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INSURANCE AS A SOURCE OF FINANCIAL RESOURCES FOR ECONOMIC DEVELOPMENT

Osiguranje kao izvor sredstava za finansiranje ekonomskog razvoja

Abstract

The key function of insurance companies is to offer the indirect protection to policyholders and business of financial intermediation, that is institutional investing. The objective of insurance companies in their role as institutional investors is to achieve additional liquidity on financial market, maximise profit with an acceptable level of investment risk, collect small, fragmented amounts of free capital from policyholders and put it in the function of economic growth and development. The aim of the research done in this paper is to briefly but comprehensively present the role of insurance companies as institutional investors, to point out the importance that insurance has in economy and society and provide the necessary information and theoretical foundation for the adoption of policies and regulations, whose ultimate aim is to support the achievement of sustainable economic growth as well as sustainable and highly profitable growth of insurance companies. In order to achieve the stated objective, we analyze steps, goals and investment risks of insurers, theoretical overview and empirical experience in managing investment portfolios of insurance companies.

Keywords: *insurance companies, investments, portfolio, management, Serbia*

Sažetak

Gljučna uloga osiguravajućih društava jeste obezbeđenje posredne ekonomske zaštite i obavljanje poslova finansijskog posredovanja, odnosno institucionalnog investiranja. Cilj osiguravajućih društava kao institucionalnih investitora je da obezbede dodatnu likvidnost na finansijskom tržištu, maksimiziraju profit uz prihvatljiv nivo investicionog rizika te prikupe sitan, slobodan kapital i stave ga u funkciju privrednog rasta i razvoja. Namera istraživanja sprovedenog u ovom radu je da sažeto prikaže celovitost uloge osiguravajućih društava kao institucionalnih investitora, da ukaže na značaj koji osiguranje ima u privredi i društvu i omogući neophodnu informisanost i teorijsku utemeljenost za usvajanje politika i regulativa čiji je krajnji cilj podrška ostvarenju održivog ekonomskog rasta, kao i održivog i visoko profitabilnog rasta osiguravajućih društava. U nameri da postignemo navedeni cilj analiziramo korake, ciljeve i rizike investiranja osiguravača, teorijski pregled i empirijska iskustva u upravljanju investicionim portfeljima osiguravajućih društava.

Gljučne reči: *osiguravajuća društva, investicije, portfolio, menadžment, Srbija*

Introduction

The key role of insurance has always been that through the formation of risk communities, communities of individuals endangered by same risk, provide protection against risks that threaten individuals' property and lives. The primary function of insurance in the modern economy is precisely the function of protection and preservation of assets. In the field of protection against risks the one of the key roles of insurance is to preserve the financial health of small and medium-sized enterprises. Security of individuals, but more importantly, the security of sustainable survival and development of small and medium-sized enterprises is an important element that contributes not only to economic development but also to political stability of any country. However, reserve management in the context of limitation of exposure to risks on the one hand and the search for investment returns in the financial markets on the other, is a basic prerequisite for optimisation of performances of insurance companies and a key step in their risk management. Income from investments enable insurance companies to better manage the risks undertaken from their policyholders and on the basis of the generated revenue from investments to offer a lower premium and become more competitive in the market. So, in addition to direct benefits in terms of protection against the risk, there are many other benefits of insurance.

Thanks to the existence of insurance cover individuals will not have to have access to a relatively large reserve funds, but these funds they can use more profitably. Individuals can use these funds for investments in financial markets, thus indirectly contributing to the development of the financial markets. Insurance allows individuals to own their own property and have a positive impact on the increased amount of purchases, thus indirectly it stimulates economic activity, as consumption is the main driver of economic growth and development. Insurance benefits economy directly through the profits of insurance companies and employment, both within the insurance sector and beyond. In Europe, for example, the insurance sector was represented by 5357 companies that were directly employing 940,000 people in 2013 [1]. Insurance companies have achieved EUR 1,117 billion in gross written premium.

Only in the UK the insurance industry employed about 314,400 people in 2014 [8] and in the US in 2013 there was 6086 companies employing 2.4 million people [7]. In the UK insurance companies have directly contributed to the growth of the gross domestic product for GBP 25 billion and paid taxes in the amount of GBP 11.8 billion. In the US, insurance and support activities accounted for 2.5% of gross domestic product. Insurance companies indirectly employ about one million agents, insurance brokers and financial intermediaries. Also, the insurance industry indirectly affects the greater employment within all of companies with which insurance companies cooperate such as companies that provide services in the field of information technology [1].

