Evaluation of the Financial Performance of Pension Funds. Empirical Evidence: Kosovo, Albania and North Macedonia

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Abstract
Purpose: This research paper aims to analyze the evaluation of the financial performance of pension funds, to find the relationship between contributions, return on investment and net asset value with pension fund performance. The following research questions have been asked in order to realize the purpose of the research: What are the factors affecting the performance of the pension fund? What is the relationship between pension fund performance and contributions, return on investment, and net asset value?

Methodology: For the specification of the econometric model of this study, we rely on secondary data published in official World Bank reports and reports of pension funds in Kosovo, Albania and North Macedonia. To measure the empirical results, these statistical tests are used: standard multiple regression, fixed effects model, random effect model, and Hausman Taylor Regression.

Findings: Based on the empirical results, we can conclude that the increase in gross domestic product, return on investment, contributions and net assets have positively influenced the performance of pension funds for the countries included in the study. The other independent variable, the exchange rate, on the basis of econometric estimations, has turned out to be non-significant.

Practical implications: The empirical results of this study may recommend that relevant institutions in Kosovo, Albania and North Macedonia undertake reforms towards the creation of efficient pension systems, and these reforms are of crucial importance for pension systems, which have an economic and social character in their function as fund accumulators and benefit distributors for the categories in need.

Originality: The study is conducted with secondary data and all the empirical analysis are original based on the authors’ calculations through econometric models. Through the results of this study we aim to provide additional empirical evidence on the performance of pension funds in Kosovo, Albania and North Macedonia, recommending that relevant institutions improve the functioning of the pension system, as it is a very important part of a financial system of a country which has an impact on economic growth.

Keywords: financial performance, pension fund, contributions, net assets, return on investment

1. Introduction

Pension funds are created for the purpose of managing funds created from employee contributions during their working time. These funds are intended to provide benefits in the form of income to contributing workers after their retirement. Pension funds enable individuals to accumulate savings from their work to be able to finance
their consumption needs in retirement. Pension funds are institutional investors that collect, accumulate and invest funds from contributors to provide future benefits to the holders. Pension funds are corporate investments that pay for employee retirement commitments. Employees and employers contribute to pension funds. Managers invest in these contributions conservatively so as not to lose the principal. An annuity plan is a plan that requires an employer to make contributions to a set of funds designated for the employee’s future benefit. The funds package is invested in the employee’s name and the investment income generates the income for the employee after his or her retirement. In addition to the contributions required by the employer, some pension plans have a voluntary investment component. A retirement plan may allow an employee to contribute a portion of his or her current wage income to an investment plan to help finance retirement. The employer may even match a portion of the employee's annual contributions up to a specific percentage. A pension fund is an investment product in which pension scheme members pay contributions to build a certain amount to secure retirement income. The government also pays tax on the income deducted from these contributions. In many cases, this is filled with contributions from the employer of the pension scheme member. This research paper is divided into four sections: the first section provides the theoretical aspect of the pension funds and how they work; the second section presents some data on the three countries' pension system (Kosovo, Albania and North Macedonia) and the reforms undertaken in the pension systems of these countries; the third section of this study will specify the econometric model and the interpretation of the results from the econometric models and will finally present the conclusions and recommendations from this study.

