments towards the public interest · targeted investment attraction	Tools that are being used today: - strategies to help the existing economy - improvement of administrative procedures - networking support - cluster development - development of human resources and education system -improving the quality of life

Source: World Bank

It would be wrong to say that every local economy should immediately apply the most modern strategy, the one from the third wave. Local circumstances differ

and it is possible that for a local economy it is a better to combine policies from two or even all three waves, rather than a strategy from one single. What is good for a highly developed economy does not have to be good for others, which may not have well-built access roads, thus that should be a priority. The great differences that exist between local economies indicate that some local economies will rely on different mechanisms and will have to find solutions that are most suitable for their environment. In other words, for each local economy it is necessary to prepare a specific, special program, designed according to its advantages and disadvantages, taking into account potential opportunities and risks.

LOCAL ECONOMIC DEVELOPMENT PROCEDURE

The facts say that economic development must be the basis for the engagement of local communities and that the coordination of this process is one of the most important leverage in the work of the leaders of local economies. The local economic development of the community implies that local leaders (including the private and public sector) recognize realistic opportunities for development and opt for change mechanisms. First, it is necessary to get acquainted with available resources, define development priorities and mechanisms that will be used in order to raise the competitiveness of the local economy, then direct limited financial and human resources and monitor the results of those decisions (Bojović, 2011).

The decision implies the creation of a clear policy that does not deviate and the whole community's support for the implementation of the adopted policy. The decision to start the economic development of the community according to the adopted development policy is a prerequisite for a successful start of the process. Of course, the units of local government have diametrically different resources and their development assumptions are different.

Local economies deal with local economic development using different approaches and methodologies. One concept of dealing with economic development and management of this process, based on experience in the implementation of the work on the LED strategy around the world, is the five-step procedure of the World Bank:

— Organizing the Effort
— Local Economy Assessment
— Strategy Making
— Strategy Implementation
— Strategy Review

Organizing the Effort - In order for a job to be started and completed successfully, it is necessary to do organize it well at the very beginning. Local economic development requires the joint effort of all important participants from

the private, public and civil sectors and their active involvement in the process. The municipality has the main role in coordinating local economic development. In order to be successful, the municipality must be ready and able to carry out this task. An important part of the initial planning phase is an overview of the necessary resources (financial, professional and material) for the formulation and implementation of the LED strategy.

Local Economy Assessment – Getting to know the context of local economic development implies that a person does not venture unprepared into a process, but that he/she uses a detailed analysis of the current state of the local economy. Each local environment in economic and social terms defines the demographic characteristics, the state of human resources and entrepreneurial culture, the technological basis, the state of infrastructure, the scope of the local market, the local economic regulation, including the (un)friendly attitude of local authorities towards local and foreign companies. The purpose of this assessment is to create a local economy profile, with emphasis on local potentials and comparative advantages over neighboring environments and other competitors.

Strategy Making - The strategy of local economic development comes from a strategic plan that contains a general vision of the economic life of the local economy, goals, programs, action plans and projects. In the process of formulating the strategy, all actors must participate and make their contribution. The strategy needs to define what goals are, how to achieve them, who needs to do the work and what work he/she needs to do, who is responsible for what, how to control the completion of goals, what is the timeliness of the strategy, etc. Of course, the strategy must take into account the human capacities for implementation, as well as the financial constraints of the local economy. The goal of the strategy is to take advantages, overcome weaknesses, exploit opportunities and get rid of risks and threats.

Strategy Implementation – Implementation of the strategy is carried out through the implementation of individual measures or action plans in certain areas, such as infrastructure construction, simplification of local regulations, improvement of security or health, land price reduction etc. The implementation of the plan depends on the budget, the people and the institutions. Problems and issues that may arise should be anticipated and it is necessary to prepare for them. Projects and programs are diverse but each of them is not applicable to every local economy. During the implementation it is necessary to monitor the results and, if necessary, to correct the strategy. The effectiveness of the strategic plan is measured by the economic and other changes that have occurred as a result of the realization of the plan.

Strategy Review – Implementation of the strategy should be monitored and evaluated. Indicators must be established to assess the progress and results of programs and projects and make corrections during implementation. Monitoring and evaluation should quantify outcomes, justify expenditures, contribute to improvements and adjustments and result in good management practices. Once a year, the competent authority should make a detailed analysis of the flow and results of the local economic development strategy and make it available to the

public. Assessing the effects of a project or program is helpful in the next cycle of economic development. The high score of the implemented programs is a proof of the success of the program.

These six steps often overlap over time. Building the capacity of institutions is one of the first steps in developing the process of economic development, but it is also a step of unlimited time duration. On the other hand, local administrations need to constantly improve the knowledge of employees, internally reorganize the work, or change relations between institutions. Also, strategic plans, however long-term, must be constantly revised and modernized. As the structure of the economy changes, important participants change as well, and the steps begin to intertwine. However, once the economic development work begins, tracking the sequence of these five steps, as proposed by the above conditions, will help to make the most painless and safest way through its first cycle.

LOCAL ECONOMIC DEVELOPMENT IN THE REPUBLIC OF SERBIA

Until 2005, the units of local self-government in the Republic of Serbia did not institutionalize the development of the local economy. There were individual examples of the teams involved in attracting investments, but no organizational unit within the local government dealt with economic development.

Local economic development in the Republic of Serbia was initiated by international development agencies that introduced the concept and launched a series of projects and initiatives that contributed to awareness-raising among actors at both the local and national level. In early 2006, U.S. Agency for International Development - USAID, through the Program of Incentives for the Economic Development of Local Government Units, based on the experiences of cities in the United States and Western Europe, offers units of local self-governments a model of institutional organization through the offices for local economic development.

REGULATION

The legal framework for local economic development activities is defined by the Constitution and legal regulations adopted at the national level and decisions taken at the municipal level. In the Republic of Serbia, a very large part of the regulations in this respect present national regulations that cannot be changed by the direct activities of local authorities. This, however, does not mean that this regulation should not be part of the analysis, since it is very important to understand how it is being implemented, which is under the jurisdiction of the local administration, and much can be done here.

Key issues of LED and decentralization regarding local self-government units are those related to the competencies and powers of local authorities and resources available for their implementation. The Republic of Serbia is still a highly centralized country in which local self-government has very limited powers.

The functioning of local self-government is defined by the Law on Local Self-Government, (Official Gazette of the Republic of Serbia, 83/2104) the Law on Financing of Local Self-Government (Official Gazette of the Republic of Serbia, 96/2017) and the Law on the Budget System. (Official Gazette of the Republic of Serbia, 113/2017) The law defines local self-government as a right of citizens to manage public affairs of immediate, common and general interest for the local population, directly and through freely chosen representatives in local self-government units, as well as the right and ability of local self-government bodies to manage, within the limits of the law, public affairs under their jurisdiction and those that are of interest for the local population (Official Gazette of the Republic of Serbia, No. 129/2007 and 83/2014 - other law).

In carrying out its responsibilities, the local self-government carries out the following tasks that are important for local economic development:

1) Adopting development programs;

2) Adopting urban plans;

3) Adopting the budget and the final account;

4) Determining the rates of municipal source revenues, as well as the method and criteria for determining the amount of local taxes and fees;

5) Regulating and securing the performance and development of utility activities as well as organizational, material and other conditions for their performance;

6) Adopting programs for the regulation of construction land, regulating and ensuring the execution of the tasks of landscaping and use of construction land and determining the amount of compensation for the arrangement and use of construction land;

7) Adapting programs and implementing local economic development projects and taking care of the improvement of the general framework for operating in the local self-government unit;

8) Arranging and ensuring the use of the business premises it manages, determining the amount of the fee for the use of business premises and supervising the use of business premises;

9) Taking care of environmental protection, adopting programs of use and protection of natural values and environmental protection programs, i.e. local action and recovery plans, in accordance with strategic documents and their interests and specificities, and establishing a special fee for the protection and improvement of the environment;

10) Adopting the basics of protection, use and arrangement of agricultural land and taking care of their implementation, determining erosive areas, taking

care of the use of pastures and deciding on the bringing of grasslands to other agricultural uses;

11) Taking care of and providing conditions for the preservation, use and improvement of areas with natural medicinal properties;

12) Encouraging and taking care of the development of tourism on its territory and establishing the amount of residence tax;

13) Taking care of the development and improvement of catering, crafts and trade, regulating working hours, places where certain activities can be performed and other conditions for their work;

14) Managing the property of the municipality, using the funds in the state ownership and taking care of their preservation and enlargement;

15) Encouraging and helping the development of cooperatives;

With the adoption of the Law on Local Self-Government, a legal framework for cooperation between local authorities, the private sector and non-governmental organizations was created. However, the very concept of local economic development with its substantiality still confuses local authorities across the Republic of Serbia. The legislator gave another authority to the local self-governments in Serbia directly in connection with the promotion of LED, without creating an adequate institutional and legal framework for its implementation, and he/she didn't take into account the resources which are available for that purpose not only to large but also to small municipalities in Serbia. Many of them faced a major challenge when they realized that more and more demands came directly from citizens, businessmen and investors, in connection with improving the conditions of business operations and life, directed precisely to them, and not to the central authorities. Taking responsibility for these issues was more important than the introduction of LED into the list of local government competencies.

TYPES OF INTERVENTIONS IN THE FIELD OF LOCAL ECONOMIC DEVELOPMENT

Local economic development in the Republic of Serbia can be divided into four areas of development whose intervention measures were focused on:

- Establishment of offices for local economic development;
- Development of strategic and action plans for local development;
- Capacity building for writing and implementing projects and
- Development of local social and communal infrastructure.

According to NALED data, the current situation in local government units in the Republic of Serbia is such that 88% of local self-government units have some of the institutionalized forms of organization at the municipal level for initiating and implementing development projects. According to the research of the Center for Equitable Regional Development, 13 different organizational forms have been

identified in the practice so far, which have been entrusted with local economic development tasks at the local level. The LED offices often appear as departments/services within the organization of the municipal/city administration or as departments/offices within the sections/services. Also, there is a practice to introduce the position of a coordinator/expert associate for the affairs of the LED, without creating a special organizational unit, by changing the systematization of jobs within the existing municipal/city organization, or to create a special team for the LED within the Cabinet of the President of the Municipality/Mayor. In some units of local self-government these jobs are performed by the assistants of the President of the Municipality/Mayor. However, all modalities were not exhausted by this in practice, because a number of local self-governments decided to move these offices outside the municipal/city administration and founded them as special legal entities, most often in the form of municipal/city development agencies.

Each of the aforementioned organizational models has good and bad characteristics and it is upon local government estimates to choose one. Local authorities need to recognize their leadership position in creating a partnership, since they are the most responsible for making and implementing decisions that address existing community issues and encourage its development. Practice in Western and Eastern European countries is to establish a special legal entity. This model was also adopted by some local self-government units in the Republic of Serbia that establish a limited liability company. This model of organizational structure is much more flexible and easier to adapt to market changes. It also provides for increased private sector participation, through founding rights or in the board of directors.

Table 2. Organizational forms of LED offices in the Republic of Serbia

No.	Organizational form of the LED office	Unit of local self-government number
1	Section within the department/service of the municipal/city administration	41
2	Department/service within the municipal/city administration	27
3	Agency	7
4	Cabinet of the President of the Municipality/Mayor	6
5	Coordinator for LED	3
6	Public enterprise/institution	2
7	Department within the Secretariat	2
8	City Administration	1
9	Group within the service	1
10	Secretariat	1
11	Permanent Office for Development of Unit of Local Self-Government	1
12	Permanent working body	1
13	Association of Citizens	1

Source: Center for Equitable Regional Development "Mapping of Local Economic Development Offices"

The stated number of local self-governments that have some of the institutionalized forms of the economic development is an important and necessary initial step in the process of local economic development in the Republic of Serbia. Problems with which LED offices in this process most often encounter are unregulated hierarchical relations with unclearly delegated duties. In the local economic development offices, there is no standardized set of services which they provide. Offices mainly deal with the preparation and realization of projects and planning of local development, while other activities are significantly less present.

Personnel problems are also present. The number of employees in the offices of the LED varies and depends on the size of the local community, the number of economic entities, the existence of the Chamber of Commerce and Industry or associations, etc. The average unit of local self-government in Serbia with fifty thousand inhabitants and around two thousand registered businesses, in optimal conditions should have an office for LED with at least five employees (NALED, 2016). However, most local self-governments do not have sufficient human resources to carry out tasks related to LEDs. In addition, certain positions are occupied by persons without the required level of expertise to perform these tasks.

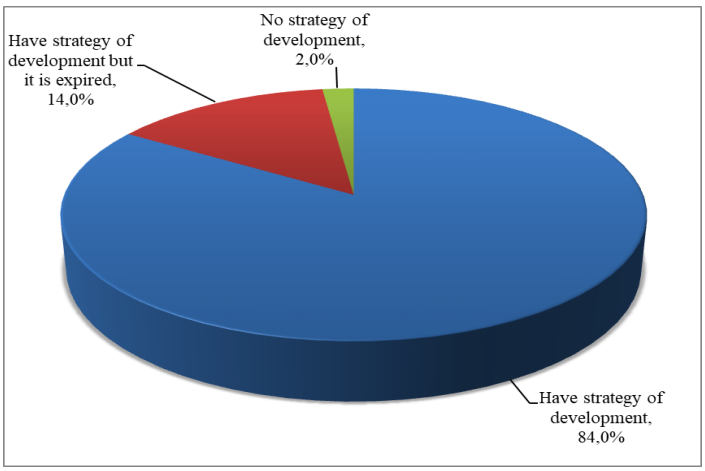

Figure 1. Percentage of local self-government units that have a development strategy in the Republic of Serbia, 2017

Source: NALED

The next important step in the process of local economic development is the adoption of strategic documents that represent an important tool for adapting to a changing environment, allowing clear definition of priorities and determining the best way to use the resources necessary for successful and efficient development. As such, it allows local authorities to deal more effectively with development and growth issues, and local governments that produce and implement their strategic plans are generally more successful in managing local economic development, especially if they do so in a participatory process that allows the participation of all relevant entities in planning the future of the local community. According to the NALED data, 84% of local governments in the Republic of Serbia have a development strategy, 14% have the expired development strategies, while only 2% have not created this document.

Despite the large number of local self-government units that have adopted strategic documents, unfortunately, strategic planning at the local level in the Republic of Serbia is still not sufficiently present. There is insufficiently developed awareness of the importance of strategic planning for local economic development. Strategic documents at the local level are perceived as a necessity to access donor resources, rather than as a very useful tool for managing development processes.

The main problem in strategic planning is the lack of a single planning mechanism at all levels that provides a clearly defined methodological framework for strategy development. In addition, for most strategies there are no elaborated action plans and clearly defined financial mechanisms for their implementation. For this reason, a significant number of strategic documents present just a wish list. In addition, in many units of local self-government, an obstacle to the implementation of strategic plans is a lack of political will and a general consensus on the priorities and development goals. Also, in a large number of local self-

government units, there is a problem of systemic monitoring of the implementation of strategies based on clear indicators. No mechanisms for efficient monitoring and evaluation of their implementation have been established, or for revision in case of need. Local self-governments still need support to build capacities for strategic planning.

When it comes to building the capacity for project writing and implementation, especially projects financed under the EU pre-accession assistance program, the situation varies drastically among local self-government units. The main problem of the capacities for project writing and implementation lies in the insufficient knowledge of foreign languages at the local level, especially in smaller and underdeveloped units of local self-government. In addition, there is no program of formal education in the field of project cycle management, but the education is performed in trainings which are often focused on explaining general concepts without capturing the essence.

The problem is also the frequent fluctuation of labor within the local self-government units. After the political structures at the local level change, it often happens that professionally trained local self-government workers are replaced or excluded from their workplaces, which significantly reduces local capacities in this area. This is especially the case in smaller local self-government units where usually one or two persons deal with projects related to projects.

The poor state of local infrastructure remains the basic characteristic of most local self-government units in the Republic of Serbia. Hoping to solve the accumulated problems of the past, local authorities actively engage in the search for economic projects and projects in the field of environmental protection (water supply, wastewater treatment, solid waste management, shelters, educational institutions, tourist sites and industrial zones). Since 2005, more than 20 projects with a value of more than 100 million Euros were financed by international donors, primarily the European Union. For most local self-government units in the Republic of Serbia, investment in social and communal infrastructure represents the most attractive part of project engagement. The construction of communal infrastructure and the reconstruction of objects of social importance (schools, hospitals, cultural centers, etc.) represent a significant part of all projects related to local economic development. The main objective of these measures is to improve the management of infrastructure services in local self-government units and to intensify investment in infrastructure in order to meet EU standards related to sustainable economic development.

On the other hand, the integrated development of business infrastructure at the local and regional level also needs to take significant place in future local economic development interventions. Business infrastructure elements, clusters, business incubators and industrial zones and parks have generally developed independently of each other, and often independently of local economic systems and development policies (Mijačić, 2012). In order to make local development more effective, it is necessary to link these elements to serve the unique vision and strategic orientation of local economic systems.

CONCLUSION

By theoretical consideration of the concept of local economic development, its significance in the growth of local economy capacities is reflected, which results in an increase in employment, real wages, the value of personal assets, scope and quality of local government services, etc. The most common approach to local economic development is the World Bank methodology in which the special importance in LED is given to the strategic planning process. This process is a five-step procedure and the partnership of local authorities, the private sector and the non-governmental sector is highlighted as a key factor in the LED success. These partnerships aim to encourage the long-term economic development of the local community.

In the Republic of Serbia, the concept of local economic development started to be applied more than 10 years ago. Even if in this period many positive things were done regarding the LED, unfortunately, the desired effects were not achieved. The failures of local economic development strategies were the result of several factors. In the first place, there is a lack of commitment and competence of the decision-makers at the local level to realize the goals, projects and programs provided in the strategic documents. It is important to point out that in the case of strategic documents, in a large number of cases, unfortunately, the procedure and methodology were not followed, which resulted in the development of inadequate strategies.

The strategies of the local self-government units in the Republic of Serbia, as their priorities, envisaged the development of tourism and agriculture, the development of production capacities with emphasis on clusters, industrial parks and business incubators. These are too ambitious development goals because many important levers of influence on local economic development are not under the control of local authorities. In the Republic of Serbia, many classic economic policy instruments are very centralized and are exclusively at the state level, which limits local authorities to influence their LED. In order for the strategic planning process to be effective, it is necessary that local self-government units in the Republic of Serbia, plan LED through matching the offer with real needs of the economy, primarily through the development of infrastructure, improving the competences of the workforce and raising their own capacities to create a more favorable business climate.

Although they have organized legal possibilities for LED, local governments should act proactively maximizing their potentials and shifting the boundaries of their activities in areas that are significant for local economic development. It is necessary to improve cooperation with the economic sector through the formation of mechanisms for continuous consultations and cooperation. In addition, building the capacity for the formation of public-private partnerships will be one of the biggest challenges in the coming period.

Local economic development affairs in the Republic of Serbia have been performed through 13 different organizational forms so far. The largest number

has the status of a section within the department/service of the municipal/city administration or the status of the department/service within the municipal/city administration. When choosing a model for organizing a LED office, the specificity of the local community should be taken into account as well as the defined development priorities in the local strategic documents and, based on that, the appropriate model should be selected.

In addition to the organization of LED, it is also important to strengthen the capacities of both municipal and local economic development staff.

As a conclusion, we want to emphasize that for the future local economic development it is very important that the competent state authorities, above all the Government of the Republic of Serbia, adopt the official methodology for the development of local strategic documents as well as development indicators that would be used in order to follow the level of development of local self-governments in a comparative way. In addition, it is important to define the minimum personnel and business capacity of the company as well as the competences that must be possessed by those who are engaged in the development of strategic documents of local economic development.