The growing institutionalisation of financial savings combined with the growing importance of the role of pension and investment funds and insurance companies, represents the most important change in the financial markets in recent times. In fact, since the mid-twentieth century insurance companies are becoming more common in the financial markets as institutional investors. The degree of institutionalisation of financial savings and the role of insurance companies varies from country to country. It is particularly pronounced in developed countries such as US, UK, Germany and others. In these countries insurance companies mobilise massive resources and have an important role in financial markets. The investment function of insurance and reinsurance companies is enabled by the fact that premiums are collected in advance and can be invested until the need for claims payment arises. In this way, insurance and reinsurance companies are an important element of the structure of the financial system. Adequate attention must be given to insurers' importance and their functions in the role of institutional investors and to the structure of investment portfolios, either life or non-life insurance companies.

The role of insurance companies as institutional investors also varies from country to country. Insurance companies have been the largest institutional investors in the European Union for years. For example, in 2013 the total volume of investments of insurance companies was over EUR 85,27 billion, which represents roughly 59% of the total gross domestic product of all the countries of

the European Union together [6]. Insurance companies in Europe have about 25% of all government bonds issued by member states of the European Union, about 21% of all European corporate bonds as well as a significant part of all quoted shares and assets such as infrastructure [6]. Also, insurance companies in Europe, according to data from 2011, owned about 11% of bank debt in the Eurozone, 24% of the public debt of the EU countries, 18% of the total shares and 14 mortgage bonds. Also, insurance companies invested in infrastructure projects around EUR 11.7 billion in direct loans to small and medium enterprises in the amount of about EUR 14.1 billion and private shares (shares that are not quoted on the stock exchange) in the amount of about EUR 18.9 billion. Insurance companies from Europe manage around 12% of the total global financial assets. About 62% of the total investments of insurance companies from the European Union belong to the insurance companies from the UK, France and Germany [1]. Figure 1 shows the share of insurers and other institutional investors in Europe in 2011.

The intention of the research done in this paper is to briefly show the role of insurance companies as institutional investors, to point out the importance that insurance has in the economy and society and to provide the necessary information and theoretical merits for adopting policies and regulations whose ultimate aim is to support the achievement of sustainable economic growth as well as sustainable and highly profitable growth of insurance companies. In order to achieve the stated

objective we analysed the steps, objectives and risks of insurers' investments, we present the theoretical review and empirical experience in managing investment portfolios of insurance companies.

Steps, objectives and risks of insurers' investments

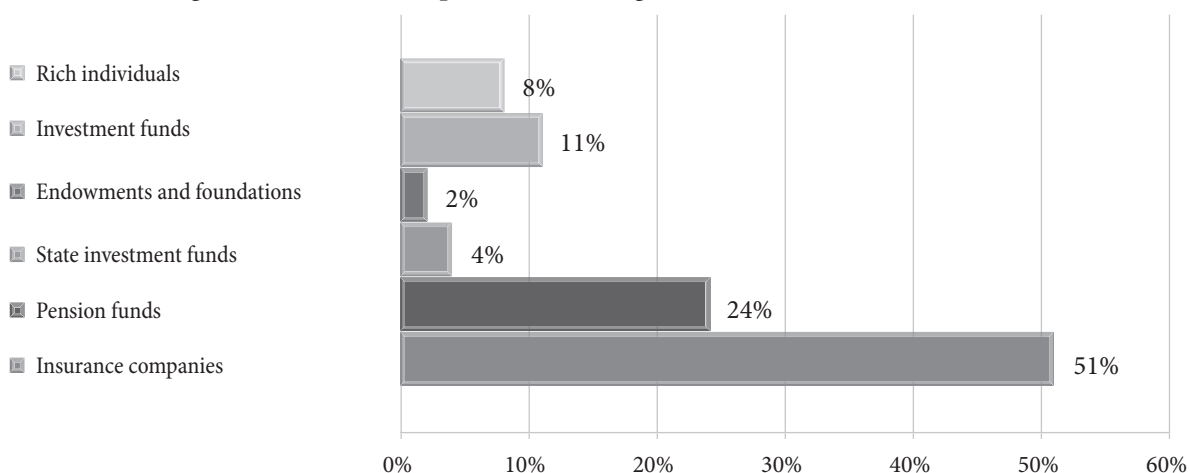
Investment management of insurance companies should include the following five steps:

The first step in the process of investment management is to set investment targets that the insurance company needs to achieve. The primary investment objective is to provide the optimal balance between risk and return, and on this basis to create value and ensure security for insurance companies, their shareholders, policyholders and the economy as a whole.