2. Definition of pension funds and their evaluation

Pension funds represent institutional investors and in this regard are similar to insurance companies. It is a characteristic of pension funds that the inflows of funds in their favor are created on an economic continuum, while the outflows are foreseen. This finding leads us to conclude that there should be no liquidity problems in pension funds, as surplus funds can be placed in the capital market. E.g., in the US, pension funds account for 30% of the permanent capital structure of financial institutions. Their financial strength at the end of the last century in the US was approximately $1,500 billion. Pension funds operate on the basis of the principles of pension plans, from which the necessary funds are foreseen. Investments made with these assets as well as the payment of compensation to pension fund owners, due to the large amount of funds they usually have, are almost always under the control of state authorities (Halili, 2012). Pension funds emerged and developed later than insurance companies. They had a rapid development in the era after world war I. While insurance policies are contracted on an individual basis, pension funds are concerned with the pension insurance of employees in large companies, on a collective basis (Govori & Lluka, 2011). In the recent past, many countries around the globe have experienced rapid growth in pension funds. The growth of these institutions is a development that countries have
given a considerable attention to, due to the sensitivity of the transactions involved in pension funds. Pension funds act as important incentives for capital markets in most countries where they exist as financial intermediaries. Pension funds tend to complement, and thus stimulate, the development of capital markets, acting as a substitute for banks (Davis, 2000). Traditionally, pension systems operated on a Pay-As-You-Go basis, which meant that workers did not have to contribute to their pensions but would have the guaranteed pension benefits when they retired. This system has been stable for the last four decades since the number of workers far exceeded the number of retirees. The Pay-As-You-Go pension system puts current workers to the responsibility of paying pensions (taxes to support current retirees) while at the same time taking responsibility for future generations (current child care) (Ngetich, 2012).

Pension funds guarantee the insured party the benefit of cash and at the same time invest most of the funds with a suitable and varied portfolio. Investing funds in securities or real estate makes it possible to increase the income of individuals in need to support their living through their post retirement period. The contribution made to the pension fund in one year by investing throughout the individual's working years gives him the opportunity to earn more income in his retirement years (Salko, 2011).

For several years, the pension system operated relatively independent of laws and legal provisions. Many firms offered to pay pensions as a reward for good long-term work and used those salaries as incentives for workers. Payments were rarely received from subsequent income. When the firm went bankrupt or was purchased by another firm, payments ceased. During the great global crisis, the frequent bankruptcy of pension systems caused the adoption of stricter laws to establish the social security system. The landmark decision of the US Supreme Court of 1949 confirmed that the provision of pensions is a legitimate part of the collective contract, namely, of the bargaining between employees and employers' unions. This decision led to a large increase in the number of pension funds, as unions pressured employers to set up pension funds for union members (Mishkin & Eakins, 2009).

We can expect that the popularity of pension funds will continue to grow as the population grows and ages. Discussions of investing funds for retirement are often heard in circles of active people who do not have an extensive working experience. The fact that more and more attention is being paid to securing the future, it will result in increased pension funds, as well as in the possibility of greater choice of different pension funds. We can also expect that pension funds will have a greater impact power on firms, in addition to increasing the number of shares under their control (Mishkin & Eakins, 2009).

3. Kosovo Pension System - Reforms, Management Tools, and Investments

Reforming Kosovo's pension system is a must to eliminate legal injustices and ensure equal treatment for its citizens, and to reward those who work and pay contributions with pensions. While the first pillar and special categories are paid from the state budget and in 2017 around 340 million € were paid to about 240 thousand beneficiaries, the second pillar (TRUST) during 2017 paid about 27 million € to 5,175 beneficiaries.
The first pillar and the special categories receive a lifetime pension while the beneficiaries of the second pillar receive only the savings amount which varies, but can never benefit more than 100 months from this pillar. Those who work and pay contributions; in the end do not receive a lifetime pension. On the other hand, while the disability of only 20% of some particular categories reaches the state financially, the same does not apply to the disability outside these schemes. If those who are working suffer an accident at work and remain unable to work and with a disability of up to 80%, they do not benefit from the state budget. As such, the pension system in Kosovo is uncoordinated and discriminatory. In the absence of a pension reform; pension schemes will continue to increase and together with them, expenses will increase from the state budget. Together with them, discrimination of different groups will continue, leading to antagonisms of different categories with each other (Klokoqi, 2018).

In the debate over the investment strategy of the Kosovo Pension Savings Trust (KPST) there were many alternatives discussed, among the investment of funds in the domestic economy that was more immune to the crisis given its limited exposure. However, investing the KPST in the domestic economy would be virtually impossible due to the lack of instruments in Kosovo's financial markets.