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FINANCING IN TOURISM - BASIC SOURCES OF FINANCING THE ACCOMMODATION OFFER

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ABSTRACT

Based on the previous theoretical research and empirical experiences and knowledge related to the development aspects of the tourism economy, it can be concluded that the basic sources of financing all major projects in the tourism economy are share and loan capital.
Today, more as a financing technique rather than as a source of funds, especially from the aspect of how to make returns on invested capital, for investments in certain tourist destinations, it is interesting project financing.
Due to the volume of investments and the duration of construction, financing of accommodation facilities and higher investments in the tourism economy, it is particularly interesting that long-term financing, that is, long-term sources of financing. In today's business conditions, in the domestic and international practice of financing large investments in the tourism economy, the model of financing from the accumulation of owns capital is very complicated or not profitable.
Right on, according to the above, the aim of the research is to clarify the significance of these sources and forms of financing when it comes to financing accommodation facilities of the tourist offer.
***Key words**: tourism, financing, accommodation facilities*
***JEL Clasification:** G10, G20, G30, G4.*

INTRODUCTION

In the contemporary international business, tourism is considered as a service sector with the greatest potential of growth which is expected in the near future. Tourism participates with 10% in the world's GNP, through the tourism over 6% of the total world export is realized and 30% world trade of the services (Premovic et all, 2013).

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The level of development of the tourist offer is measured by the quantity and quality of the basic tourist offer capacity - accommodation, food, transport, then the number of business units (enterprises), the number of employees in the tourism industry and other indicators.

Based on literature research, the accommodation offer in tourism can be defined as, a proposal that encompasses services that meet the needs of people (travelers) for accommodation, food, drinks, etc., and which are provided in specially constructed facilities.

In the world and domestic practice, the basic accommodation capacities include: hotels, pensions, hostels, motels, tourist resorts, lodging, inns and others, and in complementary: spa health resorts, climate hospitals, hikers' homes and houses, workplaces, children's and youth resorts, camps, sleeping cars, boats, private accommodation, etc. (Cacic, 1995, 54).

In short, the accommodation facilities have properly constructed and equipped construction facilities for the provision of accommodation services in tourism (hotel industry and total catering). These facilities can also be defined as spatial, organizational-technical and technologically prepared facilities, capable of accommodating and accommodating people and providing hotel (boarding and extra-boarding) services in them (Hunziker, 1961).

Therefore, in order to realize the tourism economy through the mechanisms of tourism supply and demand, the export of material and non-material values at home, without formal packaging procedures, customs procedures, freight forwarding and other foreign trade procedures, necessary the quality suprastructure and quality infractructure, especially quality accommodation facilities (Vujovic et all, 2016, 323).

In practice, there are various forms of financing investments in the tourism economy, but all these investments can be considered as investments. The investor, whether a legal entity or a physical person, may provide funds for the relocation of a defined project or activity in the following ways:

— self-financing,
— crediting,
— joint venture,
— the issuance of securities i
— leasing (Vujović, Vukosavljević and Bjeljac, 2014).

Different entities appear as investors in accommodation facilities in tourism in countries with a developed financial market. We can subdivide all these entities as potential investors to the tourist facilities of the tourist offer on:

— individuals,
— business entities,
— state institutions and organizations,
— insurance and banking financial organizations; and
— NGO.

Potential investors in order to secure the funds necessary for investing in accommodation facilities in the tourist offer, use different forms of capital insurance on financial markets. All ways of accessing equity in the financial market accessible to entrepreneurs as future investors in accommodations can be divided into two basic categories:

— *loan capital and*

— *action-equity capital.*

Borrowing capital implies a debt trust relationship between the beneficiaries of capital on the one hand and the owner of the capital on the other hand arranged as a credit relationship. A credit relationship may also be direct if it is realized directly between the owner and the beneficiary and indirect if it is realized through a banking and financial intermediary.

Loan capital often appears in the form of:

— investment loans (they do not use mortgages, but other types of guarantees for risk coverage),

— mortgage loans (these loans for covering credit risk take a mortgage) i

— long-term loans (secured by the emission of long-term securities).

Equity or equity capital operates through the form of an entity designated as a joint-stock company.

From a broader perspective, the accommodation offer in tourism, as well as other infra- and suprastructural systems, can be financed on or off the balancing sheet. Generally, financing is recorded in the balance sheets of the investing company; however, off-balance-sheet financing (OBS) or incognito leverage is more frequent nowadays and it is a way for a company to impact its level of debt and liability by not including a liability on its balance sheet. (Finansiranje, https://finansijskoposlovanje.wordpress.com 05.02.2018).

The importance of accommodation facilities is confirmed by the fact that the accommodation offer directly influences the formation of the prices of tourist services and the development of tourism can be confirmed on numerous examples. "Certain sensations (for example, the Occurrence of the Lady in Western Herzegovina) can be decisive for the formation of the price of tourist services in the short or very short term (psychological effects on the demand side), while in the long run the price setting is always on the side of the offer or manufacturer (critical costs). The crucial economy is creating a new value. Thus, e.g. in western Herzegovina, a complete infra and suprastructure should be built in the long run "(Vujovic et all, 2011, p. 573).

THEORY METHODOLOGY APPROACH TO FINANCING THE ACCOMMODATION OFFER

Methodological research is based on the theoretical analysis of the selected literature dealing with project financing in general conditions, and in particular the financing of projects in the tourism economy. Special attention is paid to financing accommodation facilities of tourist offer in the sense that they explore and define the basic forms of financing sources of these facilities.

Based on the literature analyzed, as a common one, it can be concluded that the basic sources of funds for financing accommodation facilities of the tourist offer are: own funds in the form of shares (share capital) and other assets in the form of loans.

The modern concept of economic viability means that the company, in addition to the realization of defined their own goals, needs to maintain or increase the level of wealth per capita (Premović et al, 2011).

'Project finance' is an umbrella term for all aspects of financing of the project with direct debt payoff—the debt is payed off from the project profits instead of the overal debtor company profits—or indirect debt pay off with money coming from the debtor company funds. Therefore, the creditor has clear insights into the money flow, while their only way of return on their investment is the success of the project (hotel, building, lot, etc.), which in itself is the guarantee for the loan (Vujović, 2008; Arsić, 2004).

In addition to intrinsic guarantees stemming from the project, the investor might ask for additional asssurances in case of declining profitability. Such gurantees (direct or indirect) might come form the third party that has invested interest in the success of the project, for example, an industrial or governmental institution that obligated itself to use the offered services (e.g. stay at the hotel) for a number of years. The practice of financing big hotel projects indicates that managers work with large sums of loan capital, but also implement projects financed from shareholder or their own resources. (Ristić, 2011).

Project financing implies return of the invested funds from the project profits. Therefore, the investor or creditor of a particular infra- or suprastructural system relies on debt pay off from future profits of the project, while the assets guarantee it (Vujović, 2008, 237).

Apart from the numerous criteria for the division of projects, more relevant authors point out the following: type of business activity, character of the performer, nature of goals and types of financing (Vukadinović i Jović, 2012, 75).

On the basis of all the analyzed classification and division, as a basic one, one can distinguish the division of projects into: investment and business projects.

According to its characteristics, the suprastructure of the tourist offer of tourism enters into investment projects, since they require large investments in the long term and a large number of participants (construction of capital infrastructure projects, construction of new hotels, factories, introduction of new technologies,

etc.), while business projects require smaller means of financing, shorter duration, require simpler technologies, require a smaller number of participants, etc. (Đedović, 2010).

Investement in tourism industry very often relies on structural financing techniques with large projects to minimize transfer risk and secure money flow. With this approach, the money flow is monitored with emphasis on operation, while the insurance of assets emphasises the financial aspect such as loans and payments. The main reason for such procedures lies in the fact that investor companies need new sources of capital (Miladinovski, 2012). This practice was common for international investor companies in ex-communist countries in the process of privatization of state companies. Also, the aforementioned techniques is usually related to big and complicated projects (Matić, 2017). However, it is applicable to all projects no matter the size, whether it is the construction of a hotel, a ship, a factory or a solar power plant (Ognjanović, Pešterac, 2016).

In 2002, Enron, a U.S. energy-trading and utilities company, confirmed that there are major oversights and drawbacks of the structural financing techniques. Namely, Enron utilized project financing in economically unsubstantiated way, especially unfair to its shareholders and creditors. Its manipulation of the shareholders and creditors, as well as the perversion of information, cast a shadow of doubt on this kind of financing. Further investigation of Enron activities confirmed the boomerang effect of such malpractice which lead the company to bankruptcy (William, 2002).

Main players in project financing are sponsors and financiers (Drljača, 2014).

Project sponsor finances the project and is concerned with its successful implementation. It can be a goverment of the host country, a private company or a business consortium as a future consumer of the goods and services.

Project financiers can come from various backgrounds—companies, investment funds, international development and investment banks, insurance companies, equipment manufacturers, pension funds, future consumers, etc.

Other important players are project company and contractor consortium.

A project can have multiple sponsors. The motivation for participating in a project companies find in the prospects for product manufacture and placement long after the project period with the aim of filling their production capacities. For example, a furniture manufacturer might invest in a construction of a hotel. Secondly, the motivation might stem from profit opportunities. We have seen that the aim of the project if to be profitable from its own resources, without any influence on the passive funds and the credit rating. One way to achieve this is to have a third party guarantee. Projects which are not insured by a third party, which will directly benefit from it, are rare (Leković, Pantić, 2014).

There are many reasons for disagreements between debtors and creditors. Debtors often wish to have their projects financed off the balance sheets, with only partial revela of sources of investment. On the other hand, the creditors are not in the venture capital buisness, (*Venture capital is financing that investors provide to startup companies and small businesses that are believed to have long-term*

growth potential and considerable return rate with higher risk.) meaning they wish to have their pay off guaranteed by the project itself, the sponsors or third party. Herewith lies the challenge of project finance (Bruner and Langohr, 1992).

Successful project financing means structuring it in a way that provides partial or complete pay off from the project profits while ensuring enough capital through sponsorship or third party guarantees. These assurances keep the creditors satisfied with the risk assessment (Suzie and Kathy, 1999).

Account should be taken of the differences between the models themselves or the way in which projects are financed and the way in which funds are available to finance them, regardless of the fact that the theory of equality prevails in theory and practice. So, here comes the ownership of capital or assets, and then decides how, with whom and where to invest. Own-acquired in different ways, or other means, again, and can be reached in different ways, they can be invested in different ways in different projects. Hotel corporations and the public sector appear as the largest investors in the tourism facilities.

For example, in Croatia in 2018, according to information from the Ministry of Tourism, total investments, the public and private sector in tourism, they should reach about one billion euros, with the most investing in hotel companies, more than 630 million euros, while the rest will invest public sector, or counties, cities and municipalities (https://tockanai.hr/biznis/turizam/investicije-u-tirizmu-2018-10415/, 16.06.2018).

RESULTS AND ANALYSIS OF THE RESEARCH

FINANCING THROUGH EQUITY CAPITAL AND CREDIT LOANS

Based on theoretical and empirical research of development in tourism industry, it can be concluded that two main resources for financing big projects areshareholder capital and credit loans. However, the practice has shown that the combination of the two models gives best results. The analysis of the financing models, their benefits and drawbacks, resulted in their classification according to their origin:

- external and
- internal (Ristić, 2011, 341).
- Another basis for classification proves to be significant, the ownership aspect:
- personal (company's own capital),
- other (loan), and
- hybrid (combined) (Ristić, 2011, 341).

Very often, the sheer volume of the investment, as well as the duration of the construction of accommodation or any other investment in the tourism industry, requires a long-term investment plan, that is, a sustainable source of capital. The model of self-financing big projects in the tourism industry today proved to be both complicated and unprofitable. It is imperative to distinguish between short-term and long-term investments because of the capital expenditures, duration of the project, and volume of the required capital (Ristić, 1994).

The business practice has shown that long-term financing often comes from personal (company's own) funds and long-term loans; on the other hand, short-term financing comes from bank loans, Lombard loans, short-term securities, trader loans, and factoring. The tourism industry also finds leasing (of goods, equipment, and capital) as an acceptable source of financing. Furthermore, there have been examples of other sources such as forfaiting, permanent financing, reimbursement credit, vinculating insurance, mortgage, etc. (Ristić, 1990).

When financing accommodation in tourism industry from one's own capital, a company might use: operational funds, shareholder capital, permanent financing, reserves, and long-term reservation of funds. On the other hand, financing from other sources might come from loans, term investments, bonds, etc. (Vujović, 2000).

When choosing an appropriate financing plan in tourism industry, a company must consider the ratio of personal and borrowed capital, type and volume of the projected activities, characteristics of the investment, the risk assessment, and its creditworthiness (Stančić, 2018). Nowadays, the most common way to finance the accommodation in the tourism industry is the combination of loans and shareholder capital with additional subventions and grants to reduce the amount of the borrowed money (Vujović, 2008).

Financing from loans by its nature is characterized by the interest rate which is either fixed from the beginning of the loan or it varies in accordance with the financial market. Loans are tightly controlled in terms of the payment plan and the collateral used as a borrower's pledge of specific property to secure the repayment. It is increasingly common to use the facility under construction as collateral. The overall value of the facility might not cover the loan in full but the creditor has a right of the first offer in the process of selling the asset. However, the creditor might ask from the project manager to guarantee the deadline of the completion of the construction and provide the letter of credit in case of exceeding the budget. This is also known as unsecured loans, without pledging the collateral" (Vujovic, 2008, p.220).

Financing through the issuance of securities (shares) or equity capital represents the financing process in which the financiers practically become co-owners of the pre-emptive value of the purchased shares of the company, that is, the process in which the shareholders of the shares remain without ownership and have the right to withdraw their future profits.

Consequently, shareholders count on the company performing well in the market (since there is no repayment as with loans). The shareholders participate in

the redistribution of the profits in accordance with their stake in the company. “Equity capital can come from the direct money flow, or through bond traders. Many countries support financing from equity capital in hotel and tourism projects through subventions, monetary policy, tax benefits, preferential interest rates, etc.”

Banks and other investment companies have vested interest in the success of the project paying special attention to the analysis of the prerequisites crucial to the implementation of the project. Feasibility studies and money flow projections are especially important in the evolution of a project proposal. Creditors insist on a “powerful” project manager, an experienced co-contractor as an assurance in high-risk projects. Therefore, it is important to have a business plan verified by an independent expert team. In addition, the investors value forecasting of financial, developmental, marketing, and human resource strategy of the company accompanied by a competent and effective management of the project.

Moreover, influential management companies can aid the process by asking for fixed rates in the early stages of the project, thus cutting the costs and the risk for both creditors and investors. To that end, creditors approve of projects capable of repayment from its future profits with special care paid to the interest coverage ratio.

All in all, before deciding on financing a certain project, a bank will primarily insist on insurance and security of its assets. Very often, a bank will hire independent experts to evaluate the hotel based on its profitability and project value, which is an important step in risk assessment (Vujović, 2008, p. 221).

In analyzing and pointing out the advantages and disadvantages of share and loan capital as the main sources of financing of accommodation facilities in tourism, it is necessary to briefly explain the specifics of initial, basic and durable capital in order to understand the increase in share capital.

The founding or initial capital of a company, as the name itself indicates, is the capital by which the founders establish a joint-stock company and start work.

Basic or equity capital, according to Vučurević (2012, 79), is the founding capital increased for recapitalization, either internal or external, while durable or equity is a complex category that includes basic or equity capital, assets, reserves (statutory, statutory and free) revaluation reserves and undistributed profits transferred from previous years and undistributed profits of the current business year.

Changes in the equity capital of joint-stock companies arise in the following cases (Vučurević, 2012, 79):

"The first, which relates to the increase in capital, is every case when old and new owners pay their capital to a given joint stock company by purchasing new shares. It is said that such capital always enters the outside. Even in the case where the existing undistributed profits are reinvested, it is not shared but already remains in the joint stock company.

The second case concerns the reduction of capital due to the withdrawal of shares, when the owners decide to reduce the capital of a particular joint-stock company and then we have a capital outflow.

The third case relates to loss-making operations, whereby the value of capital decreases (reduces), since the loss itself is nothing but a reduction in capital.

The share capital of public joint stock companies may be increased by a new issue of shares, which may be external or internal.

The external issue of shares implies that capital is obtained from the outside, from existing or new shareholders.

Internal recapitalization implies that from the unallocated profit, reserves and revaluation reserves (if the fixed asset is depreciated or depreciated), the share capital increases, whereby the fixed capital remains the same. There are two options for increasing basic or equity capital by issuing new shares at nominal or accounting prices and increasing nominal or accounting prices, where the number of shares does not change".

DIFFERENCES BETWEEN FINANCING FROM EQUITY CAPITAL AND LOANS

When financing the accommodation offer, it is important to compare and contrast equity capital and loans as two primary sources of financing. Various authors have analyzed them and stated major differences as follows (Vučurević, 2013):

— equity capital (share capital) entitles the holder to ownership interest and as such, the holder has a right to a vote. Loan capital, on the other hand, means crediting partnership; therefore, the investor (creditor) only has a right to payment;

— financing from loans is limited in time by the payment due date, upon which the principal amount is repaid and the loan is liquidated. Contrary to that, equity capital is timeless, or as durable as the shareholder is in possession of the stocks, until the holder decides to sell them in the secondary market or the company is liquidated;

— unlike, creditor status within the company, the shareholder has a right to a vote (controlling interest) because they are partial owners of the company with allocated risk;

— in case of bankruptcy, the creditors have a right of the first offer, meaning they are repaid first. The shareholders get repaid if there are any funds left;

— another difference is reflected in the repayment obligation. Companies are obligated to repay principal and interest to their investors and creditors as stipulated in the financing agreement, regardless of the company profits. On the other hand, paying dividends to the shareholders depends on the profits of the company;

— there is also a considerable difference in the risk profit ratio. Shares of the company carry greater risk, hence they bring greater profits. Dividend income and capital gains from shares depend on their price on the secondary market;

— finally, the tax obligations are different. Tax on issued shares is considered as expenditure for the company. The amount is deducted from the net profits. On the other hands, payments to investors and creditors are done from the net profit which is already taxed. Therefore, financing from loans is cheaper than from equity capital.

However, crediting can be indirectly also considered as part of the share financing of the project / facility, assuming that shareholders each in a different way provide funds needed to finance a particular facility / project.

For example, one of the shareholders in the financing of the hotel invests its own funds accumulated in the previous period by performing its own activities, another shareholder may invest funds generated by selling certain assets, while for example, the third invests funds provided from the loan.

It should be emphasized here that if one of the shareholders invests funds in a joint loan project, he is responsible to the creditor, he solves the debt-lending relationship, while the other shareholders and the facility that is jointly financed by creditors have no relationship.

Therefore, in the case of joint stock financing of a specific project, in practice, a special legal entity XY is usually formed, where all shareholders in advance define their rights and obligations regarding financing in terms of ownership and ownership of the future realized project or built object.

The provision of funds from the loan, in the financing of accommodation facilities in the tourist offer, in addition to interest as the price paid by the borrower, are inevitable guarantees or capital which one guaranteeing that the loan will be repaid. The mortgage or guarantee is in some way "trapped" while the borrowed funds are returned to the creditor.

When it comes to similarities and differences in financing with action and loan capital, it is interesting to mention the collection of capital by issuing securities. Depending on which securities it is working, the ownership and debt trust relationship is again expressed here.

If one of the participants in the financing of an object (hotel or a winter ski center) A, broadcasts shares in its own corporation Z to secure the funds necessary for investing in project A, it sells part of its own capital, where the equity aspect is in question. If the funds are collected by issuing bonds, then there is a debt trust relationship, in fact lending.

As a very current form of financing investment and business activities in international and domestic currency, similar to lending, in the last decades, leasing has been present.

As a form of financing, it is quite similar to crediting, leasing, it can be said, is a modern way and a specific form of financing the investments by which certain fixed assets (devices, machines, equipment, etc.) are leased out. Leasing has a positive impact on economic growth. In the conditions of turbulent environment and strong competition on the market, enterprises, tourism organizations and individuals, for the development of their activities, constantly need financial resources (Vujovic, et all, 2014, 116).

Leasing and loans as debt instruments of enterprises and individuals, with internally generated funds in the form of unallocated profit or savings and with the issuance of equity and debt securities, represent the most important external sources of financing investment projects in the broader sense of the word, and in particular it is and should be a source of financing the tourism industry.

As an alternative model of investment financing in practice, it emerged at the end of the 19th century. Leasing (English leasing) means leasing, renting. The said word simultaneously means a contract by which one party undertakes to transfer to another contracting party the subject of the lease for a certain period of time or for a specific use (business), and the other party is obliged to pay the determined fee (Stakic i Stamatovic 2003).