The second step is to define the investment policy in order to achieve the set investment goals. Setting policy begins with the conception of funds allocation in the main asset classes or capital markets products. The basic classes are the shares, fixed income securities, real estate and foreign securities.

The third step is to select the investment management portfolio strategy that specifies the chosen investment policy and strives to achieve goals. Portfolio strategies can be classified into active, passive and mixed (including elements of active and passive strategies). The expectations for factors that are expected to have an overriding influence

Figure 1: Insurance companies are the largest institutional investor in the EU



Source: [4, p. 12]

on the performance of certain asset classes are essential for all active strategies. Passive strategies include minimal expectations and the most popular of them is the indexing strategy. The aim is to replicate the performance of the leading index in the market. Indexing is mainly used for shares and its application to fixed income securities is of a recent date. Structural portfolio strategies are used for fixed income securities. These strategies can structure the portfolio so as to obtain the performance of one of leading benchmarks.

When portfolio strategy approach is selected, insurance company approaches to selection of assets that will be included in the portfolio. The optimal portfolio is the one that provides the highest yield at a given level of risk or the lowest risk for a given level of return.

The last step of the process of investment management is the measurement and evaluation of investment performance. In addition to the basic principles of the business of insurance companies, there are four basic principles of investing that insurance companies must respect when making investment decisions: 1) maximising the rate of return on invested assets, 2) maximising investment security, 3) the balance of investments with the obligations of the insurance company, and 4) satisfaction of the regulatory requirements (in essence, the maintenance of solvency).

Investment activities of insurance companies represent a significant source of their income, especially in developed countries. For example, a long-standing practice in the US insurance market is the achievement of negative results from insurance operations, i.e. the realisation of the unfavourable combined ratios. In such circumstances, insurance companies profit is based on the profitability in their investments. Yields on investments of insurance companies include interests and dividends and a capital gain or loss, which is the difference between the buying and the selling value of investments. As indicators of the profitability from insurers' investments they use the share of investment profit in the premium earned and share of the investment profit in the average invested assets.

The ratio of investment is an indicator that measures the share of the return on investment in the premium earned. It is calculated as follows:

$$(1) \quad \text{The ratio of investment} = \frac{\text{The investment return}}{\text{Premium earned}}$$

This indicator is used by non-life insurance companies in order to obtain the ratio of investment return to earned premium. This indicator shows the efficiency of the investment policy applied by the insurance company.

Life insurance companies in order to measure the profitability of investments use the following ratio:

$$(2) \quad \frac{\text{The ratio of investment of life insurers}}{\text{The ratio of investment of life insurers}} = \frac{\text{The investment return}}{\text{The ratio of investment of life insurers}}$$

This indicator shows the efficiency of investment policy applied by life insurance company.

All risks in the money and capital markets can be divided into two groups [2]:

1. Risks that have market and economic nature (economic conjuncture, market conditions, instability, technical advances, credit, foreign exchange and monetary policy, trade policy, the degree of social control, business relations, etc.) and
2. Risks that have speculative character (large and unexpected fluctuations caused by stock exchange speculations).

Risks in the financial markets involve a number of risks, including interest rate risks, exchange rate risks, futures risks, inadequate financial regulation, the risks of money transfer and payments, the risks of false information and pure speculation, currency restrictions and currency controls, etc. The most common and also the basic forms of risks are [2]:

1. Financial risk is the primary risk for all financial instruments. Commonly it is referred to as credit risk, and is linked to the non-performance of credit obligations, either in whole, or in part. The loss can be total or partial. Financial risk of investments in shares occurs in the form of poor results of the company that issued the shares, so there is a risk that investor will not realise dividends. Investors are particularly sensitive to the degree of risk, so there are specialized agencies that determine

- the rating of securities.
2. Liquidity risk arises when a financial instrument cannot be sold before the final maturity date, when the instrument cannot be converted into cash. The degree of liquidity is determined by the relationship between the maximum expected price and the market price that could be obtained by selling in a relatively short period of time. Uncertainty regarding the selling price and easiness of transformation into liquid form (money) directly affects the liquidity risk.
 3. The risk of purchasing power is related to the business conditions in the financial market when there is a higher rate of inflation. This risk is present in a lot of long-term securities with a fixed interest rate. The real interest rate then falls significantly below nominal.
 4. The price risk is directly related to the market value of financial instruments that is affected by changes in interest rates and exchange rate changes.

