

2022

REPORT

*On the developments
in the fully funded
pension insurance*



Agency for Supervision of Fully Funded Pension Insurance

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Abbreviations

GDP	<i>gross domestic product</i>
Second pillar	<i>Mandatory Fully Funded Pension Insurance</i>
VFP	<i>Voluntary Pension Funds Management Company VFP PENSION COMPANY AD Skopje</i>
VFPd	<i>VFP open voluntary pension fund - Skopje</i>
VPF	<i>voluntary pension funds</i>
SSO	<i>State Statistical Office</i>
EU	<i>European Union</i>
MPF	<i>mandatory pension funds</i>
IOPS	<i>International Organisation of Pension Supervisors</i>
KB First	<i>KB First company for mandatory and voluntary pension funds management AD Skopje</i>
KBPd	<i>KB First Open Voluntary Pension Fund - Skopje</i>
KBPz	<i>KB First Open Mandatory Pension Fund - Skopje</i>
MAPAS	<i>Agency for Supervision of Fully Funded Pension Insurance</i>
NBRNM	<i>National Bank of the Republic of North Macedonia</i>
OECD	<i>Organisation for Economic Co-operation and Development</i>
First pillar	<i>Mandatory pension and disability insurance based on generational solidarity</i>
SAVA	<i>Mandatory and Voluntary Pension Funds Management Company Sava Pension Company AD Skopje</i>
SAVAd	<i>Open Voluntary Pension Fund Sava penzija plus</i>
SAVAz	<i>Open Mandatory Pension Fund Sava penziski fond</i>
Third pillar	<i>Voluntary fully funded pension insurance</i>
TRIGLAV	<i>Mandatory and Voluntary Pension Funds Management Company TRIGLAV pension company AD Skopje</i>
TRIGLAVd	<i>Triglav Open Voluntary Pension Fund - Skopje</i>
TRIGLAVz	<i>Triglav Open Mandatory Pension Fund- Skopje</i>
PRO	<i>Public Revenue Office</i>
PDIFNM	<i>Pension and Disability Insurance Fund of North Macedonia</i>

Foreword



Dear reader,

As 2022 ended, we completed seventeen years of work of fully funded pension insurance with results that you can find in detail in the Report on the conditions in the fully funded pension insurance in 2022, of the Agency for Supervision of Fully Funded Pension Insurance - MAPAS. The report contains a description of the characteristics of fully funded pension insurance, data on fully funded pension insurance, assessment of the execution of regulations in the field of fully funded pension insurance and other relevant data regarding this insurance until 2022.

In 2022, pension funds faced an uncertain macroeconomic and financial environment. The current developments related to the military conflict between Ukraine and Russia had a negative impact on the pension funds with defined contribution, both abroad and in North Macedonia. However, the assets of the Macedonian pension funds are not directly exposed in Ukraine and Russia, and they generally felt the consequences indirectly, through inflationary pressures, higher interest rates and lower economic growth, mostly due to instability and volatility of the financial markets.

The global financial and economic uncertainty in 2022 shifted the trends of upward movement of the parameters of the mandatory and voluntary fully funded pension insurance, however pension funds are still in the accumulation phase and it is expected that these influences will be surpassed in the upcoming years.

In 2022, the total assets of the mandatory pension funds recorded a slow growth of 7.46% and reached 113.54 billion denars. The total assets of the voluntary pension funds recorded a lower growth compared to the total assets of the mandatory pension funds, that is, they increased by 6.36% and reached 3.05 billion denars. The share of the total assets of the pension funds in the second pillar and the third pillar in the gross domestic product remained almost at the same level as in the previous year (15% of GDP). In 2022, the coverage of the population in the second pillar also increased with a similar trend as the previous year (4% compared to 2021) and reached a portion of 71% in the total active population. Although there was an observable growth, the participation of the population in the third pillar is still very small, that is, approximately 3.7% of the total active population in the Republic of North Macedonia are members with a voluntary individual account or are participants in a pension scheme with a professional account in a voluntary pension fund.

In 2022, contributions in the amount of about 11.15 billion denars were transferred to the mandatory pension funds, which is approximately 1.40% of GDP, while a total of approximately 400.09 million denars were paid into the voluntary pension funds, which is approximately 0.05% of GDP.

Although the investment structure of pension funds in 2022 does not differ much compared to 2021, a slight increase in the portion of bonds is observed at the expense of the portion of deposits, shares and investment funds. The investment portfolio of mandatory pension funds in 2022 consists of domestic investments that include government securities (63.12%), deposits (5.47%), shares (2.20%), stocks in investment funds (0.11%) and corporate bonds (0.02%), as well as investments abroad which include investments in foreign government bonds (0.82%), units of investment funds (24.13%) and shares (3.57%). The commencement of the operation of the fourth voluntary pension fund VFPd did not greatly affect the overall structure of investments of voluntary pension funds, given the fact that in

the initial years of operation the new fund still disposes of a small amount of assets in relation to the total assets of voluntary pension funds. The investment portfolio in 2022 consists of domestic investments that include government securities (54.21%), deposits (9.45%), shares (6.26%), corporate bonds (0.68%) and a very small portion in stocks in investment funds (0.02%), as well as investments abroad, which include investments in foreign government bonds (0.91%), stocks in investment funds (22.55%) and shares (4.69%).

However, global developments also affected the reduction of yields calculated for a seven-year period in 2022. The increase in the change in the annualized cost of living level significantly affects the decline in the yield amounts in real terms in 2022. At the level of mandatory capital funded pension insurance, in the seven-year period 2016 - 2022, an average yield reduced to an annual level of 4.52% in nominal amount, i.e. 0.50% in real amount, was achieved, calculated through the change of the weighted average of the accounting units of the mandatory pension funds. At the level of voluntary capital funded pension insurance, in the seven-year period 2016 - 2022, an average yield reduced to an annual level of 4.64% in nominal amount, i.e. 0.61% in real amount, calculated through the change of the weighted average of the accounting units of voluntary pension funds.

In addition, 2022 was marked by the increase in the number of entities on the market of fully funded pension insurance. Namely, in August 2022, after a permit was issued by MAPAS, the fourth pension company in the Republic of North Macedonia, VFP PENSION COMPANY AD Skopje, which manages only a voluntary pension fund, started operating. It is expected that the operation of the new pension company will encourage competition in the voluntary fully funded pension insurance, it will increase the choice of members and citizens, and at the same time it will encourage the achievement of better investment results within a transparent and effective pension system.

We would like to point out that pension saving is a long-term investment, and MAPAS contributes and will continue to contribute towards continuous strengthening of the individual savings, by ensuring management of the risks that threaten the assets of both pensions and pensions benefits of the members of pension funds, as well as the reputation of the system, while reducing the risks to the lowest possible level.

As a supervisory and regulatory body, in our daily operation, we are guided by our mission and, same as in the previous years, we will invest our resources towards upgrading and promoting the fully funded pension insurance and we will act within the established framework of pension supervisors that are recognized, indicated and confirmed by the International Organization of Pension Supervisors (IOPS).

*Chairman of the Council of Experts,
Maksud Ali*

Important dates in 2022

31.05.2022

MAPAS issued a license for the establishment of a company for voluntary pension funds management and an approval for voluntary pension fund management to the Open and Closed Investment Funds Management Company VFP FUND MANAGEMENT AD SKOPJE.

01.08.2022

VFP PENSION COMPANY AD Skopje started activities of pension fund management and works on marketing of a voluntary pension fund and a survey on the public opinion.

18.10.2022

The VFP Open Voluntary Pension Fund - Skopje - started operating.

MAPAS, mission and vision

The Agency for Supervision of Fully Funded Pension Insurance - MAPAS is a regulatory and supervisory institution established in order to care about the interests of the members and retired members of the pension funds and to encourage the development of fully funded pension insurance. It was established in July 2002. It has the capacity of a legal entity with public authorizations, set out by the Law on Mandatory Fully Funded Pension Insurance and the Statute. The Agency is accountable for its operation before the Assembly of the Republic of North Macedonia.

MAPAS is responsible for issuing, withdrawing and revoking licenses for establishing pension companies, licenses for performing an activity - management of pension funds and issuing, withdrawing and revoking approvals for managing mandatory and voluntary pension funds. It supervises the operation of pension companies, mandatory and voluntary pension funds, as well as property custodians and foreign asset managers. MAPAS also promotes, organizes and encourages the development of fully funded pension insurance in the Republic of North Macedonia, in cooperation with the Ministry of Labor and Social Policy, and develops public awareness of the goals and principles of pension companies and mandatory and voluntary pension funds, on the benefits of the membership in a mandatory and/or voluntary pension fund, including the goals, principles and benefits of participating in an occupational pension scheme, the rights of members of mandatory and voluntary pension funds and other issues related to fully funded pension insurance. MAPAS adopts acts in accordance with the laws in the field of fully funded pension insurance as well as expert instructions, manuals, etc., related to fully funded pension insurance, and it initiates the adoption of laws and other acts related to pension companies and the pension funds they manage. Moreover, MAPAS cooperates with relevant institutions in the Republic of North Macedonia and abroad in order to ensure effective control of fully funded pension insurance in the Republic of North Macedonia.

The Agency for Supervision of Fully Funded Pension Insurance is managed by a Council of Experts, which consists of a Chairman of the Council and four members, as follows:

*Maksud Ali- Chairman
Mentor Jakupi – professionally engaged member
Darko Sazdov– professionally engaged member
Borche Bozhinovski- external member
Marina Makenadzieva- external member*

The mission of MAPAS is to protect the interests of the current and retired members of the pension funds and to stimulate the development of the fully funded pension insurance towards safer retirement days.

The vision of MAPAS is to be recognized as independent, expert and transparent institution, which protects and promotes the fully funded pension insurance.

1 Brief overview of the global conditions and trends in the pension industry with an emphasis on the fully funded pension insurance



Brief overview of the global conditions and trends in the pension industry with an emphasis on the fully funded pension insurance

Assets in pension savings, at the global level, increased by 7% compared to 2020 and at the end of 2021 they exceeded 60.6 billion USD (58.9 billion USD in OECD member countries and 1.7 billion USD in selected non-OECD countries). Pension funds are still the main drivers of pension systems, on a global scale (assets in the amount of 38.5 billion in 2021).

Pension plans in 2021 recorded a positive real investment return on pension assets (net of management costs) in 41 of the 70 surveyed countries. The real investment return on pension assets (net of management costs) in 2021, averaged 3% across OECD countries. Still, pension plans in a number of countries failed to achieve positive investment results, especially in non-OECD countries (in 19 out of 37 non-OECD countries) resulting in an average investment result of less than 0%.

The available data and analyses for 2022 showed that the military conflict in Ukraine had a definite impact on the negative investment results in the first quarter of 2022 and a decrease in the value of assets in the first half of 2022. The war and subsequent sanctions and counter-sanctions following Russia's invasion of Ukraine have led to a decline in the value of all Russia-related assets, particularly assets invested in Russia or assets invested in instruments issued by Russian issuers. Pension plans also felt the consequences of the war through other assets apart from those issued by Russian issuers and through macroeconomic channels, such as inflationary pressures, higher interest rates and lower economic growth.

In 2022, good practices for designing, presenting and supervising pension projections from fully funded pension systems were confirmed. The practices aim to help pension supervisors and emphasize the importance of transparency in forecasts, as well as clear and simple communication. In addition, in 2022, the importance of data collected by pension supervisors was discussed. Thereby, it was emphasized that successful data collection, especially for risk-based supervision and monitoring of ESG factors, contributes to the synergy of data availability/accessibility, diversified information sources, data quality requirements, as well as the numerous accompanying tools such as IT systems.

The pension systems¹ in the world are characterized by different structures as a result of the different socio-economic and demographic conditions in the countries, the influence of the culture of the people and their habits and perceptions of pension savings. In recent decades, the risks of an aging population and the changing nature of the labor market have prompted a wide range of pension system reforms in order to mitigate them, however with the same ultimate goal – provision of a sustainable pension system and adequate income for the insureds after their retirement.

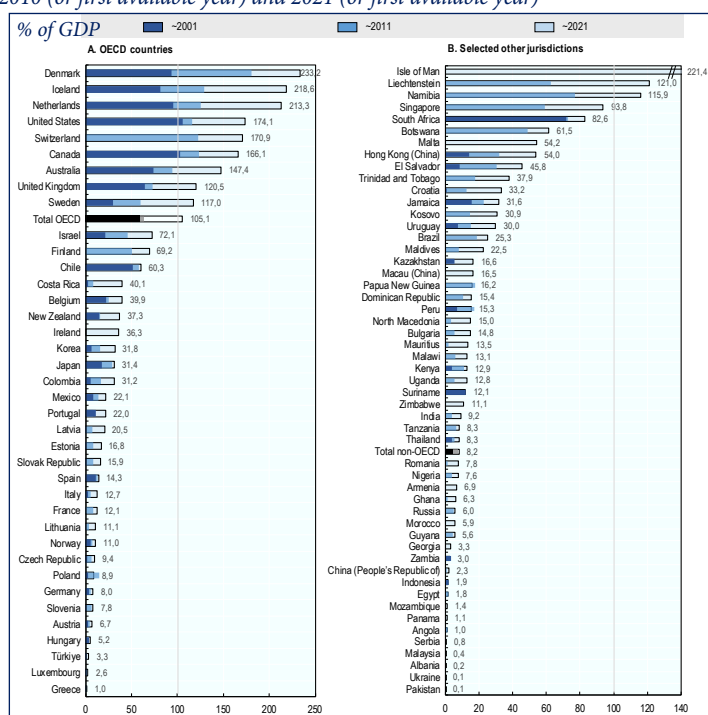
The assets of pension savings, at the world level, increased by 7% compared to 2020 and at the end of 2021 they exceeded 60.6 billion USD (58.9 billion USD in OECD member countries and 1.7 billion USD in selected non-OECD countries). The main drivers of pension systems, at the world level, are still pension funds (assets in the amount of 38.5 billion in 2021). Furthermore, some countries use other ways of saving for retirement such as pension insurance contracts with insurance companies (such as Denmark and France) or products provided and managed by banks and investment companies (such as individual retirement accounts) in the United States.

The size of the value of the assets of the private pension systems in all countries is different, which is probably due to the different beginnings of the establishment of the systems, whether the inclusion in the pension plan is mandatory or voluntary and, of course, the investment results. In absolute terms, the largest amounts of pension assets are observed in North America (Canada and the USA), Western Europe (the Netherlands, Switzerland and the United Kingdom), Australia and Japan, where pension assets exceeded one billion USD each. On the other hand, the assets of private pension systems in 69 countries (out of 90 countries that have been surveyed) amount to less than 0.2 billion USD. The size of the asset value of private pension systems in all countries is also different in relative terms. Nine of the 38 OECD member countries had assets above 100% of their economy at the end of 2021. In small countries, such as Iceland, the accumulated assets are small (USD 54 billion) compared to the other pension systems, however they are still high relative to their economy (219% of GDP). On the other hand, the amount of pension funds is less than 20% of GDP in 52 countries, including some large and fast-growing countries (such as China and India).

The comparison of the size of the asset value of private pension assets in relation to the size of the economy, expressed through the gross domestic product, provides a better picture of the relative importance of the private pension segment in

¹Used sources: OECD reports, IOPS, and own analyses and considerations.

Graph 1.1. Total pension assets, in 2010 (or first available year) and 2021 (or first available year)



Source: OECD, Pension market in focus, 2022.

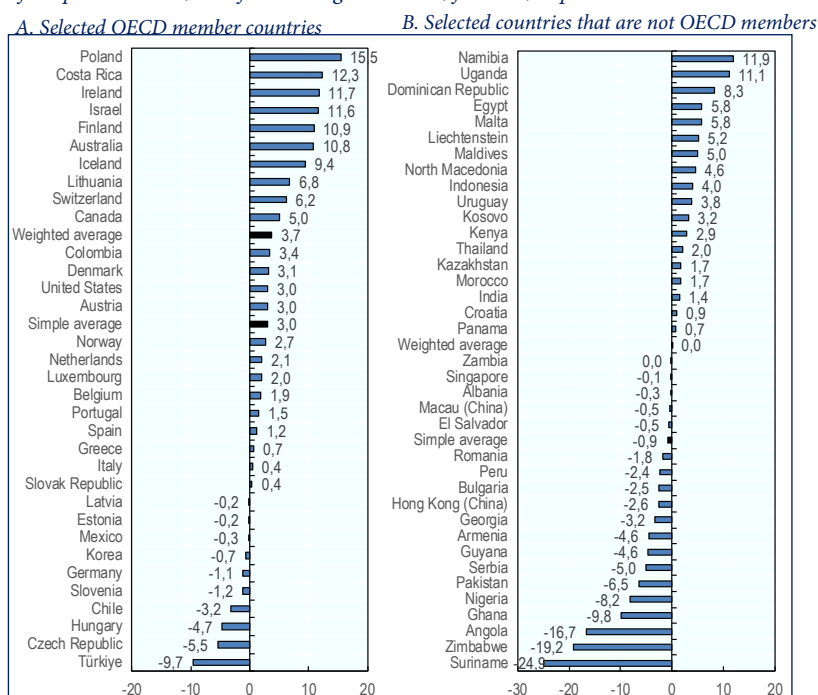
the country. The amount of pension assets in OECD member countries relative to total GDP of the OECD member countries increased from 59% in 2001 to 64% in 2011 and to 105% in 2021 (presented in Graph 1.1). USA was the leader in 2001, and in 2021 Denmark is the leader with 233% of GDP, followed by Iceland (219%) and the Netherlands (213%). Moreover, in some countries that are not OECD member countries, pension assets reached the level above 100% of GDP (121% in Liechtenstein and 116% in Namibia). On the other hand, despite a certain observed increase, pension funds in some countries (Albania, Greece, and Serbia) are still less than 1% of GDP at the end of 2021.

Another indicator of the importance of fully funded and private pensions in a country is the coverage rate. The coverage rate can be measured by the number of active members of pension plans (persons who have assets in pension plans and have not retired yet) in a proportion to the working age population (persons from 15 to 64 years of age). The access to a pension plan can be mandatory, voluntary or encouraged through automatic inclusion. The available data show that, in 2021, in 15 of the 30 surveyed countries, mandatory pension plans cover more than 75% of the working age population. The highest coverage rates are recorded in Denmark, Finland, Iceland, Latvia and Sweden, where almost the entire working age population participates in mandatory pension plans. In Latin America, Chile (84.3%) and Costa Rica (84.2%) have high coverage rates, which is not the case in other countries, such as Colombia (54.5%) and Peru (37.3%) where people have the right to choose between the pension system of generational solidarity and private fully funded pension system. The relatively low coverage rates in the mandatory pension plans are further influenced by the high rates of informal work in these countries. The participation in voluntary pension plans varies widely across the countries. More than half of the employees in Germany and Iceland, and more than half of the working age population in Belgium, the Czech Republic, Japan and Poland are covered by voluntary pension plans. In some countries, the participation in voluntary pension plans was quite low, especially in Albania, Pakistan and Kazakhstan (less than 1%). However, in Kazakhstan, many insureds are already members of mandatory pension plans, i.e., 61.2% of the working age population. The low coverage in Albania and Pakistan may be the result of insufficient awareness and little interest among the population (especially among the young population) for such pension plans.

The total amount of paid contributions to the pension plans depends on the participation of the persons who have access and are involved in the pension plans, how many of them actively contribute to the plans and the amount of the payments. Payment can be made by members, their employers or governments (for example, as financial incentives). The largest amounts of paid contributions in 2021 are observed in countries with mandatory fully funded pension plans. Relative to the size of their economy, the highest amounts of contributions were paid in Iceland (10.5% of GDP), Denmark (9%), the Dominican Republic (8.5%), Switzerland (8.3%), and Australia (6.9%). In these countries, participation in pension plans is mandatory and the coverage rate is relatively high (from 55% to 100% of the working age population). Payments to pension plans in these countries can be made by both employees and employers. In comparison, the lowest amounts of paid contributions are observed in the voluntary pension systems in Pakistan and Albania, where the participation in pension plans is voluntary and less than 2% of the working age population is included in a pension plan.

The investment results of fully funded and private pension plans are the main driver of the growth of pension assets. From the perspective of pension plan members, positive investment returns increase the certainty of the promises of defined pension plans and increase the amount of assets and post-retirement income that the members of defined contribution plans can expect. Growth in pension assets in 2021 is partly due to the investment results of fully funded and private pension plans in 2021. Pension plans in 2021 recorded a positive real investment return on pension assets (net of management costs) in 41 of the 70 surveyed countries. The real investment return on pension assets (net of management costs) in 2021 averaged 3% across OECD countries. Some of the biggest pensionable markets recorded high investment results such as Australia (10.8%), Canada (5%), Switzerland (6.2%) and the USA (3%). The best results among OECD member countries were observed in Poland (15.5%) and Costa Rica (12.3%). However, pension plans in a number of countries failed to achieve positive investment results, especially in non-OECD countries (in 19 out of 37 non-OECD countries) resulting in an average investment result of less than 0%. The financial ones markets on globally level continued to recover in during 2021, enabling pension funds investment gains especially

Graph 1.2. Real investment return of the pension assets, net of the management costs, for 2021, in percent



Source: OECD, Pension market in focus, 2022

through the instruments invested in the sectors, for energy, real estate and technological development. Meanwhile, the value of some bond indices saw a decline in 2021, which probably affected the decline in the value of some of the bonds in which the pension funds had invested. However, although pension plans achieved investment gains, nominally, in almost all countries, these gains in 2021 were insufficient to offset rising inflation in 28 countries surveyed.

Graph 1.2. shows the real investment returns of pension funds, net of management costs for 2021, in selected OECD countries and selected non-OECD countries.

The investment performances of pension plans in the long term are more important than short term gains or losses because pension funds are long-term investors. Fluctuations in investment results are inevitable throughout the existence of a pension portfolio. Pension plans in most of the surveyed countries achieved positive investment returns in the long term. Despite rising inflation in 2021 and financial market shocks (such as in the first quarter of 2020 at the start of the Corona virus pandemic), pension plans achieved positive real annual investment returns over the last ten years in 41 of the 44 surveyed countries.

The results of investing in pension assets largely depend on the allocation of the assets and the level of risk. Higher exposure of the portfolio of riskier instruments implies potentially higher amounts of return and higher return volatility. In most surveyed countries, in 2020, pension funds were invested in bonds and shares, with more than half of the investments in 35 of the 38 OECD member countries and in 38 of the 46 surveyed non-OECD countries. Therefore, the development of bond and stock markets plays a major role in the financial performance of pension plans. The highest portion of bonds and shares in the total portfolio of pension funds was in Chile (98.2%), Romania (97.9%), Dominican Republic (97.2%), Poland (97.1%), Mexico (96%), India (95.4%), and Maldives (95.3%). The percentage share of stocks and bonds differs between the countries in 2021. Although there is generally a greater preference for bonds, in 14 OECD countries and 13 non-OECD countries, the percentage share of stocks was higher than bonds. Government bonds, as opposed to corporate bonds, accounted for the largest share of direct bond investments

in a number of countries. For example, government bonds were 100% of direct bond investments in Albania and Serbia, 99.9% in North Macedonia, 99.8% in Uganda, 99% in Kenya, 99.7% in Croatia and 97.1% in Maldives, but only 19.7% in Malta, 18.9% in New Zealand, and 8.3% in Macau (China). In addition, a significant part of the pension assets in some of the surveyed countries is in cash and deposits, exceeding 20% of the assets in 9 out of 84 surveyed countries. The largest share of cash and deposits (100%) in 2021 was in Georgia, because the second pension pillar in Georgia recently started operating. In most of the surveyed countries, investments in loans, real estate, private equity funds and other alternative investments comprise a relatively small share of pension fund investments. A more significant share of investments in real estate (direct or indirect) has been observed, for example, in Switzerland (20.9%). The investment regulation may also provide for restrictions on investment in non-traditional instruments. Most countries limit or completely prohibit investments in real estate (at least direct investments), private funds and/or loans. Some countries have reduced investment restrictions in recent years and encouraged investments in infrastructure projects and long-term projects (such as in Croatia and Romania). In Croatia, the investment opportunities for mandatory pension funds were expanded for direct investments in infrastructure projects from January 2019. In Romania, with changes to the regulation from 2019, it was possible to invest pension fund assets in infrastructure projects (up to 15% of the pension assets). In Switzerland, from October 2020, a limit of 10% was introduced for investments in infrastructure, separately from the limit of 15% for alternative investments, in order to allow an increase in the exposure of pension funds to investments in infrastructure.

Although the investment structure of pension assets in 2021 is largely the same compared to 2020, there is a slight shift from bond investment to equity investment. The share of stocks in the investment structure increased by 2 percentage points, while the share of bonds decreased by almost the same extent at the end of 2021 compared to the end of 2020 on average in the 73 surveyed countries. This trend is likely due to growth in the value of shares in the portfolios or a reallocation of funds into shares to take advantage of the stock market recovery.

The available data and analyses for 2022 showed that the military conflict in Ukraine has a certain impact upon the negative ones investment results in the first quarter of 2022 and a reduction in the value of assets in the first half of 2022. The war and the subsequent sanctions and counter-sanctions after the Russian invasion of Ukraine led to a decrease in the value of all assets related to Russia, in particular the assets invested in Russia or the funds invested in instruments issued by Russian issuers. Pensions plans were also subject to the consequences of the war and through means other than those issued by Russian issuers and through macroeconomic channels, such as inflationary channels pressures, higher interest rates and lower economic growth.

In 2022, the discussions about pension projections continued. Pension projections can be a powerful tool for managing the expectations of pension fund members and can influence the decisions and choices members need to make. They can educate members about the true value of future retirement and offer advice on retirement decision-making. However pension supervisors face major challenges in terms of providing quality projections (adequate data, methodology, assumptions), finding appropriate methods for presenting results, standardization as well as provision of regulatory compliance. The main questions of supervisors are often technical in nature and relate to the development of appropriate methodology for long-term assessments, demographic assumptions (such as longevity), and macroeconomic assumptions (such as asset returns and annuity interest rates). An element of vast importance is the challenge of how to effectively communicate the results of the projections with the members of the pension funds, and especially the presentation of the uncertainty of the projected results. To that end, the IOPS published good practices in 2022 for designing, presenting and supervising pension projections from fully funded pension systems. The practices are intended to assist pension supervisors and emphasize the importance of transparency in forecasts and clear and simple communication. Adequate pension projections can also play a key role in supporting pension sustainability, especially for defined contribution pension funds.

In 2022, the importance of data collected by pension supervisors was discussed. The document published by the IOPS covers the data collection practices used by pension supervisors based on a survey of 41 countries. This research includes the following key topics: prerequisites, sources of information, data needs, data collection/analysis, and IT systems to support information collection. The report also provides an overview of issues related to data collection for risk-based supervision and monitoring of ESG factors (environmental, social and governance factors). One of the main conclusions of this research is that successful data collection, especially for risk-based supervision and monitoring of ESG factors, contributes to the synergy of data availability/accessibility, diversified information sources, data quality requirements as well as many supporting tools such as IT systems. The report also highlights that the importance of IT capabilities and data technologies in data collection will increase, as will the demands for the use of big data and advanced data validation/analytics skills in the supervision of pension systems.

Supervision based on risk assessment has been a continuously current topic of the IOPS for several years in a row, including 2022. The approach to supervision, based on the assessment and control of risks, is a process that includes identifying the potential risks faced by pension funds, or plans, assessing those risks and the potential negative financial impacts on pension fund members, and taking measures to mitigating or eliminating the effects of these risks. In the last three years, some of the activities included updating the IOPS tool for risk-based supervision and case studies of several IOPS members, as well as discussing the challenges of risk-based supervision by analyzing lessons learned and challenges related to the design, implementation, use and audit of systems that already apply risk-based supervision. Based on the experiences of 45 surveyed countries, the IOPS has identified trends that have evolved over the years of applying this approach and good practices for risk-based supervision. Risk assessment models continue to evolve in order to revise the risk focus and different approaches to risk assessment and how supervised entities deal with risks and challenges. Supervisory activities to support risk-based supervision have expanded although the collection of data and the application of supervisory judgment remain critically important.

Structure of the fully funded pension insurance in the Republic of North Macedonia

2

Description of the pension system 2.1

The role of fully funded pension insurance in the pension system 2.2

Institutions in fully funded pension insurance 2.3

2. Structure of the fully funded pension insurance in the Republic of North Macedonia

The Macedonian pension system is a combined system of public, currently funded pension insurance and private, fully funded pension insurance. Fully funded pension insurance is based on the principle of capitalization of contributions paid in the name and on behalf of the member. A characteristic of this insurance is that the funds in it are privately and competitively managed by pension companies. Important characteristics of fully funded pension insurance are the right to personal choice, the right to portability of assets, as well as the provision of a high degree of transparency.

In the Republic of North Macedonia, there are four pension companies, three of which manage one mandatory and one voluntary pension fund each, and one pension company manages one voluntary pension fund.

2.1 Description of the pension system

The Macedonian pension system is part of the social insurance of the Republic of North Macedonia and it has the following structure:

- Insurance based on generational solidarity (so-called first pillar),
- Mandatory fully funded pension insurance (so-called second pillar),
- Voluntary fully funded pension insurance (so-called third pillar).

This structure is a result of the thorough reform of the pension system, which was being prepared for many years, and its legal framework was established in 2000. There are four laws and a number of bylaws that regulate the pension system in the Republic of North Macedonia. These include: the Law on Pension and Disability Insurance, the Law on Mandatory Fully Funded Pension Insurance, the Law on Voluntary Fully Funded Pension Insurance, the Law on Payment of Pensions and Pension Benefits from Fully Funded Pension Insurance and a number of bylaws that further elaborate the relevant field.

The pension system in the Republic of North Macedonia has a history of long existence, large coverage of the workforce and provision of pensions for the insured persons. However, the socio-economic changes in the Republic of North Macedonia, in the early 1990s, had an impact on the pension system, which faced financial difficulties in its operation. They were caused by the unfavorable movements in the economy which affected the reduction of the number of active insured persons and the reduced collection of contributions, on the one hand, and the increase of the number of pensioners, on the other hand. Pension costs have been growing continuously.

Another factor that has a strong impact on the pension system is the demographic factor. Namely, the aging of the population, which is a world trend, means that people live longer due to better living conditions and better health services, and at the same time the number of newborns, i.e., the number of young people has been decreasing. As a result of this factor, the share of adults in the total population is increasing.

Such demographic movements in the pension system cause the emergence of an increased number of retirees and longer use of pension, while reducing the number of insureds. For a system with current financing, the ratio between the insureds and the pensioners is very important, because the pensions to the existing pensioners are paid with the contributions from the existing insureds. The actuarial projections, made during the preparation of the pension system reform, showed that these factors can be expected to have a major negative impact on the solvency of the PDIFNM, in the long run, i.e., without reforms, the system would function with an expressed deficit, which will increase quickly and significantly.

In order to meet these expected conditions, a thorough reform of the pension and disability insurance in our country was implemented, which introduced a three-pillar pension system, with a combined way of financing future pensions and diversification of demographic and economic risks, in order to ensure safe pension for current and future generations of retirees and long-term financial stability of the pension system.

The first pillar is financed on an ongoing basis (PAYG), which means that the contributions of existing insureds are used for paying the pensions of current retirees. This pillar functions according to the principle of the so-called defined pensions, i.e., pensions are provided through this pillar according to a predetermined formula for pension calculation. The first pillar is used for payment of part of the old-age pension, disability pension, family pension, as well as the lowest amount of pension.

The second pillar and the third pillar are fully funded pension insurance in which the paid contributions are capitalized in the name and on the account of the member. These two pillars operate on the principle of the so-called defined contributions, i.e., with them, the

level of contribution to be paid is determined in advance, while the pension is determined later, depending on the accumulated amount. The second pillar is used for payment of part of the old-age pension. The third pillar provides financial protection/compensation in case of old age, disability and in case of death of the insured.

The establishment of a multi-pillar pension system as a combined system of public pension insurance that is funded on an ongoing bases, and private, fully funded pension insurance in the Republic of Macedonia, is expected to ensure long-term stability of the system and security in exercising the rights of pension and disability insurance, by achieving long-term benefits for the individuals who participate in the pension system, for the pension system itself, as well as additional effects on the economy. Namely, from an individual point of view, greater security is provided in the provision of pension which will be financed from several sources, hence the risks are divided. At the same time, the reform achieves greater transparency and provision of information to the members of pension funds. The reform should lead towards the establishment of a solvent pension system as well as an increase in savings, encouraged investments by the population and stimulated economic growth.

2.2 The role of fully funded pension insurance in the pension system

Fully funded pension insurance is radically different from current funded pension insurance both in terms of the treatment and the record of paid contributions and in terms of the determination and payment of the pension. In this insurance, each member has an individual account on which the member's assets are recorded and a close connection and dependence are provided between the volume of paid contributions and the future pensions that will be realized by each person. This type of insurance is based on the principle of accumulation of funds from contributions to individual accounts, which are further invested and the realized return on investment, reduced for the operating costs of the system, is fully added to the accumulated funds on individual accounts. The future pension depends on the accumulated funds on the individual account and on the life expectancy at retirement, i.e., the expected period of using the pension. It is important to note that these pension savings are long-term savings, in the course of which there is a gradual however continuous increase in savings, due to which, at the beginning, while the insured is young, the savings are small, however in the future, when the insured person reaches retirement age, the savings become significantly greater.

A characteristic of this insurance is that the assets in it are privately and competitively managed, therefore the paid contributions are invested by specialized licensed pension companies that manage pension funds. This ensures that the economic goals determine the investment strategy, creating an opportunity to maximize the overall return in the interest of the members. The diversification of investment risks (including international diversification) is one of the most important characteristics of this system.

Furthermore, important characteristics of fully funded pension insurance are the right to personal choice and the initiative of the individual. Before January 1, 2003, all employees were given the opportunity to decide whether to join the second pillar of the pension system and to choose which mandatory pension fund they wish to join, while all newly employed persons after January 1, 2003, had the opportunity to choose a mandatory pension fund of their choice. Furthermore, with the amendments to the Law on Mandatory Fully Funded Pension Insurance from December 2018, the members of the mandatory pension funds who voluntarily joined the second pillar (employed for the first time before January 1, 2003) and who were born before January 1, 1967, were given the opportunity to choose to terminate or extend the duration of their membership in the second pension pillar. All newly employed persons after January 1, 2019, who on the date of joining the mandatory pension and disability insurance are younger than 40 years of age, have the opportunity to choose a mandatory pension fund of their choice. Then, the membership in the voluntary pension funds is a personal choice of the individual or it takes place through participation in an occupational pension scheme, financed by the employer, or by a citizens' association.

The portability of assets is also an important right in a fully funded pension insurance system. All members of a mandatory or voluntary pension fund have the right to transfer from one pension fund to another, whereby their saved funds are transferred. In case of participation in an occupational pension scheme, the person has the right, when transferring to another insurer, to transfer the saved funds either to another occupational pension scheme or to a voluntary individual account.

Fully funded pension insurance provides a high degree of transparency, which is one of its most important characteristics and useful innovations in the pension system. The companies have a legal obligation, at least once a year, to inform, in writing, the members and retired members of the pension fund, about the balance of the assets on their individual accounts, by submitting the so-called "green envelope", with a report on the pension savings. The green envelope also contains data on the investment of the pension fund, the collected fees and the realized return of the pension fund.

2.3 Institutions in fully funded pension insurance

The institutions that participate in the three-pillar pension system are:

- The Ministry of Labor and Social Policy – in charge of creating and conducting the policy of pension and disability insurance and of supervising the implementation of the legality of this insurance.
- The Agency for supervision of fully funded pension insurance - regulatory and supervisory institution in fully funded pension insurance. MAPAS charges a fee from the pension companies, which is calculated as a percentage of the contributions paid to the pension funds. For 2021, this percentage was 0.8%.
 - Pension company - a joint stock company, established by financial institutions with large capital and experience, whose sole activity is the management of pension fund assets. In the reformed pension system, there is a possibility to establish three types of companies:
 - o Mandatory Pension Company - manages only mandatory pension funds
 - o Voluntary Pension Company - manages only voluntary pension funds
 - o Joint Pension Company - manages mandatory and voluntary pension funds
 - Property custodian of the pension fund - safely keeps the assets of the pension fund on a special account, separate from the company's assets.
 - Public Revenue Office - performs centralized collection of contributions and submits the total contributions for pension and disability insurance to the PDIFNM.
 - The Pension and Disability Insurance Fund of North Macedonia distributes pension insurance contributions between the first and second pillar and transfers contributions and relevant data about the members to the selected mandatory second pillar pension funds. Each company that manages a mandatory pension fund is obliged to pay a monthly fee to the PDIFNM in the amount of 0.1% of each paid contribution in the previous month in the mandatory pension fund it manages.

