2017

REPORT
On the Development in the Fully Funded Pension Insurance

Agency for Supervision of Fully Funded Pension Insurance

MAPAS

Agency for Supervision of Fully Funded Pension Insurance
Republic of Macedonia

REPORT

On the developments in the fully funded pension insurance in 2017

Skopje, April 2018

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Foreword

Dear reader,

With the end of 2017 we marked twelve years of operation of the second pillar and eight years of the third pillar. The fully funded pension insurance is the second largest segment of the financial system of the Republic of Macedonia (RM), where the total assets of the pension funds represent around 9.4% of the GDP for 2017. This puts the fully funded pension insurance in relatively small pension systems, based on individual savings, but with great growth potentials.

It is my honour and pleasure to present the twelfth Annual Report on the Developments in the Fully Funded Pension Insurance of the Agency for Supervision of Fully Funded Pension Insurance-MAPAS. It encompasses the performances of the fully funded pension insurances as of 2017. According to the Law on Mandatory Fully Funded Pension Insurance, MAPAS is obligated to prepare and publish an annual report on the fully funded pension insurance in the Republic of Macedonia. Such report is prepared by the Research and Institutional Cooperation Sector and it is adopted by the Council of Experts of MAPAS. In the Report you shall find information and data on the features of the fully funded pension insurance, assessments on the compliance with legislation as well as other useful data, spread over seven chapters of the Report.

In the last decades the pension systems went through continuous reforms in order to mitigate the risks of the aging population and volatility of the labor market, but also to accomplish their ultimate goal – to provide for sustainable pension system with adequate pension income. In that respect, the role of the fully funded pension insurance is getting stronger, thorough introduction of private pension funds and by undertaking activities and measures for improving their operations. The increased coverage of the population and the growing assets in the private pension funds are proof of their increased importance. The main drivers of the private pension systems, globally, are the pension funds, followed by the banks and investment companies, insurance companies and the reserves of the employers the total private pension assets on a global level by the end of 2016 were: 39.5 trillion USD.

In order to enhance and improve some of the procedures, in 2017 MAPAS introduced amendments to the rulebooks that regulate the areas of membership, reporting, financial reports etc. Such amendments improved the procedure for updating of personal data of members in the registries of members of the mandatory and voluntary pension funds, the procedure for the identification of the applicant for update of personal data is simplified, and the procedure for submitting of data for which the Pension Companies are obligated to submit to MAPAS is further regulated and simplified, thereby some of the documents are *submitted electronically; also, the deadlines for publishing of the non-audited financial reports, audited financial reports and the excerpt from the financial reports are defined, etc.*

Both Pension Companies ended 2017 with positive financial result, where both Pension Companies have higher net profit and achieved a comprehensive profit of 83 million denars for NLB Nov Penziski fond and 112.5 million denars for KB Prvo Pension Company.

In 2017, the membership in the second pillar increased for 7% (in respect to 2016) amounting to a total of 457,000 members, which is 79% of the total number of insured persons in the Pension and Disability Insurance Fund of Macedonia. The average age of the second pillar member is 35 years. In 2017, the second pillar received 6.3 billion denars in contributions, which, together with the accumulated assets, were invested in accordance with the legal provisions on investments. The value of the assets in the mandatory private pension funds on 31.12.2017 was 57 billion denars which is a 18% rise in respect to 31.12.2016, and is 9.18% of the GDP of the Republic of Macedonia. The structure of the investment portfolio of the mandatory pension funds is not very different compared to the previous years and it is consisted of domestic investments in government securities (61%), deposits (8%) and shares (3%), as well as investments abroad, which include shares (5.5%) and participation units in investment funds (22%) and a very small part in government bonds (0.62%). The accounting units of both mandatory pension funds were rising constantly during 2017. In the 7-year period of their operations, from 2011 to 2017, the mandatory pension funds reached an average annual return of 6.06% in nominal value i.e. a real return of 4.56%. In 2017, the mandatory pension funds had realized around 310 payouts.

In 2017, the number of members in the third pillar increased by 4% in respect to 2016 and reached 23,800 members, out of which 62% are participants in occupational schemes and have occupational accounts. The members in the third pillar, on average basis are older than those in the second pillar, and their average age is 44 years. In 2017, 270 million denars were paid in the third pillar pension funds, which were invested together with the rest of the accumulated assets, thereby following the legally established investment limits. As of 31.12.2017, the value of the voluntary pension funds assets reached 1.3 billion denars, which is 0.21% of the country's GDP. The structure of the investment portfolio of the voluntary pension funds is very similar to the one of the mandatory pension funds and of the last year's and it consists of investment in domestic government securities (49%), deposits (13%) and shares (8.5%), as well as in investments abroad which include shares (6%) and participation units in investment funds (21%). The accounting unit for both voluntary funds was continuously rising throughout 2017. In the 7-year period of their operations, from 2011 to 2017, the mandatory pension funds reach an average annual return of 6.19%, i.e. a real return of 4.69% . In 2017, the voluntary pension funds realized around 250 payouts.

The Law and the secondary regulations prescribe the terms and conditions under which Pension Companies may perform their marketing activities in order to provide for the protection of the interests of current and future pension fund members and to provide for fair and unbiased information for the citizens. In 2017, the Agency organized two examinations for sales agents, where 43% of the registered candidates passed the exam. Also, the Agency performed the regular activities of registration, renewal of registration and re-registration of sales agents. For some of the sales agents the status of agents was terminated in 2017.

Generally, pension schemes, based on individual savings, have positive effects on the long-term stability of the pension systems and safety of the entitlements from the pension insurance, which was also expected with the introduction of the multi-pillar system in the Republic of Macedonia. This is due to the fact that the fully funded pension insurance is part of the system for social insurance, which enables better quality of life after retirement and coverage of other risk throughout the career. On the other had, this type of insurance contributes to the development of the capital market, stimulates investments and the creation of new financial instruments, as well as consolidates the long-term investments. Pension savings are long-term savings (considering that the average career o a person is 30 to 40 years) so it is only reasonable to evaluate its impact on a long run as well. Still, all the developments in the pension area must be monitored closely and on a continuous basis, and take adequate measures to enhance individual savings by motivating competition, promoting efficient and flexible portfolio management and extension of coverage, in the direction of protection of the interest of the pension fund members and safe pension benefits after retirement.

Guided by our mission and motivated by the results accomplished thus far, we will engage all our resources for the improvement and enhancement of the second and third pillar operations. Guided by our mission we shall continue with the daily supervision over the Pension Companies, Pension Funds and Custodians, we shall keep working on building the public awareness, on collaboration with other institutions from the industry and the financial world and when needed, we shall initiate measures for improvements of legislation in order to enhance the fully funded pension insurance and protect the interests of the pension funds members.

Chairman of the Council of Experts

Bulent Dervishi, PhD

MAPAS, mission and vision

The Agency for Supervision of Fully Funded Pension Insurance – MAPAS is a regulatory and supervisory body with a sole purpose to protect the interests of the members and the retired members of the pension funds and to enhance the development of the fully funded pension insurance. MAPAS was established in July 2002. MAPAS is a legal entity with public authorizations prescribed with the Law on Mandatory Fully Funded Pension Insurance and the Bylaws.

MAPAS is responsible for issuing, withdrawing and cancelling licenses to Pension Companies for managing Pension Funds, and for issuing, withdrawing and cancelling approvals for managing mandatory and voluntary pension funds. MAPAS supervises the operations of Pension Companies, Mandatory and Voluntary Pension Funds, Custodians and Foreign Assets Managers. Also, it promotes, organizes and enhances the development of the fully funded pension insurance in the Republic of Macedonia, collaboration with the Ministry of Labor and Social Policy. Its responsibility is to build the awareness of the public on the goals and principles of the pension companies and pension funds and on the benefits from participating in the private pension funds, including the benefits from participating in occupational schemes. It informs the members on their entitlements and obligations as private pension funds' members and on other features of the fully funded pension insurance. MAPAS passes acts in accordance wit6h the laws governing the fully funded pension insurance and initiates other regulations for the pension companies and pension funds. Also, it collaborates with relevant institutions in the country and abroad in order to provide efficient control over the fully funded pension insurance in the Republic of Macedonia.

The Agency is steered by the Council of Experts, consisted of four members and a Chairman:
Bulent Dervisi, PhD – Chairman
Mentor Jakupi – member, with professional engagement
Elizabeta Vidovikj– member, with professional engagement
Silvana Mojsovska, PhD- external member
Tome Nenovski, PhD - external member

Our Mission 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.

Our vision is MAPAS to be recognized as independent, expert and transparent institution, which protects and enhances the pension system in the Republic of Macedonia.

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

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In the last decades the global population is facing an aging trend, which can be best observed in the European countries, where a great part of the population is over 65 years of age (almost 20% of the entire population). There is also a permanent increase in the life expectancy upon birth (average of 78 years for men and 83 years for women) and the life expectancy at 65 years of age (average of 21 years for women and 18 years for men), which means that the population shall live longer. Several factors influence the aging of the population: increase of longevity, reduction of the birth rate due to reduced fertility rates (less than 2.1 children per woman), continuous reduction of women that give birth, as well as belated motherhood (after 30 years of age). Such circumstances imply reduction of the young population and increase ogf the adult population, which contributes to the imbalance between the active and the passive population. Such trends are a challenge for the pension insurance systems, considering that the pension insurance provides protection against the following risks: old age, disability and death. This is accomplished through periodical payouts (usually, monthly payouts) to the insured person, for their entire lifetime, or to their families. There are different methods of financing pensions (or so called accumulation phase) and there are different methods of calculating and paying the pension benefits (or the so called phase of de-accumulation of pension assets). These methods vary from country to country, mostly depending on the structure of the pension system, which actually depends on the social, economical and demographical circumstances of that country. Such trends also put forward the growing and important role of the pension systems, everywhere in the world, as warrantors for the safety of the population but also as pools of national savings.

Due to various socio-economic and demographic circumstances in the countries, as well as the influence of the culture on the people and their habits and perception of savings for old age, the structures of the pension systems vary from country to country. Still, usually, pension systems are defined as multi-pillar systems, in order to provide for diversification of risks that affect the pension system. The general framework is usually consisted of three pillars: basic pension (as a minimum protection for all employees or elderly people), mandatory additional savings (state or private fully funded financing, which includes various forms of contracts). The experiences demonstrates that there is no one solution, or one design of the pension system, as countries use various combinations of elements (for the financing of the pensions, calculation and payouts), in order to build effective pension system, depending on the economic and social features. The main challenge is how to combine all these components into a sustainable pension system on a long run, which will be sufficiently fair for all generations. In order to accomplish the goal of any pension system – insurance for old age– the system must be fiscally acceptable on a short-term and sustainable on a mid and long-term and finally provide for adequate pensions for old-age. In the last decade, the pension systems go through continuous reforms to mitigate the risk of aging and the volatility of the labor markets, but with the same end goal – sustainable pension system and adequate old-age income.

According to the research of the major reforms, approved and implemented in the last twenty-one years (between 1995 and 2017), the basic pay-as-you-go systems underwent several changes, in order to increase the financial and fiscal stability. One of the reforms is the increase of the contribution rate in the PAYGO systems (in Costa Rica, France, Norway, Russia, Portugal etc). The other significant reform is the increase of the retirement age (in Germany, the Netherlands, and the United Kingdom etc). In accordance with the latest amendments of the laws in the past two years in the OECD members, the retirement age will be increased for 1.5 to 2.1 years in average, for men and women, accordingly, reaching 66 years of age in the following four to five decades. This means that in the future, the retirement age shall be from 59 in Turkey (for women) and 60 years in Luxemburg and Slovenia, to estimated 74 years of age in Denmark (estimated based on the life expectancy). Also, another trend is the adjustments of the formulas for promised pensions i.e. a gradual decrease of the pension benefits or changes in the indexations of promised pensions, i.e. gradual reduction of fiscal expenses (Argentina, Brazil, Belgium, Italy, Japan, the Netherlands, United Kingdom, Vietnam, etc.). These measures are introduced in parallel with the motivation for longer careers, which influences the increase of pensions. Of course, one of the significant endeavours is to extend the coverage of the pension system and to stimulate the regular payments of pension contributions.

In parallel with the abovementioned, the role of the private fully funded components is increasing, through the introduction of private pension funds or through activities and measures for improving their operations towards provision of adequate old age income. So, in 2016, in 17 OECD countries, there are mandatory or partly mandatory private pension systems, while in 10 countries there are voluntary pension systems (organized individually or through occupational schemes) which have a significant coverage (over 40%) of the working population. According to the OECD taxonomy the private pension schemes in the pension systems may be either occupational or individual. In case when the basis for enrolment in the scheme is employment and when the scheme is established by the employer or a group of employers on behalf of all employees, then the scheme is occupational. While, the schemes are individual when they are not connected to any employment, and such schemes are established directly by some pension fund or another financial institution that manages the pension assets, and which are not influenced by the employer. Per the research made by IOPS and OECD, in most countries included in the research there is co-existence of individual and occupational schemes, (in 32 out of 35 OECD members) and in 22 countries out of 31 non-OCED members. The pension schemes may be with defined benefits or defined contributions. Reforms take different directions, so, in the past years, some countries decided to introduce defined contribution pension schemes. The DC pension schemes and the individual pension schemes are becoming more important even in the countries where, historically, the pension schemes are predominantly DB (such as the US). Also, there are transfers from DB pension schemes to DC pension schemes (this was the example in 2016 in Ireland and Island). The DC components dominate East Europe; while DB pension components still dominate those countries which have highly

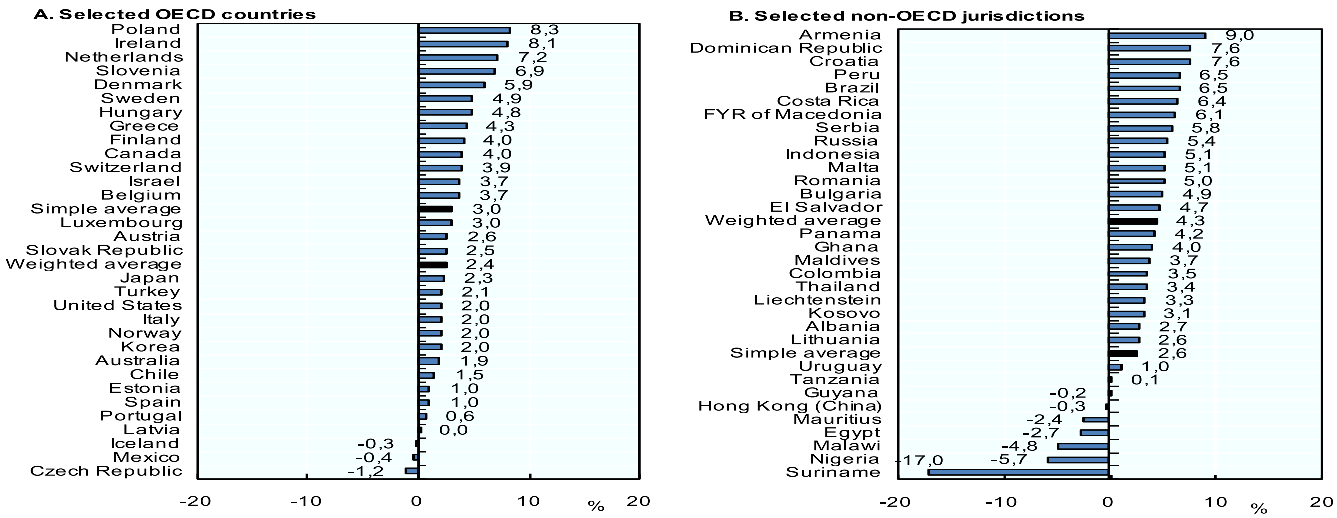
[1]*Used sources: OECD, EIOPA, World Bank, FIAP and IOPS and own analyses.*

developed occupational pension schemes (like the United Kingdom and the Netherlands). In 2016, the pension assets of the pension schemes with defined benefits represented more than a half of the pension assets of 18 OECD counties and 16 non-OECD countries. Also, there are cases of transfers from DC to DB. On the other hand, there are countries (mostly in Central and Easter Europe) which closed partially or entirely the privately managed DC schemes. The major challenge of any type of pension scheme (either DC or DB) is the correct handling of the volatile financial markets.

The role of the private pension systems is continuously increasing, which is demonstrated in their increased coverage of the population and the size of their assets. The main drivers of the private pension scheme, on a global scale, are the pension funds, followed by the banks and investment companies, insurance companies and the reserves of the employers. The total amount of the private pension funds assets, globally, by the end of 2016, was 39.5 trillion USD. Out of which, 38.1 trillion USD are placed in 35 countries members of OECD and 1.4 trillion USD are in 50 countries, non-OECD members. Thereby, in sex countries – members of OECD (Australia, Canada, Japan, the Netherlands, United Kingdom and USA) pension assets surpassed 1 trillion USD. 66% of the total pension assets of the OECD countries are in the US. The size of the private pension funds assets varies from country to country, which, most probably is due to the various dates of establishment of the systems, whether the participation in the pension scheme is mandatory or voluntary and, of course, to the investment results. The comparison of the size of the private pension funds assets in relation to the size of the economy, expressed through the GDP gives a clearer picture on the relative importance of the private pension segment in the country. In 2016, in eight countries, pension assets are higher than the GDP (Australia, Canada, Denmark, Ireland, the Netherlands, South Africa, Switzerland and the US). On the other hand, the percentage of pension assets in respect to the GDP in 50 countries (most of Europe, Asia and some countries of Africa) is lower than 20%. The percentage of pension assets in relation to the GDP, in the OECD countries is from 0.7% in Greece, to 209% in Denmark, or it is 49.5% as simple average and 125.7% as weighted average (in relation to total pension assets). In six OECD countries, this percentage is higher that the weighted average (Denmark, the Netherlands, Island, Canada, Switzerland and the US). In some selected countries, which are non-OECD members, the percentage of pension assets in respect to the GDP is from 0.1% in Albania and Pakistan to 100.6% in South Africa. The simple average is 19.8%, while the weighted average is 41.6%. In the last decade in most of the countries, the pension assets were growing faster that the growth of the GDP, i.e. in 31 OECD countries and in 34 e non-OECD members.

The real investment return, of the pension funds, net from management fees, in 2016 was positive for 28 put of 31 surveyed countries, OECD members, and in 25 out of 32 non-OECD members. The real net returns in 2016, on average, were higher than 2% in the OECD countries as well as in non-OECD countries. The real returns in 2016, in average were higher than 2% in the OECD members as well as in non-OECD members. The highest returns for 2016 were mostly achieved in the European countries such as: Armenia (9%), Poland (8.3%) and Ireland (8.1%) despite the volatility caused by the international developments, such as Brexit. In 14 other countries, the real investment returns for the pension assets were higher than 5%. The Figure 1.1 shows the real investment returns on pension assets, net management expenses for the period December 2015- December 2016, in selected OECD countries and non-OECD countries.

Figure 1.1. Real investment returns on pension assets, net management expenses for the period December 2015- December 2016, in percentages



Source: Pension markets in focus, 2017

In the period after the financial crisis, the average annual returns in the last five years (from December 2011 to December 2016) were positive for all countries, except Nigeria. The average real net returns on investments in the last five years went from -0.4% in Nigeria to 8% in the Dominican Republic and a total of 39 out of 45 countries had an annual real return on investments higher than 2%. The losses from the financial crises were recovered by most countries, i.e. the average annual returns for the last 10 years (from December 2006 to December 2016) were positive for 25 out of 31 countries. The average real net returns on investments, in the last 10 years ranged from -1.8% in Latvia to 6.3% in the Dominican Republic.

The results from investment of pension assets mostly depend on the allocation of assets. In most countries, pension assets are being invested directly into bonds or shares. The bonds and notes, generally are perceived as safe source of income, ant therefore in most countries the pension assets are invested in bonds and notes. In 2016, two OECD countries (the Czech Republic and Mexico) and in eight non-EOEC countries (Albania, Costa Rica, Dominica Republic, India, the Maldives, Nigeria, Serbia and Singapore) had over 75% of the pension assets invested in bonds and notes. In four surveyed countries, over 50% of the assets of the pension funds were invested directly into shares (Australia (51%), Hong Kong, China (60%), Namibia (58%) and Poland (83%)). In some of the countries, the low percentage of investments in shares is due to the small domestic capital markets. In eight of the surveyed countries, more than 50% of the pension funds' assets were invested in mutual investment funds (Belgium, Estonia, Luxemburg, the Netherlands, Sweden, Switzerland, Kosovo and Lithuania). In 2016, the pension funds also invested their assets, though in lower percentages in real estate, private funds, structural products etc. Pension funds in every country prefer domestic markets for their investments, while when investing aboard they prefer neighboring regions or countries (with same currencies), which characterizes them as domestically or regionally biased. Also, this often is due to the additional risks that the foreign investments bring and/or the regulatory limits. Still, there is a general trend towards the canceling the limits and restrictions on the investments abroad and the increased the permitted countries for investments.

Pension asset managers are major players on the financial markets, considering that they manage around 39.5 trillion USD (in 2016) and play a key social role in the financing of the retirement income. For this reason, this year as well as previous years, the focus of discussions and analysis is the improvement of investment results of the pension funds together with maintaining the safety of the pension assets though monitoring, improvement and enhancement of the existing regulation, connected with the investment limits. Also, of vital importance for better investment results and maintenance of the financial safety of the pension assets is the management of investment, as well as the risk management function in the asset manager. In providing a prudent investment process, the major concern of the pension schemes (with DB and DC) is the return and the risks. In the case of DB, the investments are generally connected to liability and solvency requirements, considering the defined promises of income after retirement. On the other hand, the investments in the DC schemes may have a direct impact on the intentions of the replacement rare or the expectations of the members. In the beginning years of the systems, the regulators in most countries usually regulated quantitative limits of investments in various financial instruments, including prohibitions of certain investments. Then in part of these countries, there is a gradual transition towards adoption of prudent standards as guidelines for investment, in accordance with which, the authorized person is given a broader responsibility to be able to invest the assets in a more flexible manner, but "reasonably" towards achieving highest returns in favor of the assets, and with due diligence to minimize the risk. Thereby it is expected of the authorized person to practice adequate concern, efficiency, skills and knowledge, which a prudent man would use when investing his own assets. In the last several years, the practical examples demonstrate that the pension funds, especially those of the larger markets, start to direct their investments from bonds and notes towards shares, from traditional towards nontraditional investments and top increase the investments abroad. The nontraditional, which typically include hedge funds, private funds, real estate, currencies, goods, structural products and infrastructure, raise more issues and risks, such as the solvency risk, operational risk, limited transparency, difficulties in valuation, contractual party risk, integrity risk, reputational risk, conflict of interest and risk of transferring activities and responsibilities to external entities. Most of these investments are complex and require sophisticated methods of risk management and analyses. Still, the non-traditional investments offer more possibilities for better management and mitigation of the overall portfolio risk, and better connection of the assets with liabilities with adequate diversification. Such developments increase the importance of the following functions: investment management and risk management. In this context, it is of vital importance that the supervisors possess adequate financial and human resources in order to implement adequate, effective and independent supervision. This is especially important for the supervision of the non-traditional investments. Therefore, in parallel with the regulation connected with the investment, the analyses were also focused on the supervision investment management, with special accent on the supervision of nontraditional investments. In accordance with the IOPS and OECD research, in all surveyed countries, the supervisor requests from the pension companies to have written procedures for the processes of investment and risk management. The main bodies responsible for the control of the investment processes and investment managers are the managing boards or the creditors, depending on the legal structure. Usually, the processes for the risk management and investments include certain requests like the ones for approval of investments, delegation of responsibilities, assessment of the investment risk, internal controls, documenting investments and delegating the function to external entities. According to the supervisors' perception, as potentially troublesome investments that might present a risk to the entitlements and benefits of the members are considered: assets that are not liquid, complex securities and strategies, securities that are not quoted and derivatives. Therefore, supervisors request, on behalf of the members, for explanations of the risk management policies and the exposure. Such announcements concern all types of investments, not just the non-traditional ones. Regarding the approach and the methodology used in the supervision of the investment management of pension funds, with focus on non-traditional investments, the research shows that there is no significant difference in the supervision of pension assets traditional investments vs. non-traditional investments. Most probably, this is due to the fact that in some systems the direct investments in non-traditional investments are not allowed or, in those systems where they are allowed they are still insignificant. The different approach in the supervision over the investment management concerning the non-traditional investments can be noticed only in those systems that practice risk-based supervision (Australia, Canada, the Netherlands and the UK). As non-traditional investments are considered to bear more risk than the traditional ones, more attention is paid to them in supervision. Therefore, the authorities in these countries have defined certain guidelines and principles for non-traditional investments in order to support the pension funds in their assessment of factors such as contractual party risk, valuation and due diligence and diversification.

In younger systems, where most of the members are still active on the labor market, the analysts and policy makers dedicate a lot of their attention to installing systems of individual savings and to the challenges of the accumulation stage, such as the amount of contributions that are paid in and managing them, including the investment of pension assets. Considering that the final goal of any pension system is to provide for retirement income, in 2017 the discussion still evolved on connecting the accumulation stage with the de-accumulation stage. The major challenge to be addressed in the de-accumulation stage is to guarantee the existence of an efficient pension market that will offer the future pensioners a possibility to transform the accumulated assets into periodical payouts, with lowest possible costs, thereby offering the insured persons to chooses from a variety of pension products, for which they will be educated in advance and will understand their adequacy. The experience of older pension systems, with fully funded components, demonstrates that as the number of pensioners' increases and the number of those that reach maturity is approaching (Latin America) it is recommended that the stage of de-accumulation is improved, before the start of increased number of payouts of pension benefits. One of the challenges is the update of the mortality tables so that they reflect the improved longevity. Another important challenge is the update of certain parameters of the system, towards meeting the established goals, and to decrease the risk of having elderly members with accumulated assets that are insufficient to cover their pension income (due to insufficient number of years in which the contributions were paid), as the increase of the coverage of the population and the increase of the frequency of payments, generally, depend on the level of development of the country and the improvements of the labor market, which take a lot of time. An important challenge in the de-accumulation stage is the selection of a pension product (programmed withdrawals and annuities). The system should provide for adequate, transparent and competitive offers, which shall maximize the retirement income, so the member may make the optimal choice matching their personal priorities and real expectations. Also, the system should provide for guidance for retirement, in a form of access to simplified services for institutional advice, free of conflict of interest, with regulated commissions, so that the member can make the choice easily. Yet another challenge would be the productive competition between various types of pension products and those that offer them. The systems should provide the future pensioners with simple, standard and clear access to information on the offers that would contribute to lower commissions, increased competition, minimized costs of information and increased transparency, leading towards higher pension benefits.

