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# IMPACT OF COVID-19 ON PRIVATE RETIREMENT SAVINGS IN SERBIA

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JEL CLASSIFICATION: E44, G23, G18, J32

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## ABSTRACT:

*The outbreak of the COVID-19 pandemic and the related economic downturn have impacted retirement savings, retirement saving schemes, providers, regulators and supervisors, potentially leading to future lower incomes during retirement and significant dysfunctions in the market. The main goal of this paper is to investigate how key indicators of the voluntary pension funds market in the Republic of Serbia were influenced by the Pandemic. The Pandemic certainly had an important effect, and we all had the opportunity to learn first-hand that low frequency high severity events do happen, so they are not only scenarios for a tabletop exercise for something that we should expect but something we need to be prepared for. This goal will be achieved using secondary data such as the data offered by the National Bank of Serbia, OECD Directorate for Financial and Enterprise Affairs, etc. Finally, this paper will present a comparative analysis of the effects of the pandemic on the market of voluntary pension funds in the Republic of Serbia and OECD member countries.*



## KEYWORDS:

COVID-19, VOLUNTARY PENSION FUNDS, ECONOMIC DOWNTURN

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## INTRODUCTION

Optimistic bias and overestimation of one's own ability to predict the future, coupled with the unsatisfactory standard of living and the insufficient saving capacity of the population in the Republic of Serbia, lead to the fact that many still do not save enough to be able to expect retirement with certainty in an economically and socially rational age. Additionally, in conditions where there is a pronounced danger of a long-term savings crisis, but also short-term financial pressures as a result of the global COVID-19 pandemic, the uncertainty of the financial stability of the currently working age population is growing significantly.

It should be noted that while it is natural that the COVID-19 pandemic has taken center stage in the lives of people and policy makers, the biggest long-term challenge for pensions remains financially and socially sustainable pensions in the future. Putting pension systems on a solid footing for the future will require unpopular political decisions such as, for example, extending working life, raising the level of mandatory contributions, or receiving lower pensions. Any of these decisions, if implemented, will be unpopular and reluctantly accepted by the general public. Pension reforms are widely known to be among the most contentious and least popular reforms, and long-term pension challenges have been on countries' radars even during the Global Pandemic. However, in this paper, we will focus on the challenges faced by private pension savings during the Pandemic, as supplementary savings to state pensions which are at the end of their financial sustainability.

This Paper is structured in two parts. The first part of the paper includes an analysis of the impact that the COVID-19 pandemic has had on the market of voluntary pension funds in the Republic of Serbia, as well as a comparative presentation of trends in the field of private pension savings in the Republic of Serbia and OECD countries. In the second part of the paper, trends in the field of individual savings are analyzed through various savings alternatives available to residents of the Republic of Serbia, as well as their attractiveness during the pandemic. The impact of interest rate movements on savings through the banking system, the term and currency structure of such savings, as well as the variation of premiums and the number of life insurance policyholders in conditions of a health crisis, were considered. The aim of this paper is to show how much impact COVID-19 had on the future financial stability of the citizens of the Republic of Serbia, and to what extent has the importance of raising awareness of its residents about the significance of timely savings for the third age increased.

## 1. CHALLENGES FACED BY PRIVATE PENSION SAVINGS DURING THE COVID-19 PANDEMIC

During the past two decades, the importance of pension systems, both public and private, for the economic stability of countries and the security of their aging population has been increasingly recognized by many countries in the world. This gained additional

importance during the Pandemic when the economic and social stability of the world's population was significantly threatened.<sup>2</sup> The global COVID-19 pandemic and the associated general economic downturn had numerous impacts on retirement savings, pension schemes, service providers, regulators and supervisors. These impacts can lead not only to lower pension incomes in the future but also to significant dysfunctions in the market. In this sense, as countries gradually move away from responding to the COVID-19 crisis, the structural challenges of pension systems are gaining importance as part of their recovery plans.

The economic impact of the COVID-19 outbreak has increased market risk aversion in ways not seen since the 2008 Global Financial Crisis. Investment flows reacted very quickly after the outbreak of the Pandemic. Developing economies, and especially those that entered the crisis with weakened positions, experienced a huge drop in the inflow of portfolio investments.<sup>3</sup> This reflected a well-known pattern of behavior whereby international investors transfer capital back home or invest in safer assets during periods of uncertainty. In such circumstances, trust in financial institutions, as well as in private pension funds, is significantly undermined.

It is important to keep in mind that losses caused by business interruptions and disruptions can be quantified and measured. Certainly, COVID-19 has had a devastating effect, but as a result we are able to collect meaningful data. This data can help us to better understand what actually happened and to prepare, at least to some extent, for similar scenarios in the future.

This part of the Paper will present an analysis of key indicators and trends in the market of voluntary pension funds, both in the Republic of Serbia and in the OECD countries, with special reference to the fact that private pension savings in Serbia have largely been preserved from the extreme negative effects of the Pandemic that could be observed in the developed economies of the world. All this is even more significant if we bear in mind the fact that the local financial system is bank-centric, which affects the possibility of penetration and occupation of an adequate place in the financial market by other financial institutions, such as voluntary pension funds.<sup>4</sup>

## 1.1. The effects of the pandemic on the market of voluntary pension funds in the Republic of Serbia

The market of voluntary pension funds in the Republic of Serbia consists of four management companies whose task is to manage the assets of seven voluntary pension funds, one custodian bank, five intermediary banks and one intermediary insurance company, as can be seen in the Figure 1.<sup>5</sup> According to the latest available data from the National Bank of Serbia, the net assets, i.e. balance sheet assets, of voluntary pension funds make up, at the end of 2021, about 0.9% of the balance sheet assets of the financial sector,