Based on the analysis of the research under the heading "Financing of tourist activity" (Vujović and others 2014) conducted in Western Serbia in 2014, the advantages for companies and entrepreneurs who want to establish and expand business activity, procurement of equipment through leasing is a better solution than using a loan of at least three reasons:

— purchased equipment can be used as long as the profitability of its work results is at a satisfactory level,

— after expiration of the leasing contract, the equipment can be replaced with even more modern and

— in case of leasing, upon expiry of the contract, the lessee decides whether to keep the equipment in his possession or not.

In this research, the authors see the advantage of leasing as a form of financing investments in relation to crediting in the ability of investors to use modern and expensive equipment, and if they do not have enough own funds.

Thus, by comparing the collection of funds by issuing shares and obtaining funds by taking a loan, in order to determine what is more favorable for the investor, it comes to the conclusion that besides the concrete conditions of these two models of obtaining funds, there are a number of economic and political factors, such as the development of the financial market, inflationary movements, political stability, etc., affecting the terms of financing.

The financing of accommodation facilities in tourism is exposed to the influence of various factors from the environment, the so-called external factors, with the particular importance of the factors and elements of the financial system. Legislative and legal regulation of the financial system clearly defines the rules and conditions of project financing.

Different factors and elements from the external environment in different ways affect the financing of projects, with the effects of the factors and elements of the financial system directly affecting the financing of projects in terms of previously defined conditions.

Briefly, all factors of the financial system can be divided, or grouped into three groups: factors related to financial institutions, factors related to financial markets and factors of financial instruments.

Laureate of the Nobel Prize in 1991, Ronald Coase, external factors that can have a decisive influence on the behavior of business subjects seen as transaction costs. Exploring the significance of transaction costs in the economic system, this Nobel prize man puts a sign of equality between the market and the company.

"In addition to production, there are transaction costs. Transaction costs (some of which depend on the character of technology) are economic forces that determine how resources will be linked, or whether contracts will be concluded on the market or the enterprise will be established as a contractual arrangement, and whether the companies will interconnect with special contracts vertically integrated in the market or outside the market. A company is an efficient organization only if the transaction costs within the enterprise are lower than the transaction costs (cost of using the price mechanism such as the costs of disclosing the relevant prices, the costs of negotiating and concluding a contract) that would arise on the market" (R.H Coase, 1960, p.42).

BENEFITS OF THE ACTION CAPITAL WITH REGARD TO CREDIT

When it comes to share capital as a source of funds for financing tourism accommodation facilities, the capital user appears in the role of the recipient and the owner, while the equity provider proportional to the value paid out for the purchased shares appears as the future manager and beneficiary of the realized profit.

Share capital, in principle, regardless of whether it is a state or private property, in the financing of tourism tourism suprastructure projects, analyzing all the advantages and disadvantages in comparison with other investment models, has multiple advantages.

As stated by some authors (Rous, 2003), the reasons and motives that give priority to share capital in relation to the loan code for financing investment projects of tourism suprastructure, among others are:

— maintaining the optimum balance between founding and basic-equity capital on one hand, and maintaining optimal structure between individual segments of own capital and its relationship to loan capital on the other,

— the degree of risk of investing in secured capital. This reason has its expression in the fact that the arguments for the provision of capital in the form of share capital are stronger in all those cases where the risk of investing mobilized capital in one business venture is higher;

— the degree of indebtedness of the subject. If the economic entity is heavily indebted or approaches the allowed limit of indebtedness by borrowing, and has a lack of capital for further development, then the only issue of shares is the manner of insuring capital,

— tax policy also has a major impact on investors, when deciding on the provision of capital for investing in a material basis. If tax benefits are preferred, for example, bonds, it is realistic to assume that the decision to provide additional capital will certainly be directed to the loan capital. In the case where tax relief relates to shares, this will be the case with share capital and
— the current conditions in the capital market are one of the most important reasons directly affecting the decision of the entity to use the share or loan capital.

Of course, there are other factors that influence the decision on which form of financing to apply, but here we list only some of the more important ones. In all market economies, the interest of investors must be primarily secured, and the investor himself, when investing his capital, must have the feeling of total security and confidence in the mechanisms of the capital market and the state as the regulator and controller of that mechanism. Investors on the material basis and their interest should be protected against the risks that come from the users of the capital, by the intermediaries in the capital market and by the risk of capital repayment and collection of interest income (Vujovic, 2008).

FINANCING FROM COLLABORATIVE PROJECTS

In construction of certain major infra- and suprastructural facilities, there may be more than one interested parties. The collaborators then establish a new company where a power struggle is not uncommon (Kapor, 2006, 18).

However, there are benefits to a collaborative project and working with partners with same goals and multiplied resources.

This is the case when:

— a project is outside the scope and financial abilities of a single company—then, the partnership can be complementary;
— having a big collaborative project is more profitable than a small project managed by a single company;
— the risk allocations are better shared among the partners; and
— one or more partners have tax benefits.

Financing from collaborative projects carries its own set of risks. Therefore, the success of the project, especially with multiple partners, depends on competent risk management. Since different stages of the project implementation are characterized by different risks, the funding and the creditors need to be actively secured. The initial phase is often a prolonged planning and projecting, when the neccessary equipment is purchased and various aspects of construction are negotiated, followed by the construction phase. The risk increases with rising spending on materials, equipment, and work force.

The end of the construction phase is by no means the end of the project. Sustainability and profitability of the facilities are still questionable and that is the

real test of the fisibility study and project planning. The project implementation is finished only when the facilities have proven to be sustainable and profitable for a prolonged period of time.

Most projects are financed by a single or a group of investors. However, big projects often require various investors for various project stages. This stems from different risks arising from different phases of the project, as well as different characteristics and capabilities of the investors to accept the risks. For example, certain creditors only loan money short-term, or are specialized for a specific stage of the construction process. Some might ask for third party assurances, while others might offer lower interest rates, etc.

The benefits of financing from collaborative projects lies in its process of accumulating material value from its status of the debtor itself, therefore allowing for favourable ratio between the project assest as a collateral and the loan sum.

Most common benefits of collaborative project financing for the developers and investors are (Vujović, Kvrgić, 2009, 90):

— insurance of funds – favorable loans;
— insurance of minimal engagement of company's own funds;
— maximizing the loan with fixed interest rates;
— aligning the repayment with the money flow;
— aligning the repayment in foreign currency with the profits in theatcurrency;
— minimazing investment costs;
— achieving the planned profit rate;
— engaging more public and private investors;
— achieving the neccessary level of flexibility in financing.

There two key benefits for all parties in collaborative project financing:

— increasing availability of various sources of financing which in turn increases the chances of successful implementation of a project that would otherwise be unprofitable based only on equity capital or direct borrwing.
— decreasing the rick because it is allocated to a larger number of participants.
— In case of risk transfer by various financial instruments, it is common to issue securities or financial derivatives: options, futures, swaps, and forwards.

PRESENTING THE PROJECT FOR FINANCING

When preparing the project proposal for presenting to future investors (whether they are creditors or shareholders) several important aspects must be considered (even though the investment companies will perform analysis of their own):

— it is often insisted on project manager to secure a part of the capital even before the project proposal is submitted for consideration;
— financial and business plan must be verified by an independent expert panel through a feasibility study;
— creditors often hire independent agencies to evaluate the technical aspects of the proposed construction plan, especially against the proposed budget, and often require the project manager to provide a letter of credit in case of exceeding the agreed framework in terms of time and money;
— creditors insist on efficient and competent management of the hotel, even if this means hiring an outside management company;
— location of the hotel is also evaluated to determine its suitability to the target clients;
— hotel management contract must make sure that the income of the management structures is directly related to or dependent on the hotel profits.

Investing companies, by default, require a submission of independent study on financial, market, and marketing potentials of the project proposal. Since their main goal is profit, proposal evaluation done by a renowned consulting agency is of utmost importance. A feasibility study is a detailed risk assessment of the potential of the company to service a long-term debt and repay the invested capital. This study is comprised of:

— a description of the state, region, and location of the proposed facility, including economic and demographic data;
— a study of current and projected tourist trends in the region;
— an analysis of the business operations of the competitors;
— a market analysis, including the existing supply and demand of the hotel capacities in the area;
— comments on the proposed location of the hotel, as well as the projection of the average room rate and utilization degree;
— a report on the projected profit and loss, including all the costs and incomes from the gross operational profit;
— "A sum of money needed for the project calculated from the preliminary assessment, capital expenditures, and financing models" (Ristić, 2011, 856).

MONEY FLOW

Gross operational profit is a constant source of income in project financing. Estimated money flow indicates the potential of the project to service a long-term debt and repaid the invested capital. Money flow is the amount left after the tax and investment gain are deducted from the gross profit.

"Gross operational profit includes operational costs and profit, while some of the non-operational costs are paid separately. A typical money flow report will include the following:

— lot rent – fee paid for the location of the hotel;
— building insurance – considered as a construction cost;
— refurnishing and equipping the facility – calculated as a percentage of the initial cost of furniture and equipment, or as percentage of construction cost, or percentage of income;
— management agency fee – if the hotel is run by a management agency , its fee is tied to the gross operational, though it is possible to cover the fee after the repayment of debt for the fiscal year;
— debt repayment – it can be organized in equal installments over an agreed period of time, or in proportionally smaller or larger installments in the beginning and in the end of the loan period (yearly debt consists of equal and regular installments, which lessens the money outflow in the beginning of the project when the income is usually smaller);
— interest rate – the feasibility study considers a fixed interest rate in calculating its value (however, this rate often fluctuates)" (Ristć, 2011, 853).

Deductions from the gross operational profit leave an annual excess before the tax reductions. After all that, the tax on investment gain is deducted, plus insurance against currency fluctuations. Because of these fluctuations, creditors often grant a loan in the same currency as the expected profit. However, the most difficult obstacle is how to reduce the risk of inability to transfer money and property. Tourism industry circumvents the issue by paying outside the destination itself, that is, by paying clients, tourist agencies, guides, etc. The money goes through creditors who keep a percentage for repayment, while transforming the rest of the money locally.

Before investing, creditors evaluate the appeal of the project proposal in various ways. One of the important aspects for an investor is the capital turnover. It represents average annual income from the investment. Moreover, they place importance on the loan period – number of years needed for the investment to pay off. However, neither approach is perfect.

Focusing on the capital turnover ignores the temporal dimension of money, while the second approach ignores the effective devaluation of base capital due to inflation. Therefore, the investors consider discounted cash flow to evaluate the present value of all future cash estimated and discounted by using cost of capital to give their present values. The sum of all future cash flows, both incoming and outgoing, is the net present value, which is taken as the value of the cash flows in question. This way, the invested money is repaid from interest rates.

Therefore, the project whose net present value is higher for the same amount of invested money is more appealing. Hence, the discount value represents the value of the project expressed in:

— sales revenue in its last year of the projected money flow;

— value of future money flow after its last year of implementation.

"The projected sales revenue of a hotel is calculated from multiplied gross operational profit at the time of the sale. The discount value, together with the annual discount money flow, is used to calculate net present worth."

Furthermore, when evaluating investment projects, tax fares need to be considered. However, tax deductions and exemptions in the early stages of the project can maximize its efficiency. Finally, the internal rate of gain, which should be higher than the interest rate on the principal, is highly important for investors. "The internal rate of gain represents net present value of zero thus equating the current net value of the money flow to current value of base capital (money outflow)".

CONCLUSION

When it comes to financing tourist accommodation facilities, based on previous theoretical research and empirical experience, it can be concluded that the basic models of financing all major projects in the tourism economy are shareholder and loan capital. However, examples in practice, the financing of the construction of accommodation facilities of the tourist offer, the combination of action and loan capital, stand out as the best model.

Due to the volume of investments and the duration of construction, financing of accommodation facilities and higher investments in the tourism industry, it is particularly interesting that long-term financing, that is, long-term sources of financing. In today's business conditions, in the domestic and international practice of financing large investments in the tourism economy, the model of financing from the accumulation of own capital is very complicated or not profitable.

In practice, long-term financing is made from equity and long-term debt, and short-term financing is done through bank loans, lombard loans, short-term securities issue, commercial loans and factoring. In the tourism economy as a special source of financing (equipment, goods and capital), leasing appears as an acceptable model of financing.

In addition to the aforementioned, in the financing practice of the tourism economy, other sources of financing also appear: forfeiting, permanent deposits, ranbus loans, vinculative loans, mortgage loans, etc.

When choosing the financing of accommodation facilities by own funds, the following can be used as sources: business fund, share capital, long-term deposits, reserves and long-term provisions, while in the decision for the use of other assets, sources such as loans, time deposits, bonds, etc.

Pursuant to the previously presented work, it can be concluded that investors in the tourism economy in the financing of large projects, in order to control the flow of money used in the project, implement a structural financial technique. This financial technique includes an overview of the flow of money by giving priority

to operations, while in securing the asset the flow of money focuses on a financial aspect such as loans and payments. The reason for such activities is that companies investors need to have new sources of capital. This type of financing of large projects was used by international corporations in the former communist countries in the affairs of privatization of state-owned enterprises. This technique of project financing is characteristic of large and complicated projects. However, this technique is applicable to all types of projects regardless of size, whether it is the construction of a hotel, ship, factory or solar power plant.

However, in addition to the positive features of the previous project financing technique, that there are flaws and negative features in practice, it was previously explained on the example of Enron.

Finally, in accordance with the presented research of the source or model of insurance for funding of tourism accommodation facilities, the final conclusion is that equity and lending are the main sources of financing, with priority being given to share capital.

Based on the research of the selected literature as an advantage of the action capital in financing the accommodation facilities of the tourist offer, which is especially emphasized in the paper, we highlight the following: maintaining the optimum balance between founding and basic-equity capital on one hand, and maintaining optimal structure between individual segments of own capital and its relationship to loan capital on the other, the degree of risk of investing in secured capital. This reason has its expression in the fact that the arguments for the provision of capital in the form of share capital are stronger in all those cases where the risk of investing mobilized capital in one business venture is higher; the degree of indebtedness of the subject. If the economic entity is heavily indebted or approaches the allowed limit of indebtedness by borrowing, and has a lack of capital for further development, then the only issue of shares is the manner of insuring capital, tax policy also has a major impact on investors, when deciding on the provision of capital for investing in a material basis. If tax benefits are preferred, for example, bonds, it is realistic to assume that the decision to provide additional capital will certainly be directed to the loan capital. In the case where tax relief relates to shares, this will be the case with share capital and the current conditions in the capital market are one of the most important reasons directly affecting the decision of the entity to use the share or loan capital.

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THE EUROPEAN UNION FINANCING SYSTEM

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ABSTRACT

The main objective of this paper is to provide overview and analysis of the financing system of the European Union. The paper presents a historical overview of the development of the Funding System of various EU policies, the budget of the European Union, as well as its budgetary expenditures and revenues. European policy is based on solidarity and assistance of the developed to the underdeveloped, as confirmed by the fact that more than 1/3 of the EU budget is spent on: reducing the differences in the development of its regions, improving the living standards of the population in them, restructuring their industry, developing infrastructure, creating new jobs, etc. The author analyzed sources of revenue to fill the budget, the policy of spending budget funds in a seven-year period and the impact on the development of underdeveloped regions-the regions in the European Union.
Key words: *European Union, finance, budget, expenditures, revenues*
JEL Clasification: *P40*

INTRODUCTION

The European Union is an organization that is different from traditional international organizations, such as the International Monetary Fund or the United Nations, funded only by the contributions of its member states. Since their formation, the European Communities (Europen commission, 2007) have had the need for their own sources of funding.

The way of financing European communities has undergone various stages of development. In the course of the past decades, there have been serious disagreements over the financing of the activities of supranational European institutions. On the one hand, there was a clash between the Council of Ministers and the European Parliament about the impact on budgetary policy, and on the

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other hand, there were major debates among the member states on the issue of a fair financial allocation of budget funds. For all these reasons, numerous rules and procedures have been developed and constantly upgraded, which did not eliminate the conflicts, but provided the operational financial function of the European Union. This, among other things, has contributed to the fact that the European Union's system of financing has become very complex and difficult to understand.

Initially, the European Economic Community was funded by member states' contributions. As with conventional international organizations, the size of member contributions depended on their economic wealth. The extension of integration into many areas of economic and social life has contributed to the gradual liberalization of the financing of the European Economic Community, which was the result of the self-management of the European Union's common policies and the expansion of the jurisdiction of communitarian bodies (Ilić-Gasmi, G., 2004,182).

In order to secure the financing of the European Union, not only its contributions, but also its own sources of revenue, member states had to renounce one part of their fiscal sovereignty. In theory, this is an open question of the so-called fiscal federalism at the supra-national level (Gnjatović, D., 2003, 26). The European Union disposes of its own financial resources, but this does not mean that it eliminates the possibility of Member States' influence on the activities of the European Union. Self-financing means that the European Union has complete financial sovereignty, since the principle of shared competencies, i.e. limited powers (EU Treaties, Belgrade, 2004) applies in the field of finance.

In addition to the European Coal and Steel Community, the other two communities were financed only by the contributions of the Member States during the first years (European Union Public Finance, 2002, 16). The system of own revenues of the European Community was introduced only in 1970, and began to function in the following 1971. Gradually, the importance of member states' contributions to the financing of the European Economic Community declined, so that since 1985, European Community expenditure has been largely financed by own-source funds. This system of financing has caused many misunderstandings and several crises in the finances of the European Union, which has led to the continuation of proposals for finding better financial sources that will be harmonized with the needs of the integration process.

The European Union has its own revenues and expenditures. The revenues of the European Union consist of taxes, duties and direct contributions and other fees arising from the Treaty on establishing the European Economic Community. In doing so, the European Union does not collect its own revenues independently, but it is done by the Member States on its behalf. They collect the revenues of the European Union according to their national regulations and submit them to the European Commission. By the year 2001, the Member States could retain 10% of the funds collected for the collection costs, and since then this amount has been increased to 25%.

Over the past 20 years, the planning of revenue and expenditure of The European Union is based on the Financial Perspective system, or as it is still translated, the financial projection or financial framework, which means mid-term programming of EU expenditure. Drawing up the financial perspective, precedes the adoption of a document called the Interinstitutional Agreement of the European Parliament, the European Commission and the Council of Ministers, which contains the agreed most important elements of the revenue and expenditure side of the financial perspective. The Financial Perspective contains a plan of revenues and expenditures for each year (usually) of the six-year period for which it is adopted and represents a financial expression of the long-term objectives of the European Union agreed between the Member States. It should be kept in mind that the financial perspective does not replace the annual budget of the European Union for the years for which it is delivered, but it is a planning instrument that contains the budgetary priorities for the medium term. In financial terms, the document is adjusted for each year for amounts of actual amounts of revenue and expenditure of annual budgets. The goal of long-term planning of the European Union's revenues and expenditures is, first of all, to align long-term goals with available resources. This document defines the limits of the planned expenditures in advance, while the actual expenditures are determined annually. The financial perspective thus sets political priorities, with the aim of defining the budgetary expenditures of the European Union, or at least bypassing aspirations to increase its budget.

The first financial perspective was introduced after 30 years of functioning of the European Economic Community- in 1988 - on the proposal of the European Commission and was named The first Delors package. It was adopted after several years of European Union budgetary crises in the 1980s and thus became a regular medium-term instrument for the planning of European Community funds, i.e. the European Union, for the implementation of its increasingly numerous policies.

So far, four financial perspectives have been adopted:

— First for the period 1988 - 1992 (the so called "First Delors Package");
— The second one for the period 1993- 1999 (the so-called Second Delors package);
— The third for the period 2000-2006 (called Agenda 2000);
— The fourth for the period 2007-2013;
— The fifth for the period 2014-2020.

Each of these medium-term budgetary frameworks has been fundamentally linked to the deepening of the flow of integration, the reform of the way of financing economic and social cohesion in the European Union and the creation of conditions for the admission of new member states.