The individually financed programs are characterized with the freedom to make decisions through the entire membership stage – from enrolment, to accumulation and payouts – which will influence their future retirement incomes. Therefore, much attention is put also on the pension education. Namely, due to the reallocation of risks and responsibilities among occupational schemes organizers and the members, now members bear more risks and their decisions have direct influence on their potential pensions. Hence, potential members' and potential pensioners' awareness must be raised in order to understand the importance of the system in general, and, their personal role in it, as presented through their decisions. Members must know how to make the optimum choice in accordance with their needs for the future and the acceptable risk level, and in accordance with the economic, financial and social environment. Unfortunately, there is a general agreement on the insufficient and very limited financial and pension culture of the average pension fund member, in the context of increased individual responsibility. The solution to these issues should be long-term; it should include systemic efforts by all authorities in charge of improving the pension education and culture. In that light, and especially after the financial crisis, large numbers of countries have focused on developing national strategies for financial education, including pension education and culture.

So, last year, one of the hottest topics of the World Bank, OECD and IOPS, still, was the protection of the consumers of financial services, including the pension and financial education in general. Consumer protection is an important and priority goal of the policy makers, as it supports and enables consumers to make informed decisions regarding the use of financial products and services. Also, it has implications over the sound development of the financial sector, financial inclusion and broader economic growth. The global financial crisis in 2008 had negative impact on the trust in the financial system, and, at the same time, we are witnessing a continuous transformation of the pension systems towards schemes with more complex pension products, which makes it harder for the consumers to choose. Such circumstances validate and make stronger the need for enhancement of the consumer protection. Providing effective protection of the pension funds' members and of the retired members (pension industry's consumers) in the field of private pensions is an important component of the supervision, and therefore supervisors play a key role in the promotion and enhancement of the consumer protection. This is especially relevant for those systems where private pensions are the key source of retirement income and where the insured persons face bigger possibilities for selection and decision, in all stages of pension savings. Therefore, IOPS, based on research and analyses, defined the principles or good practices of the supervising activities, in the field of protection of the pension systems' consumers. The proposed good practices of IOPS focus on five key areas of the high level principles of G20, which are pointed out as most relevant from the supervisor's perspective, towards strengthening the consumer protection in the private pensions sector - legal framework and supervisor authorizations, publications and transparency, financial education and awareness, responsible behaviour of pension companies and their agents, complaints, and damages. Regarding the legal framework, the experience of other countries demonstrate that the provisions for the consumers' protection may be covered with various legal acts, such as, the pension regulation, financial services regulation, lex generalis on the consumer protection, or in the lex specialis on protection of financial services consumers, laws on supervisors, labour laws etc. in terms of the supervisor's authorities, as important measures for promotion of the public trust in the pension system, may be individuated: setting rules, standards and directions for the pension companies, licensing, registration or approval of pension companies, agents and intermediaries, review of pension products, managing such products, approval or prohibition of pension products, cooperation with other public institutions and authorities etc. The regulators and supervisors constantly put their efforts into the announcements and the transparency, especially in the area of providing key information for the pensions, via simple, comparable and standardized format (KID-Key information document, reports on pension benefits, electronic platforms for comparing pension products etc.) that enable a better/simpler comparison and comprehension of future entitlements connected with the pension benefits. The regulators pay attention to projections connected with pension benefits, especially in the DC systems, due to the insecurity regarding future pension benefits and the complexity of their production ad presentation before the members, considering that during the projection a lot of long-term assumptions are used (economic, financial and demographic). Supervisors also initiate activities in the field of financial education and awareness raising, by being part of various educational approaches, aiming towards improved understanding of the subject of pensions by using campaigns for public information and awareness raising, targeted programs for financial education of insured persons and for the general population, and evaluation of their efficiency and effectiveness. Huge accent is being put on the responsible behaviour of pension companies and their sales agents, by adopting various codes, by evaluating their adequacy and eligibility, especially of the senior management, approval and follow up of the contents of the contracts before signing (between members and pension companies) and marketing strategies. Supervisors also pay attention to handling of complaints and disputes resolutions, as a critical component in the supervisor's framework. Considering that most of the complaints are being sent to pension companies for indemnifications, pension supervisors in most cases monitor such complaints, while in some countries they participate in the proceeding.

One of the main features of the fully funded pension systems and in general of the private pension funds is the right of the members to choose a pension funds, select a portfolio as well as the portability of assets, meaning the right to transfer such assets from one to another pension fund. The right to portability is an additional challenge for the pension companies that manage pension assets in the DC systems, as pension companies face the risk of outflow of the pension assets before the actual entitlements to a pension benefit payout. This right to transfer from one to another pension fund or portfolio influences on the allocation of assets in the long term investments. The research of annual transfers compared to the amounts of short-term investments demonstrates that the increased frequency of transfers between various pension funds and portfolios is connected to the increased investing of short-terms and more liquid assets. Thereby, the portability is a result of competition, market structure, investment advice, and sometimes lower returns on investments for the members. Some of the recommendations for the regulatory authorities connected to the challenges of the portability of assets are: use of administrative controls for prevention of transfers between pension funds as a result of misconception, provision of clear comparison of performances and costs in order to motivate members to be informed before they make a choice; diligent supervision and marketing control in order to avoid transfers based on wrong advice; control over financial incentives for sales agents, for providing advice for transfer when such transfer is in the best interest of the member, etc.

In times of fats development of technology and its impact on every segment of life, its influence on the development of the financial sector is inevitable. The technology rapidly transfers the functioning of the financial sector, and so, the pension sector, i.e. the management of pension funds and payout of pension benefits, are not any exception. For that reason, in the focus of 2017 discussions were the analyses of how to use technology and improve the design and the "delivery" of pensions and how regulators support and manage such changes. The financial technology („FinTech") and related technological accomplishments, like the technology for mitigation of regulatory compliances („RegTech"), have the potential to change the design and the "delivery" of the private pensions. Globally, there are innovative applications for financial services in place which can improve the interaction among members (users) and the pension companies. The financial technology has great potential to help pension companies become more efficient in the area of internal processes and risk management. The opportunities offered with the new technologies are driving changes in the business models and in the delivery of the financial products to the consumers. The technological changes lead to increased advantages for the consumers with lower costs and increased access to opportunities for retirement savings. On the other hand, the technological development in the pension industry creates risks. The members with lower level of education and lower income may be excluded from the technological progress due to their inability to participate in the new methods of communication. Another concern is the protection and safety of the data, consumer protection and adequacy of offered services and products. Therefore, while regulators are willing to promote innovative ideas that might be beneficial to the consumers, they, at the same time, need to approach them with caution, and provide for the protection of members. In many countries significant resources are being spent on following changes which are instigated with technology in order with the regulation to obtain the needed balance with the new environment. The centers for innovation are the key component for supporting new businesses in connecting the existing regulation with their idea. The mechanisms for development of new regulations are also growing fast, as it is necessary for the regulation to keep up to speed with the fast development of innovations and to be flexible in the application to the new business-models. Anyway, this is just a beginning of such new programs and time will tell if they were truly efficient in providing full protection of consumers without stifling the innovations.

The structure of the fully funded pension insurance in the Republic of Macedonia

2

2.1 Description of the pension system

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

- Generational solidarity – based insurance (first pillar)
- Mandatory fully funded pension insurance (second pillar)
- Voluntary fully funded pension insurance (third pillar)

This structure is the product of a thorough reform of the pension system, which had been prepared for several years and its legal framework had been actually established in 2000. The pension system in the Republic of Macedonia is regulated with four laws and numerous secondary regulations. These regulations are: 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 the Fully Funded Pension Insurance and the secondary regulations that further regulate relevant areas of the pension system.

The Macedonian pension system has a long history of existence; it has a rather extensive coverage of the labour force and in the provision of pension benefits for the retirees. However, the social and economic turmoil at the beginning of the '90s left their mark on the pension system, causing financial difficulties for the system. These difficulties were caused by the unfavourable developments of the economy and the reduction of the active insured members participating in the system, reduced contribution collection and increased number of retired persons. This led to increased costs for the payout of pension benefits.

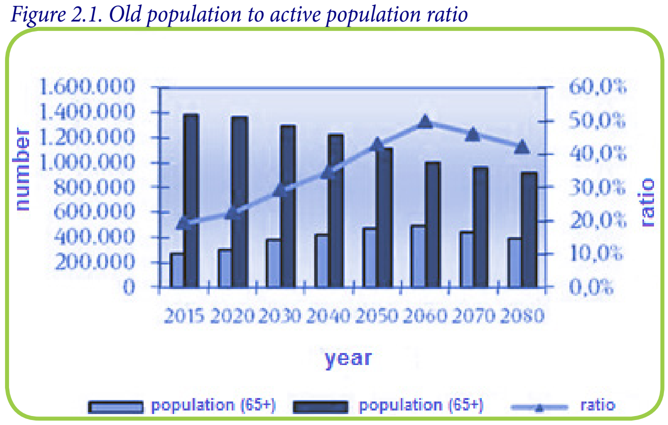
Also, demographics have strong influence over the pension system. It is already a global trend that due to improved living and medical conditions, people tend to live longer, however, the number of newly-born is constantly decreasing, leading to older population participating at a higher rate in the total population of the world.

The projections of the Actuarial Unit in the Pension and Disability Insurance Fund (PDIF) demonstrate that this trend shall persist in the future. One of the most common indicators for measuring the aging of the population is the ratio of old population (above 65 years of age) to the active population (at the age from 18 to 64). The Figure 2.1 shows both groups in numbers and in relation to each other.

It is expected that in 2060, the ratio of these two groups shall increase from the current 19.45% to 49.74% in 2060, while in 2080 it will decrease to 42.28%, which means that on a long-run one half of the population above the age of 18 years will be old population.

For the pension system, such demographic movements mean that the number of retired persons shall increase with the increasing number of years when such persons shall be pension beneficiaries as well. At the same time, this means that the number of insured persons shall decrease. The actuarial projections, which were prepared in the period of

Figure 2.1. Old population to active population ratio



Source: PDIF – Report on the pension system in the Republic of Macedonia with actuarial projections (short version – December 2015

contemplation of the pension reform, demonstrate that on a long run, such factors might have huge negative impact on the solvency of the PDIF and, without reforms the system might face a huge and increasing deficit over the years.

In order to be prepared for such changes, the pension and disability insurance in our country was thoroughly reformed, which resulted in the introduction of a three-pillar pension system. This system includes a combined financing of the future pension benefits and diversification of the economic and demographic risks, which should provide for a safer retirement income for the current and future generations of pensioners and a long-term stability of the pension system as a whole.

The first pillar is financed on a generational solidarity basis (PAYG), which means that the pension benefits for the current pensioners are paid out from the contributions of the current insured persons. This pillar is a defined benefit pillar, which means that it provides the benefits according to a predetermined formula. The first pillar pays out the following benefits: part of the old age pension, disability and survivors pension benefits, as well as the minimum pension benefit.

The second and the third pillars constitute the fully funded pension insurance, which capitalizes the paid in contributions on the insurers' accounts. These two pillars are defined contribution pillars, which means that the contribution is predefined, while the pension benefit is determined based on the accumulated amount on the insurer's account. The second pillar pays out part of the old age pension. The third pillar provides financial protection from old age, disability and death of the insured person.

It is expected that the reform of the pension system and the introduction of the multi-pillar pension system, as a combination of public financing (generational solidarity) and private financing (fully funded), will bring long-term stability of the system and safety in the provision of pension and disability entitlements. This should be realized through the long-term gains for the individual members, for the pension system and for the economy as a whole. Such a reformed system brings higher safety to the individual participant, who will receive the pension benefit from more than one source, when retired, as it provides for risk diversification. At the same time, the reform provides for more transparency and information for the members of the pension funds. The reform should lead to a solvent pension system, increased savings and boost the investments and therefore the economic growth.

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

The fully funded pension insurance is very different from the PAYGO insurance in these respects: treatment and recording of contributions and benefit payouts. In this insurance, each member has his individual account on which the assets are recorded and which provides the base for the future pension benefit, based on the amount of paid in contributions. The fully funded pension insurance is based on accumulation of assets from contributions on individual accounts, which are further invested and the return from the investments, decreased for management expenses, which is added to the assets accumulated on the individual account. Therefore, the future pension depends on the amount of accumulated assets and the life expectancy upon retirement. It is very important for this type of pension saving that it is a long-term saving; it develops gradually, where at the start, while the member is very young, the savings are small, but, in the future, when the member reaches retirement age, the savings are significantly higher.

This type of insurance is privately managed by licensed pension companies, which manage the pension funds and invest the paid in contributions. Thereby, it is guided by economic goals, which determine the investment strategy, creating the possibility for maximizing the entire return, in the best interest of the pension fund members. One of the main features of this type of insurance is the investment risk diversification (including international diversification).

Other important features of the fully funded pension insurance are: the right to personal choice and the initiative of the individual. Namely, all persons employed before January 1, 2003, were given the opportunity to join the second pillar and to choose the pension fund of their preference, while the newly employed were given the chance to choose the private pension fund in which they wanted to be members. The membership in the voluntary pension funds is also by choice of the individual or by participation in an occupational scheme, sponsored by the employer or by a citizens' association.

The portability of assets is another important feature of the fully funded pension insurance. All members of the mandatory or voluntary pension funds have the right to transfer from one to another pension fund, together with their savings. When a person is participating in an occupational scheme, he has the right to transfer his savings to another occupational scheme or to his individual account, in case of change of employer.

The fully funded pension insurance provides for high level of transparency, which is one of the most important characteristics and a novelty for the pension system, in general. The pension companies have the legal obligation to inform their members and the retired members in writing, at least once a year, for the balance of their accounts, by submitting the so called "green envelope". The green envelope contains data on the investments of the pension fund, the charged fees and the return of the pension fund.

2.3 *Institutional infrastructure of the fully funded pension insurance*

The three-pillar pension system is consisted of the following institutions:

• Ministry of Labour and Social Policy – responsible for creating and enforcing the policy governing the pension and disability insurance and for supervising of the legality of operations within this insurance.

• Agency for Supervision of Fully Funded Pension Insurance (MAPAS) – regulatory and supervisory body of the fully funded pension insurance.

• Pension Company – joint stock company founded by financial institutions with large capital and experience, whose sole activity is managing pension funds' assets. The reformed pension system offers the opportunity for establishing three types of pension companies:

o Mandatory Pension Company - manages only mandatory pension funds

o Voluntary Pension Company - manages only voluntay pension funds

o Joint Pension Company - manages mandatory and voluntary pension funds

• Custodian of pension fund assets – safely keeps pension funds' assets, on a separate account, apart from the assets of the Pension Company.

• Public Revenue Office (PRO) – PRO undertakes centralized contribution collection and submits to the PDIF total contributions for pension and disability insurance.

• Pension and Disability Insurance Fund of Macedonia (PDIF) – allocates the pension insurance contributions between the first and the second pillar and allocates the data on membership to the selected mandatory pension fund.

MAPAS is a regulatory and supervisory body, established to protect the interests of the current and retired pension funds' members, and to enhance public awareness about the characteristics of this type of insurance and to promote the development of the fully funded pension insurance. MAPAS initiates and passes regulations and acts, grants licenses to pension companies and approvals for pension fund management, performs off-site and on-site supervision of the pension companies, pension funds and custodians, organizes exams and registration of sales agents, performs pro-active controls over the activities of the pension companies etc. For its performance, MAPAS reports to the Parliament. MAPAS charges a fee from the pension companies, which is calculated as a percentage of the contributions paid in the pension funds. For 2017, this percentage was 0.8. MAPAS is a regulatory body that supervises the second biggest segment of the financial market – the pension funds. The total assets of the mandatory and voluntary pension funds present around 9.4% of the GDP for 2017 with a potential for further growth.

A pension company is a joint stock company, which is established and operates as per the Law on Companies and the Law on Mandatory Fully Funded Pension Insurance or the Law on Voluntary Fully Funded Pension Insurance. A Pension Company is established upon a granted license from MAPAS and it manages a pension fund upon prior approval for pension fund management. A mandatory pension company is established to manage only mandatory pension funds; a voluntary pension company is established to manage only voluntary pension funds, while a joint pension company is established to manage mandatory and voluntary pension funds. A joint pension company must have a share capital of at least 1.8 million Euro in denar counter-value; a mandatory pension company's share capital should be 1.5 million euro in denar counter-value, while a voluntary pension company's share capital should be 0.5 million Euro. In case of increased assets under management, the pension company is obligated to increase the share capital according to the Law. The sole activity of the pension company is pension fund management, its representation in front of third parties and other activities, which derive directly from the pension fund management. The main responsibilities of the pension company are: membership, assets management, risk management and risk mitigation, administration and record keeping, abiding by the laws and secondary regulations governing the fully funded pension insurance, regular reporting to members, public and MAPAS, payout of programmed withdrawals to the retired members etc. A pension company operates according to the rules of good corporate governance and it has a fiduciary duty to work only in the best interest of the members and the retired members of the pension fund under management. This fiduciary duty is rendered thorough high level of ethics and integrity and without any conflicts of interest. For performing these functions, the pension companies charge three types of fees (More details in Chapters 5.6 and 6.7)

A pension fund (mandatory or voluntary) is an open-end investment fund, which is established and operates according to the Law on Investment Funds if not otherwise regulated with the Laws on Mandatory or Voluntary Fully Funded Pension Insurance. A mandatory pension fund is consisted of contributions and assets of the members, assets of the retired members and returns on the invested contributions and assets, reduced for the fees charged from the mandatory pension fund. A voluntary pension fund is consisted of voluntary contributions paid in the name and on behalf of the members, assets of the members, assets of the retired members and returns on the invested contributions and assets, reduced for the fees charged from the voluntary pension fund. The owners of the pension fund are its current and retired members, and their individual ownership entitlements are determined with the amounts of their accounts. The pension fund assets cannot be subject to claims, nor can they be subject to execution by the pension company's creditors.

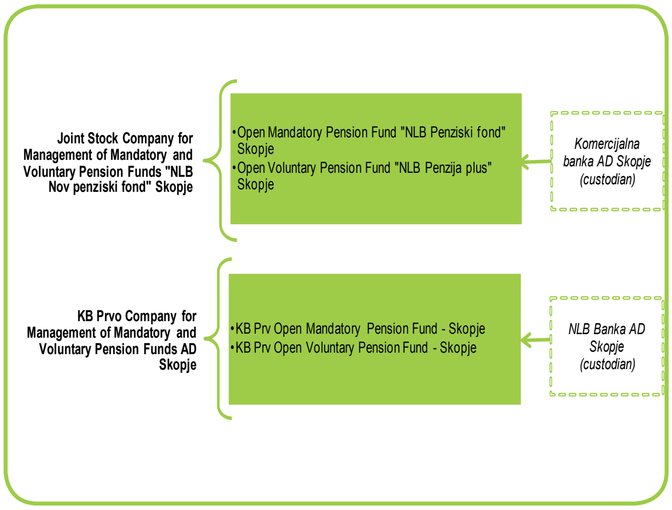
In 2005, on the international public tender, MAPAS granted two licenses for establishment of pension companies. And in 2009, those same pension companies, which were established as mandatory pension companies, were granted licenses and approvals to manage voluntary pension funds in addition to the existing mandatory pension funds.

Thus, today we have two pension companies, which manage one mandatory, and one voluntary pension fund each as seen on Figure 2.2.

Since the beginning of operation of the system until 31.12.2017, both pension companies have a mixed ownership of domestic (49% of the shares) and foreign (51% of the shares) shareholders, as shown on Figure 2.3[3].

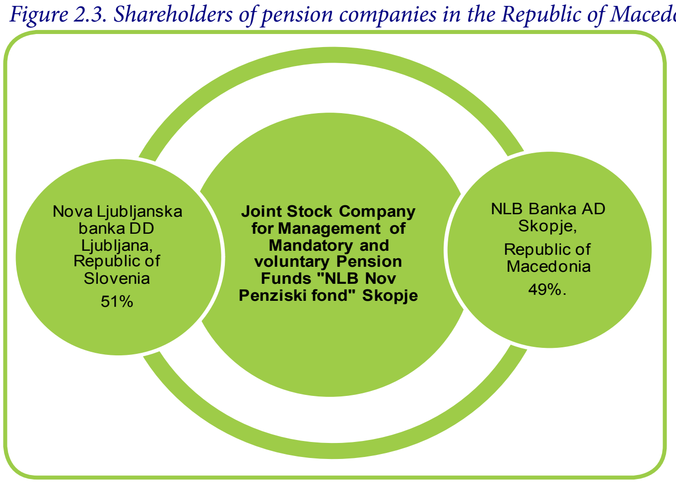
Pension fund assets are completely separated from the assets of the pension company managing that pension fund, and those assets are kept with a custodian bank. This segregation of assets is essential to the safety and control of the transactions with the pension funds' assets. Any commercial bank, meeting the statutory requirements and

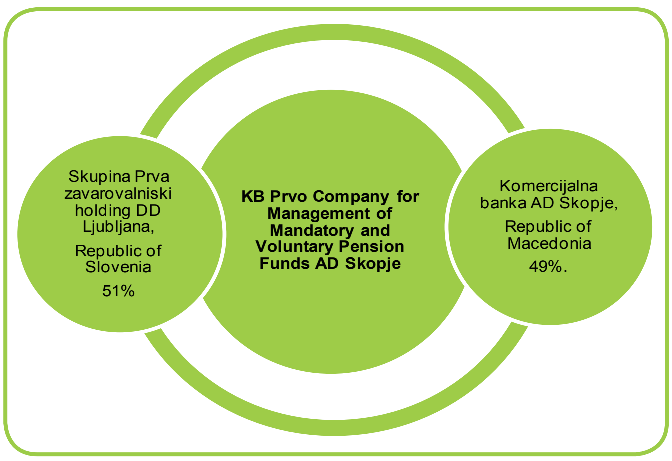
Figure 2.2. Pension companies and pension funds in the Republic of Macedonia



having a contract with the pension company, may be a custodian bank for the mandatory and the voluntary pension funds' assets. Each pension company has a selected custodian for the mandatory and for the voluntary pension fund under management, as shown on Figure 2.2. For their service, the custodians charge fees from the pension companies. These fees are calculated as percentage from the pension funds' assets, depending on the amount of assets and in accordance with the signed contracts for custody services. In Table 1.1 are given the fees that were charged by the custodians in 2017.

Figure 2.3. Shareholders of pension companies in the Republic of Macedonia





[2]Herein after for the names of the Pension Companies, mandatory and voluntary pension funds the following abbreviations shall be used: NLB for Joint Stock Company for Management of Mandatory and Voluntary Pension Funds "NLB Nov penziski fond" Skopje, KB Prvo for KB Prvo Company for Management of Mandatory and Voluntary Pension Funds AD Skopje, NLBz for Open Mandatory Pension Fund - „NLB penziski fond" Skopje, KBPz za KB Prv Open Mandatory Pension Fund – Skopje, NLBd for Open Voluntary Pension Fund "NLB penzija plus" Skopje and KBPd for KB Prv Open Voluntary Pension Fund - Skopje

[3] Since March 2018, as shareholder in Joint Stock Company for Management of Mandatory and Voluntary Pension Funds "NLB Nov penziski fond" is Pozavarovalnica Sava, Republic of Slovenia, which participates with 100% in the share capital.