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2 Papić, (2021), p. 51

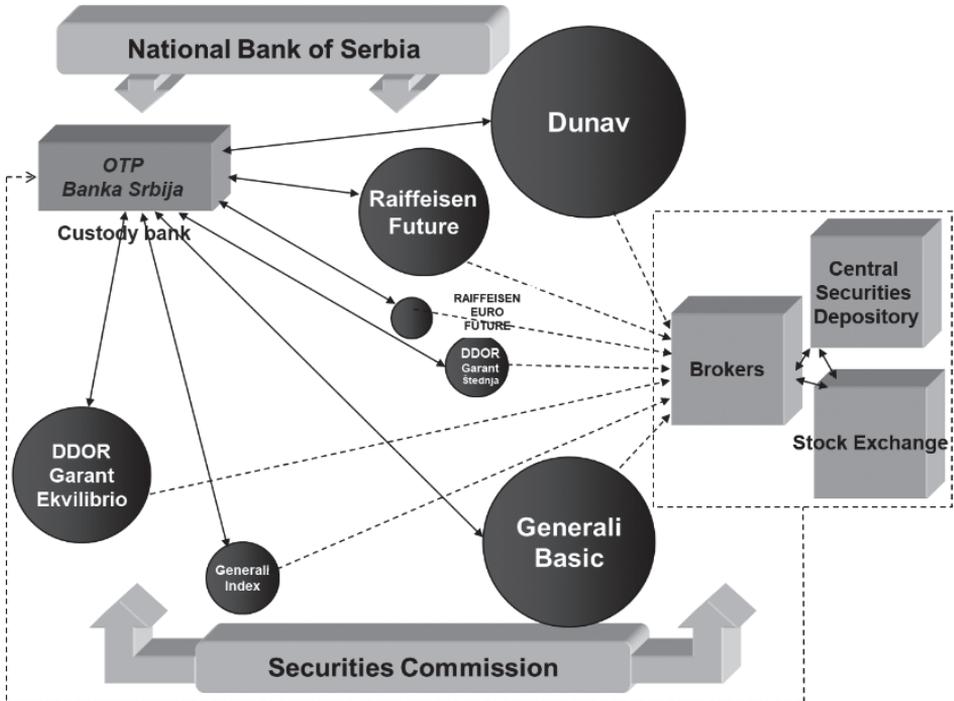
3 OECD (2020b), p. 2

4 Papić & Janković (2020), p. 19

5 National Bank of Serbia (2022a), p. 3

i.e. about 0.8% of Gross Domestic Product of the Republic of Serbia.<sup>6</sup> The above data is not of key importance for the topic that will be discussed in this part of the Paper, but it helps the reader to understand the structure of this segment of the financial system in the national framework, as well as its relative importance for the system as a whole.

► FIGURE 1: VOLUNTARY PENSION FUNDS MARKET IN THE REPUBLIC OF SERBIA



Source: National Bank of Serbia.

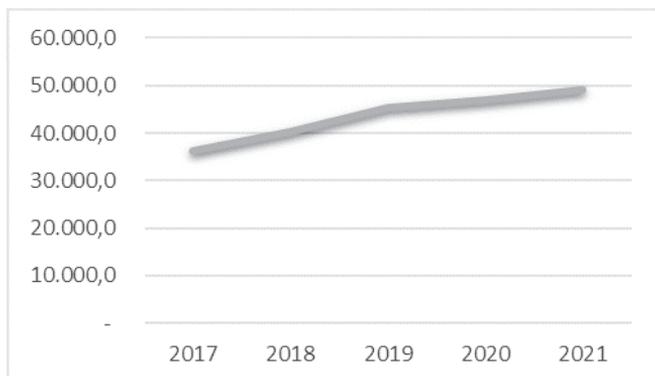
The net assets of voluntary pension funds reached the amount of RSD 48.9 billion at the end of the first quarter of 2022.<sup>7</sup> Looking at the three-year period from 2019 to 2021, net assets recorded an average annual growth rate of about 7%, while the average growth rate for the ten-year period from 2011 to 2020, was 17% (author's calculation based on data from the National Bank of Serbia). It should also be noted that net assets in the five-year period from 2017 to 2021 recorded a continuous growth trend (see information presented in Chart 1).

6 OECD (2021a), p. 11

7 National Bank of Serbia (2022b), p. 4



▶ **CHART 1: NET ASSETS OF VOLUNTARY PENSION FUNDS (IN MILLION RSD), 2017-2021.**



Source: National Bank of Serbia.

By analyzing the fluctuation of the mentioned indicator, we can see one of the obvious consequences of COVID-19 - the slowdown in the growth of the net assets of voluntary pension funds. It should be noted that the change in the value of net assets is affected by net contributions,<sup>8</sup> withdrawals and investment returns. Now that we know what could have caused the slowdown in the growth of the funds' net assets, we will discuss the variation of each of the mentioned factors, all with the aim of analyzing which one of them had the greatest impact on the net assets.

▶ **TABLE 1: NET CONTRIBUTIONS, WITHDRAWALS AND INVESTMENT INCOME (IN MILLION RSD), 2019-2021.**

	2019	2020	2021	(IN MLN RSD)
Net contributions	3.843,50	3.401,89	3.650,09	
Withdrawals	1.679,81	2.159,63	2.223,49	
Net investment income	2.896,81	530,45	607,95	

Source: Presented based on data from the National Bank of Serbia.