Tax collection is otherwise in the exclusive jurisdiction of the governments of the Member States of the European Union, and tax regulations are part of the national tax systems of the Member States. Since membership in the European Union is based on an international treaty for which members have numerous and diverse rights and obligations, in order to strengthen the common internal market,

the European Union has also gradually influenced the reform of the tax systems of the member states. Different unrealized and unrealistic ideas about fiscal harmonization among member states were often used as an alternative approach to fiscal federalism in the European Union (Grčić, M., Bilac, V., Šimović, H., 2006, 58). The term fiscal federalism refers to the system of co-operation, coordination and division of fiscal rights and responsibilities between different levels of local, regional and central, respectively federal authorities (Jovanović, N., 2004, 142).

The European Union funding is closely linked to the issues of relations between the European Union and the Member States, and the specificity of its transnational nature. Relations between the European Union and its member states are based on the application of several basic principles. These are the principles of attribution, delegation of competences, subsidiarity and proportionality. In addition, it should be borne in mind that the competences of the European Union are limited from the aspect of exclusivity (Stojanović, S., 2006, 74-105).

The principle of attributing jurisdiction implies that the European Union does not have the original competence, (Article 5 of the Treaty on the European Economic Community provides that the community shall act within the limits of the competencies conferred upon it by the treaty and the intended objectives to be achieved.) but its competencies are derived from the competence of the Member States.

The principle of subsidiarity means that every public function should be done by the lower level of government, if it is more efficient, and if this creates the lowest possible administrative costs. In the relations between the European Union and the Member States, this principle is applied in the field of non-exclusive, i.e. divided jurisdiction and it means that the competence of the European Union will be established only if the objectives of a function cannot be achieved by the member states, but can be better achieved if the specific function is carried out at the level of the European Union. (In the EU law the principle of subsidiarity, is derived from Article 5 para. 2 and 3 of the Treaty on European Community.

The principle of proportionality, as a constitutional principle, means that any measure taken by the European Union will not go beyond what is necessary in order to achieve the objectives set out in the treaty on the European Economic Community. (This principle is provided for in Article 5, paragraph 3 of the Treaty on the European Economic Community.)

We can conclude that the European Union does not have a classical government like the member states but has a budget with a revenue and expenditure structure. In addition to the budget, the European Union has a "multi-annual financial framework", which represents an approximate or indicative overview of revenues and expenditures over the next few years.

A HISTORICAL OVERVIEW OF THE DEVELOPMENT OF DIFFERENT EU POLICIES FINANCING SYSTEM

The financing of the European Communities was first carried out through the system of contributions of the Member States. For the first time in the Rome Treaty on the European Economic Community, one general budget of this community was envisaged. It was the European Economic Community budget for 1958, which was adopted by the Council of Ministers, proposed by the European Commission after obtaining the opinion of the European Parliament. This first budget was very small and covered exclusively the administrative costs of the European Community. Since the goals of the European Economic Community have increasingly turned into certain political obligations (goals), the budget has increasingly included such goals. In the first years, financial contributions from each of the six Member States went through the European Commission's revenues (http://www.ec.europa.eu/budget/index_en.htm)

By the Paris treaty on the European Coal and Steel Community, two budgets for this community have been created - administrative and operational. Similarly, the Treaty on the Atomic Energy Community envisages the formation of two budgets - the administrative and budget for the costs of research and investment.

Such solutions were changed by the subsequent contracts, firstly by the Merger Treaty of 1965, and then by a special agreement enacted in Luxembourg in 1970. All the changes were in favor of the creation of an integrated, general budget of the European Communities. Since 1971, the system of own revenues of the European Communities has begun (Stojanović, S., 2006, 74-106). At the beginning there were three types of own revenues of European supranational structures:

— customs;

— taxes on agricultural products;

— VAT based income (Value Added Tax);

— GDP-based income of the Member States of the European Union (income introduced by the Council of Ministers Decision no. 88/376, 1988).

The first two revenues are the so-called "Traditional Own Revenues" (TORs), while VAT-based revenue has the character of contributions from Member States. Later, in 1988, as part of the First Delors Package, the fourth, additional source of financing the budget of the European Economic Community - income based on the GDP of the member states of the European Union was introduced. Over time, this revenue has become the main source of European Union funding (Radulovic, D., 2013, 285).

The story of financing the budget of the European Economic Communities was further complicated by the so-called "General Compensation Mechanism", which was introduced in 1985, and was an integral part of the system of own revenues of European communities. It is a mechanism that refers to a compensation payment to the United Kingdom, which is often abbreviated in the

literature as "the problem of the British rebate." Namely, the UK budgetary imbalance was created shortly after joining the European Community in 1973 for two reasons. Its agricultural sector was relatively smaller than in other Member States, resulting in fewer allocations for agriculture in this country, which meant less of the contribution of the European Economic Community, at that time to the already highly developed, Common Agricultural Policy. A comparison of Member States' contributions showed that the UK was the largest net contributor to the European Community budget. Thus, the UK paid much more to the budget of the European Economic Community than it got back. At that time (as today, after all), the largest beneficiary of the Common Agricultural Policy was France. Over time, this problem has grown more and more, and the British government led by "Steel Lady" Margaret Thatcher went to the famous "I Want My Money Back" campaign (Međak, V., Majstorović, S., 2004, 68).

That is why, after years of unsuccessful negotiations, in 1984, in Fontenblou, an agreement was established (which began in 1985), according to which the contribution of the UK to the budget of the European Economic Community has been reduced to 66% in relation to the balance of its budget. This reduction in British participation has been compensated by the higher share of other Member States in VAT payments. An exception in this respect was Germany, which first paid 1/3, and then 1/4 of its "normal" compensation payment (Stojanović, S., 2006, 74-105). Later, the participation of three more countries, the Netherlands, Austria and Sweden, was partially reduced.

Otherwise, the story of Member States as net providers and net recipients has been much abused and caused frequent clashes among member states on how to fund the EU budget. Each Member State must make a contribution to the European Union budget. If a Member State invests more in the EU budget than it gets back from it (through various initiatives and programs of the European Economic Community or through structural funds), this does not mean that it is a loser of the integration process. On the contrary, its gain is that it achieves a long-term free supply of its goods to the markets of other member states, which is, after all, one of the most important benefits of integration processes in the economy (Radulovic, D., 2013, 287).

Table 1 provides an overview of the current percentage participation of Member States in financing the costs of the European Union.

Table 1. Contribution by Member States (in percentages)

No.	State	%	No.	State	%
1.	Belgium	3,53	15.	Luxembourg	0,27
2.	Bulgaria	0,14	16.	Hungary	0,55
3.	Czech Republic	0,51	17.	Malta	0,03
4.	Denmark	2,00	18.	Netherlands	4,85
5.	Germany	20,5	19.	Austria	2,41
6.	Estonia	0,05	20.	Poland	1,30
7.	Greece	1,47	21.	Portugal	1,15
8.	Spain	7,85	22.	Romania	0,37
9.	France	19,55	23.	Slovenia	0,18
10.	Ireland	0,91	24.	Slovakia	0,21
11.	Italy	12,86	25.	Finland	1,47
12.	Cyprus	0,09	26.	Sweden	2,74
13.	Latvia	0,07	27.	Great Britain	14,82
14.	Lithuania	0,12			

Source: *European Council: Financial Perspective 2007-2013, Brussels, 19 Dec. 2005, p. 34, http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/misc/87677.pdf*

BUDGET OF THE EUROPEAN UNION

The budget of most international organizations covers only their administrative costs. It is the European Union that is the exception, since it redistributes almost 95% of its budget to member states.

The European Union budget for a long time after the formation of the European Community for coal and steel and the European Economic Community

amounted to much less than 1% of GDP. By 1967, the budget amounted to less than € 10 billion, in 1977 it reached € 30 billion, in 1991 it was € 70 billion, and in 2000 it exceeded € 90 billion, which can be seen in Table 2.

Table 2. Expenditure of the European Union in 1970-1994 in billions

	1970	1980	1988	1989	1990	1991	1992	1993	1994
Total expenditure of the EEC	3,58	16,45	42,49	42,28	45,61	55,16	60,5	69,23	72,3
Expenditures per capita	19	63	131	130	139	160	174	199	207
EU expenditure as % of public expenditure in member states	1,9	1,7	2,3	2,1	2,0	2,2	2,2	2,4	2,4
Expenditure growth in the EU%	-	-	16,9	-0,5	7,9	20,9	9,7	14,4	4,4
Expenditure growth rate of members	-	-	6,0	7,5	10,1	14,1	6,8	4,6	4,0
EU expenditure as% of GDP	0,74	0,8	1,05	0,96	0,96	1,07	1,12	1,19	1,24

Source: Prokopijević, M., 2005. "European Union-Introduction", Official Gazette, Belgrade, pp. 271.

As it can be seen from the previous table, the European Union's budget is continually growing. In 1970, it was € 3.6 billion or € 19 per capita of the then European Economic Community, and in 2003 it reached € 98 billion or € 258 per capita of the European Union at that time. The budget of the European Union then cost every citizen € 0.7 per day. The first budget of the EU-25 amounted to € 105 billion, which meant an expenditure of € 232 per capita per year or 60 cents a day (Jovanović, N.M., 2004, 186).

Government spending is still dominant in the Member States. The budget of the European Union amounts to 1.24% of GDP of all EU Member States, and they spend 30-55% of their GDP on their budgets. How the expenditure for the European Union budget has increased is seen in Table 3.

Table 3. Expenditure increase for the European Union budget

	1980	**1985**	**1990**	**1995**	**1997**	**2008**
Cost per capita of the EU (1996 prices) in €	115	139	164	188	226	299
EU budget as% of EU GDP	0,8	0,9	1,0	1,1	1,2	1,1
EU budget as% of total public expenditure of the Member States	1,7	1,9	2,0	2,1	2,5	21,4

Source: *Prokopijević, M., Beograd,2008. "European Union", Introduction, Official Gazette, Belgrade, 2008, p.68*

Over time, the budget went through various stages:

— the period 1973-1984, was characterized by disputes about the size and structure of spending;

— the period 1984-1998 can be marked as a period of rapid growth and stabilization of the budget at a high level;

— the period 1999-2006, the problems of the fifth enlargement of the European Union and the continuation of a policy of moderate budget expansion prevail;

— the period 2007-2013, the impact of the global economic crisis on the member states and on the European Union itself (Radulovic, D., 2013, 289).

Budget increase does not come from allocating a higher percentage of Member States' GDP, but thanks to GDP growth in the European Union. There were major fluctuations in the distribution of budget items by categories, so in 1979 about 70% of the budget was spent on agriculture. Expenditure on structural funds since 1991, which in the period 2007-2013 accounting for 80% of total budget expenses with agriculture, is also rising rapidly. Interestingly, there is a decrease in the allocation of funds for agriculture, and the funds allocated to the Structural Funds are increased, which can be seen in Table 4.

Table 4. Structural consumption in the European Union in percentages

The purpose of spending	**1985**	**1995**	**2002**	**2005**
Agriculture	72,9	53,6	46,4	43,1
Structural funds	13,9	25,5	35,7	35,5
Internal policies	2,6	5,6	6,2	7,4
Administration	4,6	5,1	5,3	5,3
Miscellaneous (EU assistance to other enlargement countries)	5,4	10,7	6,2	8,7
Reserves	0,2	-	-	-

Source: Prokopijević, M., "European Union", Introduction, Official Gazette, Belgrade, 2008, p.271

Germany and Great Britain were practically the only countries until 1988, which significantly more paid into the EU budget than they got a return, and since 1990, most countries have become a net financier. Great Britain has managed to get a return from the EU budget by the 1980s, which is a precedent in the European Union. The refund is a reimbursement for European Union subsidies intended for agricultural products, which are anyhow imported by the UK. Only in 1985, the return (rebate) was over € 1 billion. Therefore, for more than 20 years, the UK has been reimbursing the part of the money it is paying from the European budget. This mechanism was created by Margaret Thatcher, so that it would not be that London would pay more than the rest of the other (http://www.bbc.co.uk/serbian/news).

Former British Prime Minister Tony Blair has made a concession to the Brussels talks, which preceded the adoption of the budget, in the form of a reduction in rebates in favor of less developed, mostly new EU members.

The budget of the European Union, like the budgets of the national states, is a one-year and a budget year is identical to the calendar. The budget is based on several basic principles:

— unity (all revenues and expenditures must be shown in one document);

— annuality (the budget is passed annually);

— balance, i.e. equilibrium or budget balance (revenue and expenditure are equalized);

— universality (all expenditures are financed irrespective of the source of income, there are no specific revenues for specific expenditures).

— Some authors also point to the principle:

— specification (each item in the budget must have a clearly defined purpose);

— the principle of a single account (today the European Union budget is expressed in Euros, earlier in the eke, and at the very beginning, the budget was calculated in the Belgian francs);

— the principle of transparency or consistent financial management (the budget is clear and reports are submitted every month and quarterly, i.e. annually - by adopting the final account) (Stojanović, S., 2008, 53-70).

As a first step in budgeting, the Council of Ministers, the European Commission and the European Parliament are concluding an agreement to ensure budget discipline, long-term planning and improve co-operation and connectivity over the annual budget. This inter-institutional agreement also includes a "multi-annual financial framework" that establishes (sets) annual maximum limits. The procedure for adopting the budget (established by the European Union's agreements) runs from September 1 to December 31.

In the first years of the existence of the European Union, the Council of Ministers had decisive and, for some time, the exclusive influence on the formation of the budget, while the European Commission technically shaped it. Since 1975, the powers of the European Parliament have progressively increased. The European Commission is preparing a draft version of the budget by 1 July each year, and the Council of Ministers adopts it by October 5 in the year preceding the budget year. From the moment of the proposal of the preliminary draft of the budget to its adoption there is a very long way. When the European Commission drafts a preliminary draft, it sends it to the Council of Ministers by the 15th of July for "The First reading", which is adopted by a qualified majority. Thereafter, by 31 July, the Council of Ministers, after consultation with the European Parliament, establishes a draft (Radulovic, D., 2013, 291).

The introduction of a general compensation mechanism for the United Kingdom (which has been in place since 1985), a reduction in the share of compensatory payments for Germany, the Netherlands, Austria and Sweden, as well as the financing of the EU budget, mainly VAT and GDP, led to the fact that the financial system of the European Union became very complex and non-transparent. (GDP - a macroeconomic indicator that represents the total value of all goods and services produced in one country for one year. (Gross Domestic Product – GDP). GDP differs from GNI which represents the total value of all goods and services created by a national of a country in it or abroad during the year (Gross National Product - GNP). The difference between GDP and GNI is relatively small.)

BUDGET REVENUES

In the first years after its creation, the European Economic Community was financed by the contributions of member states. In the first half of the 1970s, there was a significant change. The European Union has received its own sources of financing: part of the customs duties on imports to the European Union from third countries, revenues from import duties on agricultural products and part of VAT in the amount of 1% of the total revenues collected. Member States retained 10% of the amounts collected for the two primary purposes, due to the costs of collecting those funds. Since then, the European Union has funded its own costs with its own resources. Member States collect them on behalf of the European Union and then transfer those funds to the European Union budget. In the first years of the existence of this system, financed by the European Union, import funds were the most important source of income, but this changed rapidly due to the reorientation of trade to partners within the European Union. This was due to the entry into the customs union (a union without customs duties between members, but not towards other countries outside the European Union). This led to a change in trade flows. Since the 1980s, VAT has become the most important source of filling the budget of the European Union from 57.6%, contributions for agricultural imports have contributed with 31.8%, and around 10.5% were collected from customs to third countries(Radulovic, D., 2013, 292).

The funds that make up the budget income since 1988 can be divided into four groups:

1) Traditional resources (tor) - consist of customs duties charged on imports of goods coming from countries outside the European Union. They bring about € 1.73 billion, which makes up 15% of budget revenues;
2) Indirect-VAT - account for 15% of budget revenues or around € 1.78 (1.4% on national VAT in 1985, in 2002, decrease to 0.75%, in 2003 to 0.5%);
3) GNI-based funds - are collected in a manner that a percentage is set (0.73%) applied to the GNI of each member state. The funds thus collected represent the largest source of budget revenues and amount to € 80 billion, which represents 69% of all revenues;
4) other sources - represent fines, surpluses from previous years, certain taxes paid by employees of EU bodies and institutions to their income, certain contributions from countries outside the European Union for certain EU programs, funds paid by companies if they violate competition regulations and other laws. The resources thus collected amount to 1% -1.5% of the budget, i.e., € 1.3 billion.

Revenues are budgeted in a manner that is proportional to the wealth of each member state. Funds from EU funds go to Member States according to the priorities defined within the European Union, and less developed countries receive proportionately more funds than those rich, so that more countries receive more money from the budget than they give.

Today, the European Union's revenue system consists of several types of own resources, as well as revenues from other sources. The European Union's own revenues are:

— traditional own revenues (duties and charges on agricultural products);
— VAT-based revenue;
— GDP-based revenue;

Despite the name "own", the basic characteristic of the European Union's traditional own revenues is not that it charges it alone. The European Union does not have such powers, but Member States pay 75% of the funds raised for these purposes to the EU budget, while the rest (25%) retain national budgets as a form of compensation for the costs of collection (Council of Ministers Decision, 1994). (Firstly, with the Decision of the Council of Ministers on own revenues of the European Communities, adopted in 1994 (Decision 94/728/EC), Member States retained 10% of their own revenues, later with the 2000 Decision (2000/597/EC) this amount was increased and now it is 25%. The charging costs stem from the fact that the European Union does not have tax authorizations, but it belongs exclusively to the Member States that introduce and charge taxes.)

VAT-based revenue is charged on the so-called "abstract" harmonized VAT base of all Member States. The abstract base is calculated because there are differences in the national tax systems of the member states, as the harmonization of tax systems has not been harmonized at the level of the European Union, but the amount of VAT is different among the Member States (Prokopijević, M., 2009, 411- 443). In contrast to VAT-based revenues, GNI-based revenue is charged as a single rate in proportion to the GDP of each individual Member State. The current limitation is that the total budget revenues of the European Union must not exceed the amount of 1.24% of GNI created at the level of the European Union. This percentage has, of course, been changed throughout the history of the integration process.

Member States are obliged to submit the funds they collected for collecting their own revenues from the European Economic Community to the EU budget, and if they refrain from doing so, the Commission can sue them with the European Court of Justice (ECJ). In principle, the decision of this court contains high penalties for the accused state or states (Stojanović, S., 2008, 134).

Apart from own revenues, belonging to the budget of the European Union also are the so called other revenues. This group of revenue consists of:

— fines;
— revenues generated by the administrative activities of the institutions of the European Union;
— contributions related to activities in the European economic area;
— interest for payment delays;
— taxes on income of employees in European institutions;

— income from loans and borrowings;

— other revenues (Radulovic, D., 2013, 295).

Although in the group "other revenues" there are more types of income than in the group of own revenues, they are much less funds collected than the revenues from their own budget in the EU budget (Šimović, H., 2005, 299-315).

Because of this, many authors conclude that the current EU funding system is overly complex and non-transparent. The European Union is mainly funded by VAT and GNI revenues, which are essentially a form of contributions paid by Member States. Therefore, there is no direct link between the budget of the European Union and the citizens. The main revenues of the EU budget (based on VAT and GNI) are first fed into the budgets of member states, and then sent to the EU budget, while retaining a quarter of the revenue so collected. A significant disadvantage is that the application of the general compensation mechanism diminishes the participation of some Member States in the EU budget, so, therefore, the financing system violates equality among the member states. Economists, on the other hand, often warn against the old rule that taxation without political representation leads to tyranny, and that political representation without taxation creates irresponsibility. Hence, it encourages the interpretation, that even though the citizens of the member states are represented in the bodies of the European Union, they as such have no possibility of collecting the tax. The lack of EU law to collect taxes creates the basis for the irresponsibility of its institutions in the disposal of budget funds (Prokopijević, M., 2009, 461). As an example, it is possible to state that because of the European Union budget abuse campaign, the European Commission, headed by Jacques Santer, resigned in 1999.

Budgetary funds of the European Union are, however, modest in relation to the economic strength of the Member States and their national budgets. (That is quite normal, since the most expensive policies, such as defense, pensions, education, health and social protection, are still being created and implemented in member states.) The main sources of income of the European Union budget in 2005 were:

— Direct contributions of member states in an average of 1.24% calculated in proportion to the country's economic power (or GNI) - which accounts for as much as 73% of the EU budget;

— part of the value added tax, i.e. VAT - which account for 14.4% of the revenue of the EU budget;

— customs and other import duties in the European Union - to collect 10.1% of revenues;

— taxes on agrarian production - which make up 1.5% of revenues;

— other revenues - which account for 1% of the revenue of the European Union budget(Radulovic, D., 2013, 296).