Portfolio management of insurance companies

Basically portfolio management is the selection of the type of assets in which insurance companies will invest. Placements of insurance companies may be varied but they are never in just one form of assets. The investments can be with fixed or variable yields, in financial or real assets, long-term or short-term, more or less liquid. In addition, the maturity structure of investments is conditioned by the function and purpose of the technical provisions of

insurance companies (see Table 1). It is necessary to answer the question of where to place financial resources to achieve the set goals of investment. In order to give an answer to the question of constructing an investment portfolio it is necessary to have knowledge of the basic elements that determine a decision, such as: interest rate, yield and risk.

Investing in any form of assets is motivated by the logic of capital, that is the need of capital to be increased. However, the return may or may not be achieved. There is, therefore, the uncertainty of the outcome of investments that can manifest itself with more results, whose variability can be measurable. This is about investment risk. Any investment implies the conditionality between return and risk. Based on the expected return and risk (yield adjusted by the level of uncertainty) investor can adequately compare the available alternatives. The expected yield represents the equivalent of the average yield adjusted to the probability of its realisation: Expected return \bar{R} , where R_i – possible income and p_i – the probability that income will be realised. Investment risk is measured by the standard deviation of future returns relative to the expected return on investment. If the standard deviation is zero, then the investment is without risk. Investors seek to achieve maximum yield at a given level of risk or minimal risk with a given level of return. If there are different investment yields but also a selection of different risk investment alternatives will depend on the preferences of investors.

Modern portfolio theory was established by *Harry Markowitz* in 1952. Portfolio theory explores how investors with different risk aversion construct portfolios in order

Table 1: Insurers' investment strategies are determined by characteristics of their liabilities (reserves)

Type of obligation	In billion EUR (in 2011)	Durability of obligations	Demanded liquidity	Target return	Typical investment strategy
Non-life	890	Typically, 1-5 years	Medium, no redemption value	No guaranteed return	Short-term investments, liquid
Life insurance, insurer takes investment risk	2820	Typically, > 8 years	Low, insurance interruption is charged	Frequent investment guarantees	Long-term investments, orientation on high returns
Life insurance, insured takes investment risk	1670	Typically, 5-8 years	High, insured can switch funds and insured amount is paid	Returns based on chosen fund	Flexible investments, based on return maximisation that depends on insured's investment risk tolerance

Source: [4, p. 14]

to optimise expected returns for a given level of market risk. Theory proves the benefits of diversification. The aim of creating a portfolio is the minimisation of risk through diversification of investments. The essence of the portfolio is precisely to diversify risk and reduce the overall risk to the insurance company as an investor. By creating a portfolio combining two or more elements, the individual returns and risks are compensated so that the risk of the portfolio is less than the risk of each element.

When creating a portfolio there are numerous possible combinations of different assets. It is necessary to have all the data on yields of certain types of investments as well as on their risks (which are expressed through the measure of the standard deviation). Portfolio theory defines a mathematical model for the selection of shares that should be making the basket [3]. The most important result stemming from the portfolio theory is that by constructing a portfolio of shares investor can reduce the risk and still keep the weighted average rate of return on individual securities. For these reasons, it is possible that an investor, institutional or individual, determines the group of securities that contribute to the formation of portfolio that suits best to the investor’s attitude towards risk.

The most effective risk reduction is achieved when selected securities are not correlated. If it is possible, it would be best to choose securities that are negatively correlated. By increasing the number of shares that are not

correlated the level of risk of the entire portfolio is reduced when it contains 20 different shares, when virtually all risk specific to a particular share is eliminated [3]. Portfolio management includes the pricing of risk, or determining how much the risk of investment in the market portfolio produces returns relative to risk-free elements of the portfolio as well as which combination of elements (risk and non-risk) creates optimum yield in relation to the total (market) risk of the portfolio. Numerous models have been developed, such as the CAPM (capital asset pricing model) and APT (arbitrage pricing theory).