If we look at the data presented in Table 1, it can be clearly seen what is the main cause of the slowdown in the growth of the funds' net assets - the decline in investment profits. Namely, the impact of the Pandemic on the movements in the financial market was noticeable, especially in the form of a significant drop in the stock market indices, which was also reflected in the results of the pension funds' operations. For example, BELEX15, as a benchmark stock index, recorded a quarterly decrease of 20.6% in the first quarter of 2020 (author's calculation based on data from the Belgrade Stock Exchange). If we also know that the portion of shares of domestic legal entities, which are listed on the Regulated Market of the Belgrade Stock Exchange, in the total assets of voluntary pen-

8 Net contributions are total contributions minus the front-load fee.

sion funds amounted to about 9.0%<sup>9</sup> in the same quarter, it is easy to conclude that the impact of this decline in the financial market on the funds was significant to a certain extent. Nevertheless, the stability of the system of voluntary pension funds remained preserved, and despite the changed business circumstances and the consequent reduced amount of profit from investments in the first half of the year, pension funds managed to record an annual profit from investments in the amount of about 0.5 billion dinars. Additionally, in 2021, the funds achieved a profit from investments that amounted to about 0.6 billion dinars on an annual basis.

The decline in net contributions and the increase in withdrawals also had an impact on the fluctuation of accumulated assets of members in voluntary pension funds. The total amount of net contributions in 2020 was 3.4 billion dinars, while in 2019 it was 3.8 billion dinars. Therefore, it can be said that payments have maintained a certain stability and continuity, despite the increased uncertainty caused by the health crisis. On the other hand, the 29% growth of withdrawals in 2020 compared to the end of 2019 is also a consequence of changes in the business environment due to the spread of the Pandemic, but it can be stated that there were no significant negative effects on the liquidity and stability of the sector of voluntary pension funds.

It should be noted that the effects of the Pandemic were additionally shown at the end of 2021, in relation to the value of the government bonds of the Republic of Serbia. When we talk about investments of voluntary pension funds in government bonds, it is also necessary to briefly comment on the state of the Public Debt of the Republic of Serbia at the time of the Pandemic. Namely, according to data from the National Bank of Serbia, the trend of reducing the share of Public Debt in Gross Domestic Product over the past few years has temporarily stopped in 2020. In 2020, the government borrowed funds for the most part by selling securities on the domestic market, so the share of government securities in the total Public Debt of the central state amounted to 59.5% (Public Debt Administration). Nevertheless, during 2020, the reduction of interest rates for government borrowing in both dinars and euros continued, thanks primarily to low and stable inflation, the continued easing of the monetary policy of the National Bank of Serbia, low interest rates on the international market, and the extension of the maturity of bonds issued in dinars and euros, as well as the increased interest of non-residents in investing in dinar bonds with the longest maturities.<sup>10</sup> The trend of decreasing interest rates on government bonds benefited the voluntary pension funds, because the value of these financial instruments that the funds held in their portfolios increased as a result, and thus had a positive impact on the movement of the funds' net assets.

On the other hand, the situation in 2021 and then in 2022 looked somewhat different. The current problem of rising average weighted interest rates on government securities of those maturities and currencies for which the Ministry of Finance carried out issues, re-issues, i.e., premature redemptions, had an impact on the reduction of the value of net assets of voluntary pension funds. Namely, the valuation of government bonds is, in certain circumstances, carried out according to the "on-the-run" yield curve, which is formed on the basis of the achieved rates at the primary auctions of securities of all issued maturities, including the reopening of issues as well as in cases of early redemption

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9 National bank of Serbia (2022b)

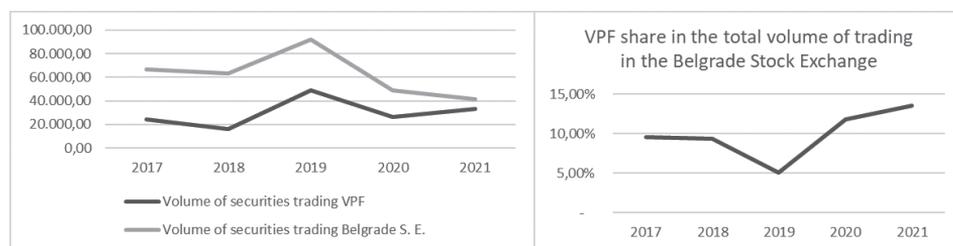
10 National Bank of Serbia (2022c), p. 30

by issuer. In this sense, the rising average weighted interest rates on government bonds caused the decrease in the value of the net assets of voluntary pension funds, especially in the fourth quarter of 2021, when the value of government bonds in the portfolio of voluntary pension funds dropped drastically, which led to the realization of a quarterly loss from the investment of funds in this sector. Additionally, the loss from the investment of funds' assets appeared in the second quarter of 2022, also as a consequence of the fall in the value of government bonds.

We can extend the analysis to other financial instruments in which voluntary pension funds have invested assets, such as term deposits with commercial banks, investment units of open investment funds etc. Nevertheless, if we take into account that during 2020 and 2021, the share of government bonds in the total assets of the funds, at the sector level, was on average about 77%, while the portion of shares of domestic legal entities was about 12%, on average, analysis of these two most representative types of financial instruments in the assets of the funds, is sufficient for the needs of this Paper.

Voluntary pension funds' trading volume in securities followed, in the observed five-year period, the turnover trend of the Belgrade Stock Exchange, as can be seen in Chart 2. Nevertheless, the participation of these financial institutions in the total turnover on the Regulated Market of the Belgrade Stock Exchange recorded growth during 2020 and 2021, which, inter alia, indicates the growing importance of voluntary pension funds in the national financial sector in the conditions of the Pandemic.