A pension company is a joint stock company that is established and operates in accordance with the Company Law and the Law on Mandatory Fully Funded Pension Insurance, or the Law on Voluntary Fully Funded Pension Insurance. A pension company is established on the basis of a license from MAPAS and it manages a pension fund on the basis of a pension fund management approval. Mandatory pension fund management company is established and it manages only mandatory pension funds, voluntary pension fund management company is established and it manages only voluntary pension funds, and mandatory and voluntary pension fund management company is established and it manages mandatory and voluntary pension funds. Mandatory and voluntary pension fund management company should have a charter capital in the amount of at least 1.8 million euros in denar countervalue according to the average exchange rate of the National Bank of the Republic of North Macedonia, a mandatory pension fund management company should have charter capital of at least 1.5 million euros and a voluntary pension fund management company should have a charter capital of at least 0.5 million euros. In an event of increase of the assets of the mandatory and/or voluntary pension fund managed by the pension company, the company is obliged to increase the charter capital in accordance with the legal provisions. The only activity of the pension company is the management of pension funds, their representation before third parties and activities that directly arise from the performance of management of pension funds. The main responsibilities and activities of the pension company are: membership, asset management, risk management and control mechanisms for risk mitigation, administration and record keeping, compliance with laws and bylaws, regular reporting to members, the public and MAPAS, payment of programmed withdrawals of retired members, etc. The pension company operates in accordance with the rules for good corporate governance of the company and has a fiduciary duty to work only for the benefit of the members and the retired members of the pension fund it manages, which it should conduct by applying high standards of ethics and integrity and no conflict of interest. In order to perform these functions, the pension companies, in accordance with the law, charge three types of compensation. (More details on fees can be found in Chapters 5.7 and 6.7.)

A pension fund (mandatory or voluntary) is an open investment fund, which is established and operates in accordance with the Law on Investment Funds, unless otherwise regulated by the Law on Mandatory Fully Funded Pension Insurance or the Law on Voluntary Fully Funded Pension Insurance. The Mandatory Pension Fund consists of the contributions and assets of the members, the assets of the retired members and the returns from the invested contributions and assets, reduced for the fees collected from the mandatory pension fund. The voluntary pension fund consists of voluntary contributions, paid on behalf of and for the account of the members, the assets of the members, the assets of the retired members and returns on invested contributions and funds, reduced for the fees collected by the voluntary pension fund. The owners of the pension fund are its members and retired members, and their individual ownership rights are determined by the amount of funds on their accounts. The assets of the pension fund may not be subject to receivables, and an enforcement may not be conducted on those assets, by or on behalf of, the creditors of the pension company which manages that pension fund.

In 2005, MAPAS, through an international public tender, issued two licenses on the establishment of companies, whereby two pension fund management companies were established, and in 2009, MAPAS issued licenses for performing an activity - management of a voluntary pension fund and approvals for management of a voluntary pension fund to the two existing mandatory pension management companies. In 2017 and the first half of 2018, a process of sale of the Joint Stock Company for Management of Mandatory and Voluntary Pension Funds “NLB Nov Penziski Fond” Skopje was conducted, i.e., 100% of the shares issued by NLB Nov Penziski Fond JSC Skopje² were transferred to Pozavarovalnica Sava dd Ljubljana, Republic of Slovenia. In June 2018, MAPAS gave an approval to change the name of the company Joint Stock Company for Management of Mandatory and Voluntary Pension Funds “NLB Nov Penziski Fond” Skopje into a Company for Mandatory and Voluntary Pension Fund Management Sava Pension Company a.d. Skopje, it gave an approval to change the name of the Pension Fund Open Mandatory Pension Fund – “NLB Penziski Fond” Skopje into Open Mandatory Pension Fund Sava Pension Fund and gave an approval to change the name of the pension fund Open Voluntary Pension Fund – “NLB Penzija Plus” Skopje into Open Voluntary Pension Fund Sava Penzija plus. In 2019, a third pension company was established. Namely, at the end of March 2019, MAPAS issued a license for establishment of a company for management of mandatory and voluntary pension funds of Zavarovalnica Triglav DD Ljubljana, Republic of Slovenia, an approval for management of a mandatory pension fund and an approval for voluntary pension fund management. Then, in 2022, a fourth pension company was established. At the end of May 2022, MAPAS issued a permit for the establishment of a company for voluntary pension funds management to the Voluntary Pension Funds Management Company VFP FUND MANAGEMENT AD SKOPJE and an approval for voluntary pension fund management.

Until 31.12.2022, in the Republic of North Macedonia there are three pension companies that manage one mandatory and one voluntary pension fund each, and one pension company that manages only a voluntary pension fund as presented in Table 2.1.

Table 2.1. Pension companies and pension funds in RNM

Mandatory and Voluntary Pension Funds Management Company Sava Pension Company a.d. Skopje	KB First Company for Mandatory and Voluntary Pension Funds Management AD Skopje	Mandatory and Voluntary Pension Funds Management Company TRIGLAV PENSION COMPANY AD Skopje	Voluntary Pension Fund Management Company VFP PENSION COMPANY AD SKOPJE
which manages:	which manages:	which manages:	which manages:
<ul style="list-style-type: none"> • Open Mandatory Pension Fund Sava Pension Fund • Open Voluntary Pension Fund Sava Penzija Plus 	<ul style="list-style-type: none"> • KB First Open Mandatory Pension Fund - Skopje • KB First Open Voluntary Pension Fund - Skopje 	<ul style="list-style-type: none"> • Triglav Open Mandatory Pension Fund – Skopje • Triglav Open Voluntary Pension Fund - Skopje 	<ul style="list-style-type: none"> • VFP Open Voluntary Pension Fund - Skopje
Property custodian of the pension funds: NLB Banka AD Skopje	Property custodian of the pension funds: Sparkasse AD Skopje	Property custodian of the pension funds: Komerčijalna Banka AD Skopje	Property custodian of the pension funds: Sparkasse Banka AD Skopje
Shareholder: <ul style="list-style-type: none"> • Pozavarovalnica Sava d.d. Ljubljana, Republic of Slovenia - 100% participation in the capital of the company. 	Shareholders: <ul style="list-style-type: none"> • Skupina Prva Zavarovalniški Holding DD Ljubljana, Republic of Slovenia - 51% share in the capital of the company. • Komerčijalna Banka AD Skopje, Republic of North Macedonia - 49% share in the capital of the company. 	Shareholder: <ul style="list-style-type: none"> • Zavarovalnica Triglav DD Ljubljana, Republic of Slovenia - 100% share in the capital of the company. 	Shareholder: <ul style="list-style-type: none"> • Open and Closed Investment Funds Management Company VFP FUND MANAGEMENT AD SKOPJE, Republic of North Macedonia - 100% share in the capital of the company.
Startup capital 2.1 million euro	Startup capital 1.8 million euro	Startup capital 5.4 million euro.	Startup capital : 0.5 million euros.

As of December 31, 2021, in the Republic of North Macedonia, there are three pension companies that manage one mandatory and one voluntary pension fund, as shown in Table 2.1.

One of the pension companies had a combination of domestic (49% share) and foreign (51% share) shareholders, two pension companies have a single foreign shareholder (100% share) and one pension company has a single domestic shareholder (100% share). The shareholders of the three pension companies are indicated in Table 2.1.

²Shareholders of the Joint Stock Company for Mandatory and Voluntary Pension Funds Management “NLB Nov Penziski Fond” Skopje were Nova Ljubljanska Banka, DD, Ljubljana, Republic of Slovenia which participated with 51% in the capital of the company and NLB Banka AD Skopje, Republic of North Macedonia which participated with 49% in the capital of the company.

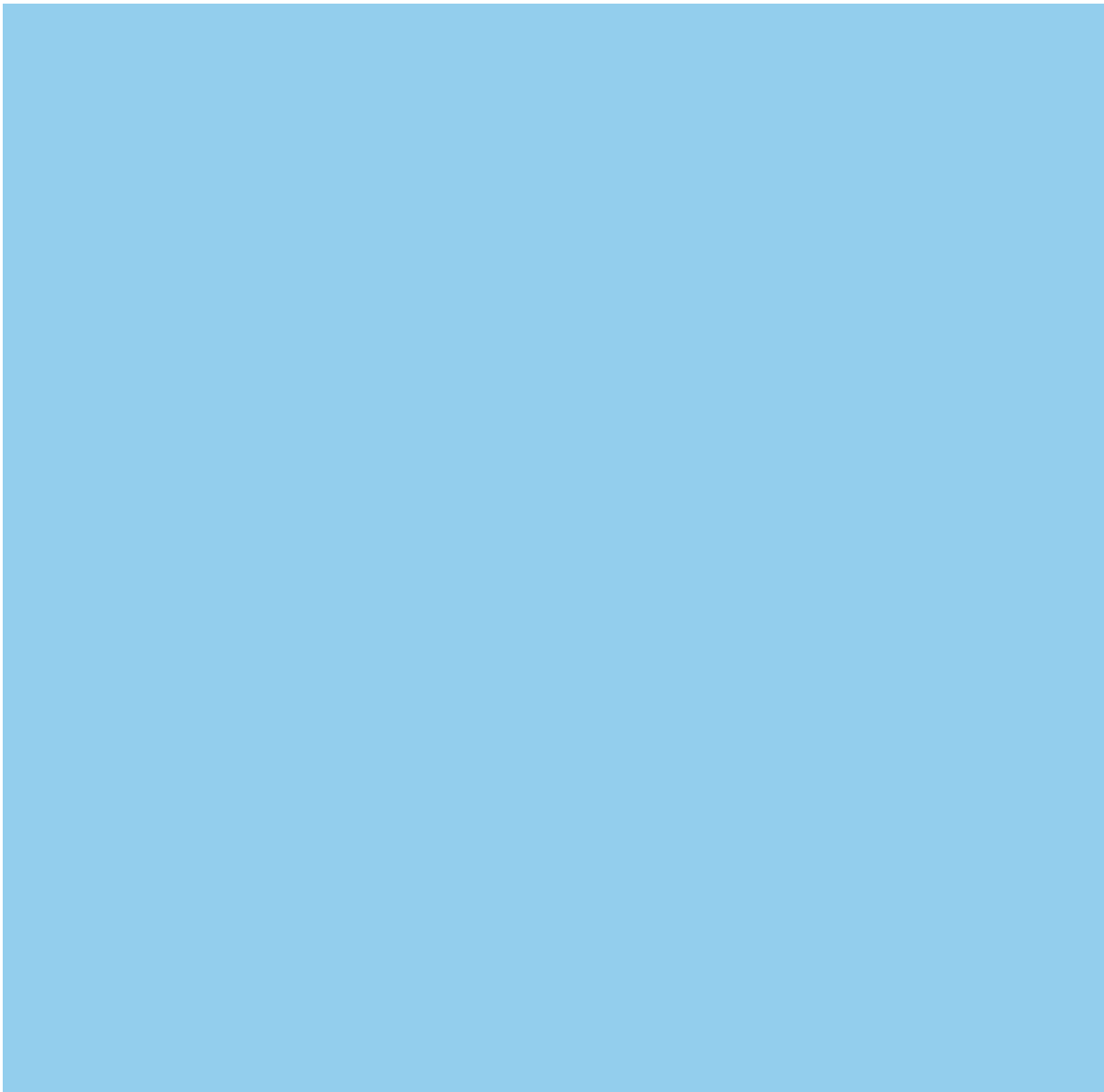
The assets of the pension fund are completely separated from the assets of the company that manages that fund and are kept with a property custodian bank. This segregation of assets is extremely important in order to achieve a high degree of asset security and additional control of transactions with the assets of the pension fund. The function - property custodian, for both mandatory and voluntary pension funds, is performed by commercial banks that meet the legal requirements and wherewith the company has concluded agreements on custody of the assets of the pension funds. The four pension companies have selected a custodian for each pension fund they manage, as shown in Table 2.1. For the property custody function of mandatory and voluntary pension funds, custodians charge a fee from the pension companies. The fees are calculated as a percentage of the assets of the pension funds, in accordance with the concluded agreements for custody of the assets of the pension funds. An overview of the fees charged by property custodians from pension companies in 2022 is presented in Table 2.2.

Table 2.2. Fees charged by property custodians from the pension companies for property custody of the pension funds

For mandatory pension funds	Amount (at an annual level)	For value of the assets (in million Euros)	Date of application
Sparkasse AD Skopje as a property custodian of KBPz		0,032%	3 October 2021
		0,030%	3 October 2022
NLB Banka AD Skopje as a property custodian of SAVAz	0,058%	up to 100	4 April 2019
	0,055%	over 100 to 200	
	0,050%	over 200 to 300	
	0,048%	over 300 to 400	
	0,040%	over 400 to 500	
	0,037%	over 500 to 600	
	0,035%	over 600 to 700	
	0,032%	over 700 to 800	
	0,029%	over 800 to 900	
	0,025%	over 900 to 1000	
Komercijalna Banka AD Skopje as property custodian of TRIGLAVz	0,050%	up to 50	1 April 2019
	0,041%	over 50 to 100	
	0,038%	over 100 to 200	
	0,035%	over 200 to 300	
	0,033%	over 300 to 400	
	0,028%	over 400 to 500	
	0,026%	over 500 to 600	
	0,025%	over 600 to 700	
	0,023%	over 700 to 800	
	0,020%	over 800 to 900	
0,018%	over 900 to 1000		
0,017%	over 1000		
For voluntary pension funds	Amount (at an annual level)	For value of the assets (in million Euros)	Date of application
Sparkasse AD Skopje as a property custodian of KBPd		0,06%	3 October 2018 until 3 October 2023
NLB Banka AD Skopje as a property custodian of SAVAd	0,180%	up to 50	4 April 2019
	0,144%	over 50	
Komercijalna Banka AD Skopje as property custodian of TRIGLAVd	0,050%	up to 50	1 April 2019
	0,041%	over 50 to 100	
	0,038%	over 100 to 200	
	0,035%	over 200 to 300	
	0,033%	over 300 to 400	
	0,028%	over 400 to 500	
	0,026%	over 500 to 600	
	0,025%	over 600 to 700	
	0,023%	over 700 to 800	
	0,020%	over 800 to 900	
0,018%	over 900 to 1000		
0,017%	over 1000		
Sparkasse Banka AD Skopje as a property custodian of VFPd	0,050%	up to 50	18 October 2022
	0,041%	over 50 to 100	
	0,038%	over 100 to 200	
	0,035%	over 200 to 300	
	0,033%	above 300 to 400	
	0,028%	above 400 to 500	
	0,026%	over 500 to 600	
	0,025%	above 600 to 700	
	0,023%	above 700 to 800	
	0,020%	above 800 to 900	
0,018%	above 900 to 1000		
0,017%	over 1000		

Amendments to the laws and bylaws, which regulate the fully funded pension insurance

3



3. Amendments to the laws and bylaws, which regulate the fully funded pension insurance

In order to promote and specify or simplify specific procedures in 2022, amendments were made to the regulations governing the areas of licensing, membership in the second pillar and third pillar, investment of the assets of pension funds, etc. At the same time, the possibility of payment of a voluntary contribution was regulated through a transaction related to the transaction account of the member, the payer, or the insurer, which increases the possibilities of payments of a voluntary contribution in the third pension pillar.

In 2022, the Council of Experts of MAPAS adopted four regulations, i.e. amendments to the regulations, which refer to mandatory and/or voluntary fully funded pension insurance, namely:

1. Rulebook amending the Rulebook on the manner of payment of contributions to a voluntary pension fund (“Official Gazette of the Republic of North Macedonia” No. 27/2022);
2. Rulebook on the rules and minimum standards for determining interest rates (“Official Gazette of the Republic of North Macedonia” No. 177/2022);
3. Rulebook on minimum standards for mortality tables (“Official Gazette of the Republic of North Macedonia” no. 177/2022);
4. Rulebook amending the Rulebook on the procedure for the selection of domestic legal entities for performing services with securities “Official Gazette of the Republic of North Macedonia” No. 269/2022).

The amendments to the regulations were made in order to clarify certain procedures. With the amendment of the Rulebook on the method of payment of contributions to a voluntary pension fund, it is possible to make a payment of a voluntary contribution through a transaction connected to the transaction account of the member, the payer or the insurer, which increases the possibilities for the payment of a voluntary contribution to the third pension pillar. The Rulebook on the rules and minimum standards for determining interest rates prescribes the rules and minimum standards for determining interest rates that the pension company uses in the calculation of the annuity factor for pensions from the second pillar and pension benefits from the third pillar through lifelong and temporary programmed withdrawals. The Rulebook on minimum standards for mortality tables regulates the rules and minimum standards for determining the mortality tables that the pension company uses when calculating the annuity factor for pensions from the second pillar and pension benefits from the third pillar through lifetime and temporary programmed withdrawals. With the amendment to the Rulebook on the procedure for the selection of domestic legal entities for the performance of services with securities, the criterion for the selection of the legal entity that performs services with securities, is that it should be in the first 10 domestic legal entities that perform services with securities according to the volume of trading, i.e., realized turnover of classical trading with securities for the last six months before the start of the selection procedure, according to the official statistics of the Macedonian Stock Exchange, and nomotechnical improvement of the text of the rulebook is being performed.

Data on financial operation of the pension companies

4

Revenues and expenditures of the pension companies for 2022	4.1
Financial result of the pension companies	4.2
Capital, charter capital and own assets of pension companies	4.3
Indicators	4.4

4. Data on financial operation of the pension companies

Sava Pension Company a.d. Skopje and KB First Pension Company AD Skopje also achieved positive financial results in 2022. Both pension companies ended 2022 with a net profit and achieved a total comprehensive profit, that is, Sava pension company a.d. Skopje had a profit in the amount of about 74 million denars and KB First had a profit in the amount of approximately 154 million denars. TRIGLAV PENSION COMPANY AD Skopje recorded a negative financial result in the fourth year of its operation. The pension funds managed by this company have a relatively small number of members and the assets are of a smaller scale, which affects the smaller amount of income on the one hand, and on the other hand, there are significant costs for managing the company and the funds. VFP also recorded a negative financial result in the first year of its operation. Such a result is usual and expected for the initial years of operation of a pension company.

4.1 Revenues and expenditures of the pension companies for 2022

Pension companies prepare financial statements about their financial operations, in accordance with the Company Law, the Rulebook on the Form and Content of the Financial Statements of the Pension Company and the Rulebook on Bookkeeping and Applicable International Accounting Standards. The data, on the basis of which the analyses in this chapter are made, are from the unaudited annual financial statements of the three pension companies, as of 31.12.2022.

In order to perform the sole activity – management of the assets of pension funds, the pension companies are financed through legally determined fees, i.e., they charge a fee from contributions, a fee from the assets of the pension funds and a transfer fee. Pension companies also have financial income as a result of investing free cash in deposits and securities, which are allowed in accordance with the Law on Voluntary Fully Funded Pension Insurance. The revenues of the four pension companies for 2022 are presented in Table 4.1.

Table 4.1. Revenues of the pension companies for 2022

(in denars)

Basis	SAVA		KB First		TRIGLAV		VFP	
Revenues from the management of the mandatory pension fund								
Fee from contributions	100.097.777	31,50%	107.968.820	30,37%	15.101.781	47,26%	-	-
Fee from assets	177.431.550	55,83%	200.700.917	56,45%	14.593.160	45,67%	-	-
Fee from transfer	1.850	0,00%	1.848	0,00%	31.498	0,10%	-	-
Total revenues from the management of the mpf	277.531.177	87,33%	308.671.585	86,81%	29.726.439	93,03%	-	-
Revenues from the management of the voluntary pension fund								
Fee from contributions	4.321.595	1,36%	5.540.213	1,56%	103.302	0,32%	113.833	50,63%
Fee from assets	12.966.502	4,08%	13.342.823	3,75%	45.643	0,14%	14.541	6,47%
Fee from transfer	0	0,00%	0	0,00%	0	0,00%	0	0,00%
Total revenues from the management of the vpf	17.288.097	5,44%	18.883.036	5,31%	148.945	0,47%	128.374	57,09%
Financial revenues	21.803.603	6,86%	27.531.324	7,74%	1.678.392	5,25%	96.477	42,91%
Other revenues of the company	1.173.083	0,37%	480.546	0,14%	399.881	1,25%	0	0,00%
Total revenues	317.795.960	100,00%	355.566.491	100,00%	31.953.657	100,00%	224.851	100,00%

Table 4.2. Expenditures of the pension funds for 2022*

(in denars)

Basis	SAVA		KB First		TRIGLAV		VFP	
Expenditures for management of the mandatory pension fund								
Expenditures for company agents	2.308.849	1,23%	1.520.947	0,83%	11.298.966	15,57%	-	-
Marketing expenditures	13.862.463	7,38%	12.635.923	6,86%	4.821.879	6,64%	-	-
Transaction expenditures	71.182	0,04%	0	0,00%	0	0,00%	-	-
Expenditures for MAPAS	39.979.587	21,29%	43.129.312	23,42%	6.036.192	8,32%	-	-
Expenditures for property custodian	15.067.409	8,02%	17.560.111	9,54%	1.686.306	2,32%	-	-
Expenditures for the PDIFNM	5.057.922	2,69%	5.396.056	2,93%	757.137	1,04%	-	-
Other expenditures from the fund management	1.168.877	0,62%	1.083.696	0,59%	1.278.806	1,76%	-	-

Total expenditures for management of the mpf	77.516.289	41,27%	81.326.045	44,17%	25.879.286	35,66%	-	-
Expenditures for managing a voluntary pension fund								
Expenditures for company agents	5.035.260	2,68%	1.912.042	1,04%	13.378	0,02%	163.421	3,57%
Marketing expenditures	802.249	0,43%	867.457	0,47%	19.210	0,03%	216.496	4,73%
Transaction expenditures	49.054	0,03%	0	0,00%		0,00%	0	0,00%
Expenditures for MAPAS	1.521.480	0,81%	1.619.169	0,88%	30.066	0,04%	32.722	0,72%
Expenditures for property custodian	2.600.375	1,38%	889.778	0,48%	2.572	0,00%	857	0,02%
Other expenditures from the fund management	71.455	0,04%	265.128	0,14%	45.094	0,06%	350.000	7,65%
Total expenditures for management of the voluntary pension fund	10.079.873	5,37%	5.553.574	3,02%	110.320	0,15%	763.496	16,70%
Expenditures for management of the pension company								
Salaries and compensations for the employees	58.036.615	30,90%	43.193.401	23,46%	22.605.283	31,15%	1.412.750	30,90%
Expenditures for services	14.930.235	7,95%	9.814.575	5,33%	12.925.580	17,81%	1.508.551	32,99%
Expenditures for raw materials and other materials	2.642.212	1,41%	1.896.302	1,03%	1.080.694	1,49%	61.640	1,35%
Depreciation	2.772.463	1,48%	4.610.340	2,50%	3.365.748	4,64%	188.643	4,13%
Financial expenditures	4.782.723	2,55%	25.304.413	13,74%	5.389	0,01%	8.328	0,18%
Other operating expenditures	16.709.535	8,90%	11.648.834	6,33%	5.830.364	8,03%	629.172	13,76%
Reservations for expenditures and risks	350.439	0,19%	792.739	0,43%	771.613	1,06%	0	0,00%
Total expenditures from management of the company	100.224.222	53,36%	97.260.604	52,82%	46.584.671	64,19%	3.809.084	83,30%
Total costs	187.820.384	100,00%	184.140.223	100,00%	72.574.277	100,00%	4.572.580	100,00%

*For the expenditures, the data that cannot be separated, per mandatory and voluntary pension fund, the pension company uses the number of members in the mandatory, i.e., voluntary pension fund as a separation weight.

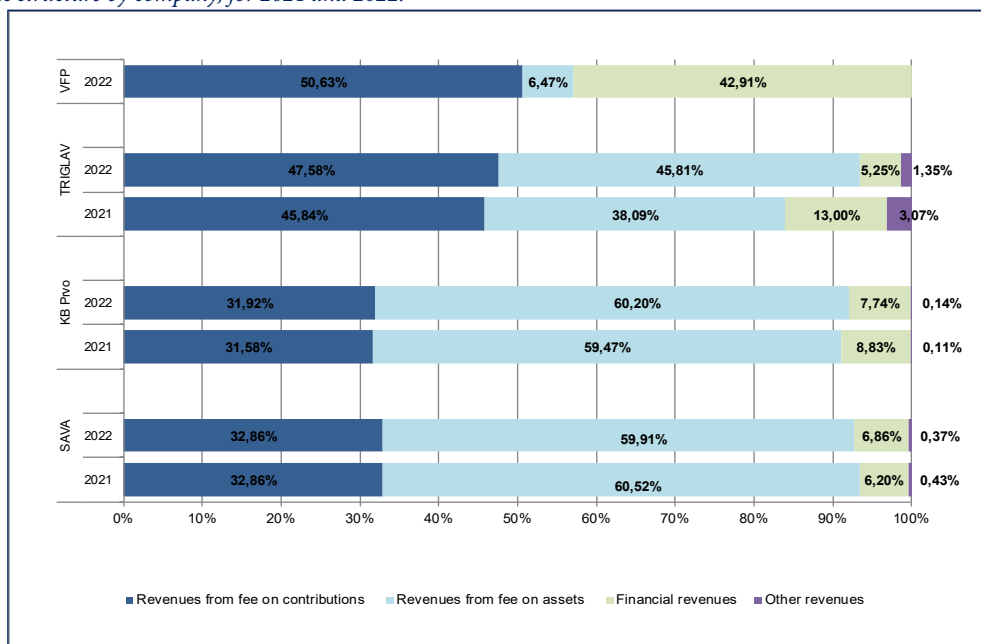
Within the revenue side, in both SAVA and KB First there is an increase in the total revenues in 2022 compared to 2021, by about 12% in SAVA and 10% in KB First. Thereby, most of the revenues of SAVA and KB First, in 2022, are obtained from fees from assets of the mandatory and voluntary pension funds (approximately 60% both in SAVA and KB First), followed by fees from contributions in mandatory and voluntary pension funds (about 33% in SAVA and 32% in KB First). Compared to the previous year, the percentage share of the income from fees from contributions, in the total revenues, for both pension companies is approximately at the same level. The percentage share of the revenues from fee from assets decreased by about one percentage point in SAVA and it increased by about one percentage point in KB First. Compared to 2021, the percentage share of financial revenues in SAVA increased by approximately one percentage point, while at KB First it decreased by about one percentage point. The percentage share of the other revenues of the companies is the lowest (less than 1%) in both pension companies.

Within the expenditure side in 2022, compared to 2021, in both SAVA and at KB First there is an increase in the total costs by approximately 12% in SAVA and approximately 26% in KB First. Thereby, in SAVA, most of the costs, i.e., approximately 53% of the costs are related to the operation of the company, the largest part of which includes costs for salaries and allowances for employees, followed by the remaining operating costs and costs for services. And at KB First in 2022, the costs related to the operation of the company amounted to about 53%. Again, most of these costs refer to the costs of salaries and benefits for employees, then to financial expenses, other operating costs and service costs. The remaining 47% of the costs of both SAVA and KB First refer to the pension fund management costs. At the same time, the costs for marketing and agents amount to approximately 12% of the total costs at SAVA and approximately 9% of the total costs at KB First, which compared to the previous year means that they have increased by one percentage point both in SAVA and in KB First. Approximately 34% of the costs of SAVA and 37% of the costs of KB First refer to fees for MAPAS, the PDIFNM and property custodians.

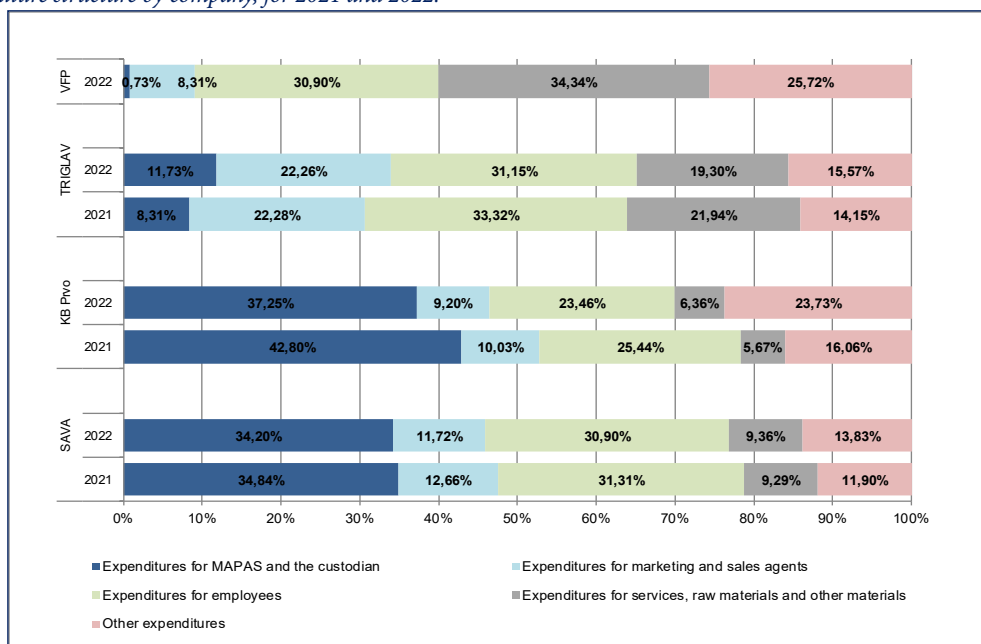
TRIGLAV started activities of pension fund management and marketing of the mandatory and voluntary pension fund and public opinion survey from 01.04.2019. Triglav Open Voluntary Pension Fund - Skopje started operating on 1 March 2021. There is a difference in the amounts and distributions on the basis of revenues and costs in regards to SAVA and KB First, which have been operating for seventeen years. In TRIGLAV, the revenues from the fee from contributions have the largest share on the revenue side, i.e., approximately 48% of the total revenues. The share of income from compensation from assets in 2022 has increased and amounts to 46%. Then, the financial revenues have a share of approximately 5% in TRIGLAV's total revenues, while the lowest is the percentage share of the other revenues (approximately 1%). In terms of expenditures, most of the costs, i.e., approximately 64% of the costs refer to the operation of the company, where the costs of salaries and allowances for employees have the largest share, followed by service costs and other operating costs. The costs for managing the pension funds are approximately 36%. The costs for marketing and agents are approximately 22% of the total costs. Approximately 12% of the costs refer to the fees for MAPAS, the PDIFNM and property custodians and approximately 2% are the remaining costs from the pension fund management.

VFP started activities of pension fund management, voluntary pension fund marketing and public opinion survey from 01.08.2023. VFP manages only a voluntary pension fund and the revenues and expenses of TRIGLAV refer only to the operation of a voluntary pension fund. VFP Open Voluntary Pension Fund - Skopje started operating on 18.10.2022 when the first voluntary contribution payment was made. The significant difference in amounts and distributions based on revenues and expenses compared to other pension companies that also manage a mandatory pension fund is evident. In VFP on the revenues side, the largest share is the revenues from the compensation from contributions, that is, about 51% of the total revenues. The revenues from compensation from assets has a significantly smaller share of about 6%. This is expected, because in the first years of the fund's operation, the funds in the voluntary pension fund are of a smaller volume. Financial revenues have a significant share (about 43%) in the total revenues of VFP. In terms of expenses, most of the expenses, that is, about 83% of the expenses, refer to the operation of the company, in which the largest amounts include expenses for services, followed by expenses for salaries and benefits for employees and other operating expenses. The costs of managing the voluntary pension fund amount to about 17%. At the same time, the costs of marketing and agents amount to about 8% of the total costs. About 1% of the costs refer to MAPAS and property custodian fees and about 8% are other costs arising from the management of the voluntary pension fund.

Graph 4.1. Revenue structure by company, for 2021 and 2022.



Graph 4.2. Expenditure structure by company, for 2021 and 2022.



4.2 Financial result of the pension companies

SAVA and KB First achieved a positive financial result in 2022 as well. Both pension companies ended 2022 with a net profit (profit after tax). KB First achieved a higher net profit than SAVA, which is mostly due to the fact that KB First achieved higher revenues, and at the same time has less expenses than SAVA, for 2022. In 2022, SAVA recorded a larger net profit compared to 2021, by 10%, while KB First recorded a lower net profit compared to 2021, by 3%. Also, the two pension companies made a total comprehensive profit, SAVA in the amount of about 74 million denars and KB First in the amount of about 154 million denars. The accumulated profit (until 31.12.2022) of SAVA is approximately 435 million denars and of KB First it is approximately 471 million denars. TRIGLAV recorded a negative financial result in the fourth year of its operation. The mandatory pension fund managed by TRIGLAV still has a relatively small number of members and the assets are of a smaller scale, which affects the lower amount of income on the one hand, and on the other hand there are significant costs due to the maintenance of the company's infrastructure and employees, costs for marketing, as well as ongoing expenses for managing the fund. Moreover, the voluntary pension fund managed by TRIGLAV has been operating for less than two years and has a relatively small number of members and a small amount of assets. VFP also recorded a negative financial result in the first year of its operation. Such a result is usual and expected for the initial years of the operation of a pension company. VFP manages only a voluntary pension fund that started working in October 2022 and it has a small number of members and the assets are of a smaller scale, which affects the smaller amount of income on the one hand, and on the other hand there are significant costs due to the establishment of the system, the infrastructure of the company and the employees, marketing costs, as well as current costs for managing the fund. More detailed data on the financial results of the pension companies are presented in Table 4.3.

Table 4.3. Financial result of the pension companies for 2022

(in denars)

Description*	SAVA	KB First	TRIGLAV	VFP
Profit / Loss (for 2022)	129.975.576	171.426.268	-40.620.620	-4.347.729
Profit / Loss after tax (for 2022)	120.773.281	154.258.460	-40.620.620	-4.347.729
Extraordinary expenses	0	0	0	0
Net profit (for 2022)	120.773.281	154.258.460	-40.620.620	-4.347.729
Other comprehensive profit**	-46.612.586	0	0	0
Total comprehensive profit ***	74.160.695	154.258.460	-40.620.620	-4.347.729
Accumulated profit / Transferred loss (until 31.12.2022)	434.753.665	471.324.188	-89.709.078	-4.347.729

*The data on other comprehensive profit and total comprehensive profit are from the audited financial statements of the pension companies for 2022.

**The data on other comprehensive profit includes unrealized profits or losses, which are not shown in the balance sheet.

***The data on total comprehensive profit include the net profit and the other comprehensive profit.

4.3 Capital, charter capital and own assets of pension companies

A very important factor for the system and the members is for the pension companies to be strong and stable institutions and to have an adequate charter capital. Three pension companies manage mandatory and voluntary pension funds and should have a charter capital of at least 1.8 million euros, in denar countervalue, according to the average exchange rate of the National Bank of the Republic of North Macedonia, while one pension company manages only a voluntary pension fund and it should have a charter capital of at least 0.5 million euros, in denar countervalue, according to the average exchange rate of the National Bank of the Republic of North Macedonia. In an event of an increase of the assets of the mandatory and/or voluntary pension fund, which is managed by the pension company, the company is obliged to increase the capital, in accordance with the legal provisions.

The charter capital of the pension company is paid only in monetary assets. In order to increase the financial strength of pension companies, it is not allowed for the charter capital to originate from loans and credits and it cannot be encumbered in any way. The charter capital of the company must originate from legal sources and it must be taxed in accordance with the regulations of the Republic of North Macedonia and the regulations of the country in which each foreign shareholder is established as a legal entity.

The company is obliged, at all times, to maintain the amount of the capital, however not less than one half of the amount of the charter capital. The company is obliged, at all times, to maintain its own assets, in an amount not less than half of the amount of the charter capital.

Table 4.4. Capital, charter capital and own funds of the pension companies

(in denars)

Description	SAVA	KB First	TRIGLAV	VFP
Capital and reserves	692.573.481	779.738.726	199.036.322	26.499.821
Charter capital	130.001.478	110.459.024	329.366.020 ***	30.847.550
Excess capital over a legally established minimum	14.91%	26.80%	79.81%	86.00%
Own funds*	649.732.875	701.798.879	186.528.802	22.191.089
Excess own funds over the legal minimum**	115.61%	128.25%	237.03%	43.88%

*The own funds are calculated in accordance with the Rulebook on the methodology for calculation of own funds of a pension company.

**In accordance with the legal obligation, SAVA, from February 2021, is obliged to maintain increased capital in relation to the charter capital, i.e., capital in the amount of 9.8 million euros in denar countervalue, due to the fact that the amount of the assets of the mandatory and voluntary pension fund, which it manages, exceeded the amount of 800 million euros.

KB First, from November 2021, is obliged to maintain an increased capital in relation to the charter capital, i.e., capital in the amount of 10 million euros in denar countervalue, due to the fact that the amount of the assets of the mandatory and voluntary pension fund, which it manages, exceeded the amount of 900 million euros.

***In October 2022, TRIGLAV increased the share capital for an amount of 2.356.000 euros by issuing ordinary shares with voting rights from the second issue by means of a private offer, wherewith the charter capital amounts to 5.356.000 euros. The increase of the charter capital of the company is for the purpose of maintaining the necessary amount of capital in accordance with the law.

4.4 Indicators

When analyzing the financial data of the pension companies, the movement of specific indicators per member and the efficiency coefficient are both important. Table 4.5 shows the most important indicators per member and the efficiency ratio of the three pension companies for 2022.

Compared to 2021, the average income per member increased by 10% at SAVA, 8% at KB First and 21% at TRIGLAV. Then, compared to 2021, the average expenses per member increased by 10% at SAVA and 24% at KB First, while at TRIGLAV they decreased by 12%. At the same time, at SAVA there is an increase in profit per member compared to 2021 in the amount of about 9%, while at KB First there is a decrease of about 5%. It is also noted that the efficiency coefficient for both companies shows a slight increase compared to 2021. In 2022, TRIGLAV records a decrease in loss per member of about 27% compared to 2021, but the efficiency ratio still shows a high representation of total costs in relation to total revenues. VFP records a loss per member in 2022, and the efficiency ratio also shows a large representation of total costs in relation to total revenues.