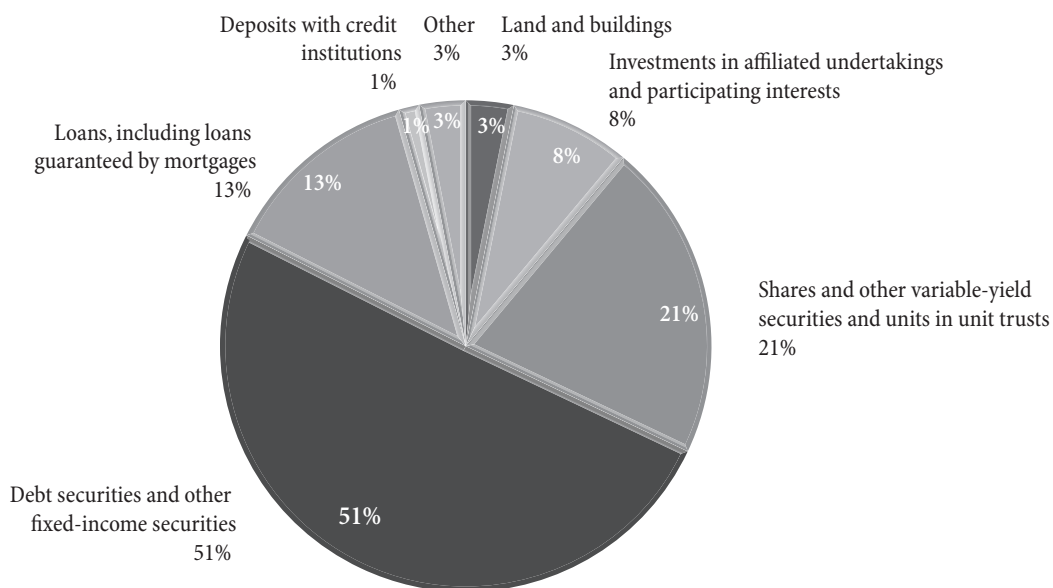
European insurers’ portfolio investment structure is presented in Figure 2.

The figure shows that the insurance companies in Europe mostly invested in bonds, other debt securities, shares and other securities with variable yields.

Characteristics of investment portfolios of non-life insurance companies

Non-life insurance is divided into property and liability insurance. The main characteristic of non-life insurance is that the occurrence of the insured event is less predictable in relation to life insurance. The lower predictability of occurrence of the insured event results in lower insurance provisions available for investments and accordingly the ways of investing these reserves are different from the

Figure 2: The structure of investments of insurance companies in Europe in 2012



Source: [5]

patterns of life insurers. The risks are greater in money terms than in life insurance. Also, the risks of non-life insurance are not independent but are usually correlated, for example, in large natural disasters that results in a high concentration of risk.

Another important difference between non-life and life insurance that impacts insurers' investments is the duration of insurance contracts. The most of non-life insurance policies are issued for a period of one year. This results with assets dominated by cash and investments. In their portfolios bonds and common shares are the most present securities. The structure of investments of non-life insurers in the United States in the period from 2004 to 2013 is presented in Table 2.

In the structure of investments of non-life insurance companies in the US the domination of investments in

bonds and shares is obvious. The investments in bonds and shares throughout the whole observed period account for around 80% of total investments.

The investment strategies of insurance companies in Slovenia are relatively liberal when compared to other countries in the region of former Yugoslavia. We believe that the reason for liberal investment policy of non-life insurance companies is in Slovenia Insurance Act [12] and high-quality of risk management. The structure of investments of non-life insurance companies in Slovenia is shown in Table 3.

The structure of the investment portfolios of non-life insurers in Slovenia, in the period from 2004 to 2013, shows the relative conservatism. Over 50% of total investments are investments in government securities and debt securities, that is, in securities with zero or relatively

Table 2: The structure of investments of non-life insurance companies in the USA during the period 2004-2013

	2004	2005	2007	2008	2009	2010	2011	2012	2013
Bonds	67.18%	68.38%	65.95%	68.38%	68.82%	66.39%	67.26%	65.34%	62.55%
Shares	19.44%	18.33%	19.19%	16.60%	18.04%	17.17%	17.80%	19.16%	22.14%
Preferred	1.47%	1.01%	1.52%	1.80%	1.50%	1.34%	0.87%	0.86%	0.78%
Ordinary	17.98%	17.32%	17.66%	14.80%	16.54%	15.84%	16.94%	18.30%	21.36%
Mortgages	0.30%	0.29%	0.39%	0.44%	0.36%	0.32%	0.37%	0.41%	0.54%
First liens	0.29%	0.28%	0.37%	0.41%	0.33%	0.30%	0.36%	0.39%	0.53%
Other than first liens	0.01%	0.01%	0.02%	0.03%	0.02%	0.02%	0.02%	0.02%	0.01%
Real estate	0.89%	0.83%	0.79%	0.86%	0.81%	0.74%	0.77%	0.75%	0.67%
Properties occupied by company	0.74%	0.70%	0.66%	0.74%	0.70%	0.65%	0.66%	0.65%	0.57%
Properties held for income production	0.10%	0.09%	0.09%	0.10%	0.09%	0.08%	0.09%	0.09%	0.08%
Properties held for sale	0.04%	0.04%	0.04%	0.02%	0.02%	0.01%	0.02%	0.01%	0.02%
Cash, cash equivalent and short-term investments	8.57%	8.11%	7.09%	8.00%	6.96%	6.53%	5.41%	5.95%	5.65%
Derivatives	n.a.	n.a.	n.a.	n.a.	n.a.	0.05%	0.05%	0.04%	0.04%
Other invested assets	3.62%	4.06%	6.59%	5.72%	5.01%	8.80%	8.34%	8.35%	8.41%