► **CHART 2: VOLUME OF TURNOVER OF VOLUNTARY PENSION FUNDS AND THE BELGRADE STOCK EXCHANGE (IN MILLION RSD), 2017-2021.**

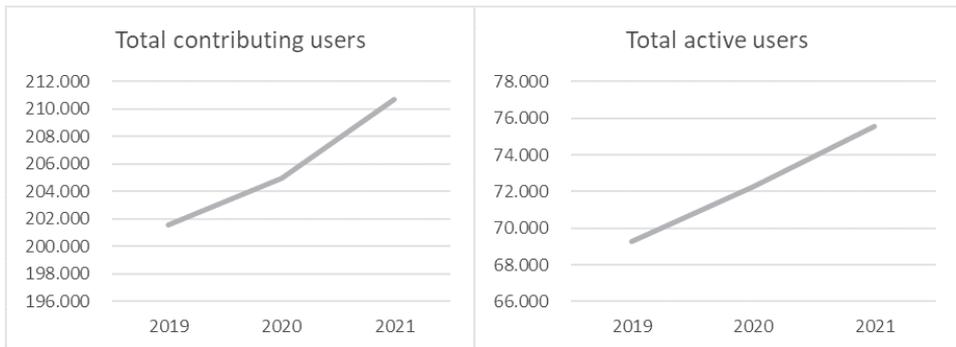


Source: Presented based on data from the National Bank of Serbia and the Belgrade Stock Exchange.

When we talk about securities trading, it is useful to mention the analysis of the investment intensity focus of voluntary pension funds on the, for example, class of shares of domestic legal entities, depending on the trends in the capital market of the Republic of Serbia. Regarding that, and based on the conducted research, presented in the Appendix, it can be concluded that changes in the exposure of assets of voluntary pension funds to the class of shares of domestic legal entities are not predominantly the result of price movements in the capital market itself. Namely, changes in the BELEX15 benchmark index explain only about 32.6% of the variance, i.e., changes in the exposure of assets of voluntary pension funds to the shares of domestic legal entities. The investment focus on this asset class is more the result of the active management of that portfolio segment in order to ensure better overall yield performance while respecting somewhat rigorous regulatory restrictions for investing in individual financial instruments.

Finally, we cannot finish the analysis of the effects of the Pandemic on voluntary pension funds without mentioning the beneficiaries of these financial institutions. The total number of users of voluntary pension funds recorded a continuous growth trend during the previous three years (see the information presented in Chart 3). In the same period, the number of active users (users who regularly pay contributions to the voluntary pension fund) also increased, but their participation in the total number of users in the accumulation phase is still relatively low and in December 2021 it amounted to 35.9% (35.3% in December 2020, i.e. 34.4% in December 2019).<sup>11</sup> The mentioned trends indicate the retained trust of citizens in voluntary pension funds, in their stability and ability to shield the accumulated funds of users from significant negative economic effects of the health crisis.

▶ **CHART 3: USERS OF VOLUNTARY PENSION FUNDS, 2019-2021.**

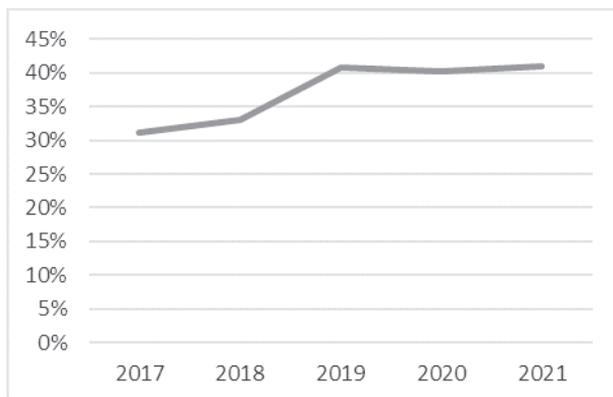


Source: Presented based on data from the National Bank of Serbia.

Also, one of the trends regarding the payment of contributions to voluntary pension funds by users, which can significantly affect the further development of these funds as a type of supplementary savings for old age, is the increase in the share of individual payments compared to employer payments. Although payments by employers who pay contributions into the pension fund for their employees have a dominant share in total contributions, a growing trend of individual contributions is also noteworthy. It should be noted that the growth trend of the participation of individual contributions in total contributions was briefly interrupted during 2020 due to the Pandemic, but during the following year, in 2021, individual contributions resumed the level of participation in total contributions from 2019.

11 National Bank of Serbia (2022b)

▶ **CHART 4: USERS OF VOLUNTARY PENSION FUNDS, 2017-2021.**



Source: Presented based on data from the National Bank of Serbia.

Bearing in mind all the above, although still small participants in the national financial system, voluntary pension funds in the Republic of Serbia have shown themselves well in terms of sustainability and stability of operations in the conditions of a global Pandemic. Additionally, somewhat rigorous regulatory restrictions on the investment of voluntary pension funds largely contributed to their protection from the significant effects of the crisis, bearing in mind that in the asset structure these institutional investors did not even have somewhat riskier asset classes that could threaten their stability. Thus, the lessons learned during the global COVID-19 pandemic indicate that the national system of private pension savings is well established and largely resilient to market disruptions, even in the face of eroded market and business confidence.

## 1.2. Comparative analysis of the impact of the pandemic on private pension savings in the Republic of Serbia and selected OECD countries

The recession caused by the outbreak of the COVID-19 pandemic has greatly affected the economic and social environment of the OECD member states. Macroeconomic policies implemented in extraordinary circumstances managed to mitigate much more severe consequences for individual incomes than originally expected. In particular, employment fell much less than gross domestic product, although the labor market was severely affected in most countries.<sup>12</sup> If we look at state pensions for a moment, it is known that pensioners generally suffer smaller income losses during economic crises compared to currently employed citizens. As a result of the indexation rules, the political and economic measures taken, as well as the drop in the income of the working-age population, the relative income of pensioners in such circumstances has at least temporarily improved.<sup>13</sup>

<sup>12</sup> OECD (2021b), p. 19

<sup>13</sup> Ibid., p. 20

Nevertheless, and what is important for this Paper, the current and future incomes of the currently employed part of the population suffer significant consequences of the crisis. In this sense, early and ambitious political-economic responses are of key importance to prevent the collapse of the financial stability of the currently working-age population in the future.<sup>14</sup>

The COVID-19 Pandemic has led to an emergency situation of significant proportions that required state support for both businesses and entire industries. The design and implementation of such support was of key importance to avoid the dysfunction of both local and international markets in the medium and long term.<sup>15</sup> Below are some of the challenges faced by private pension savings in OECD member states:<sup>16</sup>