Table 1.1 Fees charged by the custodians from the Pension Companies for safekeeping of the pension funds' assets

For Mandatory Pension Funds	Amount (annual)	For value of assets (in million denars)	Date of application
NLB Banka AD Skopje, as custodian of KBPz	0.081%	up to 100	2 July 2015
	0.076%	above 100 up to 200	
	0.070%	above 200 up to 300	
	0.066%	above 300 up to 400	
	0.059%	above 400 up to 500	
	0.055%	above 500 up to 600	
	0.053%	above 600	
	0.046%	above 700 up to 800	
	0.040%	above 800 up to 900	
	0.035%	above 900 up to 1000	
	0.033%	above 1000	
Komercijalna banka AD Skopje, as custodian of NLBz	0.092%	up to 100	12 July 2015 г
	0.087%	above 100 up to 200	
	0.081%	above 200 up to 300	
	0.077%	above 300 up to 400	
	0.070%	above 400 up to 500	
	0.066%	above 500 up to 600	
	0.064%	above 600	
	0.060%	above 500 up to 600	
	0.053%	above 600 up to 700	
	0.046%	above 700 up to 800	
	0.042%	above 800 up to 900	
	0.034%	above 900	
For Voluntary Pension Funds	Amount (annual)	For value of assets (in million denars)	Date of application
NLB Banka AD Skopje, as custodian of KBPd	0.25%	up to 50	21 December 2009 .
	0.20%	above 50	
Komercijalna banka AD Skopje, as custodian of NLBd	0.25%	up to 50	15 July2009
	0.20%	above 50	

Amendments and additions to the legislation and secondary legislation regulating the fully funded pension insurance

3

In 2017, the Council of Experts in MAPAS passed 4 secondary regulations or amendments to existing secondary regulations for the mandatory and/or fully funded pension insurance:

1. Rulebook for amendments to the Rulebook on the form and content of Pension Company's financial reports („Official Gazette of the Republic of Macedonia No.138/2017 from 2.10.2017);

2. Rulebook for amendment to the Rulebook for reporting to the Agency for Supervision of Fully Funded Pension insurance by the Pension Company (Official Gazette of the Republic of Macedonia No. 176/2017 from 4.12.2017);

3. Rulebook for amendment to the Rulebook on Mandatory Pension Fund Membership Official Gazette of the Republic of Macedonia No. 188/2017 from 21.12.2017);

4. Rulebook for amendments to the Rulebook on Voluntary Pension Fund Membership Official Gazette of the Republic of Macedonia No. 188/2017 from 21.12.2017);

The amendments to the Rulebooks were done in order to further regulate certain procedures. The amendments to the Rulebooks on Mandatory and Volunatary Pension Fund Membership upgrade the update of personal data of memebsr in the Register of memebres and simplify the procedure for identification of the person submitting the request for update of personal data. The amendments to the Rulebook on for reporting to the Agency for Supervision of Fully Funded Pension Insurance by the Pension Company simplifies the submission of data as per Article 96 of the Law on Mandatory Fully Funded Pension Insurance and Article 116 of the Law on Voluntary Fully Funded Pension Insurance, whereby some of the documents may be submitted by e-mail. With the amendment of the Rulebook on the form and content of Pension Company's financial reports are regulated the deadlines for publishing of unaudited annual financial report, the audited financial reports and the excerpt from the audited financial reports. Also, the form for the Income Statement is changed in the part of expenses for the Custodian's fee, as well as fees for other institutions (MAPAS and PDIF), in order to update such form with the practice.

In 2017, MAPAS updated and passed the following instruction:

1. Technical instruction for submitting reports from the Custodian to the Agency for Supervision of Fully Funded Pension Insurance (June 2017) and

2. Technical instruction for defining formats of data and exchange of data file in the voluntary fully funded pension insurance (June 2017).

Financial data for the Pension Companies

4

4.1 Revenues and expenditures of pension companies for 2017

Pension companies prepare financial reports on their financial performance in accordance with the Law on Companies, the Rulebook on the Form and Contents of the Financial Reports of a Pension Company, the Rulebook on Accounting and, the effective international accounting standards. The data which underlie this chapter come from the unaudited annual financial reports for both pension companies as of 31.12.2017.

When performing their sole activity – managing pension funds – the Pension Companies get their finances from fees, charged in accordance with Law, from contributions, pension funds' assets and transfers. Also, Pension Companies gain financial revenues as a result of their investing of free assets in deposits and securities, which are allowed according to the Law on Voluntary Fully Funded Pension Insurance. The revenues of both pension companies for 2017 are given in the Table 4.1.

Table 4.1. Revenues of Pension Companies for 2017 *in denars*

Basis	NLB		KB prvo	
Revenues from managing a mandatory pension fund				
Contributions Fee	82,329.804	38.44%	91,121,657	37.17%
Assets Fee	102,939,117	48.06%	117,993,457	48.13%
Transfer Fee	0	0.00%	924	0.00%
Total revenue from managing a mandatory pension fund	185,268,921	86.50%	209,116,038	85.29%
Revenues from managing a voluntary pension fund				
Contributions Fee	3,177,858	1.48%	3,603,260	1.47%
Assets Fee	6,241,128	2.91%	5,519,241	2.25%
Transfer Fee	0	0.00%	0	0.00%
Total revenue from managing a mandatory pension fund	9,418,986	4.40%	9,122,501	3.72%
Financial revenues	18,058,697	8.43%	26,316,614	10.73%
Other revenues of the pension company	1,432,266	0.67%	616,418	0.25%
Total revenues	214,178,870	100.00%	245,171,571	100.00%

*Table 4.2. Expenditures of pension companies for 2017** *in denars*

Basis	NLB		KB prvo	
Expenditures for managing a mandatory pension fund				
Sales agents	546,263	0,43%	441,824	0,37%
Marketing	9,214,610	7,26%	8,131,821	6,78%
Transactions	6,454	0,01%	94,046	0,08%
MAPAS	23,967,714	18,87%	26,497,928	22,10%
Custodian	16,491,032	12,99%	16,620,924	13,87%
Other expenditures for pension fund management	1,169,048	0,92%	1,155,566	0,96%
Total expenditures for managing a mandatory pension fund	51,395,121	40,47%	52,942,109	44,16%

Expenditures for managing a voluntary pension fund				
Sales agents	2,031,607	1,60%	51,032	0,04%
Marketing	795,011	0,63%	1,057,869	0,88%
Transactions	6,454	0,01%	597,393	0,50%
MAPAS	1,039,768	0,82%	1,117,357	0,93%
Custodian	1,306,368	1,03%	1,538,533	1,28%
Other expenditures for pension fund management	55,758	0,04%	75,218	0,06%
Total expenditures for managing a voluntary pension fund	5,234,966	4,12%	4,437,402	3,70%
Pension company management expenditures				
Wages and fees for employees	46,129,914	36,33%	34,004,579	28,37%
Non-material expenditures	12,840,136	10,11%	7,258,264	6,05%
Material expenditures	1,153,938	0,91%	1,354,793	1,13%
Depreciation	1,914,275	1,51%	2,679,622	2,24%
Financial expenditures	3,063,170	2,41%	9,095,686	7,59%
Other operational costs	5,068,419	3,99%	8,102,233	6,76%
Reservation of expenses and risks	189,756	0,15%	0	0,00%
Total expenditures for pension company management	70,359,608	55,41%	62,495,177	52,13%
Total expenditures	126,989,695	100,00%	119,874,688	100,00%

** Some data cannot be shown separately, In order to isolate some data, the pension company uses the number of members in the mandatory or voluntary pension fund as a weighted value.*

Naturally, Pension Companies have expenditures, which in general are dedicated to managing pension funds' assets, valuation of assets, membership, keeping of members' accounts, reporting to the members, payment of fees for MAPAS and the custodian and operational costs of pension companies. The expenditures are divided into three categories: expenditures for managing mandatory pension funds, for managing voluntary pension funds and for managing the Pension Company. The expenditures for both Pension Companies in 2017 are demonstrated in Table 4.2

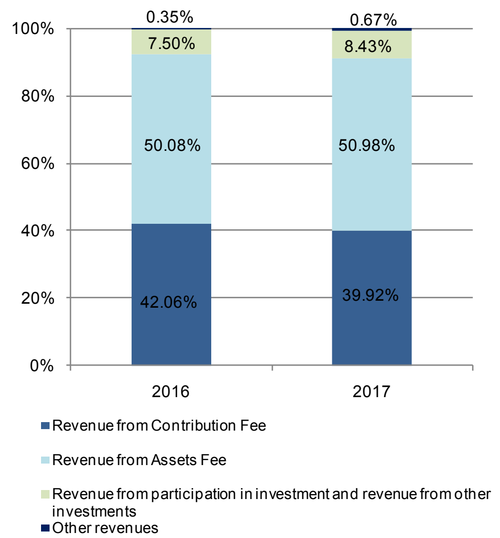
In 2017, both Pension Companies earned higher revenues in respect to 2016 for around 6% in NLB and 9% for KBP. The largest portion of the revenues of the pension companies came from fees from assets of mandatory and voluntary pension funds (around 50% in NLB and 51% in KB Prvo), followed by fees from contributions in mandatory and voluntary pension funds (around 40% for NLB and 39% for KB Prvo). In respect to the previous year, the percentage participation of the revenue from fees from contributions in the total revenue has decreased for approximately two percentage points in NLB and three percentage points in KB Prvo. While the participation of the revenues from fees from assets has increased for 1 percentage point for NLB and for KB Prvo it staid almost the same. In respect to 2016, the perceptual participation of financial revenues and other revenues of pension companies have increased for 1 percentage point for NLB and for around three percentage points for KB Prvo. Both Pension Companies had the same percentage participation of the other revenues as in 2016.

As far as the expenses are concerned, both pension companies have less more in 2017 in respect to 2017, for around 2% in NLB and around 5% in KB Prvo. Most of the expenses of the Pension Companies are operational (around 55% for NLB and 52% for KB Prvo), with highest participation of wages and fees for employees, followed by expenditures for services and other expenditures for NLB and the financial expenses, other expenses and service expenses for KB Prvo. In respect to the previous year, the percentage participation of the wages in NLB has decreased for five percentage points, while for KB Prvo it remains almost the same. In 2017, other expenditures have remained almost the same for NLB, while for KB PRVO there was an increase of four percentage points. The rest of the expenditures refer to pension fund management (around 45% for NLB and 48% for KB Prvo). Also, the expenditures for marketing and sales agents are 10% out of the total expenditures for NLB and around 8% of the total expenditures for KB Prvo, which means that they remained almost the same for NLB while for KB Prvo they slightly increasing in respect to the previous year. Around 34% in NLB and 38% in KB Prvo of the expenditures are for payment of fees to MAPAS, PDIF and the custodians. Around 14% of the expenses of NLB and 15% of expenses of KB Prvo, are for the fees for the custodians, so their percentage participation in comparison to 2016 has increased for two percentage points for both pension companies. In terms of absolute amounts of the expenses for the custodian, they have increased for around 17% for NLB and 12% for KB Prvo in respect to 2016. Also, there is an increasing trend for the custodian expenses, as those are calculated as percentage from the pension fund's assets. So, the increase of the total expenses for the custodian fees for both pension companies, since 2010 and until 2016, is around 25% per year, and 15% in 2017.

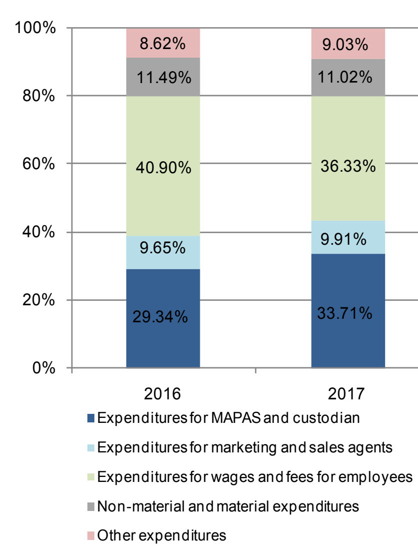
Figure 4.1. Structure of revenue and expenditures per company for 2016 and 2017

NLB

Revenue

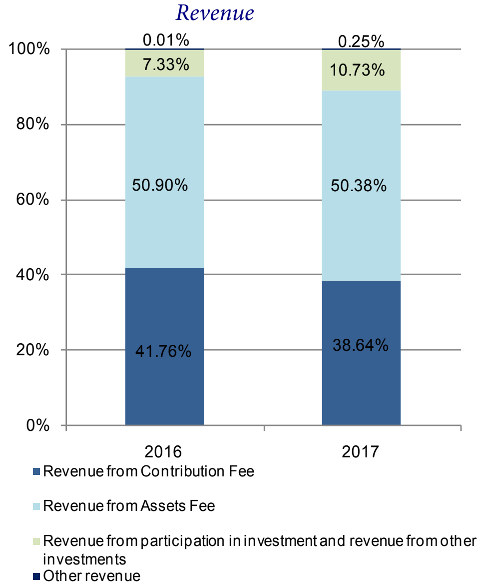


Expenditures

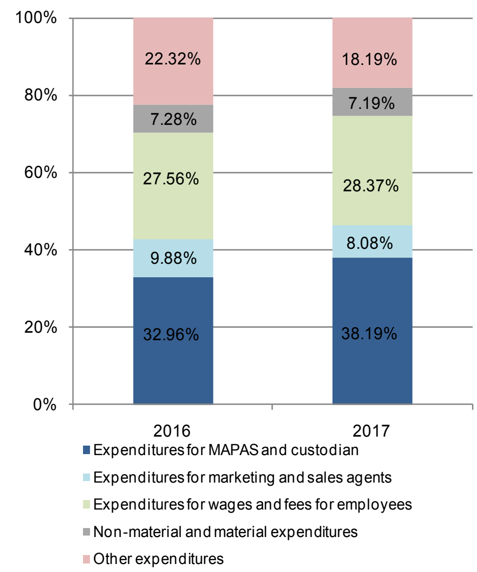


KB Prvo

Revenue



Expenditures



4.2 *Financial results of the pension companies*

In 2017, both pension companies demonstrated positive financial results. Table 4.3 gives more detailed information on the financial results.

Both Pension Companies ended 2017 with net profit (profit after tax). KB Prvo's net profit is higher than NLB's, which is due to the fact that KB Prvo has more revenues than NLB, and less expenditure for 2017. In 2017, both Pension Companies had higher net profit than 2016, NLB for 21% and KB Prvo for 26%. Also, both Pension Companies earned total comprehensive income in the amount of 33 million denars for NLB and 112.5 million denars for KB Prvo. The accumulated profit (as of 31.12.2017) for NLB is around 223 million denars and for KB Prvo is around 228 million denars.

Table 4.3. Financial results of the pension companies for 2017 *in denars*

Description*	NLB	KB Prvo
Profit (for 2017)	87,189,175	125,296,883
Profit after tax (for 2017)	78,305,796	112,506,230
Nonrecurring cots	0	0
Net profit (for 2017)	78,305,796	112,506,230
Other comprehensive income**	4,680,000	0
Total comprehensive income***	82,985,796	112,506,230
Accumulated profit (as of 31.12.2017)	223,202,322	228,103,701

**The data on the Other comprehensive income and the Total comprehensive income come from the Audited financial reports of the pension companies for 2017.*
***The data on the Other comprehensive income includes unrealized income or losses not shown in the Balance Sheet.*
****The data on the Total comprehensive income includes net income and other comprehensive income.*

4.3 *Share capital, initial capital and own assets of pension companies*

It is crucial for the system and the members of the system that pension companies are strong and stable institutions, which have adequate share capital. The existing pension companies should have a minimum of 1.8 million Euros in denar counter-value as share capital, exchanged per the middle exchange rate of the National Bank of the Republic of Macedonia. In case of increased assets under management, the pension company is obligated to increase the share capital according to the Law.

The share capital of the pension company is paid only in cash. In order to increase the financial strength of the pension companies it is not allowed that the share capital is procured from loans or credits and it may not be burdened in any manner. The share capital must come from legal sources and it must be taxed in accordance with the Macedonian legislation and the legislation of the country in which each shareholder is registered as a legal entity.

The Pension Company is obligated, at any time, to maintain the share capital at a minimum of the total amount, Also, the Pension Company is obligated to maintain, at any time, its own assets at the minimum of the total amount of the share capital.

Table 4.4. Share capital, initial capital and own assets of pension companies *in denars*

Description	NLB	KB Prvo
Share capital and reserves	454,590,368	473,160,759
Share capital	130,001,478	110,459,024
Excess of share capital beyond statutory minimum	27,44%	12,97%
Own assets*	411,506,491	433,498,834
Excess of own assets beyond statutory minimum**	130,73%	107,01%

** Own assets are calculated according to the Rulebook on the Methodology for Calculation of Own Assets of the Pension Company .*
*** According to the statutory obligation, from May 2017, NLB, are obligated to maintain increased share capital i.e. share capital in the amount of 5.8 million Euro in denar counter-value., because the amount of assets of the mandatory and the voluntary pension funds under their management surpasses 400 million Euro. From December 2017, KB Prvo is obligated to maintain increased share capital i.e. share capital in the amount of 568 million Euros in denar counter-value, because the amount of assets of the mandatory and the voluntary pension funds under their management surpasses 500 million Euro.*

4.4 Indicators

In analyzing the financial data of the Pension Companies it is important to observe the indicators per member and the efficiency coefficient. Table 4.5 gives the more important indicators per member and the efficiency coefficient for both Pension Companies for 2017.

The above indicators prove that the average indicators per member are higher for around 35 denars for KB Prvo, while for NLB the average expenditures per member are higher for 80 denars. Compared to 2016, the average revenues per member for NLB decreased for 1% while for KB Prvo increased for 2%. The average expenditures, compared to 2016, have slightly decreased for both Pension Companies (8% for NLB and 11% for KB Prvo). Bothe Pension Companies marked an increase in the profit per member in respect to 2016, 12% for NLB and 18% for KB Prvo. Both Pension Companies have decreased their efficiency coefficient in respect to 2016, for 8% for NLB and 12% for KB Prvo.

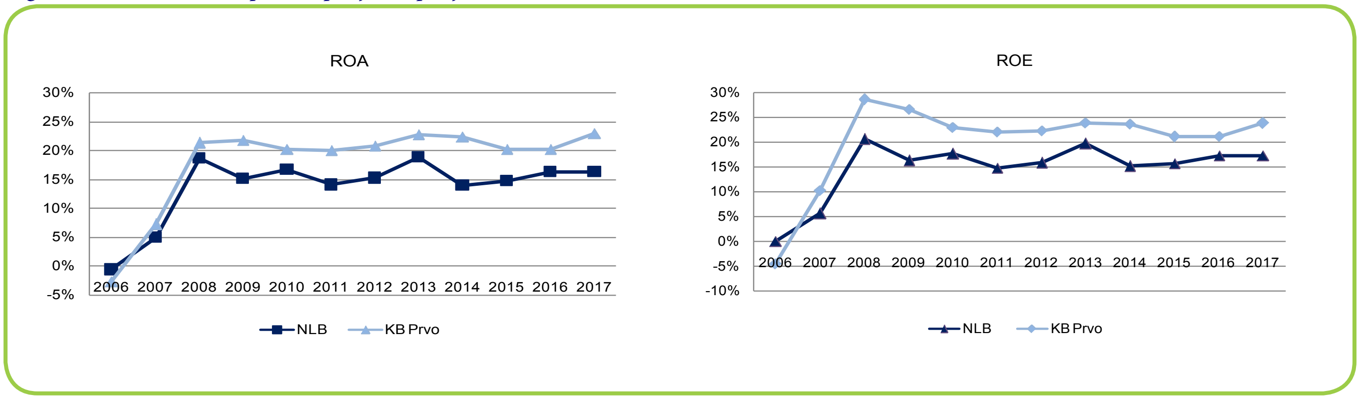
Figure 4.2 shows the movement of profitability indicators, ROA (net profit/total assets and ROE (net profit/capital), compared for both companies for the period 2006-2017.

Compared to 2016, in 2017 KB Prvo has higher rates of return on assets and on capital, while for NLB the return rates have remained almost the same as in 2016.

Table 4.5. Indicators *in denars*

Description	NLB	KB Prvo
Indicators for revenues and expenditures per member		
Average revenues per member	936.53	971.47
Average expenditures per member	555.28	474.99
Profit per member	381.25	496.48
Efficiency indicators		
Efficiency coefficient (total expenditures / total revenues)	59.29%	48.89%

Figure 4.2 ROA and ROE per company and per year



Information on mandatory pension funds

5

5.1 Membership in mandatory pension funds

An insured person may be entitled to a membership in a pension fund upon:

1) signing a membership contract and upon registration in the Membership Register kept by MAPAS;

2) random allocation in a mandatory pension fund by MAPAS in cooperation with the PDIF, when the insured person is obligated to become a member but had not signed a membership agreement in the prescribed period for selecting a mandatory pension fund, followed by registration in the Membership Register kept by MAPAS.

There are two major categories of second pillar members:

• Mandatory members – insured persons who got employed, and entered the mandatory pension and disability insurance for the first time after January 1, 2003

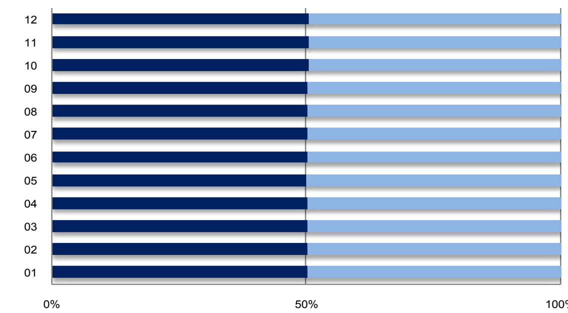
• Voluntary members – insured persons who were employed for the first time before January 1, 2003

Insured persons as per Chapter VII - Acquisition and realization of entitlements of some categories of insured persons under special conditions of the Law on Pension and Disability Insurance (employees with increased pension service working for the Ministry of Interior, Penitentiary-Corrective institutions, the Macedonian Army and similar) and individual farmers - cannot be members of the second pillar. As an exception, if such persons change their status of insured persons as per Chapter VII or as individual farmers, they may sign a membership contract with a pension fund by their choice, within one year from the status change. Also, persons that have already joined the second pillar and afterwards have changed their status into one of the above-mentioned categories have the right to switch back to the mono-pillar system within one year from the status change.

On September 20, 2005 the membership in the second pillar started. The voluntary members had the possibility to make their choices until December 31, 2005. Mandatory members are obligated to sign a membership contract within three months from their first employment. Once these categories of insured persons are employed, MAPAS i.e. PDIF temporary allocates them to a randomly chosen mandatory pension fund, in order for their assets to be invested immediately after their employment. The mandatory members, who will not sign a membership contract with the expiration of the statutory deadline, shall remain members in the pension fund to which they were temporarily allocated.

MAPAS prescribes the weight, which is used for allocation of members to pension funds. This is done the first working day of each month. The weight depends on the value of the fee from contributions, charged by the Pension Company and from the nominal return of the pension fund, where the impact is higher from the return (70%) rather than the fee (30%)[4]. Figure 5.1 presents the weight used in 2017 for allocation of insured persons in mandatory pension funds.

Figure 5.1 Weight used in 2017 for allocation of insured persons in mandatory pension funds.



	01	02	03	04	05	06	07	08	09	10	11	12
NLBz	50,19%	50,22%	50,20%	50,10%	49,89%	50,23%	50,09%	50,06%	50,11%	50,38%	50,47%	50,48%
KBPz	49,81%	49,78%	49,80%	49,90%	50,11%	49,77%	49,91%	49,94%	49,89%	49,62%	49,53%	49,52%

Just like in the previous years, in 2017 the number of allocated members between the two mandatory pension funds is almost equal. Considering that the value of both weights is around 50% (with exception for the month of May, throughout the entire year, the value of the weight for NLBz is slightly higher than the one of KBPz). Even though the contribution fee was reduced in 2017, the weights i have almost the same value, because both companies charge the same fee from contributions and the nominal return for booth pension funds is almost the same.

The total number of members and temporarily allocated members in the mandatory pension funds as of December 31, 2017 is 457,266, which is an increase of 30,241 second pillar members or 7% in respect to 2016. This means that around 79% of the total number of insured persons in the PDIF are members of the two-pillar pension system. The allocation of members and temporarily allocated insured persons among the pension funds in 2017 remained almost the same as in 2015, where on 31.12.2017 the total number of members and temporarily allocated insured persons in the mandatory pension funds are 52% in KBPz, while 48% are in NLBz.

Out of the total number of second pillar members, 68,848 or 15% are voluntary members, while 388,418 or 85% are mandatory members. Out of the total number of mandatory

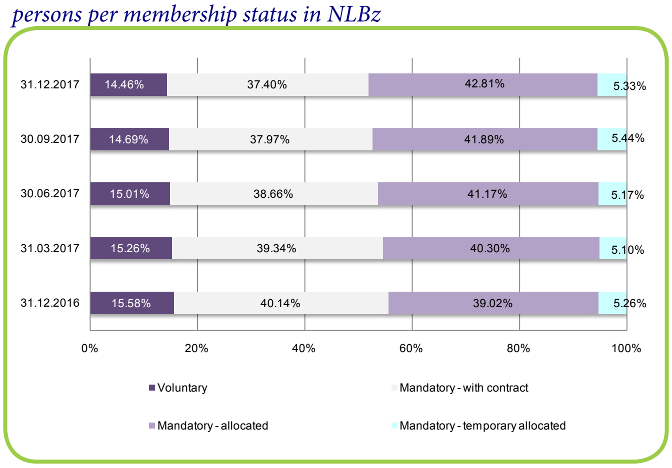
[4]The formula for weight calculation is prescribed with the Rulebook for Membership in a Mandatory Pension Fund.

members, 171,846 members have signed a membership agreement, while 192,784 are members allocated to a pension fund by MAPAS, and 23,788 are temporarily allocated members. Only 4% of the persons who got their first employment and/or became mandatory members of the second pillar in 2017, signed a membership agreement with a mandatory pension fund, while the rest or 96% remained in the pension funds as allocated by MAPAS.

In terms of the structure of members and temporarily allocated insured persons in the mandatory pension funds and per membership status there were no unexpected or significant changes in 2017, as shown on the Figures 5.2 and 5.3.

The structure of members and temporarily allocated insured persons per membership status in 2017 is similar in both pension funds. It is obvious that with every quarter the participation of voluntary members is decreasing, while that of the mandatory members is increasing. This is to be expected because each year the number of newly employed persons is increasing, which automatically increases the mandatory membership. Also, it is evident that the number of mandatory members who signed membership agreements is slightly decreasing in each quarter, unlike permanently allocated members whose participation is growing gradually in the total membership in each following quarter.

Figure 5.2 Structure of members and temporarily allocated insured persons per membership status in NLBz



The analysis of the membership structure by age demonstrates that the largest group of members is composed of those of young age, for whom the second pillar is most favourable. The mandatory members are young people, at the age from 26 to 35 years, while voluntary members are slightly older at the age from 36 to 45 years. The average age of mandatory members is 33 years for men and 34 years for women, the average age of the voluntary members is 44 years (for men and women), and of all members it is 35 years. The membership structure of the two-pillar pension system per age, per gender and per membership category is shown on Figure 5.4.

According to the projections of the State Statistical Office, the total population of the Republic of Macedonia at the end of 2016 is 2,073,702. Out of the entire population at the end of 2016, around 21% are members of the two-pillar pension system.. The membership structure of the second pillar out of the total population, per age and per gender, as of 31.12.2016 is demonstrated on Figure 5.5.