Graph 4.3 and Table 4.6 show the movement of the profitability indicators ROA – return on assets (net profit/total assets) and ROE – return on equity (net profit/capital), compared for SAVA and KB First, for the period from 2006 to 2022, for TRIGLAV for the period from 2019 to 2022 and for VFP for 2022. It can be noticed that, in 2022, compared to 2021, the rate of return on assets recorded an increase at SAVA and a decrease at KB First. Also, the capital return rate in 2022 compared to 2021 at SAVA shows a slight increase, while at KB First it shows a slight decrease. The ROA and ROE ratios for TRIGLAV and VFP are negative.

Table 4.5. Indicators

(in denars)

Description	SAVA	KB First	TRIGLAV	VFP
Revenue and expenditure indicators per member				
Average revenues per member	1.184,62	1.228,69	728,70	2.444,03
Average expenditures per member	700,12	636,31	1.655,06	49.701,96
Profit/loss per member	484,50	592,38	-926,35	-47.257,92
Efficiency indicators				
Efficiency coefficient (total expenditures / total revenues)	59,10%	51,79%	227,12%	2033,60%

Graph 4.3. ROA and ROE by company and by year

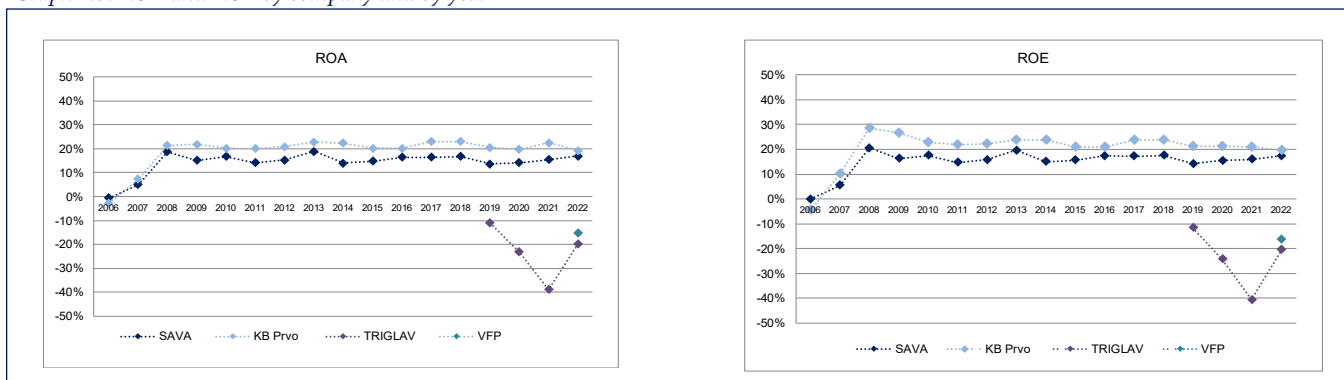


Table 4.6. Profitability indicators

Pension company	SAVA		KB First		TRIGLAV		VFP	
Year / Description	ROA	ROE	ROA	ROE	ROA	ROE	ROA	ROE
2006	-0,60%	0,00%	-2,69%	-4,45%				
2007	4,97%	5,57%	7,19%	10,19%				
2008	18,66%	20,55%	21,30%	28,53%				
2009	15,09%	16,26%	21,80%	26,54%				
2010	16,66%	17,60%	20,24%	23,00%				
2011	14,09%	14,75%	20,02%	22,03%				
2012	15,21%	15,84%	20,84%	22,31%				
2013	18,88%	19,68%	22,71%	23,80%				
2014	13,94%	15,09%	22,35%	23,71%				
2015	14,77%	15,65%	20,20%	21,00%				
2016	16,34%	17,34%	20,23%	21,09%				
2017	16,35%	17,23%	22,89%	23,78%				
2018	16,79%	17,49%	22,96%	23,71%				
2019	13,70%	14,26%	20,52%	21,24%	-10,99%	-11,55%		
2020	14,13%	15,43%	19,66%	21,29%	-23,13%	-24,18%		
2021	15,38%	15,96%	22,46%	20,82%	-38,77%	-40,54%		
2022	16,84%	17,44%	19,23%	19,78%	-19,81%	-20,41%	-15,07%	-16,41%

5 Information on mandatory pension funds

- 5.1 Membership in mandatory pension funds
- 5.2 Data on membership in mandatory pension funds
- 5.3 Transfer of a member from one mandatory pension fund to another
- 5.4 Contributions in mandatory pension funds
- 5.5 Investment and portfolio structure of the mandatory pension funds
- 5.6 Net assets, accounting unit and rate of return of the mandatory pension funds
- 5.7 Fees in mandatory pension funds
- 5.8 Payment of pensions from mandatory fully funded pension insurance

Information on mandatory pension funds

The total number of members and temporarily allocated insureds in the second pillar in 2022 increased by approximately 3.93% and by 2022 it amounted to 550.477 members. The movement in the trend of member transitions from one mandatory pension fund to another mandatory pension fund that was stimulated by the start of operation of the third mandatory pension fund in 2019, continued in 2022, whereby 1.48% of the total number of members transferred from one mandatory pension fund to another.

In 2022, contributions in the amount of approximately 11.15 billion denars were transferred to the mandatory pension funds. In addition to the contributions, the Pension and Disability Insurance Fund also transferred a total of approximately 2.76 million denars as compensation for the untimely transfer of contributions to members for whom it did not transfer the contributions to the accounts of the selected mandatory pension funds within three months from the day of receipt of the contributions.

In 2022, the total assets of the mandatory pension funds recorded a slow growth of 7.46% and reached 113.54 billion denars, which is approximately 14.29% of the GDP of the Republic of North Macedonia. Although the investment structure of pension funds in 2022 does not differ much compared to 2021, a slight increase in the portion of bonds is observed at the expense of the portion of deposits, shares, and investment funds. The investment portfolio of mandatory pension funds in 2022 consists of domestic investments that include government securities (63.07%), deposits (5.47%), stocks (2.20%), shares in investment funds (0, 11%) and corporate bonds (0.02%), as well as investments abroad which include investments in foreign government bonds (0.82%), shares of investment funds (24.13%) and stocks (3.57%) .

In 2022, the accounting units of the three mandatory pension funds recorded larger oscillations than usual, caused by the unfavorable situations on the financial markets in conditions of global crisis as a result of the military conflict between Ukraine and Russia. Hence, in 2022, the accounting units of the three mandatory pension funds recorded a deviation from the growth trend. Thereby, at the end of the year, the value of the accounting unit of SAVAZ recorded a decline of 2.34%, the one of KBPZ recorded a decline of approximately 2.43%, and the value of the accounting unit of TRIGLAVZ recorded a decline of 1.12%.

At the level of the second pillar, in the seven-year period from 2016 to 2022, an average yield reduced to an annual level of 4.52% in nominal amount, i.e. 0.50% in real amount, was achieved, calculated through the change of the weighted average of the accounting units of the mandatory pension funds.

In 2022, pensions and payments were provided for 581 members of the second pillar.

5.1 Membership in mandatory pension funds

An insured person can become a member in a mandatory pension fund in two ways:

1) by signing an agreement for membership in a mandatory pension fund and by registering in the Register of Members kept by MAPAS;

2) by random distribution in a mandatory pension fund, by the PDFINM, in case when the insured, who is obliged to become a member of a mandatory pension fund, has not signed a membership agreement in the period for selection of a mandatory pension fund and with registration in the Register of Members kept by MAPAS.

The amendments to the Law on Mandatory Fully Funded Pension Insurance (“Official Gazette of the Republic of Macedonia” no. 245/2018 dated 28.12.2018 and no. 180/2019 dated 02.09.2019) stipulate several essential changes regarding the accession to mandatory fully funded pension insurance which are valid as of 01.01.2019.

Namely, there are two categories of insureds who are members of the second pillar:

- Mandatory members

- o insureds who were employed, i.e., who have joined the mandatory pension and disability insurance, for the first time, after January 1, 2003 and were born after January 1, 1967;

- o insureds who were employed, i.e., joined the mandatory pension and disability insurance, for the first time after January 1, 2019 and who are younger than 40 years of age on the date of joining.

- Voluntary members

- o insureds who were employed for the first time, before January 1, 2003, who by their own choice by concluding a membership agreement joined the mandatory fully funded pension insurance, and were born after January 1, 1967;

- o insureds who were employed for the first time, before January 1, 2003, who by their own choice joined a mandatory fully funded pension insurance by concluding a membership agreement, and who were born before January 1, 1967 and signed a statement for extension of membership in a mandatory fully funded pension insurance.

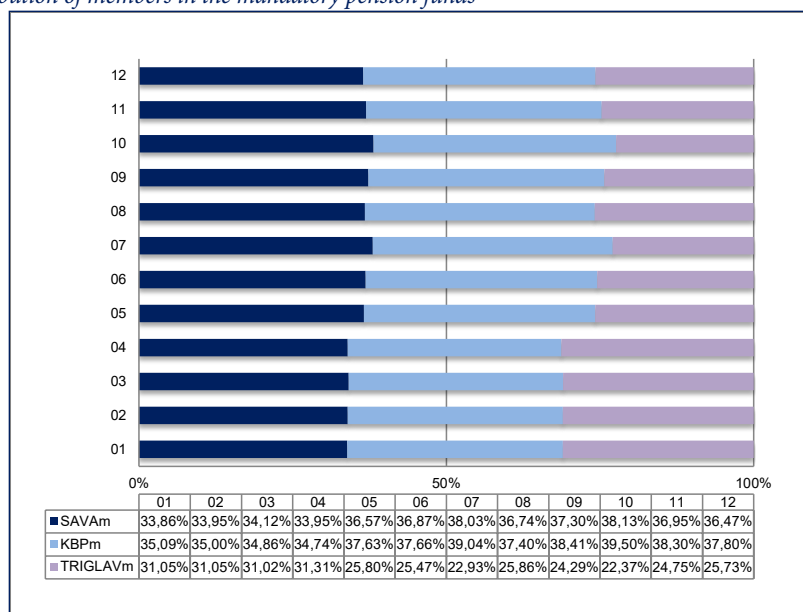
Insureds whose insurance length of service is considered with increased duration and insureds who belong to Chapter VII – “Acquisition and realization of the rights of specific categories of insureds under special conditions of the Law on Pension and Disability Insurance” (employees with beneficial length of service at the Ministry of Interior, penitentiary-correctional facilities, the Army of the Republic of Macedonia, etc.) are not included in the second pillar, if they have completed insurance length of service with increased duration which enables reduction of the age limit for exercising the right to old age pension for at least one year. When insureds who are members of a mandatory pension fund complete an insurance length of service with increased duration that allows lowering the age limit for exercising the right to old age pension for at least one year in accordance with Article 118 paragraph (3) of the Law on Pension and Disability Insurance, they have the right to choose to extend the membership in the second pillar with a written statement for extension of the membership in the mandatory pension fund within three months from the completion of the insurance length of service. If these members do not give a written statement, their membership in a mandatory pension fund ends after the expiry of this term.

5.2 Data on membership in mandatory pension funds

Insureds who are mandatory members of a fully funded pension insurance, are obliged to join a mandatory pension fund within three months from the date of first employment. The PDIFNM temporarily distributes these insureds in the mandatory pension funds, at random, from the moment of their employment, so that their funds can be invested immediately after the employment. If they do not sign a membership agreement with any company within the legal deadline, these insureds remain members of the mandatory pension fund in which they were previously temporarily distributed.

The weight, according to which the temporary distribution of the insureds in mandatory pension funds is performed at random, is determined by MAPAS for each mandatory pension fund, on the first working day of each month. The weight depends on the value of the contribution fee collected by the pension company and the return in nominal amount realized by the pension fund, whereby the return (70%) has greater impact compared to the contribution fee (30%)³. The weights used for the distribution of the insureds in the mandatory pension funds in 2022 are presented in Graph 5.1.

Graph 5.1. Weight for distribution of members in the mandatory pension funds



On April 1, 2019, the mandatory pension fund TRIGLAVz started operating, wherewith as of April 2019, the insureds are distributed in three mandatory pension funds. In order to support the operation in the initial years of operation of a new mandatory pension fund, and in accordance with the defined provisions in the regulation, if the mandatory pension fund operates for less than 12 months as a value for return (for weight calculation), the average return in nominal amount of the existing mandatory pension funds is considered. Then, if the fund has been operating for less than 36 months and longer than 12 months, the value of the return that is considered (for the calculation of the weight) is the higher value between the return in nominal amount of the mandatory pension fund and the average return in nominal amount of all existing mandatory pension funds including the contribution in nominal amount of the mandatory pension fund. This principle of distribution of the insureds is justified in order to encourage competition in the fully funded pension insurance, in order to increase the choice of pension funds for the members and to encourage better investment results of the pension funds. Having in mind the fact that, in 2022, the three pension companies collected compensation

³The formula for calculating the weight is prescribed in the Rulebook on membership in a mandatory pension fund.

from contributions in the same amount, the amounts of the weight were mostly influenced by the amounts of the realized returns of the mandatory pension funds. In 2022, the weight of TRIGLAVz is lower compared to SAVAZ and KBPz because the return of TRIGLAVz during this period was lower. Since May 2022, a greater reduction in the weight of TRIGLAVz has been observed because the period of support for the operation of a new mandatory pension fund has passed, and the return of TRIGLAVz is lower than the average of the returns in nominal amount of all three mandatory pension funds. Also, throughout 2022, the value of the weight of KBPz is slightly higher (on average by one percentage point) relative to the value of the weight of SAVAZ.

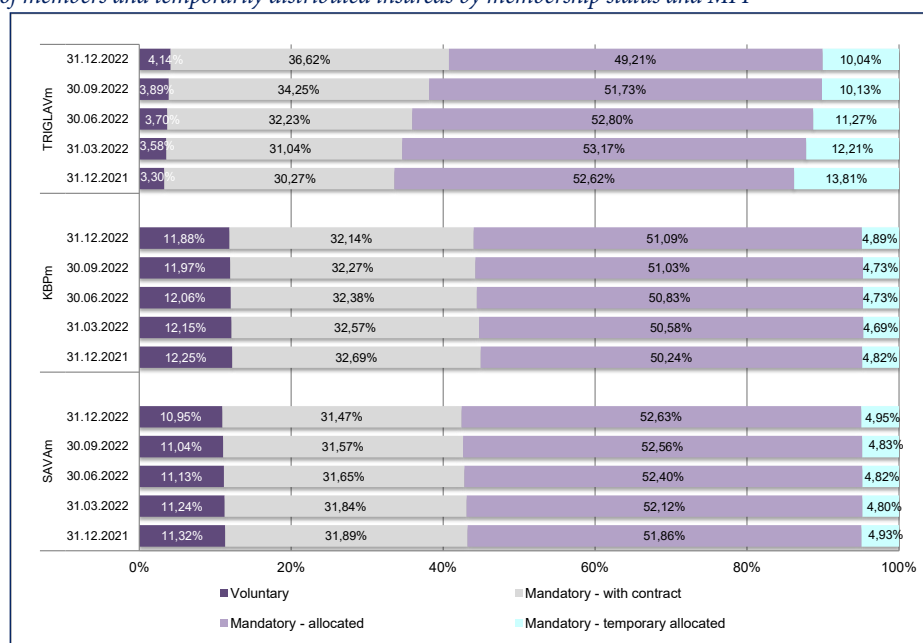
The total number of members and temporarily distributed insureds in the mandatory pension funds, until December 31, 2022, is 572.094, which means an increase in the number of members of the second pillar by 21.617, or about 3.93%, compared to 2021. The growth of the membership in 2022 compared to 2021 retains approximately the same level as the previous year.

In regard to the distribution of membership by mandatory pension funds, it is expected that in 2022 the largest number of insureds are members of SAVAZ and KBPz. Hence, of the total number of members and temporarily distributed insureds under the mandatory pension funds, until 31.12.2022, 48% are in KBPz, 4.5% are in SAVAZ and 8% are in TRIGLAVz. Compared to 2021, there is an observable lower percentage share of membership in both SAVAZ and KBPz (by about one percentage point), i.e., higher percentage share of membership in TRIGLAVZ (by about three percentage points).

Of the total number of members of the second pillar, 62.189 or 11% are voluntary members, while 509.905 or 89% are mandatory members. Out of the total number of mandatory members, 184.122 members signed a membership agreement, 295.410 did not sign an agreement and are permanently assigned and 30.373 insured persons are temporarily assigned. In 2022, there is an observable increase in the number of new insured persons who sign membership agreements. Namely, it can be noticed that in 2022 about 19% of the insured persons who are obliged to join a mandatory pension fund in 2022 and for which the deadline for selection of a mandatory pension fund has expired, signed a membership agreement, while the remaining ones, approximately 81%, did not sign a contract and remained in the fund where they were previously distributed.

In the structure of members and temporarily distributed insureds by membership status, in 2022, for SAVAZ and KBPz, no unexpected and significant changes occurred. The structure of members and temporarily distributed insureds by membership status, in 2022, is similar in both SAVAZ and KBPz. Thereby, it can be noticed that in each quarter, the percentage participation of voluntary members decreases, while the participation of mandatory members increases, which is expected, because every year the influx of mandatory members increases. In addition, it can also be noticed that the percentage share of mandatory members who have signed a membership agreement gradually decreases from quarter to quarter, as opposed to the share of mandatory members who are permanently distributed, which gradually increases from quarter to quarter. After working for more than three years, the structure of members and temporarily distributed insureds by membership status of TRIGLAVz is gradually approaching the structure of SAVAZ and KBPz. However, the participation of voluntary members at TRIGLAVz is lower compared to the participation of voluntary members at SAVAZ and KBPz, while the participation of temporarily distributed insureds at TRIGLAVz is higher compared to the participation of temporarily distributed insureds at SAVAZ and KBPz. Voluntary members in TRIGLAVz are insureds who have signed contracts for transition from SAVAZ or KBPz to TRIGLAVz. The structure of members and temporarily distributed insureds by mandatory pension funds and by membership status in 2022 is presented on a quarterly level, on Graph 5.2.

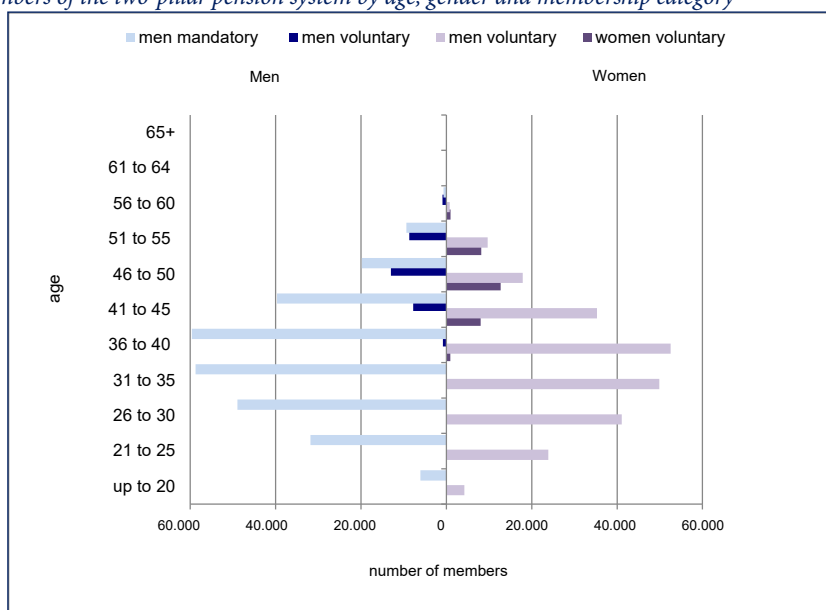
Graph 5.2. Structure of members and temporarily distributed insureds by membership status and MPF



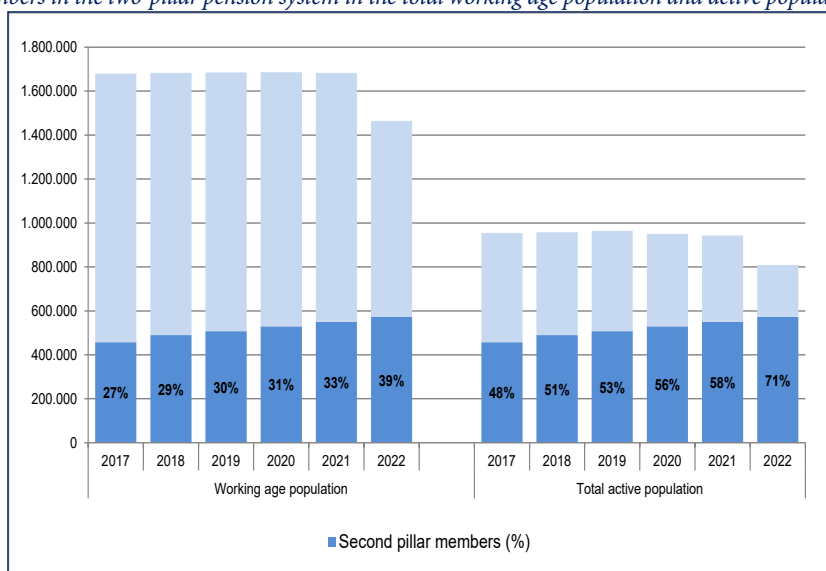
The analysis of the structure of members by age shows that most of the members are young people. Mandatory members are young people, whereby 74% of the mandatory members are up to 40 years of age, while voluntary members are slightly older and 70% of them are up to 50 years of age. The average age of the mandatory members is 35 for men and 36 for women, and for the voluntary members it is 48 years (for both men and women), and for all members, in total, it is 37 years. The structure of the members of the two-pillar pension system by age, gender and category of membership is shown in Graph 5.3.

According to SSO data⁴, at the end of 2022, the total number of working age population in the Republic of North Macedonia is 1.464.492, while the total active population⁵ is 808.078. As of the end of 2022, approximately 39% of the total working age population of the Republic of North Macedonia are members of the two-pillar system, i.e. approximately 71% of the total active population in the Republic of North Macedonia are members of the two-pillar pension system. The increase in the participation of members in the two-pillar pension system, in the total working age population and active population in the Republic of North Macedonia, in the period from 2017 to 2022, is presented in Graph 5.4.

Graph 5.3. Structure of members of the two-pillar pension system by age, gender and membership category



Graph 5.4. Structure of members in the two-pillar pension system in the total working age population and active population, by age groups and gender



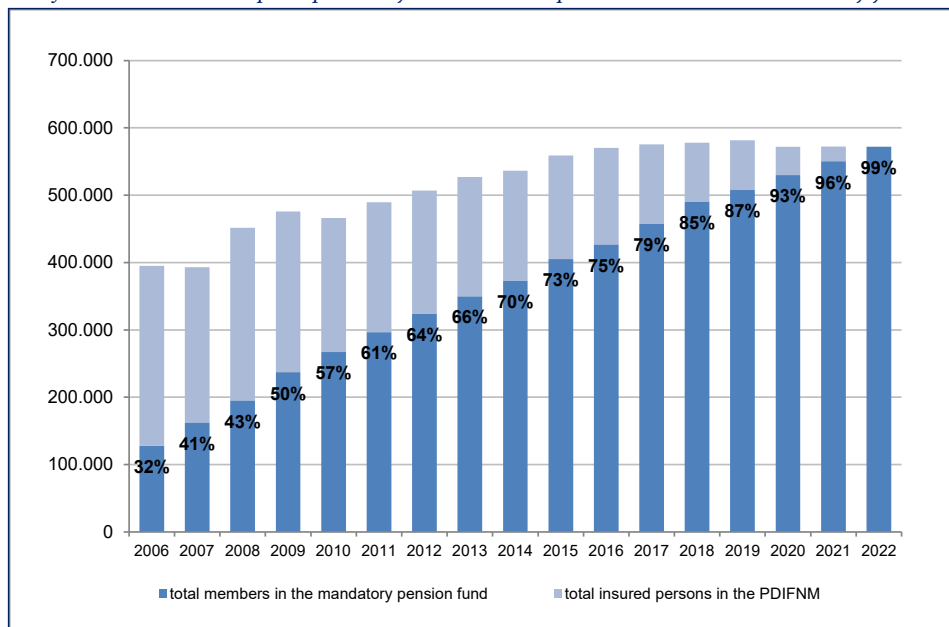
Source: MAPAS and SSO - Active Population in the Republic of North Macedonia, Results of the Labor Force Survey, 2022.

⁴Working population - consists of all persons from 15 to 79 years of age.

⁵Economically active population - consists of employed and unemployed persons.

According to the data of the PDIFNM regarding the number of insureds until 31.12.2022, approximately 99% of the total number of insureds in the PDIFNM are members⁶ of the two-pillar pension system. In Graph 5.5. one can see the increase of the participation of the members in the two-pillar pension system in the total number of insureds in the PDIFNM can be seen from the beginning of the operation of the second pillar.

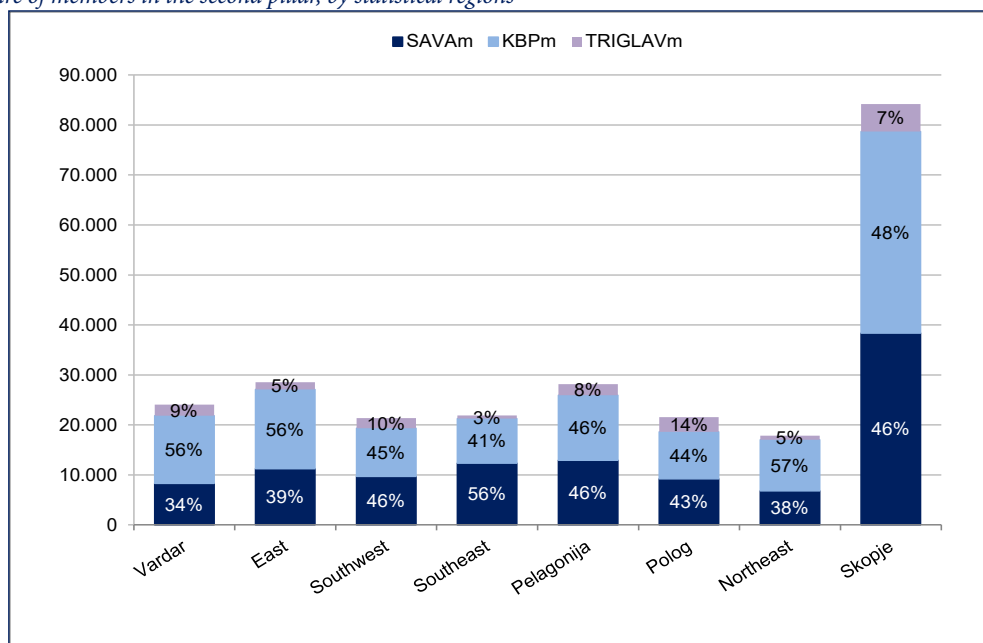
Graph 5.5. Participation of members in the two-pillar pension system in insured persons in the PDIFNM Fund, by years, 2006-2022



Source: MAPAS and PDIFNM

The structure of members in the mandatory pension funds, by statistical regions⁷ in the Republic of North Macedonia, is presented in graph 5.6. The Skopje region has the most members in all three mandatory pension funds. SAVAZ has the fewest members from the Northeast region, KBPz and TRIGLAVz have the fewest members from the Southeast region.

Graph 5.6. Structure of members in the second pillar, by statistical regions



⁶According to the law, the cessation of contribution payment does not affect the status of membership in a mandatory pension fund. About 72% of the total number of insureds in the Pension and Disability Insurance Fund of the Republic of North Macedonia are members of the two-pillar pension system who had at least one payment to a mandatory pension fund in 2022.

⁷The statistical regions are defined according to SSO - territorial units. The nomenclature of the territorial units is based on the territorial organization of the local self-government in the RNM and it is harmonized with the EU classification.

5.3 Transfer of a member from one mandatory pension fund to another

Every member of a mandatory pension fund has the right to transfer to another mandatory pension fund, if he is not satisfied with the mandatory pension fund where he is a member, i.e., from the company that manages it. If the person has been a member of the mandatory pension fund for less than 24 months, in case of transfer, he/she is obliged to pay a transfer fee. If the person has been a member of a fund for more than 24 months, then the transfer to another fund is free. During the transfer, the total funds from the member's account are also transferred.

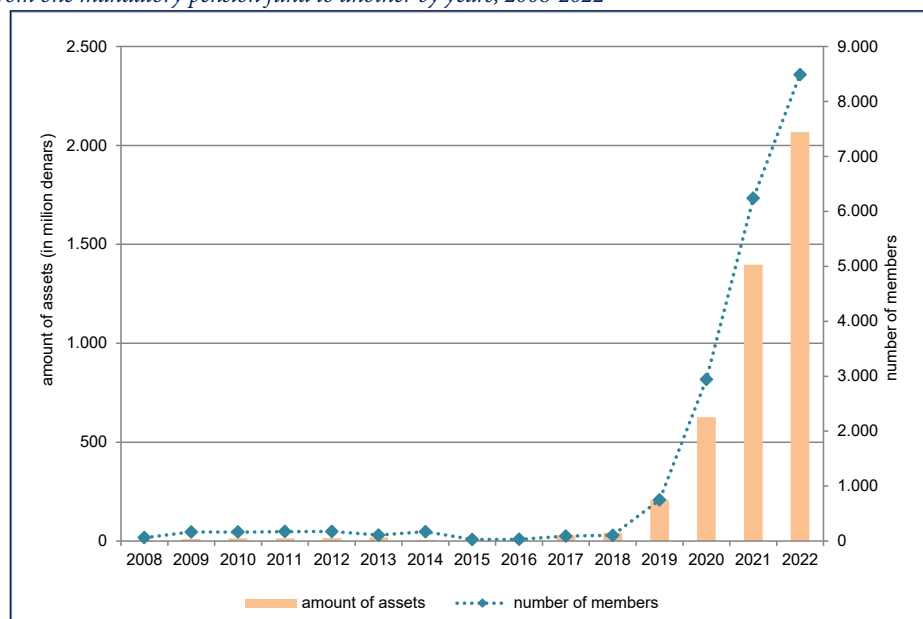
Table 5.1. contains data on the number of members who transferred from mandatory pension fund to another and on the amount of transferred funds from one mandatory pension fund to another, on that basis, in the course of 2022.

Table 5.1. Transfers of members from one mandatory pension fund to another

2022		MPF to which members have transferred, i.e., in which funds have been transferred			Total
		SAVAz	KBPz	TRIGLAVz	
Members who transferred from a MPF	SAVAz	-	245	3.686	3.931
	KBPz	272	-	3.976	4.248
	TRIGLAVz	74	237	-	311
	Total	346	482	7.662	8.490
Assets that have been transferred from a MPF (in denars)	SAVA	-	69.133.121	905.481.414	974.614.535
	KBPz	80.986.527	-	916.861.833	997.848.360
	TRIGLAVz	19.909.615	75.839.763	-	95.749.378
	Total	100.896.142	144.972.884	1.822.343.247	2.068.212.273

The movement in the trend of transfers of members from one mandatory pension fund to another, which was encouraged by the commencement of the operation of the third mandatory pension fund in 2019, continued in 2022. In 2022, the total number of members in the mandatory pension funds, who transferred from one mandatory pension fund to another, is 8,490, which is 1.48% of the total number of members. Although the percentage share of members who made a change in the mandatory pension fund in the total number of members is still small, in 2022, the number of members who made a change in the mandatory pension fund is significantly higher compared to 2021. At the same time, 346 members transferred to SAVAz, 482 transferred to KBPz and 7.662 members transferred to TRIGLAVz. During the transfer, approximately 101 million denars were transferred to SAVAz, approximately 146 million denars were transferred to KBPz and approximately 1.82 billion denars were transferred to TRIGLAVz. Graph 5.7. shows an overview of all transfers of members from one mandatory pension fund to another and the total transferred funds from one mandatory pension fund to another from 2008 to 2022.

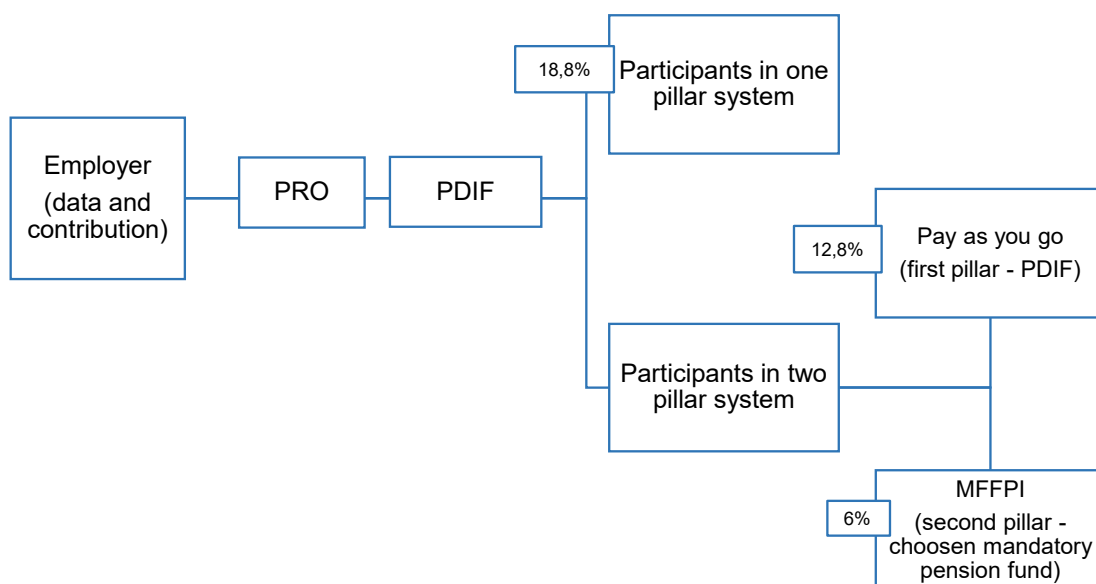
Graph 5.7. Transfers from one mandatory pension fund to another by years, 2008-2022



5.4 Contributions in mandatory pension funds

The payment of the contributions for pension and disability insurance is made by the debtor for payment of contribution, i.e., the employer, on behalf of the employee. The Public Revenue Office performs integrated collection of mandatory social insurance contributions (pension and disability insurance contribution, health insurance contribution and contribution for employment in case of unemployment) and personal income tax.

Graph 5.8. Schematic representation of the payment and distribution of contributions



For the insureds who participate in a one-pillar system, the total paid contribution remains in the PDIFNM (for 2022, it was 18.8% of the gross salary). For the insureds who are included in the two-pillar system, the PDIFNM distributes the paid contribution between the first and second pillar. The amount of the contribution, which is transferred to a mandatory pension fund, is 6% of the gross salary, and the contribution that remains in the PDIFNM is the amount that was received as the difference between the total contribution for pension and disability insurance and the contribution paid to the mandatory pension fund (for 2022, it was 12.8% of the gross salary ($12.8\% = 18.8\% - 6\%$)).

Immediately, and not later than five working days from the receipt of the contributions, the PDIFNM transfers the contributions of the members of the mandatory pension funds to the individual accounts in the selected mandatory pension funds, provided that appropriate data in accordance with the law were received within the same deadline, which enable the PDIFNM to perform that obligation. If the PDIFNM does not transfer the contributions of the members of the mandatory pension funds to the accounts of the selected mandatory pension funds immediately, and not later than five working days from the day of receiving the contributions due to lack of appropriate data, the PDIFNM is obliged within a period not longer than three months from the day of receipt of the contributions to provide appropriate data and to transfer the contributions of the members of the mandatory pension funds to the accounts of the selected mandatory pension funds with the property custodian. Then, the PDIFNM submits data to the companies and MAPAS related to the performed transfer of contributions.

In 2022, contributions in the amount of approximately 11.15 billion denars were transferred to the mandatory pension funds, which is approximately 1.40% of the GDP⁸ of the Republic of North Macedonia. The total paid contributions in the mandatory pension funds in 2022 increased by 15.19% compared to the total paid contributions in 2021. The detailed paid contributions by months (in millions of denars) are presented in Table 5.2.