- Decline in the value of assets in pension savings accounts due to the decline of financial markets;
- Increase in liabilities due to falling interest rates in pension savings arrangements with defined income in retirement (e.g., defined-benefit pension plans and life annuity arrangements);
- Lower ability for individuals to contribute to pension savings plans, due to a reduction in their earnings or job loss, as well as from employers facing financial problems;
- Operational problems in work as a result of remote work;
- Cyber -attacks and fraud targeting individuals, regulators, supervisors and providers of pension savings services (e.g., pension funds);
- The tendency of individuals to prioritize immediate needs over their long-term interests. Early access to accumulated funds in retirement accounts, even in part, could jeopardize the adequacy of retirement income;
- An invitation to pension providers to invest in local businesses or infrastructure projects, potentially increasing the risk profile of pension savings portfolios.

Now it's time to show comparative indicators on the market of private pension funds for the Republic of Serbia and OECD member states (see detailed information shown in Table 2), and point out the strength of the effects that the pandemic had on the private pension savings systems in them. Additionally, when interpreting comparative data, it should be noted that pension systems are very different both between OECD member countries and in relation to the Republic of Serbia, and it is very difficult to generalize their characteristics, such as the legislative framework related to this economic branch, the design of pension plans as well as the tax treatment of funds, so that they represent unified characteristics of pension systems that can be adequately compared.

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14 OECD (2020a), p. 8

15 OECD (2021c), p. 1

16 OECD (2020c), p. 23

▶ TABLE 2: COMPARATIVE PRESENTATION OF THE MAIN TRENDS IN PRIVATE PENSION SAVINGS, 2020/2019.

	CHANGE 2020/2019	
	REPUBLIC OF SERBIA	AVERAGE OF OECD COUNTRIES
Total assets in retirement savings plans, in millions of national currency	4%	7%
Total assets in retirement savings plans, as a % of GDP	0.02 p.p.	5.07 p.p.
Contributions to retirement savings plans, as a percentage of GDP	<b>-0.01 p.p.</b>	0.33 p.p.
Total benefits paid from retirement savings plans, as a percentage of GDP	0.01 p.p.	0.32 p.p.

Source: OECD. (2021a). Pension Markets in Focus 2021.

As already mentioned in the Paper, the emergence of COVID-19 led to a large decline in the financial markets in the first quarter of 2020, and as a result, the market value of pension savings accounts suffered a noticeable decrease. State governments have taken numerous precautionary measures to limit the spread of the virus, including shutting down parts of the economy, which has largely slowed down economic activity at the global level. Losses in the financial markets between mid-February and the end of March 2020 had the effect of reducing the amount of funds in pension plans. Nevertheless, by the end of the same year, the balance sheet assets of private pension funds at the level of OECD countries increased by around 7%, while in the Republic of Serbia this growth amounted to around 4%. In this sense, it can be concluded that the system of private pension savings preserved stability and even recorded growth in the conditions of the global Pandemic.

The tendency to prioritize short-term needs over long-term interests can greatly jeopardize the financial stability of individuals in the future. Namely, as stated in the official publication of the OECD, the impact of the pandemic on the levels of contributions in private pension savings is unclear for now. A crisis can change people's behavior patterns in terms of consumption and savings. On the one hand, tough and uncertain times can deter people from saving for retirement, and some OECD countries have indeed reported a drop in contributions to retirement savings plans in the second quarter of 2020 compared to the same period in 2019. As we can see in Table 2, the Republic of Serbia also recorded such a trend, and contributions paid to voluntary pension funds, as a percentage of gross domestic product, decreased by about 0.01 percentage points in the first year of the Pandemic. On the other hand, the lockdown period may have led some people to cut back on spending. One of the largest pension funds in Denmark has seen additional voluntary contributions from members in 2020 with a simultaneous decline in spending.<sup>17</sup>

Furthermore, when it comes to withdrawals from pension funds, it can certainly allow people to compensate for the loss of income as a result of the economic blockade, but it can also lead to lower amounts of accumulated funds at retirement, which would cause lower incomes in the retirement period. Generally speaking, the withdrawal of funds at

17 OECD (2020c), p. 25

a time when the markets are in decline can lead to the materialization of those losses in the market.<sup>18</sup> The increase in the share of withdrawals from private pension funds in the gross domestic product, by about 0.01 percentage points in the Republic of Serbia, i.e. about 0.32 percentage points at the level of OECD member countries, is a consequence of short-term financial pressures due to the spread of the Pandemic, but it can be stated that there was no significant negative effects on the liquidity and stability of private pension systems.

It should be considered that the sector of voluntary pension funds in the Republic of Serbia is far from the level of development and spread of private pension systems abroad. Nevertheless, there is a noticeable steady growth in the participation of voluntary pension funds both in the gross domestic product and in the structure of the financial sector of the Republic of Serbia, with the exception of 2020, due to the presence of a global Pandemic. OECD recommendations suggest that retirement savings arrangements could be more resilient and able to respond to challenges such as the need to withdraw funds caused by a pandemic, if, for example, long-term savings arrangements include both a retirement savings account and an emergency savings account.

Ultimately, the sustainability and resilience of pension savings arrangements largely depend on their role as supplementary income during retirement, but also on their adequacy. Adequacy assessment requires a clear framework for open and transparent discussion about the role of government, policy makers and regulators in establishing the objectives of these arrangements. By analyzing the impact of different policies on the adequacy of pension income, using appropriate indicators and thorough assessments of all potential shortcomings, we can, at least to some extent, prepare for future market disruptions, because as Albert Camus said, there have been as many plagues as wars in history, yet always plagues and wars take people equally by surprise.