Source: Insurance Information Institute

Table 3: The structure of investment portfolio of non-life insurance companies in Slovenia during the period 2004-2013

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Government securities	30.60%	37.60%	38.70%	33.40%	26.10%	27.60%	26.80%	25.20%	30.40%	33.30%
Real estate	3.70%	3.20%	1.50%	1.50%	2.60%	2.70%	2.50%	2.10%	2.30%	2.20%
Loans	2.60%	1.50%	1.40%	1.60%	1.40%	2.10%	2.10%	3.10%	2.00%	1.90%
Debt securities	17.60%	17.50%	19.70%	24.10%	22.10%	17.80%	20.90%	24.20%	27.10%	28.80%
Shares	19.40%	16.50%	20.00%	20.60%	15.00%	13.60%	12.80%	10.60%	9.30%	7.90%
Bank deposits	15.20%	13.60%	9.70%	7.20%	8.10%	11.30%	13.30%	16.20%	10.30%	6.50%
Other investments	10.90%	10.20%	9.00%	11.60%	24.70%	24.90%	21.60%	18.60%	18.60%	19.40%

Source: Insurance Supervision Agency

low risk. However, if compared with the investments of non-life insurance companies in other countries of the former Yugoslavia, it is notable that Slovenian insurers invested more in shares in the first half of the period. Certainly, there has been a downward trend in the share of shares in the structure of the investment portfolio during the second half of the observed period.

Transactions in financial markets in Croatia are realised within the framework of a regulated market in this country – the stock exchange in the capital Zagreb. Securities traded on the Zagreb Stock Exchange are shares, bonds, rights and commercial papers. Investment activities of insurance companies are regulated by the Insurance Act [10] which was adopted in 2015 and which entered into force in January 2016. This law regulates the different investment of technical reserves that were not regulated in the observed period. The structure of investments of insurance companies is shown in Table 4.

The structure of the investment portfolio of non-life insurance companies in Croatia shows the conservatism of investment due to the high share of real estate and deposits. However, during the period there has been a growth in the share of investments in securities while reducing

investments in deposits and especially in real estate. The greater prudence in investments appears only in 2008.

Investments of insurance companies in Serbia are regulated by the Insurance Act [11] as well as by the Decision on investment of insurance provisions [9]. Table 5 shows the structure of investments of non-life insurance companies in Serbia during the period from 2004 to 2013.

Investment structure of non-life insurance companies in Serbia shows a high share of bank deposits. This type of investment is considered to be low risk, but also a form of investment with minimal returns. It is common when insurance companies do not have more convenient and profitable alternative. Also, there is conservatism in investments shown in the continued growth of investments in government securities. In addition, there is an unusual high proportion of cash in the portfolios.

Characteristics of investment portfolios of life insurance companies

Life insurance companies' available resources for investments are gained from the sale of life insurance policies, which have insurance and savings elements. In developed economies,

Table 4: The structure of investment portfolio of non-life insurers in Croatia during the period 2004-2013

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Securities	25.50%	26.50%	30.40%	34.60%	27.90%	34.50%	38.70%	40.90%	42.50%	46.60%
Deposits	14.80%	19.60%	16.60%	18.00%	20.90%	16.00%	16.90%	14.70%	15.80%	12.60%
Real estate	30.30%	27.50%	20.50%	14.40%	16.40%	15.00%	16.80%	15.90%	15.30%	15.30%
Equity and investment fund shares	n.a.	n.a.	9.40%	11.20%	6.10%	7.80%	8.80%	6.40%	8.50%	8.50%
Loans	12.20%	9.50%	8.00%	7.80%	14.30%	13.30%	8.20%	7.40%	4.70%	5.60%
Other	17.20%	16.90%	15.10%	14.00%	14.40%	13.40%	10.60%	14.80%	13.20%	13.20%

Source: Croatian Agency for Supervision of Financial Services

Table 5: The structure of investment portfolio of non-life insurers in Serbia during the period 2004-2013