As of 2015, there have been only two main investment options for the country's economy, such as government treasury bills and deposits in the domestic banking sector. Regarding the first investment option, which is treasury bills, it should be noted that this part of the financial market in the country has only been operational since January 2012, while the amount offered by the Treasury Department was quite limited, amounting to slightly more than 70 million €, which was 10% of the total KPST assets by the end of 2012. Furthermore, investing in treasury bills presents a challenge for the KPST since the KPST is not an asset manager, therefore cannot qualify as a primary trader. Instead, the KPST has to invest its assets through licensed primary dealers, who in this case are commercial banks operating in the country.

Regarding the second investment options - bank deposits - this is another case where the KPST is limited, as this process must be based on a tender and a liquidated banking system. It is unlikely for any bank to provide funds available to the KPST; thus, making it even harder to invest in the local economy.

The total gross return since the establishment of KPST to date is approximately 407 million €. The key role in this KPST investment performance was played by investments in the financial market outside Kosovo, contributing in large part to the total return on investment. It should not be overlooked that the basis for increasing the value of KPST investments lies in the overall development of global financial markets, where about 90% of KPST assets are invested. The year 2017 has witnessed stability and sustained global economic growth, which came both from the improvement of economic indicators, as well as from the monetary easing at major economic centers. These were the prerequisites for increasing investor optimism, while at the same time KPST had an investment strategy that managed to harness this positive development in the markets.

In 2017, the Kosovo Pension Savings Trust witnessed a record increase in assets under management. Excluding December, assets under management rose by about 217 million €, compared to about 189 million € raised a year earlier. In addition to the return on
investment in raising funds under management, the record inflows of new contributions also had an effect.

The number of contributors who have accounts with KPST has increased significantly in recent years with 47,607 new contributors joining the scheme, bringing the number of accounts with KPST to reach 589,530. The number of pension beneficiaries for this period was 5,022 with the corresponding amount of 26 million €, against 4,447 beneficiaries and the amount of 19 million € for 2016. totaling 117 million €.

The amount of investments in Kosovo increased from about 99 million € at the end of 2016 to about 142 million € at the end of 2017. The increase in investment in Kosovo came mainly due to the increase in deposit funds in local banks. The Governing Board has consistently expressed the willingness to make more investments locally, within the means allowed by law.

4. The Pension System in Albania - Reforms, Payments, and Contribution Rates

Albania's social security system went through three major reforms. The first reform was launched in 1993, which was based on the unification of two different social security schemes (state employees and cooperatives) to guarantee the same conditions for all active individuals at work. The second reform in 2002 aimed at changing the parameters based on demographic forecasts where an increase in the dependency ratio of the elderly population was expected. Finally, the third reform of 2005 was concerned with the adjustment of the social security system with the market economy, thus allowing the privatization of this system as well (Kllapi & Chombi, 2017).

The Institute of State Social Security was founded in 1947. In its genesis, the institute was conceived as a link to the unique system of finance between the state and citizens in employment relations for providing them with a means of subsistence in case of loss of ability to work, illness, aging, etc. Prior to the transition, this system was distributed through towns and villages, guaranteed by the Constitution and applied without exception to all citizens in working relationships and to their dependents. The mission of the Social Security Institute today is broader and includes the administration of social security in general and pension policies in particular - the placement of insured people and an improved service to them and the coverage of the population with social security elements in each country and time (Peca, 2013).

Mandatory social and health insurance contribution for the employee, starting from 2009 onwards, would be 27.9% of the gross monthly salary, according to the payroll, with the employer share being 16.7% and the employee share 11.2%. Contributions were calculated by the employer, over the gross salary, specified in this decision. He holds 9.5% of the employee's salary for social security and 1.7% for health insurance, and together with his 15% of his salary for social security and 1.7% of his salary for health insurance, he declares and pays into the bank account designated for contributions.