Table 5.2. Paid contributions in the second pillar

(in million denars)

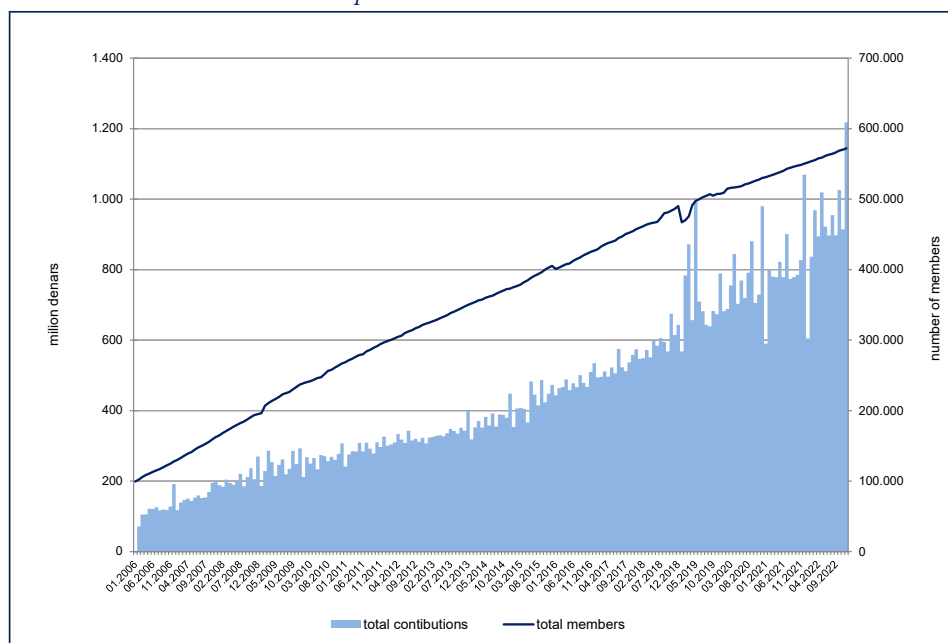
	Total 2021	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total 2022
SAVAz	4.449	273	380	440	404	460	415	401	428	399	457	406	539	5.002
KBPz	4.820	298	409	474	436	495	443	434	460	433	493	439	584	5.396
TRIGLAVz	413	34	48	56	55	64	64	62	67	65	76	70	95	754
Total	9.682	605	837	969	894	1.019	922	897	954	898	1.026	914	1.218	11.153

⁸Source for GDP: SSO - Announcement - gross domestic product, fourth quarter of 2022 - estimated data.

Graph 5.8. shows the total contributions (in millions of denars), paid in the second pillar, every month, from the commencement of the operation of mandatory fully funded pension insurance until 31.12.2022 and the total number of members, at the end of each month, in the same period.

It can be noticed that, in general, with the increase in the number of members, the paid contributions in the mandatory pension funds increase (although the trend of payments is not completely linear, however there are certain declines and bigger increases in specific months). The larger increases in the paid contributions in the months in the first half of 2019 are probably due to the paid contributions for the insureds who were untimely distributed in the second pillar. The reduction of the membership status in the first month of 2019 is due to the termination of the membership of certain categories of insureds on 01.01.2019 in accordance with the amendments to the law.

Graph 5.8. Paid contributions and members in the second pillar



5.4.1 Compensation for untimely transfer of contributions

The amendments to the Law on Mandatory Fully Funded Pension Insurance from 28.12.2018 provide for an obligation of the PDIFNM Fund to pay compensation for untimely transfer of contributions in case when the PDIFNM did not distribute the insureds who were mandatory members of the second pillar in accordance with the criteria before the adoption of the amendments to the law, in case if the PDIFNM does not distribute the insured persons who are mandatory members of the second pillar in accordance with the new criteria for membership within three months after their accession to the mandatory pension and disability insurance and in case if the PDIFNM does not transfers the contributions of the members of the mandatory pension funds to the accounts of the selected mandatory pension funds within three months from the day of receipt of the contributions. The funds for mandatory fully funded pension insurance, realized on the basis of untimely and incomplete payment of contribution, are transferred to the individual account of the member of the mandatory pension fund.

The amount of compensation for untimely transfer of contributions is determined⁹ on the basis of an assessment of the balance of a hypothetical individual account of a member of a mandatory pension fund who has an identical history of payment of contributions as the insured with untimely distribution, i.e., on the basis of an assessment of the balance of part of the funds on the individual account of the member of the mandatory pension fund, the amount of the total untimely transferred contributions and the contribution fees charged by the pension company.

In 2022, in the mandatory pension funds, the PDIFNM transferred a total of approximately 2.76 million denars as a fee for untimely transfer of contributions for members for which it did not transfer the contributions to the accounts of the selected mandatory pension funds within three months of the day of receipt of the contributions. Table 5.3. shows detailed data on the transferred fees for untimely transfer of contributions by funds.

⁹The formula for calculating the fee for untimely transfer of contributions is prescribed in the Rulebook for untimely transfer of contributions.

Table 5.3. Paid fees for untimely transferred contributions in the second pillar in 2021

Mandatory pension fund	Fee for untimely transfer of contributions
SAVAz	2.15
KBPz	0.50
TRIGLAVz	0.10
Total	2.76

5.4.2 Returned assets to the PDIFNM

In 2022, a part of the paid assets in the mandatory pension funds (about 451 million denars) was returned to the PDIFNM for several reasons:

- exercising the right to disability or family pension;
- excess of paid contributions in the second pillar due to technical errors or excess of payments by the employer
- termination of membership agreements or annulment of distribution;
- termination of membership of insureds who during the insurance have completed insurance length of service with increased duration which allows to lower the age limit for exercising the right to old age pension for at least one year.

In 2021, most of the returned assets to the PDIFNM (64%) refer to the termination of membership of the insureds who during the insurance have completed insurance length of service with increased duration which allows to lower the age limit for exercising the right to old age pension for at least one year and did not give a written statement for extension of the membership in the mandatory pension fund within three months of the completion of the insurance service.

The structure of the refunds in the PDIFNM, by mandatory pension funds, is presented in detail in Table 5.4.

Table 5.4. Structure of returned funds in the PDIFNM, by MPF

(in millions of denars)

Reasons	From the mandatory pension fund			Total
	SAVAz	KBPz	TRIGLAVz	
Earned pension	56.42	83.90	1.59	141.90
- disability pension	16.66	28,37	0.02	45.06
- family pension	39.76	55,53	1.56	96.85
Excess contribution payments	0.02	0.03	0.003	0.05
Termination of agreements and cancellation of distributions	6.73	11.51	0.06	18.30
Termination of membership	134.70	151.39	4.39	290.48
- members who during the insurance have completed the insurance length of service with increased duration that allows to lower the age limit for exercising the right to old age pension for at least one year	134.70	151.39	4.39	290.48
Total	197.86	246.83	6,040	450.73

5.5 Investment and portfolio structure of the mandatory pension funds

Usually, in fully funded pension systems, proactive control and quantitative and qualitative investment constraints are used in the initial phase. Having this as the point of departure, the law and bylaws define the investment goals and principles, the types of instruments in which the assets of the mandatory pension funds can be invested, the conditions that must be met by the regulated secondary capital markets, where the assets of the mandatory pension funds are traded, the quality of the instruments in which the assets of the mandatory pension funds can be invested, countries or groups of countries in which the assets of the mandatory pension funds can be invested, investment constraints within the instruments and issuers, prohibited investments, overcoming of investment constraints, etc.

The company is obliged to invest the assets of the mandatory pension fund in accordance with the laws and bylaws and its investment strategy, in order to achieve the highest return, only for the benefit of the members and retired members of the mandatory pension fund and through diversification and financial analysis to minimize the risk of losses that incurred as a result of non-payment by the issuer or the other contracting party arising from the impact of the domestic and foreign financial markets, losses in the real value of the assets of the mandatory pension fund due to inflation and losses resulting from sales of the assets of the mandatory pension fund due to provision of liquidity to the mandatory pension fund. Thereby, a member of the management board and the supervisory board in the company, during the management and control of the investment of assets of the mandatory pension fund, is obliged to apply a degree of care, efficiency and skills, which would be applied by a reasonable person when investing his own assets. Each member of the board of directors and the supervisory board in the company should fulfill his obligation in accordance with his fiduciary duties and should ensure their application by every employee and person with a work engagement in the company.

The law and bylaws stipulate that the assets of the mandatory pension funds can be invested in bank deposits and certificates for deposit, bonds and other debt securities, in shares and commercial bills issued by issuers with headquarters in the Republic of North Macedonia and abroad, in EU or OECD member states. Considering that it is necessary to achieve appropriate diversification between different types of investments, maximum constraints are stipulated for investing in a specific company and maximum constraints on the amounts that can be invested in certain types of instruments. In order to prevent investments in instruments that are not suitable for investing in mandatory pension funds, it is legally prohibited to invest in shares, bonds and other securities that are not listed on the official market or that are not publicly traded, instruments that cannot be legally available, instruments that cannot be immediately assessed, multiple forms of property that cannot be immediately assessed and items of uncertain value, such as antiques, works of art, etc.

Considering that the assets of the mandatory pension funds are constantly growing, their increase is accompanied by the opportunity to expand to a larger number of capital markets and on a larger scale, since the domestic market is becoming smaller in terms of the needs to invest the assets of the mandatory pension funds, as well as in order to enable greater diversification of the assets during their investment and greater choice of companies for investing the assets of the mandatory pension funds by the companies. The maximum investment constraints are presented in Table 5.5.

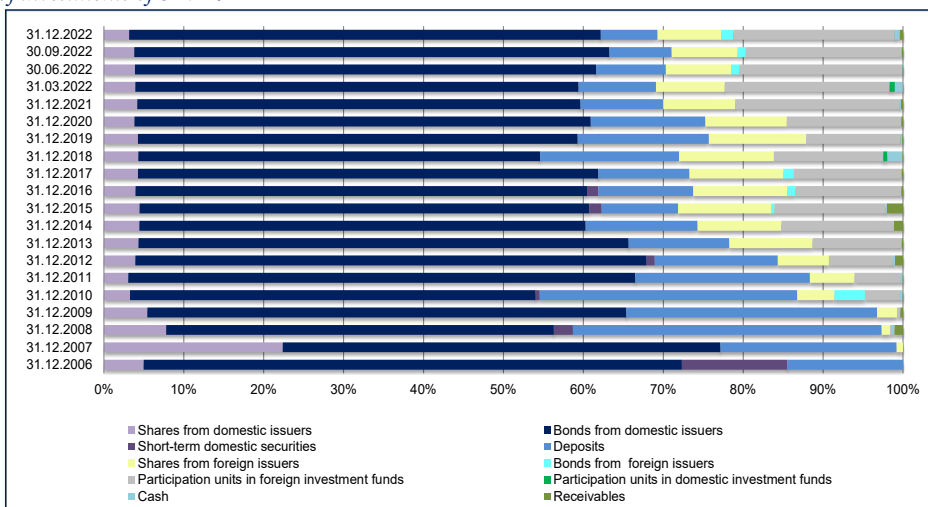
Table 5.5. Maximum investment limits

Type of instrument	Maksimum limit
Investment abroad (EU and OECD)	50%
<ul style="list-style-type: none"> • bonds and other securities issued by foreign governments and central banks 	50%
<ul style="list-style-type: none"> • securities issued by non-state foreign companies, banks or investment funds 	30%
Securities issued or guaranteed by RNM on the domestic market or NBRNM	80%
Bank deposits, deposit certificates, mortgage backed securities, and other securities issued by domestic banks	60%
<ul style="list-style-type: none"> • bank deposits 	30%
Bonds issued by local self-government and domestic joint stock companies, which are not banks and, commercial notes from domestic joint stock companies, which are not banks	40%
<ul style="list-style-type: none"> • bonds issued by local self-government 	10%
Shares issued by domestic joint stock companies	30%
Participation units and shares of open-end, close-end and private investment funds in RNM	5%
<ul style="list-style-type: none"> • participation shares in private investment funds 	1,5%

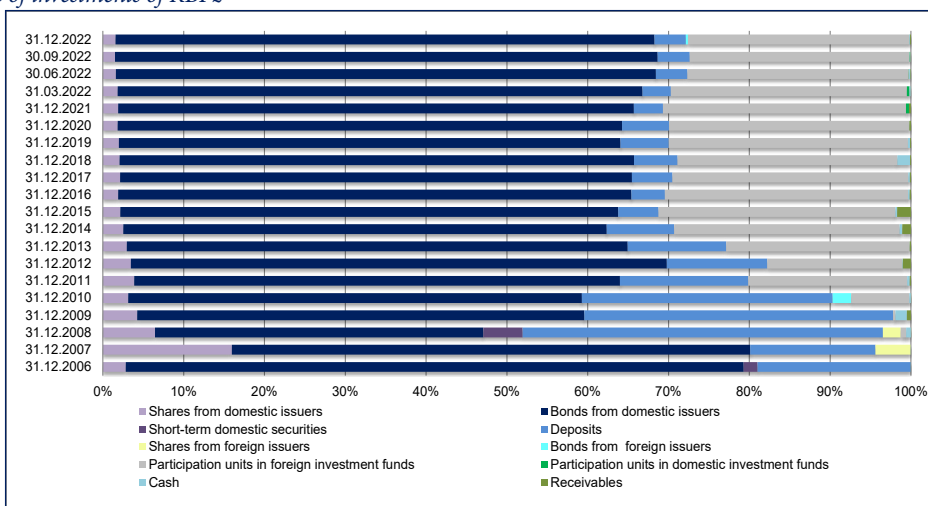
MAPAS may prescribe constraints on investments in certain types of instruments other than the constraints set out in the law, which will be valid for a period that is also prescribed by MAPAS, however not longer than five years. In 2019, decisions were made on additional constraints according to which a maximum percentage of 100% was determined for the value of the assets of a mandatory and voluntary pension fund that can be invested in deposits with banks licensed by the National Bank of the Republic of Macedonia, if they carry interest, i.e., in bonds and other securities issued or guaranteed by the Republic of North Macedonia on the domestic market, in a period of one year from the date of the first payment in a mandatory and voluntary pension fund.

The structure of investments of the mandatory pension funds SAVAz and KBPz, from the initial functioning of the system (for the period 2006 - 2021, annually, and for 2022, quarterly) is presented in Graph 5.9. and in Graph 5.10. The structure of the investments of the mandatory pension fund TRIGLAVz from the initial operation of the fund (April 1, 2019) and on a quarterly basis for 2022, is shown in Graph 5.11.

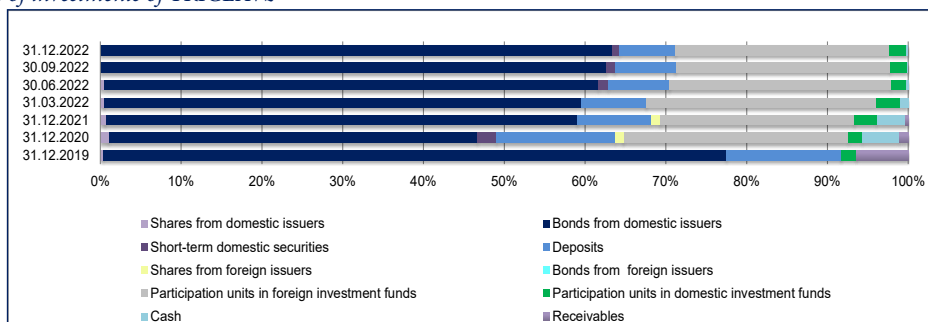
Graph 5.9. Structure of investments of SAVAz



Graph 5.10. Structure of investments of KBPz

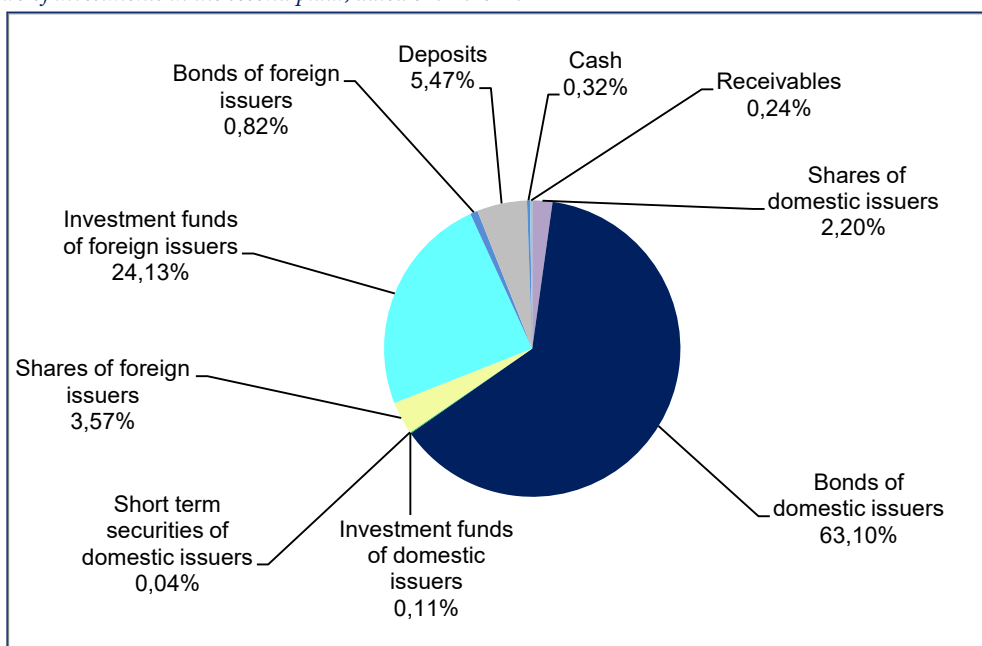


Graph 5.11. Structure of investments of TRIGLAVz



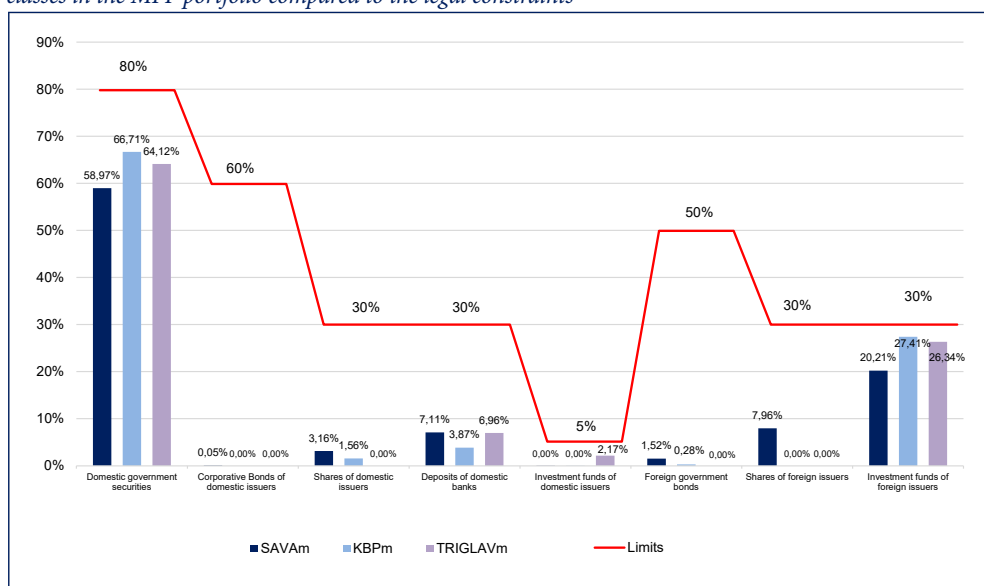
The structure of the investments of the mandatory pension funds, with a status on 31.12.2022, does not differ much compared to the structure of the investments of the mandatory pension funds, with a status on 31.12.2021, and it is presented in Graph 5.12. The share of domestic bonds, which include domestic government bonds (63.07%) and a corporate bond (perpetual bond issued by a bank - 0.02%) is 63.10%, which means it is minimally increased compared to the situation on 31.12.2021 (59.87%). A very small part of the investments of the mandatory pension funds belongs to short-term securities by domestic issuers that include a 12-month treasury bill (0.04%). The share of bank deposits is reduced and it is 5.47%. Domestic shares make a small part of the portfolio (2.20%) and this participation remains almost at the same level compared to the situation on 31.12.2021. A very small part of the investments of the mandatory pension funds belong to investments in stocks of domestic investment funds (0.11%). In 2022, the share of investments abroad increased, compared to the previous year, and amounted to 28.52%. In 2022 two pension funds also invested in foreign securities, hence the investments in securities include investments in foreign government bonds (0.82%), stocks of investment funds (24.13%) and investments in shares (3.57%). The other assets are monetary assets 0.32% and receivables 0.24%.

Graph 5.12. Structure of investments in the second pillar, dated 31.12.2022.



In 2022, the three mandatory pension funds invested within the maximum investment constraints. Graph 5.13. shows the percentage share in the portfolio by asset classes in SAVAz, KBPz and TRIGLAVz and the legal restrictions, with a status on 31.12.2022.

Graph 5.13. Asset classes in the MPF portfolio compared to the legal constraints



Same as in the previous year, in 2022, a small percentage of the assets of the mandatory pension funds (2.20%) were invested in shares of domestic issuers. In 2022, in both SAVAz and KBPz, the exposure in shares, compared to 2021, is almost at the same level. At the same time, the exposure of shares in domestic issuers is higher in SAVAz (3.16%), compared to KBPz (1.56%). Until 31.12.2022, TRIGLAVz has no investments in shares of domestic issuers.

In comparison, the movement¹⁰ of the value of the Macedonian Stock Market Index - MBI10, the Bond Index of the Macedonian Stock Exchange - OMB and the values of the accounting units of the mandatory pension funds, in 2022, are presented in Graph 5.14. The value of the accounting unit of SAVAz decreased by 2.34%, the accounting unit of KBPz decreased by 2.43%, and the accounting unit of TRIGLAVz decreased by 1.12%. In 2022, MBI10 decreased by approximately 30.79% . In 2022, the OMB decreased by approximately 6.74%¹¹.

Graph 5.14. Comparative movement of the value of MBI10, OMB and the value of the accounting unit of MPF, 2022

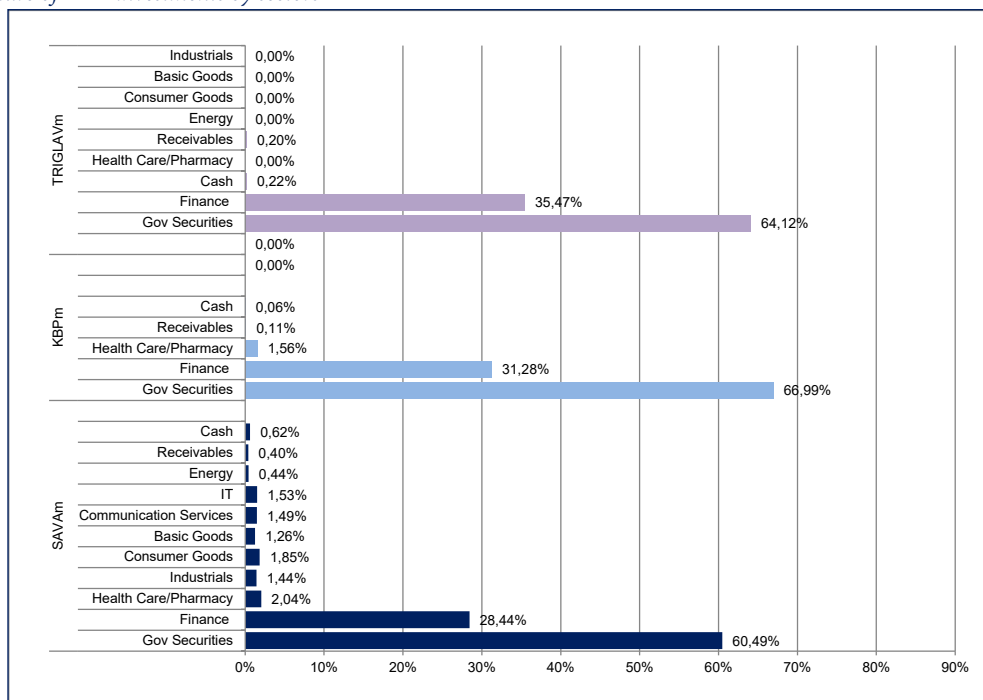


Source: MAPAS and Macedonian Stock Exchange JSC Skopje - Annual Statistical Bulletin 2022.

More than half of the assets of the mandatory pension funds in 2022 include government securities, specifically domestic government securities (58.97% in SAVAz, 66.71% in KBPz and 64.12% in TRIGLAVz) and foreign government securities (1.52% in SAVAz and 0.28% in KBPz). Then, analyzed by sectors, about one third of the assets of the three pension funds are investments in instruments by issuers/joint stock companies from the financial sector, that is, 28.44% in SAVAz, 31.28% at KBPz and 35.47% in TRIGLAVz from the total assets of the fund. Within this sector, SAVAz has the largest portion of stocks in foreign and domestic investment funds (71.07%) and domestic bank deposits (24.99%) and the portion of financial services is lower (3.22%), of shares in domestic banks (0.53%) and bonds issued by domestic banks (0.18%). The dominant portion in KBPz includes foreign and domestic investment funds within the financial sector (87.63%), followed by domestic bank deposits (12.37%). At TRIGLAVz, the portion of foreign and domestic investment funds (80.38%) prevails within the financial sector, followed by domestic bank deposits (19.62%). In addition to the abovementioned sectors, mandatory pension funds also invest in other sectors: pharmacy, consumer goods, industry, basic goods, information technology, communication services and energy, however with a much smaller share (from 0.05% to 2.85%). The structure of investments of the mandatory pension funds by sectors is presented in Graph 5.15.

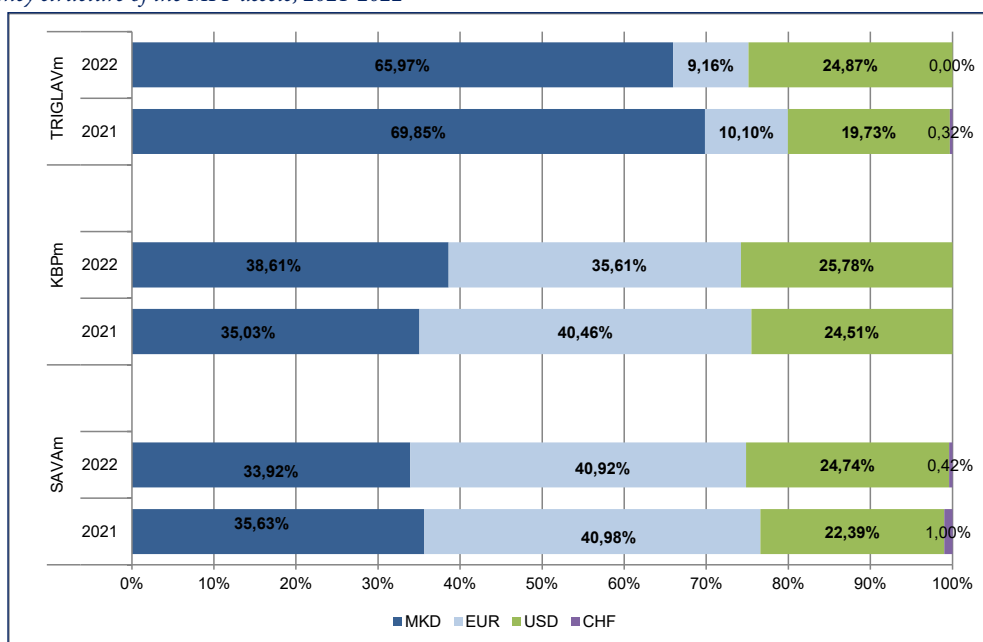
¹⁰The movements are presented through the change of the indices/units in relation to the initial index equal to 100, on 31.12.2021.

Graph 5.15. Structure of MPF investments by sectors



According to the currency structure of the assets of the mandatory pension funds, which is shown in Graph 5.16, it can be noticed that in 2022 in SAVAz (40.92%) most of the assets were invested in euros, while in KBPz (38.61%), most of the assets were invested in domestic currency. In SAVAz, the portion of instruments in euros in 2022 remains almost at the same level compared to 2021, while in KBPz, a decrease in the portion of instruments in euros can be observed (35.61%), compared to the previous year. The portion in domestic currency instruments in SAVAz recorded a slight decrease and amounted to 33.92%, while in KBPz it recorded an increase compared to the previous year. Then, both SAVAz (24.74%) and KBPz (25.78%) can see an increase in the portion in instruments, in US dollars, compared to 2021. A very small part of SAVAz assets are invested in Swiss francs (0.42%). The currency structure of TRIGLAVz differs in relation to the currency structure of SAVAz and KBPz in terms of portion in instruments in euros and denars. The weight of the assets of TRIGLAVz is still on the side of the assets invested in instruments in denars (65.97%), and 24.87% of the assets are invested in instruments in US dollars, while the remaining 9.16% are invested in instruments in euros.

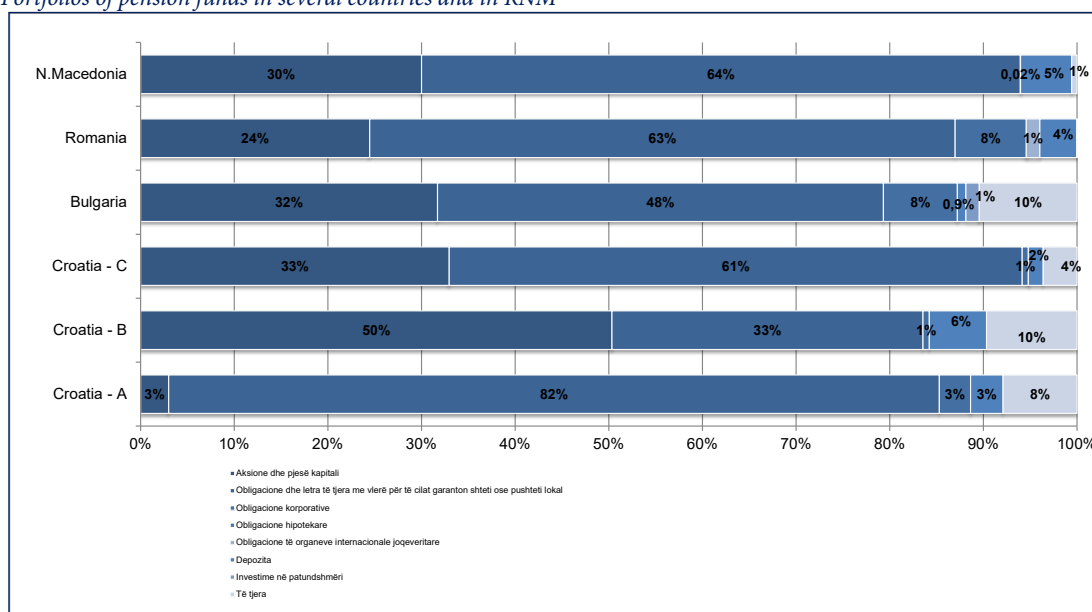
Graph 5.16. Currency structure of the MPF assets, 2021-2022



If one compares the countries in the region that have similar pension systems with the Macedonian one, similarities can be noticed, however also significant differences in the investment portfolios of the mandatory pension funds. Graph 5.17. shows portfolios of pension funds (corresponding to the mandatory pension funds in North Macedonia) in several countries and in the Republic of North Macedonia, on 31.12.2022 .

If the portfolios of the mandatory pension funds are reviewed by types of instruments, it can be noticed that, except in Bulgaria, in all countries, 50% of the assets of the pension funds are invested in bonds and other securities guaranteed by the country or the local government (64% in North Macedonia, 63% in Romania, 61% in Croatia B¹¹ and 48% in Bulgaria). The remaining part of the assets are invested in different ways. Most of the investments in stocks and shares are in Croatia (33%), followed by Bulgaria (32%), North Macedonia (30%) and Romania (24%). Pension funds in Macedonia have the most investments in deposits (5%), followed by Romania (4%), Croatia B (2%) and Bulgaria (1%). Pension funds also invested in corporate bonds, 8% in Bulgaria and Romania, and 1% in Croatia B. Compared to pension funds in other countries, the portion of investments in corporate bonds in North Macedonia is significantly lower, 0.02%. Only pension funds in Bulgaria (1%) have investments in real estate (in the other countries, this instrument is usually not allowed). Regarding the exposure of the portfolios of the mandatory pension funds in instruments issued by foreign issuers¹², it can be noticed that the pension funds in North Macedonia have the largest exposure abroad (29%), followed by Croatia B (24%) and Romania (10%).

Graph 5.17. Portfolios of pension funds in several countries and in RNM



Sources: www.hanfa.hr ; www.fsc.bg; www.asfromania.ro and own calculations.

¹¹In Croatia there are multi-funds, i.e., three categories of pension funds: A (with the highest risk), B (existing portfolios at the time of introduction of the multi-funds) and C (with the lowest risk).

¹²The data on foreign investments for Bulgaria dated 31.12.2022 were not available at the time of the analysis.

5.6 Net assets, accounting unit and rate of return of the mandatory pension funds

The contributions paid into mandatory pension funds, reduced by the contribution fee, are invested immediately. The total realized return is attributed to the assets in the mandatory pension fund, i.e., to the individual accounts of the members. Once a month, the companies also charge a fee for asset management, which is calculated on a daily basis, as a percentage of the net assets of the mandatory pension fund. In addition, in each transaction, the transaction fees of the very mandatory pension fund are charged with the assets of the mandatory pension fund. The value of the assets of the mandatory pension fund is assessed every day. It is determined on the basis of the market value of each individual asset or on the basis of the depreciated value of the asset, if the instrument is held to maturity, or in the available-for-sale portfolio, or if its market value cannot be estimated.

The changes in the assets of the mandatory pension funds from the beginning to the end of the year occur due to:

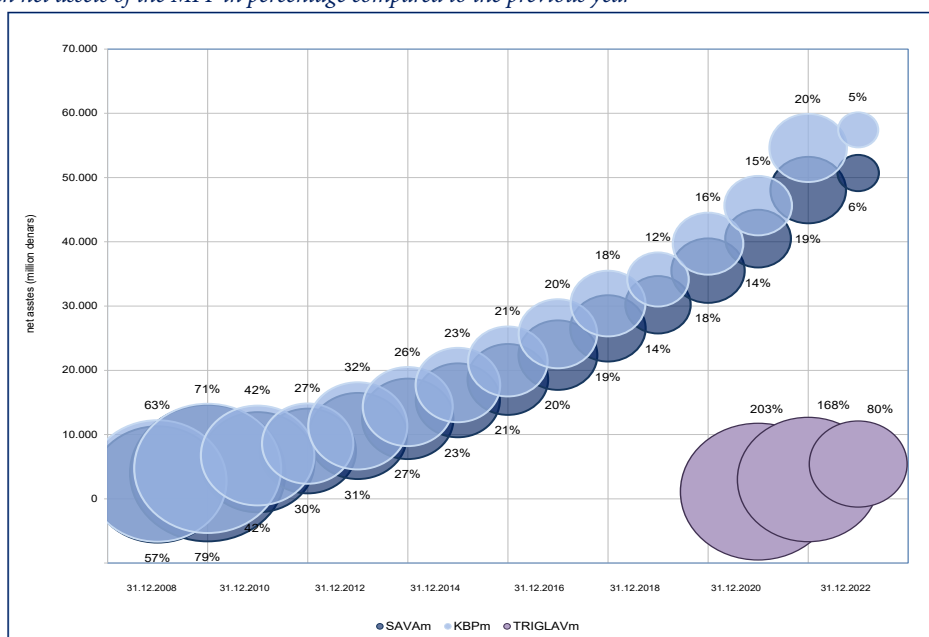
- inflow of contributions,
- inflow of fees for untimely transfer of contributions in case of untimely transfer of contributions,
- outflow due to fees and transaction fees,
- inflow due to transfer from the other mandatory pension fund (for persons who were previously temporarily distributed to another fund, and then signed an agreement with the current fund and for persons who were members of another fund, and then transferred to the current fund),
- outflow due to transfer to the other mandatory pension fund (for persons who were temporarily distributed to the respective fund, but then signed an agreement with the other fund and persons who were members of the respective fund, and then transferred to the other fund),
- outflow for persons who terminated the membership agreements, outflow due to overpayment, outflow due to exercising the right to disability or family pension and outflow for persons whose membership in the mandatory pension fund has ended and who have completed the insurance length of service with increased duration during the insurance which allows to lower the age limit for exercising the right to old age pension for at least one year.
- outflow due to payment of inheritance,
- outflow due to one-time payments to persons who did not exercise the right to an old-age pension,
- outflow due to payment of old age pension - programmed withdrawals,
- outflow due to payment of family pension – programmed withdrawals,
- (un)realized gains or losses from investments.

Starting from the value of the net assets at the end of the previous year, and taking into account all the above changes, the value of the net assets at the end of the year is obtained, which is shown in Table 5.6.