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Bank deposits	n.a.	13.00%	28.00%	27.00%	30.00%	27.00%	32.00%	29.00%	21.00%	19.70%
Cash	n.a.	n.a.	n.a.	n.a.	20.00%	21.00%	14.00%	12.00%	13.90%	14.50%
Premium receivables that are not due for payment	n.a.	n.a.	n.a.	n.a.	12.00%	10.00%	9.00%	10.00%	7.10%	6.30%
State securities	n.a.	n.a.	14.00%	10.00%	10.00%	16.00%	24.00%	29.00%	35.60%	38.90%
Shares	n.a.	n.a.	17.00%	20.00%	7.00%	8.00%	6.00%	3.00%	n.a.	n.a.
Real estate	n.a.	30.00%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Others	n.a.	57.00%	41.00%	43.00%	21.00%	18.00%	15.00%	17.00%	22.40%	20.60%

Source: National Bank of Serbia

in addition to classic life insurance new products of life insurance with investments have been developed. Life insurance companies in the United States (and in other developed insurance markets) have two parts in their balance sheets. One is the main account and the other part belongs to separate accounts. Separated accounts are based on the allocation of provisions where policyholders bear the investment risk. Regulations regarding the restriction of investments are directed to the main account and the investments from this account are limited.

A key feature of life insurance is its long-term nature. On the basis of the concluded life insurance contracts (which are rarely concluded for periods of less than 10 years) the mathematical provisions are formed. Mathematical provisions are the source of long-term funds for long-term

investments. They represent the funds of highest quality. The structure of investments of life insurers in the United States in the period from 2004 to 2013 shows Table 6.

Table shows that life insurers invested primarily in bonds during the observed period. During the entire period, investments in bonds exceeded 70% of total investments. Mortgage loans have a significantly higher share of investments in relation to the non-life insurers in the United States during the same period.

The structure of investments of the life insurance companies in Slovenia during the period from 2004 to 2013 is displayed in Table 7.

Investment structure of life insurance companies in Slovenia in the observed period shows a high conservatism of investments in early period, when the portfolio was

Table 6: The structure of investment portfolio of life insurers in the USA during the period 2004-2013

	2004	2005	2007	2008	2009	2010	2011	2012	2013
Bonds	75.88%	76.61%	73.26%	71.27%	74.62%	75.93%	75.34%	74.65%	74.70%
Shares	3.68%	3.52%	4.78%	3.79%	2.37%	2.41%	2.33%	2.29%	2.31%
Preferred	1.20%	0.91%	2.22%	2.12%	0.38%	0.28%	0.24%	0.23%	0.24%
Ordinary	2.47%	2.61%	2.56%	1.68%	1.99%	2.12%	2.09%	2.06%	2.07%
Mortgages	9.85%	9.87%	10.67%	10.87%	10.28%	9.61%	9.61%	9.85%	10.14%
First liens	9.81%	9.83%	10.60%	10.79%	10.19%	9.55%	9.56%	9.78%	10.05%
Other than first liens	0.04%	0.05%	0.07%	0.08%	0.09%	0.07%	0.06%	0.07%	0.09%
Real estate	0.72%	0.68%	0.66%	0.67%	0.63%	0.62%	0.61%	0.63%	0.64%
Properties occupied by company	0.22%	0.19%	0.20%	0.20%	0.20%	0.18%	0.17%	0.16%	0.16%
Properties held for income production	0.46%	0.46%	0.43%	0.46%	0.42%	0.43%	0.13%	0.45%	0.46%
Properties held for sale	0.05%	0.03%	0.03%	0.01%	0.01%	0.01%	0.01%	0.02%	0.03%
Cash, cash equivalent and short-term investments.	2.76%	2.21%	2.68%	4.86%	4.00%	2.98%	2.97%	3.13%	2.72%
Derivatives	3.91%	3.80%	3.84%	3.92%	3.91%	3.86%	3.75%	3.74%	3.69%
Other invested assets	n.a.	n.a.	n.a.	n.a.	n.a.	0.68%	1.32%	1.22%	1.09%
Bonds	3.20%	3.31%	4.11%	4.62%	4.82%	4.53%	4.07%	4.49%	4.71%

Source: Insurance Information Institute

Table 7: The structure of investment portfolio of life insurers in Slovenia during the period 2004-2013