## **2. ALTERNATIVES TO SAVINGS IN THE REPUBLIC OF SERBIA AND THEIR ATTRACTIVENESS DURING THE PANDEMIC**

The health crisis caused by the COVID-19 pandemic represented a significant test for households and their financial resilience and ability to plan for the future, highlighting the need to improve financial skills.<sup>19</sup> Demographic aging, the living standard of the population, the degree of development of the capital market and other macroeconomic factors significantly determine the range of possibilities for the state, growth and development of private pension savings. Additionally, pension reforms initiated in the 1990s have a long legacy and still influence people's retirement planning, and regulatory solutions regarding pensions are continuously evolving and new reforms are constantly being implemented. When we add to all this the global crisis caused by the pandemic, financial planning for old age seems even more difficult.

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18 Ibid., p. 26

19 OECD (2022a), p. 7

People's decisions about saving for old age depend on a number of factors. One of the important ones is certainly the level of income that a person can access if he stops working, but also the level of income that he has at the moment when he makes the decision about saving for old age. According to the data of the Republic Fund for Pension and Disability Insurance, in 2004/2005 the share of the average pension in the average salary without taxes and contributions amounted to about 68%. That was certainly one of the reasons for the implementation of a voluntary pension system in the Republic of Serbia in 2005/2006. After fifteen years of the existence of voluntary pension funds, despite the evident need (at least part) of citizens to save additionally for old age, in reality this does not happen on a sufficient scale, primarily due to insufficient financial literacy and short-sightedness of citizens.<sup>20</sup> In addition, the share of the average pension in the average earnings without taxes and contributions amounted to around 45% at the end of 2021,<sup>21</sup> and at the same time it recorded a downward trend during the last decade, which only further reinforces the importance of starting supplementary savings in a timely manner.

One of the reasons why individuals do not engage in planning or are not familiar with pensions and the terms of their financial contracts is precisely the lack of financial literacy. Insufficient knowledge of both advanced and basic financial concepts is the result of numerous research conducted at the international level.<sup>22</sup> In such circumstances, with the exception of deposits in commercial banks, the understanding of the characteristics of financial products that meet more specific needs, such as life insurance or voluntary pension funds, is at an extremely unsatisfactory level. The need to raise the level of financial literacy is increasingly recognized in the matter of all types of financial products.

Additional aggravating circumstances for savings planning certainly occurred with the outbreak of the health crisis in 2020. Among the immediate economic impacts of the COVID-19 crisis were job losses due to closures, especially in sectors that were significantly affected. Millions of workers experienced economic disruption through widespread income losses that made it much more difficult for households to pay even their usual bills.<sup>23</sup> Even those who did not lose their jobs, in many sectors, had to accept shorter working hours, lower wages etc.<sup>24</sup>

Contrary to these global trends, it seems that the Republic of Serbia managed to preserve stability on the labor market during the crisis period. Namely, according to the data of the Statistical Office of the Republic of Serbia, in 2020, the unemployment rate was 9.7%, which is a decrease compared to 2019. However, during 2021, the unemployment rate increased to 11.0%. It should be noted that in 2020, individuals who could not look for a job or were unable to start working due to measures undertaken to prevent the spread of the virus, were not considered unemployed, but were classified as part of the work inactive population. Hence, the increase in the unemployment rate in 2021, as well as the decrease in the rate of the work inactive population from 47.8% to 45.3% in the same period, can be considered indicators of recovery, as they return to the level before the crisis caused by the pandemic. In the same period, the employment rate increased from 47.1% to 48.6%. In this regard, we can conclude that the ability of the working popula-

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20 Fiscal Council (2022), p. 9

21 PDI Fund (2022), p. 13

22 OECD (2011), p. 125

23 OECD (2021d)

24 OECD & ILO, (2020), p. 14

tion of the Republic of Serbia to save was not significantly threatened during the years in which the effects of the health crisis were manifested, so it is important to analyze in which financial products the citizens primarily decided to invest their free cash resources and what motivated their decisions.

The Paper will examine further the main trends in savings of the population in banks, as well as trends in the life insurance market. Based on the analyzed data, it can be clearly seen that the local financial system is bank-centric, which, along with the impossibility of the capital market to fulfill its basic goal, the efficient allocation of financial resources of savings and investors (households) towards companies in order to finance their development, leads to an economic environment which is dominated by traditional financing through banking products (deposits and loans).

## 2.1. Household savings with banks

Preserved macroeconomic stability mitigated the negative effects of the health crisis on the economy, and in such conditions, the population's savings in banks continued to grow continuously. Namely, dinar and foreign currency savings of the population in banks constantly grew during 2020 and 2021, in the conditions of the spread of the epidemic, as well as the reduction of interest rates on term deposits of the population, which proves the trust of citizens in the banking system (see the information shown in Chart 4).

Interest rates on household savings in euros remained unchanged compared to the end of 2019 and amounted to 1.2% in December 2020, while interest rates on dinar savings decreased by 0.7 p.p. in the same period, to 2.35%.<sup>25</sup> Nevertheless, the population's dinar savings continued to grow dynamically in 2020 despite the global pandemic. The population increased their dinar savings deposits by 13.5 billion dinars, i.e., by 17.1%, whereby dinar savings at the end of December 2020 recorded their previous maximum of 92.5 billion dinars.<sup>26</sup>

During 2021, interest rates on household savings recorded a decrease for foreign currency savings by 0.3 p.p., to 0.7% in December, i.e., for dinar savings by 0.4 p.p., to 2.0%.<sup>27</sup> Dinar savings of the population continued dynamic growth for the fourth year in a row despite the uncertainty and crisis caused by the COVID-19 pandemic. The population increased their dinar savings deposits by 11.1 billion dinars, or by 12.0%, so that dinar savings reached their previous maximum of 103.7 billion dinars at the end of December.<sup>28</sup>