5. The Pension System in North Macedonia - Reforms and Their Purpose

The Republic of North Macedonia (as a state in transition), during the transitional period, also underwent pension reforms - with the aim of consolidating the
pension fund and securing funds for pension payments. The corresponding approved reforms came mainly from demographic movements and the deterioration of the employed-retiree ratio. The Macedonian pension system is based on the principle of general solidarity, pay-as-you-go (PAYG), where current contribution payments are used to fund current pensions. Therefore, by 2006, the North Macedonian pension system had only one pillar. In 2006, a system design reform was implemented that introduced the principle of providing fully funded pensions, where in addition to the first pillar, two additional pillars were added: a mandatory and a voluntary private pension pillar in 2008. As a result, the structure of the pension system in North Macedonia today consists of three pillars, where: the first (mandatory) pillar is still based on the principle of general solidarity, while the second (mandatory) and third (voluntary) pillars operate fully based on funds. The first pillar provides part of the old-age, disability and survivor's pensions, as well as the minimum pension. The second pillar provides an additional portion of the old-age pension for those retirees who pay contributions to this pillar. Meanwhile, the third pillar (voluntary) provides additional material security. On the other hand, the implementation of the new pension system entailed additional costs, or as they are known, transition costs. Although, the costs of transition or transformation are of a temporary nature, and will, over time end. However, for the Fund, this burden is a critical condition financially, in view of the fact that to cover these costs, additional revenue are required, which the Fund cannot provide, since the parameters underlying the reforms are hit by a reduction in contributions, drainage of a portion of them in the second pillar, unemployment, and by new retirees.


The analysis includes data on the pension fund of Kosovo, Albania and North Macedonia for a period of 15 years. This data is analyzed with the Stata program. Regression analysis, fixed effect, random effect, and Hausman Taylor regression were used in this study to analyze the relationship between the dependent variable (performance) and the independent variables.

Table 1. Description of variables included in the study

<table>
<thead>
<tr>
<th>Variable</th>
<th>Source of data</th>
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<tbody>
<tr>
<td>Performance</td>
<td>Pension Fund Statements</td>
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<tr>
<td>GDP</td>
<td>World Bank financial reports</td>
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<tr>
<td>Exchange rate</td>
<td>World Bank financial reports</td>
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<tr>
<td>Return on Investment</td>
<td>Pension Fund Statements</td>
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<td>Net Assets</td>
<td>Pension Fund Statements</td>
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<tr>
<td>Contributions</td>
<td>Pension Fund Statements</td>
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Source: Authors’ data processing (2019)

The performance of pension funds was taken as a dependent variable, as other researchers used this dependent variable to analyze the factors that influence the
performance of different countries' pension funds. Pension performance is defined as
the profits that members receive after investing their contributions.
Independent variables were GDP, exchange rate, return on investment, net assets and
contributions. Gross domestic product is an aggregate measure of the value of all end
products and services produced in an economy. The exchange rate represents the prices
of one currency denominated in another currency. The return on investment is obtained
using the registered income of the funds in one year. The net assets in this study were
taken from the financial records of pension funds. Contributions are deducted from the
amounts in the financial records of pension schemes showing how much funds they
received from their contributors in a given year.
This econometric model was used in this study:

\[ \text{Performance} = \alpha_0 + \beta_1 \text{GDP} + \beta_2 \text{Exchange rate} + \beta_3 \text{Return on Investment} + \beta_4 \text{Net Assets} + \beta_5 \text{Contributions} + e \]

Performance is the dependent variable. The independent variables are GDP, exchange
rate, return on investment, net assets and contributions. \(\beta_1\) through \(\beta_5\) are the
coefficients of the model, while \(e\) represents the stochastic variable.