This figure demonstrates that only a small percentage of the population participates in the two-pillar pension system and the majority of the members are young persons, at the age from 25 to 34 years. This is the case because the reformed pension system is still very young and it has been operational only for twelve years.

The membership structure of mandatory pension funds per statistical regions[5] in the Republic of Macedonia is given on Figure 5.6. The majority of members are from the region of Skopje, while for NLBz least of the members are from the North-eastern part of the country, and for KBPz from the South-eastern part of the country.

Figure 5.3 Structure of members and temporarily allocated insured persons per membership status in KBPz

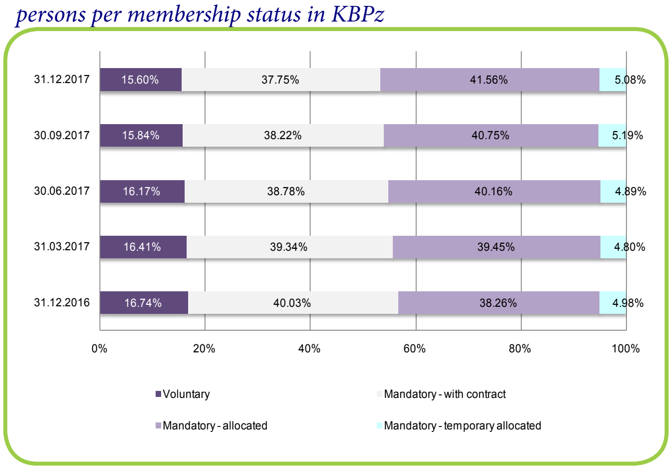
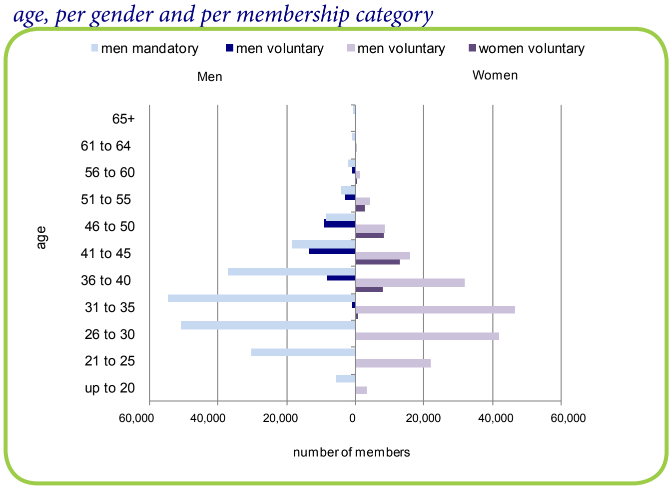
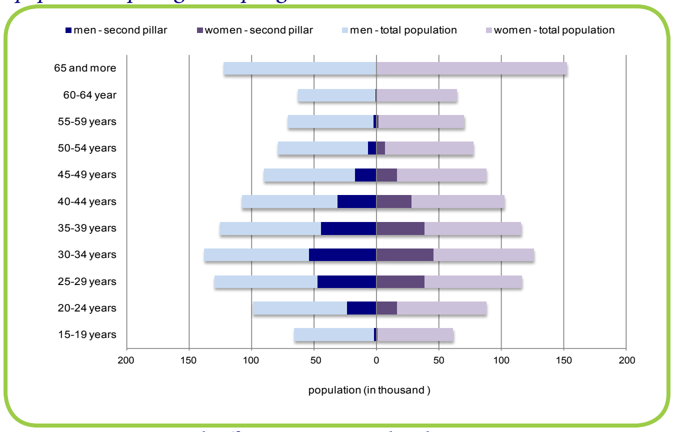


Figure 5.4 Membership structure of the two-pillar pension system per age, per gender and per membership category



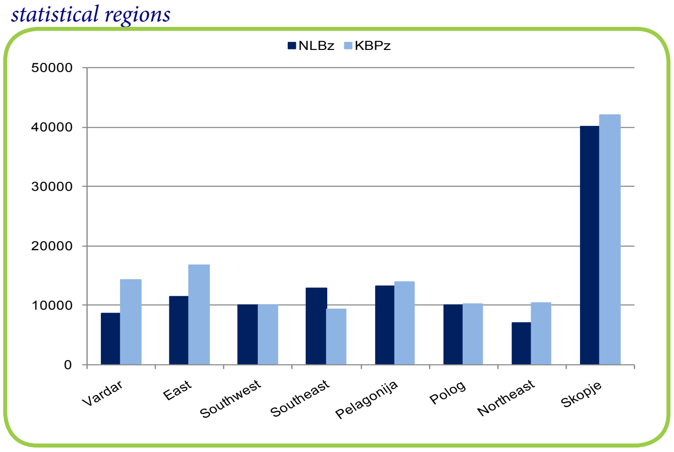
[5]*The statistical regions are defined by the State Statistical Office as territorial units, the nomenclature of the territorial units is based on the territorial organization of the local self-government in the Republic of Macedonia and it is harmonized with the EU classification.*

Figure 5.5 Membership structure of the second pillar out of the total population, per age and per gender



Source: State Statistical Office – MAK STAT data base – Statistics per regions – Population – Estimations of population

Figure 5.6 Membership structure of mandatory pension funds per statistical regions



5.2 *Transfer of members from one to another mandatory pension fund*

Each member of a mandatory pension fund is entitled to transfer to another mandatory pension fund if that member is not satisfied with the pension fund or with the pension company managing that pension fund. If a person had been a member in a mandatory pension fund less than 24 months, he is obligated to pay a transfer fee (in 2017 -15 Euros); otherwise, the transfer is free of charge. Upon such transfer, all of the assets on the members' account are transferred to the other pension fund.

Table 5.1 gives data on the number of members who transferred from one to another pension fund and the amount of assets that were transferred with those members, throughout 2017.

Even though the number of members who transferred from one to another mandatory pension fund in 2017 is bigger than 2016, still the number of persons who have changed the mandatory pension fund remains to be very small. During 2017, the total number of persons who have transferred from one to another mandatory pension fund is 89, which is 0.02% of the total number of members. Out of those who transferred, 25 went from KBPz to NLBz and 64 members transferred from NLBz to KBPz. Upon such transfers, around 5.8 million denars were transferred from KBPz to NLBz, while from NLBz to KBPz around 24 million denars were transferred.

Table 5.1 Transfer of members from one to another mandatory pension fund

2017	Members who have transferred FROM a mandatory pension fund	Transferred assets FROM a mandatory pension fund (in denars)	Members who have transferred TO a mandatory pension fund	Transferred assets TO a mandatory pension fund (in denars)
NLBz	64	24,117,015	25	5,824,605
KBPz	25	5,824,605	64	24,117,015

5.3 *Contributions in the mandatory pension funds*

The taxpayer is obligated to pay the pension and disability contribution –in the Republic of Macedonia the employers pay the contributions on behalf of the employees. The Public Revenue Office is in charge of the integrated collection of the social insurance contributions (pension and disability insurance, health insurance and insurance in the event of unemployment), as well as of the personal income tax.

For those who are members only in the mono-pillar system, their contributions remain with the PDIF (which for 2017 was 18% of the gross wage). For those persons who are part of the two-pillar system the PDIF divides the contribution between the first and the second pillar. The contribution transferred to the mandatory pension fund is 6% of the gross wage and the rest of the contribution for pension and disability insurance remains with the PDIF (for 2017 it was 12% of the gross wage (12% = 18% – 6%)).

The PDIF transfers the contributions of the mandatory pension fund members to their individual accounts, immediately upon payment, or maximum within five working days after receipt of the contributions, under the condition that with the receipt of the contributions the PDIF received the relevant data that would enable the PDIF to perform such transfer.

Figure 5.7 Payment and allocation of contributions

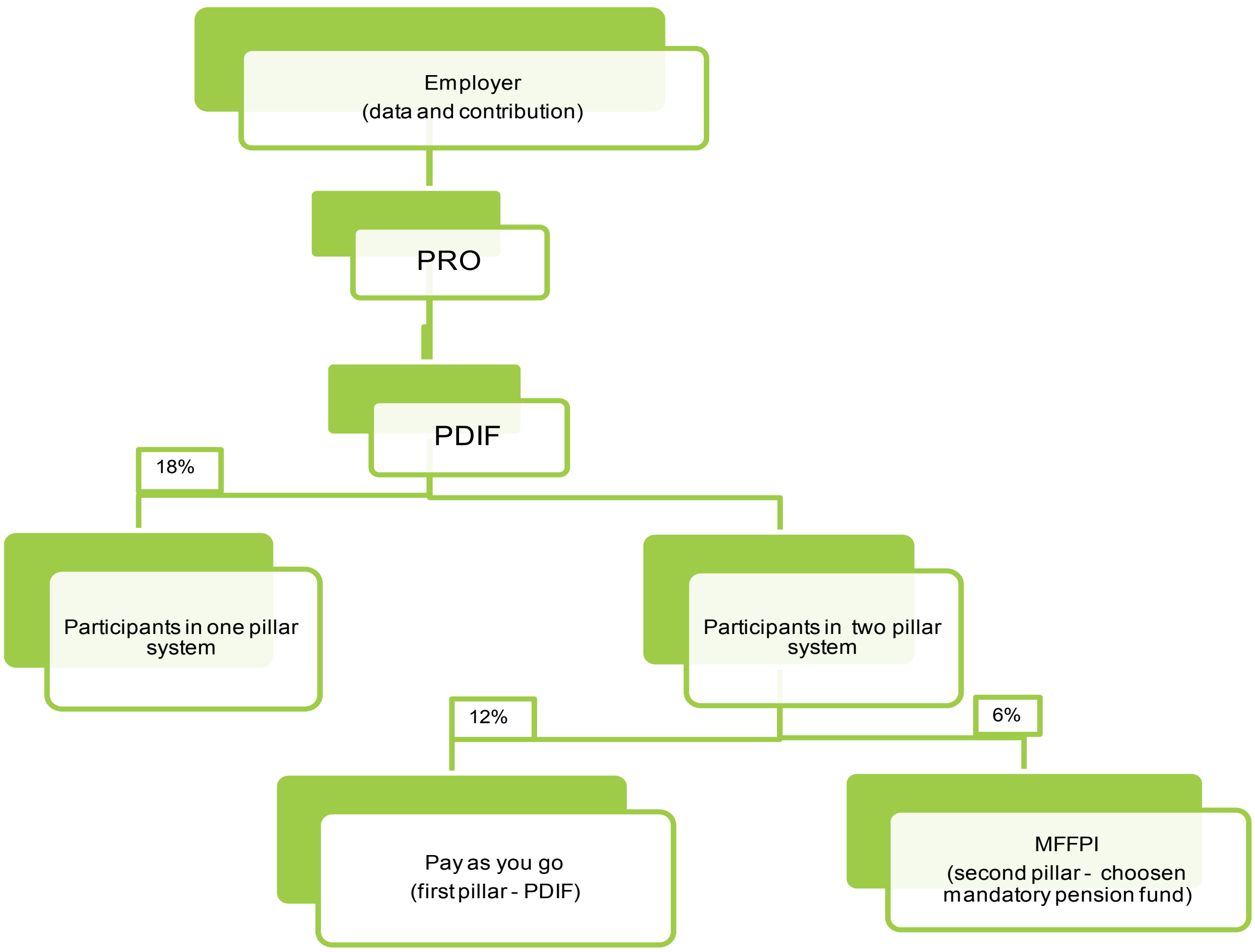


Table 5.2 Paid in contributions in the second pillar *in million denars*

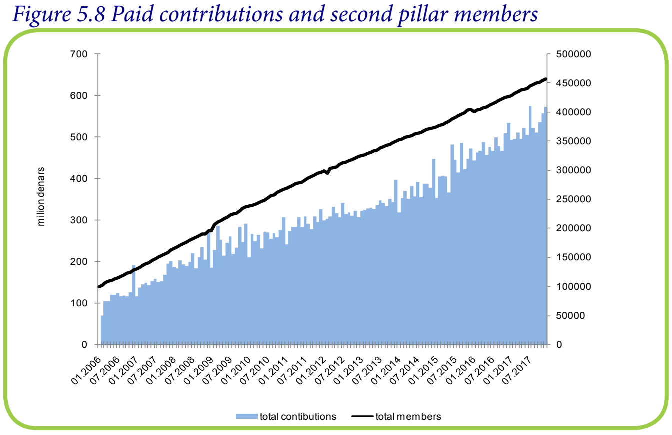
	Total 2016	Jan	Feb	March	April	May	June	July	Aug	Set	Oct	Nov	Dec	Total 2017
NLBz	2,733	234	235	244	236	249	241	271	249	242	255	266	274	2,995
KBPz	3,025	260	261	268	261	274	266	304	274	270	282	292	300	3,312
Total	5,758	495	496	512	497	522	506	575	523	512	537	558	574	6,307

During 2017, 6.3 billion denars were transferred to the mandatory pension funds, as presented in the Table 5.2, broken down by months:

Figure 5.8 shows all contributions (in million denars) paid in the second pillar, each month, from the very start of the reformed system until 31.12.2017, as well as the total number of members at the end of each month, in the same period.

It is evident that with the increase of membership the paid contributions grow as well (though the trend of payments is not linear, but it has certain peaks and valleys in some months).

Figure 5.8 Paid contributions and second pillar members



In 2017, one part (around 59 million denars) of the paid in contributions in the pension funds was returned to the PDIF for several reasons:

- Entitlements to disability pension benefits;
- Termination of membership contracts or cancellation of allocation of a member;
- Excess of paid contributions in the second pillar due to technical errors or excess of payments by employers

The structure of the returned assets to the PDIF, per mandatory pension fund, is shown in the table below.

Table 5.3 Structure of returned assets to PDIF, per mandatory pension funds

Reasons	From a mandatory pension fund	
	NLBz	NLBz
Entitlements	15,256,244	18,292,184
• Disability pension	4,207,388	5,926,473
• Survivors pension	11,048,856	12,365,711
Termination of contracts and cancellation of allocations	11,613,188	13,861,491
Contributions paid in excess	152,732	134,803
Total	27,022,164	32,288,478

5.4 *Investments and portfolio structure of mandatory pension funds*

It is very common for mandatory fully funded pension systems to introduce proactive control and quantitative and qualitative investment limits in the initial stages of implementation. Thus, the law and the secondary regulations define: the investment principles and goals, as well as the allowed types of investment instruments, the conditions that the regulated secondary markets must meet in order for the pension funds assets to be traded on such capital markets, the quality of instruments, countries or groups of countries in which pension funds assets may be invested, investment limits per instruments and per issuers, prohibited investment, allowed excesses of investment limits etc.

The pension company is obligated to invest the assets of the mandatory pension fund in accordance with the legal provisions and its investment strategy in order to earn the highest return for the benefit of the active and retired members. Also, it is obligated through diversification and due diligence, to minimize the risks from losses which might occur due to default of the issuer or other contractual parties, from the influences of the domestic or foreign markets, losses in the real value for the mandatory pension fund assets due to inflation and losses due to selling of assets for securing liquidity of the mandatory pension fund. In doing so, the members of the management and supervisory boards are obligated to employ care, efficiency and skills of prudent men upon discharging their duties of control and management over the investment of the pension funds' assets. Each member of the management or supervisory board of the pension company must meet their obligations in accordance with their fiduciary duties and they must provide for their application by each employee or contractor of the company.

The law and the secondary regulation stipulate that the pension fund's assets may be invested in bank deposits, certificates for deposits, bonds or other debt securities, shares and commercial notes issued by issuers with headquarters in the Republic of Macedonia or abroad, in the countries of the EU or OECD. Having in mind the necessary diversification that must be attained among different types of investment, there are maximum limits for investing in one company and maximum limits on the amounts that might be invested in certain types of instruments. In order to prevent investing in instruments that might be disadvantageous to mandatory pension funds, the law prohibits investments in shares, bonds and other securities that are not traded on official markets or that are not publicly traded, instruments that are not legally disposable, instruments that cannot be assessed, most types of property that cannot be immediately assessed and other items with uncertain values, like antiques, art etc.

Pension funds' assets are constantly growing and the domestic market is becoming smaller for their investments. So, the pension funds can afford to trade on large scale foreign market, and thus provide for diversification due to bigger choices of instruments and companies for investing of their assets.

Figures 5.9 and 5.10 give the investment structure of the mandatory pension funds from the beginning of the system (for the period 2006-2016 annually and for 2017 the structure is given on a quarterly basis).

Table 5.4 Maximum investment limits

Type of instrument	Maкsimum limit
Investment abroad (EU and OECD)	50%
• bonds and other securities issued by foreign governments and central banks	50%
• securities issued by non-state foreign companies, banks or investment funds	30%
Securities issued or guaranteed by RM on the domestic market or NBRM	80%
Bank deposits, deposit certificates, mortgage backed securities, and other securities issued by domestic banks	60%
• 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%
• 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 RM	5%
• participation shares in private investment funds	1.5%

Figure 5.9 Investment structure for NLBz

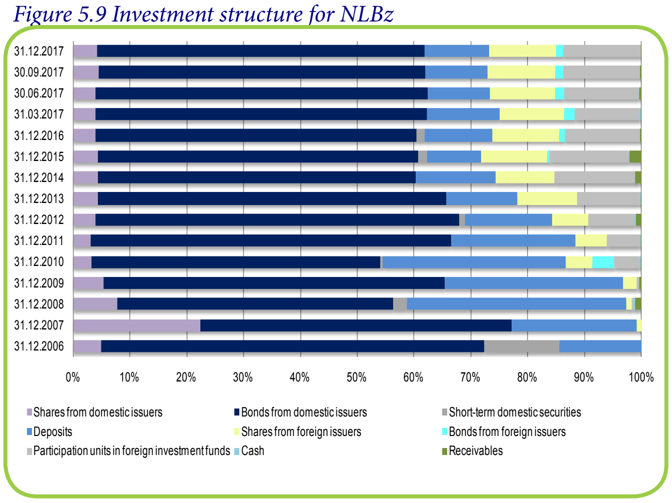
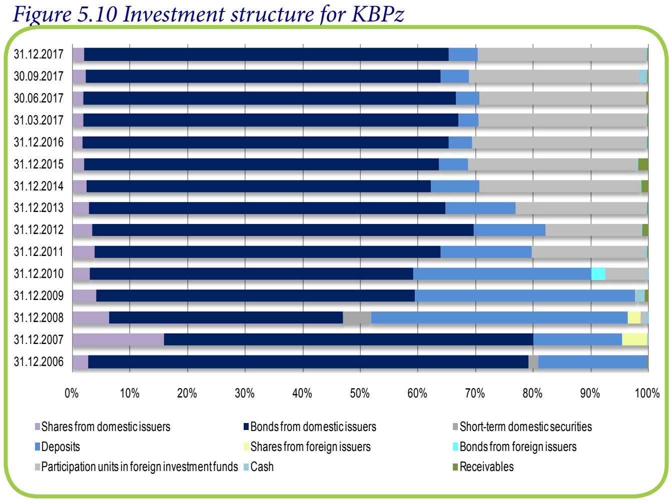


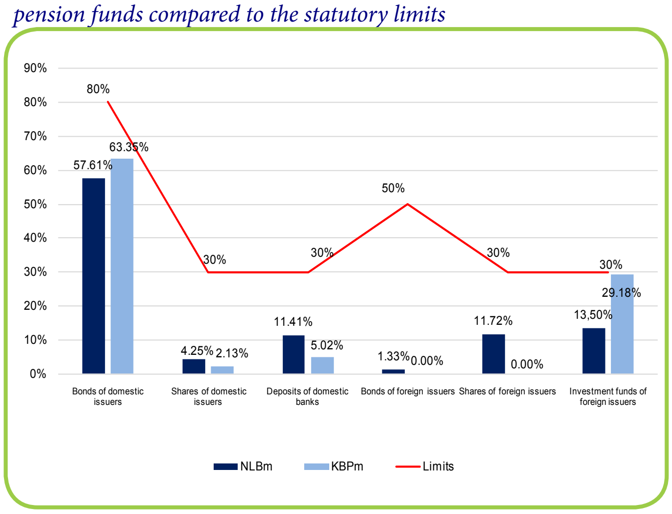
Figure 5.10 Investment structure for KBPz



The structure of investments of the mandatory pension funds, as of 31.12.2017 is given in Figure 5.11, and it is similar to the structure as of 31.12.2016. Domestic securities include only domestic government bonds, with 60.68% participation. The participation of bank deposits is 8%. Domestic shares' participation in the portfolio is rather low (3.12%)% in the investment portfolio, and it is almost the same as the previous year. In 2017, the investments abroad are almost the same as in 2016 and they were 27.95%. The investments in foreign securities include investments in participation units of foreign investment funds (21.87%), investments in shares (5.46%) and investments in government bonds (0.62%). The rest were investments in cash and cash equivalents (0.10%) and receivables (0.15%).

In 2017 both pension funds were in compliance with the statutory maximum investment limits. Figure 5.12 demonstrates the percentage participation in the portfolio per classes of assets for NLBz and KBPz and the statutory limits on 31.12.2017.

Figure 5.12. Classes of assets in the portfolios of the mandatory pension funds compared to the statutory limits

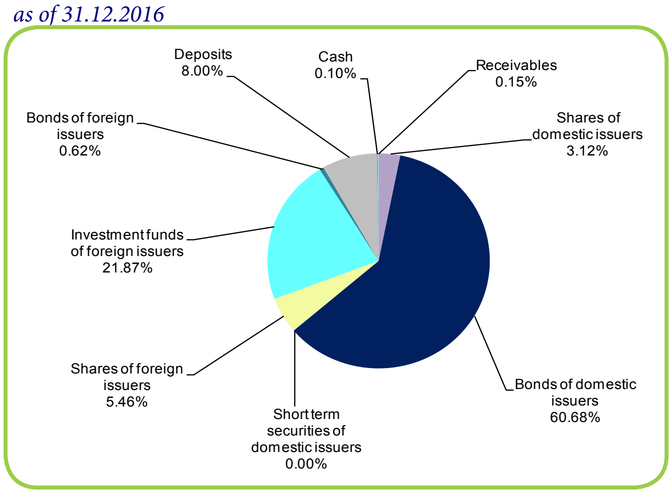


In 2017 just like in 2016, pension companies did not invest much in shares of domestic issuers. In 2017, both mandatory pension funds had almost the same exposure to shares in respect to 2016. Considering that this exposure is very limited, the changes in the Macedonian Stock Exchange Index (MBI 10) did not have any significant impact on the average value of the accounting unit of the mandatory pension funds. Namely, in 2018, MBI10 marked a growth of 18.92%[6], while the average increase in the value of the accounting unit of the mandatory pension funds was 5.53% in respect to 2016.

Also, the value of the bond index of the MSE – OMB, does not have a significant impact on the average value of the accounting unit of the mandatory pension funds, considering that only 0.92% of the assets are invested in domestic bonds traded on the Macedonian Stock Exchange. The rest of the portfolio is invested in domestic bonds which are parts of the continuous domestic bonds. In 2017, OMB had a minor growth of 0.58%, while the average increase in the value of the accounting unit of the mandatory pension funds was 5.53% in respect to 2016.

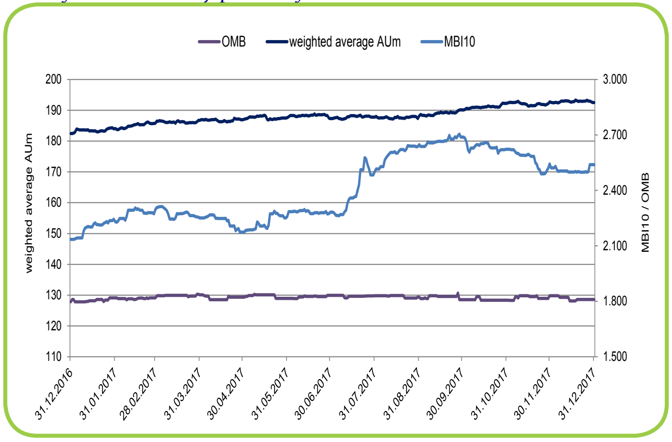
The Figure 5.13 shows the movements of the MBI10, OMB and the average value of the accounting unit of the mandatory pension funds in 2017.

Figure 5.11 Structure of investments of the mandatory pension funds, as of 31.12.2016



[6]The average value is calculated as weighted average of the accounting units of the mandatory pension funds in respect to the net assets of the mandatory pension funds.

Figure 5.13 MBI10, OMB and the average value of the accounting unit of the mandatory pension funds



Source: Macedonian Stock Exchange – Annual Statistical Bulletin for 2017

In 2017, most of the mandatory pension funds' assets were invested in domestic securities (58.94% for NLBz and 63. 53% for KBPz). Part of the domestic government securities of NLBz (1.33% from the total assets of NLBz) are government bonds of foreign issuers (1.00% of the total assets of NLBz). The next largest category of investments is instruments from issuers/shareholders from the financial sector – in which NLBz invested 28.01% and KBPz 34.53% of the total pension funds' assets. In this category, participation units in foreign investment funds have the largest participation (48.22% for NLBz and 84.51% for KBPz), compared to the previous year is higher for NLBz and lower for KBPz. These are followed by domestic bank deposits (40.75% for NLBz and 14.53% for KBPz) and financial services (10.10% for NLBz), while the lowest participation is that of shares in domestic banks (0.93% for NLBz and 0.96% for KBPz). Mandatory pension funds invest in other sectors as well: pharmacy, food industry, transportation, tourism, textile, IT, telecommunications, chemical industry, construction, automobile industry etc, however with very low participation (from 0.12% to 2.92%).

