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VOLUNTARY PENSION FUNDS IN THE REPUBLIC OF SERBIA - COVID AND POST COVID PERIOD

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Abstract: The topic of this paper is the analysis of voluntary pension funds in the Republic of Serbia in the period 2019-2023: the role, performance, and structural characteristics. Voluntary pension funds have emerged as a significant component of retirement planning across the globe. Unlike mandatory pension schemes, which are compulsory and often state-managed, voluntary pension funds offer individuals the opportunity to augment their retirement savings beyond what is provided by state or employer-sponsored plans. Voluntary pension funds represent a contractual type of financial institution, with a significant share of their capital derived from client contributions, which define the contractual relationship between the fund and its clients. Unlike some other types of funds, such as investment funds, pension funds benefit from regular, monthly contributions or payments, which provide a steady influx of free capital for investment in the financial market.

Voluntary pension funds in Serbia represent a significant segment of the country's financial market, providing a supplementary avenue for retirement savings beyond mandatory pension schemes. The analysis reveals a general upward trend in net asset value, although a notable decline of 4,25% occurred in 2022 due to increased withdrawals and negative investment returns. Voluntary pension funds are predominantly invested in domestic government debt securities, with a significant portion also allocated to equities and term deposits. Market data indicates that Dunav Voluntary Pension Fund has consistently led the market in terms of net asset value, with other funds such as Generali Basic, DDOR Garant Ekvilibrio, and Raiffeisen Future following. Most assets are held in the domestic currency, while a smaller proportion is in foreign currencies, particularly euros. The findings highlight the importance of voluntary pension funds in providing financial security for retirees and underscore the need for ongoing evaluation and adjustment in response to market conditions and demographic trends.

Keywords: voluntary pension funds, net asset, the asset structure, currency structure of asset, Republic of Serbia
Field: Economics

1. INTRODUCTION

The primary objective of pension funds is to ensure clients receive a stable and secure income upon retirement, or a continuous cash flow after reaching a certain age. It is important to note that voluntary pension funds emerged as a response to ongoing global demographic changes. The extension of the average lifespan for both men and women, coupled with a decrease in the number of employed individuals and their replacement by modern technological solutions, has led economically developed countries to face challenges in providing quality pension payments to their citizens. Consequently, many countries encourage their citizens to opt for additional, voluntary pension insurance alongside mandatory schemes.

The founders of pension funds can be various legal entities, including banks, insurance companies, or other enterprises. The management company is tasked with managing the voluntary pension fund, making investment decisions, executing programmed payments, conducting administrative and marketing activities, and performing other business functions. The assets of a voluntary pension fund belong to the fund and its members and cannot be subject to forced collection, pledges, or mortgages. They also cannot be included in the liquidation or bankruptcy estate of the management company, custodian bank, or other entities, nor used to settle the obligations of fund members or others to third parties, thereby ensuring additional security for clients' assets.

Both individuals and legal entities have the right to make contributions to private pension funds, either independently or on behalf of employees in companies. Due to the specific nature of their function, pension funds are conservative institutions with a high aversion to risk, and legal acts and regulations restrict them to investments in specific securities. Additionally, the National Bank of Serbia, as the responsible supervisory body, monitors the investments and operations of voluntary pension funds operating in the domestic financial market.

According to the current Law on Voluntary Pension Funds and Pension Plans (2011), voluntary pension funds are subject to the following investment limitations: "Up to 10% of the assets of a voluntary

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pension fund can be invested in securities of a single issuer or in securities of two or more related issuers, except for securities issued by the Republic or the National Bank of Serbia; up to 5% of the assets of a voluntary pension fund can be invested in securities issued by the organizer of the pension plan that has joined the fund.” The Law also precisely defines the net value of a voluntary pension fund. The value of the fund’s assets comprises the total value of the securities in the fund’s portfolio, real estate owned by the fund, and cash deposits held by the fund in banks. The value of the fund’s assets is calculated based on market value.