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<th>Table 2. Results of econometric models</th>
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<td><strong>Performance</strong></td>
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<td>GDP</td>
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Source: Authors' calculations (2019)

Based on the results presented in the table above, it is observed that there is a positive
relationship between gross domestic product and the performance of pension funds.
This claim is correct because the significance value of this parameter is within the
statistical confidence interval (P - value = 0.000 <0.10). Therefore, if we increase GDP
by 1%, keeping constant the exchange rate, return on investment, net assets and
contributions, then the performance of pension funds will increase by 0.11%. Such a
result has a logical connection with the economic theory, since in a country where there
is economic growth, this also affects the increase in per capita income and as a result, the
increase in income directly affects the growth of per capita income. pension
contributions, and return on investment. When pension funds have more contributions
available, they invest continuously in international financial markets.
The pension sector in Kosovo recorded positive financial performance until 2017 as a
result of the positive return on investment, increased new contributions and increased share price of the sector. KPST’s return on investment in December 2017 amounted to 102.6 million €, which is 38.0 million € higher than in 2016. It is worth noting that, during the analyzed period, Kosovo Pension Savings Trust during 2018 has recorded a 5.2% decline in performance, with a negative return of 84.7 million € and this also affected the value of its assets. Such a decline in the performance of the Kosovo Pension Savings Trust comes as a result of a negative movement in international financial markets. According to estimates by the Central Bank of Kosovo, this decline was due to a sharp increase in volatility, mainly driven by rising interest rates and the strengthening of US trade sanctions on Chinese exports. The eco of these movements in the US were also reflected in other key financial areas, the EU and Japan, which also closed this period with a negative performance.

The results of the econometric models show that the second variable is not significant and we can conclude that exchange rates did not affect the performance of these countries' pension funds. One of the most important indicators that has had a positive impact on the performance of pension funds is return on investment. All the econometric results show that return on investment positively affects the performance of these pension funds and this parameter is significant at the 5% level of statistical significance. If we have a 1% increase in return on investment, then this will increase the performance of the pension funds by 0.07%.

Net assets are another important variable that has a positive impact on the performance of these pension funds. The results of the standard multiple regression analysis and the random effect model show that this parameter is significant and if we have a 1% increase in the amount of net assets then this will positively impact the performance of these pension funds by 0.23%. A very important source of investment of these pension funds are pension contributions, so through this analysis we will provide empirical evidence of how pension contributions have affected the financial performance of these pension funds during this period 2002 - 2017. This independent variable turns out to be significant and we can conclude that there is a positive relationship between pension contributions and the performance of pension funds. If we have a 1% increase in the amount of pension contributions, this will increase the performance of pension funds by 0.35%.

Moving on with the empirical analysis of this study, to give more empirical support to the findings of this study, we present some data on the financial performance of the Kosovo Pension Savings Trust, the Social Security Institute in Albania, and the Pension and Disability Insurance Fund in North Macedonia. Figure 1 shows the data for the Kosovo Pension Savings Trust for the period 2010 - 2018. The positive performance of new contributions and the gross return on asset investment by the funds has led this sector to grow gradually over the years. The value of the assets of the pension sector was characterized by an annual growth of 16%, reaching 1.68 billion €. The KPST asset structure continues to be dominated by foreign market investments, which are mainly held in the form of mutual funds, which diversify risk through investing in foreign governments' treasury shares and bonds. By the end of 2017, the investment portfolio in foreign markets increased by 13.4 percent, attributable to better investment performance and returns in international stock markets in which the
fund invests.

Figure 1. Financial performance of the Kosovo Pension Savings Trust (2010 - 2018)
Source: Authors’ calculations (2019)

The pension sector recorded a positive financial performance in 2017 as a result of a positive return on investment, increase in new contributions, and increase in the share price of the sector. KPST’s return on investment in December 2017 amounted to 102.6 million €, which is 38.0 million € higher than the previous year. The investment performance of assets undertaken by the pension sector was affected by positive fluctuations as a result of fiscal easing and GDP growth beyond projections, which consequently had a positive impact on the US financial markets. On the other hand, the government bond market in the eurozone during the fourth quarter was characterized by falling interest rates. The majority of FSKP assets continue to be invested abroad with 87.1% of the total assets. The investment abroad strategy is mainly concentrated in the form of shares (78.9%), securities (17.5%), commercial securities (1.6%) and cash (2.0%).