Per the currency structures of the mandatory pension funds' assets (as shown on Figures 5.16 and 5.17), it can be noticed that the largest amount of the NLBz assets (62.77%) and of KBPz (52.85%) are invested in Euros. From this, it can be noticed that both pension funds increased its investments in Euros in respect to 2016. The investments in instruments in domestic currency are lower for both pension funds in respect to 2016 and they are 17.62% for NLBz and 21.87% for KBPz. The participation of instruments in USD has increased compared to the previous year for KBPz and it is 25.29%, while for NLBz it has slightly decreased and it is 18.86% for KBPz). Small part of the NLBz assets is in invested in CHF (0.75%)..

Figure 5.14 Investment structure per sectors for NLBz

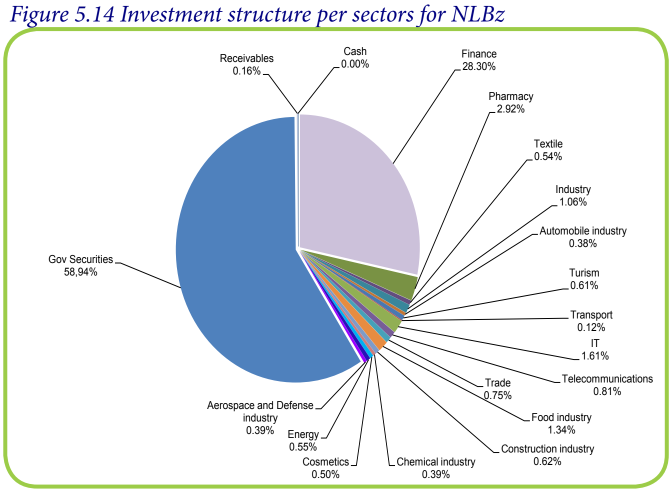


Figure 5.15 Investment structure per sectors for KBPz

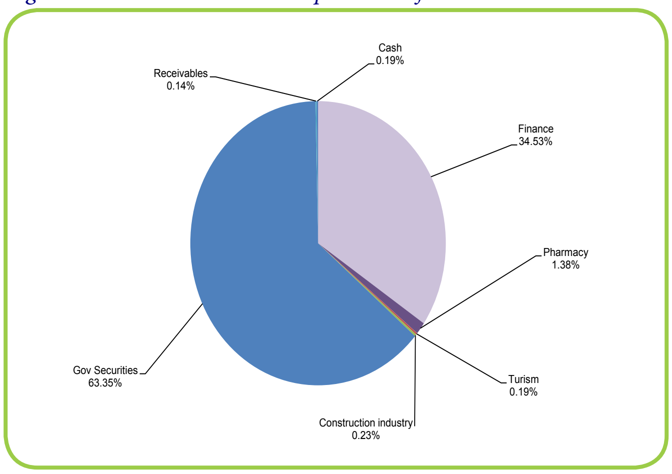


Figure 5.16 Currency structure for NLBz

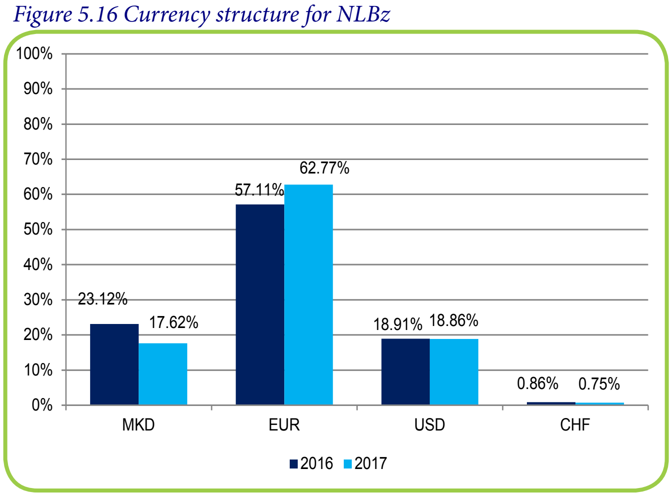


Figure 5.17 Currency structure for KBPz

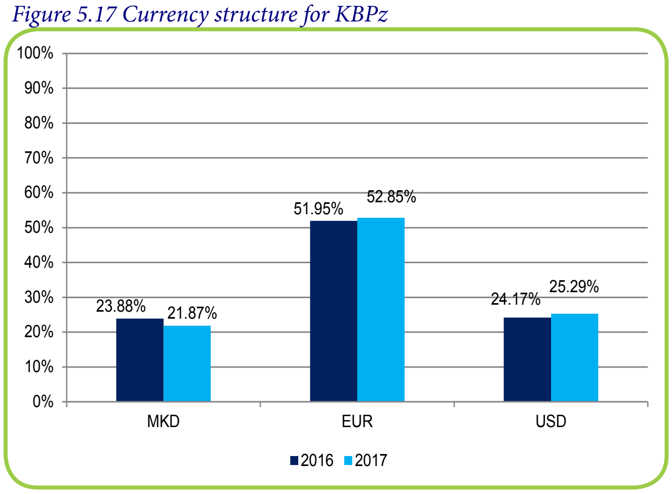
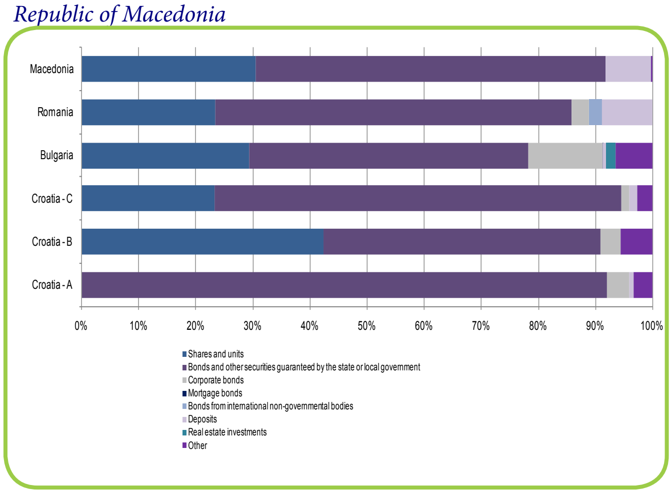


Figure 5.18 Pension funds portfolios in several countries and in Republic of Macedonia



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

The Macedonian system shows similarities but also significant differences when compared to global experiences or to countries with similar pension systems in terms of investment portfolios. Figure 5.18 shows pension funds portfolios (similar to the Macedonian pension funds) in several other countries and in Macedonia, as of 31.12.2017. it can be noticed that the structure of the investments of mandatory pension funds in the researched countries, is not very different at the end of 2017 in respect to 2016.

Analyzing the portfolios from types of instruments perspective, it is obvious that Bulgaria has least investments in bonds and other securities guaranteed by the government or the local authorities (49%). On the other hand, the rest of the countries invested more than 60% in bonds and other securities guaranteed by the government or the local authorities (Croatia B[7] 71%, Romania 62% and Macedonia 61%). The rest of the assets were invested in various ways. The following countries are leaders in deposit investments: Macedonia (8%) and Romania (9%), while only 1% of the assets of the pension funds in Bulgaria and Croatia C are invested in deposits. Most investments in shares and units can be seen in Macedonia (30%), Bulgaria (29%), followed by Croatia C (23%) and Romania (23%). Unlike pension funds in Macedonia, the pension funds in other countries invested in corporate bonds (Bulgaria 13%, Romania 3% and Croatia B 1%), but it should be noted that the Macedonian market is scarce in such instruments. Only Bulgarian pension funds invested in real estate (2%) (In other countries this instrument is mostly prohibited). The portfolio structure from the perspective of investing at home or abroad demonstrates the largest exposure of Bulgarian funds (59%), then Macedonian (28%), Croatian B (12%), Romania (9%).

[7]Croatia introduced multi funds, i.e. three categories of pension funds A (with highest risk), B (with current portfolios at the moment of introduction of the multi funds) and C (lowest risk) .

5.5 *Net assets, accounting units and rates of return of the mandatory pension funds*

The contributions transferred in the mandatory pension funds, reduced for the fee from contributions are invested immediately upon transfer. The earned returned is allocated in the mandatory pension fund i.e. on the members' individual accounts. Once a month, pension companies charge a management fee, which is calculated daily as percentage from the pension funds' assets. Also, transaction fees are charged from the pension fund upon each transaction. The valuation of the pension funds assets is done on a daily basis. It is done based on the market value of each asset, or based on the depreciated value of the assets if the instrument is kept until maturity or in a portfolio available for sale or if it is not possible to determine the market value.

The assets of the mandatory pension fund might change throughout the year for the following reasons:

- inflow of contributions;
- outflow due to fees and transaction commissions;
- inflows as a result of transfers from another pension fund (for persons who were temporarily allocated to another pension fund and have signed a contract with the current pension fund and for persons that were members in another pension fund and then transferred to the current pension fund);
- outflows due to transfers to another pension fund (for persons who were temporarily allocated to the current pension fund and have signed a contract with the other pension fund and the persons that were members of the current pension fund and then transferred to another pension fund);
- outflows of persons who have terminated their membership contracts, surplus of paid contributions or entitlements for disability or survivor pensions);
- outflows due to payouts of inheritance;
- outflows due to lump sum payments to persons who are not entitled to old-age pensions
- outflows due to payouts of old age pensions – programmed withdrawals
- (un) realized incomes or losses from investments

The value of the net assets at the end of the year is derived from the net assets at the end of the previous year and all the changes to them, as mentioned above. This is demonstrated in Table 5.5.

The total net assets of mandatory pension funds as of 31.12.2017 are approximately 57 billion denars or around 925 million Euro, which is approximately 9.18% of the GDP of the Republic of Macedonia[8].

Table 5.5 Changes in the assets of the mandatory pension fund (in million denars)

	NLBz	KBPz
Net assets as of 31.12.2016	22,358.80	25,691.42
Contributions	2,995.35	3,311.50
Fees from contributions	82.33	91.02
Contributions reduced for fees from contributions	2,913.03	3,220.48
Fees from assets	102.94	117.99
Expenditures for intermediary commissions	1.39	0.48
Transfers from another fund	6.04	25.06
Transfers to another fund	25.06	6.04
Transfers to PDIF due to termination, return of contributions or retirement	27.13	32.39
Inheritance pay out	2.59	5.28
Old-age pension benefit payouts – programmed withdrawals	0.49	0.74
Lump sum payouts	1.32	0.75
Gross profit from investments	1,402.10	1,619.46
Net profit from investments	1,297.77	1,500.98
Net assets as of 31.12.2017	26,519.03	30,392.74

Figures 5.19 and 5.20 demonstrate net assets at the end of each year as well as their annual increase in percentage in respect to the previous year. It is evident that the net assets of both mandatory funds grow with almost the same pace. The biggest growth is marked in 2009 in respect to 2008.

Figures 5.21 and 5.22 demonstrate the changes in the value of the net assets and the cumulative contributions, accompanied by the growth of contributions paid in the mandatory pension funds and the growth of the net assets, from the start of the system (i.e. the first payment on January 1, 2006) until 31.12.2017. Evidently, in the first years the net assets grow proportionally with the cumulative contributions, while in the last six years the assets of the pension funds are growing faster than the growth of the cumulative contributions.

[8]Source for GDP: State Statistical Office – announcement on the GDP fourth quarter of 2017- estimated data.

Figure 5.19 Annual growth of the net assets of NLBz in respect to the previous year, in %

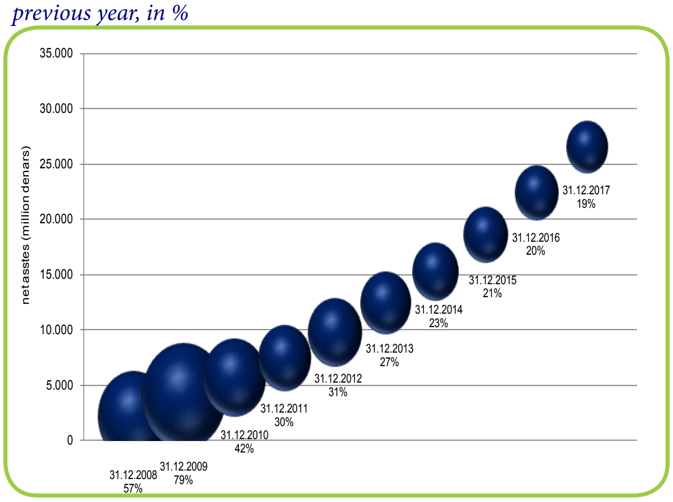
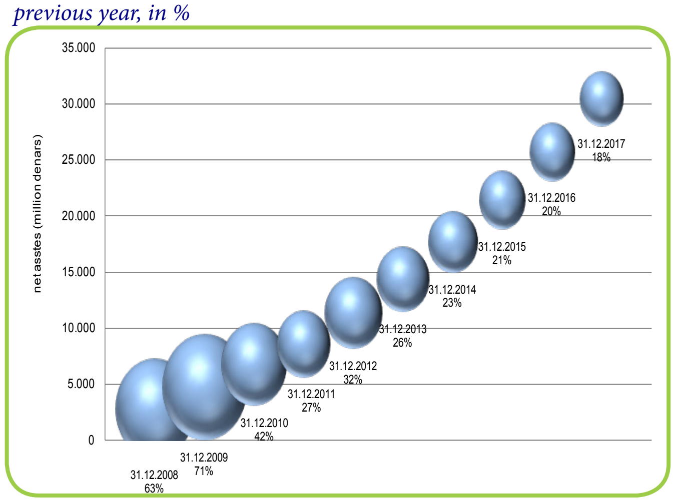


Figure 5.20 Annual growth of the net assets of KBPz in respect to the previous year, in %



For both mandatory pension funds, the net assets and the cumulative contributions have been growing since the start of the system. The biggest growth of net assets for both pension funds (around 150%) and of paid contributions (around 40%) was noticed in 2007. This is due to the large increase in membership and contributions, as well as of the accounting unit. Then there is a decrease in the net assets and the paid contributions. Trends stabilize over the years, and in the last four years the average increase of the net assets is 21% and the average increase of the cumulative paid contributions is 11.5%. In 2017, the growth of the net assets is 19% for NLBz and 18% for KBPz, while the growth of the paid contributions is 10% for NLBz and 9% for KBPz.

Accounting units are used for record keeping of the mandatory pension funds assets. One accounting until is a proportionate share of the total net assets of the fund. The value of the accounting unit is equal to the value of the net assets divided by the number of accounting units on all individual accounts and sub-accounts. The starting value of the accounting unit was 100 denars. Pension funds, Macedonian ones as well, are subjects to cyclical movements, which mean changes in the values of the accounting units, depending on the investments and the changes in the values of the instruments in which the assets are invested, as well as the dynamics of collecting contributions and fees.

The changes in the value of the accounting units of the mandatory pension funds, from the beginning of the system until 31.12.2017 are given in Table 5.6 and Figure 5.23. As shown on the Figure, the accounting units have a growing trend. In 2017, the accounting unit was growing grow and this growth was particularly obvious by the end of the year.

Usually, the return of the pension funds is calculated for several years and it is presented annually. So, the legislation for the Macedonian pension system, stipulates that the return shall be calculated for a seven-year period (calculation period) and it will be presented annually in real and nominal value. In case a pension fund is younger than 84 months, but older than 12, the return is calculated at the end of June i.e. at the end of December for the period from the first June i.e. December, after the establishment of the pension fund until the end of June i.e. December when the calculation period ends. In such case, the calculation period is 78, 72, 66, 60, 54, 48, 42, 36, 30, 24, 18 or 12 months.

The nominal return[9] is the change (growth) in percentage in the value of the accounting unit, on the last valuation date of the calculation period and the value of the accounting unit on the last day of the month preceding the first month of the calculation period, converted into equivalent annual nominal rate of return.

Figure 5.21 Net asset growth compared to the growth of paid contributions in NLBz

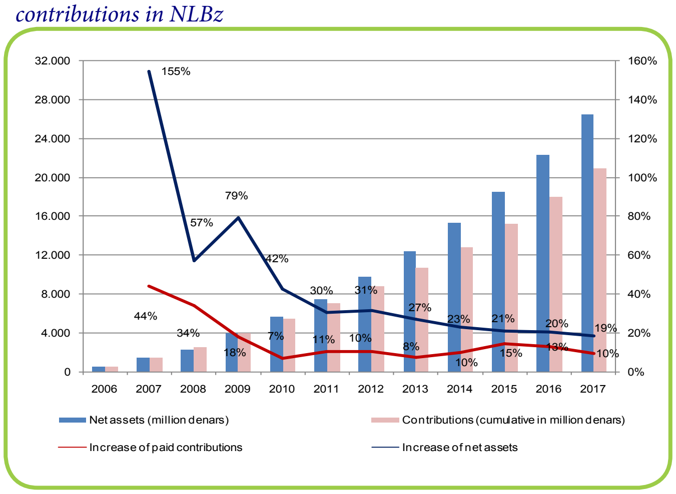


Figure 5.22 Net asset growth compared to the growth of paid contributions in KBPz

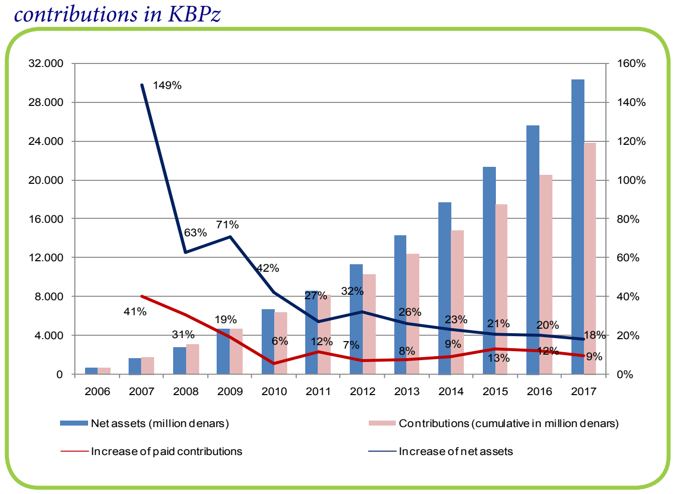


Table 5.6. Value of the accounting unit from the beginning of the system

Date	Value of the accounting unit	
	NLBz	KBPz
31.12.2006	105.929336	106.265900
31.12.2007	115.511364	115.303221
31.12.2008	100.155213	107.116421
31.12.2009*	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
31.03.2017	183.847605	189.267561
30.06.2017	184.592488	189.708460
30.09.2017	187.703138	192.208064
31.12.2017	189.686331	195.037486

** In the second half of 2009, both pension companies decided to reclassify the financial instruments held to maturity, into financial instruments available for sale. In this procedure, the pension companies actually re-evaluated the financial instruments, by applying fair value and have determined the value of assets, net assets, value of accounting units and number of accounting units, which caused a significant correction in the value of the accounting unit.*

The real return for each calculation period, converted into equivalent annual real rate of return is calculated based on the annual rate of return in nominal value and the change in the living costs of the calculation period, on annual basis.

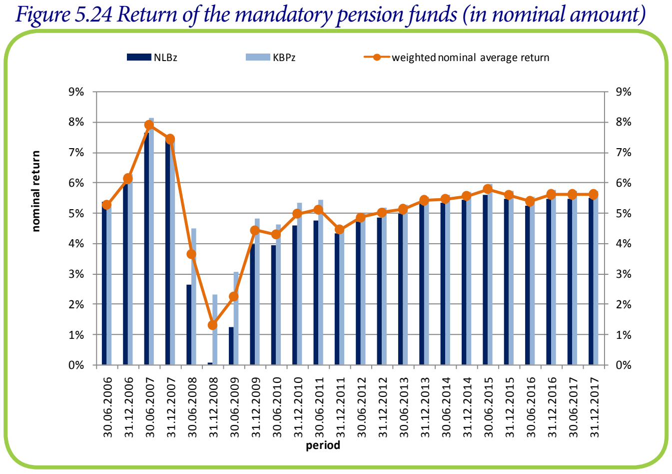
Table 5.7 demonstrates the return of the mandatory pension funds, per periods, presented annually.

The return on the individual account is variable, it depends on the return of the mandatory pension fund, and the fees charged from the pension company. The return or the yield is a parameter, which cannot be predicted realistically as it depends on the conditions on the capital markets and the economy as a whole.

Considering the long-term nature of the pension insurance, it is important to calculate the return from the start of the system (twelve years) and in average[10], it is 5.61% in nominal value and 3.45% in real value.

The changes in the nominal return during these twelve years of existence of the system are shown with the Figure 5.24. Plotted on the Figure are the returns per periods (from the start of the system until the adequate period), from the beginning of the system until 31.12.2016, per funds and with the weighted average return. It is obvious that at the beginning of the system, the return is growing, so by the end of 2006 and 2007 the rates are high, while by the end of 2008 the rates are at their lowest, due to the negative developments on the domestic and foreign financial markets. By the end of 2009, the rates recover and start growing by 2010. In 2011 again, there is a slight decrease in respect to 2010. However, in the next years, by mid-2015 it is obvious that the rates of return start to pick up and have a steady growth, followed by a slight drop by mid-2016 which takes rise again as of the end of 2016. In 2017 the return remained almost the same as the return for 2016.

Figure 5.24 Return of the mandatory pension funds (in nominal amount)



[9]The formulas for calculating the nominal and real return are prescribed with the Rulebook on valuation of assets of mandatory and voluntary pension funds.
[10]The average return is calculated with the same formula used to calculate the rate of return of mandatory pension fund, where instead of the accounting unit, the weighted average of the accounting unit is used in respect to the net assets ..

Figure 5.23. Value of the accounting unit from the beginning of the system

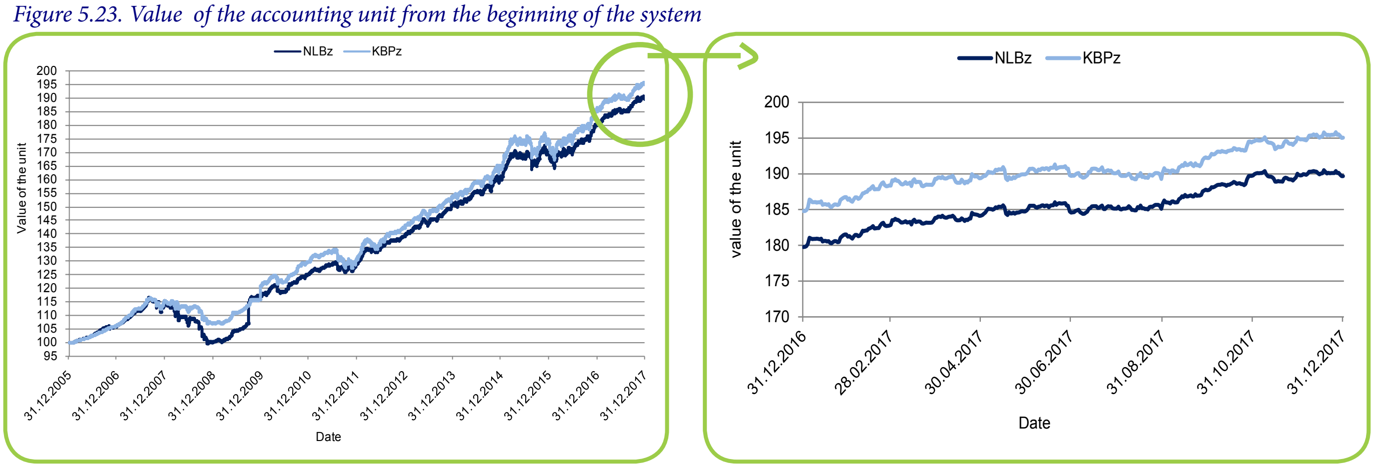
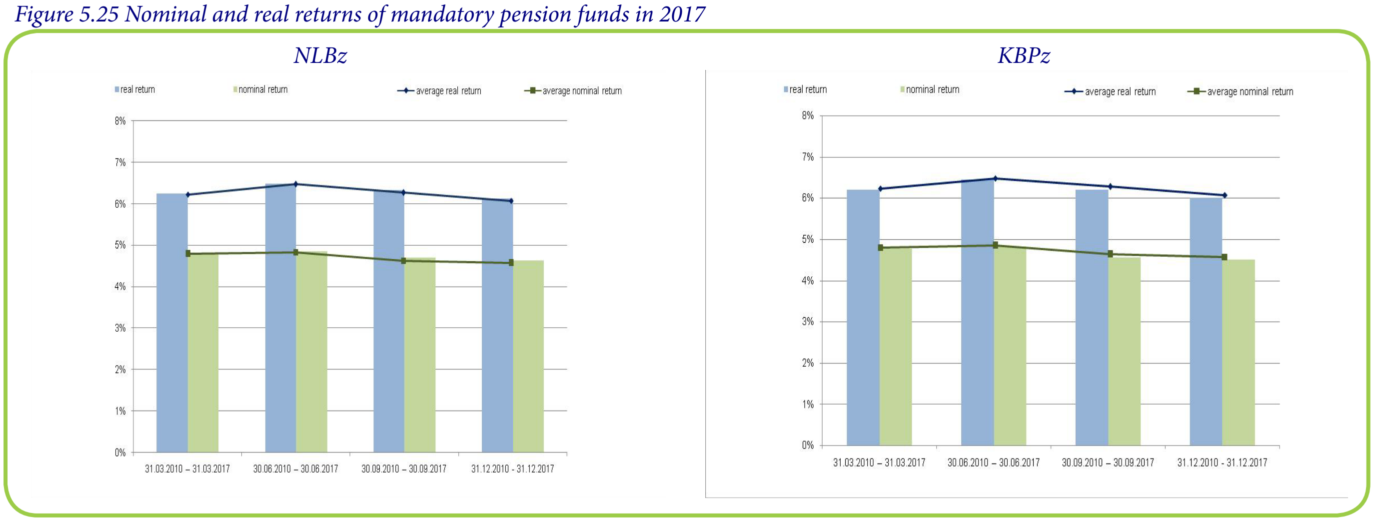


Table 5.7 Return of the mandatory pension funds

Period*	NLBz		KBPz	
	In nominal value	In real value	In nominal value	In real value
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%
31.03.2010 – 31.03.2017	6.25%	4.81%	6.21%	4.77%
30.06.2010 – 30.06.2017	6.49%	4.86%	6.45%	4.82%
30.09.2010 - 30.09.2017	6.34%	4.70%	6.20%	4.56%
31.12.2010 - 31.12.2017	6.13%	4.63%	6.01%	4.51%
Start* -31.12.2017	5.48%	3.32%	5.72%	3.56%

** Until the amendments to the Law on mandatory, fully funded pension insurance in 2013, the return was calculated for a period of 3 years, only in nominal value.*
*** For NLBz and KBPz the start is on January 1, 2006*

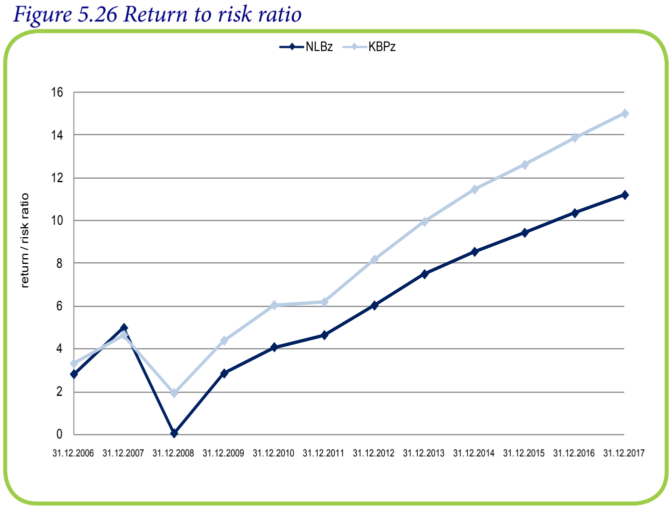
Figure 5.25 Nominal and real returns of mandatory pension funds in 2017



The movements in the real and nominal rates of return for 2017 for the period of seven years, per mandatory pension fund and compared to the average return are shown on Figure 5.25. In 2017, the nominal return is extending in the range from 6.01% to 6.49%, while the real return is in the range 4.51% to 4.86%. The highest values are noticed in the returns for the period 31.06.2010 – 30.06.2017.