2. MATERIALS AND METHODS

The paper provides an overview of the development of voluntary pension funds in the Republic of Serbia from 2019 to 2023 covering key trends, challenges, and opportunities faced by voluntary pension funds during this period. Data from various sources are utilized to examine the growth of the industry as well as the performance of voluntary pension funds and its impact on the broader financial market and domestic economy.

The paper employs both theoretical and empirical research methodologies to explore its subject matter. Theoretically, the authors explain fundamental concepts and present a comparative analysis of the functions of institutional investors within the capital market, with a specific emphasis on the role and impact of voluntary pension funds in the Serbian capital market. The empirical component of the research is underpinned by current literature, ongoing studies, and relevant case examples, particularly focusing on the impact of the Covid-19 pandemic and the subsequent period.

The research on voluntary pension funds in the Republic of Serbia necessitated the use of diverse methodological approaches, predominantly relying on desk research and the compilation of both primary and secondary data. The study will employ scientific methods, including analytical-synthetic, inductive-deductive, and comparative-classification techniques. Additionally, tabular, and graphical representations will be utilized to effectively present the summarized data under analysis.

The primary data source for this study is the National Bank of Serbia, which maintains comprehensive records of registered voluntary pension funds and their activities. Supplementary analysis is informed by secondary data from academic articles, reports, and other pertinent publications.

3. LITERATURE REVIEW

Recent literature emphasizes the evolving characteristics of voluntary pension funds, with a particular focus on trust, integration of environmental, social, and governance (ESG) criteria, and strategic adaptations to changing economic conditions. Key to the future success of these funds are advancements in financial literacy, innovative governance practices, and sustainable investing approaches. Future research should further investigate these aspects, concentrating on the practical application of these strategies and their long-term effects on retirement security. This literature review delves into the academic discussions on voluntary pension funds, analyzing their structure, advantages, challenges, and the determinants affecting their adoption and efficacy.

There is also a very limited literature body on the factors influencing voluntary pensions in the CEE region (Marcinkiewicz, 2017). Pienkowska-Kamieniecka (2013) states that the factors that affect the insufficient participation in the supplementary pension systems in the CEE region are at the low level of financial knowledge and inefficient fiscal incentives. Similarly, Choi et al. (2005) identify inertia and lack of financial literacy as major barriers to participation. Individuals often procrastinate or are unaware of the benefits and mechanics of these funds, leading to suboptimal retirement savings. Lusardi and Mitchell (2023) emphasize the role of financial literacy in enhancing trust and participation in voluntary pension schemes. They argue that individuals with higher financial literacy are more likely to understand the benefits of voluntary pension funds and thus participate more actively. Their research, conducted in the post-COVID era, suggests that targeted financial education programs can significantly improve participation rates in voluntary pension funds.

One of the primary advantages of voluntary pension funds is their potential to enhance retirement income. Antolin et al. (2008) argue that these funds can significantly bolster the financial security of retirees, especially in systems where mandatory pensions are insufficient. Additionally, voluntary pension funds offer tax incentives in many jurisdictions, such as tax-deferred growth and tax deductions on contributions, which can further enhance their attractiveness (OECD, 2018). Voluntary pension funds also promote a culture of savings and financial planning. Beshears et al. (2011) suggest that the presence of these funds encourages individuals to think more strategically about their long-term financial health, leading to more disciplined saving behaviors. Moreover, the flexibility in contributions allows individuals to adjust their savings according to life changes, such as income fluctuations or unexpected expenses (Choi et al., 2004).

The economic environment plays a crucial role in shaping the strategies of voluntary pension funds. The OECD (2022) report outlines the challenges posed by a low-interest-rate environment and the need for pension funds to diversify their portfolios to ensure adequate retirement income. The report suggests that funds are increasingly turning to alternative investments, such as real estate and infrastructure, to achieve higher returns. Beshears et al. (2022) discuss the impact of behavioral economics on retirement savings, noting that automatic enrollment and default options have significantly improved participation in voluntary pension schemes. Their research underscores the importance of designing pension plans that leverage behavioral insights to enhance saving behavior and retirement outcomes.