From year to year, the European Union's common budget has grown steadily. For that reason, for the first time in 1998, Member States have set the upper limit of allocation in the common cash register, according to which the annual budget of

the European Union should not exceed 1.27% of the European Union's GNI. After the 1997-1999 period, when this highest allocation rate was reached, this limit was lowered to 1.24%, which is still valid today. It means that the increase in the budget of the European Union no longer comes from an increase in the allocation rate, but because of GDP growth in EU member states.

The first annual budget of the European Union with 25 Member States (the so-called "enlargement budget") amounted to € 99.7 billion and represented only 0.98% of the GNI of the enlarged European Union, which was significantly less than the 1.24% of GNI permitted. The European Union budget (for 2009) is € 133.8 billion and represents 1.03% of the European Union's GNI. In relation to the budget of the European Union in 2008 it increased by 2.5%.(http://ec.europa.eu/budget/library/publications/budget_in_fig/syntchif_2009_en.pdf)

2/3 of the total budget (until 1979) used to be allocated to support the implementation of the Common Agricultural Policy. Today it is reduced to about 40%. Most of the agricultural budget is spent on restructuring and modernization of agriculture, especially in the regions of the European Union where this activity is the dominant economic branch. In agriculture and village allocations, in 1975, 72.9% of the budget was spent, in 1995 - 53.6%, in 2002 - 46.4%, and in 2005 - 42.6%. The general tendency during this period is the gradual reduction in the allocation for agriculture and, in parallel, the increase in the allocation for structural and development funds, which finances, in total, economic and social cohesion.(True, and through instruments supporting regional and social cohesion, rural and agricultural activities are financed, so authors who are more specific about this topic warn that the story of reducing agricultural resources is oversimplified and that in reality still significant funds are being invested in agriculture.) The European Union budget for 2008 defined 40% of the funds for agriculture, while for economic development and cohesion 45% of the funds.

The European Parliament plays a very important role in the adoption of the EU budget. In 1970, it gained the right to make amendments to the draft budget and to adopt the budget, although he had no right to decide on non-compulsory expenditures (Ilić-Gasmi, G., 2004, 183*). (The division of the European Union's expenditure on compulsory and non-compulsory is based on the relationship to founding contracts. Mandatory expenditures arise from founding contracts and other legal acts and are linked to the financing of common policies, while non-compulsory costs do not arise from these contracts.)*

Budget funds are divided into:

A) compulsory expenses that make up ¾ of the total funds. These include most of the funds for agriculture, aid to underdeveloped countries, part of the costs of the administration of the European Union and part of the expenditures for fishing policy (the amount determined by the Council of Ministers) (Prokopijević, M., 2008, 269).

B) Non-compulsory expenditure, which include a small proportion of agricultural funds, aid to underdeveloped overseas countries, a smaller proportion

of expenditure on fisheries policy, all funds from the Research and Development Fund, Structural Funds expenditures, the bulk of administrative expenditure. (determined by the European Parliament) (Prokopijević, M., 2008, 269).

When it comes to deciding on obligations, the European Commission and the Council of Ministers have the final say, and the European Parliament on the non-mandatory expenditure of the European Union.

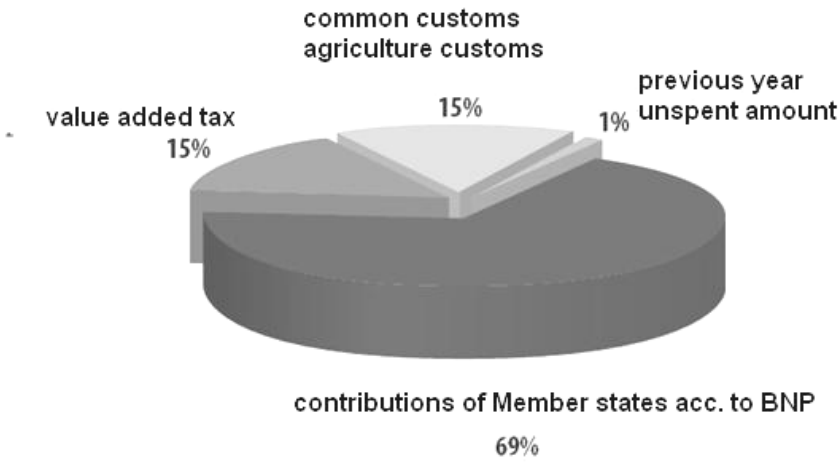
When budget is being accorded, there is a strong struggle between the Council of Ministers and the European Commission, on the one hand, and the European Parliament, on the other hand, about the redistribution of funds. The ability of the European Parliament to increase or reduce funds for certain purposes is not unlimited as the European Commission has the ability to limit them from three factors:

— the movement of GDP in the Member States;
— government expenditure in member states;
— cost of living(Radulovic, D., 2013, 298).

The European Commission can only limit the European Parliament's financial plans, but it cannot influence whether or not they will be, and whether the funds will be redistributed from one fund to another.

The financial year in the European Union starts on January 1 and lasts until December 31 each year. Much earlier before the beginning of a particular budget year, all European Union institutions are required to report certain budget expenditures. The European Commission consolidates these expenditures and should submit the early draft to the European Parliament and the Council of Ministers by 1 September. The Council of Ministers then harmonizes the budget with the European Parliament, which considers it upon "two readings". After the first reading in October, the European Parliament has the authority to amend and improve the draft budget presented by the Council of Ministers. Certain disagreements will be considered on time and resolved at mutual meetings between these three institutions. Then this draft with all suggestions is returned to the Council of Ministers. Before the second reading (in November), the Council of Ministers is holding intensive consultations in order to reach a budget agreement in principle (full text of the budget). After that, the budget is adopted in the second reading. Before the final vote, the European Parliament may amend the latest draft of the budget proposed by the Council of Ministers. When the budget is adopted, the President of the European Parliament signs the budget.

A 2/3 majority in the European Parliament is needed for the failure to implement the budget. If the budget is adopted, the normal financing of the activities of the European Union continues. If it is not adopted, the European Union switches to a temporary monthly funding where for each month it can be spent up to a maximum of 1/12 of the previous year's budget (Prokopijević, M., 2008, 269).



Graphic 1 Revenues of the European Union budget for 2007. Where does the money come from?

Source: European commission, EU budget 2007, Launch of the 2007–2013 financial framework. New generation of EU programmes; Office for Official Publications of the European Communities, 2006.

BUDGET EXPENDITURES

It's important not only that the budget is getting full, but how it is being emptied. Of the total budget, about 20% of the amount is discharged through the European Union body, and about 80% across Member States. The biggest responsibility for managing the budget lies with the European Commission. The main rules governing the way of spending and management of European Union funds are found in the Financial Regulation. The second set of rules, the so called Implementing Rules exist to properly apply the Financial Rules. Before any funds for certain programs are approved, each request must pass a rigorous procedure and must have some legal support. These rules exist to ensure objectivity in evaluating the feasibility of individual projects and thus set certain spending limits (http://www.ec.europa.eu/budget/index_en.htm).

Activities and projects financed from the EU budget reflect the priorities set by the European Union countries at a given moment. They are grouped in broader cost categories and in 31 different fields of political activity. The European Union budget finances activities and projects in those domains ("policies") around which all EU countries have agreed to work at the European Union level.

These decisions were made for very practical reasons. By combining forces in these areas, better results and lower costs can be achieved.

The European Union budget needs to be balanced. Members of the European Union today have big problems with their budgets, a large number of them have a deficit, and in a good part of the countries it is over 3% of GDP.

The European Union has the right to borrow money in international financial markets. Crediting opportunities are limited, although borrowing on behalf of the European Union has been allowed since its inception in order to finance the programs with these funds.

Directly or indirectly, everyone benefits from some activity funded from the EU budget, whether it's cleaner beaches, safer food on plates, better roads, or a guarantee of human fundamental rights.

If we were to analyze the spending of the European Union funds for 2007-2013, explaining what one euro is being spent on, we could present it in the following way:

— **8 cents,** goes to activities that will make the European Union more competitive. Sustainable development has become one of the main priorities of the European Union. The economy must be more competitive, and less developed regions must catch up with other regions;

— **36 cents,** goes to cohesion activities. Achieving long-term development depends on increasing the development potential of the European Union. This priority known as cohesion (linking), calls for help in less developed regions, in order to equip their economy to achieve global competition. Innovation and knowledge economy provide a new framework for opportunities to launch development in these regions;

— **43 cents,** goes to natural resources. Thanks to geographical and climatic diversity, European Union countries produce a large number of different agricultural products, which European consumers can buy at reasonable prices. The European Union's efforts in this field have two objectives:

a) what is produced should be related to what consumers want, including a high level of safety and quality of agricultural products;

b) from the standpoint of production, manufacturers should plan and adapt products according to customer requirements, but in accordance with the environment.

— Successful management and protection of natural resources must include direct measures for the protection of the environment, for the restructuring and introduction of diversity in the rural economy and for the promotion of sustainable fishing;

— **1 cent,** is spent on fighting terrorism, organized crime, illegal immigration;

— **1 cent** is spent for the protection of cultural heritage and wealth, protection of public health and consumer interests;

— **6 cents,** goes to co-operation with countries that are to join the European Union, other neighboring countries and poor regions and countries around the world;

— **6 cents,** goes to the functioning of the European Union. It covers wage costs for employees and the construction of all EU institutions, including the European

Parliament, the Council of Ministers, the European Commission, the European Court of Justice and the European Court of Auditors (Radulovic, D., 2013, 301-302).

The budget adoption procedure consists of 5 phases:

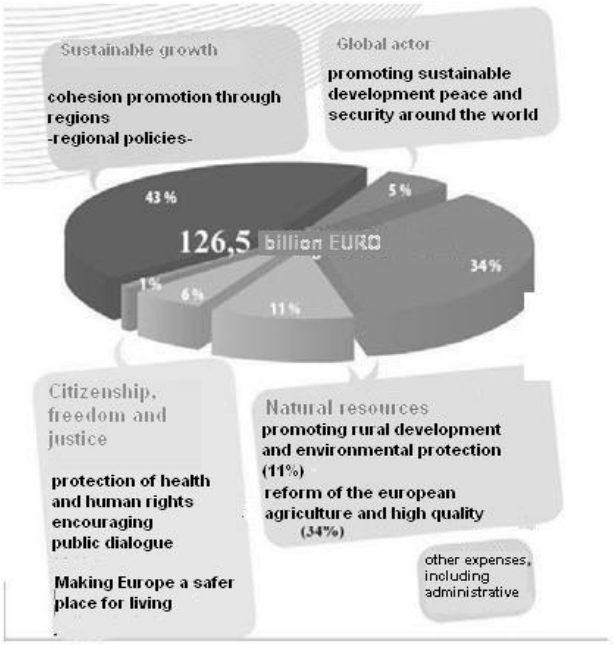
1) In **the first phase**, the European Commission prepares the draft budget based on the estimates of expenditures delivered by each EU institution by 1 July of the current year. The European Commission then sends the draft budget to the Council of Ministers, which should be done by September 1;
2) In **the second phase**, the Council of Ministers shall establish the draft budget (by the qualified majority) and send it to the European Parliament for discussion. If the Council of Ministers changes the draft budget of the European Commission, it must adopt a decision unanimously, obtaining the opinion of the European Commission and other interested bodies;
3) **The third phase** is the consideration of the budget proposal in the European Parliament. If it accepts the proposal within 45 days, or if it does not make a decision at that time, it is considered that the budget has been adopted. The European Parliament can amend the budget proposal;
4) **The fourth phase,** if the European Parliament proposes amendments to the budget proposal, the procedure is again returned to the Council of Ministers. This is the fourth phase of the budget procedure. The Council of Ministers, after that, may, within 15 days, accept or amend the European Parliament's amendments to the draft budget, but also not to accept them. In case of non-acceptance, the budget proposal is returned to the European Parliament. If the Council of Ministers accepts the amendments of the European Parliament within 15 days, it is considered that the budget has been adopted and the Council of Ministers informs the European Parliament that it has not changed its amendments and amendments to the budget proposal;
5) **The fifth phase,** the procedure for adopting the budget occurs if the European Parliament changes the amendments made by the Council of Ministers on the proposal of the budget and re-establishes its amendments (to the so-called second reading of the budget proposal or other "reading", as is usually the case). The European Parliament then establishes the final version of the draft budget, which again has a 15-day deadline. Afterwards, the President of the European Parliament declares the budget finally adopted. The adoption of the final declaration on the adoption of the budget in the European Parliament marks the entry into force of the budget. Without this declaration of the European Parliament, the budget cannot be adopted (Ilić-Gasmi, G., 2004, 183).

So far, it has happened several times that the European Parliament rejects the draft budget: in 1979 - after the first direct elections for the European Parliament, 1981, 1983, 1984 and 1986. This created political tensions and conflicts with the Council of Ministers, which ended with the achievement of a compromise, but also with the strengthening of the role of the European Parliament, which gradually gained even greater opportunities to influence the formulation and implementation of common European Union policies. If the European Union budget is not adopted,

the EU institutions will switch to the so-called temporary funding, which means they can spend 1/12 of the previous year's budget each month (Radulovic, D., 2013, 303).

From Figure 2, it can be seen that a large amount of money is spent on regional or structural policies aimed at increasing cohesion among regions and thus alleviating existing differences.

In addition to the annual budgets, when it comes to regional policy, the European Union adopts seven-year development strategies or plans that provide a financial perspective and a way of spending funds for a longer period.



Graphic 2. Expenditures of the European Union budget for 2007. What is the money spent on?

Source: European commission, EU budget 2007, Launch of the 2007–2013 financial framework. New generation of EU programmes; Office for Official Publications of the European Communities, 2006.

CONCLUSION

Today's budget of the European Union represents a complex mechanism both by the procedure of its adoption, and by the ways of its charging and discharging. It has become an arena of political battles and numerous compromises within the European Union. It is shown by the items such as large subsidies for agriculture and new members, because their change and importance in the budget structure are

best seen by the goals of the European Union itself, their change and the creation of new political goals.

The importance of the budget at the same time goes beyond the European Union's framework indirectly (through the European Union's influence on world events), and directly through various funds as well as pre-accession instruments, and now through IPA programs.

It is very certain that the structure of the budget will increasingly change, and that its change will depend on both the reform of the EU institutions themselves, the new enlargement of the European Union, and the overall situation on the world stage.

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ASSESSMENT OF FINANCIAL STRESS AT THE REGIONAL LEVEL: RUSSIAN AND INTERNATIONAL PRACTICE

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Anna Savtsova[26]

ABSTRACT

Despite the fact that risk management appeared in Russia not so long ago, it is already recognized in all spheres and sectors of the economy. Of course, there are difficulties and problems in this area, but risk management is developing, and the issues of building risk management systems are becoming increasingly important today.

However, little attention is paid to researching of the risk management system in the region, despite the high importance and the need for permanent forecasting of possible losses.

The article is presented an approach of building financial risk management system at the regional level, methods of risk control system, identified indicators of financial risk and financial stress.

***Key words**: risk management, financial risk, financial risk indicators, financial control*

***JEL Clasification:** A12*

INTRODUCTION

The global financial crisis of 2008 has generated emergence of a large number of new integrated indicators which will allow both to estimate current state of a financial system and to predict it future development. It is possible to carry an indicator of a financial stress to such indicators. The level of a financial stress is extent of a realization risk system and financial instability, leading a financial

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system to a condition of financial crisis. Considering complexity of this phenomenon, we don't set before ourselves the purpose to trace a condition of all financial institutions, and we use external manifestations of their change in a type of macroeconomic indicators.

Today indexes of a financial stress are widely used in world practice. It gives the chance to regulators to estimate financial stability, to develop and pursue stabilization economical policy, and to estimate riskiness of investments at financial instruments of the country or region by investors.

Since February, 2016 the financial system of Russia exists in the stability mode. But stress level in a financial system exceeds pre-crisis indicators of 2012-2013 so far. Sources of the raised stress are volatility of the oil market and internal recession. Internal structural consequences of economical downturn are not overcome yet, but its are already much more predictable therefore it create smaller risk.

In relation to regional economy process the risk management has to accompany the operating decisions at all levels of decision-making (for example, at the top level, at the level of structural divisions or design group) therefore risk management needs to be integrated into management of business processes or their components (stages).

Process of management of risks has to accompany planning and decision-making on the most important questions. It belongs, first of all, to representation of new strategy and procedures, project management, large investments or optimization of the internal organizational conflicts and contradictions.

Therefore today the risk management fully takes the leading positions in business, financial, educational and organizational infrastructure of the economic relations.

METHODS

Risk management at the regional level can be defined as the multistage activity of regional authorities and development institutions related to overcoming uncertainty or reducing the damage associated with the possible result deviation of the regional economic strategy implementation from the planned indicators. At the same time, it should be noted that the risk management system does not spare the risks themselves, but it allows to predict and minimize possible losses, given an unfavorable outcome of the situation; the risk assessment system potential makes it possible to mark out all risk sources, establish their nature, produce high-quality and quantitative assessment, manage on a basis of a single methodological basis and make managerial decisions at different levels. (Zaitsev et all, 2017)

The risk management potential should be considered as a combination of its capabilities to act as a strategic planning tool, which is theoretically valid and meaningful for practice at the same time. Any regional business processes must be

started, continued and ended with the risk management. This determines the requirements for the system of risk management interactivity. (Zenchenko et all, 2017)

COSO formed eight basic components of the regional financial risk management:

1. The regional internal environment, which determines the risk identification and decisions to be made.
2. Risk management for achieving regional management goals and risk identification.
3. Unfavorable events identification, i.e. anything that violates the regional economic system balance.
4. Risk assessment. All identified risks must be assessed with regard to the risk occurrence and the damage potential size.
5. Risk response actions. Regional management must determine the most possible response to the risk i.e. take, exclude, reduce or divide risks.
6. Business processes control, which means internal policies and procedures that ensure that the adopted strategy for risk responding is effective for daily operations.
7. Info communications. Information must be collected, processed and transferred in a timely manner to the risk management responsible units.
8. Monitoring, i.e. risk detection, analysis and control.

Regional financial risk management involves centralization and coordination of regional risk management; each strategic document must include a risk component, a set of possible reactions to risks and a control system. When the process of risk management is dispersed across various segments of regional management, this inevitably leads separate units taking measures to prevent negative consequences, and new risks are identified inappropriately slowly.

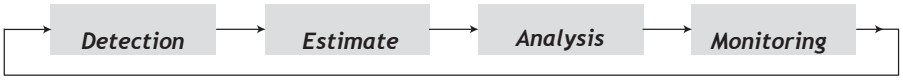

Figure 1. Processing within the framework of regional financial risk management

RESULTS AND DISCUSSION

The main goal of risk management is to prevent one-off, but significant losses, which can have catastrophic consequences for the regional economic system. Therefore, it is extremely important to make an effective analytical tool. Traditionally, it is based on mathematical statistics, which allows to calculate losses with a given probability. (Zenchenko et all, 2017) However, it is not

effective enough for the regional financial risk management, because it does not provide quality information due to the probability interval violation. Therefore, to solve this task, it is necessary to apply stress testing. In view of the above, it is considered expedient to use stress-testing mechanisms to assess the financial risks of the regional economic system, which allow to estimate the expected losses since they do not meet the current economic trends and therefore poorly projected.

Principals of regional financial risk assessment:

- target and risk assessment scale coordination;
- risk assessment complexity;
- political will, obligations of government officials in respect of risk assessment;
- risk assessment bodies interaction;
- risk assessment coordinating body;
- risk assessment system flexibility;
- a combination of quantitative and qualitative risk assessment indicators, as well as their sufficiency and variety;
- risk assessment tools and results documenting.

There is a vastly accumulated experience of financial risks integral assessment. Now it helps determine the level of development of the territory and the degree to which stress affects the economic system of the region.