The main goal of investing the assets of the mandatory pension funds is to cause growth of such assets. Therefore, the return is the measure of such growth. At the same time, one should mind the risk from investments. The risk represents the inability to predict the accomplishment of the return on the invested assets. The risk to return ratio is direct, which means that higher risk brings higher return and vice versa. The nominal return to risk[11] ratio (calculated by one of the possible calculation methods) from the beginning of the system until the end of 2017 is shown on Figure 5.26. Higher return to risk ratio is an indicator of the better investment performance of the fund and the potentials of the fund for higher returns per risk unit.

Figure 5.26 Return to risk ratio



[11]The return is calculated on annual level from the growth of the accounting unit and from the beginning of the system. The risk represents the volatility of the accounting unit and it is calculated as annualized standard deviation of the pension funds 'return.

5.6 *Fees for mandatory pension funds*

According to the Law, Pension Companies charge three types of fees: fee from contributions, fee from assets and fees for transfers. They use these fees to cover the following functions: manage the mandatory pension funds assets, valuation of assets, membership, keeping of individual accounts, reporting to members, payment of fees to MAPAS and the custodian and covering of own expenses.

This type of financing of pension companies is common for pension systems similar to Macedonian. The entry fee (fee from contributions) is charged as a percentage from the contributions, it is paid once, upon payment of the contribution and then the contribution is invested until the assets are withdrawn. The management fee is charged at the end of each month from the total assets under management. The burden of the contribution fees is felt at the beginning, as they are relatively high in the beginning years. Management fees however, are more burdensome at the end, since the accumulated assets are much bigger towards retirement[12]. On a long run, the contribution fee will have insignificant impact on the amount of the pension benefit, while the assets management fee will gain on significant with the years; therefore the law regulates the very low percentage limits for this fee. However, at the beginning of the system, the impact of the contribution fee on the individual accounts is quite evident. This is expected, since in the start-up years the assets of the pension fund are limited and, the company has a lot of set-up expenses, which are covered from the company's own assets and from the fees charged from the members. As the system develops in the future, the assets of the mandatory pension fund will grow and it can be expected that they will earn more profit for the individual accounts of the members. The short-term results are of no significance, because the system is designed for savings that are accumulated for e period of 30 to 40 years. The members start saving while they are young, and get their pension at 64 (for men) or 62 (for women). Thus, one should look for the advantages of this type of insurance solely on a long run.

Table 5.8 Fees charged by Mandatory Pension Companies

Type of fee	NLB	KB Prvo
Fee from contributions	2.75%*	2.75%*
Monthly fee from the assets of the mandatory pension fund	0.035%**	0.035%**
Transfer fee		
Number of days***	Amount of transfer fee	Amount of transfer fee
number of days ≤ 720	15 Euros	15 Euros
number of days > 720	Transfer fee not charged	Transfer fee not charged

** Amount equal to the maximum amount prescribed by law for 2017 (previously it was 3.00% for both – NLBz and KBPz).*
*** Amount equal to the maximum amount prescribed by law for 2017 (previously it was 0.045% for both – NLBz and KBPz)*
**** The number of days is calculated from the day in which a person became a member of the existing pension fund (or in case of first membership, the first day in the month in which the contributions started for the member in the current pension fund) until the deadline in which the member should submit to MAPAS the transfer from and the proof of payment of the transfer fee.*

The types and amounts of fees charged by the Mandatory Pension Companies in 2017, are shown in the Table 5.9.

At the very beginning of the system, the contribution fee was set by a public tender at 8.5%. Further on, as the system developed the state authorities decreased the fees charged from the Pension Companies, and as the contributions

Table 5.9 Contribution fees charged by pension companies in the second pillar

Pension company	Fee	Effective from
NLB	9.90%	Tender
	8.50%	Beginning of the system (2006)
	7.90%	July 2007
	6.90%	February 2008
	6.50%	May 2009
	5.50%	January 2010
	4.50%	January 2011
	4.00%	January 2012
	3.75%	June 2013
	3.50%	January 2014
	3.25%	January 2015
	3.00%	January 2016
	2.75%	January 2017
KB Prvo	9.90%	Tender
	8.50%	Beginning of the system (2006)
	7.90%	July 2007
	6.80%	February 2008
	5.50%	January 2010
	4.50%	January 2011
	4.00%	January 2012
	3.75%	June 2013
	3.50%	January 2014.
	3.25%	January 2015
	3.00%	January 2016
	2.75%	January 2017

[12] *Administrative Charges for Funded Pensions: An International Comparison and Assessment, Edward Whitehouse, June 2000.*

continued to grow, this fee was decreased several time. The fees from contributions from the beginning of the system until 2017 are shown in Table 5. 10.

The fee from assets was set in the Law, and until May 2013, it was 0.05% from the net assets of the mandatory pension fund and then until December 2014 it was 0.045%. From January 2015, the fee is 0.04%, until December 2016. Since January 2017, the fee on assets is 0.035%

Since 2013, the Law regulates the contribution and the asset management fees have statutory maximum limits beyond which pension Companies are not allowed to charge and certain reductions of the fees are stipulated to happen in time. Also, the amendments stipulate their gradual reduction over several years. So, the maximum amount of the contribution fee will not surpass 2%, while 0.03% is the maximum for the asset management fee, which will be implemented from 2019-2020 onward. Until these amounts are reached, the fees will be reduced gradually from their current values, as seen in Table 5.10.

The collection of fees (in million denars) by pension companies in 2017 is given in Table 5.11.

Table 5.10 Maximum amounts of contribution and management fees for the second pillar, stipulated by law.

Year	Fee from contributions	Monthly fee from assets
2016	3.00%	0.040%
2017	2.75%	0.035%
2018	2.50%	0.035%
2019	2.25%	0.030%
2020	2.00%	0.030%

Transaction commissions for acquisitions or transfers of assets of a mandatory pension fund are charged from the pension fund and paid to selected service providers. These fees are calculated as a percentage from the value of each transaction. For each transaction on the Macedonian Stock Exchange, the pension fund pays commissions to the Macedonian Stock Exchange and the Central Securities Depository. During 2017, NLBz paid 1.39 million denars for transactions commissions and KBPz paid 0.48 million denars in commissions.

Table 5.11 Collection of fees in 2017 by pension companies (in million denars)

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
NLBz- total	14.36	14.52	14.89	14.77	15.26	15.14	16.03	15.53	15.50	16.03	16.46	16.79	185.27
From contributions	6.45	6.46	6.70	6.47	6.84	6.62	7.44	6.84	6.66	7.02	7.31	7.52	82.33
From assets	7.91	8.05	8.19	8.30	8.42	8.52	8.59	8.69	8.84	9.02	9.15	9.26	102.94
KBPz - total	16.26	16.44	16.77	16.71	17.18	17.08	18.21	17.47	17.50	18.05	18.49	18.86	209.02
From contributions	7.16	7.18	7.36	7.17	7.52	7.30	8.36	7.54	7.42	7.74	8.03	8.25	91.02
From assets	9.09	9.26	9.42	9.53	9.66	9.78	9.85	9.93	10.09	10.30	10.46	10.61	117.99

5.7 *Pay outs of pensions from the mandatory fully funded pension insurance*

The retirement conditions are the same for the first and for the second pillar: age – 64 years for men and 62 years for women, and at least 15 years of career.

The first pillar pays the following benefits: part of the old age pension, survivors, disability and minimum pensions. The pension from the first pillar is calculated as a defined benefit per a predefined formula (percentage depending on the career years multiplied by the pension basis, determined from the valorised wages earned in the entire career of the person).

The second pillar pays out part of the old age pension, in a form chosen by the member:
- as a pension annuity; determined from the entire amount of money accumulated on the individual account; the annuity is paid out for the rest of the member's life by an authorised insurance company; or
- as programmed withdrawals provided by the pension company managing the mandatory pension fund , or
- as a combination of both .

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

In case an insured person is entitled to a disability pension and is a member of the second pillar, the total amount of assets on the member's account is transferred to the PDIF and the payout of the total amount of the disability pension is done by the PDIF. As an exception, if the amount of assets on the member's account surpasses the amount for disability pension regulated with the Pension and Disability Insurance Law, than the member can choose to receive a second pillar pension benefit instead of the disability pension from the PDIF.

In case a second pillar member dies and his/her family members are entitled to a survivor's pension, the total amount of assets on the member's account is transferred to the PDIF and the benefit payout is done by the PDIF. As an exception, if the amount of assets on the member's account surpasses the amount for survivor's pension regulated with the Pension and Disability Insurance Law, than the member can choose to receive a second pillar pension benefit instead of the survivor's pension from the PDIF.

In 2017, the second pillar members i.e. close family members of the deceased members acquired 58 disability pensions and 125 survivor's pensions, respectively. Their accumulated assets were transferred to PDIF that pays the disability and survivors' pensions. In 2017, 15 members of the second pillar started to receive their old age pension from the second pillar through programmed withdrawals.

Table 5.12 Pension entitlements for second pillar members

Type of pension/ Mandatory pension fund	NLBz	KBPz	Total
Disability	23	35	58
Survivors	57	68	125
Old age pension – programmed withdrawals	9	6	15
Lump sum payments – old age	24	11	35
Lump sum payments – inheritance	34	41	75
Total	147	161	308

Additionally, the legislation stipulates payouts from the member's individual accounts without entitlements to a pension, in the following cases:

- when a deceased pension fund member has no family members entitled to a survivors pension, and the assets on that member's account become a part of his/her property and will be managed in accordance with the Law on Inheritance.

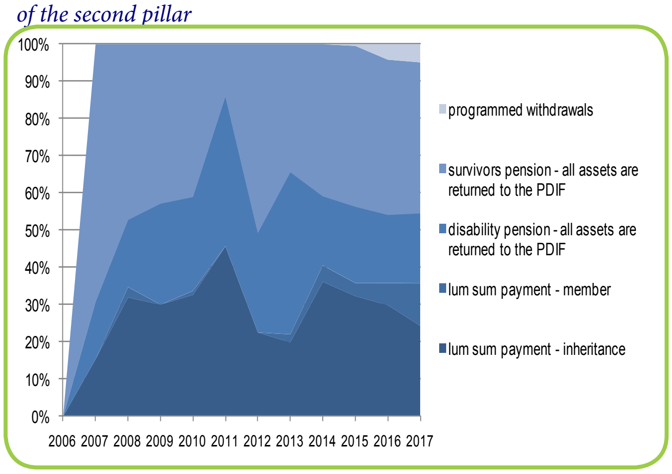
- when a pension fund member has not acquired the entitlement to an old-age pension according to the Law on Pension and Disability Insurance because he/she does not have at least 15 years of service, he/she can buy monthly pension annuity if the amount of that annuity is equal or higher than 40% of the minimum pension. In case the calculated amount of pension annuity is lower than 40% of the minimum pension, the mandatory pension fund shall pay a lump sum of the accumulated assets on the member's account. In such cases, the acquisition of the pension annuity and the lump sum payment of the total accumulated assets can be done after reaching 65 years of age.

In 2017, the inheritance for 75 deceased members was paid out from the individual accounts, out of which 34 were members of NLBz and 41 were members of KBPz. Also, there were 35 lump sum payouts (24 NLBz members and 11 KBPz members).

Table 5.13 gives a detailed overview on the acquired pension entitlements for the second pillar members per mandatory pension fund in 2017.

Figure 5.27 gives the structure of entitlements and payouts from the second pillar in its twelve years of existence, as of 31.12.2017. The number of payouts is low, because its members are very young. Most of the payouts are for survivors' pensions due to death of second pillar members, followed by disability pensions and lump sum payments and payouts to members with programmed withdrawals.

Figure 5.27 Structure of entitlements and payouts from the beginning of the second pillar



Information on the voluntary pension funds

6.1 The goal of voluntary fully funded pension insurance

6.2 Membership in the voluntary pension funds

6.3. Members transferring accounts in the same or other voluntary pension fund

6.4. Contributions to the voluntary pension funds

6.5. Investments and portfolio structure of voluntary pension funds

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

6.7. Voluntary pension fund fees

6.8. Payout of pension benefits from the voluntary pension insurance

6

6.1 *The goal of voluntary fully funded pension insurance*

The primary goal of the voluntary fully funded pension insurance is to provide higher old-age income at retirement to the persons who are already insured in the mono-pillar and/or in the two-pillar pension system; to provide a pension for those individuals who are not covered by the mandatory pension system and to provide conditions for establishment of occupational pension schemes in the process of the harmonization of the Macedonian social insurance with the European Union systems. The basic principles of this insurance: to provide an additional old-age income, membership on a voluntary base, voluntary fully funded insurance on defined contribution basis, investment of assets based on safety, diversification of risk and maintaining of adequate liquidity, as well as transparency.

The voluntary fully funded pension insurance offers coverage for a larger group of the population in the Republic of Macedonia, as well as for persons who are not citizens of the Republic of Macedonia. As it provides for additional old-age income, this type of insurance increases a person's material security in the retirement days. Macedonia, like many European countries has occupational pension schemes sponsored by the employers or the citizens associations, which provide and finance additional pension insurance for their employees or members. Due to the ever increasing pressure over the European social insurance systems, the occupational pensions will play more significant role in the provision of old-age income. Therefore, the occupational pensions have to be developed in addition to the social insurance, in order to ensure reliable, permanent and efficient social insurance, one that will provide for a decent living standard after retirement. In the third pillar, an employer or a citizens association (sponsor) can organize and finance occupational pension schemes and pay the contributions in the voluntary pension funds for their employees or members. A group of employers or citizens associations can organize and finance occupational pension schemes together. Thus, the sponsor signs a contract with the chosen pension company that manages the pension fund in which the occupational scheme of the sponsor shall be included.

The voluntary fully funded pension insurance should have a broad impact on the entire national economy, as the savings of the population will increase, investments will be boosted and they will additionally stimulate and deepen the capital markets, which will lead to an increase in the demand for new instruments and new financial services, etc.

The voluntary fully funded pension insurance became operational in the second half of 2009 and the existing pension companies were granted licenses for management of voluntary pension funds. Therefore, Open Voluntary Pension Fund "NLB penzija plus" Skopje started on July 15, 2009 while KB Prv Open Voluntary Pension Fund – Skopje on December 21, 2009.

6.2 *Membership in the voluntary pension funds*

A person may become a member of a voluntary pension fund by:

1) signing a contract for membership in a voluntary pension fund with the Voluntary Pension Company or Joint Pension Company and by opening a voluntary individual account

2) signing a contract for membership in a voluntary pension fund with a third person (payer), who shall pay in the name and on behalf of the person and with the Pension Company and by opening of voluntary individual account

3) participating in an occupational pension scheme organized by his/her employer or association were he/she is a member and by opening an occupational account.

One person can have only one voluntary individual account and one occupational account. These accounts can be in the same or in different voluntary pension funds.

As of 31.12.2017, the third pillar has 23,800 members or 811 members more than on 31.12.2016. This means that the third pillar membership has grown for around 4%. Out of the total membership, 8,979 members or 38% have individual accounts and 14,821 members or 62% are participants in occupational schemes and have occupational accounts.

Figure 6.1 Membership structure per voluntary pension fund and per membership type in NLBd

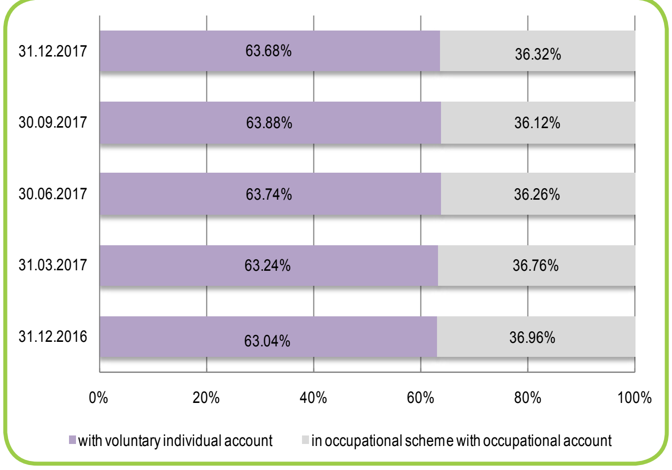
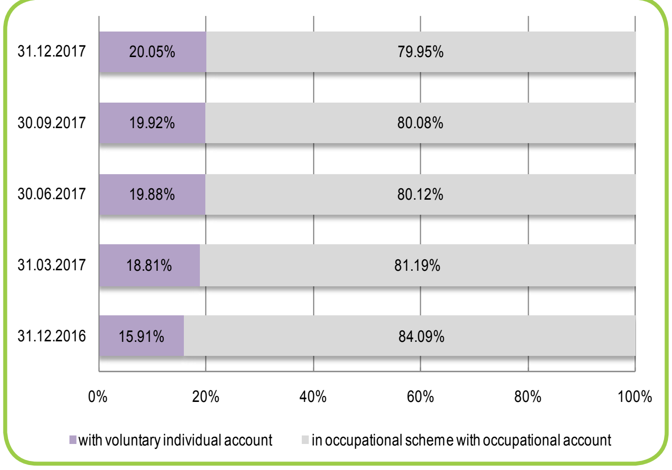


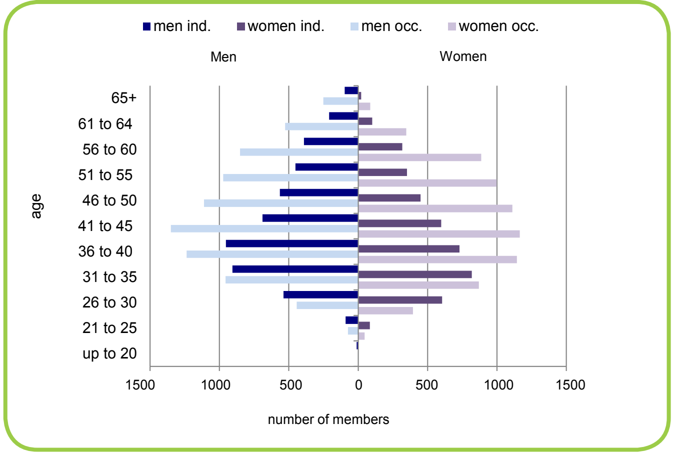
Figure 6.2 Membership structure per voluntary pension fund and per membership type in KBPd



On 31.12.2017, around 41% are members in NLBd and 59% are members in KBPd, which is almost the same as the previous year.

Figures 6.1 and 6.2 show the membership structure in the voluntary pension funds per membership type in 2017 on quarterly level. It is evident from the figures that there is a significant difference in both types of membership for both voluntary pension funds. NLBd has more members with individual accounts (64%), while KBPd has more members with occupational accounts (80%). It is evident that the membership structure in NLBd is more diversified compared to 2016, while in KBPd the percentage participation in occupational schemes is decreased for around four percentage points in respect to 2016. The third pillar membership structure per age, gender and type is shown on Figure 6.3. This figure demonstrates that most members are young people (at the age from 36 to 40). Still, compared to the second pillar, the third pillar has more mature members. The members with occupational accounts are older than those with individual accounts. The average age of the members with individual accounts is 42 years for men and 41 years for women; while for the members with occupational accounts the average age is 46 years for men and 45 for women. The average age for all members is 44 years.

Figure 6.3 Third pillar membership structure per age, gender and membership type



From the experience so far, the members with individual account mostly pay their own contributions, while in a very few cases a third party (payer) pays their contributions (out of 8,979 members with individual accounts only 454 members or 5% have a third party as a payer). The third pillar allows membership to persons who are not Macedonian citizens; however this percentage is very small so far (0.02% out of the total number of members).

In NLBd 3,502 members participate in 1,172 occupational schemes, and in KBPd 11,319 members participate in 2,762 occupational schemes. Some schemes have many members, while other have only 1 or 2 participants. Out of the total number of occupational schemes, 18 of them have over 100 members and only one scheme has over 1,000 members. The average number of members per scheme is 4. The allocation of members per occupational scheme per fund is given on the Figure 6.4, which gives individually only schemes of over 100 members, while the rest is given in the category "others".

The structure of the third pillar membership per statistical regions[13] is given on the Figure 6.5. The majority of members are from the region of Skopje, where KBPd has 5,947 members and NLBd has 4,188 members. NLBd has least members in the region of Polog, with 503 members, while KBPd in the South-eastern region with 542 members.

[13]Statistical regions are defined by the State Statistical Office – as territorial units, the nomenclature of the territorial units is based on the territorial organization of the local self-government in the Republic of Macedonia and it is harmonized with the EU classification.

Figure 6.4 Allocation of third pillar members per occupational scheme

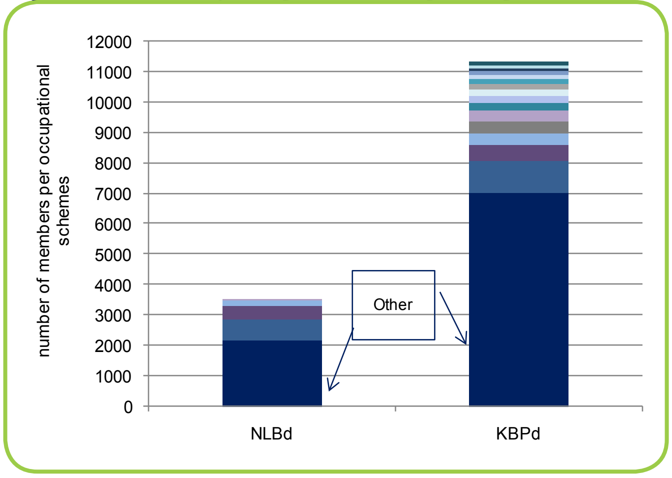
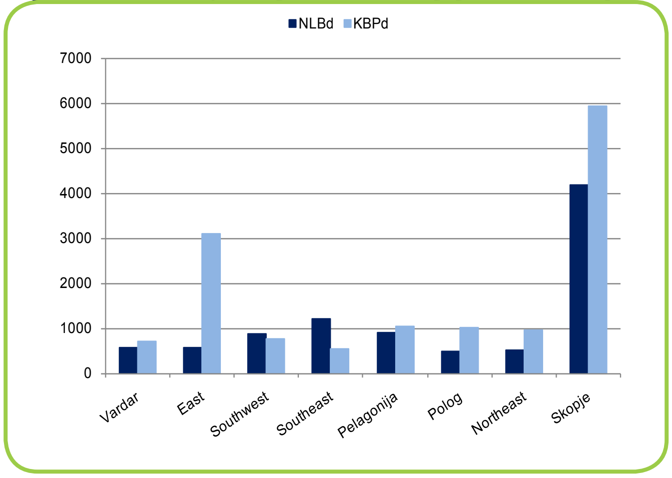


Figure 6.5 Structure of third pillar membership, per statistical regions



6.3 *Members transferring accounts in the same or other voluntary pension fund*

A person has the right to choose a voluntary pension fund and to change it at any time during the membership. If the member has stayed with one voluntary pension fund less than 12 months, he will be required to pay a transfer fee upon transferring to another fund. Otherwise, transfers are free of charge. When a member transfers to another fund, all the assets from his account are transferred as well. When a participant in an occupational scheme changes employers he has the right to transfer the savings from his occupational account to another occupational account or to an individual account, in case the new employer does not have an occupational scheme or does not wish to include the person in his occupational scheme. A participant in an occupational scheme has the right to transfer his assets to an individual account in case he remains unemployed or is not associated with any citizens association.