Investment risk is another critical concern. The performance of voluntary pension funds is subject to market fluctuations, which can jeopardize the retirement savings of participants, particularly those nearing retirement (Antolin, 2008). The reliance on individual decision-making also means that inadequate investment choices can result in poor fund performance. Administrative costs and fees can erode the returns on voluntary pension funds. Bikker and de Dreu (2009) highlight that high management fees can significantly reduce the net benefits of these funds. Transparency in fee structures and efforts to minimize costs are essential to ensure that participants derive maximum benefit from their contributions.

Trust remains a pivotal factor in the participation and success of voluntary pension funds. Buchholz and Ohndorf (2023) discuss how pension fund management's transparency and accountability directly affect trust levels among participants, which in turn influences their willingness to contribute to voluntary schemes. Their findings highlight that higher trust levels correlate with increased participation and savings, particularly during periods of economic uncertainty.

The integration of ESG criteria into pension fund investment strategies has gained prominence. According to Thaler and Sunstein (2023), ESG considerations are becoming critical for pension fund managers seeking to mitigate long-term risks and enhance sustainability. They categorize ESG investing into three primary approaches: transformative (aiming to change the world), exclusionary (avoiding harm), and risk-focused (managing portfolio risk). Their review indicates that pension funds integrating ESG criteria tend to perform better over the long term due to improved risk management and alignment with broader societal values. Merton and Bodie (2023) further explore the financial implications of ESG integration, noting that pension funds incorporating ESG factors often experience lower volatility and higher returns. Their analysis of global pension funds highlights a growing trend towards sustainable investing, driven by both regulatory pressures and investor demand. Voluntary pension funds continue to evolve as an essential component of retirement planning, influenced by regulatory changes, economic conditions, and shifts in investment strategies. This review synthesizes recent research from 2022 to 2024, focusing on trust and participation, the integration of Environmental, Social, and Governance (ESG) criteria, and adaptive strategies in a fluctuating economic environment.

Clark and Monk (2024) provide a comprehensive overview of emerging governance models for pension funds, emphasizing the importance of transparency, accountability, and stakeholder engagement. Their study suggests that innovative governance practices, such as the inclusion of ESG criteria and enhanced communication strategies, are crucial for the future success of voluntary pension funds. Mitchell and Rappaport (2022) highlight recent innovations in retirement financing, including longevity insurance and life cycle funds. These innovations are designed to address the challenges of increasing life expectancy and changing retirement needs. Their review indicates that such products can provide more flexible and secure retirement solutions, complementing traditional pension schemes.

4. RESULTS

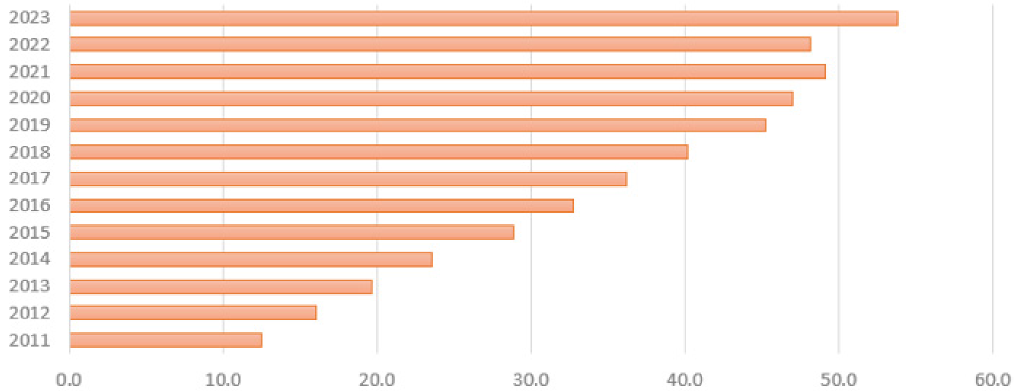
Data from the National Bank of Serbia's report on the Sector of Voluntary Pension Funds for the last quarter of 2022 indicates that the domestic market featured seven voluntary pension funds, four management companies, one custodian bank, five intermediary banks, and one insurance intermediary company. Compared to the most recent report for the fourth quarter of 2023, which shows the entry of an additional custodian bank into the market, the current market composition includes: four management companies managing the assets of seven voluntary pension funds, two custodian banks, five intermediary banks, and one insurance intermediary company (National Bank of Serbia, 2024).