In 2010, the Chinese news agency Xinhua News Agency, together with the Chicago Mercantile Exchange CME Group Inc., developed and published an index called Xinhua-Dow Jones International Financial Centers Development Index or IFCD Index. Since 2014, its calculation has been regular. The index includes a five-component integrated assessment of the territory, such as the growth and development of the real economy (assessment core), the financial market development level, industry support, the quality of services and general business conditions. All these five basic indices have the same weight when calculating the final rating, and the rest of 46 indices are assessed on the basis of quantitative (statistical) and qualitative (questioning) indicators. The maximum rating is 100 points. (Zenchenko et all, 2017)

If financial stress is system-defined and has a negative impact on the real economy, then the level of stress increases as provided by the expected financial loss, the risk (distribution of probable loss expansion) or uncertainty (lower credibility of probable loss distribution). Financial instability describes financial condition and regional financial system shocks. In European practice, the level of stress impact on the real economy is assessed through the Financial State Index (FCI) or the Financial Stress Index (FSI).

It is calculated as the balanced sum of three main subindeces: money market indicators, bonds market indicators and stock market indicators (Rosenberg, 2009). Each of these sub-indices is also formed by a combination of other basic indicators that have equal weights. The index is formed by ten variables and has been calculated since 1991.

Unlike Bloomberg FCI, Citi FCI includes only six financial variables, including corporate spreads, money supply estimate, share prices, mortgage rates, weighted exchange rates and energy prices. The index has been calculated since 1983. FCI Deutsche Bank differs from other similar indices by using a weighted average assessment of the main debt and the target rate for federal funds. The Goldman Sachs FCI index consists of four main components: weighted yields of short-term bonds, long-term corporate profitability, exchange rates and stock market.

The KCFSI index, which is a combination of 11 standardized financial indicators selected by the Federal Reserve Bank of Kansas City, is divided into two categories: yield spreads and asset price behavior. It is based on the definition of five functions of financial stress: increased assets value base uncertainty, increased uncertainty of other investors behavior, increased information asymmetry, reduced willingness to withhold risky assets (flight to quality) and / or nonliquid assets (flight to liquidity).

The macroeconomic advisers' conditions index (or mA) was developed in the 1990s. The index includes an integrated calculation of 38 financial variables that reflect the impact on GRP of such indicators as - real short rate, real long exchange rate, dividend rate, real exchange rate and real capitalization of the stock market. Partial effects estimation of changes in financial variables of real GDP growth over time is used to obtain the response function based on the use of large-scale simulations in the macroeconomic model. The response functions aggregate the impact of current and past changes in each of the financial variables on real GDP growth in the current period.

The list of indices presented is not limited, there are similar indices used in Turkey, Japan and Australia. However, it should be noted that the calculation core is the indicators volatility of stock and currency market, the assets stability, which in its turn forms a potential attractiveness of the territory in investors.

In Russia, the main index reflecting the financial risks is the index, developed by 'Expert RA' the rating agency in order to assess the investment attractiveness of Russian regions. It is based on two relatively independent characteristics: investment potential and investment risk. There are several highly important factors to be taken into account when assessing the investment potential: region's territory saturation with production factors (natural resources, labor, fixed assets, infrastructure, etc.), consumer demand, etc. The region's investment potential consists of nine indicators: natural resources; labor resources and educational level; economic activity result; innovation, i.e. scientific and technological progress in the region; market economy institutions development; infrastructure; tax base volume, enterprises profitability in the region and population income; consumer demand in the region; places for tourists and holidaymakers to see and stay at. Investment risk estimate depends on political, social, economic, financial, environmental and criminal situation. Its value indicates the probability of investment loss and income.

CONCLUSION

Finally yet importantly, when assessing regional financial risk, it is necessary to act on the possible volatility of the territory's financial potential and the risk of its decline.

It should be borne in mind that when assessing the risk of financial capacity reduction as inconstancy of its formation in comparison with the expected value, then the fully-owned fill of financial capacity, which ensures the regional expenditure financing, will be a risk-free financial capacity, and insufficient regional financial potentials will be risky. The greater the volatility of financial capacity, the greater the risk.

When assessing the risk it is more advisable to use the relative (or base) indicator of the real financial security level of region's economic development, since the risk of financial potential reduction is estimated through the losses amount according to the financial potential elements. Since the financial potential filling volume can vary significantly in absolute amounts, and the level of real financial security determines the coverage of regional expenditures, it does not depend on the elemental fillability of the financial potential and is comparable in the space-time context.

The actual formation of the regional financial potential of most regions is different from what is expected. Thus, the real financial security of regional development can be regarded as a random variable that obeys the probability distribution law.

Regional financial risk management involves the application of the control function. In order to implement the risk-based financial control effectively, it is necessary to develop and legislatively approve financial control standards at the regional level. The system of standards should include the positive international and Russian experience. The set of standards is as follows:

— general standards describing the principles of control activity;

— working standards that represent the systematized and orderly actions of employees in the monitoring process especially while planning, supervising and documenting;

— a reporting standard that establishes requirements for the form and content of reports in order to ensure transparency of control, strengthen financial discipline and ensure interaction between regional government bodies by unifying reports;

— a quality control standard that establishes requirements for the activities of controlling and accounting bodies and ensures the compliance of their activity with the standards.

The purpose of control implementation is to enhance the regional financial potential through quality control and analytical activities aimed at improving financial discipline, ensuring greater transparency and effective management of the region's resources. To achieve this goal, it is necessary to strengthen the

independence of financial control; introduce new control directions, analytical and methodical activity and improve quality control measures.

Thus, the risk of financial stress in the region is a probabilistic indicator that determines the possible financial losses, which requires constant monitoring and control, as well as the development of special procedures for its forecasting and adjustment of the economic development strategy of the region. In the context of the discovering problem, the determination of the stress resistance of the regional financial system is the identification those negative consequences that may arise as a result of under-accounting and incorrect assessment of the availability of financial resources in the region for the implementation of planned activities for the regional sustainable development, including the negative impact on the resource base of the territory and the standard of living of its population.

One of the most important objectives of risk management is to prevent one-time, significant losses that can have catastrophic consequences for the region. To solve this problem we use not a probabilistic but a scenario approach known as stress testing. Stress testing allows us to assess the potential consequences of the simultaneous impact of a number of risk factors on the economical development of the region.

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EXCISE ON TOBACCO AND TOBACCO MARKET IN SERBIA

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ABSTRACT

This paper will analyse the flows of tobacco trade and the effects of excise on tobacco products. The tobacco market is specific, not only because of the type of products burdened by a special tax, but also because of its characteristics – very sensitive, regulated, covered with incomplete statistics, as well as heavily controlled market. This is indicated by the experience of other European countries that regulated this area by legal solutions, extensive regulations, and EU directives, which are now applied by Serbia. The high profit and extensive consumption of tobacco products has contributed to the existence of a parallel illegal tobacco market. Illegal flows weaken the state budget by reducing the country's revenues from excise on tobacco. The data analysis for the period 2005-2017 shows that the increase in revenues from excise on tobacco in Serbia was influenced by increased and regular collection of excise duties, stronger control of the borders and high elasticity of demand for tobacco.

Key words: *excise, illegal trade, budget revenues*

JEL Clasification: *H20, H61, H71*

INTRODUCTION

Excises are one of the basic types of tax revenues. Excise duty rates within the EU are regulated by prescribed measures and directives related to excise management and control. Excise products are regulated in Serbia by the excise tax law. Under excise products, all products that are the subject of storage, production and sale of a particular product are considered. The law prescribes the regime of deferred accounting and payment of excise. Products that are legally prescribed to be taxed by excise are: (1) petroleum derivatives, (2) biofuels and biotechnology, (3) tobacco products, including tobacco products that are heated but not combusted, (4) alcoholic beverages 5) coffee, (6) fluids for charging electronic cigarettes, (7) final energy consumption, (8) cigarettes produced in the host country. The main goal of introducing laws and its harmonization with EU rules is

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control and regulation of taxation of excise products and in order to ensure regular and legally prescribed excise business operations, reduce smuggling and bootlegging of excise products, and ensure regular tax revenue.

According to the EU directive, excises are indirect taxes relating to the sale or use of certain products, such as alcohol beverages, manufactured tobacco products and energy product. These excise duties were mainly adopted in the context of the establishment of the Internal Market on 1 January 1993. Revenue from excise duty rates is collected as a whole in the country in which the payment is made. EU Member States have adopted common rules to ensure that they apply in the same way for the same products within the EU. Thus, for example, a minimum excise rate has been introduced, with the idea of preventing trade distortions in the single market, providing fair competition between companies and reducing administrative burdens for companies. Also, the EU law prescribes common provisions applicable to all products subject to excise duties (Council Directive 2008/118/EC). In addition, horizontal rules include the categories of products to which Member States must apply excise duty rates. Part of these rules also includes the issue of excise revenues, as well as the introduction of rules on the production, storage and movement of excise products.

There are common provisions within the EU that include the Excise Monitoring and Control System (EMCS). It is an IT system through which the movement of excise products within the EU is monitored. In order to improve excise duty rates, amendments were introduced to the directives that raise the quality of excise products and prescribe and adjust the amount of excise duty rates. Serbia, as a candidate country, takes over EU provisions and adopts them within its system.

The tobacco market is a specific market and it is always inconsistent with supply and demand. The main cause of the present market anomalies is found in illegal flows of tobacco on the supply side. In fact, we are talking about an illegal market through which smuggling and bootlegging has always been a lucrative business. We are all witnesses that there are numerous actors on this side of the offer – smugglers, individuals, companies, and even states. An increasing problem is the fact that such an illegal marketplace is, in addition to the legit market, easily accessible to everyone. The grey tobacco market reduces budget revenues, raises costs to the state and has unfavourable social, health and social consequences.

In this paper the tobacco market will be analysed. Through the experience of certain countries in the conduct of excise policies, we will look at the regulation and anomalies of the tobacco market, and their effects on the economy. The following section presents the analysis of the impact on the state budget based on available data, as well as the results of applying the excise policy in Serbia. Concluding remarks are the last part of the paper.

REGULATION OF THE TOBACCO MARKET AND PRACTICE

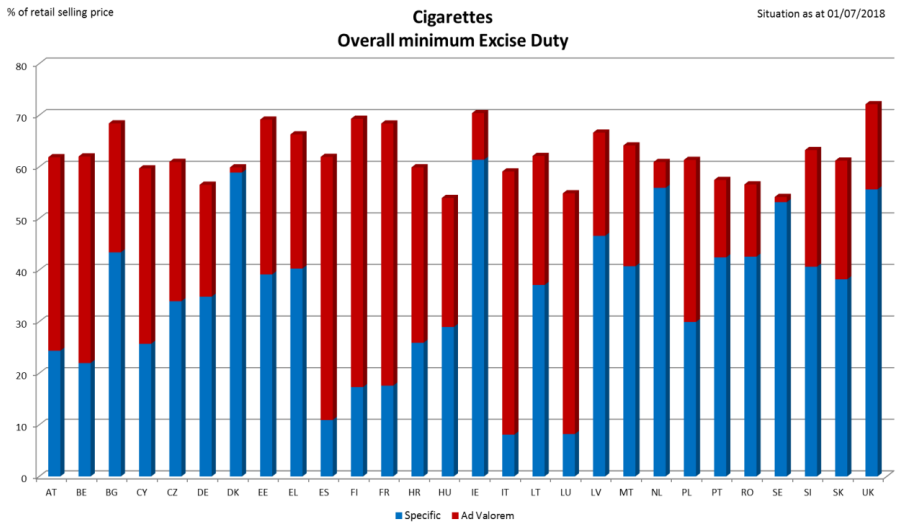
The basic rule for the operation of the excise products requires that all products subject to excise duty must be produced in tax warehouses. In addition, tax warehouses must be approved by national authorities. By placing excise goods on the market, excise duty rates must be paid. In a word, these goods are under the burden of customs. The Republic of Serbia aligns the regulations with the stated EU principles (Recommendation 2000/789 / EC).

In accordance with the rules and the common EU market, excise taxes are paid by natural persons for commercial transactions in the country of consumption. The transport of excise goods is suspended until the excise goods reach the ultimate destination, with the system of compensation for avoiding double taxation. All excise goods transported between Member States of the EU must be accompanied by appropriate documentation (simplified Administrative Document - SAAD).

Existing practice has shown that the EU excise policy is effective. It is an example of a successful regional tax harmonization with an effort to ensure the proper functioning of the EU's internal market, which required a reduction in inter-country differences in the prices of tobacco products. These differences are an incentive to the tobacco industry's pricing strategies and they have implications for the accessibility of tobacco products. In spite of that, the differences that exist in cigarette and price taxes between EU countries are higher than in the US. In the US, the prices of excise tobacco products are far more homogeneous, especially in terms of revenue.

Two basic characteristics of the EU Directive on the taxation of cigarettes (in force since 1 July 2006) relate to:

1. The minimum excise duty burden (i.e. the percentage share of the tax burden in the price) Member States must meet the minimum excise duty of 57% (exceptions are countries where the total excise value exceeds EUR 115 per 1000 cigarettes);
2. Excise tax base, measured in euros per 1000 sold cigarettes - excise tax from 64 euros per 1000 cigarettes.



Graphic 1. Minimum excise duty on cigarettes

Source: European Commission 2018

EU Member States are required to use a mixed tax system that applies to the application of two tax burdens - ad valorem excise and specific excise duties. A specific excise has a tendency to reduce relative price differences between inexpensive and expensive brands, while the ad valorem regime does not make that difference. In addition, the specific component ranges between 77.5% and 76.5% of the total tax burden - expressed as a fixed amount per 1000 cigarettes, while the ad valorem component is expressed as a percentage of the maximum retail price. In addition, the total excise rate must be at least EUR 90 per 1000 cigarettes and 60% of the weighted average retail price. However, the balance between these taxes is mainly based on protectionist measures more than on theoretical considerations of this type of product. In addition to the existing differences in excise taxes on tobacco products within the EU, the integrated multi-tax policy is still successful.

Table 1. Simple calculation for pack of 20 cigarettes

Retail Selling Price (excluding taxes)	EUR 0.7
+ Excise duty - *specific:*	*EUR* 1.0
+ Excise duty - *ad valorem:*	*EUR* 0.8 *(27% of RSP)*
Total excise duty:	EUR 1.8 *(60% of RSP)*
= Price (excluding VAT)	EUR 2.5
+ VAT 20%	EUR 0.5
= Retail Selling Price (including all taxes)	EUR 3.0

According to EU rules, Member States have the freedom to apply excise rates that are above the minimum and in accordance with their own national needs. Hence, there are more or less deviations in retail prices for packets.

In recent years, the debate on specific and ad valorem duties has lost significance in relation to the costs that smokers impose on society as a whole. It is already known that smoking causes serious health problems, causes many diseases, provokes envy, and so on. The economic costs of society primarily relate to the cost of treating smoking-related illnesses, as well as social benefits and earnings on the market. The application of taxation has the idea to cover the costs of treatment, and improve regulation and improve the collection of excise taxes on tobacco products, with the mandatory contingent education of the population.

Table 2. Minimum rates for other tobacco products

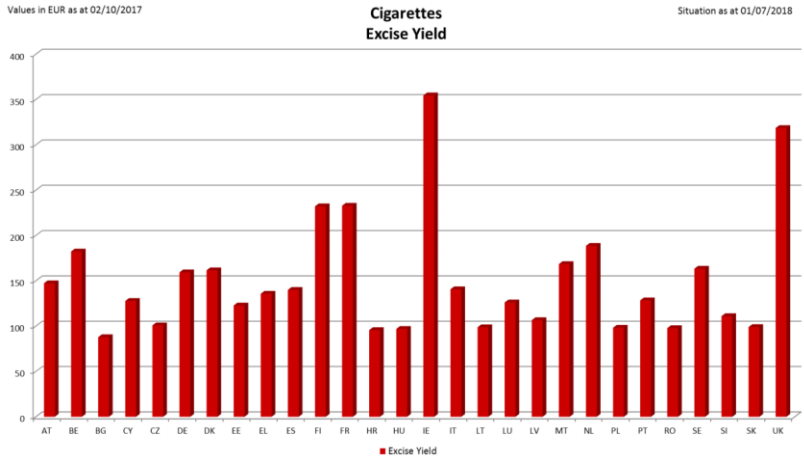
Product Category	Minimum Rate
Fine-cut smoking tobacco	48% of the weighted average retail selling price* Or EUR 60 per kilogram*
Cigars and Cigarillos	5% of the retail selling price Or EUR 12 per 1000 or per kilogram
Other smoking tobaccos	20% of the retail selling price Or EUR 22 per kilogram

*Note: * To gradually increase, by 2020, to 50% or EUR 60*

Although there are initiatives and directives that continually improve this sphere of tax revenues, there are problems in enforcing the law on tobacco tax within the EU. Most EU Member States have high levels of tobacco taxation, there are significant differences in levels of taxation between countries - they have become fertile soil for smuggling (purchasing paid taxable tobacco products in low-tax countries and sales in high-tax countries) and bootlegging (consumption of tobacco products for which customs duties are not paid).

The EU-15 countries prefer to apply the excise burden rule (or to a higher level of excise duty rates) because they are easily taxable due to the high prices of cigarettes. The new members since 2004 (EU-12) have difficulty meeting the excise burden because tobacco prices are lower than in the EU-15. Since 2010, all the countries of Central and Eastern Europe, EU member states since 2004, have easily complied with the minimum requirement for tax burden, with a real excise burden from 59% to 72% (on average 64%). In the same year, the excise burden fell from 52% to 65% (on average 59%) in the EU-15 countries. EU-15 countries easily meet excise duty rates with value of the excise on 1000 cigarettes ranging

from 101.40 € to 260.98 € (mean value 140.57 €). On the other hand, the countries of Central and Eastern Europe, EU Member States since 2004, are struggling with this requirement: their excise on 1000 cigarettes ranges from € 64.00 to € 122.00 (mean 76.18).



Graphic 2. Excise Yield on cigarettes

Source: European Commission 2018

According to the European Commission (2018a), in the structure of the Initial tax rate (ITR), tobacco and alcohol which accounts for 7.1 % of the ITR on average across the EU. Since January 2018, new higher excise duties on tobacco apply, which are related to health and environmental protection, as well as contributions to the insurance of individual tobacco producers. An additional increase in excise duty is anticipated as of January 1, 2020. Taxation of tobacco and alcohol consumption as a share of EU GDP for 2016 is highest in Bulgaria (2.8%), Estonia (2.2%), Greece (1.8%) and Poland (1.7%), while Germany, Denmark and the Netherlands at 0.5%. In addition, excise duties on tobacco and alcohol account for 9.7% of total taxes in Bulgaria, 6.3% in Estonia, 5% in Greece and 4.4% in Poland, while only 1.2% in Denmark, 1.4% in Germany and 1.6% in France. In addition, the highest revenue from the collection of excise duty rates on tobacco and alcohol in 2016 was achieved by economies with lower share of excise duty at total tax rates - Great Britain (24.3 billion euros), Germany (17.2 billion euros) and France (16.3 billion euros).

The main incentive for the spread of smuggling and bootlegging within the EU is found only on the tobacco market. Namely, the differences in the prices of tobacco between EU member states are triggers for smuggling. Illegal cigarette flows range from EU member states with lower cigarette prices and those where excise taxes are lower in Member States with more expensive cigarette and higher excise rates. "Large-scale smuggling also requires a willing market and a good local distribution network to supply it. Such markets and networks have existed for

many years in some countries (like Italy, Spain)" (Joossens, Raw, 1998, pp.67). Smuggling or bootlegging affects, on the one hand, the increase in cigarette consumption and lower income of the state, while on the other, they represent a budgetary expense because they become increasingly critical for public health through increasing use. In other words, they cause additional costs of the state in terms of health protection, new regulations, education, prevention, etc.

There is a view that cigarette smuggling is being carried out all over the world. Numerous research by tobacco companies shows that over 5% of the total cigarettes sold in the world remains in circulation without taxes, mostly in South Eastern Europe, Africa and the Middle East. The tobacco industry argues that the problems of smuggling should be resolved by Member States by lowering taxes. Illegal cigarette flows disrupt the normal functioning of the market because cigarettes that are not taxed appear on the side of the offer. Then the market does not reflect the true amount of the supply or the demand, as well as the prices. In addition, companies are advocating expanding regulation and adapting to new tobacco products. Companies remain in the interest of increasing profits, and they are not interested in the public health issue or the society as a whole, nor the costs arising from it.