Table 5.6. Changes in the assets of the MPF (in millions of denars)

	SAVAz	KBPz	TRIGLAVz
Net assets on 31.12.2021	48.059,63	54.605,42	2.996,68
Contributions	5.002,49	5.396,05	754,47
Contribution fees	100,10	107,97	15,10
Contributions reduced for contribution fees	4.902,40	5.288,09	739,37
Compensation for untimely transfer of contributions	2,15	0,50	0,10
Fees from assets	177,43	200,70	14,59
Expenditures for intermediary fees	2,82	0,58	0,36
Transfer from the other fund	101,61	146,09	1.822,82
Transfer to the other fund	975,60	998,49	96,43
Transfer from the fund on the basis of termination of an agreement, return of contribution, retirement and termination of membership	197,86	246,83	6,04
Inheritance payment	12,19	12,11	0,05
Payment of old age pension - programmed withdrawals	0,70	1,34	0,00
Lump sum payment	0,00	0,28	0,00
Payment of family pension - programmed withdrawals	0,13	0,00	0,00
Gross return on investment	-983,60	-1.160,92	-33,74
Net return on investment	-1.163,84	-1.362,21	-48,69
Net assets on 31.12.2022	50.715,46	57.418,84	5.407,76

Graph 5.18. Increase in net assets of the MPF in percentage compared to the previous year

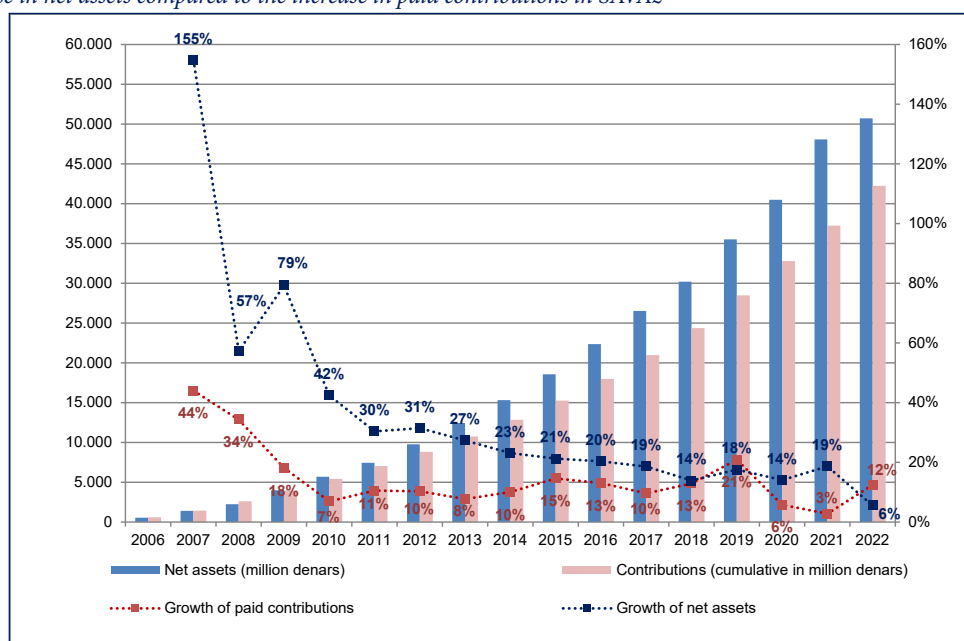


The total net assets of the mandatory pension funds, with a status on 31.12.2022, amounted to approximately 113.54 billion denars or approximately 1.85 billion euros, which is about 14.29% of the GDP of the Republic of North Macedonia.

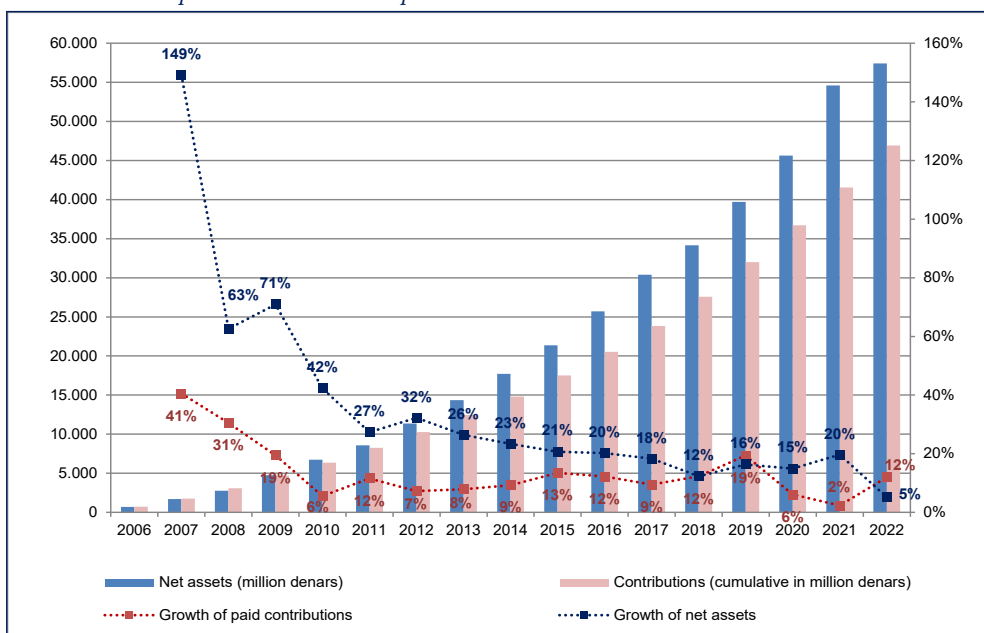
Graph 5.18. shows the values of the net assets of the mandatory pension funds, at the end of each year (2008-2022), and their increase in percentage, compared to the net assets in the previous year. Thereby, one can notice that the net assets of both SAVAz and KBPz are growing at a similar pace. The largest increase in both SAVAz and KBPz was observed in 2009 compared to 2008. In TRIGLAVz there is an observable large increase in net assets in the initial years of operation of the fund.

The movement of the value of the net assets and the cumulative contributions as well as the increase of the paid contributions and the increase of the net assets of SAVAz and KBPz, from the beginning of the operation of the system (i.e., from the date of the first payment, on 01.01.2006) until 31.12.2022, are presented in Graph 5.19. and in Graph 5.20. The growth of the net assets of the mandatory pension funds is implied by the growth of the paid contributions and the investment results. For 2022, more than half of the growth of net assets is due to paid contributions. Compared to the first years of operation of the funds, the share of paid contributions in the total growth of the net assets has been decreasing gradually. It can also be noticed that, during the first years, the share of the cumulative contributions in the total net assets is significantly large, then gradually decreases, and in the last five years, it averages 80%.

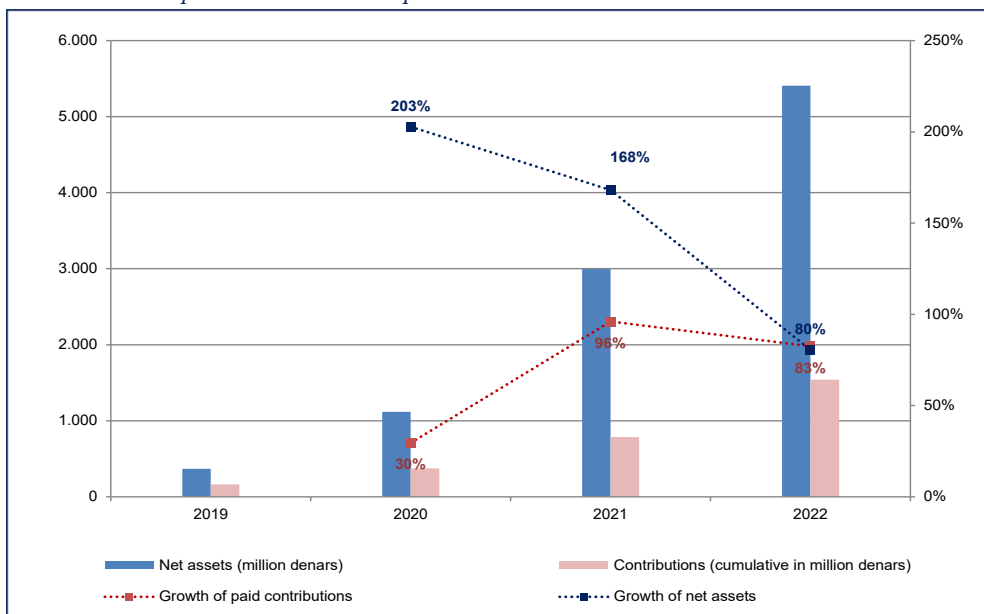
Graph 5.19. Increase in net assets compared to the increase in paid contributions in SAVAz



Graph 5.20. Increase in net assets compared to the increase in paid contributions at KBPz



Graph 5.21. Increase in net assets compared to the increase in paid contributions in TRIGLAVz



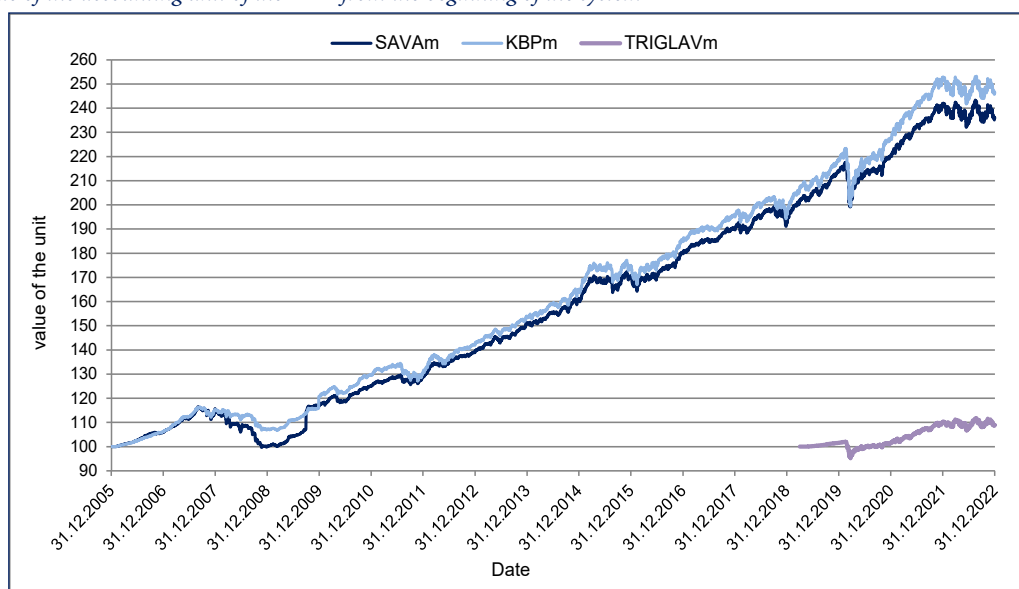
At SAVAz and KBPz, the net assets and cumulative contributions have been growing continuously since the initial functioning of the system. The largest increase in net assets (approximately 150%) as well as in paid contributions (approximately 40%) of SAVAz and KBPz was observed in 2007. This is probably due to the largest percentage increase in membership, i.e., the contributions compared to the previous year, as well as the rather high growth of the unit. This is followed by a decline in the growth of both net assets and paid contributions. Over the years there has been a gradual stabilization, hence the growth of net assets in the last five years, on average, is about 14%, while the growth of contributions paid in the same period, on average, is about 11%. In 2022, an increase in the growth of paid contributions is observed (12% for both SAVAz and KBPz) and reduced growth of net assets (6% at SAVAz and 5% at KBPz).

The movement of the value of the net assets and the cumulative contributions as well as the increase of the paid contributions and the increase of the net assets of TRIGLAVz, for the first four years of operation of TRIGLAVz (2019 – 2022), are presented in Graph 5.21. TRIGLAVz also shows an increase in net assets and cumulative contributions in 2022 compared to 2020. The growth of the net assets of TRIGLAVz, despite being implied by the growth of the paid contributions, is largely due to the transferred funds to TRIGLAVz from SAVAz and KBPz based on the concluded agreements on transfer of the members who switched from SAVAz and KBPz to TRIGLAVz.

Accounting units are used for recording the assets of the mandatory pension funds. One accounting unit is a proportional part of the total net assets of the mandatory pension fund. The value of the accounting unit is equal to the value of the net assets divided by the total number of accounting units of all individual accounts and sub-accounts. The initial value of the accounting unit of the pension fund is 100 denars. The pension funds, including Macedonian ones, are subject to cyclical phenomena and movements, which implies an increase or decrease in the values of their accounting units, depending on the investment of funds and the movement of the value of the instruments in which the funds of the pension funds are invested, as well as from the collection of fees and commissions.

The movement of the value of the accounting units of the mandatory pension funds, from the initial functioning of the system until 31.12.2022, is presented in Table 5.7., Graph 5.22. and Graph 5.23. Since the beginning of the operation of SAVAz and KBPz, there has been a growing trend of the accounting units. On April 1, 2019, the third mandatory pension fund, TRIGLAVz, started operating. In 2022, the accounting units of the three mandatory pension funds recorded larger oscillations than usual caused by unfavorable conditions on the financial markets in the context of the global crisis as a result of the military conflict between Ukraine and Russia. Hence, in 2022, the accounting units of the three mandatory pension funds recorded a deviation from the growth trend. Moreover, at the end of the year, the value of the accounting unit of SAVAz recorded a drop of 2.34%, of KBPz a drop of about 2.43%, and of TRIGLAVz a drop of 1.12%. However, pension funds, by their very nature, operate over the long term, so their performance should be evaluated over the long term.

Graph 5.22. Value of the accounting unit of the MPF from the beginning of the system



Graph 5.23. Value of the accounting unit of the MPF in 2022

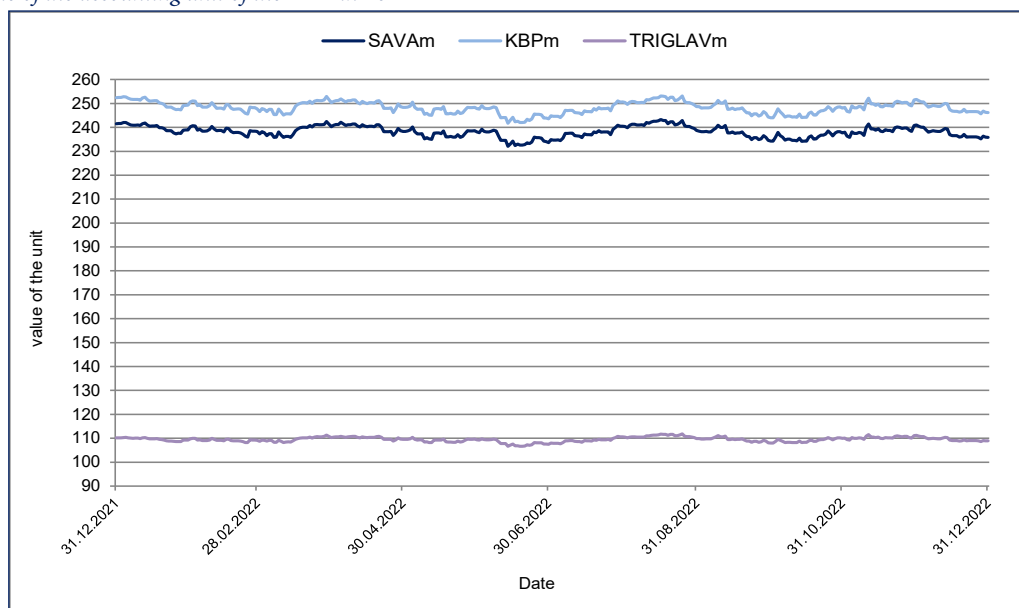


Table 5.7. Value of the accounting unit from the beginning of the system

Date	Value of accounting unit (in denars)		
	SAVAz	KBPz	TRIGLAVz
31.12.2006	105,929336	106,265900	
31.12.2007	115,511364	115,303221	
31.12.2008	100,155213	107,116421	
31.12.2009 ¹³	116,874672	120,667142	
31.12.2010	125,009646	129,590887	
31.12.2011	129,003093	130,697013	
31.12.2012	139,225567	142,372582	
31.12.2013	151,117506	153,757419	
31.12.2014	160,733889	164,578077	
31.12.2015	170,193521	174,392410	
31.12.2016	179,771032	184,786292	
31.12.2017	189,686331	195,037486	
31.12.2018	193,113009	196,706281	
31.12.2019	213,757775	218,317207	101,578448
31.12.2020	220,489334	227,667060	101,665261
31.12.2021	241,504146	252,373824	110,128711
31.03.2022	240,312008	250,362201	110,260134
30.06.2022	233,588828	243,616996	107,431271
30.09.2022	234,514403	244,287184	108,088053
31.12.2022	235,843874	246,231776	108,891957

The return on the individual account is variable and depends on the return of the mandatory pension fund and the fees charged by the company. Thereby, the return, i.e., profit, is a parameter that cannot be realistically predicted, because it depends on the conditions of the capital market and the entire economy.

Given the long-term nature of the pension insurance, it is important to calculate the return of the mandatory pension funds from the beginning of the system, i.e., from the beginning of the mandatory pension fund reduced to an annual level, which for SAVAz is 5.17% in nominal amount, that is, 2.12% in real amount, for KBPz it is 5.44% in nominal amount and 2.37% in real amount. The return from the commencement of operation of TRIGLAVz reduced on an annual basis is 2.30% in nominal amount, that is, -4.11% in real amount.

The movement of the return in nominal amount, during the seventeen years of existence of the mandatory fully funded pension insurance, can be seen in Graph 5.24, which shows the returns by periods (from the beginning of the system to the appropriate date), from the beginning of the system to 31.12.2022, by funds (for SAVAz and KBPz). The graph also shows the returns by periods from the beginning of TRIGLAVz to the respective date. At the initial functioning of the system, there is an observable increase in the return, hence, at the end of 2006 and 2007, there are high returns, while the lowest returns are observed at the end of 2008, as a result of the negative developments in the domestic and foreign financial markets. This is followed by a gradual recovery from the crisis and an increase in returns, by the end of 2009, as well as at the end of 2010. At the end of 2011, there was a slight decrease in returns, compared to the end of 2010. During the following years, there was an increase (with small deviations from the growth of returns until the end of 2015 and the first half of 2016 and the returns in 2018). The lower amounts of returns in 2018 are mostly due to the impact of prices on world financial markets, which recorded higher volatility in 2018 and a decrease at the end of 2018. In 2019, there is an observable gradual increase in returns. In 2020, lower returns are observed compared to 2019 in SAVAz and KBPz, mostly due to the unfavorable conditions on the financial markets in conditions of a coronavirus pandemic. TRIGLAVz in the initial years of its operation and in exceptional circumstances due to the unfavorable conditions on the financial markets in conditions of the Corona virus pandemic, recorded a return in nominal amount less than zero, which was already offset in the next period. After the increase in returns in 2021, in 2022 there is a decrease in returns for the three pension funds due to the global crisis caused by the military conflict between Ukraine and Russia.

¹³In the second half of 2009, both SAVA and KB First made decisions on reclassification of the financial instruments held to maturity in the category of available-for-sale financial instruments and, in this procedure, the companies reassessed the value of the financial instruments, by applying an objective, fair value and determined the value of the assets, net assets, the value of the accounting units and the number of accounting units, which caused a relatively high correction in the value of the accounting units..

¹⁴TRIGLAVz is included in the comparative return analyses with a calculated return for the respective periods, according to the regulation, because it exists longer than 12 months, however less than 84 months.

¹⁵The formulas for calculating the yield in nominal and real amount are prescribed in the Rulebook for assessment of the assets of the mandatory and voluntary pension funds.

Usually, the return for pension funds is calculated for the last few years, reduced to an annual level. Thus, in the Macedonian pension system, it is legally regulated to calculate the return for a period of seven years (accounting period), reduced to an annual level, in nominal and real amount. If the fund exists for less than 84 months, however longer than 12 months, the return is calculated at the end of June, i.e., December, for the period from June 1, i.e., December, after the establishment of the fund, until the end of June, i.e., December, when the calculation is made. In that case, the accounting period is 78, 72, 66, 60, 54, 48, 42, 36, 30, 24, 18 or 12 months¹⁴.

The return in nominal amount¹⁵ is a change (increase) in percentage of the value of the accounting unit at the last valuation date of the accounting period and the value of the accounting unit on the last day of the month preceding the first month in the accounting period, converted into an equivalent annual rate of return in nominal amount. The return in real amount, for each accounting period, converted into an equivalent annual rate of return in real amount, is calculated based on the annual rate of return in nominal amount and the change in the level of the cost of living in the accounting period, reduced to annual level. The return of the mandatory pension funds, by periods, reduced on an annual level, is shown in Table 5.8.

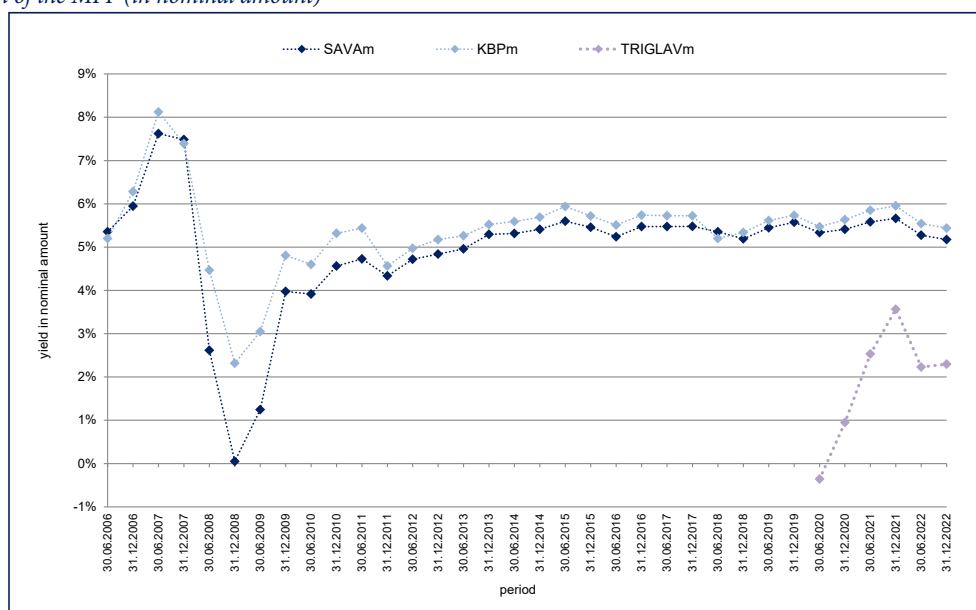
Table 5.8. Yields of MPF

Period*	SAVAz		KBPz		TRIGLAVz	
	in nominal amount	in real amount	in nominal amount	in real amount	in nominal amount	in real amount
01.01.2006 - 31.12.2008	0,05%		2,32%			
31.12.2006 - 31.12.2009	3,33%		4,32%			
31.12.2007 - 31.12.2010	2,67%		3,97%			
31.12.2008 - 31.12.2011	8,80%		6,86%			
31.12.2009 - 31.12.2012	6,00%		5,66%			
31.12.2006 - 31.12.2013	5,20%	2,16%	5,41%	2,37%		
31.12.2007 - 31.12.2014	4,83%	2,67%	5,21%	3,05%		
31.12.2008 - 31.12.2015	7,87%	6,45%	7,21%	5,80%		
31.12.2009 - 31.12.2016	6,34%	4,74%	6,27%	4,67%		
31.12.2010 - 31.12.2017	6,13%	4,63%	6,01%	4,51%		
31.12.2011 - 31.12.2018	5,93%	4,72%	6,01%	4,80%		
31.12.2012 - 31.12.2019	6,31%	5,74%	6,29%	5,72%		
31.12.2013 - 31.12.2020	5,54%	4,84%	5,76%	5,06%	-	-
31.12.2014 - 31.12.2021	5,98%	4,48%	6,29%	4,79%	-	-
30.06.2019 - 31.12.2021	-	-	-	-	3,84%	1,01%
31.03.2015 - 31.03.2022	5,20%	3,07%	5,37%	3,23%	-	-
30.06.2019 - 31.03.2022	-	-	-	-	3,54%	-0,50%
30.06.2015 - 30.06.2022	4,83%	1,84%	5,01%	2,01%	-	-
30.06.2019 - 30.06.2022	-	-	-	-	2,35%	-3,55%
30.09.2015 - 30.09.2022	5,11%	1,28%	5,35%	1,52%	-	-
30.06.2019 - 30.09.2022	-	-	-	-	2,36%	-4,48%
31.12.2015 - 31.12.2022	4,77%	0,73%	5,05%	1,00%	-	-
30.06.2019 - 31.12.2022	-	-	-	-	2,40%	-4,40%
Start** - 31.12.2022	5,17%	2,12%	5,44%	2,37%	2,30%	-4,11%

*Until the adoption of the amendments to the Law on Mandatory Fully Funded Pension Insurance from January 2013, the return of the mandatory pension fund was calculated for a period of 3 years, only in nominal amount.

**The date of commencement of operation of SAVAz and KBPz is 01.01.2006. The date of commencement of operation of TRIGLAVz is 01.04.2019.

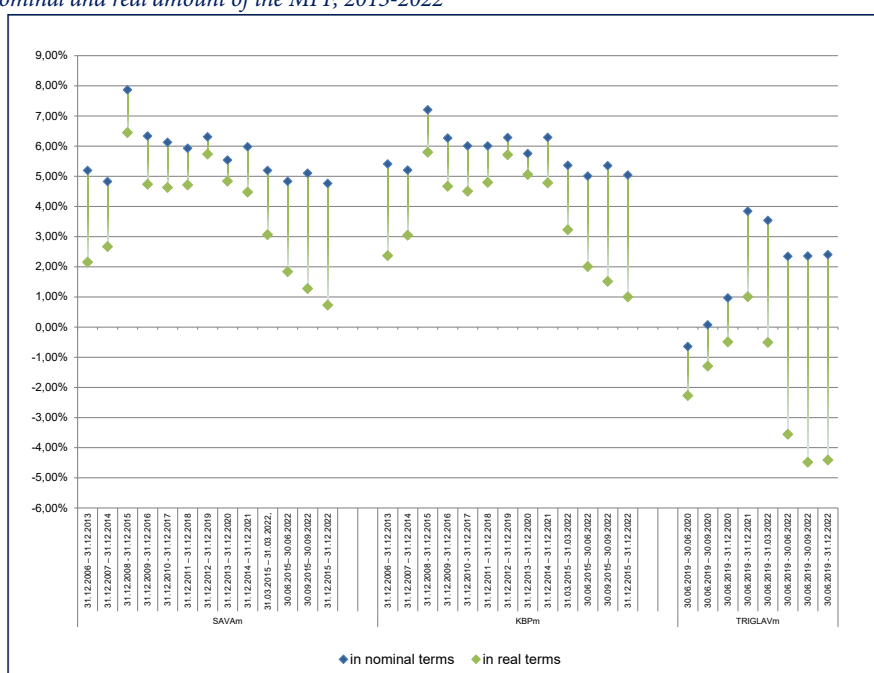
Graph 5.24. Return of the MPF (in nominal amount)



The movement of the return in nominal and real amount, in the period from 2013 to 2021 (annually) and in 2022 (quarterly), in seven-year periods, converted into an equivalent annual rate of return, per mandatory pension fund, can be seen in Graph 5.25. This graph also shows the movement of the return in nominal and real amount of TRIGLAVz, for the respective periods in accordance with the regulation because it exists longer than 12 months however less than 84 months. In 2022, the return in both nominal and real amount reduced in both SAVAz (from 5.20% to 4.77% in nominal amount and from 3.07% to 0.73% in real amount) and in KBPz (from 5.37% to 5.05% in nominal amount and from 3.23% to 1.00% in real amount). At the same time, the lowest amount of return in nominal amount and in real amount was recorded in the fourth quarter for pension funds that have existed for more than seven years. The return of the third mandatory pension fund that started operating in April 2019 after the increase in 2021, records a decrease in 2022 in both nominal amount (from 3.54% to 2.40%) and real amount (from -0.50% to -4.40%). In the reviewed period (2013-2022), the change in the level of the cost of living in the calculation periods, reduced to an annual level, until 2019, recorded a decrease, which affects the gradual approach of returns in real amount to returns in nominal amount, while in the period after 2019 (especially in 2022) it records an increase that affects the gradual distancing of returns in real amount from returns in nominal amount.

The seven-year return on the level of mandatory fully funded pension insurance for the period 31.12.2015 - 31.12.2022, calculated through the change of the weighted average¹⁶ of the accounting units of the mandatory pension funds, reduced to annual level is 4.52% in nominal amount, that is, 0.50% in real amount.

Graph 5.25. Return in nominal and real amount of the MPF, 2013-2022



5.7 Fees in mandatory pension funds

In order to perform its functions of management of the assets of the mandatory pension fund, assessment of the assets, membership registration, keeping individual accounts of the members and reporting to the members, as well as for payment of fees for MAPAS, the PDIFNM and the property custodian and for covering their own costs, the companies, in accordance with the Law, charge a fee from contributions, a fee from assets and a fee for transfer.

This way of financing the pension companies is common for the companies that operate in a pension system similar to the Macedonian one. The fee that is collected as a percentage of the contributions is paid once from the payment of the contribution, and then the same contribution is invested until the withdrawal of the funds, while the fee that is collected from the funds is collected at the end of each month, from the total funds that are managed. Fees, based on contributions, have a weight “at the beginning”, i.e., they are relatively high in the initial years. Asset-based fees weight at “the end”, as accumulated assets are much higher the closer they are to retirement¹⁷. In the long run, the contribution fee will not have a significant impact on the amount of the member’s pension, and the fee from assets will become more significant over the years.

The types and amount of fees charged by the companies that manage the mandatory pension funds in 2022 are shown in Table 5.9.

¹⁶The average value is calculated as a weighted average of the accounting units of the mandatory pension funds in relation to the net assets of the mandatory pension funds.

¹⁷Administrative Charges for Funded Pensions: An International Comparison and Assessment, Edward Whitehouse, June 2000.

Table 5.9. Fees charged by companies managing mandatory pension funds in 2022

Type of fee	SAVA	KB First	TRIGLAV***
Fee from contributions	2,00%*	2,00%*	2,00%
Monthly fee from the assets of the mandatory pension fund	0,030%**	0,030%**	0,030%
Transfer fee			
Number of days****	Amount of transfer fee	Amount of transfer fee	Amount of transfer fee
number of days ≤ 720	15 Euros	15 Euros	15 Euros
number of days > 720	Transfer fee not charged	Transfer fee not charged	Transfer fee not charged

* The amount is equal to the legally determined maximum for 2020 (previously it was 2.25% for all MPFs).

** The amount is equal to the legally determined maximum for 2019 (previously it was 0.035% for both SAVAz and KBPz).

*** The amount is equal to the legally determined maximum for 2019. From April 2019.

**** The number of days is calculated from the date on which the member acquired the status of a member of the existing mandatory pension fund (or from the first of the month for which the member acquired the right to contribute to the existing mandatory pension fund, in case of first membership) to the date of transfer of the funds to the individual account of the member in the future mandatory pension fund.

Initially, the fee from contributions was determined in a tender, and the initial fee, collected by SAVA and KB First, was 8.50%. Furthermore, with the development of the system and the reduction of the fees charged by state institutions from the companies, as well as the growth of the contributions and funds, which are the basis for calculating the fees, there was further continuous gradual reduction of this fee. The amount of fees from contributions, which were collected from the beginning of the system, until 2022, is shown in Table 5.10.

Table 5.10. Amount of the fees from contributions collected by the pension companies in the second pillar

Pension company	Amount	Date of application	Pension company	Amount	Date of application	Pension company	Amount	Date of application
SAVA	9,90%	In a tender	KB First	9,90%	In a tender	TRIGLAV	2,25%	From April 2019
	8,50%	From the beginning of the system (2006)		8,50%	From the beginning of the system (2006)		2,00%	From January 2020
	7,90%	From July 2007		7,90%	From July 2007			
	6,90%	From February 2008		6,80%	From February 2008			
	6,50%	From May 2009		5,50%	From January 2010			
	5,50%	From January 2010		4,50%	From January 2011			
	4,50%	From January 2011		4,00%	From January 2012			
	4,00%	From January 2012		3,75%	From June 2013			
	3,75%	From June 2013		3,50%	From January 2014			
	3,50%	From January 2014		3,25%	From January 2015			
	3,25%	From January 2015		3,00%	From January 2016			
	3,00%	From January 2016		2,75%	From January 2017			
	2,75%	From January 2017		2,50%	From January 2018			
	2,50%	From January 2018		2,25%	From January 2019			
	2,25%	From January 2019		2,00%	From January 2020			
	2,00%	From January 2020						

The compensation from assets was determined by law and, as of May 2013, it amounted to 0.05% per month of the value of the net assets of the mandatory pension fund, then as of December 2014, it amounted to 0.045%. From January 2015, the fee was 0.04%, until December 2016. From January 2017, the fee from assets was 0.035%. From January 2019 the compensation of funds is 0.030%.

Since 2013, the law has determined the maximum amount of the fee from contributions and the fee from assets was legally determined, which the pension companies will be able to collect, and their gradual further reduction was anticipated.

The collection of fees (in millions of denars) by the companies in 2022 is presented in Table 5.11.

Table 5.11. Collection of fees by companies, in 2022 (in millions of denars)

	Jan.	Feb.	March.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
SAVAz- total	19,83	21,99	23,28	22,75	23,79	22,90	22,80	23,67	22,97	24,11	23,37	26,07	277,53
From contributions	5,46	7,61	8,79	8,08	9,19	8,31	8,04	8,56	7,99	9,14	8,12	10,80	100,10
From assets	14,37	14,38	14,48	14,67	14,60	14,58	14,77	15,12	14,98	14,97	15,25	15,28	177,43
KBPz - total	22,27	24,44	25,86	25,30	26,41	25,35	25,37	26,27	25,60	26,78	26,05	28,98	308,67
From contributions	5,97	8,18	9,47	8,72	9,90	8,87	8,68	9,20	8,66	9,86	8,78	11,68	107,97
From assets	16,30	16,27	16,38	16,58	16,51	16,48	16,69	17,07	16,93	16,92	17,27	17,30	200,70
TRIGLAVz – total	1,59	1,91	2,11	2,16	2,40	2,43	2,47	2,65	2,67	2,92	2,91	3,47	29,69
From contributions	0,68	0,96	1,12	1,09	1,29	1,27	1,24	1,34	1,31	1,51	1,40	1,89	15,10
From assets	0,92	0,95	0,99	1,06	1,12	1,16	1,23	1,31	1,36	1,41	1,50	1,58	14,59

Transaction fees, in relation to the transactions for the acquisition or transfer of funds to a mandatory pension fund, are paid from the assets of the mandatory pension fund to selected legal entities that provide services with securities, at home and abroad. The transaction fees are calculated as a percentage of the value of each concluded transaction.

In 2022, a total of MKD 2.82 million denars of transaction fees were collected by SAVAZ, a total of 0.58 million denars was collected by KBPz and a total of 0.10 million denars of transaction fees were collected by TRIGLAVz.

5.8 Payment of pensions from mandatory fully funded pension insurance

The conditions for acquiring the right to a pension are the same for both the first and the second pillar: the age limit of 64 years for men, i.e., 62 years for women, with a minimum of 15 years of work experience.

From the first pillar, part of the old-age, family and disability pension is paid, as well as from the minimum pension. The pension from the first pillar is calculated as a defined pension according to a predetermined formula (a specific percentage, depending on the years of service, multiplied by the pension base, determined by valorized salaries from the entire working life).

From the second pillar, a part of the old age pension is paid, in a form chosen by the member:

- pension annuity with the entire amount of funds, accumulated on the individual account of the member; the annuity is paid for the rest of the member's life by an insurance company authorized for that purpose, or
- programmed withdrawals, from the accumulated funds on the individual account of the member and are paid by a company that manages a mandatory pension fund, or
- combination of the abovementioned methods.

The provision of pension annuities and programmed withdrawals is regulated by the Law on Payment of Pensions and Pension Fees from Fully Funded Pension Insurance.

If the insured person who has been entitled to a disability pension is a member of the second pillar, the total amount of funds on the account of that member is transferred to the PDIFNM and the full payment of the disability pension is paid by the PDIFNM. As an exception, if the accumulated funds on the member's account are more than the amount required for the payment of a disability pension, in accordance with the Law on Pension and Disability Insurance, then the member may choose to use a second pillar pension instead of that pension.

In the event of the death of a member of second pillar mandatory pension fund member, whose members are entitled to a family pension, the total amount of assets on that member's account is transferred to the PDIFNM and the full payment of the family pension is paid by the PDIFNM. As an exception, if the accumulated assets on the member's account are more than the amount required for payment of family pension, in accordance with the Law on Pension and Disability Insurance, then the user of family pension can choose to use a second pillar pension instead of that pension.

In 2022, 139 disability pensions and 306 family pensions were obtained by members of the second pillar, i.e., family members of a deceased member, therefore their accumulated funds were transferred to the PDIFNM, which pays the disability pension, i.e., the family pension. In 2022, 14 members of the second pillar will be paid an old-age pension from the second pillar, through programmed withdrawals. In 2022, a second pillar old-age pension was paid, through programmed withdrawals, for a total of 30 retired members (including members who started withdrawing funds in previous years). In addition, in 2022, programmed withdrawals began to be paid to a family member of a deceased member who was entitled to a family pension.

There are also cases in which funds are paid from the individual account of the member, without exercising the right to a pension, as follows:

- when the deceased member of the mandatory pension fund does not have family members who are entitled to family pension, then the assets on the account of that member become part of the testator's estate and they are treated in accordance with the Law on Inheritance;

- when a member of a mandatory pension fund will not acquire the right to an old-age pension according to the Law on Pension and Disability Insurance, because he has not completed a length of service of at least 15 years required for retirement, he/she can earn pension only from the assets of the second pillar, if the pension is greater than or equal to 40% of the minimum amount of the pension, and if the calculated amount of the pension is less than 40% of the minimum amount of pension, the mandatory pension fund will pay the accumulated funds to the member's account all at once. Pension can be earned only from the assets from the second pillar and the payment of the total accumulated funds in these cases can be made after the person has reached 65 years of age.

In 2022, assets as inheritance were paid from the individual accounts of 118 deceased members. In addition, one-time payment of assets was made to 3 persons.