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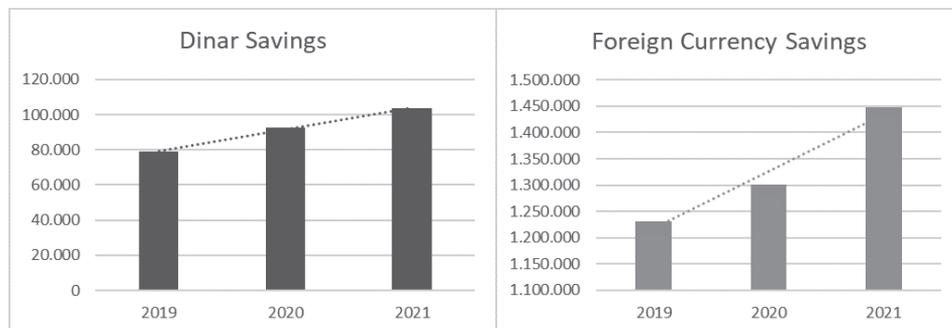
25 National Bank of Serbia (2021a), p. 34

26 Ibid., p. 38

27 National Bank of Serbia (2022d), p. 26

28 Ibid., p. 29

▶ **CHART 5: HOUSEHOLD SAVINGS WITH BANKS (IN MILLIONS OF DINARS, BALANCE AT THE END OF THE PERIOD), 2019-2021.**



Source: Presented based on data from the National Bank of Serbia.

Additionally, at first it may seem contradictory that savings are reaching their record levels in conditions where interest rates are falling. Nevertheless, this phenomenon is primarily a consequence of preserved price stability, the relative stability of the dinar exchange rate against the euro and financial stability, as a result of which the population's trust in the domestic currency and the domestic financial system has been maintained. The movement of interest rates on both dinar and foreign currency savings, in the coming period, will depend on future developments on the financial market, as well as upcoming decisions of the National Bank of Serbia, but also of the leading central banks, first of all the European Central Bank, bearing in mind that the largest part of foreign currency savings consists of deposits held in euros.

When it comes to the term structure of dinar savings, short-term savings dominate, with a maturity of up to one year (81.3%, of which almost a third refers to demand deposits), while a smaller part (18.7%) of dinar savings refers to long-term deposits, with maturity over one year. On the other hand, when it comes to the term structure of foreign currency deposits of the population, demand deposits have dominated the last few years (70% of total foreign currency savings), and the growth trend of this type of savings continued even during the pandemic.<sup>29</sup>

In the end, the mentioned trends regarding residents' savings in banks are completely different compared to those that we could observe during the Global Financial Crisis in 2008. Namely, on the eve of the beginning of the Global Financial Crisis, dinar savings practically continuously decreased from October 2008 to April 2009 (by a total of 15%). During the last quarter of 2008, we also experienced a sudden outflow of foreign currency savings.<sup>30</sup> Contrary to such trends, the global health crisis in 2020 only slowed down the growth of both dinar and foreign currency savings, but the increasing trend from year to year remained intact.

<sup>29</sup> National Bank of Serbia

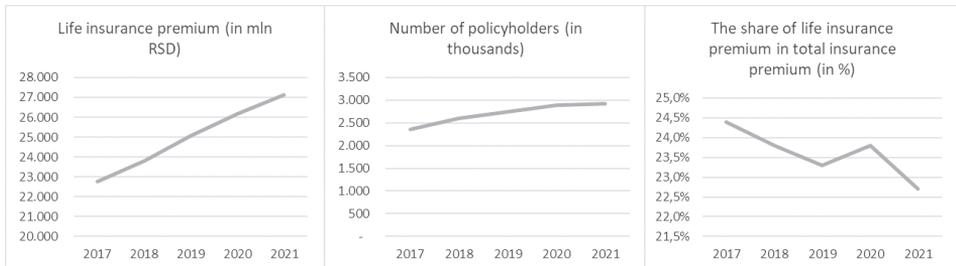
<sup>30</sup> National Bank of Serbia

## 2.2. Life insurance as a type of long-term savings

Life insurance is a special type of insurance that includes financial protection of an individual against the risk of premature death or the negative consequences of an accident. The basic importance of a life insurance policy is that it represents insurance and savings at the same time.<sup>31</sup> It is common for all countries in transition that the share of non-life insurance is significantly higher than that of life insurance.<sup>32</sup> However, in the Republic of Serbia, during the last fifteen years, this type of insurance has predominantly grown compared to non-life insurance.

During 2020, in the conditions of the COVID-19 pandemic, the share of the life insurance premium in the total premium increased slightly, from 23.3% in 2019 to 23.8% in 2020, with a nominal growth of this premium of 4.4%.<sup>33</sup> However, in 2021, the share of the life insurance premium in the total premium was reduced to 22.7%, with a growth of this premium of 3.6%. This was primarily a consequence of the higher growth of non-life insurance premiums than the growth of life insurance premiums, specifically voluntary health insurance, property insurance and motor vehicle insurance.<sup>34</sup> Therefore, the trend of life insurance premium growth was maintained during 2020 and 2021, in the conditions of the health crisis, but with a decrease in the participation of this type of insurance in favor of non-life insurance in 2021. Additionally, the number of life insurance policyholders also recorded growth during the observed period, with growth slowing down in 2020 and 2021 (see the information shown in Chart 5).

▶ **CHART 6: MOVEMENT OF THE LIFE INSURANCE PREMIUM AND THE NUMBER OF INSURED PERSONS, 2017-2020.**



Source: Presented based on data from the National Bank of Serbia.