From 2011 through the end of 2023, the net asset value of voluntary pension funds has generally exhibited an upward trend, except for 2022, which saw a 4,25% decrease in value. This decline can be attributed to fund withdrawals and the returns generated by the funds' investments (see Figure 1).

The National Bank of Serbia's report on the operations of voluntary pension funds at the end of 2022 reveals that total contributions amounted to 3.738,5 million RSD, representing an increase of 7,5 million RSD compared to 2021. However, members withdrew 3.530,1 million RSD, which was 1,3 billion RSD more than in 2021, while the loss from investments totaled 972 million RSD (National Bank of Serbia, 2023). In this context, the observed decline in 2022 is a result of the negative returns on invested assets—a phenomenon not previously recorded since the inception of the first voluntary pension fund in 2006. Additionally, there was a temporary increase in withdrawals due to adverse and risky conditions in the global financial market.

The net assets of the funds at the end of the fourth quarter of 2023 amounted to 53.8 billion dinars, representing an 11.5% increase compared to the end of 2022 and a 2.7% increase compared to the end of the previous quarter (National Bank of Serbia, 2024).

Figure 1. Net Assets of Voluntary Pension Funds, in Billion RSD



Source: National Bank of Serbia, Voluntary Pension Funds Sector: IV Quarter Report for 2023, p.4

The following table provides a detailed overview of the net asset value and market share of voluntary pension funds in the Republic of Serbia in the period 2019-2023. It illustrates trends in the financial performance and market presence of these funds within the domestic financial sector, highlighting their evolution and significance.

Table 1. Net Assets and Market Share of Voluntary Pension Funds

Voluntary pension fund/ Year	*Net asset*					*Market share (in net asset)*				
	2019	*2020*	*2021*	*2022*	*2023*	*2019*	*2020*	*2021*	*2022*	*2023*
Generali Basic	13.075,8	13.477,0	13.726,4	13.166,7	14.582,5	28,90%	28,66%	27,98%	27,31%	27,12%
Raiffeisen Future	5.459,9	5.876,6	6.197,9	5.764,2	6.361,3	12,07%	12,50%	12,64%	11,96%	11,83%
DDOR Garant Ekvilibrio	6.050,3	6.143,3	6.170,1	5.563,1	5.765,0	13,37%	13,07%	12,58%	11,54%	10,72%
Dunav	18.010,5	18.459,3	19.452,0	19.729,1	22.349,3	39,81%	39,26%	39,66%	40,93%	41,57%
Generali Index	1.095,6	1.220,6	1.334,8	1.619,6	1.891,4	2,42%	2,60%	2,72%	3,36%	3,52%
DDOR Garant Štednja	1.328,4	1.551,3	1.788,0	1.743,1	2.043,1	2,94%	3,30%	3,64%	3,62%	3,81%
Raiffeisen Euro Future	225,0	290,2	383,6	618,3	769,9	0,50%	0,62%	0,78%	1,28%	1,43%
SUM	*45.245,5*	*47.018,2*	*49.052,8*	*48.204,1*	*53.762,5*	*100%*	*100%*	*100%*	*100%*	*100%*

Source: Author's Analysis Based on Available Data from the National Bank of Serbia Website: https://nbs.rs/sr_RS/finansijske-institucije/penzijski-fondovi/izvestaji/, Statistical Annex

Data presented in Table 1 indicate that, during the observed period, Dunav Voluntary Pension Fund was the market leader based on net asset value, with an average market share of approximately 40%. It was followed by Generali Basic, DDOR Garant Ekvilibrio, and Raiffeisen Future, with average shares of 27%, 12,5%, and 12%, respectively. When categorizing voluntary pension funds based on their market share in net asset value, the following distribution is observed:

- Two large voluntary pension funds with a market share exceeding 20%.
- Two medium-sized voluntary pension funds with a market share between 5% and 19,99%.
- Three small voluntary pension funds with a market share of 5% or less.