AVAILABILITY OF THE TOBACCO MARKET DATA

The area of tobacco smuggling and bootlegging belongs to the group of illegal and unregistered trade and as such is not the subject of statistical processing. Availability of these data exists on unofficial sites and individual researches in which there is sometimes no discrepancy between data. In addition to published articles, sources of data are official budget lines (income from excise duty rates on tobacco), customs reports and analysis of health organizations. Sharing data from these sources, although not completely reliable for analysis, is useful for making conclusions and can be a valid basis for taking corrective and regulatory measures.

The experience of other countries in struggling against illegal tobacco flows is the starting point for new measures and actions. Previous practice has shown that wealthy economies face long-standing problems without being in line with expectations. In Canada, revenues were drastically reduced, with prevention significantly increased, while health problems kept the previous level. In Sweden, the prices of packs were significantly increased, tax revenues were partly reduced, and partly there was a decrease in the number of smokers with an increase in the illegal supply of cigarettes. Britain has increased cigarette prices with the intention of dealing with tobacco smuggling, however, smuggling of British cigarettes outside Great Britain, which has been repatriated to the UK market by illegal channels, has also increased. There are allegations at the state level that accuse other countries of aiding or participating in the smuggling of cigarettes. A good example is the accusations of Canada, Ecuador and Colombia about the involvement of US companies in tobacco smuggling in 1999. Similar accusations

followed after 2000 by the United Kingdom and the European Commission. Spain has successfully reduced the level of smuggling cigarettes from Andorra thanks to comprehensive co-operation and actions with other European member states of the EU. Adequate legislative solutions have been introduced, with emphasis on container supplies, customs and intelligence controls, using modern technology (Joossens and Raw, 2000, p. 948).

There were also cases where tobacco companies contributed to smuggling. The 1998 case is known when RJR Nabisco is charged with participating in the illegal sale of cigarettes by redirecting cigarette exports to Canada.

SERBIAN REGULATION AND BUDGET REVENUES

Excises as analytical (special) consumption taxes were applied in the Kingdom of Yugoslavia as excise duties. After the war, their implementation was limited to become part of the tax system from the 1950s. When designing a fiscal system reform in mid-1988, excise duties on particularly suitable consumption items were introduced, from the point of view of fiscal outlook. Beginning in the 1990s, in Serbia, a special consumption tax is introduced into the tax system as an excise duty, as a special tax on the consumption of a specific product group. The primary goal of introducing this type of government tax was to increase budget revenues as well as to reduce the rising illegal flows of cigarettes. During the process of harmonization with EU regulations, after the 2000s, it introduced new laws and adopted EU directives on excise duty on tobacco products. By amending the Law on Excises in the Republic of Serbia, a new excise policy was established for the period from 2017 to 2020, within which it is planned to increase the dinar amounts of excise with successive periods, as follows:

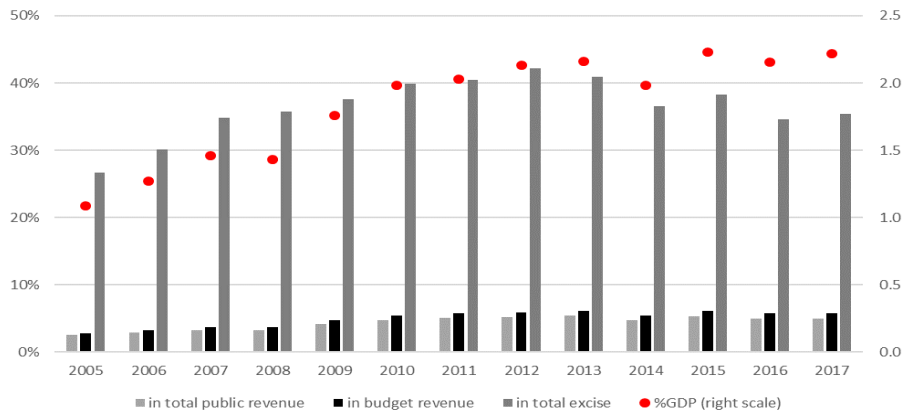
— for the period 01.01.-30.06.2017. in the amount of 64,00 dinars per cigarette pack
— for the period 01.07.-31.12.2017. in the amount of 65,50 dinars per cigarette pack;
— for the period 01.01.-30.06.2018. in the amount of 67.00 dinars per cigarette pack;
— for the period 01.07.-31.12.2018. in the amount of 68.50 dinars per cigarette pack;
— for the period 01.01.-30.06.2019. In the amount of 70.00 dinars per cigarette pack;
— for the period 01.07.-31.12.2019. in the amount of 71,50 dinars per cigarette pack;
— for the period 01.01.-30.06.2020. in the amount of RSD 73.00 per cigarette pack;
— for the period from 01.07.2020. in the amount of RSD 74.50 per pound of cigarettes.

In the period January-June 2018, the total collection of all excises was increased by 9.1 billion dinars compared to the same period of the previous year, i.e. in real terms by 5.2%. This increase is mostly due to the increase in the collection of excise taxes on tobacco products, where the increase in collection of 4.8 billion dinars was registered, i.e. in real terms by 8.8% compared to the same period of 2017.

According to reports, revenues from excise duties on tobacco products in Serbia bring about 6% of the tax revenues of the consolidated state budget. However, revenues were not increased in anticipated amount with the introduction of excise duties, as the volume of sales decreased, partly due to the increase in the prices of cigarettes, partly due to a lower number of smokers, partly due to the increase in consumption of new tobacco products, partly due to the supply of smuggled and illegal cigarettes. Due to cigarette smuggling, the state loses millions of dinars, and therefore the state takes action in the form of strict control over tobacco traffic and monitoring of illegal flows. The outcome of such actions in recent years has given massive arrests and seizures of large quantities of cigarettes from the grey and the black market. According to some interpretations of the decision to increase excise duties, and what regular activity in terms of compliance with EU rules has provoked a counter-effect. The fact is that these decisions did not protect domestic industry, especially non-tobacco producers, leaving the space for large and foreign companies to take over the tobacco market.

Very often, the decision to increase excise duties on tobacco products is linked to the desire to increase budget revenues. The negative effects of such a decision, in this case, have sparked the grey market without increasing the turnover of this type of product on the market. The essence is to adjust the excise policy to the standards of the state and the market. If revenues from excise duties on tobacco products decline, despite expectations of revenue growth, the benefits are mainly to smugglers to cigarettes, while at the loss of states due to lower incomes, registered tobacco producers who regularly pay their obligations, and traders from legal flows. An additional problem is the low standard of living and poor purchasing power of the population, which have led to the supply of tobacco products partly from the grey market.

The excise tax policy in Serbia has influenced a significant revenue growth. For example, in the period 2005-2017 of excise duties have doubled their share in tax, total and public revenues. The main reasons for such a high contribution to the budget are not only the increase in the amount of these levies, but also the rising consumption of products subject to the excise tax policy, greater control over the collection and introduction into the legal flows of trading in these products. In 2005, excises accounted for less than 15% of tax revenues, in order to reach a share of 30% of tax revenues in recent years. Taxes on tobacco account for one third of excise revenues, while in the period 2013-2016, this share amounted to over 40% of total excise revenues.



Graphic 3. Share of Excises on tobacco in Budget of Republic of Serbia, 2005-2017.

Source: author calculations

Excise revenues in the period January-June 2018 achieved nominal y-o-y growth of 7%, and real growth of 5.2%. Revenues from excise duties on oil derivatives are nominally higher by 6%, while they are real higher by 4.3%. Since the Excise Law allows for the right to refund with paid excise on oil derivatives used for transport purposes, for the transport of goods in the inland waterway, for agricultural purposes, for heating and for industrial purposes, corrected revenues from excise duties on tobacco products are real higher by 8.8%, and nominally higher by 10.7%.

CONCLUSION

One of the biggest problem is that cigarette smuggling occurs in all parts of the world, even we consider regions with lower taxes and lower prices. We can't resolve the problem of smuggling and bootlegging by decreasing the taxes. Such measure could increase consumption and simultaneously decrease revenue in government budget. The only one successful action in combating smuggling is reducing the supply of illegal cigarettes and control cigarette transit at international level.

The experiences of many countries that have been fighting smuggling and bootlegging for many years are very useful in making key proposals and measures to prevent illegal tobacco product flows in Serbia and the Balkans. As a key measure, container transport, modern scanners for container content, increased customs controls, sharper sanctions and penalties, and increased awareness of the importance of the problem, as well as the benefits and losses arising from illegal trafficking in tobacco products could be identified as key measures. In this context,

tobacco companies should not be omitted, but it is necessary to strengthen or require more control over the transport of cigarettes. All these moves are not enough to be isolated, sporadic and selective, but comprehensive and jointly at the international level.

Essentially, it is necessary to harmonize and adjust the excise tax policy to state standards and market conditions, with coordination of intelligence services and customs authorities in order to make comprehensive control of tobacco market. Just in such circumstances the expected results on the tobacco market can be achieved, and at the same time providing income to the state and meeting the social community.

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INTERNATIONAL TRADE OF GENETICALLY MODIFIED ORGANISMS IN THE FUNCTION OF EXPLOITATION AND ACHIEVING EXTRA PROFIT FOR MULTINATIONAL COMPANIES

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Jovica Beslac[30]

ABSTRACT

The aim of this paper is to try to point out to the general public (scientific, expert and general) that there is no reliable knowledge and scientific evidence that genetically modified products are completely safe for food, but also that the trade of genetically modified seeds and pesticides producers of seeds and pesticides in fact, create the dependency of seed users and actually exploit them and generate high profits.

In this paper the method of analysis, synthesis, induction and deduction is used. Regardless of the different regulations and controls that are related to the international trade of GMOs, these products certainly come to the tables of the inhabitants also in the countries that prohibit their trade and production.

Exploitation of seeds and pesticides users consists in the fact that once purchased seed does not provide the next sowing of seeds in their own production and the need for the purchase of pesticides (mostly Roundup) from seed producers, without which it is not possible to grow GMO cultures. The WTO's request that all Member States must approve the trade of GMO products is in order to further exploit the small ones by large ones.

***Key words**: GMO, production, international traffic, exploitation, profit.*

***JEL Classification:** G24, Q19*

INTRODUCTION

Different authors explain or define genetically modified organisms in different ways (Škoroć 2009, Konstatinov, Mladenović-Drinić 2006, Ostojić 2012, Manojlović 2013, Konstatinov and Mladenović-Drinić 2006, Trkulja 2014), but they all have a common content and that is that genetically modified organisms are created artificially in the laboratory, not in a natural way. Also, all authors dealing

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with genetically modified organisms emphasize that genetically modified organisms could never be created in nature. From these explanations, without any doubt, it can be concluded that genetically modified organisms are the patent of their creator and that according to the regulations governing patents and intellectual property rights, all rights defined by these regulations belong to that creator (Beslać, Ćorić, 2017). In the case of genetically modified organisms, the basic rights of their creators are in the obligation of the seeds beneficiaries to pay this seed, for each planting and inability to use seeds from their own production in the previous year (Beslać, Ćorić, 2017).

In this way, the full dependence on manufacturers of agricultural crops from seed producers is created. Therefore, crop growers are dependent on seed producers. As such, they can not affect the prices for which they will buy the seed, and when they buy seeds, they must also purchase the means of protection against diseases from these same seed producers, because only the protective agents produced by GMO seed producers can efficiently prevent various diseases.

The aim of this paper is to point out the fact that the production and sale of GMO by companies and the simultaneous production of protection products, in the specific case of the production and sale of herbicide Roundup by the same companies, is a classic example of user exploitation because they are not able to choose what protection product to use. The authors want from this work to be contribution to the examination of the disadvantages of production and sales of GMOs to the extent that leads to the exploitation of users. Also author want this topic to be subject of scientific attention and discussion.

This work consists of multiple connected units, as follows: 1) a short history of production and traffic of gmos 2) definitions 3) genetically modified organisms and health of people 4) gmo in the food chain of people 5) multinational companies - manufacturers and traders of gmo - exploitators and creators of high profits 6) discussion and conclusions.

A SHORT HISTORY OF PRODUCTION AND TRAFFIC OF GMOS

The production and trade of genetically modified organisms is related to the development of genetics as a scientific discipline. This scientific discipline has evolved from biology. It studies inheritance and variation, or mutation in inheritance. The name of genetics comes from the Greek word geno, which is translated into Serbian as giving birth.

Genetics as an independent scientific discipline began its development in the mid-nineteenth century. Its development was influenced by numerous scientists, among whom a priest Gregor Mendel from Brno (Dimitrijević, Petrović, 2004) took a very important place. This priest-scholar dealt with the crossing of various pea varieties and in 1865 he found that there were certain units that were

transferred from one generation to another and so on. **By this conclusion, Gregor Mendel actually laid the foundations for the laws of the inheritance of traits.**

Four years later, in 1869, Belgian F. Miescher (Dimitrijevic, Petrovic 2004) discovered deoxyribonucleic acid (DNA). Both these discoveries (the inheritance of Gregor Mendel and DNA - F. Miescher) in the scientific community of that time remained unnoticed. However, these two discoveries during the twentieth century were the basis on which modern genetics was developed. Today, the DNA is an instrument for detecting many unsolved cases, especially in the fields of crime, terrorism and every form of violence (author's remark).

Thirty years after Gregor Mendel set the foundations of inheritance, so in 1902, scientist William Bateson (Dimitrijevic, Petrovic 2004) first used the term genetics. In his letter, which he sent to Adam Sedgwick, he described the inheritance process and on that occasion used the term genetics.

At the end of the Second World War scientists Avery, MacLeod and McCarty (Dimitrijevic, Petrovic 2004) showed that the DNA cause hereditary changes in the bacteria streptococcus.

Significant contribution to the development of genetics was given by Beadle and Tatum (Dimitrijevic, Petrović, 2004) by the theory of "one gene - one enzyme". They proved this theory by experimenting with mushrooms. Research on corn Barbara McClintock, who continued the work of Griffith in 1950, discovered moving elements, which were named transposons (Dimitrijević, Petrović, 2004).

The year 1952 was fruitful for genetics. That year, Lederberg and Zinder discovered the transmission of genetic material through the virus, and Hershey and Marta Chase proved that the DNA is the carrier of inherent traits (Dimitrijević, Petrovic 2004). They made this conclusion by experimenting with bacteria colic and virus T2. In the same year and February 28, Francis Crick discovered the DNA structure (deoxyribonucleic acid). (Dimitrijević, Petrovic 2004). Discovering DNA's structure has actually revealed the secret of life as published by Francis Crick.

The discovery of the structure of DNA in fact is a very significant, or one might say a turning point and is the basis of the development of modern molecular genetics, and accordingly the genetically modified organisms. So, the discovery of the DNA structure was actually the basis for the creation of genetically modified organisms (author's remark).

For the development of genetics and the discovery of the structure of DNA a large number of scientists won the Nobel such as Beasle, Tatum, Barbara McClintock, Watson, Crick, and Maurice Wilkins (Dimitrijevic, Petrovic 2004). Rosalind Franklin is a scientist who also dealt with the DNA structure and showed X-ray photos of the DNA structure. However, she did not receive the Nobel Prize because she died at the age of 37.

These discoveries gave new impetus to new discoveries that were very common. Thus, in 1959, Savada discovered that antibiotic resistance genes could be transmitted from the Shigella race in the escherichia coli race. **This discovery**

was very important for the further development of genetics and the production of genetically modified organisms (Dimitrijević, Petrović 2004).

The development of genetics, and consequently of genetically modified products, led to their enormous commercialization in agriculture, and much less (at least for now) in medicine.

DEFINITIONS

Genetically modified organisms created by joining the DNA of different species of plants and animals to produce the new combination of plant or animal species, which, due to genetic mutation, represent unstable and unpredictable combinations. It is especially important to note and point out that such new plant and animal species can never be created naturally. (Manojlovic et al, 2012). In plant production, newly produced GMOs are created through biotechnology. These plants are used for animal nutrition and in this way, without any doubt, the food chain leads to food for people (Ostojić, 2012). The basic characteristics of GMO plants consist in the creation of such plant species that would never be created in nature on the one hand and at the same time they are resistant to various herbicides, on the other hand. Genetically modified organisms are those organisms that contain several genes, which are introduced through laboratory procedures into unrelated and distant species (Trkulja et all, 2014).

When genetic laboratory modification is compared with traditional crossing, it must be noted that traditional crossing involves crossing the same or similar plant species and whose genetic mutation can be predicted with great probability, while genetic engineering implies the merging of genes of different plant and animal species where the gene mutation can not be predicted.

In any case, genetic engineering and traditional crossing aim to obtain new species, especially in plant production, but there are very important differences between these two methods. While the conventional method produces a new species as a result of the cross-breeding of very close species, genetic engineering produces new species as a merger of very different and distant plant species or the gene of plant and animal species (Konstatinov, Mladenović-Drinić, 2006).

So far it is known that genetic engineering causes many problems. Namely, the first problem of genetic engineering consists in the fact that it involves the merging of different plant and animal species, for example, bacteria with corn, fish with tomato or spider with goat, etc. Another problem, not less important, is that GMOs of plant species produce insecticides themselves that are useful for the growth and production of these plants, but at the same time harmful and deadly for insects such as bees. The destruction of bees in fact presents a huge threat to the flora, and consequently to fauna, because it is known that in the total pollination, bees participate with more than 90%. If there is no pollination, there is no total flora, and consequently no total fauna. Lastly, the practice has unambiguously

shown that there are harmful effects on the health of animals fed by GM products (Ševarlić, 2014).

GENETICALLY MODIFIED ORGANISMS AND HEALTH OF PEOPLE

Today, there is no consensus in the world on whether genetically modified products for animal nutrition and then with the food chain are passed on to people, are completely safe for human health. This disagreement is largely derived from the views of two groups of scientists engaged in the study of GMOs. A number of studies have shown that GMO crops and food, that is, products derived from these crops are safe for human consumption, i.e. that they do not contain harmful toxins and allergens, and that the methods for determining food safety are completely correct (MacKenzie, D., McLean, M., (2002), (1996). However, a detailed analysis of published studies and articles has shown that it is not about reviewing studies and articles but about studies published by Monsanto or the experts working for that company (Papić-Brankov T. 2013, Endgdahl W. 2005.). Thus, scientists working for companies and in institutes and laboratories founded by companies that are engaged in the production and trade of GMOs, (dominantly Monsanto), or those that are in any way related to these companies, claim that GMOs are completely safe for animal , and then for human nutrition and that the production of these organisms solves the problem of hunger in the world. In contrast, scientists who investigate and study this matter in laboratories that are not associated with GMO producers (Endgdahl W. 2005, Seralini 2014) claim that there is clear evidence that GMOs adversely affect animal health. In 1995, the Scottish Ministry of Agriculture, the Environment and Fisheries allocated $ 1.5 million to investigate the risks of using GMOs. This research was entrusted to the Rowett Institute of Aberdeen and Dr. Pusztai Scientist. Dr. Pusztai's study was the first independent study on GMO in the world. At the end of 1997, Dr Pusztai spotted negative effects on mice fed with GM potatoes such as immune system weakening, lighter internal organs, but the greatest negative effect was that the brain of the examined mice was considerably smaller. In 1998, Dr. Pusztai presented part of his findings and emphasized that citizens can not be used as guinea pigs. It was also pointed out, without specifying details of the results of research, that if he could choose he would not eat GM potatoe, that said enough about his findings and the harmfulness of GM potatoes.

Another scientist, Seralini (2007) and his team, proved that rats fed with Monsanto's MON863 corn were gotten significant liver and kidney toxicity, making it unambiguous to conclude that Monsanto's MON863 corn is not safe for food. That same year, Seralini and his team published a study on the toxicity of Monsanto Herbicide Roundap on human embryonic cells and structural mammalian cells (Seralini 2007).

Gilles Erik Seralini, professor of molecular biology at Caen University. He received his doctorate in biochemistry and molecular biology at Université Montpellier in 1987. He became a university professor with 30 years of age as the youngest professor in France. He is the author of over 100 scientific papers. He was twice appointed French government adviser for GMO (1998-2007). Since 1999, he has been president of the scientific committee, the Committee for independent research and information on genetic engineering.