Table 6.1 gives data in the number of members who transferred to another Voluntary Pension Fund and the amount of transferred assets from one to another Voluntary Pension Fund during 2017. In 2017, 13 members transferred from NLBd to KBPd, and 13 members transferred from KBPd to NLBd (0.03% of the total membership). Also, in 2017, there were transfers within the same pension fund but from one to another occupational scheme and from occupational to individual accounts.

Table 6.1 Transfer of members from one to another voluntary pension fund

2017	Members who have transferred FROM a voluntary pension fund	Transferred assets FROM a voluntary pension fund (in denars)	Members who have transferred TO a voluntary pension fund	Transferred assets TO a voluntary pension fund (in denars)
NLBd	13	1,727,477	13	1,310,239
KBPd	13	1,310,239	13	1,727,477

6.4 Contributions to the voluntary pension funds

The payment of the voluntary contribution is allowed only for the person that meets the membership requirements per the Law on Voluntary Fully Funded Pension Insurance. So, the members owning voluntary accounts may pay the voluntary contributions on their own, or a payer may do it on their behalf. Only a sponsor may do the payment of the voluntary contribution for a member who has an occupational account. The payments are done from the transaction account of the member and/or from the payer's or sponsor's accounts. The voluntary contribution is paid on a special account of the voluntary pension fund, kept with the custodian, from where the assets are allocated to the individual or to the occupational accounts of the member, depending on the type of membership, and only after the person had met the membership requirements.

The member, the payer and the sponsor are free to determine the amount of the contribution and the dynamics of payments and, the change in the amounts of payment or the termination of payments do not influence the right to a membership in a voluntary pension fund. The amounts of voluntary contributions are set by the sponsor for all participants in the occupational scheme and are set as a percentage from the wages of the occupational scheme members.

During 2017, in the voluntary pension funds were paid 270 million denars, or per months as shown in Table 6.2.

In 2017, more contributions were paid in KBPd than in NLBd. In respect to 2015, the contributions paid in NLBd grew for 18%, while for KBPd they increased for 5%. In both pension funds, a significantly higher percentage of paid contributions in 2016 is made towards occupational accounts (78%).The allocation of payments per type of account, on a monthly basis is presented with the Figure 6.6.

Figure 6.6 Allocation of third pillar payments per type of account

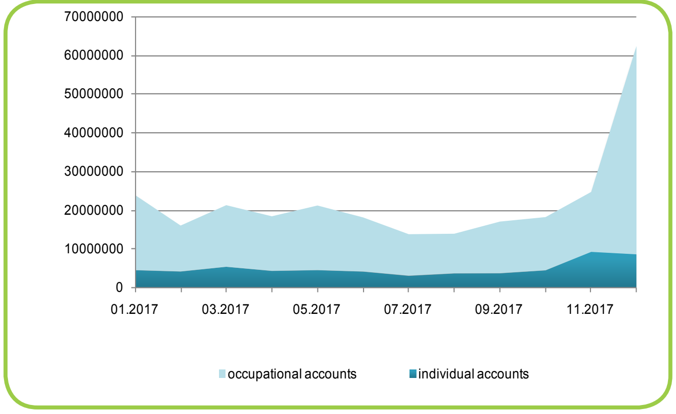


Table 6.2 Contributions in the third pillar per months and per funds *(in million denars)*

	Total 2016	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Total 2017
NLBd	109.60	8.73	7.33	9.47	7.39	6.61	11.03	7.21	7.27	8.97	10.55	15.15	30.10	129.82
KBPd	133.21	15.20	8.71	11.82	11.04	14.60	7.10	6.59	6.65	8.13	7.67	9.57	32.58	139.67
Total	242.82	23.93	16.03	21.30	18.43	21.21	18.14	13.80	13.93	17.10	18.22	24.72	62.68	269.49

6.5 Investments and portfolio structure of voluntary pension funds

The voluntary fully funded pension insurance, just like the mandatory one, is subject to proactive control and, qualitative and quantitative investment limits in their start-up stage. However, the voluntary fully funded pension insurance has more liberal investment rules in respect to the mandatory one.

Besides investment instruments allowed for the mandatory pension fund, the voluntary pension funds are also allowed to invest their assets in debt securities issued by the European Central Bank, European Investment Bank, the World Bank, as well as in debt securities issued by local authorities. In order to obtain certain level of diversification among different

Table 6.3 Maximum investment limits

Type of instrument	Mksimum limit
Investments abroad (EU, OECD)	50%
• bonds and other securities issued by foreign governments and central banks and other debt securities issued by the European Central Bank, European Investment Bank and the World Banks	50%
• debt securities issued by the local-self government, non-state foreign companies or banks, shares issued by foreign companies or banks or participation units, shares and other securities issued by investment funds	30%
Securities issued or guaranteed by RM on the domestic market or NBRM	80%
Bank deposits, deposit certificates, mortgage backed securities, and other securities is-sued 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%
• bonds issued by local-self government	10%
Shares issued by domestic shareholders	30%
Participation units and shares in Macedonian investment funds	5%

types of investment, voluntary pension funds must follow prescribed maximum limits for investing in one company and maximum limits on the amounts that might be invested in certain types of instruments. In order to prevent investing in instruments that might be disadvantageous to voluntary pension funds, the law prohibits investments in shares, bonds and other securities that are not traded on official markets or that are not publicly traded, instruments that are not legally disposable, instruments that cannot be assessed, most types of property that cannot be immediately assessed and other items with uncertain values.

Figures 6.7 and 6.8 present the structure of voluntary pension funds investments from the beginning of the system.

Figure 6.9 presents the structure of investments of the voluntary pension funds, as of 31.12.2017, which is not very different from the voluntary pension funds' investments in 2016. In 2017, the participation of bonds from domestic issuers is almost the same in respect to 2016 and it is 48.67%. The participation of investments abroad is 28.01% (21.31% in units of investment fund and 6.07% in shares and 0.63% in bonds). The participation of deposits in domestic banks remains almost the same as the previous ears and it is 13.10%, followed by shares from domestic issuers 8.50%, cash 1.65% and receivables 0.06%.

In 2017, both pension funds complied with the maximum investment limits. Figure 6.10 presents the percentage participation in the portfolio per classes of assets for NLBd and KBPd and the statutory limits as of 31.12.2017.

Figure 6.7 Structure of voluntary pension fund investments - NLBd

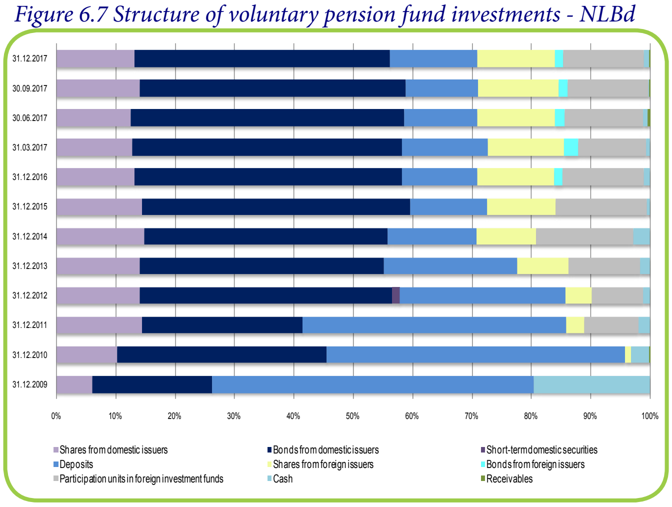


Figure 6.8 Structure of voluntary pension fund investments - KBPd

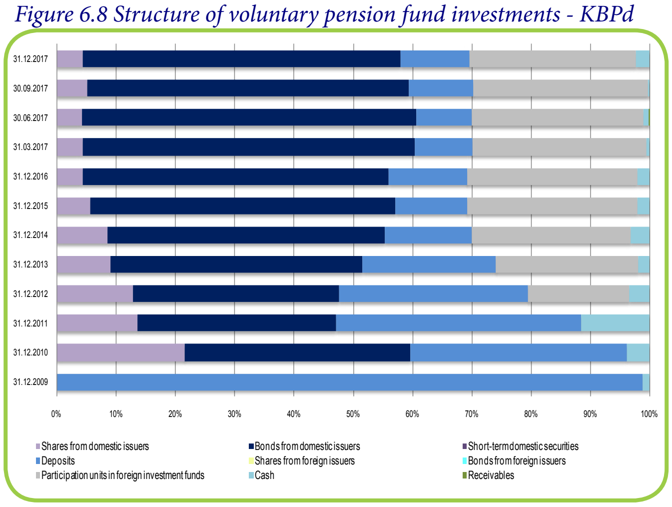
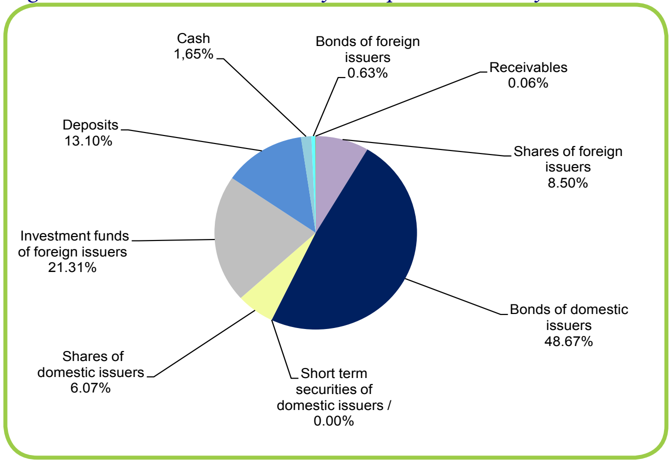


Figure 6.9 Investments structure of third pillar assets as of 31.12.2017



Voluntary pension funds have a slightly higher exposure to domestic shares (8.50%) than the mandatory pension funds. In 2017, MBI10 had a rise for around 18.92% , while the average value of the accounting unit of the voluntary pension funds[14] in 2017 grew for 5.83% in respect to 2016.

Compared to the mandatory pension funds, the voluntary ones are more exposed to domestic bonds traded on the Macedonian Stock Exchange (6.64% of the total assets of the voluntary pension funds). The reminder of the portfolio invested in domestic bonds is continuous domestic bonds. In 2017, OMB, had a slight increase of 0.58% , while the average value of the accounting unit of the voluntary pension funds grew for 5.83% in respect to 2016%. The Figure 6.11 shows the comparison in the changes of the value of MBI10, OMB and the average value of the accounting unit of the voluntary pension funds in 2017.

In 2017, the assets of the voluntary pension funds were mostly invested in securities (NLBd 44.40% and KBPd 53.53%). Part of the domestic securities of NLBd is invested in government bonds of foreign issuers (1.36% of the total assets of NLBd). This is followed by the instruments from issuers/shareholders in the financial sector (33.00% for NLBd and 39.88% for KBPd). Within the financial sector, for NLBd the highest participation have the bank deposits in domestic banks (44.59%), followed by that of units of foreign investment funds (44.12% for NLBd), investments in financial services (9.36%) and shares of domestic banks (4.93%). For KBPd the highest participation have those of units of foreign investment funds (70.25% for KBPd), followed by domestic bank deposits (29.53%), and shares n domestic banks (0.40%). Voluntary pension funds invest in other sectors, such as: pharmacy, food industry, tourism, telecommunications, IT, construction and other industries, however with much smaller participation (from 0.15% to 4.60%). The structure of investments of the voluntary pension funds per sectors is given in Figures 6.12 and 6.13.

According the currency structure of voluntary pension funds assets, shown on Figures 6.14 and 6.15, we can conclude that there are not any significant changes in respect to the previous year. Namely, the majority of assets, or almost one

Figure 6.10 Classes of assets in the portfolios of the voluntary pension funds compared to the statutory limits

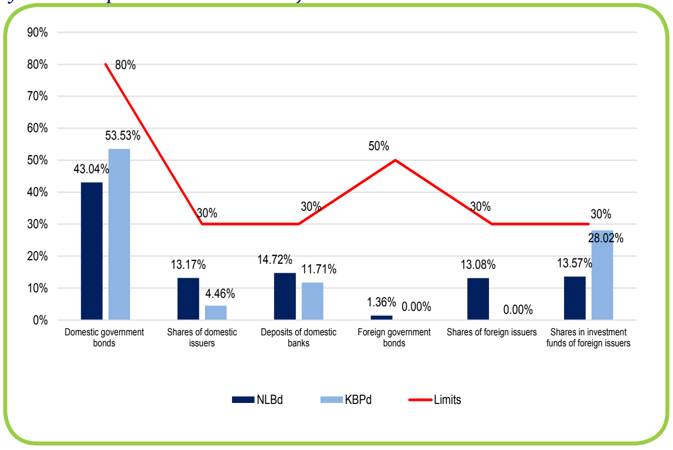
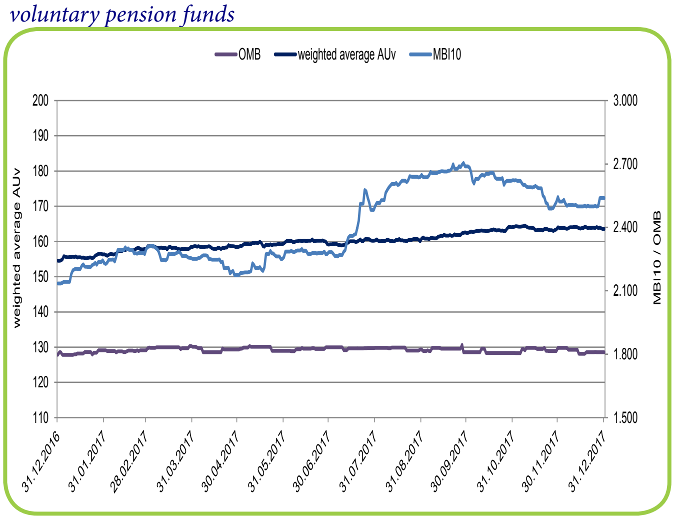


Figure 6.11 MBI10, OMB and average value of the accounting unit of voluntary pension funds



Source: Macedonian Stock Exchange – Annual Statistical Bulletin for 2017

half of the assets of both voluntary pension funds are invested in instruments in Euro (49.32% for NLBd and 50.80% for KBPd). This is followed by investments in domestic currency (NLBd 30.56% and KBPd 24.36%). Next in line for NLBd are the investments in US dollars (19.27% for NLBd and 24.84 for KBPd), therefore lower than 2014 for NLBd, while for KBPd are higher in respect to last year. In the currency structure of NLBd a very small part includes investments in Swiss Francs (0.85%).

The Macedonian investment portfolios of the voluntary pension funds have many similarities but they also have differences with similar pension systems abroad. Figure 6.16 compares investments of voluntary pension funds assets in Macedonia as of 31.12.2017, with the investments of such assets in other countries in the region, which have implemented the voluntary fully funded pension insurance.

[14] *Average value is calculated as a weighted average of the accounting units of the voluntary pension funds in respect to the net assets of the voluntary pension funds*

Figure 6.12 Investment structure per sectors for NLBd

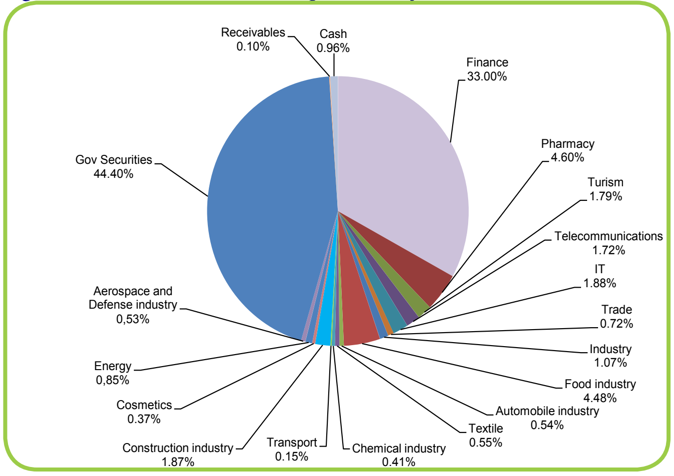


Figure 6.13 Investment structure per sectors for KBPd

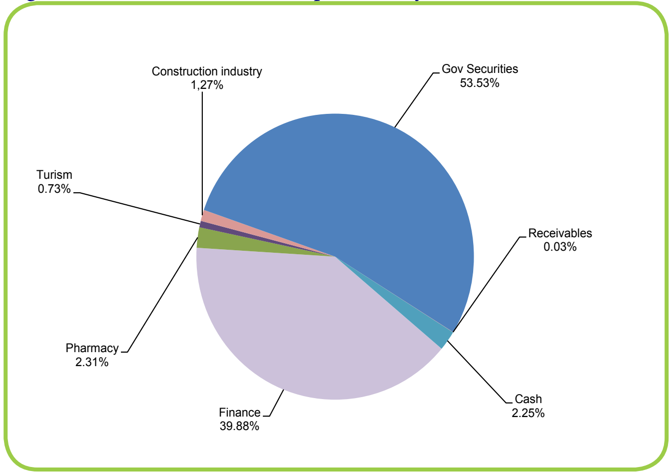


Figure 6.14 Currency structure for NLBd

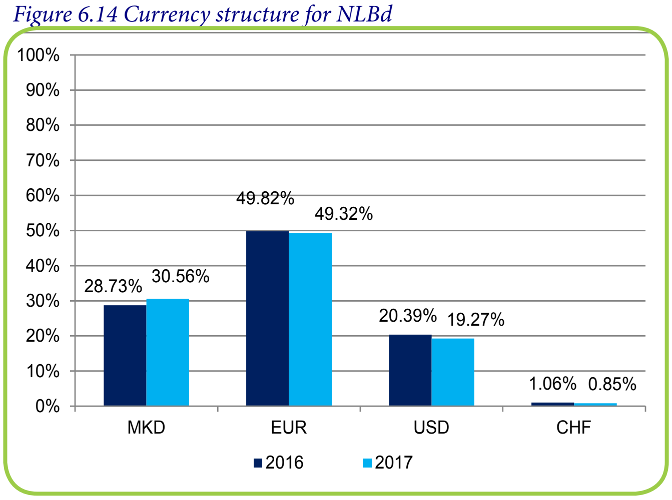
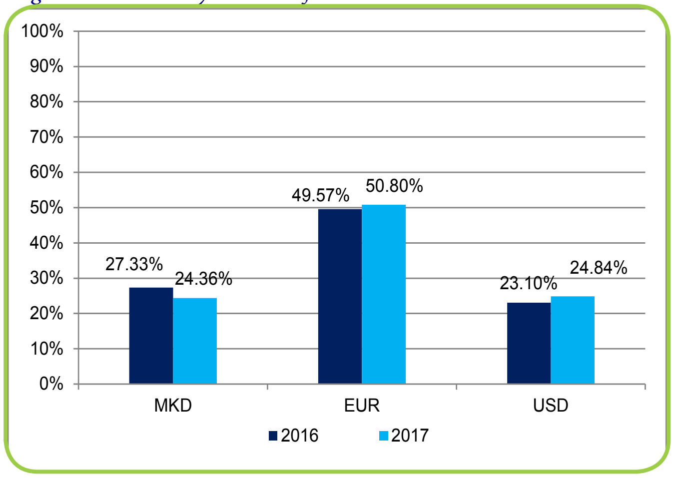
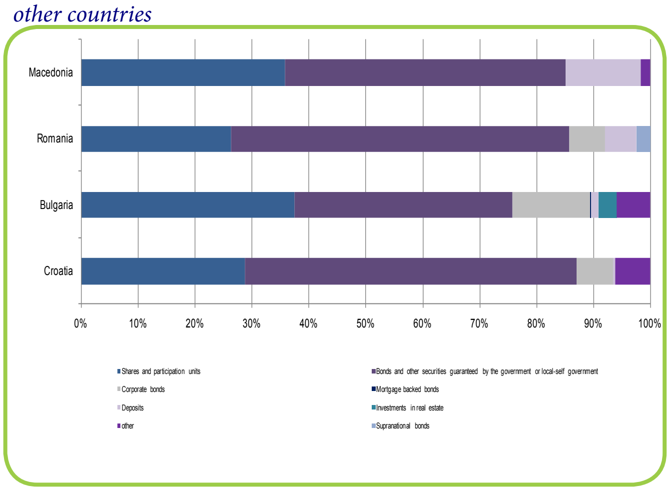


Figure 6.15 Currency structure for KBPd



It is evident that the investment structure of the voluntary pension funds in 2017 is not very different from the one in 2016. It is obvious from the portfolios of most countries that the largest exposure is in government bonds and other securities guaranteed by the state or the local self-government (in Romania 59%, Croatia 58%, and Bulgaria 38%). In Macedonia, the exposure to such instruments is 49%, while the exposure to bank deposits is 13%. Unlike Macedonia, the exposure to bank deposits in the other countries is lower: Romania (6%), Bulgaria (1%) while in Croatia the exposure in deposits is very low (0.35%). When it comes to shares and participation units, Bulgaria has the highest percentage (37%), followed by Macedonia, (36%), Croatia (29%) and Romania (26%). The above Figure shows that most countries invest in corporate bonds (Bulgaria 14%, Romania 6% and Croatia 6%), except for Macedonia where such instruments lack on the market. Only the pension funds in Bulgaria invest in real estate (4%), while in other countries this instrument is generally prohibited. Regarding investments abroad, Bulgaria has the highest exposure of 58%, followed by pension funds in Macedonia with 28%, Romania with 12% and Croatia with 10%.

Figure 6.16 Voluntary pension funds portfolios in Macedonia and other countries



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

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

The calculations of the net assets, the accounting unit and the rate of return for the voluntary pension funds are the same as the mandatory pension funds.

The assets of the voluntary pension fund might change throughout the year for the following reasons:
- inflow of contributions;
- outflow due to fees and transaction commissions;
- inflows from personal tax returns;
- inflows as a result of transfers from another pension fund (for persons who were members in another pension fund and have transferred to the current pension fund);
- outflows due to transfers to another pension fund (for persons who were members in the current pension fund and have transferred to another pension fund);
- outflows due to payment of inheritance
- outflows due to payouts of old age pension benefits (lump sum and multiple payments);
- (un) realized incomes or losses from investments.

The value of the net assets at the end of the year is derived from the net assets at the end of the previous year and all the changes as mentioned above. This is demonstrated in Table 6.4:

On 31.12.2017, the total net assets of the voluntary pension funds were approximately 1.3 billion denars or 21 million Euros, or 0.21% of the GDP[15].

Figures 6.17 and 6.18 demonstrate net assets at the end of each year as well as their annual increase in percentage in respect to the previous year. It is evident that the net assets of both mandatory funds grow with almost the same pace. The biggest growth is marked in 2011 in respect to 2010.

Table 6.4 Changes in the voluntary pension funds assets (in million denars)

	NLBd	KBPd
Net assets as of 31.12.2016	459.08	538.68
Contributions	129.82	139.67
Fees from contributions	3.18	3.60
Contributions reduced for fees from contributions	126.64	136.07
Payments on individual accounts from personal tax returns	1.01	1.06
Returns of erred contributions	6.24	5.52
Expenditures for intermediary commissions	0.14	0.03
Transfers from another fund	1.31	1.73
Transfers to another fund	1.73	1.31
Inheritance payout	0.68	1.07
Payout of old-age pension benefits – lump sum/ multiple payments	13.34	12.62
Gross profit from investments	36.32	37.25
Net profit from investments	29.94	31.70
Net assets as of 31.12.2017	602.23	694.24

Figures 6.19 and 6.20 demonstrate the changes in the value of the net assets and the cumulative contributions, accompanied by the growth of contributions paid in the voluntary pension funds and the growth of the net assets.