The asset structure of voluntary pension funds reveals that approximately three-quarters of their investments are allocated to government debt securities, with additional investments in equities and term deposits (see Table 2). Data from the subsequent table show that from 2019 through 2023, voluntary pension funds exclusively invested in the domestic market. There is a notable trend of increasing investment, except for 2022, which saw a slight decline.

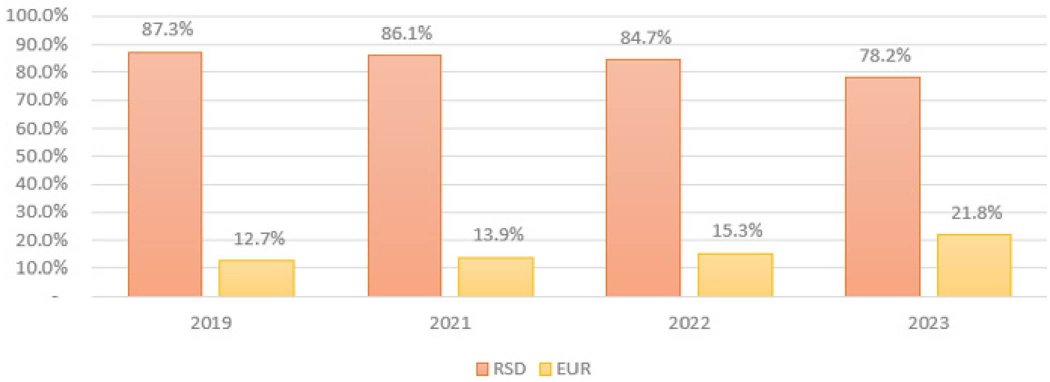
Table 2. Structure of Net Assets of Voluntary Pension Funds

Year/ Securities	**Structure of net asset**					**Share of securities in net asset**				
	2019	***2020***	***2021***	***2022***	***2023***	***2019***	***2020***	***2021***	***2022***	***2023***
Investments in the Republic of Serbia	*43.879,9*	*44.388,3*	*47.415,5*	*46.681,3*	*47.166,2*	*96,7%*	*94,2%*	*96,4%*	*96,7%*	*87,6%*
Shares	5.042,4	5.668,9	6.676,7	5.242,6	5.821,1	11,1%	12,0%	13,6%	10,9%	10,8%
Government bonds	35.481,6	34.423,5	37.875,3	36.961,7	37.717,8	78,2%	73,1%	77,0%	76,6%	70,1%
Treasury bills	-	202,0	-	-	-	-	0,4%	-	-	-
Corporate bonds	1.491,2	1.489,8	-	-	-	3,3%	3,2%	-	-	-
Other securities	-	-	-	-	-	-	-	-	-	-
Investment funds	247,1	230,4	59,3	-	481,4	0,5%	0,5%	0,1%	-	0,9%
Real estate	-	-	-	-	-	-	-	-	-	-
Deposits	1.617,7	2.373,6	2.804,2	4.476,9	3.145,9	3,6%	5,0%	5,7%	9,3%	5,8%
Foreign Investments	-	-	-	-	-	-	-	-	-	-
Securities	-	-	-	-	-	-	-	-	-	-
Investment funds	-	-	-	-	-	-	-	-	-	-
Custody accounts	*1.435,0*	*2.720,8*	*1.739,5*	*1.583,2*	*6.464,5*	*3,2%*	*5,8%*	*3,5%*	*3,3%*	*12,0%*
Receivables	*44,3*	*13,6*	*14,0*	*1,3*	*200,4*	*0,1%*	*-*	*-*	*-*	*0,4%*
Sum	*45.359,3*	*47.122,7*	*49.169,0*	*48.265,8*	*53.831,1*	*100 %*	*100 %*	*100%*	*100%*	*100%*