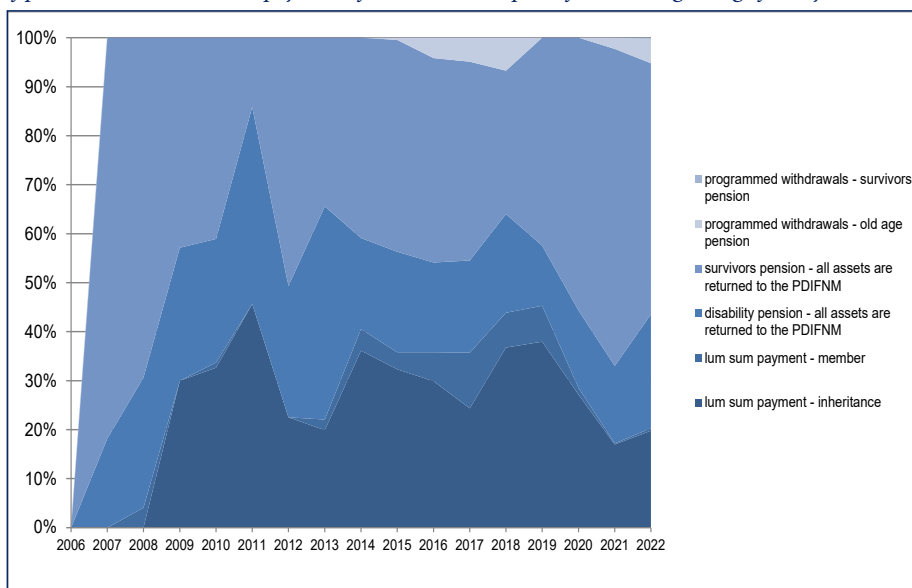
A detailed overview of the earned pensions and payments for members of the second pillar in 2022, by mandatory pension funds, is presented in Table 5.12.

Table 5.12. Pension entitlements and payments for the second pillar members in 2022

Type of pension and payment / Mandatory pension fund	SAVAz	KBPz	TRIGLAVz	Total
Disability pension	52	86	1	139
Family pension	147	154	5	306
Old age pension – programmed withdrawals	5	9	0	14
Family pension – programmed withdrawals	1	0	0	1
One-time payment – member	0	3	0	3
One-time payment – inheritance	56	60	2	118
Total	261	312	8	581

Graph 5.26. shows the structure of pension entitlements and payments from the second pillar, in the seventeen years of existence of the second pillar, until 2022. The number of payments is very low, because the members are young people. Most of the payments are in cases of death of a member, through an earned family pension, or payment of inheritance, then payments based on an earned disability pension, and the lowest is the number of one-time payments to members and payments to members through programmed withdrawals.

Graph 5.26. Structure of pension entitlements and payments from the second pillar from the beginning of the system



6 Information on voluntary pension funds

- 6.1 Purpose of voluntary fully funded pension insurance
- 6.2 Membership in voluntary pension funds
- 6.3 Member account transfer in the same or another voluntary pension fund
- 6.4 Contributions in voluntary pension funds
- 6.5 Investment and portfolio structure of the voluntary pension funds
- 6.6 Net assets, accounting unit and rate of return of voluntary pension funds
- 6.7 Fees in voluntary pension funds
- 6.8 Payment of pension benefits from voluntary fully funded pension insurance

6. Information on voluntary pension funds

In the voluntary fully funded pension insurance, by 2022, there are a total of 29.502 members, which means an increase in membership in the year by about 6.23%, and this is approximately at the same level as the previous year. Of the total number of members in the third pillar, about 46% are members with a voluntary individual account, while about 54% are participants in a pension scheme with a professional account. The new voluntary pension fund has made a slightly more drastic movement in the transitions of members from one voluntary pension fund to another in 2022.

In 2022, a total of approximately 400.09 million denars were paid in the voluntary pension funds.

The total assets of the voluntary pension funds recorded a lower growth compared to the total assets of the mandatory pension funds, that is, they increased by 6.36% and reached 3.05 billion denars, which is approximately 0.38% of the GDP of the Republic of North Macedonia. The structure of the investment portfolio of the voluntary pension funds also does not differ significantly compared to the previous year, although a slight increase in the portion of bonds at the expense of the portion of deposits, shares and investment funds was also observed in voluntary pension funds. The commencement of operation of the fourth voluntary pension fund did not greatly affect the overall structure of investments of the voluntary pension funds, given the fact that in the initial years of operation, the new fund still disposes of assets of small scale compared to the total assets of the voluntary pensions funds.

In 2022, the accounting units of the four voluntary pension funds recorded a deviation from the growth trend due to the unfavorable conditions in the financial markets (a decline of 2.76% in the value of the accounting unit of SAVAd, a decline of 2.98% in KBPd, a decline of 1.48% in TRIGLAVd, while the value of the accounting unit of VFPd recorded a decline of 1.21% since the commencement of operation).

At the level of the third pillar, in the seven-year period from 2016 to 2022, an average yield reduced to an annual level of 4.64% in nominal amount was achieved, i.e. 0.61% in real amount, calculated through the change of the weighted average of the accounting units of the voluntary pension funds.

In 2022, 377 pension benefits and payments from the third pillar were completed.

6.1 Purpose of voluntary fully funded pension insurance

The primary purpose of voluntary fully funded pension insurance is to provide higher income after retirement, for insureds who are already insured in the single-pillar and/or two-pillar pension system, to provide pensions to persons who are not covered by mandatory pension insurance for themselves or from others and to provide preconditions for establishing occupational pension schemes in the process of harmonization of the social security system in the Republic of North Macedonia with the EU systems. The basic principles of voluntary fully funded pension insurance include: provision of additional funds in case of old age, voluntary membership, capital financing on the principle of defined contributions, investing funds on the basis of security, risk diversification and maintaining adequate liquidity, as well as transparency.

Voluntary pension insurance enables coverage of a large group of persons from the population of the Republic of North Macedonia, as well as persons who are not citizens of the Republic of North Macedonia. This provides additional savings for old age, which increases material security in old age. Furthermore, in accordance with the common practices in many European countries, where there are occupational pension schemes, through which employers, or citizens' associations, organize and finance additional pension insurance for their employees, i.e., members, this is also provided in the Republic of North Macedonia. Since European social security systems are subject to increasing pressure, occupational pensions, in the future, will increasingly play a role in supplementing revenues after retirement. For those reasons, occupational pensions, in addition to social security, should be developed in order to provide safe, permanent and effective social insurance, which should guarantee a decent standard of living in old age. In the third pillar, an employer, or a citizens' association (insurer), can organize and finance an occupational pension scheme and pay contribution to a voluntary pension fund for its employees and members. Multiple employers, or multiple civic associations, can co-organize and fund occupational pension schemes. The insured signs an agreement with the company he/she has chosen to manage the voluntary pension fund, which will include the occupational pension scheme.

Voluntary fully funded pension insurance is expected to have an additional significant impact on the economy as a whole, by increasing the savings of the population, increasing the power of investment and encouraging the development and deepening of the capital market, by investing the funds of voluntary pension funds, by increasing demand for new instruments and through new financial services, etc.

Voluntary fully funded pension insurance became operational in the second half of 2009, whereby the existing companies were granted licenses to manage voluntary pension funds. The Open Voluntary Pension Fund "NLB Penzija Plus" - Skopje started operating on 15.07.2009, while KB First Open Voluntary Pension Fund - Skopje, on 21.12.2009. In June 2018, MAPAS gave an approval to change the name of the pension fund Open Voluntary Pension Fund - "NLB Penzija Plus" Skopje to Open Voluntary Pension Fund Sava Penzija Plus. Triglav Open Voluntary Pension Fund - Skopje started operating on 01.03.2021. VFP Open Voluntary Pension Fund - Skopje started operating on 18.10.2022.

6.2 Membership in the voluntary pension funds

A person can become a member of a voluntary pension fund in three ways:

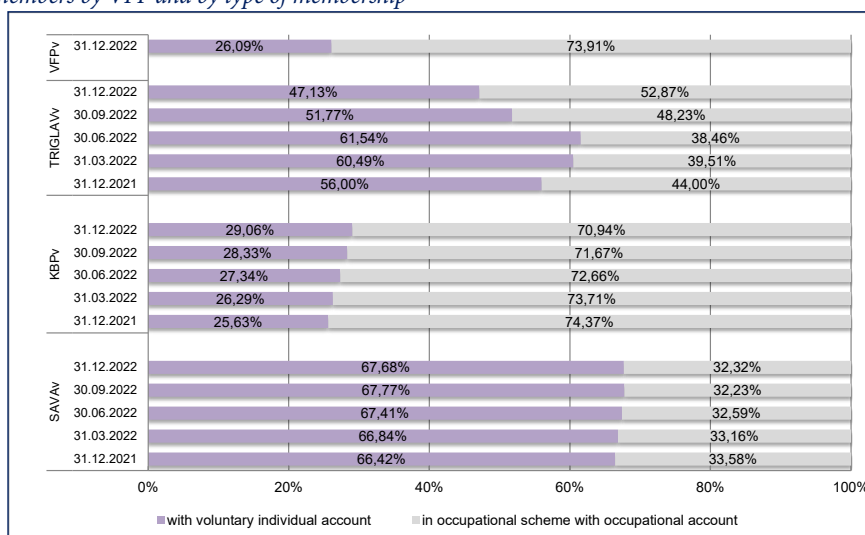
- 1) by signing an agreement on membership in a voluntary pension fund between the person and the company and by opening a voluntary individual account,
- 2) by signing an agreement on membership in a voluntary pension fund between the person, the natural person who pays on behalf and for the account of the person (payer) and the company and by opening a voluntary individual account,
- 3) by participating in an occupational pension scheme, organized by his employer or by an association in which he is a member, and by opening a professional account.

A person can have only one voluntary individual account and one professional account. These accounts can be in the same or in a different voluntary pension fund.

In the voluntary fully funded pension insurance, with a status on 31.12.2022, there are a total of 29.502 members, which means additional 1.730 members compared to 31.12.2021, i.e., there is an increase in membership by about 6.23%. The increase in membership in 2022 compared to 2021 retains approximately the same level as the previous year. Of the total number of members in the third pillar, 13.628 or about 46% are members with a voluntary individual account, while 15.874 or about 54% are participants in a pension scheme with a professional account. Because TRIGLAVd and the new voluntary pension fund VFPd have relatively small number of members (0.59% of the total number of members in TRIGLAVd and 0.31% in VFPd), in relation to the distribution of members by voluntary pension funds, with a status on 31.12.2022, for voluntary pension funds that have been operating since 2009, there is no significant change compared to the situation in the previous year, i.e., about 44.11% of the members are in SAVAd, while about 54.99% are in KBPd.

In Graph 6.1., which shows the structure of members by voluntary pension funds and by type of membership, in 2022, at the quarterly level, a significant difference can be observed in relation to the type of membership in the four voluntary pension funds. Namely, SAVAd has a larger number of members with voluntary individual accounts (67.68%), KBPd and VFPd have more members in pension schemes with professional accounts (70.94% KBPd and 73.91% VFPd), while at TRIGLAVd the membership distribution is more evenly distributed although there is a slightly larger number of members of pension schemes with occupational accounts (52.87%). Regarding the structure of members by type with a status on 31.12.2022, both in SAVAd and in KBPd there is no significant change compared to the situation in the previous year.

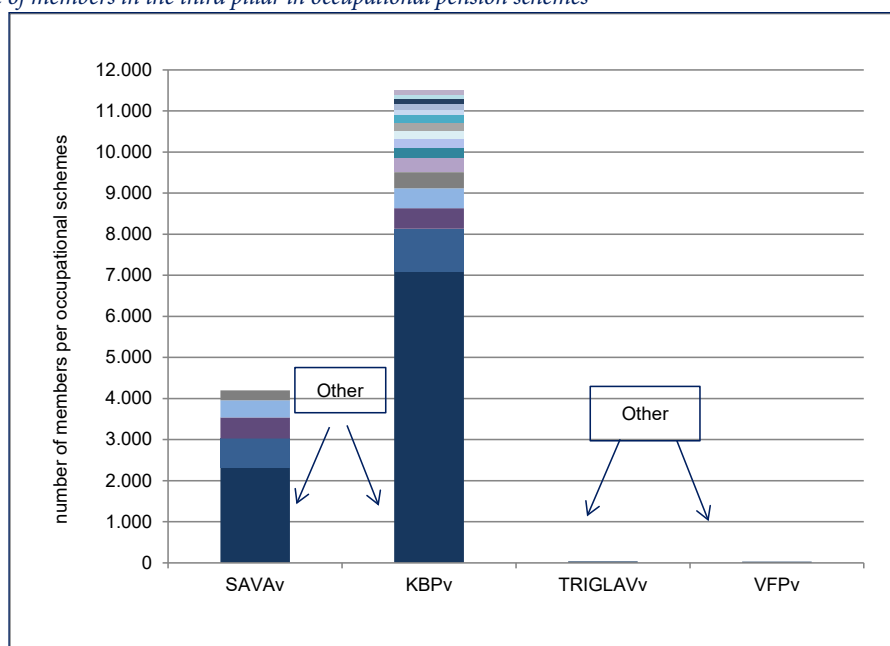
Graph 6.1. Structure of members by VPF and by type of membership



From the experience so far, usually, members who have individual accounts pay the assets themselves, and rarely there are members whose contribution is paid by a payer (out of a total of 13.628 members who have individual accounts, only 750 members or 5.5% have a payer). Voluntary fully funded pension insurance enables membership of persons who are not citizens of the Republic of North Macedonia. In the existence of the third pillar so far there are very few members who are foreign nationals (0.02% of the total number of members).

Regarding the participation of members in occupational pension schemes, in SAVAd, 4.206 members are participants in 1.233 occupational pension schemes, in KBPd, 11.508 members are participants in 2.883 occupational pension schemes, and in TRIGLAVd, 92 members are participants in 5 occupational pension schemes. There are occupational pension schemes with several dozen members and occupational pension schemes with only 1 to 2 members. Out of the total number of schemes, 19 occupational pension schemes have over 100 members, four schemes have over 500 members, one of which has over 1,000 members. The distribution of members in the occupational pension schemes by funds is presented in Graph 6.2., which individually shows only the schemes that have more than 100 members, while the other schemes are included in the item "others".

Graph 6.2. Distribution of members in the third pillar in occupational pension schemes



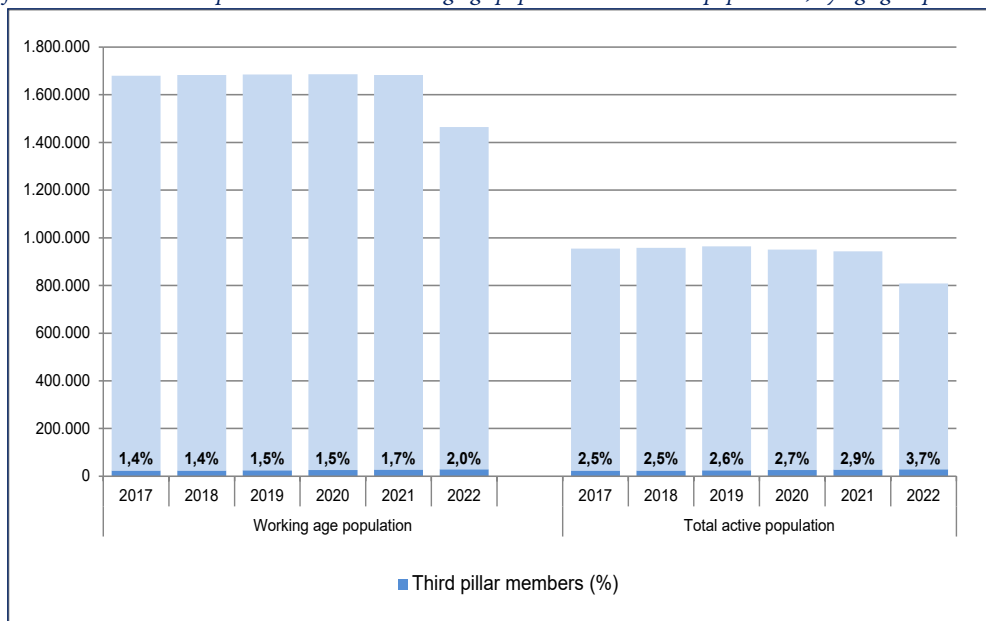
Graph 6.3. Structure of members in the third pillar by age, gender and type of membership



The structure of the members in the third pillar, by age, gender and type of membership, is shown in graph 6.3. This graphical representation shows that in the third pillar compared to the second pillar the number of older members is higher. About 60% of the members with a voluntary individual account are up to 45 years of age, while about 58% of the members with a professional account are up to 50 years of age. Members who have a professional account are older than members with an individual account. The average age of the members with an individual account is 44 years for men and 43 years for women, and the average age of the members with a professional account is 48 years for men and 48 years for women, while the average age of all members in total is 46 years.

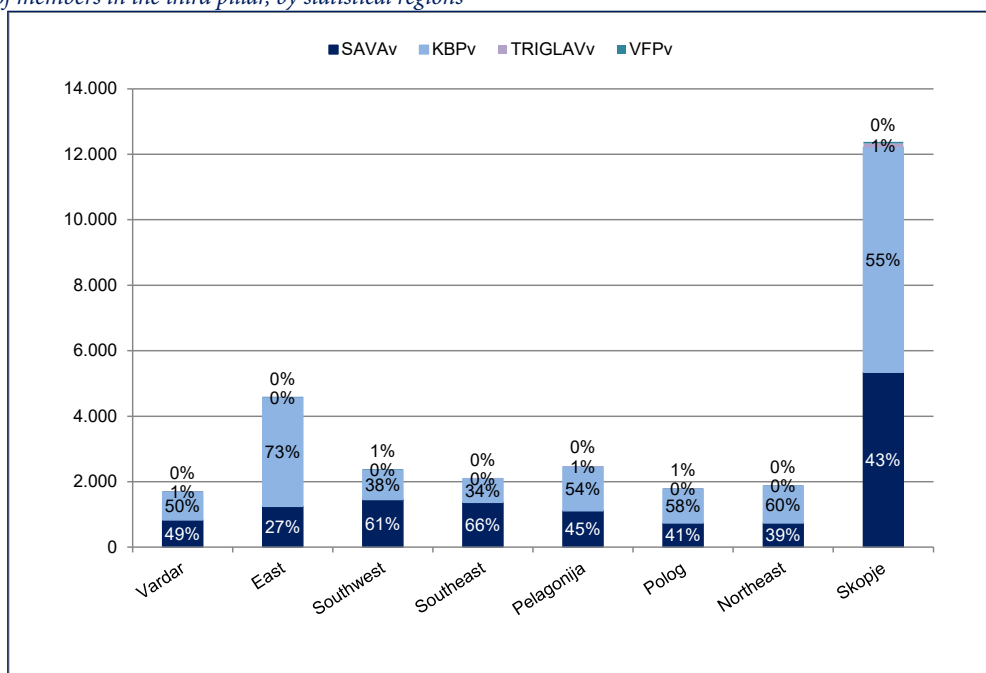
The portion of the total number of members of the third pillar in the total working age population and in the total active population, although it has increased in 2022, is still small. At the end of 2022, only about 2.0% of the total working age population in the Republic of North Macedonia are members of the third pillar, i.e., about 3.7% of the total active population in the Republic of North Macedonia are members of the third pillar. The increase of the portion of members in the third pillar, in the total working age population and active population in the Republic of North Macedonia, in the period from 2017 to 2022 is presented in Graph 6.4. This result shows that there is significant potential for the development of the third pillar.

Graph 6.4. Structure of members in the third pillar in the total working age population and active population, by age groups and gender



The structure of members in voluntary pension funds by statistical regions¹⁸ in the Republic of North Macedonia is presented in Graph 6.5. Most members in the four voluntary pension funds are from the Skopje region, 6,872 members in KBPv, 5,345 members in SAVAd, 113 members in TRIGLAVd and 52 members in VFPv. SAVAd has the fewest members from the Polog region (738 members), KBPv has the fewest members from the Southeast region (627 members), TRIGLAVd has the fewest members from the Northeast region (member), while the VFP has no members at all from the Southeast region and the Pelagonija region.

Graph 6.5. Structure of members in the third pillar, by statistical regions



¹⁸The statistical regions are defined according to the State Statistical Office - territorial units. The nomenclature of the territorial units is based on the territorial organization of the local self-government in the RNM and is harmonized with the EU classification.

6.3 Member account transfer in the same or another voluntary pension fund

The persons have the right to choose a voluntary pension fund and the right to change the selected voluntary pension fund, at their own discretion, at any time. If the member is a member of the existing voluntary pension fund for less than 12 months, he/she should pay a transfer fee upon transfer. Otherwise, the transfer is free. During the transfer, the total funds from the member's account are also transferred. In addition, in case of transfer of a participant in an occupational pension scheme from one insurer to another, he has the right to transfer the funds saved in the occupational scheme to a professional account or to a voluntary individual account, if the other insurer has not organized an occupational pension scheme or has not included the person in it. The member, who is a participant in an occupational pension scheme, has the right to transfer the funds to a voluntary individual account, if he/she is not employed or is not a member of a citizens' association.

Table 6.1. contains data on the number of members who transferred from one voluntary pension fund to another and on the amount of transferred funds from one voluntary pension fund to another, on that basis, in 2022.

The start of operation of the fourth VFP voluntary pension fund has caused a somewhat larger movement in the transition of members from one voluntary pension fund to another in 2022. Namely, in 2022, the total number of members in voluntary pension funds, who transferred from one voluntary pension fund to another, is 114, which represents 0.39% of the total number of members. Although the percentage share of members who made a change in the voluntary pension fund in the total number of members is still minimal in 2022, the number of members who made a change to the voluntary pension fund is significantly higher compared to 2021. At the same time, 10 members transferred to SAVAd, 11 transferred to KBPd and 39 members transferred to TRIGLAVd and 54 transferred to VFPd. During the transfer, about 3.51 million denars were transferred to SAVAd, about 3.29 million denars were transferred to KBPd, 1.92 million denars were transferred to TRIGLAVd and about 19.44 million denars were transferred to VFPd. Also, in 2022, there were also transitions within the same pension fund from one occupational scheme to another and from occupational to a voluntary individual account.

Table 6.1. Transfers of members from one voluntary pension fund to another

2022		VPF to which members have transferred, i.e., in which funds have been transferred				Total
		SAVA _v	KBP _v	TRIGLAV _v	VFP _v	
Members who transferred from a VPF	SAVA _v	-	11	5	12	28
	KBP _v	9	-	34	42	85
	TRIGLAV _v	1	0	-	0	1
	VFP _v	0	0	0	-	0
	Total	10	11	39	54	114
Assets that have been transferred from a VPF (in denars)	SAVA _v	0	3.292.115	383.235	7.790.761	11.466.111
	KBP _v	3.501.957	0	1.534.514	11.652.404	16.688.875
	TRIGLAV _v	3.910	0	0	0	3.910
	VFP _v	0	0	0	0	0
	Total	3.505.867	3.292.115	1.917.749	19.443.165	28.158.896

6.4 Contributions in voluntary pension funds

The payment of a voluntary contribution can be made only for a person who meets the requirements for membership in a voluntary pension fund, in accordance with the Law on Voluntary Fully Funded Pension Insurance. The payment of a voluntary contribution, on behalf and for the account of a member who has a voluntary individual account, can be made by the member and/or the payer. The payment of voluntary contribution, on behalf and for the account of a member who has a professional account, can be made only by the insured. Payments are made from the transaction account of the member and/or the payer or insured. The voluntary contribution is paid to a special cash account of the voluntary fund, which is kept with the property custodian and is distributed to a voluntary individual account, or to a professional account of the member, depending on the manner of membership registration and after fulfilling the membership requirements.

The member, the payer and the insured have the right to freely determine the amount of the paid voluntary contribution and the dynamics of the payment, and the change of the payment amount, or the termination of the payment, do not affect the right to membership in the fund, i.e., do not imply termination of membership. The amounts of voluntary contributions are determined by the insurer, for all participants in the occupational pension scheme, which he organizes and finances and determines as a percentage of the salary of the member, who is included in the occupational pension scheme.

Table 6.2. Contributions in the third pillar by months and funds

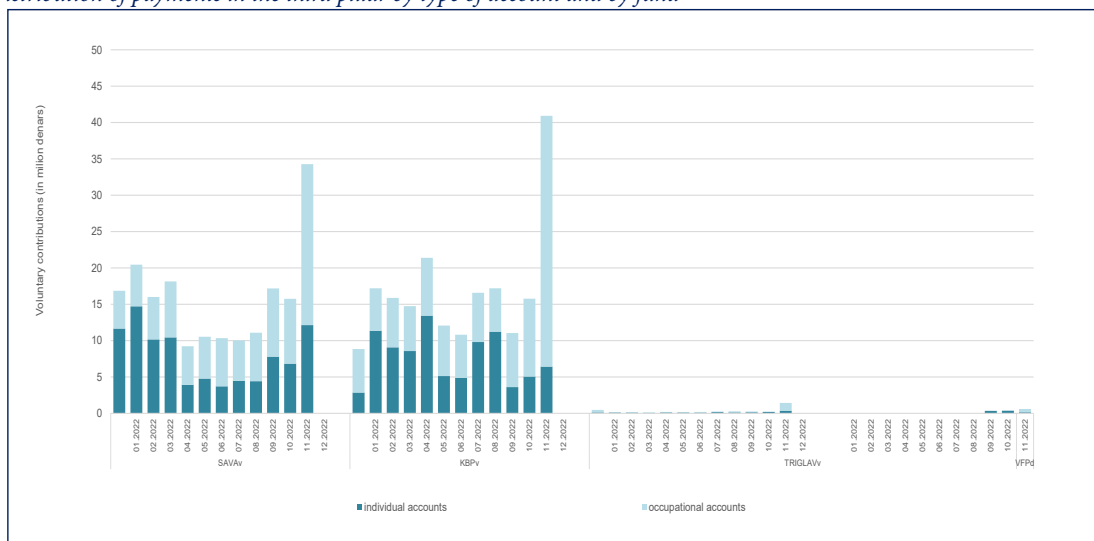
(in million of denars)

	Total 2021	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total 2022
SAVAd	191.52	16.86	20.45	15.99	18,14	9.22	10.53	10.34	10.00	11.09	17,18	15.75	34,28	189.83
KBPd	214.39	8.85	17,20	15.87	14.74	21.38	12.06	10.80	16.57	17,19	11.04	15.76	40.93	202.40
TRIGLAVd	1.80	0.45	0.13	0.15	0.11	0.18	0.13	0.19	0.24	0.28	0.26	0.23	1.42	3.76
VFPv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.79	2.97	4.09
Total	407.71	26,16	37.78	32.02	33.00	30.78	22.72	21,32	26.81	28.55	28.80	32.54	79.61	400.09

In 2022, a total of about 400.09 million denars were paid into the voluntary pension funds, which is about 0.05% of the GDP of the Republic of North Macedonia. The detailed contributions paid by month (in millions of denars) are presented in Table 6.2.

In 2022, the total paid voluntary contributions in the third pillar recorded a decrease of 1.87% compared to 2021. Moreover, compared to the previous year, the total amount of voluntary contributions paid to SAVAd decreased by about 0.88% KBPd also recorded a decrease in total paid voluntary contributions by about 5.59%, while TRIGLAVd recorded an increase in paid voluntary contributions by 109.18%. Voluntary contributions in the amount of 4.09 million denars. In 2022, the share of voluntary contributions in the four voluntary pension funds paid into professional accounts is 53%, while the share of voluntary contributions paid into voluntary individual accounts is 47%. This allocation in terms of funds, in 2022, at SAVAd is equal, that is, 50% of the total voluntary contributions are paid to voluntary individual accounts, while 50% are paid to professional accounts. At KBPd and TRIGLAVd this distribution is similar, and slightly different from the distribution at SAVAd, i.e. at KBPd 45% of the total voluntary contributions are paid into voluntary individual accounts, and 55% into professional accounts, while at TRIGLAVd 43% of the total voluntary contributions were paid to voluntary individual accounts, and 57% to professional accounts. This distribution differs most among VFPd, where 20% of total voluntary contributions are paid into voluntary individual accounts, and 80% on professional accounts. The distribution of payments by type of account to which they were paid and by fund, on a monthly basis, is presented in Graph 6.6.

Graph 6.6. Distribution of payments in the third pillar by type of account and by fund



6.5 Investment and portfolio structure of the voluntary pension funds

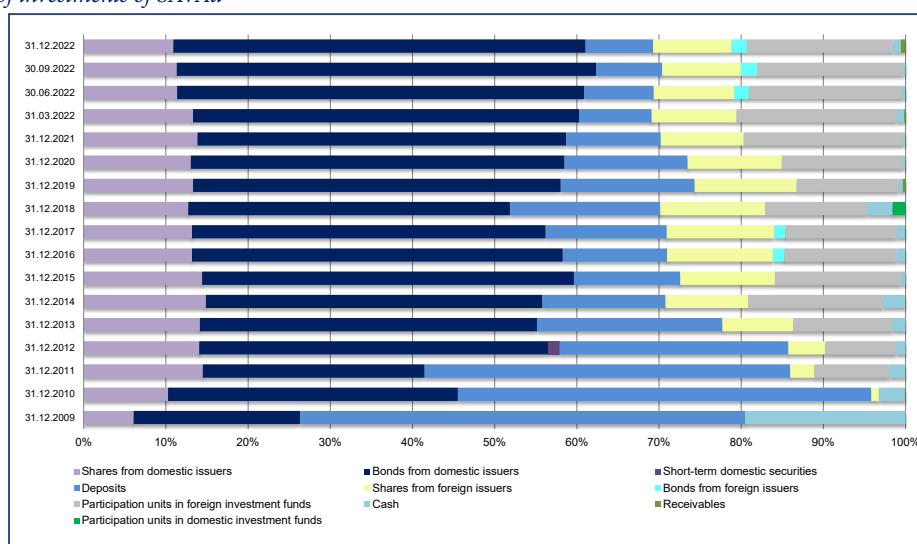
In voluntary fully funded pension insurance, same as in mandatory fully funded pension insurance, in the initial phase, proactive control and quantitative and qualitative restrictions on investments are used. However, unlike mandatory fully funded pension insurance, voluntary pension insurance has more liberal investment terms.

In addition to the instruments allowed in mandatory pension funds, in the voluntary pension funds, for investments abroad, it is also allowed to invest in debt securities, issued by the European Central Bank, the European Investment Bank and the World Bank, as well as debt securities, issued by local self-government units. Because it is necessary to achieve proper diversification between different types of investments and voluntary pension funds, maximum constraints are provided for investing in a certain company and in a certain economic group and maximum constrains on the amounts that can be invested in certain types of instruments. In order to prevent investments in instruments that are not suitable for investing in voluntary pension funds, the law prohibits investments in shares, bonds and other securities, which are not listed on the official market or which are not traded publicly, instruments that cannot be legally available, multiple forms of assets that cannot be immediately assessed and items of uncertain value. The maximum investment constraints are shown in Table 6.3.

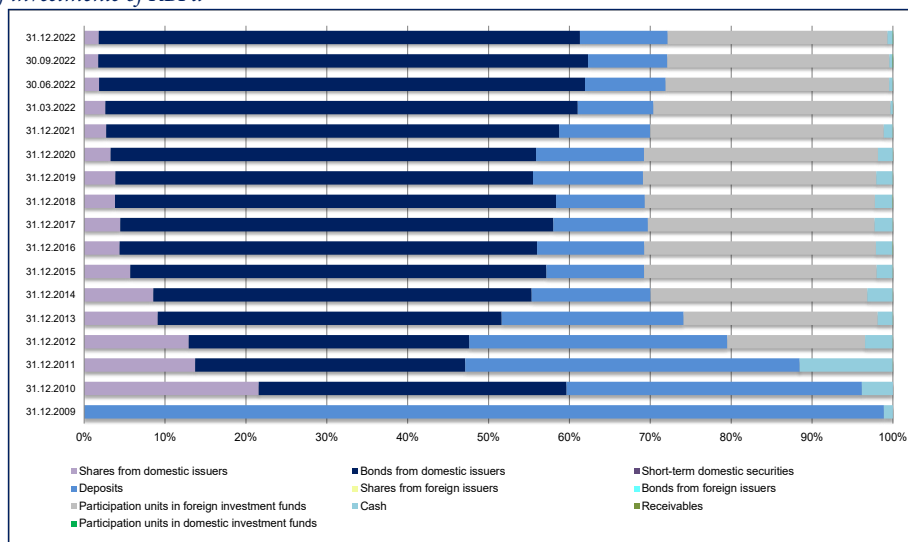
Table 6.3. Maximum investment limits

Type of instrument	Maksimum limit
Investments abroad (EU, OECD)	50%
<ul style="list-style-type: none"> bonds and other securities issued by foreign governments and central banks of foreign countries and debt securities issued by the European Central Bank, the European Investment Bank and the World Bank 	50%
<ul style="list-style-type: none"> debt securities issued by local self-government units, non-state foreign companies or banks, shares issued by foreign companies or banks and share documents, shares and other securities issued by investment funds 	30%
Securities issued or guaranteed by RNM on the domestic market or NBRNM	80%
Bank deposits, deposit certificates, commercial papers, bonds and mortgage backed securities issued by domestic banks	60%
Bonds issued by local self-government and domestic joint stock companies, which are not banks and, commercial notes from domestic joint stock companies, which are not banks	40%
<ul style="list-style-type: none"> bonds issued by local self government units 	10%
Bonds issued by domestic joint stock companies	30%
Participation units and shares in Macedonian investment funds	5%

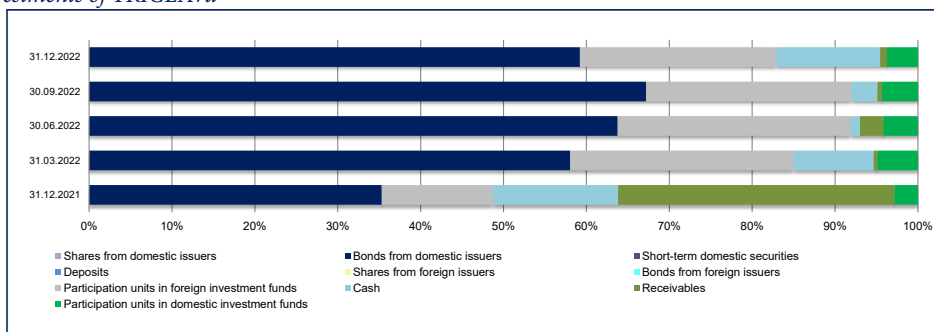
Graph 6.7. Structure of investments of SAVAd



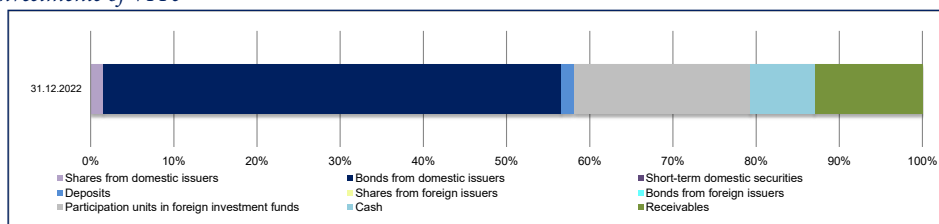
Graph 6.8. Structure of investments of KBPd



Graph 6.9. Structure of investments of TRIGLAVd



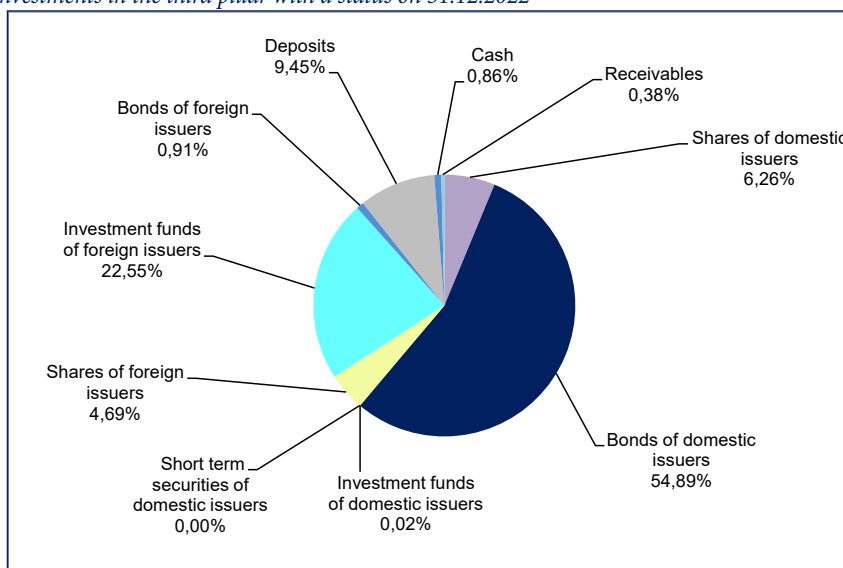
Graph 6.10. Structure of investments of VFPs



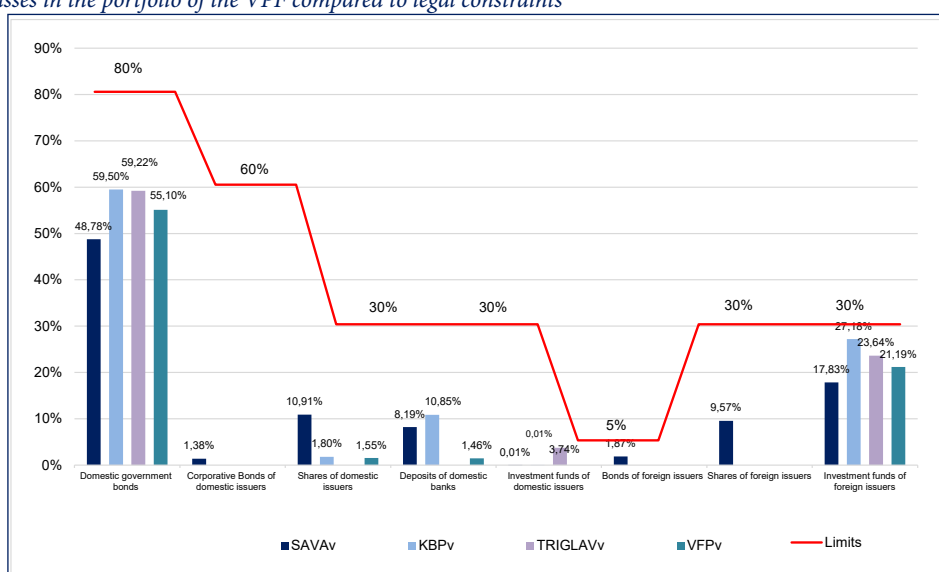
The structure of the investments of the voluntary pension funds SAVAd and KBPd, since the initial operation of the voluntary pension funds (for the period 2009 - 2021, on an annual basis, and for 2022, on a quarterly basis), is presented in Graph 6.7. and in Graph 6.8. The structure of the investments of the voluntary pension fund TRIGLAVd since the initial operation of the fund (01.03.2021) and on a quarterly basis for 2022 is presented in Graph 6.9. The structure of the investments of the voluntary pension fund VFPd since the initial operation of the fund (18.10.2022) on a quarterly basis for 2022 is presented in graph 6.10.