The growth of life insurance premium payments directly affects the development of the insurance market as an important factor in the economic growth of a country.<sup>35</sup> Also, considering that life insurance is a form of savings, its dual function - savings and protection - makes it a more attractive product on the insurance market. The right to life protection that citizens acquire by paying the first installment, i.e., effectively during the entire insurance period, is what makes saving through life insurance significantly different from

31 Ivanović et al. (2014), p. 52

32 Ibid., p. 59

33 National Bank of Serbia (2021b), p. 27

34 National Bank of Serbia (2022e), p. 23-24

35 Council of Foreign Investors (2021), p. 183

saving through the banking system. However, the life insurance market in the Republic of Serbia is still in its infancy, and it is far from the level of the OECD member states, where the share of life premium in the total insurance premium is around 50%.<sup>36</sup>

## CONCLUSION

The COVID-19 pandemic has devastated our societies, devastated our economies, and reversed much of the economic progress made since the 2008 Financial Crisis. It has led, in addition to dramatic health implications for people around the world, to an almost immediate and profound economic upheaval in many economies. In extraordinary circumstances, there was not only a disruption in business, but also a general slowdown in economic activity, an increase in unemployment as well as an initial reduction in the assets of participants in the financial system due to the decline of financial markets. All these interconnected areas of social and economic life have influenced the growing uncertainty regarding the sustainability of the living standards of the elderly in the future and further increased the importance of timely composition of supplementary savings for the retirement period of individuals.

The analysis of selected indicators of the sector of voluntary pension funds in Serbia, presented with the aim of understanding trends in this segment of the financial market, as well as the perspective of its further progress, indicated a high degree of dependence on macroeconomic and social factors. Factors in the national economy, such as the population living standard, the degree of development of the capital market, but also the potential reforms of the legislative framework, will dominantly influence the trends in this sector in the future. Furthermore, the stability of the domestic system of voluntary pension funds remained preserved in the conditions of the health crisis, and these institutional investors, despite the changed business circumstances and the consequent reduced amounts of investment profits in the first half of 2020 due to the initial shock of the Pandemic, managed to record, at the end of the year, profit from the investment, and then achieve a positive result in the following year, 2021.

By comparing the trends in the domestic market of voluntary pension funds and the markets of private pension funds in OECD member states, we came to interesting conclusions. When interpreting them, it should be noted that pension systems differ greatly both between OECD member countries and in relation to the Republic of Serbia, as well as that the sector of voluntary pension funds in the Republic of Serbia is far from the level of development and prevalence of private pension systems in abroad. Nevertheless, the analyzed statistics of private pension savings in the country and abroad indicated that the national system of voluntary pension funds successfully follows the trends observed in the OECD member states, except in the case of the movement of contributions paid by users of these financial institutions. Namely, contribution payments recorded a decline in 2020 compared to 2019 (at the level of the OECD countries, growth was recorded in the same period), but already during 2021 they almost completely returned to their level from 2019.

By analyzing certain indicators of population savings through the banking sector, as well as trends in the life insurance market, it can be observed that the Pandemic did not have significant negative consequences on the accumulated funds of citizens in these financial institutions. Namely, despite the reduction of interest rates on both dinar and foreign currency savings, household deposits with banks recorded growth during the previous two years. Additionally, the trend of life insurance premium growth was recorded during 2020 and 2021, in the conditions of the health crisis, while the number of life insurance policyholders also recorded growth during the analyzed period. All this points to the continued trust of citizens in these financial institutions.

Finally, the experience with COVID-19 has provided - and will continue to provide - numerous lessons that can contribute to a more effective response to future pandemics and reduce the potential for catastrophic losses. The significance of that is not only from the aspect of preserving economic growth and development, but also from the point of view of ensuring satisfactory conditions for both current and future financial stability of the population.

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## APPENDIX

Below is an overview of how the investment focus of voluntary pension funds on the share class of domestic legal entities was analyzed. Namely, the research question that was considered is: Is there a linear relationship between changes in the portion of shares of domestic legal entities in the total assets of voluntary pension funds at the sector level and changes in the BELEX15 benchmark index? The analysis covered a five-year period, more precisely the period from 2017 to 2021. It should be borne in mind that the calculation used monthly data for the mentioned five years. In accordance with the stated objective of the research, the null hypothesis was defined as follows:

$H_0$ : There is no linear relationship between changes in the benchmark index BELEX15 and changes in the level of exposure of the assets of voluntary pension funds to the share class of domestic legal entities.

and then the alternative hypothesis:

$H_1$ : There is a linear relationship between changes in the benchmark index BELEX15 and changes in the level of exposure of the assets of voluntary pension funds to the share class of domestic legal entities.

Since IBM SPSS statistical software can be used to calculate different statistical indicators, the analysis and interpretation of the Pearson linear correlation coefficient was chosen. After testing the hypotheses about the existence and degree of linear relationship, results were obtained and based on them it can be concluded that there is a moderate linear relationship between the analyzed variables.

### ► CORRELATIONS

		KV_PLASMANI_U_AKCIJE	KV_BELEX15
kv_plasmani_u_akcije	Paerson Correlation	1	.571
	Sig. (2-tailed)		.001
	N	47	33
kv_BELEX15	Paerson Correlation	.571	1
	Sig. (2-tailed)	.001	0
	N	33	36

As can be seen from the previous table, the Pearson correlation coefficient between the observed variables is 0.571, which indicates a moderate positive linear relationship. Also, we see that the probability is less than 0.05, more precisely it is 0.001, which means that we can reject the null hypothesis for the chosen significance level of 5%. Therefore, the obtained correlation coefficient is statistically significant.

In addition, we can calculate the coefficient of determination, which shows how much of the variance of a variable is explained, i.e., caused by the variance of another variable. The coefficient of determination, in the case of simple correlation, is calculated as the square of the Pearson correlation coefficient. In our example, the Pearson correlation is

0.571, and when it is squared, it is 0.326. Therefore, we can state that the changes in the benchmark index BELEX15 explain about 32.6% of the variance, i.e., the change in the exposure of the assets of voluntary pension funds to the share class of domestic legal entities.