Source: Author's Analysis Based on Available Data from the National Bank of Serbia Website: https://nbs.rs/sr_RS/finansijske-institucije/penzijski-fondovi/izvestaji/, Statistical Annex

At the end of the of 2023, government bonds constituted 70,1% of the portfolio of voluntary pension funds, compared to 76,6% at the end of 2022, representing a decrease of 2,1 percentage points. Assets held in custodian accounts and term deposits with banks accounted for 13,8%, while investments in equities made up 10,8%. According to the latest report by the National Bank of Serbia, the average maturity of invested funds in government debt securities was 5,5 years: 9.4% of government debt instruments had maturities of up to one year, 5.7% had maturities between one and two years, 36.5% had maturities between two and five years, 43.8% had maturities between five and ten years, and 4.6% had maturities exceeding ten years (National Bank of Serbia, 2024).

Graph 2. Currency Structure of the Assets of Voluntary Pension Funds



Source: Author's Analysis Based on Available Data from the National Bank of Serbia Website: https://nbs.rs/sr_RS/finansijske-institucije/penzijski-fondovi/izvestaji/, Statistical Annex

Regarding the currency structure of assets held by voluntary pension funds in the Republic of Serbia, data from the following graph indicate that during the observed period, more than three-quarters of the funds' assets were denominated in the domestic currency. The remaining portion of the assets was held in foreign currency (euros).

5. CONCLUSION

Voluntary pension funds play a crucial role in retirement planning by providing flexibility and potential financial benefits to individuals. Understanding the trends and dynamics is crucial for policymakers, investors, and other stakeholders in making informed decisions and fostering a conducive environment for financial market growth (Dimic et al., 2024). However, their effectiveness depends on addressing challenges related to participation rates, investment risks, and administrative expenses. To maximize the advantages of voluntary pension funds, it is essential to enhance financial literacy, improve regulatory frameworks, and increase employer involvement. Future focus should be on exploring innovative strategies to boost participation and optimize fund performance, ensuring that these funds effectively complement mandatory retirement schemes and offer substantial financial security for retirees. Regulatory frameworks that offer tax incentives and establish clear guidelines for fund management can significantly increase the appeal of voluntary pension funds (OECD, 2018). Additionally, efforts to enhance financial literacy can enable individuals to make well-informed decisions about their retirement savings (Lusardi and Mitchell, 2014). Employer involvement is also essential in promoting the effectiveness of voluntary pension funds. Employers can enhance participation by implementing automatic enrollment, offering matching contributions, and educating employees about the advantages of these funds (Madrian and Shea, 2001).

During the pandemic, Serbian voluntary pension funds experienced a reduction in net asset value, primarily attributable to market volatility and increased withdrawal rates. Nonetheless, the sector has exhibited signs of recovery, with asset values gradually rebounding and a return to more stable growth patterns. Investment strategies have been recalibrated to mitigate risk, focusing on diversified portfolios that balance both domestic and international investments.

Furthermore, the structure of these funds has undergone significant changes. While a considerable portion of assets remains invested in domestic government securities, there has been a notable shift toward a more diversified asset allocation, including equities and international investments, to manage risk more effectively and enhance returns. Similarly, the currency composition of the assets has adapted, with a stable proportion held in foreign currencies to hedge against domestic economic fluctuations.

Overall, the post-COVID-19 period has emphasized the crucial role of voluntary pension funds in enhancing retirement security. The sector's ability to adapt and make strategic adjustments underscores its importance in supporting financial stability and ensuring sustained benefits for retirees in Serbia.

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