The structure of investments of voluntary pension funds, with a status on 31.12.2022, does not differ much compared to the structure of investments of voluntary pension funds, with a status on 31.12.2021, and it is presented in Graph 6.11. The initial operation of the new voluntary pension fund did not have a significant impact on the overall investment structure of the voluntary pension funds, considering the fact that in the initial years of operation the new fund disposed of small-scale assets that represent a small share of the total assets of the voluntary pension funds. In 2022, the portion of bonds from domestic issuers, which include domestic government bonds (54.21%) and corporate bonds (a perpetual bond issued by a bank, 0.68%) compared to the previous year, recorded an increase and amounted to 54.89%. The portion of deposits in domestic banks decreases compared to the previous year and amounts to 9.45%. Moreover, the portion of shares from domestic issuers decreases compared to the previous year and amounts to 6.26%. A very small part of the investments of the voluntary pension funds belong to investments in shares of domestic investment funds (0.02%). In 2022, the share of investments abroad decreased, compared to the previous year, and amounted to 28.15%. In 2022, a pension fund also invests in foreign government bonds, so investments in foreign securities include investments in foreign government bonds (0.91%), shares of investment funds (22.55%) and investments in shares (4.69%). The remaining part of the assets of the voluntary pension funds consists of cash 0.86% and receivables 0.38%.

Graph 6.11. Structure of investments in the third pillar with a status on 31.12.2022



Graph 6.12. Asset classes in the portfolio of the VPF compared to legal constraints



In 2022, the four voluntary pension funds invested within the maximum investment constraints. Graph 6.12. shows the percentage share in the portfolio by asset classes in SAVAd, KBPd, TRIGLAVd and VFPd and the legal constraints with a status on 31.12.2022.

Voluntary pension funds have higher exposure to assets in shares of domestic issuers (6.26%) compared to mandatory pension funds. Thereby, the exposure of shares in domestic issuers is significantly higher in SAVAd (10.91%) compared to KBPd (1.80%). The exposure to domestic issuers of shares in VFPd in the first year of its operation is 1.55%. Until 31.12.2022 TRIGLAVd has no investments in shares of domestic issuers.

In comparison, the movement¹⁹ of the value of the Macedonian Stock Exchange Index - MBI10, the Bond Index of the Macedonian Stock Exchange - OMB and the values of the accounting units of the voluntary pension funds, in 2022, are presented in Graph 6.13. The value of the accounting unit of SAVAd recorded a decrease of 2.76%, the accounting unit of KBPd a decrease of 2.98%, the accounting unit of TRIGLAVd a decrease of 1.48% and the accounting unit of VFPd recorded a decrease of 1.21% since the beginning of its operation. MBI10, in 2022, recorded a decrease of approximately 8.14%. OMB, in 2022, recorded a decrease of approximately 6.74%¹¹.

Graph 6.13. Comparative movement of the value of MBI10, OMB and the value of the accounting unit of the VPF, 2022.

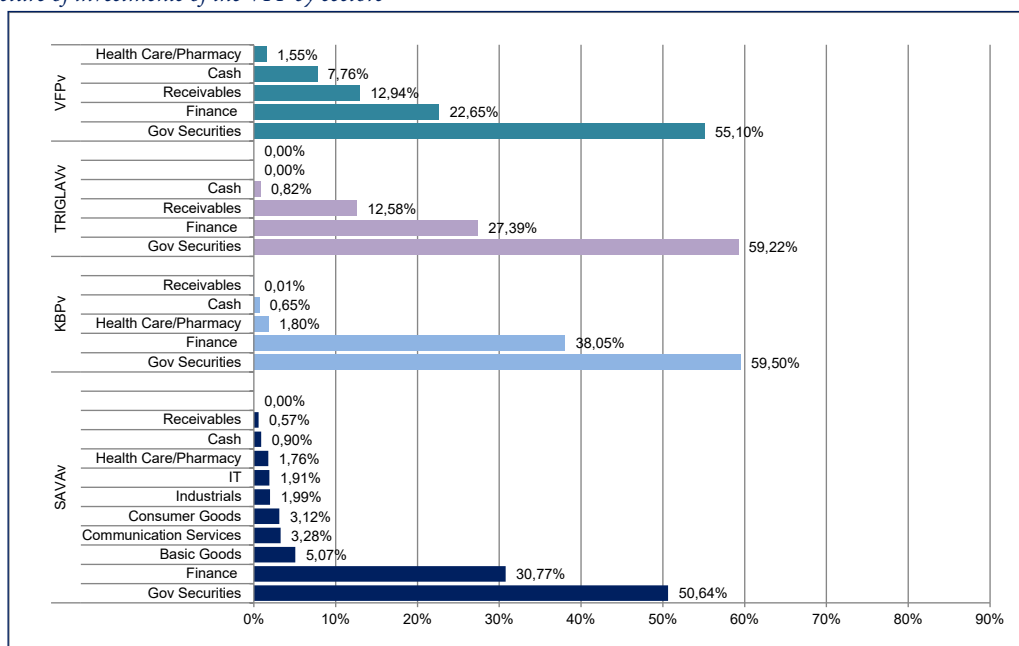


Source: MAPAS and Macedonian Stock Exchange AD Skopje - Annual Statistical Bulletin 2022

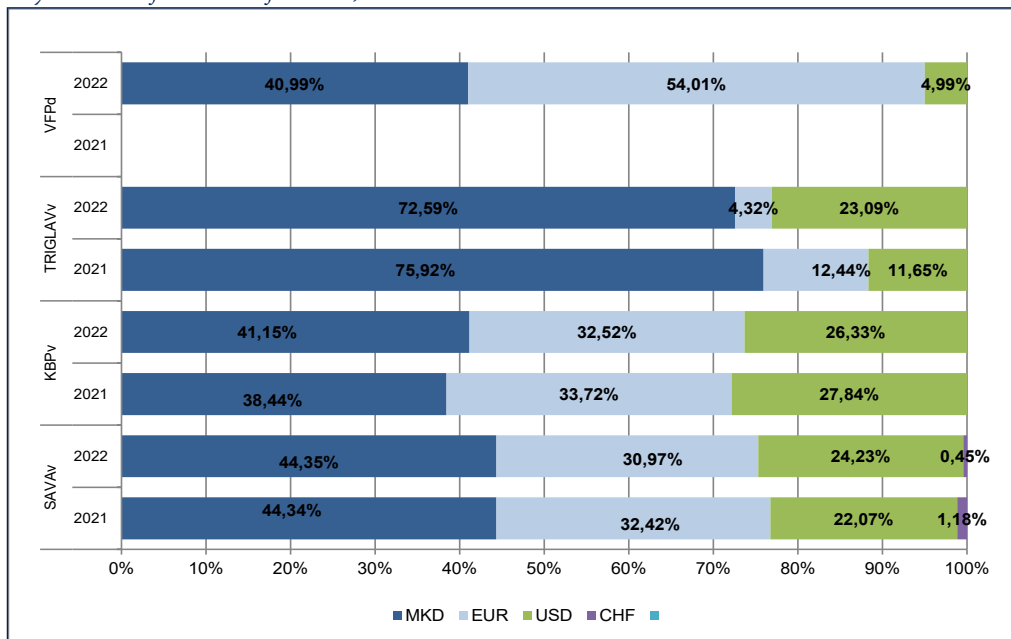
¹⁹The movements are shown through the change of the indices/units in relation to the initial index equal to 100, on 31.12.2021.

In the voluntary pension funds as well, most of the assets in 2022 were invested in domestic government securities (48.78% in SAVAd, 59.50% in KBPd, 59.22% in TRIGLAVd and 55.10% in VFPd) and in foreign government securities (1.87% in SAVAd). This is directly followed by investments in instruments by issuers/joint-stock companies from the financial sector (30.77% in SAVAd, 38.05% in KBPd, 27.39% in TRIGLAVd and 22.65% in VFPd). Within this sector, SAVAd the largest portion of shares in foreign and domestic investment funds (57.98%) and domestic bank deposits (26.62% and the portion of shares in domestic banks is lower (6.73%), bonds issued by domestic banks (4.48%) and financial services (4.18%). The portion of foreign investment funds is dominant in KBPd (71.47%) within the financial sector, and the rest belongs to domestic bank deposits (28.53%). The portion of foreign and domestic investment funds (100%) also prevails in TRIGLAVd within the financial sector. The participation of foreign and domestic investment funds prevails in VFPd (93.55%) within the financial sector, and the rest belongs to domestic bank deposits (6.45%). In addition to the abovementioned sectors, voluntary pension funds invest in other sectors as well: basic goods, pharmacy, consumer goods, industry, information technology, communication services and energy, however with a much smaller portion (from 1.55 to 5.07%). The structure of investments of voluntary pension funds, by sectors, is presented in Graph 6.14.

Graph 6.14. Structure of investments of the VPF by sectors



Graph 6.15. Currency structure of the assets of the VPF, 2020-2021

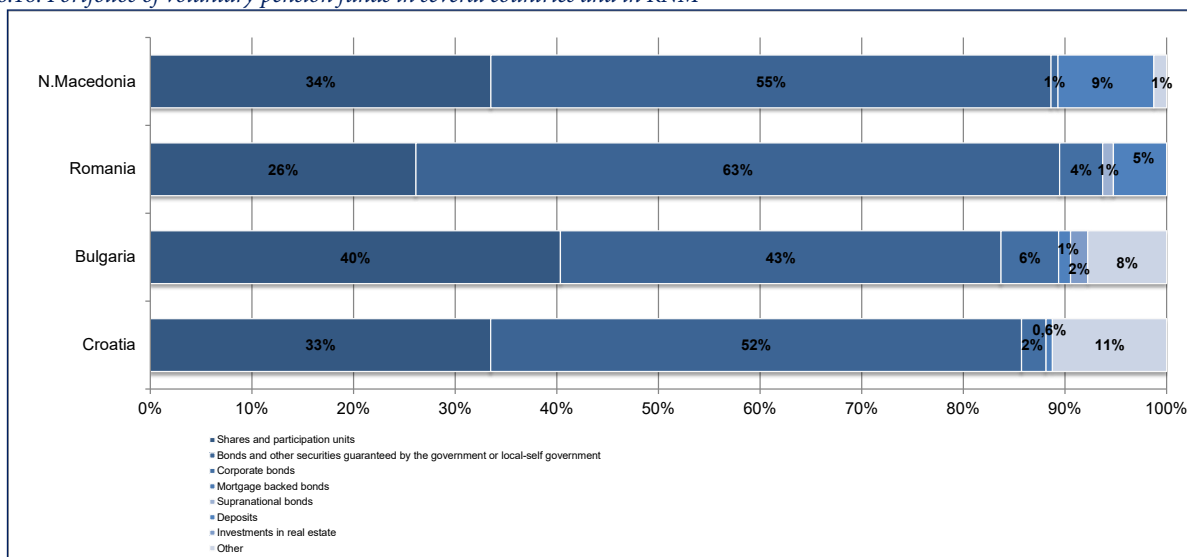


In regard to the currency structure of the assets of voluntary pension funds, presented in graph 6.15., we can see that SAVAd and KBPd have a similar currency structure. Namely, in 2022, most of the assets of SAVAd are invested in instruments in domestic currency (44.35%), while the portion in instruments in euros is 31.61%. In SAVAd, the portion in instruments in denars and the portion in instruments in euros remain almost at the same level compared to last year. In KBPd, most of the funds are invested in instruments in domestic currency (41.15%), while the portion in instruments in euros is 32.52%. In 2022, compared to last year, in KBPd, the portion in instruments in denars increases, while the portion in instruments in euros decreases slightly. The portion of investments in US dollars in SAVAd (23.59%) is increasing, while at KBPd (26.33%) it is decreasing compared to the previous year. The currency structure at SAVAd also includes a small portion of instruments that are invested in Swiss francs, 0.45%. The currency structure of TRIGLAVd differs from the currency structure of SAVAd and KBPd. Although it is decreasing, the weight of the assets of TRIGLAVd is still on the side of assets invested in denar instruments (60.16%). In 2022, an increase in the share of instruments in foreign currency is observed, i.e. only 16.75% of the assets of TRIGLAVd are invested in instruments in euros, and 23.09% of the assets are invested in instruments in US dollars. In addition, the currency structure of VFPd differs in relation to the currency structures of SAVAd, KBPd and TRIGLAVz. In VFPd, most of the assets are invested in instruments in euros (54.01%), followed by the portion in instruments in domestic currency (40.99%), and the smallest portion in instruments in US dollars (4.99%).

If a comparison is made with the countries that have similar pension systems with the Macedonian one, there are observable similarities, but also differences in the investment portfolios of the voluntary pension funds. Graph 6.16. shows a comparison of the investments, with a status on 31.12.2022, of the voluntary pension funds in the Republic of North Macedonia, with the investments of the voluntary pension funds in some of the countries in the region that have implemented voluntary fully funded pension insurance.

If the portfolios of voluntary pension funds are reviewed by instruments, it can be noticed that pension funds in almost all countries have the highest exposure to bonds and other securities guaranteed by the country or local government (63% in Romania, in North Macedonia 55%, in Croatia 52%, and the lowest percentage in Bulgaria, 43%). Exposure to bank deposits is highest in North Macedonia and amounts to 9%. Unlike North Macedonia, in other countries the exposure to deposits is significantly lower: Romania (5%), Croatia and Bulgaria (approximately 1%). In terms of investments in stocks and shares, the largest percentage of assets in shares and stocks are invested in the pension funds in Bulgaria (40%), North Macedonia (34%), followed by Croatia (33%), and Romania (26%). Pension funds also invested in corporate bonds, 6% in pension funds in Bulgaria, 4% in Romania and 2% in Croatia. Compared to the pension funds in other countries, the share of investments in corporate bonds in the pension funds in North Macedonia is significantly lower, 1%. Only in Bulgaria the pension funds invested in real estate (2%), and in other countries, usually, this instrument is not allowed. In terms of foreign investments²⁰, pension funds in North Macedonia have the highest exposure to foreign investments with 28%, followed by pension funds in Croatia with 23% and Romania with 10%.

Graph 6.16. Portfolios of voluntary pension funds in several countries and in RNM



Sources: www.hanfa.hr; www.fsc.bg; www.asfromania.ro and own calculations.

²⁰The data on foreign investments for Bulgaria dated 31.12.2022 were not available.

6.6 Net assets, accounting unit and rate of return of voluntary pension funds

The method of calculation of the net assets, the accounting unit and the return of the voluntary pension funds is the same as for the mandatory pension funds.

The changes in the assets of the voluntary pension funds, from the beginning to the end of the year, occur due to:

- inflow of contributions,
- outflow due to fees and transaction fees,
- inflow due to personal income tax refund,
- outflow due to incorrect payment of converted contributions,
- inflow due to transfer from the other voluntary pension fund (for persons who were members of another fund and then transferred to the current fund),
- outflow due to transfer to the other voluntary pension fund (persons who were members of the respective fund, and then transferred to the other fund),
- outflow due to payment of inheritance,
- outflow due to payment of pension benefits (single and multiple payments),
- un(realized) profits/losses from investments.

Starting from the value of the net assets at the end of the previous year and taking into account all the above-mentioned changes, we come to the value of the net assets at the end of the year (which is shown in Table 6.4.).

Table 6.4. Changes in the assets of the voluntary pension funds (in millions of denars)

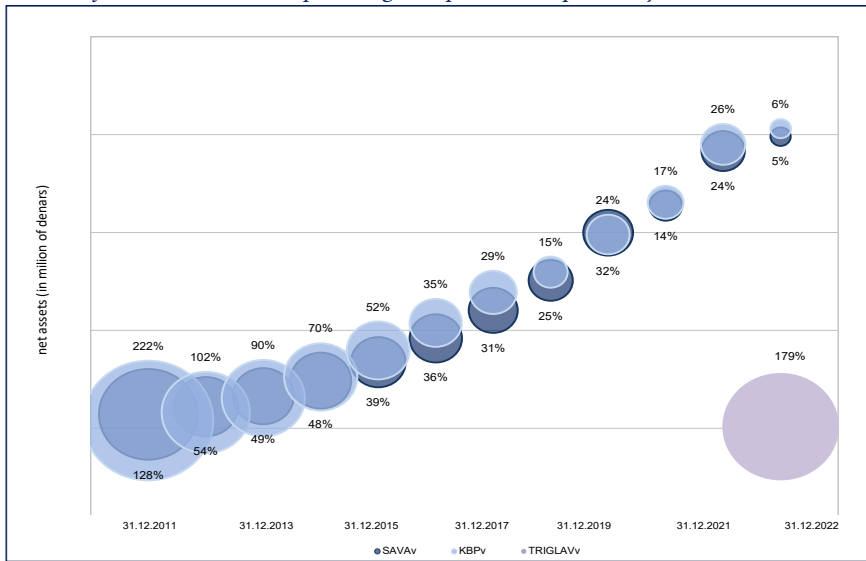
	SAVAd	KBPd	TRIGLABd	VFPd
Net assets on 31.12.2021	1,416.14	1,450.40	3.06	0.00
Contributions	189.83	202.40	3.76	4.09
Fees from contributions	4.31	5.59	0.10	0.11
Contributions reduced for fees from contributions	185.52	196.82	3.65	3.98
Payment on an individual account from personal income tax refund	0.00	0.00	0.00	0.00
Outflow for incorrect payment of converted contributions	0.10	1.85	0.01	0.00
Compensation from assets	12.97	13,34	0.05	0.01
Expenditures for intermediary commissions	0.29	0.06	0.00	0.01
Transfer from the other fund	3.51	3.29	1.92	19.44
Transfer to the other fund	11.47	16.69	0.00	0.00
Inheritance payment	5.44	3.34	0.00	0.00
Payment of pension compensation - one-time payment/multiple payment	58,53	53.46	0.00	0.00
Gross return on investment	-26.35	-31.33	-119.23	17.64
Net return on investment	-39.60	-44.74	-119.28	17.62
Net assets on 31.12.2022	1,490.03	1,530.44	8.55	23,18

The total net assets in the voluntary pension funds, with a status on 31.12.2021, amounted to approximately 3.05 billion denars or approximately 49.63 million euros, which is about 0.38% of the GDP.

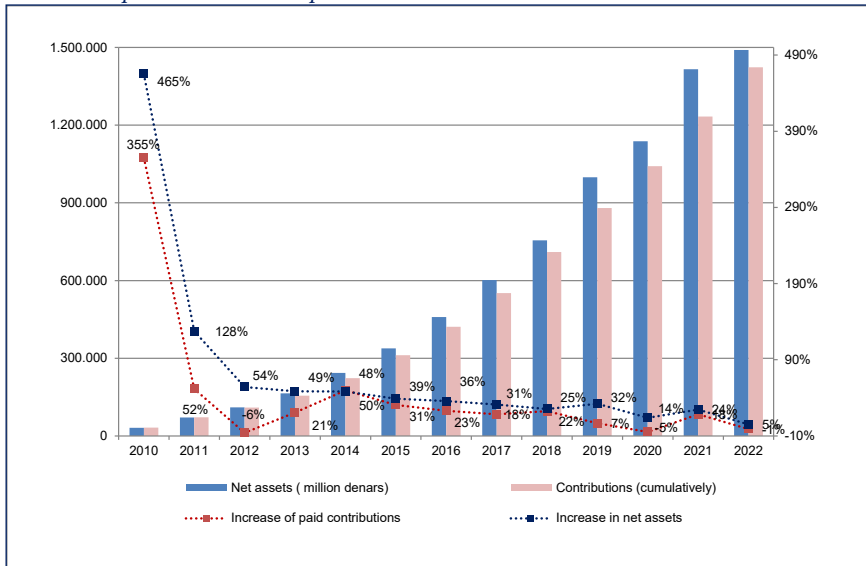
Graph 6.17. shows the values of the net assets at the end of all years and their increase in percentage compared to the net assets in the previous year. Thereby, it can be noticed that the net assets of SAVAd and KBPd are growing with a similar trend. The biggest growth is observed in 2011 compared to 2010, while the lowest growth is observed in 2022 compared to 2021. In TRIGLABd, a large increase in net assets can be observed in the second year of the fund's operation compared to the first year.

The movement of the value of net assets and cumulative contributions, as well as the increase of paid contributions and the increase in net assets in SAVAd and KBPd are presented in Graph 6.18. and Graph 6.19. The increase of the net assets of voluntary pension funds is implied by the increase of the paid contributions and the investment results. For 2022, a decrease in the growth of net assets is observed and it is mostly due to the paid contributions as a consequence of the negative investment results. The portion of cumulative contributions in the total net assets during the first years is significantly large, and then it decreases with the exception of 2022.

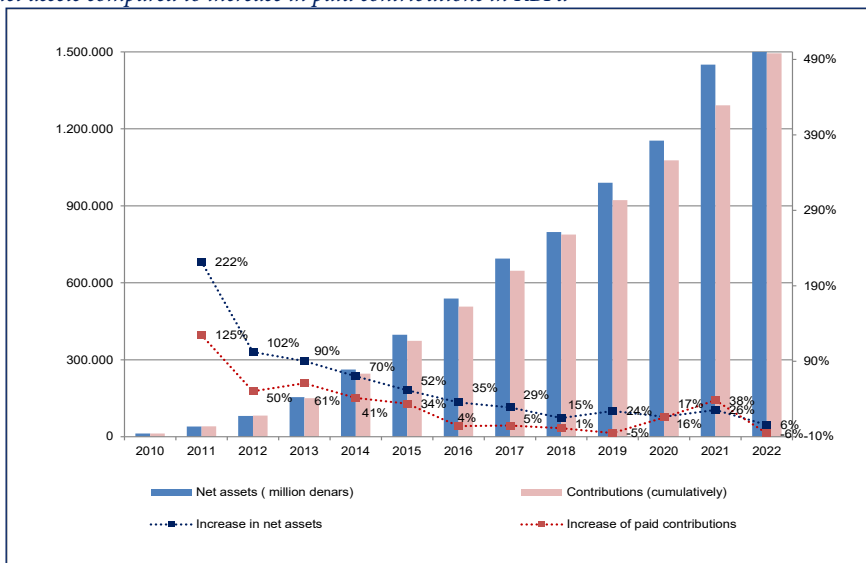
Graph 6.17. Increase in net assets of SAVAd and KBPd in percentage compared to the previous year



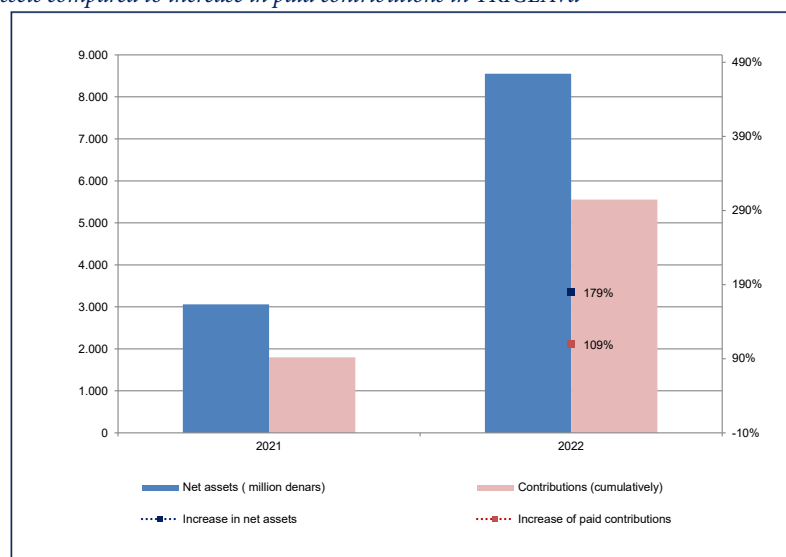
Graph 6.18. Increase in net assets compared to increase in paid contributions in SAVAd



Graph 6.19. Increase in net assets compared to increase in paid contributions in KBPd



Graph 6.20. Increase in net assets compared to increase in paid contributions in TRIGLAVd



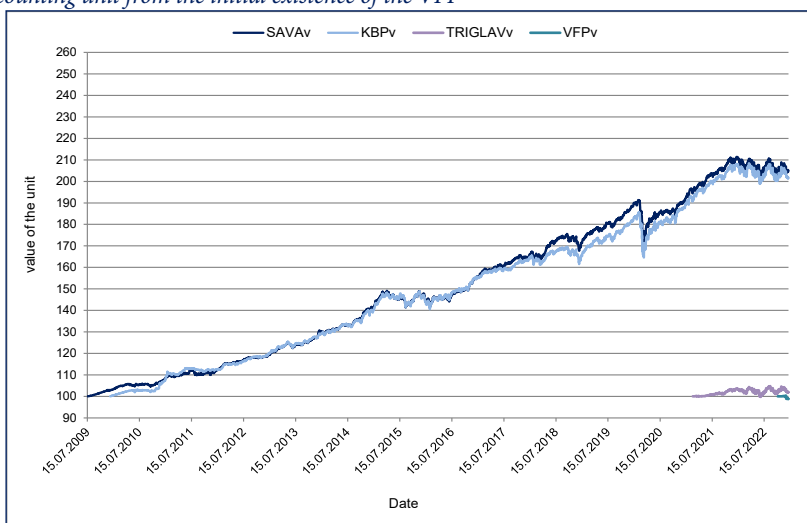
In SAVAd, in the initial period (2009-2011), there is an observable large increase in net assets and paid contributions. In 2012, compared to 2011, the increase in net assets was 54%, while in paid contributions a decrease of 6% can be noticed. In the next six years, the growth of the net assets of SAVAd will gradually decrease from 49% to 25% in 2018 compared to 2017. In 2019, an increase of 32% is observed. In 2020, the growth of net assets of SAVAd slows down again and amounts to 14%. After the increased growth of the net assets of SAVAd in 2021 (24%), in 2022 a larger deviation than usual is observed and the growth of the net assets of SAVAd amounts to 5%. On the other hand, in the contributions paid in 2014, a greater increase is observed, in the amount of 50%, and in the following years, the increase in the contributions paid gradually decreases until 2017. In 2018, compared to 2017, the increase in paid contributions increased again and amounted to 22%, while in 2019 the value decreased and amounted to 7%. In 2020, there was a decrease in paid contributions by 5% compared to 2019. After the increased growth of paid contributions in 2021 (18%), in 2022 a decrease of paid contributions by 1% was observed.

In addition, also in KBPd, in the initial period (2010 - 2012), there is an observable large increase in net assets and paid contributions. In 2013, compared to 2012, the increase in net assets amounted to 90%, while the increase in paid contributions was around 61%. In the following years, the growth of net assets and paid contributions in KBPd began to decline gradually. In 2018, compared to 2017, in KBPd, the net assets increased by 15% and the paid contributions increased by 1%. In 2019, compared to 2018, in KBPd, the increase in net assets additionally increased to 25%, however the amount of paid contributions decreased by 5%. In 2020, there is again a reduced growth of net assets, i.e., the net assets increased by 17% compared to 2019. The amount of paid contributions in 2020 compared to 2019 increased by 16%. And in the case of KBPd, after the increased growth of the net assets of KBPd in 2021 (26%), in 2022 a larger deviation than usual is observed and the growth of the net assets of KBPd is 6%. The same trend is observed in the amount of paid contributions, i.e., after the increased growth of paid contributions in 2021 KBPd (38%), in 2022 compared to 2021 there was a decrease of paid contributions by 6%.

The movement of the value of net assets and cumulative contributions, as well as the increase in paid contributions and the increase in net assets of TRIGLAVz, for the first two years of operation of TRIGLAVd, 2021 and 2022, are shown in graph 6.20. At TRIGLAVd, an increase in net assets and cumulative contributions is observed in 2022 compared to 2021. The growth of the net assets of TRIGLAVd, in addition to being implied by the growth of paid contributions, is also due to the funds transferred from SAVAd and KBPd to TRIGLAVd based on the concluded agreements for the transfer of the members who transferred from SAVAd and KBPd to TRIGLAVz.

The movement of the value of the accounting units of the voluntary pension funds, from the beginning of the operation of the voluntary pension funds, until 31.12.2022, is presented in Table 6.5., in Graph 6.21. and in Graph 6.22. Moreover, since the beginning of the operation of SAVAd and KBPd, a growing trend of the accounting units has been observed. On March 1, 2021, a third voluntary pension fund, TRIGLAVd, started operating. On 18.10.2022, the fourth voluntary pension fund, VFPd, started operating. In 2022, the accounting units of the four voluntary pension funds recorded larger oscillations than usual caused by the unfavorable conditions in the financial markets in the context of the global crisis as a result of the military conflict between Ukraine and Russia. Hence, in 2022, the accounting units of the four mandatory pension funds recorded a deviation from the growth trend. Moreover, at the end of the year, the value of the accounting unit of SAVAd recorded a decline of 2.76, compared to 2021, of KBPd a decline of about 2.98, the value of the accounting unit of TRIGLAVd recorded a decline of 1.48%, while the value of the accounting unit of the VFPd recorded a decline of 1.21% since the initial operation. However, pension funds, by their very nature, operate over the long term, so their performance should be evaluated over the long term.

Graph 6.21. Value of the accounting unit from the initial existence of the VPF



Graph 6.22. Value of the accounting unit of the VPF in 2022

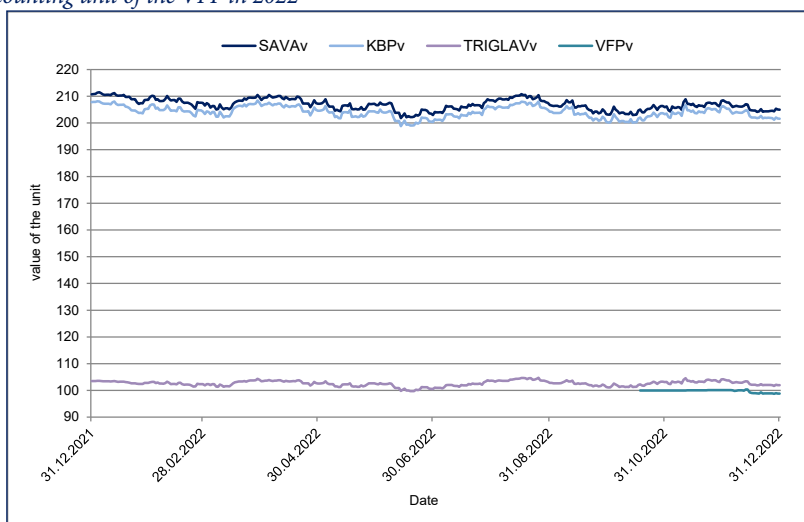


Table 6.5. Value of the accounting unit from the initial existence of VPF

Date	Value of accounting unit		Date	Value of accounting unit			
	SAVAd	KBPd		SAVAd	KBPd	TRIGLABd	VFPd
15.09.2009	100,000000		31.12.2021	210.750156	207.793725	103.476074	
21.12.2009	102,815757	100,000000	31.03.2022	208.584994	206.318704	103.404732	
31.12.2009	103,061825	100,204385	30.06.2022	203.007328	200.348676	100.516971	
31.12.2010	107,592926	106,891617	30.09.2022	203.311922	200.457940	101.252279	
31.12.2011	111,854726	112,639593	31.12.2022	204.936103	201.600542	101.945390	98.791716
31.12.2012	118,742851	119,129537					
31.12.2013	130,511147	129,015451					
31.12.2014	140,946772	139,908803					
31.12.2015	147,535595	146,709341					
31.12.2016	154,578083	154,465341					
31.12.2017	164,155073	162,989756					
31.12.2018	169,649887	163,696595					
31.12.2019	188,197689	181,404697					
31.12.2020	191,209810	188,085163					

The return of the voluntary pension funds by periods, reduced to the annual level, is shown in table 6.6.

Table 6.6. VPF yield*

Period**	SAVAd		KBPd		TRIGLAVd****	
	in nominal trm	in real term	in nominal term	in real term	in nominal term	in real term
31.12.2009-31.12.2010	4,40%		6,67%			
31.12.2009-31.12.2011	4,18%		6,02%			
31.12.2009-31.12.2012	4,83%		5,93%			
31.12.2009-31.12.2013	6,08%	3,00%	6,52%	3,42%		
31.12.2009-31.12.2014	6,46%	4,09%	6,90%	4,52%		
31.12.2009-31.12.2015	6,16%	4,25%	6,56%	4,64%		
31.12.2009-31.12.2016	5,96%	4,36%	6,37%	4,77%		
31.12.2010-31.12.2017	6,22%	4,72%	6,21%	4,71%		
31.12.2011-31.12.2018	6,13%	4,91%	5,48%	4,27%		
31.12.2012-31.12.2019	6,80%	6,22%	6,19%	5,62%		
31.12.2013 - 31.12.2020	5,60%	4,90%	5,53%	4,82%		
31.12.2014 - 31.12.2021	5,91%	4,41%	5,81%	4,31%		
31.03.2015 – 31.03.2022	5,08%	2,95%	4,99%	2,87%	-	-
30.06.2015 – 30.06.2022	4,90%	1,90%	4,70%	1,70%	-	-
30.06.2021 – 30.06.2022	-	-	-	-	-0,16%	-12,76%
30.09.2015 – 30.09.2022	5,16%	1,33%	4,98%	1,16%	-	-
30.06.2021 – 30.09.2022	-	-	-	-	0,46%	-13,11%
31.12.2015 – 31.12.2022	4,80%	0,77%	4,64%	0,61%	-	-
30.06.2021 – 31.12.2022	-	-	-	-	0,84%	-11,60%
Start*** – 31.12.2022	5,48%	2,47%	5,52%	2,45%	1,06%	-10,39%

*Until 31.12.2022, no return is calculated and published for VFPd because it has been operating for less than 12 months.

**Until the adoption of the amendments to the Law on Voluntary Fully Funded Pension Insurance, from January 2013, the return of a voluntary pension fund was calculated for a period of 3 years, only in nominal amount.

***The start is 15.07.2009 for SAVAd, 21.12.2009 for KBPd and 01.03.2021 for TRIGLAVd.

****TRIGLAVd is included in the comparative analyses on return with calculated return for the respective periods, according to the regulation, because it exists longer than 12 months, however less than 84 months.

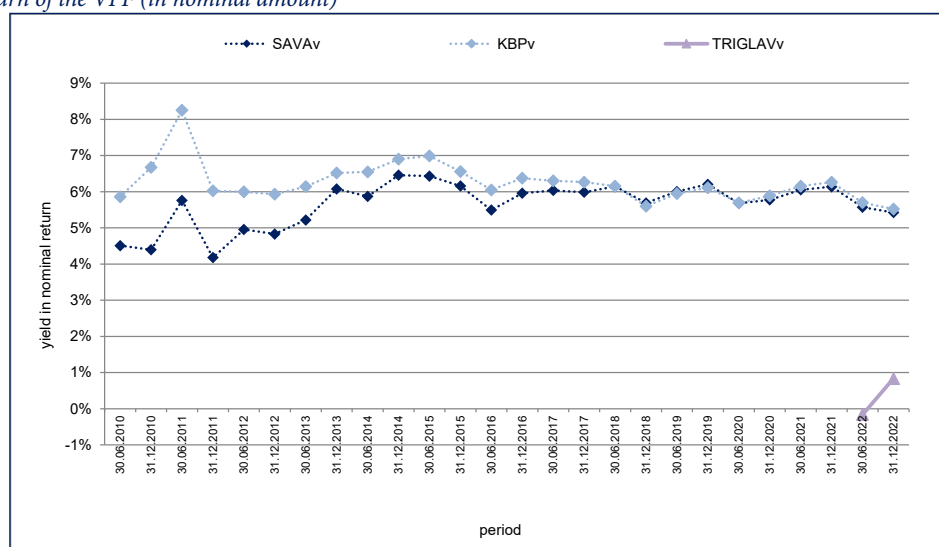
The return on the voluntary individual and/or professional account is variable and depends on the return of the voluntary pension fund and the fees charged by the company. The return, i.e., the profit, is a parameter that cannot be realistically predicted, because it depends on the conditions of the capital market and the overall economy.