Figure 6.17 Annual growth of the net assets of NLBd in respect to previous year, in %

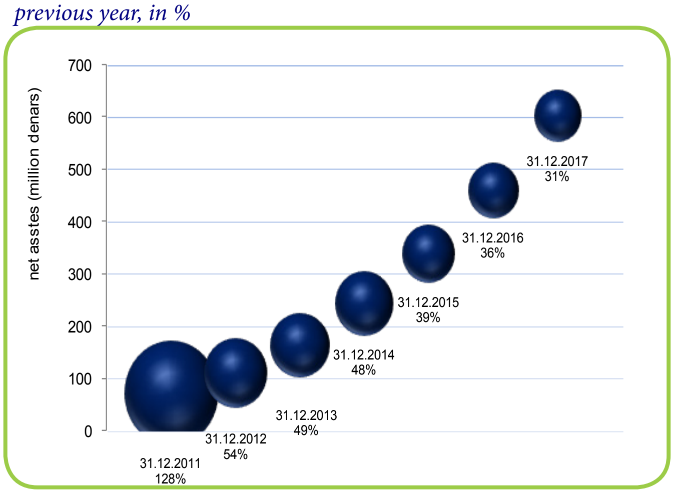
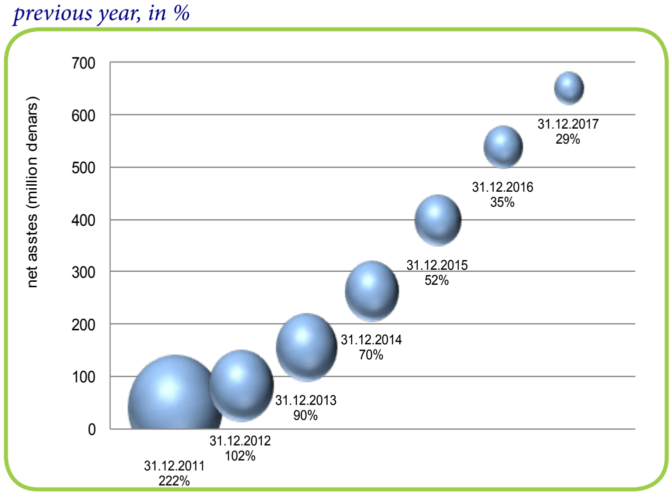


Figure 6.18 Annual growth of the net assets of KBPd in respect to previous year, in %



[15] *Source for GDP: State Statistical Office – announcement on the GDP fourth quarter of 2017- estimated data*

Figure 6.19 Net asset growth compared to the growth of paid contributions in NLBd

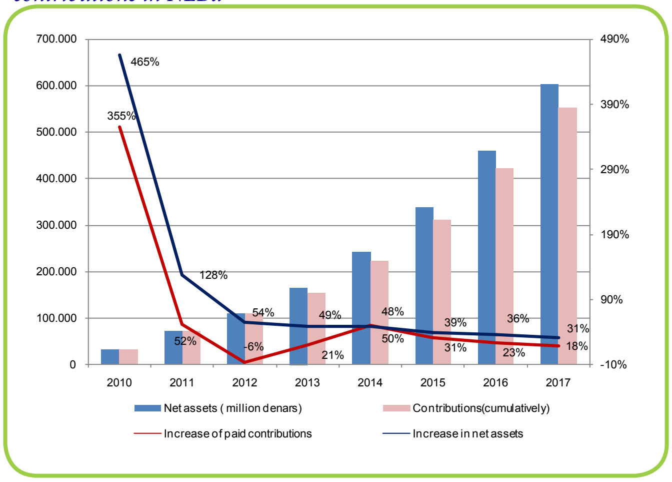


Figure 6.20 Net asset growth compared to the growth of paid contributions in KBPd

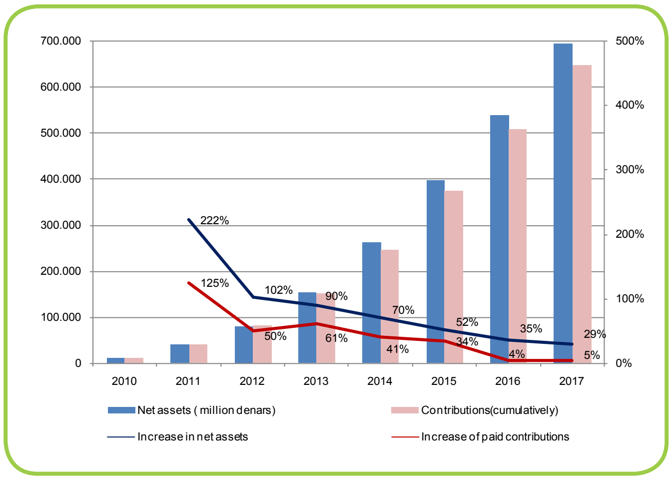


Table 6.5. The value of the accounting unit of the voluntary pension funds from the beginning of the system

Date	Value of the accounting unit	
	NLBd	KBPd
15.09.2009	100.000000	
21.12.2009	102.815757	100.000000
31.12.2009	103.061825	100.204385
31.12.2010	107.592926	106.891617
31.12.2011	111.854726	112.639593
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
31.03.2017	158.942154	158.102243
30.06.2017	159.971128	158.478863
30.09.2017	163.992478	161.182685
31.12.2017	164.155073	162.989756

In the initial period of operations (2009 – 2011), NLBd had a huge growth of net assets and paid contributions. In 2012, compared to 2011, the growth of the net assets was 54%, while the paid contributions had a fall of 6%. In the next five years the growth of the net assets of NLBd has decreased gradually from 49% to 31% in 2017, compared to 2016. While the paid in contributions in 2014 have higher increase, of 50% in the following 4 years, and the growth of the paid contribution has decreased up to 18% in 2017, compared to 2016.

For KBPd as well, the initial period (2010-2012) is marked by significant growth of the net assets and paid contributions. In 2013, compared to 2012, the growth of net assets was 90%, while the growth of the paid contributions was 61%. In the following years the growth of the net assets and paid contributions slowly decreased. In 2017 compared to 2016, the net assets of KBPd grew for 29%, while he paid contributions for 5%.

The changes in the value of the accounting units of the voluntary pension funds, from the beginning of the system until 31.12.2017 are given in Table 6.5 and Figure 6.21. As shown on the Figure, the accounting units have a growing trend. In 2017, the accounting unit was growing and this growth was particularly obvious by the end of the year.

Figure 6.21 The value of the accounting unit of the voluntary pension funds from the beginning of the system

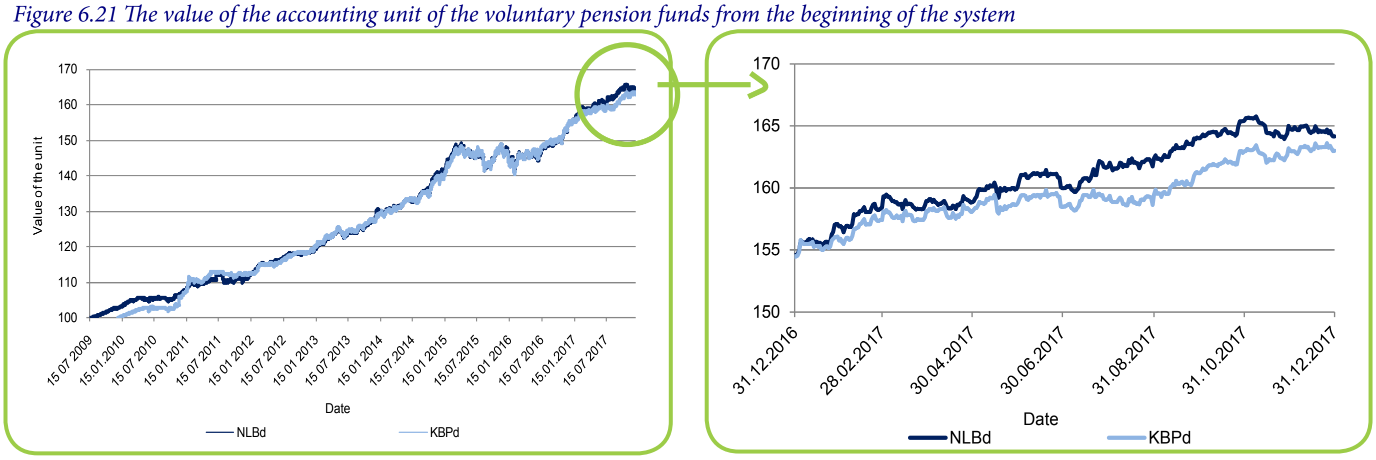


Table 6.6. Returns of voluntary pension funds

Period*	NLBd		KBPd	
	In nominal value	In real value	In nominal value	In real value
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%
31.03.2010 - 31.03.2017	6.08%	4.65%	6.46%	5.01%
30.06.2010 - 30.06.2017	6.15%	4.52%	6.33%	4.70%
30.09.2010 - 30.09.2017	6.63%	4.98%	6.76%	5.11%
31.12.2010 - 31.12.2017	6.22%	4.72%	6.21%	4.71%
Start* -31.12.2017	6.04%	4.37%	6.27%	4.55%

** Until the amendments to the Law on voluntary, fully funded pension insurance in 2013, the return was calculated for a period of 3 years, only in nominal value.*
*** The start is on 15.7.2009 for NLBd and on 21.12.2009 for KBPd.*

The return on the individual account and/or occupational account is variable and it depends on the return of the voluntary pension fund and the fees charged by the pension company. The return or the yield is a parameter, which cannot be predicted realistically because it depends on the conditions on the capital markets and the economy as a whole.

The return of the voluntary pension funds is calculated in the same way as the one of the mandatory pension funds.

Considering the long-term nature of the pension insurance, the return of the voluntary pension funds should be calculated from the beginning of their existence, and presented annually. So, for NLBd the return is 6.04% in nominal value and 4.37% in real value, while for KBPd it is 6.27% in nominal value and 4.55% in real value.

Figure 6.22 shows the changes in the nominal return in the last seven years, giving the returns per periods from

Figure 6.22. Voluntary pension funds returns (in nominal value)

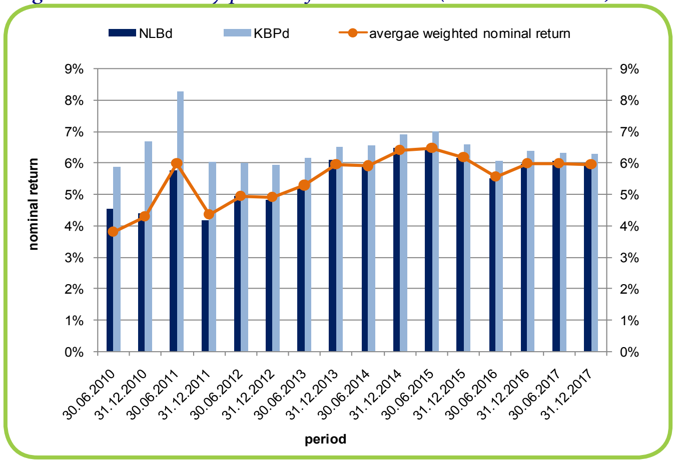
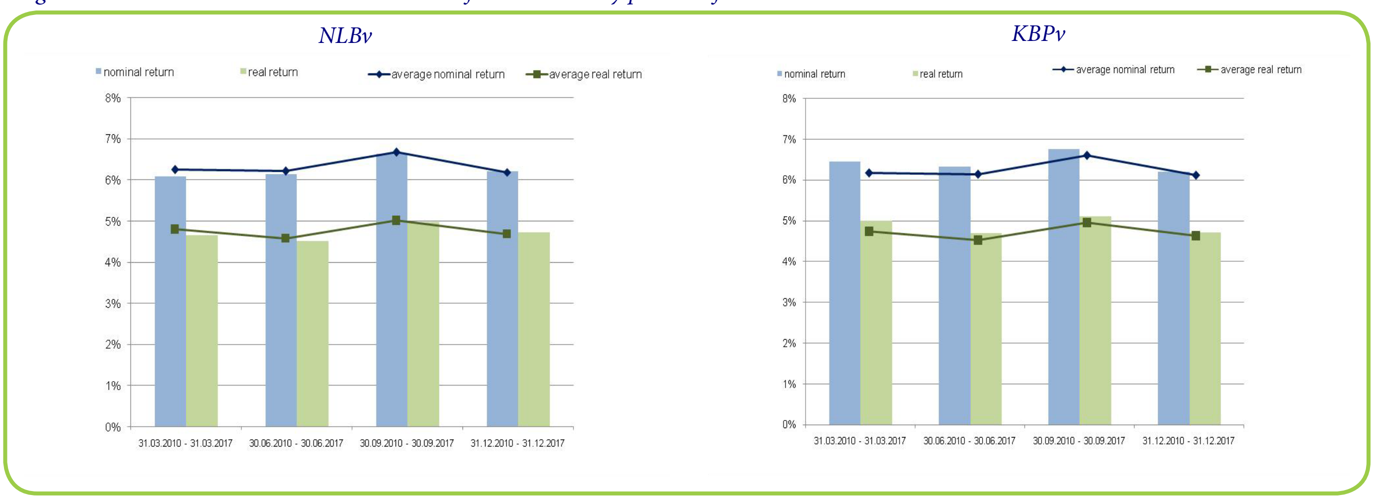


Figure 6.23. Returns in nominal and real values for the voluntary pensions funds in 2017



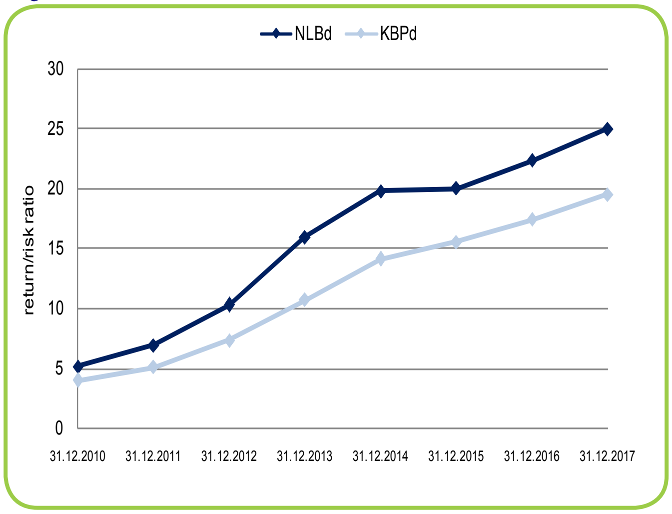
31.12.2009 until 31.12.2017, per funds and the average weighted return. At the beginning, the return is growing, so, at the end of the first half of 2011, both funds have high returns, while at the end of 2011, the returns start to fall. Then, in the following years, the returns start to pick up gradually by mid 2015, and then to drop again by mid 2016, until the end of 2018. The return in 2017 remains almost the same as the return at the end of 2016.

The changes in the nominal and in real values of the return for 2017, per periods, and presented annually per voluntary pension fund and compared to the average return and are given on the Figure 6.23. In 2017, the nominal returns for both pension funds was between 6.08% and 6.76%, while the real return was from 4.52% to 5.11%. The lowest value of the returns is noticed for the period 30.09.2010 – 30.09.2017.

The main goal of investing the assets of the voluntary pension funds is to cause growth of such assets. So, the return is the measure of growth. At the same time, one should mind the risk from investments. The risk represents the inability to predict the accomplishment of the return on the invested assets. The risk to return ratio is direct, which means that higher risk brings higher return and vice versa. The nominal return to risk[16] ratio (calculated by one of the possible calculation methods) from the beginning of the system until the end of 2017 is shown on Figure 6.24.

Higher return to risk ratio is an indicator of the better investment performance of the fund and the potentials of the fund for higher returns per risk unit.

Figure 6.24. Return to risk ratio



[16]The return is calculated on annual level from the growth of the accounting unit and from the beginning of the system. The risk represents the volatility of the accounting unit and it is calculated as annualized standard deviation of the pension funds 'return.

6.7 Voluntary pension fund fees

According to the Law, voluntary pension companies charge three types of fees: fee from contributions, fee from assets and fees for transfers. They use these fees to cover the following functions: manage the voluntary pension funds assets, valuation of assets, membership, keeping of voluntary individual and occupational accounts, reporting to members, payment of fees to MAPAS and the custodian and covering of own expenses.

The fee from contributions is charged upon payment of contributions before it is converted into accounting units. Generally, this fee is charged in the same percentage from all members of the voluntary pension fund. However, there are exceptions for those members who are part of occupational schemes or in cases of multi-year membership. The monthly fee from assets is a percentage from the value of the net assets in the voluntary pension fund and it is calculated on each valuation day of the voluntary pension fund's assets (in accordance with the secondary regulation each day is a valuation day) and it is charged once a month. The transfer fee is charged in cases of transfers of members from one to another pension fund, provided that those members have been part of the current pension fund less than a year.

Table 6.7 Fees charged by the pension companies that manage voluntary pension funds

Type of fee	NLB	KBP
Fee from contributions*	2.90%[17]	2.90%[18]
Monthly fee from the net assets of the voluntary pension fund	0.100%[19]	0.075%[20]
Fee from transfers		
Number of days**	Transfer fee	Transfer fee
Number of days ≤ 360	10 euro	10 euro
Number of days> 360	Free of charge	Free of charge

** For members in occupational schemes the pension company may set fees lower that this fee.*
*** The number of days is calculated based on the number of days passed from the date the member became a member in the current pension fund until he signed a membership agreement with the future pension fund.*

Table 6.8. Amount of fees charged by pension companies in the third pillar

Pension Company	Amount	Date of application
NLB	5.25%	From the beginning f operations of the fund (15 July 2009)
	3.80%	From 1 March 2011
	2.90%	From 1 January 2017
KB Prvo	5.50%	From the beginning f operations of the fund (21 December 2009)
	4.00%	From 24 April 2010
	2.90%	From 1 June 2013

The Law stipulates the maximum amounts and the pension companies have the freedom to determine the amounts they will charge within the given statutory maximum amount.

Table 6.7 presents the fees charged by the pension companies that manage the voluntary pension funds for 2017.

The amount of fees from contributions, charged from the beginning of the third pillar as of 2017, are given in Table 6.8

From the beginning of operations of the voluntary pension funds, they have decreased the fee from contributions twice. The fee from assets was 0.15% at the beginning, as a monthly percentage of the net assets of the voluntary pension fund. Also, in 2011 both companies reduced the asset management fee which now is 0.100% for NLB and 0.075% for KBP.

Table 6.9 gives us the fees charged by the pension companies managing the voluntary pension funds (in thousand denars), for 2017, per month and per type of fee.

Transaction fees for acquisition or transfer of assets to a voluntary pension fund are charged from the pension fund and paid to selected legal entities, which render services with securities. These fees are calculated as a percentage from the value of each transaction. The pension fund is also charged for each transaction on the Macedonian Stock Exchange, by the Macedonian Stock Exchange and the Central Securities Depository. In 2017, NLBd paid 0.14 million denars in transaction fees, and KBPd paid 0.03 million denars in transaction fees.

[17]From January 1, 2017 (previously it was 3.5%)
[18]From June 1, 2013 (previously it was 4.00%)
[19]From March 1, 2011 (previously it was 0.15%)
[20]From January 1, 2011 (previously it was0.15%)

Table 6.9 Fees charged by pension companies for 2016 (in thousand denars)

	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Total
NLB – total	674	659	722	676	666	778	699	707	760	816	964	1,300	9,418
From contributions	208	181	234	182	163	264	177	177	219	262	395	715	3,177
From assets	466	478	487	494	503	513	522	530	540	554	569	585	6,241
KB Prvo – total	784	655	729	728	828	651	642	648	688	684	741	1,345	9,123
From contributions	373	231	297	286	375	189	179	180	211	197	246	840	3,604
From assets	411	424	432	441	453	462	464	469	477	487	494	506	5,519

6.8 *Payout of pension benefits from the voluntary pension insurance*

The third pillar is more liberal than the second pillar in terms of entitlements to pension benefits and their payouts. Nevertheless, the third pillar savings are old-age savings. Therefore, the assets on the accounts may be withdrawn not sooner than ten years before the statutory retirement age, as per the Law on Pension and Disability Insurance. At this moment, this means that the assets may be withdrawn at 54 years of age for men and at 52 for women. In addition, when the Commission for Assessment of the Working Capacity in the Pension and Disability Insurance Fund of Macedonia assess a member to be generally incapacitated to further his career, that member, regardless of the age, is entitled to withdraw the assets. In case of death of a voluntary pension fund member, the assets on the member's account shall form part of his/her estate and will be managed in accordance with the Law on Inheritance.

A third pillar member may chose from the following types of benefit payout:

- lump sum payment or payments in several instalments;
- pension annuity in a form of a life-time annuity paid from an authorized insurance company;
- programmed withdrawals provided by the pension company that manages the voluntary pension fund where the insured person is a member on the day of retirement; or
- a combination of the above mentioned methods.

The provision and payout of pensions and pension benefits from the second and the third pillar is regulated with the Law for Payment on Pensions and Pension Benefits from Fully Funded Pension Insurance.

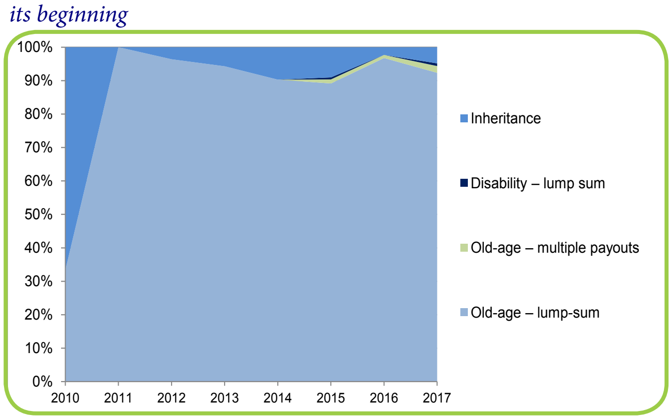
In 2017, the third pillar paid out 248 pension benefits. Most of the pension benefit payouts are old-age benefits, mostly paid as lump sums, and small number of members had their benefits paid as multiple payouts. In 2017, there were lump-sum payouts for disability. Small part of the payouts of the third pillar was made for cases of death of a member, by payouts of inheritance. Table 6.10 gives the details on the third pillar payouts in 2017, per voluntary pension fund and per type of account.

Figure 6.25 shows the structure of the pension benefits and payouts for the members of the third pillar from the beginning of the voluntary pension insurance, per years, until 2017. The number of payouts is small, because the system I still very young and the members are relatively young people. Most of the payouts are lump-sum for old-age, followed by payouts in case of death of a family member, as payout of inheritance, there are a very small number of payouts for disability and multiple payouts for old-age.

Table 6.10. Pension benefit entitlements and payouts from the third pillar

Type of pension benefit and payout / voluntary pension fund	NLBd		KBPd		Total
	Ind. account	Occ. account	Ind. account	Occ. account	
Old age – lump sum	40	34	25	130	229
Old age – multiple payouts	0	1	2	2	5
Disability – lump sum	0	0	1	1	2
Inheritance	2	1	2	7	12
Total	42	36	30	140	248

Figure 6.25. Structure of pensions and payouts from the third pillar from its beginning



Marketing and Sales Agents of Pension Companies

7

The protection of the interests of current, future and retired members of the fully funded pension insurance is a primary concern of all the system's stakeholders. In that light, the provision of fair and objective information to the public is essential.

The marketing of the pension companies entails all activities for advertising of the mandatory and voluntary pension companies and pension funds, information and signing of membership contracts with the mandatory and voluntary pension funds and payout of assets from such pension funds. These activities include more specifically: advertising for the pension companies' operations and pension funds under their management; disseminating information on the characteristics of the mandatory and voluntary fully funded pension insurances; disseminating information on the fees and transactions commissions; disseminating information on the mandatory and voluntary pension funds returns; giving information on the mandatory and voluntary pension funds' investments portfolios; providing information on the individual accounts, voluntary individual accounts and occupational accounts; enrolment and transfer of members from one to another mandatory pension fund; enrolment and transfers of members from one to another voluntary pension fund; signing of contracts for programmed withdrawals, lump sum payouts and payouts in instalments, as well as other activities for advertising and provision of information related to the pension companies and the pension funds. A pension company may perform marketing activities of pension funds in its premises, in the premises of its marketing associates, directly or via appropriate forms of communication (telephone, fax, Internet). The premises where such marketing activities take place must meet certain conditions prescribed by law.

MAPAS controls all marketing activities of the pension companies. For that purpose, the pension companies must submit all marketing materials to MAPAS in photocopy, or on appropriate medium, not later than three days after such material has been published. In case MAPAS finds some marketing materials or advertisements to be misleading, it can prohibit their further publication or distribution and it may request alterations to the material in a given deadline.

A sales agent is any person who performs marketing activities on behalf of a pension company. Sales agent may be an employee of the pension company or another person otherwise engaged by the pension company. Such sales agent may perform marketing activities for the pension fund and/or sign membership or payout agreements but only for those pension funds that are managed by the pension company on which behalf the sales agent is acting.

A sales agent must be present upon the signing of the agreements for membership, transfer, programmed withdrawals, lump sum payouts, or payouts in instalments. Also, the sales agent is obligated to make personal contacts with members, retired members, potential members and he must not subcontract the signing of the agreement to another person. The sale agent plays an important role in the selection of the type of pension benefit payout, therefore he is obligated to present the options to the member who submitted a quotation request and must explain in detail all characteristics and assumptions for all types of payouts.

A person can perform marketing activities after he is registered in the Sales Agent Register kept by MAPAS. MAPAS prescribes the sales agent exam's methodology and procedure as well as the registration in the Sales Agents Register.

In 2017 there were two examination sessions, with 61 candidates, out of which 26 (43%) passed the Sales Agent Exam.

In 2017, 26 agents got registered out of which NLB registered 14 sales agents and KP Prvo 12. Then, 343 renewed their annual registration, out of which 212 sales agents for KB Prvo and 131 agents for NLB. In 2017, 7 KBP agents had terminated their status as sales agents.

The Figure 7.1 demonstrates the frequency of signed contracts in the mandatory pension funds by sales agents from the beginning of the system. It is evident that most contracts were signed in 2005, as this was the stat-up year, and 31.12.2005 was the deadline for the voluntary members to join the two-pillar system by signing a membership contract with a sales agent. In the following years, the number of contracts per agent is significantly decreasing in 2013 and 2014. In 2017, in respect to 2016 the number of sales agents who signed membership contracts has decreased, while the average number of signed contracts per sales agents maintained the same level.

The Figure 7.2 demonstrates a similar analysis of signed contracts for the voluntary pension funds. It is evident that the number of agents who signed contracts is highest in 2010, while the number of average contracts per agent is the lowest. In 2014, there is the highest value per average number of contracts and rather small number of agents who signed contracts. After 2014 the number of signed contracts per sales agent is decreasing. And, after 2012, the number of agents that sign contracts is decreasing. In 2017, in respect to 2017 the number of sales agents who signed membership contracts remained the same, while the average number of signed contracts per sales agent increased slightly.

Figure 7.1. Number of agents that signed membership contracts for mandatory pension funds and average number of contracts per agent.

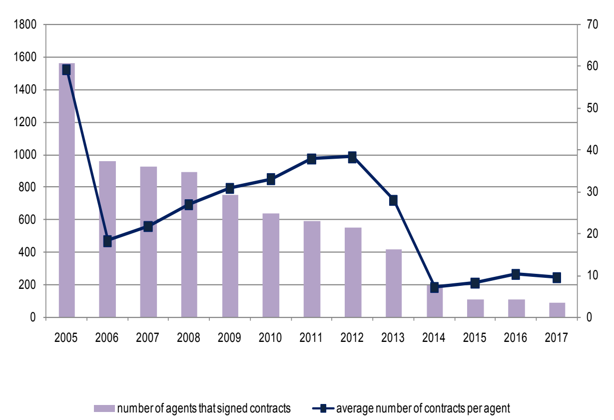


Figure 7.2. Number of agents that signed membership contracts for voluntary pension funds and average number of contracts per agent