In a very respectable magazine, **Food and Chemical Toxicology**, Seralini showed very dramatic indicators of the deadly effects of Monsanto's corn NK603 (Seralini 2012). This study was done in complete confidentiality to avoid various pressures. The conclusions made by Professor Seralini derived from a two-year study on a sample of 200 rats.

The results of Seralin's study in the shortest: 1) Females fed GM by corn were two to three times more likely to die than female controls, 2) congestion and liver necrosis was 2.5 to 5.5 higher than control group, Male rats gotten four times larger tumors than those in the control group, 50-80% of females developed tumors (some animals up to three tumors), only 30% developed malformations in the control group. The highest number of tumors (three) were received by females treated with Roundap. The negative effects of the roundup are seen in the destruction of aromatase that synthesizes estrogen, and then the function of estrogen and androgen receptors in the cell is disturbed. This herbicide disrupts the function of the sex glands, and also affects the increase in pituitary dysfunction in treated females.

Seralini's scientific discovery showed how harmful the consumption of GMO corn NK603 and herbicide Roundap, which was, by the way, the best-selling herbicide in the world, which at the same time means exploitation of the users of this herbicide. At the same time, this scientific discovery has shown how extensive, solid and influential the relationship between the GMO and herbicide producers, politicians, the media and the corrupt scientists. After the announcement of this discovery attacks on Seralini, his team and his work are undeniable proof instrumentalisation of genetic engineering in order to achieve the exploitation and extra profit by selling GM seeds and pesticides. Attacks on Professor Seralini and an attempt to discredit him showed that corrupt scientists and scientists, without conscience and honesty, serve those forces that are guided by profit and domination over human destinies and lives and who want to exclude from the public and science all those who possess scientific knowledge, dignity, honor and a positive human attitude towards the overall humanity and the future of the planet. To make things worse against Seralini and his work and results, some scientists from Serbia have come together. Thus, at the lecture at Kolarac Endowment, a molecular biologist prof. Dr. Vladimir Glišin called the work of Professor Serallini called "intellectual dishonor" (Seralini 2014). **This in fact means that in Serbia there are forces, as well as many others around the world, which are consistent and encouraging the producers of GMOs and herbicides, which are used for their protection,to become masters of**

agricultural production and owners on a planetary scale, to exploit, enormously enrich and control life on the planet.

Seralini is not the only scientist to research GMOs and who has shown their harm to animal health, and hence people.

Italian scientist M. Malatests (Jermakova I. 2014) with a group of his colleagues found that in the experimental group of mice there are pathological changes in the liver, pancreas and semen when this group is fed with GM soybean, which is treated with herbicide Roundup.

Australian scientists (Jermakova I 2014) found negative effects on animals on which experiments were carried out, so their immune system was weakened, and lung inflammation was observed.

French scientists (Jermakova I 2014) found that there is a negative impact, pathological changes in the liver, kidneys, pancreas and reproductive organs of rats fed by GM corn.

German scientist U. Doerfler and scientists S. Iven and A. Pusztai (Jermakova I. 2014) have come to the conclusion that GMOs lead to the formation of tumors and oncological diseases.

Russian scientist I.V. Jermakova (Jermakova I. 2014) demonstrated that in the rabbit females, which are fed with soybean, which has been treated with the herbicide Roundup, there is an increase in mortality in the first generation, then underdevelopment of survivors as well as the absence of the second generation.

Russian scientists M.A. Konovalova и B.A. Blinov (Jermakova I. 2014) have shown that the isolate of GM soybean protein has the consequence of various pathologies of internal organs and an increase in obesity.

Proponents of GMO production, trade and consumption are most likely to point out that GMO products need to free the planet from hunger, because higher yields are achieved and the production of these organisms is cheaper. They do not look at scientific evidence from scientists from around the world who talk about the harmfulness of GMOs to animal health, and hence humans. Opponents of production, trade and consumption of GMO products emphasize that it is not true that production is cheaper but it is more expensive in the long term, that they are no higher yields, and especially emphasize that for GMO products there is no evidence that they are completely safe for food, but on the contrary, that feeding animals GMOs foods are affected by various types of diseases, especially tumors, as demonstrated by research results of the foregoing scientists. When these results of the research are taken into account and the conclusions made on the basis of these studies and if people are fed with GMO products, consequently it can be undoubtedly concluded that people will also suffer from the same diseases when they use food containing GMOs in the long run. Thus, there are irreconcilable views of the two opposing sides, where unfortunately science is suppressed by multinational companies, their lobbyists, various corrupt politicians and corrupt scientists. **In any case, the previous experimental research and the decision of a large number of countries in the world that do not allow the production of GMOs in their territory, shows that there is no evidence that GMOs are completely safe for the health of animals and humans.**

The basic characteristics of GMO are visible table.

Table 1. Overview of myths and truth about GMOs

Myths about GMOs	The truth about GMOs
Less pesticide is used in production.	Yes (Author's Note), but the plant gets a gene that itself becomes a pesticide. We eat such a plant. Not one that is sprayed pesticides from the outside, but one that carries a gene for insect venom
In ecological terms, it is acceptable because less pesticides are released into the air, water, soil and it does not pollute the environment	It distorts the ecosystem because the GMO plant damages other natural organisms. For example, a gene that has pesticide properties has proven to destroy bees and butterflies
The smaller area produces a larger quantity of crops and yields are higher.	The land on which GM seed is sown once, for the next 10 years is unusable for every natural culture that was previously sown in a traditional way. According to the author's knowledge, there is no reliable evidence for this claim.
GMO production is strictly controlled under laboratory conditions and tested for human use.	No tests carried out by the manufacturer lasted for more than three months, which is why it can not be said with certainty that the GMO is harmless for human health in the long run.
GMO is a contribution to modern science in reducing disease and allergies because GM food is a better nutritional composition and richer in vitamins than those found in nature.	No laboratory-produced plant can have a more nutritious ingredient than a natural plant in nature. It has been proven that GM foods increase allergic reactions and generate new ones.
The European Union has forced non-members to accept the traffic, trade and cultivation of GMOs in order to become a member of the EU.	Only 6 of the 27 EU Member States grant GMOs in their territories. Regulations in the EU give freedom for members to make their own decisions on this issue, without any disturbance.
First of all, GMO helps reduce hunger in the world.	The number of hungry in the world has not decreased significantly in the last 20 years as far as laboratories produce GMO seed.
GMOs are food for the poor because organic or conventional food production is too expensive	GMO cheapens production of processed food, which does not reduce the price of this product in the store. It's cheaper for food processors, not for consumers.
The man has always intervened in nature, what has been grafting once, today is a laboratory and manipulation of genes in response to the use of science in everyday life.	Grafting of plants in nature and breaking cells and injecting the genes of another organism is not the same. The first process is the help of man to nature, the other is manipulation of nature for profit. You can cross two dogs without the danger of a species, but outside the laboratory you can not cross the tomatoes and fish, what the GMO does.
EU Member States that have approved GMO crops in their territories have higher yields per hectare, and hence profit from agriculture.	Totally incorrect. According to FAOSTAT data, in the period from 2005 to 2010, Serbia had higher yields per hectare than Romania or Slovakia, which GMOs have in their fields.

GMO can always be planted in a specific and limited area, a person has the freedom to choose whether to cultivate traditional or GMO seed.	The GMO plant cannot be limited to one area because its pollen extends to the surrounding nature and plants. A case in Canada is known, when GMO culture from a neighboring field has fertilized the cultivation of a field with traditional seeds, and the seed producer immediately asked owners of the once-traditional and now contaminated land payment of patent rights to yield. This was the first such trial of a little man against a big corporation that he lost.
Domestic farmers are intrigued by GMOs due to higher yields, and this will generally increase the agricultural profits in our country.	Farmers are mostly interested in conventional production, not GMOs, and the introduction of GMO seeds will tragically endanger domestic seed production and take us off the list of desirable exporters, as we will no longer be different from others.
GMO will enrich and empower farmers, and that is the basis for overcoming the crisis.	GMOs will enrich only and exclusively producers of this seed and seed protection products and their dealers and distributors. In the long term, with the spread of GMOs, food in the world will be monopolized and owned by several large chemical industries.
GMOs are less harmful than pesticides and herbicides for human consumption.	According to the consumption of pesticides, Serbia is below the European average. The problem with pesticides and herbicides is the problem of withdrawal, the time (a certain number of days) which is necessary to pass between the last spraying and harvesting. In Serbia, the withdrawal period is not respected, because the farmer aspires to present the harvest before the buyer as soon as possible. If this were to be regulated, pesticide damage to human health would not exist.
There is no valid research proving the harmfulness of GMOs for nature, humans and animals	There are numerous studies that prove the harmfulness of GMOs to the environment, humans and animals, but they quickly discredited, always from the standpoint of research methodology
WTO requires, for admission into membership, permission to import, trade (and cultivation) GMOs	The truth. Also, the newest member of the WTO, Russia prohibits GMO after the results of research by French scientists. What kind of consequences will they have on their fresh membership, they will see. And incorrect: The WTO does not require that GMO cultivation be a condition for membership, but only traffic.

Source: http://www.stetoskop.info/Sve-sto-vas-je-ikada-zanimalo-o-GMO-a-niste-imali-vremena-d guglate-5257-c15-content.htm, http://www.mooshema.com/2012/11/12/gmo-prirucnik-za-laike-mitovi-i-cinjenice/, author: Nikola Nikolić

The above review shows that all those who insist and advocate the positive characteristics and properties of GMOs are not accurate. Furthermore, this

overview shows all the harmfulness of production, traffic and consumption of GMOs.

GMO IN THE FOOD CHAIN OF PEOPLE

There are countries in the world that have approved their GMO production and traffic because they consider that foods containing GM organisms have the same safety status for human health as foods produced in a conventional way. It is estimated that in the United States 75% of food products contain GM ingredients. To appease consumers and the public, these countries ordered the labeling of products that contain GMOs. Formally this means consumers have a choice. If people do not want to use food containing GMO ingredients they can avoid it. However, only the labeling of products containing GMOs is not a guarantee that these products do not contain GMO ingredients. This labeling means, in fact, only to recognize products containing GMOs from those that do not contain it. However, there is no guarantee that products not labeled as GMOs do not contain GMOs in themselves.

Most EU countries estimate that, when GMOs are used for animal feed, and via the food chain and transferred to humans, there are risks to the health of animals and people, but at the same time there is a negative impact on the environment, agricultural land and biodiversity.

EU Directive 2001/18 / EC allows member states to limit or completely prohibit the production of GMOs within their territory. Using this directive, 19 EU countries banned the production of GMOs in their territory (Jankovic S. 2014). The EU Directive No. 1829/2003 regulates the labeling of food and food products containing approved GM ingredients in a percentage of more than 0.9%. However, although it seems that these directives very well regulated production and marketing of GMOs in the EU and there are still risks from the use of products that contain GMOs. Namely, EU countries import large quantities of GM soy and corn for food production. In this way, the EU adopted the GMO contamination, because these organism through the food chain of animals comes to food for people.

Russia is a country that has adopted the most restrictive law on GMOs. It prohibits the cultivation and import of GMOs. But Russia receives the meat and milk of GMO cattle, because Russia is a member of the WTO and therefore can not completely ban the trade of GMOs, on the one hand, and it needs food for a rich animal fund, on the other. In fact, this means that in addition to such a restrictive law, which has been sued by the WTO, the population of Russia uses food products that contain GMOs.

Serbia has also adopted a very restrictive GMO Law. It is regulated by the Law that no modified living organism as a product of a genetically modified organism can be put on market, or can not be grown for commercial purposes in the territory of the Republic of Serbia (Law on GMOs). Bearing in mind such legal provisions, it is reasonable to assume that there are no products containing GMOs

in Serbia. However, GMOs enter Serbia in many ways. In 2001, 50,000 tons of GM soybeans were found in Serbia, which arrived as food aid from America. After this case, food aid was denied twice from America. In addition, smuggling is a very important source of GMOs in Serbia, which comes mostly through the territory of Kosovo and Metohija, which receives large food aid from the United States.

Also, GMOs enter Serbia and through the import of food products (such as margarine, vegetables, cereals, noodles, soups, sausages, various drinks, snacks, chocolate, mayonnaise, etc.) that are not subject to marking.

The above examples confirm that citizens, or consumers, can not be sure that the products they consume daily contain GMOs and the level of GM ingredients.

MULTINATIONAL COMPANIES - MANUFACTURERS AND TRADERS OF GMO - EXPLOITATORS AND CREATORS OF HIGH PROFITS

In sociology exploitation implies the appropriation of someone else's work, that is, the exploitation of other people for their own needs and interests. Under exploitation, author also implies, the exploitation in the best possible way, in order to achieve the best effect for those who are exploiters.

Exploitation is most often spoken of in a negative aspect, because it implies the exploitation of human labor, knowledge and skills by third parties, with the basic aim of earning profit or profits at the expense of or damage to the one who is exploited.

By profit, the most common is the positive difference between invested and received. In accounting, profits are viewed as taxable, tax-free and pure profit.

Past experience shows that production and trade of GMO has not resolved the issue of hunger in the world, nor it will be possible in the future. If it is now completely clear that GMO crops do not have a higher yield, that production costs are lower only in the beginning and later in the long run higher (due to the obligation of constant purchasing seeds and pesticides), who only can protect GMO, then there is only one conclusion, that is, the motive of production and trade of GMOs has the other goal, that is, it aims at exploiting farmers and consumers, and on that basis achieving high profits.

One of the proofs of this is the law-decree 81 which Paul Bremer III brought after the occupation of Iraq (Engdahl, 2005). This law-decree is given the name: "Patent Law, Industrial Design, Classified Information, Integrated Circuits and Plant Types" (Engdahl, 2005) from which derives its purpose and unequivocal exploitation of Iraqi economies and populations. brought under the influence of Monsanto, as a multinational company, which is the most famous GMO manufacturer.

The essence of exploitation in the production and trade of GMOs is that each GMO is a patent that implies a set of exclusive rights that the inventor is guaranteed by the country in a way that protects its invention from use or any other form of exploitation by third parties.

Patents represent the invention of new machines or significant improvements to existing machinery or plant machines, the invention or significant improvement of industrial and other processes, the invention of industrial products, the discovery of various chemical compounds, food, medical or pharmaceutical products as well as various forms of genetic engineering of modified plants and animals.

Owner GMO, as the owner of a patent may prohibit the production, operation, use, attempt to sell, sale and import of products that is produced on the basis of a patent. The registered patent is valid for 10 years, and it is forbidden for farmers to use seed crops of protected crops preserved from the previous harvest, as well as the seeds of any other crop, (Engdahl, 2005).

The exploitation of Iraqi farmers is that they are obliged to conclude contracts with owners of GMO seeds for which they are obligated to pay a technological fee, which makes the owners of the seed, a multinational company, among which Monsanto is the most important, have the opportunity to exploit them and make high profits. The exploitation of Iraqi farmers is even more evident given the fact that they developed their agricultural production 8,000 years before Christ by developing all kinds of seeds that exist in the world (Beslać M, Belokapič-Čavkunovič J. Beslać J.).

An unfavorable circumstance for Iraqi farmers was that Iraq was 10 years under sanctions and therefore all the stocks of their own seeds were exhausted. In order to meet the needs of Iraqi farmers for seeds, the International Development Agency provided "high-quality and tested seeds" of American origin that nobody had the right to examine. After a few years, when it is determined that GM seeds Iraqi farmers had to pay the technology fee.

The exploitation of farmers through GMOs is very clearly seen on the example of Argentina. The problems of the Argentinean economy and overall economic development in the past were the result of oil shocks, then the granting of favorable loans by banks that were in Rockefeller's ownership and monetary shock, when interest rates on loans increased first at 10, then at 16 and at the end 20% . It is known that this monetary shock has affected not only Argentina, but the entire world economy, with the dollar reaching an undeservedly high growth. All borrowing countries, including Argentina, to repay cheap loans had to borrow at high interest rates, which was another form of exploitation of underdeveloped and less developed countries, that is, those countries that were forced to borrow (Beslać M, Belokapič- Čavkunovič J. Beslać, J.). At the same time, the Argentine market is open to multinational companies, who performed the purchase of Argentine soil at very low prices (the most important buyers were company Cargill and the Soros Quantum Fund (Engdahl, 2005)). Domestic investors were unable to purchase soil for the simple reason that due to previous sanctions they did not have cash.

Thus conditions have been created to plant GM crops, especially soybeans, on the purchased soil. However, in addition to the fact that GM crops were sown on newly bought soil, Argentinian peasants were forced to plant GMOs on their land. Namely, the company Monsanto approved loans for purchasing its own seeds, pesticide loans, and for agricultural machinery. Thus, large areas of the Argentinean country are planted with GM crops, and the traditional production of peas, legumes and grains has almost disappeared. Selling GM seeds, pesticides and agricultural machinery by multinational companies, and especially Monsanto, to Argentine farmers, who had no other choice, can not be called in any way other than exploitation where very high profits are made.

The most famous company that produces GMOs and pesticides for their protection is Monsanto. It employs 25,500 workers in 66 countries around the world.

Representatives of this company point out that the production and trade of GMOs is aimed at reducing hunger in the world, which means that food containing GMOs is safe for food. However, in 1998, Vice President Monsanto said that Monsanto does not guarantee the safety of foods it produces. He expects food ministries (FDAs) to be responsible for food safety. The main goal of Monsanto is to increase sales, which consequently brings high revenues and profits, but at the same time it means complete neglect for the health of both animals and humans (Engdahl 2005).

The connection of multinational companies and their desire to achieve dominance and huge profits from agricultural production, and therefore the exploitation of farmers and the population, is also evident from the fact that in September 2016, the pharmaceutical company Bayer bought Mosanto. The pharmaceutical company Bayer bought company Monsanto for 66 billion US dollars (Beslac M. Coric 2017).

Antiglobalists and opponents of the GMO believe that there will be a huge increase in Bayer's income as they will produce GMOs that damage health, and then they will treat them with their medicines. And in Germany itself there are opponents who are against the fusion of Bayer and Monsanto. Thus, **Green Party leader Anton Hofeiter in the German parliament said genetic technology is a risk, not a future for humanity.**

DISCUSSION AND CONCLUSIONS

If it comes from the terminology of exploitation that means exploiting the fruits of someone else's labor, exploiting other people, exploiting natural resources, without adequate compensation, then the production and trade of GMOs is a very clear instrument of exploitation. This is clearly demonstrated on the example of Iraq and Argentina, as well as the fusion of Bayer and Monsanto. Iraqi farmers imposed by the law - Decree 81 which enable multinational companies to produce and sell genetically modified seeds. The exploitation in this case is reflected in the

fact that farmers do not have the possibility to leave their seed from their own production for the next sowing, but they have to pay the so-called technological fee, on the one hand, and due to long-term embargoes and three-year drought they have exhausted all their supplies. In addition to seeding to be successful, it is necessary herbicide produced by the same company that produces the seeds leading to a double exploitation.

The example of Argentina also shows that GMO production is an instrument of exploitation. Namely, programmed indebtedness and measures such as forcible privatization, the granting of cheap loans (followed by a huge increase in interest rates of up to 20%) and the purchase of vast areas of agricultural land by multinational companies, farmers in Argentina have been brought in complete dependence and Argentina has been converted into enormous space for the production of GM soybeans. The agreement between GMO producers and farmers regulates the payment of technological fees, which is evident exploitation.

During the preparation of this work and research, the authors have clearly demonstrated on the example of Argentina how and in what way the production of GMO instrument is exploitation. This work should be interested and enabled other researchers to deny or support the conclusions reached by the authors of this paper.

The authors agree with those independent experts and researchers who consider and experimentally prove that the production and sale of GMOs are potentially harmful to humans and that it provides huge profits for multinational companies.

The acquisition of Monsanto by Bayer unambiguously shows that large-scale capital, in order to increase revenue, takes on the role of polluters of living space and a negative impact on the health of animals and humans, and then treats both humans and animals. Respectable scientists from around the world shown the harmfulness of GMOs for the health of animals and people, but the policy of multinational companies and scientists dependent on multinational companies does not accept this.

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