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
State securities	50.10%	46.10%	43.40%	34.30%	38.10%	37.10%	33.90%	30.80%	32.90%	33.40%
Real estate	0.10%	0.20%	0.10%	0.10%	0.30%	0.30%	0.60%	0.70%	0.70%	0.80%
Loans	1.00%	0.80%	0.40%	0.30%	0.50%	1.70%	1.60%	1.60%	1.40%	1.40%
Debt securities	26.40%	27.70%	28.30%	30.50%	32.30%	26.70%	26.30%	26.80%	25.80%	26.20%
Shares	12.50%	16.80%	22.50%	28.50%	21.30%	26.70%	29.40%	29.10%	31.50%	32.30%
Bank deposits	9.70%	35.20%	4.70%	5.60%	6.40%	6.00%	7.10%	9.50%	6.30%	4.60%
Others	0.30%	0.20%	0.60%	0.70%	1.10%	1.50%	1.10%	1.50%	1.40%	1.30%

Source: Insurance Supervision Agency

dominated by government securities and debt securities. There is continuation of conservatism during the period. End of period is characterised by significant growth of participation of shares and a decline of the share of government securities. This trend reflects the search for profitable opportunities in relation to low-risk investments in securities. The structure of investments of life insurers in Croatia in the period from 2004 to 2013 is shown in Table 8.

The structure of the investment portfolios of life insurers in Croatia shows a high prudence in investment of mathematical provisions. In fact, throughout the period the structure of the investment portfolio of life insurance companies in Croatia is dominated by securities of the Republic of Croatia and Croatian Bank for Reconstruction and Development, therefore low-risk securities with stable but relatively low yields. Also, deposits have a significant share. Equity investments have low share in total investments. The structure of investments of life insurance companies in Serbia in the period from 2004 to 2013 is presented in Table 9.

The structure of the investment portfolio of life insurance companies in Serbia is similar to the structure

of investments of life insurance companies in Croatia. The basis of similarity is the dominance of investments of mathematical provisions in government securities, whose share in the structure of the investment portfolio at the end of the period reached almost 90%. The share of bank deposits is relatively high during the period and especially in 2008, 2009 and 2010, the years after the financial crisis.

Conclusion

The relevance of the theme arises from the fact that in emerging economies all potential development opportunities of insurance have not yet been sufficiently exploited. Insurance is particularly important for these countries in the area of long-term economic performance, supply of accumulated funds for long-term financing of economic development and an efficient allocation of economic resources. The need to accumulate financial savings in order to support economic growth through the mechanism of insurance, in conditions of limited capital stocks, excessive current balance deficit and external debt, for the countries of region of the former Yugoslavia is becoming increasingly important. The economic growth of Serbia (as well as of

Table 8: The structure of investment portfolio of life insurers in Croatia during the period 2004-2013

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Securities of the Republic of Croatia and Croatian Bank for Reconstruction and Development	77.60%	75.00%	65.70%	65.50%	68.40%	72.90%	75.90%	79.30	79.70%	83.40%
Deposits	10.20%	11.80%	15.60%	18.00%	20.20%	14.80%	10.60%	8.50%	7.90%	6.10%
Real estate	6.20%	4.50%	5.10%	2.50%	2.00%	1.50%	4.90%	2.90%	3.10%	4.30%
Equity and investment fund shares	n.a.	n.a.	8.30%	8.90%	3.90%	4.50%	2.90%	2.90%	3.10%	3.10%
Others	6.00%	8.70%	5.30%	5.10%	5.50%	6.30%	5.80%	6.40%	6.20%	3.10%

Source: Croatian Agency for Supervision of Financial Services

Table 9: The structure of investment portfolio of life insurers in Serbia during the period 2004-2013

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Bank deposits	n.a.	n.a.	16.00%	12.00%	19.00%	20.00%	30.00%	12.00	7.80%	5.20%
Cash	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Receivables	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
State securities	n.a.	n.a.	n.a.	n.a.	71.00%	72.00%	59.00%	82.00%	85.70%	88.50%
Shares	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Other securities	n.a.	33.00%	57.00%	69.00%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Bonds traded on a stock market	n.a.	30.00%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Others	n.a.	37.00%	27.00%	19.00%	10.00%	8.00%	11.00%	6.00%	6.50%	6.30%

Source: National Bank of Serbia

other countries in the region) in the previous period, even during the eighties when the self-managed economic system was not able to maintain some kind of economic growth, was financed on the basis of foreign borrowing in the form of loans from private or international financial institutions. Although during the first decade of the new millennium economic growth was financed by the inflows of FDI, according to representatives of the World Bank and leading local politicians it is not realistic to expect such developments in the future. The focus must be directed towards the improvement of the competitiveness of the domestic economy, export promotion, public sector reform and support of the most propulsive sectors and companies. As institutional investors, insurance companies can have the greatest influence on these changes.

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