The return of the voluntary pension funds is calculated in the same way and according to the same formula as the return of mandatory pension funds.

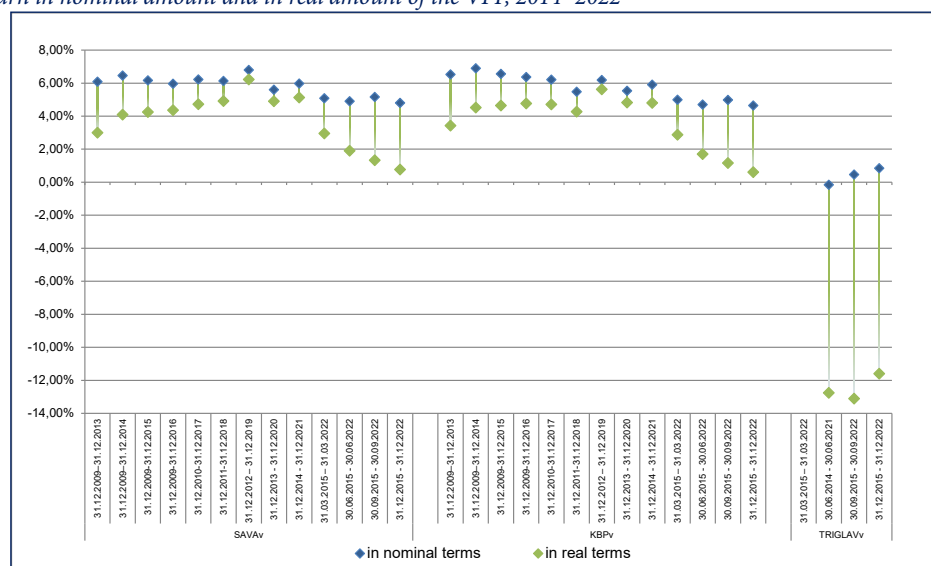
Considering the long-term nature of pension insurance, it is good to calculate the return of voluntary pension funds from the beginning of their existence, reduced to an annual level, which for SAVAd amounts to 5.48% in nominal amount, i.e., 2.47% in real amount, for KBPd it amounts to 5.52% in a nominal amount, i.e., 2.45% in real amount, and for TRIGLAVd 1.06% in nominal amount, i.e. - 10.39% in real amount.

The movement of the return in nominal amount, by periods, can be seen in Graph 6.23., where the returns by periods are shown, from 31.12.2009 to 31.12.2022, by funds. At the beginning, one can notice an increase in return, so at the end of the first half of 2011, high returns are observed in both voluntary pension funds, while at the end of 2011, there was a decrease in returns. Then, in the following years, there was a gradual increase in returns until mid-2015, followed by a decline in returns until mid-2016, and then again there is an increase in return, until the end of 2016. In 2019, there is an observable increase in return compared to the return at the end of 2018. In 2020, lower returns are recorded compared to 2019 in SAVAd and KBPd, mostly due to the unfavorable conditions on the financial markets in conditions of a coronavirus pandemic. After the increase in returns in 2021, in 2022 there is a decrease in returns for SAVAd and KBPd due to the global crisis caused by the military conflict between Ukraine and Russia. TRIGLAVd in the initial years of its operation and in exceptional circumstances due to the unfavorable conditions in the financial markets recorded a return in a nominal amount less than zero, which was already compensated in the next period.

Graph 6.23. Return of the VPF (in nominal amount)



Graph 6.24. Return in nominal amount and in real amount of the VPF, 2014- 2022



The movement of the return in nominal and real amount, in the period from 2013 to 2022 (on an annual level) and in 2022 (on a quarterly level), after appropriate legally defined periods, converted into an equivalent annual rate of return, by voluntary pension fund, can be seen in Graph 6.24. This graph also shows the movement of the return in nominal and real amount of TRIGLAVd, for the corresponding periods according to the regulation because it has existed longer than 12 months but less than 84 months. In 2022 year the return in nominal amount and real amount reduced in both SAVAd (from 4.90% to 4.80% in nominal amount and from 1.90% to 0.77% in real amount) and KBPd (from 4.70% to 4.64% in nominal amount and from 1.70% to 0.61% in real amount). In 2022 year the return in both nominal and real amount notes reduced in both SAVAd (from 5.08% to 4.80% in nominal and from 2.95% to 0.77% in real amount) and KBPd (from 4.99% to 4.64% in nominal amount and from 2.87% to 0.61% in real amount). At the same time, the lowest amount of return in nominal amount and in real amount was recorded in the fourth quarter for pension funds that have existed for more than seven years. The return of the third voluntary pension fund that started operating in March 2021 after the negative result in nominal amount in June 2022, recorded growth both in nominal amount (from -0.16% to 0.84%) and in real amount (from -12.76% to -11.60%). In the reviewed period (2013-2022), the change in the level of the cost of living in the accounting periods, reduced to an annual level, until 2019 it recorded a decrease, which affects the gradual approach of returns in real amount to returns in nominal amount, while in the period after 2019 (especially in 2022) it recorded an increase that affects the gradual distancing of returns in real amount from returns in nominal amount.

The seven-year return at the level of voluntary fully funded pension insurance for the period 31.12.2015 - 31.12.2022, calculated through the change of the weighted average²¹ of the accounting units of the voluntary pension funds, reduced to an annual level, is 4.64% in nominal amount, that is, 0.61% in real amount.

²¹The average value is calculated as a weighted average of the accounting units of the voluntary pension funds in relation to the net assets of the voluntary pension funds.

6.7 Fees in voluntary pension funds

In order to perform its functions of management of the assets of the voluntary pension fund, assessment of the assets, membership registration, keeping voluntary individual and professional accounts of the members and reporting to the members, as well as for payment of fees for MAPAS and the property custodian, the companies, in accordance with the Law on Voluntary Fully Funded Pension Insurance, charge a fee from contributions, a fee from assets and a fee for transfer.

The fee from contributions is charged as a percentage of each paid contribution to a voluntary pension fund, before its conversion into accounting units. This compensation is charged by the company in the same percentage, from all members of the voluntary pension fund, except in the case of members who are participants in an occupational pension scheme or in the case of a multi-year membership. The monthly fee from assets is a percentage of the value of the net assets of the voluntary pension fund, which is calculated on each date of assessment of the assets of the voluntary pension fund (in accordance with applicable bylaws, the date of assessment is every day) and is charged once a month. The fee for transfer is charged in case of transfer of a member from one voluntary pension fund to another voluntary pension fund, provided that the transferring member has been a member of the existing voluntary pension fund for less than one year.

The law determines the maximum amounts, and the companies are free to determine the amounts of certain types of fees within the legal maximum.

The fees charged by the companies managing the voluntary pension funds in the Republic of North Macedonia, for 2022, are shown in Table 6.7.

Table 6.7. Fees charged by companies managing voluntary pension funds in 2021

Type of fee	SAVA	KB First	TRIGLAV	VFP
Fee from contributions*	2,50% ²²	2,90% ²³	2,90%	2,90%
Monthly fee from the assets of the voluntary pension fund	0,075% ²⁴	0,075% ²⁵	0,075%	0,075%
Transfer fee				
Number of days**	Amount of transfer fee	Amount of transfer fee	Amount of transfer fee	Amount of transfer fee
number of days ≤ 360	10 Euros	10 Euros	10 Euros	10 Euros
number of days > 360	Transfer fee not charged	Transfer fee not charged	Transfer fee not charged	Transfer fee not charged

* For members who are participants in an occupational pension scheme, the company may set a lower amount of this fee.

** The number of days is determined based on the number of days from the date when the member acquired the status of a member of the existing voluntary pension fund to the date of signing the membership agreement with the future voluntary pension fund.

The amount of fees from contributions, which were collected from the initial operation of the third pillar, until 2022, is shown in Table 6.8.

Since the initial operation of the voluntary pension funds, the pension companies have reduced the fee from contributions, SAVA reduced it three times, while KB First reduced it twice. The fee from assets from the initial operation of the third pillar was 0.15% per month of the value of the net assets of the voluntary pension fund. In addition, in 2011, both companies reduced the fee to 0.100% in SAVA and 0.075% in KB First. In 2021 SAVA once again reduced the fee and now it is 0.075%.

The collection of fees (in thousands of denars), by the companies that manage the voluntary pension funds, in 2022, by months and by type of compensation, is shown in Table 6.9.

²² As of 1 May 2021 (previously it was 2,90%).

²³ As of 1 June 2013 (previously it was 4,00%).

²⁴ As of 1 May 2021 (previously it was 0,100%).

²⁵ As of 1 January 2011 (previously was 0,15%).

Table 6.8. Fee amount from the contributions charged by the pension companies in the third pillar

Pension company	Amount	Date of application
SAVA	5,25%	From the initial operation of the fund (July 15, 2009)
	3,80%	From March 1, 2011
	2,90%	From January 1, 2017
	2,50%	From 1 May 2021
KB First	5,50%	From the initial operation of the fund (December 1, 2009)
	4,00%	From April 24, 2010
	2,90%	From June 1, 2013
TRIGLAV	2,90%	From March 1, 2021
VFP	2,90%	From the initial operation of the fund (18 October 2022)

Table 6.9. Collection of fees in companies in 2022

(in thousands of denars)

	Jan.	Feb.	March	April.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
SAVAd- total	1.456	1.549	1.438	1.492	1.276	1.303	1.308	1.323	1.333	1.472	1.457	1.873	17.281
From contributions	395	483	372	416	205	236	226	223	247	389	354	768	4.315
From assets	1.061	1.066	1.066	1.076	1.071	1.067	1.081	1.100	1.086	1.083	1.103	1.105	12.967
KBPd-total	1.322	1.572	1.532	1.516	1.705	1.431	1.413	1.597	1.613	1.422	1.573	2.234	18.932
From contributions	239	487	440	412	604	333	302	461	486	301	432	1.092	5.589
From assets	1.083	1.086	1.093	1.103	1.101	1.099	1.111	1.137	1.128	1.121	1.141	1.142	13.343
TRIGLAVd - total	15	6	7	6	8	7	9	11	12	12	12	44	149
From contributions	13	4	4	3	5	4	6	7	7	7	7	39	104
From assets	2	3	3	3	3	3	4	4	5	5	5	6	46
VFPd - total										9	21	98	128
From contributions										9	20	85	114
From assets										0	1	13	15

The transaction fees, in regard to the transactions for acquisition or transfer of the assets of the voluntary pension fund, are paid from the assets of the voluntary pension fund, and are collected by selected legal entities that provide services with securities, at home and abroad. The transaction fees are calculated as a percentage of the value of each concluded transaction.

In 2022, a total of approximately 287 thousand denars of transaction fees were collected from SAVAd, while a total of about 64 thousand denars of transaction fees were collected from KBPd. In 2022, a total of 3 thousand denars were collected from TRIGLAVd, while 13 thousand denars of transaction fees were collected from VFP.

6.8 Payment of pension benefits from voluntary fully funded pension insurance

The requirements for acquiring the right to a pension fee and the manner of payment of the pension fee from the third pillar are more liberal compared to the second pillar, however one should bear in mind that these are savings for the period after retirement. Namely, the funds can be withdrawn at the earliest ten years before the age for acquiring the right to old age pension, in accordance with the Law on Pension and Disability Insurance, which at the moment would imply the earliest at the age of 54 for men and 52 for women. Funds may also be withdrawn in the event when the Work Ability Assessment Commission within the PDIFNM has established that a member is generally incapable to work, regardless of age. In case of death of a member of a voluntary pension fund, the funds from the account of the member become part of the person's estate and they are treated in accordance with the Law on Inheritance.

The funds from the third pillar are used at the choice of the member in the following types of pension benefits:

- single or multiple payment of funds;
- pension annuity paid by an insurance company authorized for that purpose;
- programmed withdrawals paid by the company managing a voluntary pension fund, or
- a combination of the above options.

The provision of pensions and pension benefits, which are paid from the second and third pillars, is regulated by the Law on Payment of Pensions and Pension Benefits from Fully Funded Pension Insurance.

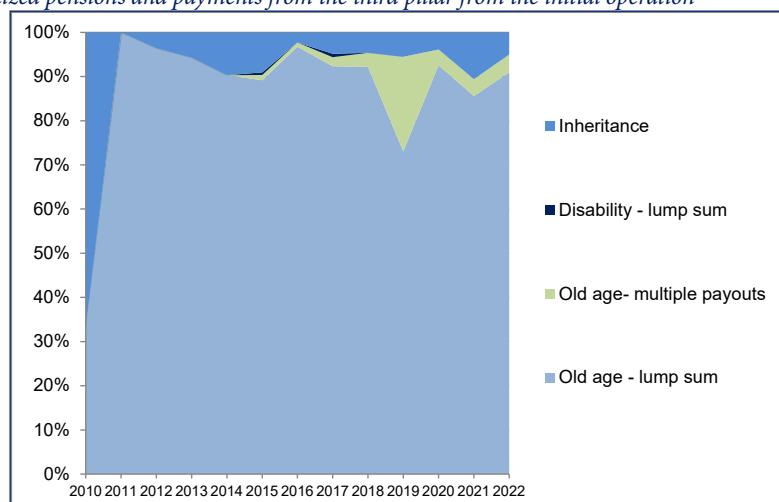
In 2022, 377 pension benefits and payments from the third pillar were realized. Most of the realized pension benefits were in cases of fulfilled age criteria, mostly as one-time payments, and a small part as multiple payments. Disability pension benefits were also paid as a one-time payment. A small part of the payments in the third pillar were in case of death of a member, with payment of inheritance. A detailed overview of the realized pension benefits and payments for members of the third pillar, by voluntary pension funds and type of account for 2022, are presented in Table 6.10.

Table 6.10. Realized pension benefits and payments to members of the third pillar

Type of pension benefit and payment/ Voluntary pension fund	SAVAd		KBPd		Total
	Individual account	Professional account	Individual account	Professional account	
Old age - one-time payment	90	59	42	151	342
Old age - multiple payment	2	6	3	4	15
Disability - one-time payment	1	0	0	0	1
Inheritance	4	2	4	9	19
Total	97	67	49	164	377

Graph 6.25. shows the structure of realized pension benefits and payments to members of the third pillar from the beginning of the operation of the third pillar, by years, until 2022. The number of payments is low, because the system is still young and the members are relatively young persons. Most of the payments are one-time payments in case of fulfilled age criteria, followed by payments in cases of death of a member as inheritance payment. There is also a small number of one-time disability payments as well as multiple payments based on fulfilled age criteria.

Graph 6.25. Structure of realized pensions and payments from the third pillar from the initial operation



Marketing and agents of pension companies



7. Marketing and agents of pension companies

In order to protect the interests of current members, future members and retired members of fully funded pension insurance and to provide fair and objective provision of information to the public, marketing is carried out in a regulated environment, regulated by law and by-laws.

In 2022, an exam for agents was organized and conducted, in six exam sessions, whereby 57% of the present candidates passed the exam. In addition, registration and annual renewal of the registration of the agents were carried out, and the agent status was terminated for some of the agents.

The increase in the average number of concluded agreements per agent continues in 2022, mostly due to the increase in the average number of concluded agreements per agent at TRIGLAV. In regard to the number of agents who concluded agreements, there has been an increase in the three pension companies.

In order to protect the interests of current and future members and retired members of the fully funded pension insurance and to provide fair and objective information to the public, marketing is carried out in a regulated environment, governed by law and bylaws.

Marketing activities imply all activities aimed at advertising the pension companies and the mandatory and voluntary pension funds and provision of information and conclusion of membership agreements in the mandatory and voluntary pension funds and for the payment of funds from the mandatory and voluntary pension funds. These activities include: advertising the operation of pension companies and the pension funds they manage, provision of information about the characteristics of mandatory and voluntary fully funded pension insurance, provision of information about fees and transaction fees, provision of information about the returns of mandatory and voluntary pension funds, provision of information about the investment portfolios of the mandatory and voluntary pension funds, provision of information about individual accounts, voluntary individual accounts and professional accounts, membership and transfer of members from one mandatory pension fund to another, membership and transfer of members from one voluntary pension fund to another, conclusion of agreements for programmed withdrawals, agreements on one-time payment and agreements on multiple payments and other activities for the purpose of advertising and provision of information related to the operation of pension companies and pension funds. The pension company can perform marketing activities of a pension fund, in its premises, in the premises of its business associates for marketing or outside them, directly or through an appropriate type of communication (telephone, fax, internet). The marketing premises must meet certain legally prescribed requirements.

In order to enable MAPAS to exercise the control function over the marketing materials, the pension company is obliged to submit to MAPAS, in a photocopy or on an appropriate external medium, any published marketing material, within three days after its publication. In the event when MAPAS considers that an advertisement, or other written material, may be misleading, it may adopt a decision to prohibit further publication, or distribution, and order the publication of an amendment to that material, within a period that it will determine.

A person who works on marketing, i.e., agent, may be a person employed in a pension company or another person who is contractually engaged by a pension company. The agent may perform marketing activities of pension funds and/or conclude membership or payment agreements, only for pension funds managed by the pension company where he is employed or contractually engaged. The agent must be present at the conclusion of the membership agreement of the pension fund, the transfer agreement, the programmed withdrawal agreement, the one-time payment agreement and the multiple payment agreement and is obliged to sign such an agreement. The agent is obliged to personally make all contacts with the member, the retired member or the persons who have the right to become members and retired members of a pension fund, personally and must not conclude agreements through another person. The agent also has a significant role in choosing the type of pension payment from the fully funded pension insurance, by the member, and is obliged to personally present the offers on projected future pensions of the member who submitted a request for listing, with a detailed explanation of the characteristics and the used assumptions for all types of pension payments.

The person can perform marketing activities, only after his/her registration in the Register of Agents maintained by MAPAS. MAPAS prescribes the manner and procedure for taking the exam for agents and the manner and procedure for registering the person in the Register of Agents.

In 2022, an exam for agents was organized in six examination sessions for a total of 575 present candidates who registered to take the exam, whereby 327 or 57% of the present candidates passed the exam. Detailed data on the present candidates who took the exam for agents in 2022, by pension company, are presented in Table 8.1.

In 2022, a total of 275 agents were registered, of which 62 were agents from SAVA, 55 were agents from KB First, 89 were agents from TRIGLAV and 69 agents were from VFP. Re-registration²⁶ was performed for 1 agent of VFP. An annual renewal of the registration of agents was also performed, for a total of 735 agents, of which 314 agents from SAVA, 323 agents from KB First and 98 agents from TRIGLAV. In 2022, the agent status terminated for a total of 10 agents, of which 5 agents from SAVA, 4 agents from KB First and 1 agent from TRIGLAV. An overview of the number and average values of registered, renewed and terminated statuses of agents from 2015 to 2022 by pension company is presented in Graph 7.1. It can be noticed that the number of registered agents from SAVA, KB First and TRIGLAV in 2022 is higher compared to 2021.

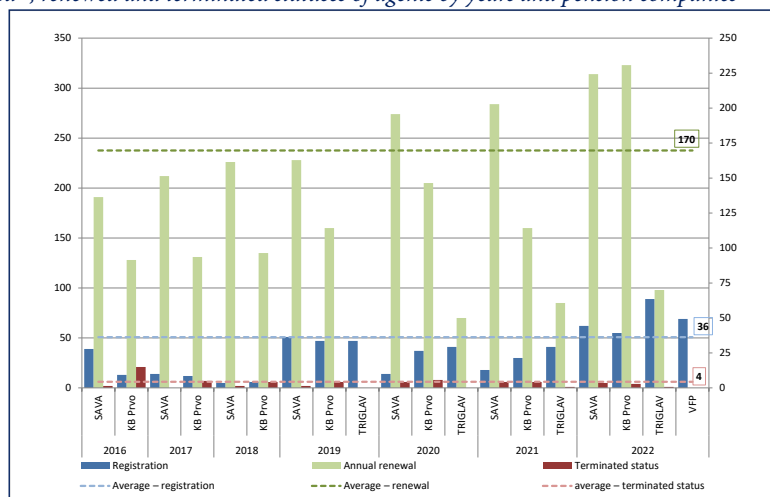
²⁶Re-registration of an agent for a pension company is performed for an agent who was previously an active agent of another pension company.

Table 7.1. Present candidates who took the exam for agents by pension company

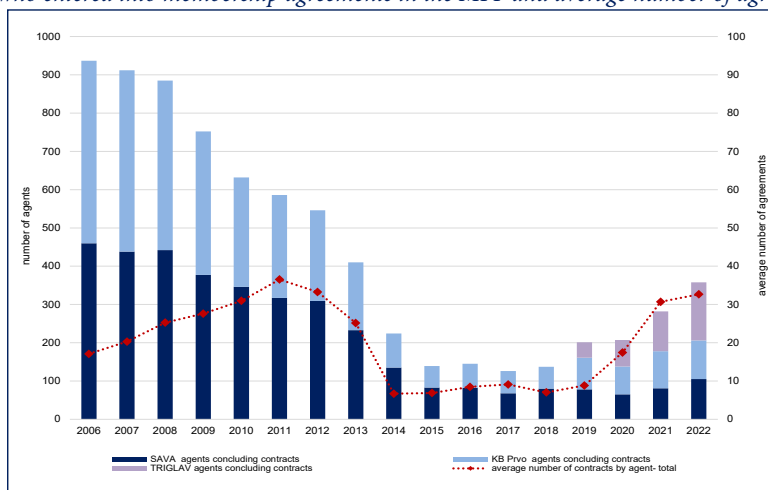
Pension company	Present	Passed	Passed (in %)
SAVA	131	75	57%
KB First	151	55	36%
TRIGLAV	165	109	69%
VFP	128	88	67%
Total	575	327	57%

In regard to the number of membership agreements in the mandatory pension funds, which are concluded by the agents from the initial operation of the system, Graph 7.2. shows that in 2005 the number of agents was highest, on average they concluded the most membership agreements, as this was the beginning of the system, and 31.12.2005 was the deadline for voluntary members to choose whether to join the two-pillar system and sign an agreement. In the following years, the number of agents who conclude agreements was continuously decreasing from one year to another, and at the same time the average number of concluded agreements per agent was increasing, until 2011. Then, by 2014, the average number of agreements per agent dropped significantly. In the following years, the number of agents who signed agreements and the average number of agreements per agent remain at approximately the same level. In 2019, when the third pension company started operating, there is again an observable increase in the number of agents who signed agreements as well as a minimal increase in the average number of concluded agreements per agent compared to 2018. The increase in the average number of concluded agreements per agent continued in the following three years, mostly due to the increase in the average number of concluded agreements per agent in TRIGLAV. In regard to the number of agents who signed agreements, there was an increase in the three pension companies..

Graph 7.1. Number of registered²⁷, renewed and terminated statuses of agents by years and pension companies



Graph 7.2 Number of agents who entered into membership agreements in the MPF and average number of agreements per agent



²⁷The number of re-registered agents is included in the number of registered agents.

Appendix: Effects of the current financial and economic uncertainty on fully funded pension insurance in the Republic of North Macedonia



Effects of the current financial and economic uncertainty on fully funded pension insurance in the Republic of North Macedonia²⁸

The current developments at the global level had a negative impact on the pension funds with defined contributions, both abroad and in North Macedonia. At the same time, it is important to emphasize that the funds of Macedonian pension funds are not directly exposed in Ukraine and Russia and in general the consequences of the military conflict were felt indirectly, through macroeconomic channels, such as inflationary pressures, higher interest rates and lower economic growth.

During this period, the average value of the accounting unit recorded larger oscillations than usual and in 2022 a drop of 3.43% was observed of the weighted average of the accounting unit of the mandatory pension funds, compared to 31.12.2021 and a drop of 3.33% of the weighted average of the accounting unit of the voluntary pension funds. Still, the global developments also affected the reduction of yields calculated for a seven-year period in 2022. During the fourth quarter, smaller amounts of returns in nominal amount are observed compared to the previous quarters, and the amounts of returns in real amount are significantly lower, which is mostly due to increased inflation.

The global financial and economic uncertainty in 2022 shifted the trends of upward movement of the parameters of mandatory and voluntary fully funded pension insurance, however pension funds are still in the accumulation phase and these impacts are expected to be overcome in the following years.

In 2022, pension funds faced an uncertain macroeconomic and financial environment. After years of relatively low interest rates and low inflation, recent events such as the Corona virus pandemic and the war in Ukraine have affected global supply chains and changed some of these macroeconomic trends, with rising inflation, sharp increase in interest rates and uncertainty of economic growth. These current developments had a negative impact on pension funds with defined contributions, both abroad and in North Macedonia. At the same time, it is important to emphasize that the funds of the Macedonian pension funds are not directly exposed in Ukraine and Russia and in general the consequences of the war were felt indirectly, through macroeconomic channels, such as inflationary pressures, higher interest rates and lower economic growth.

Rising inflation can affect pension fund assets primarily through investment results. Namely, inflation can reduce the value and investment results of fixed income asset classes (such as fixed rate bonds) because their cash flows have less purchasing power over time. On the other hand, proprietary asset classes (such as shares) show different returns in times of rising inflation.

In addition, changes in interest rates had their impact on the assets of pension funds. Higher interest rates could negatively impact the earnings and stock prices of some companies, through higher borrowing costs and potentially lower revenues from reduced consumer demand and spending. The price and value of existing bonds may also decline, as interest rates rise and investors turn to newly issued, high-yield bonds.

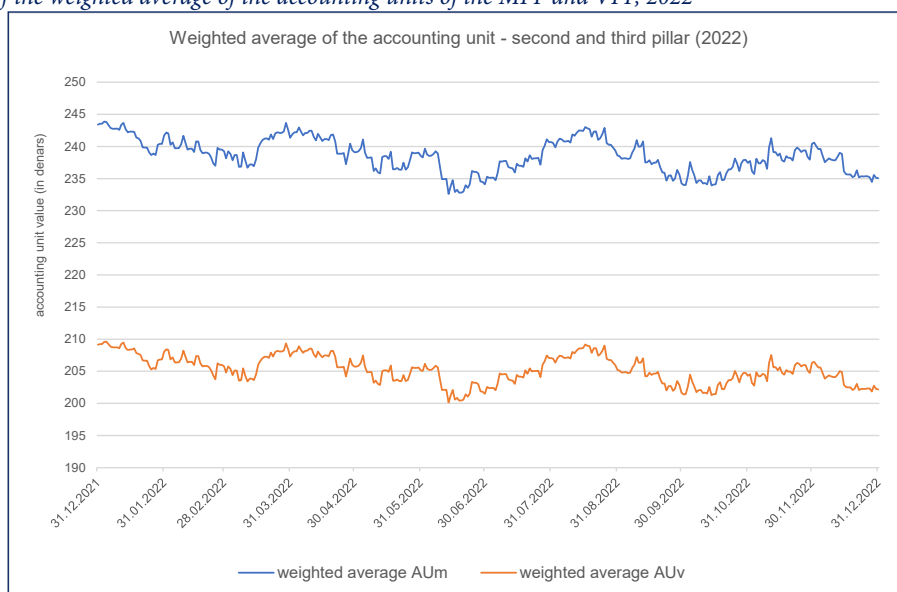
In addition, higher inflation and higher interest rates may cause instability and volatility in financial markets amid a deteriorating economic outlook. The rising inflation and changes in monetary policies create changes in the expectations of market participants and price fluctuations. The assets of the pension funds that were invested in shares recorded more pronounced fluctuations in 2022. Although financial markets rebounded from a decline in the first quarter of 2022, they faced another decline later due to the expectations of higher inflation and lower economic growth. Also, the expectations of lower economic growth may negatively affect the investment results of pension funds. Fundamental factors that reduce growth may lead to lower investment returns in some sectors and therefore could affect the investment results of pension funds depending on their asset allocation.

The influence of the world stock markets on the prices of securities in which the funds of the Macedonian pension funds are invested is inevitable. Initially, the effect is observed on the amounts of the accounting unit shown in Graph 1. During this period, the average value²⁹ of the accounting unit recorded larger oscillations than usual and in 2022 there was a drop of 3.43%, of the weighted average of the accounting unit of the mandatory pension funds, compared to 31.12.2021, and a drop of 3.33% of the weighted average of the accounting unit of the voluntary pension funds. These effects are short-term, and pension funds are long-term investors, so their performance is evaluated over the long term. Until April 2023, there is already an observable growth of the accounting unit, with a value of 2.48% in the mandatory pension funds and 2.90% in the voluntary pension funds, despite the extended uncertain environment and influence of the newly emerged developments in the banking sector and markets in the USA and Switzerland. Pensions systems in countries with a pension system similar to the Macedonian one have also felt the world financial crisis. For comparison, in the past year there was a decline in the accounting unit of pension funds in Croatia and Romania. The average value of the accounting unit of the mandatory pension funds in Croatia with a balanced portfolio (mirex of category B) in 2022 suffered a drop of about 5.04%, while the average value of the accounting unit of the mandatory pension funds in Romania declined by about 3.40%.

²⁸Used sources: OECD – *Pension Market in Focus, The impact of inflation and current financial and economic uncertainty on pension and insurance market*, www.hanfa.hr, www.asfromania.ro and own calculations.

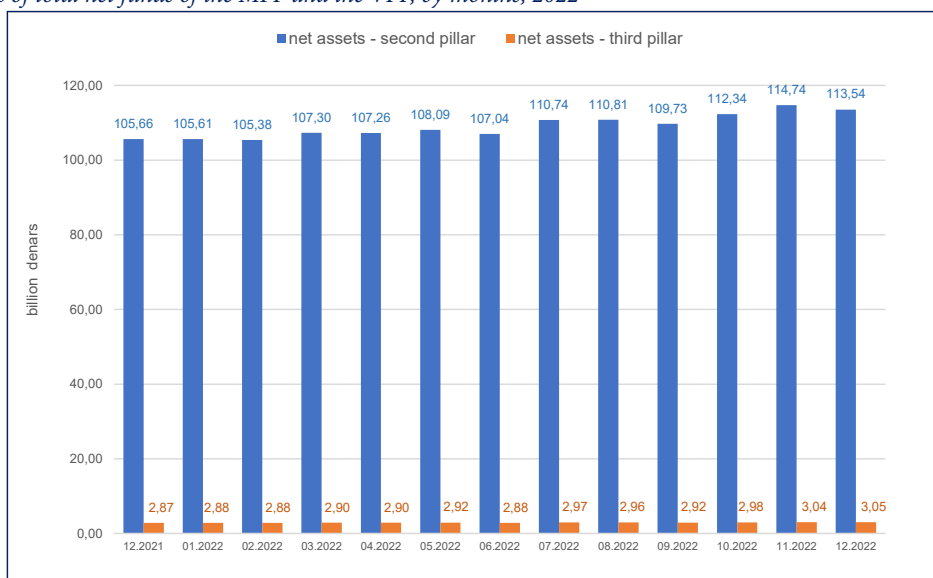
²⁹The average value of the accounting unit is calculated as a weighted average in relation to the net assets of the pension funds.

Graph 1. Movements of the weighted average of the accounting units of the MPF and VPF, 2022



The negative global developments in the world financial markets in 2022 had their impact, which caused deviations from the growing trend at the monthly level and in the value of the net assets of the pension funds (Graph 2). A decrease in the value of the net assets of the mandatory and voluntary pension funds on a monthly level of about 1% was observed in the months of June, September and December 2022. However, until 31.12.2022 compared to 31.12.2021, there was a growth of 7.46% for mandatory and 6.36% for voluntary pension funds, although this growth was lower than usual.

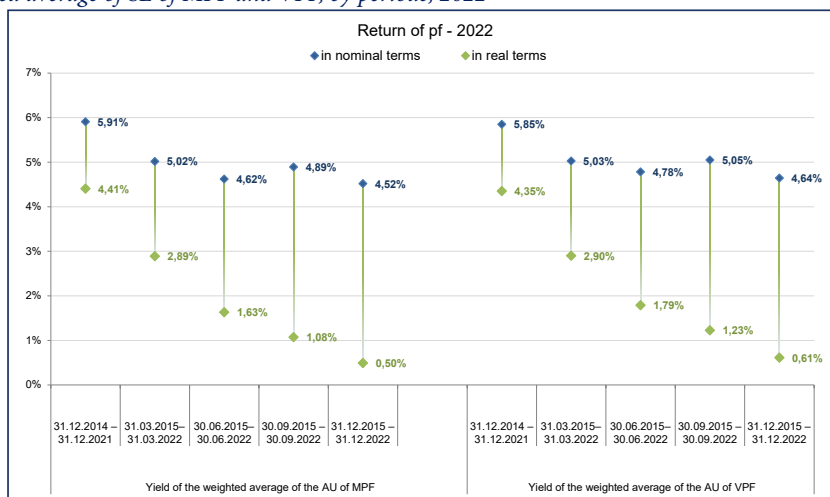
Graph 2. Movements of total net funds of the MPF and the VPF, by months, 2022



Pension funds are long-term investors, so it is more important to value them in the long term. According to the regulations, the return of the pension funds is calculated for a seven-year period in nominal and real return. Still, global developments also affected the reduction of returns calculated for a seven-year period in 2022 (Graph 3). The seven-year return at the level of mandatory fully funded pension insurance for the period 31.12.2015 – 31.12.2022, calculated through the change in the weighted average of the accounting units of the mandatory pension funds, reduced to an annual level is 4.52% in nominal amount, i.e., 0.50% in real amount. This means a reduction of the return in nominal amount by 1.39 percentage points, i.e., by 3.91 percentage points of the return in real amount in relation to the return for the period 31.12.2014 - 31.12.2021. Then, the seven-year return at the level of voluntary fully funded pension insurance for the period 31.12.2015 – 31.12.2022, calculated through the change of the weighted average of the accounting units of the voluntary pension funds, reduced to an annual level is 4.64% in nominal amount, i.e., 0.61% in real amount. This means a reduction of the return in nominal amount by 1.21 percentage points, i.e., by 3.74 percentage points of the return in real amount in relation to the return for the period 31.12.2014 - 31.12.2021.

During the fourth quarter, smaller amounts of returns in nominal amount are observed compared to the previous quarters, and the amounts of returns in real amount are significantly lower, which is mostly due to increased inflation. After 2019, there has been an increase in the change in the cost of living level, reduced to an annual basis, which significantly affects the decline in the amounts of return in real amount in 2022. Macedonian pension funds are still in the accumulation phase, so good investment results are expected that will offset the results of such market shocks.

Graph 3. Return of weighted average of SE of MPF and VPF, by periods, 2022



Individually influence on members of pension funds

The impact of such financial crises individually for members in pension funds with defined contributions depends on the allocation of the assets of the pension fund and the age of the member, because the investment risk is borne by the member individually.

Inflation affects the amount of accumulated funds for members who are still in the accumulation phase. Although inflation can impair the purchase value of the members' assets depending on how they are invested, some factors, such as salary growth, can protect members from the effect of inflation on the amount of retirement savings they accumulate. Contributions that are pre-defined as part of the salary increase automatically as the salary rises, preserving the value of the contributions to the pension fund in real terms up to a certain level, depending on the relationship between salaries and inflation. On the other hand, increased inflation may affect the frequency and amounts of payments in pension savings, especially in voluntary pension funds, because there is a risk that members will favor consumption instead of saving in order to cope with the crises of the cost of living.

The amount of the pension that the member will receive from the second pillar and the third pillar will depend on the profit that the mandatory or voluntary pension fund will make during all the years of the member's contribution and on the return that was made during that entire period, not just in a few years of operation. It is logical and expected that during the period when the members invest in the selected pension funds, there will be periods of weaker results, even financial crises in the entire capital market, at home or abroad, but what is most important is for the profit from the periods of good performance to cover the loss when the capital markets operate poorly, i.e., on average per year, if the entire contribution period of the insured is considered (30-40 years) the fund provides a reasonable profit that will provide a reasonable level of pension from the second pillar, i.e., pension benefit from the third pillar. Hence, adverse movements in pension fund assets in 2022 will not have a great impact on the assets of younger members who can expect losses to be covered in future years. While for older members, who are close to retirement, large losses of pension fund assets would imply permanent losses of income if they would have to use the saved money for annuities or programmed withdrawals.

However, the average age of the members of the mandatory pension funds is 37 years and over 93% of the members in the mandatory pension funds are younger than 50 years of age, while the average age of the members of the voluntary pension funds is 46 years and over 66% of the members in voluntary pension funds are under 50 years of age. The number of people who withdrew funds from the mandatory and voluntary pension funds is very low in 2022. These short-term adverse impacts on pension fund assets are expected to be neutralized in the years that members have until retirement.

The global financial and economic uncertainty in 2022 has shifted the trends of upward movement of the parameters of mandatory and voluntary fully funded pension insurance, however pension funds are still in the accumulation phase and it is expected that these impacts will be overcome in the following years.

MAPAS, as a regulator and supervisor, regularly monitors the situation and the risks in fully funded pension insurance and, upon an assessed need, it may undertake additional activities and measures, within the established framework of action of pension supervisors that have been recognized, indicated and confirmed by the International Organization of Pension Supervisors (IOPS).