Figure 2. Financial performance of the Social Security Institute in Albania (2012 – 2018)
Source: Authors’ calculations (2019)

In 2017, there were 97,821 contributors to the social security system in Albania, more than in 2014, with a significant upward trend, as the number of contributors at the end of 2017 reached 763,997. In the period 2015 - 2017, the number of contributors to the social security scheme in Albania increased by over 97,800, while the number of beneficiaries increased by 35,700. This has, consequently, improved the quality of the
contributor-beneficiary ratio, which is one of the most important reports on the system’s sustainability. A very important indicator of the reforms undertaken in the pension system in Albania is the indicator of income and expenses of the Social Security Institute expressed in millions of Albanian Lek.

According to the data presented in the figure above, there is an increasing trend of income provided by the Social Security Institute in Albania. The value of these revenues in 2012 was 399,874.52 €, while the value of these revenues in 2018 was 743,865.35 €. In addition to the positive trend of increasing social security income, during this period there is also a positive trend of increasing social security expenditure, with their value in 2012 being 729,687.36 €, while in 2018 this value increased to 979,645.48 €.

As observed by this comparative analysis between income and social security expenditures, there is a greater trend of increasing expenditures, which implies that the Social Security Institute throughout this period has covered the annual deficit of the pension scheme with funding from the state budget. The main purpose of financing this pension scheme deficit from the state budget is to prevent the Social Security Institute from operating at a loss. The average annual amount of funding from the state budget for the period 2012 - 2018 is 320,033.72 €.

Below, we present some other financial data on the performance of the pension system in North Macedonia. Fully financed pension insurance increased its total GDP share to 9.2% at the end of 2017. This is the second largest asset-segment in the North Macedonian financial system, but with a significantly smaller share than the banking sector. Private pension fund assets recorded a slow growth in 2017.

![Figure 3. Financial performance of the Pension Fund in Northern Macedonia (2012 – 2018)
Source: Authors’ calculations (2019)](image)

Based on the data presented in the figure above, there is a positive trend of growth of the net assets of the Pension Fund in North Macedonia. The value of these assets in 2013 was 432,616.30 €, which amounted to 918,696.23 € by 2017. The positive trend of net asset growth over this 5-year period has been accompanied by a downward trend in net asset growth rate. The value of this rate in 2013 was 26.9%, which in 2017 had dropped to 18.4%. The annual growth rate of cash flow from contributions has increased from 2013 (8%) to 2015 (14.3%), while in 2017, this rate decreased by -4.5%.

In 2017, net assets of mandatory pension funds continued to grow, but at a slower pace,
as a result of the lower increase in paid contributions of fund members compared to the previous year. The paid contributions continue to be the main engine of net asset added value, with a share of around 70%. Investing in shares of foreign investment funds (unrealized return on equity from these investments decreased by 31.7%, i.e. by 304 million Macedonian Denar) has the largest contribution to reducing the unrealized return on equity.

7. Conclusions and Recommendations

Investing in pension funds is the best investment a diligent worker can make. Investment in pension funds is regulated by law and monitored by the Central Bank. Pension funds are complex institutions with cash flows entered into the fund, realized investments, secured returns and issued benefits, all managed under conditions of ongoing interaction by: employees, employers, investment funds, banks, and the government.

Pension reform is essential to eliminate legal injustices and ensure an equal treatment for citizens, and reward those who work and pay contributions with pensions. The pension system is developed to redistribute income across generations of employed citizens, to enable mandatory retirement and disability insurance for all of them. The pension system aims to guarantee citizens the provision of cash for subsistence in case of loss of ability to work, illness, aging, etc.

The purpose of this study was to evaluate the financial performance of pension funds in Kosovo, Albania, and North Macedonia. The results of this study showed that gross domestic product, return on investment, net assets, and contributions have a positive impact on the performance of pension funds, as their performance increases as well. Moreover, this study proved the exchange rate has no effect on the performance of pension funds.

Kosovo, Albania, and North Macedonia need to undertake reforms in order to create efficient pension systems. These reforms are of crucial importance for the pension systems, which have an economic and social character in their function as accumulators of funds and distributors of benefits for the parties in need.

References


