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CONTENTS

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Skopje, December, 2023

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MILA MITREVA *

THE IMPORTANCE OF INSURANCE COMPANIES FOR THE CAPITAL MARKET DEVELOPMENT AND ECONOMIC GROWTH IN NORTH MACEDONIA

Abstract

In this paper, through regression analysis the effect of the insurance sector on the economic growth and the capital market in N. Macedonia was analyzed for the period 2014-2022. The main variables used in the analysis were GDP, Stock Market Capitalization, Bond Market Capitalization and Assets of Insurance Companies. Hence, considering the participation of 1.54% of the insurance sector in the N. Macedonian GDP, as well as the asset allocation of the insurance companies, the obtained results were according to the expectations. On one hand, the insurance companies showed negative effect on GDP, which may be due to the very low participation in the total GDP, but they showed positive effect on the stock market capitalization. Additionally, bidirectional causality with positive effect was determined between the GDP and Stock Market Capitalization.

Keywords: insurance companies, capital markets, economic growth

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Introduction

The finance-growth nexus has been deeply analyzed in many papers (Demetriades and Rewilak, 2020; Jayaratne and Strahan, 1996; Bello et al., 2022). Notwithstanding, capital markets and economic growth are interrelated with an impact running from both directions, depending on the country. The main difference between the countries is that some of them are market based and the others are bank-based. Levine (1997) claims that financial development contributes to economic growth through different channels, such as the productivity of capital, technological innovation, saving rate and channeling saving to investment. When it comes to the developing countries in Europe, the banking sector has been considered the main driver for economic growth. Nevertheless, the determinants of economic growth are constantly evolving and changing and the need for new and deep analysis is always occurring. Nowadays, the non-bank financial institutions are expanding with a rapid speed and are starting to become very attractive for the population because of the various kinds of instruments that they offer. Existing literature shows that the development of the non-financial sector can have great impact on the financial development. Prochniak and Wasik (2017) claim that some factors such as the regulations, the institutional environment of the country and the political stability can have an impact on the development of the financial sector. Additionally, Yadirichukwu and Chigbu (2014) determined that the capital markets have an impact on the economic growth of the country. Therefore, when analyzing the institutions that have an impact on both capital markets and economic growth, institutional investors have very important role. Thus, for increasing the competition in the financial markets, for encouraging financial innovation and for stimulating the market integration, insurance companies are of great importance (Balaban, 2012). In this context, it is worth mentioning that insurance sector has been growing rapidly in the past several years. On one hand, the main role of the insurance companies is to reduce the financial uncertainties of the people and the companies, and to compensate the losses. On the other hand, they are large investors that usually implement long-term investment strategies that are beneficial for the capital markets and the financial development in general. In addition, the interest in this paper is to analyze the impact of the insurance companies on capital market and economic growth in N. Macedonia. One reason for this research is the limited amount of papers analyzing the effect of the insurance sector in N. Macedonia. According to the Insurance Supervision Agency in N. Macedonia, despite the various macroeconomic obstacles that occurred during 2022, the insurance sector achieved satisfactory financial results and was able to absorb all of the shocks that occurred (such as inflation and slow economic growth). In N. Macedonia in 2022 actively worked sixteem insurance companies, from which eleven are non-life insurance companies and five are life-insurance companies. The statistical data showed that the assets of the insurance companies are constantly increasing (ASO, 2022). Thus, considering the existing literature in this field for other European countries, this study will further expand the literature for the N. Macedonian insurance sector and its impact on the N. Macedonian economic growth and capital market.

1. REVIEW OF THE LITERATURE FOR THE RELATIONSHIP BETWEEN INSURANCE COMPANIES, ECONOMIC GROWTH, AND CAPITAL MARKETS

Well-functioning capital markets encourage new investments, create opportunities for individual investors, for companies and for institutional investors. The interest for analyzing the impact of institutional investors on stock market development occurred in the early 90s of the previous century. As it was mentioned in the paper of Bayar, et al. (2022), institutional investors improve the performance of the financial markets because they increase the market efficiency, stimulate the competition, especially in the banking sector and are considered long-term capital source. However, the literature that analyzes the relationship between the insurance companies and the capital markets is limited. Only few paper focus on this topic. For instance, Pradhan, et al. (2020) examined the causal relationship among the banking competition, stock and insurance market development and economic growth in Europe for the period 1996-2016. Through utilization of multivariate framework, they have concluded that the variables in their analysis are co-integrated, with short-run bidirectional causality between stock market and insurance sector. Cheng and Hou (2022) through panel data analysis for 17 European countries for the period 1980-2015 found that life insurance development assists in moderating long-term real growth volatility and take up the side effect of private credit on the economic growth. Sawadogo and Guérineau (2015) analyzed the relationship between insurance penetration and the stocks traded total value, from which they determined that the more the stocks transactions increase, the more the insurance penetration rises.

Moreover, when comparing the insurance companies with the banking sector, many differences can be distinguished. Insurance companies do not serve as a channel for the monetary policy, neither are vulnerable to customer runs. Another difference is the composition of the balance sheet, mainly in the maturity of their liabilities and the structure of their assets (Trichet, 2005). However, both of the institutions are very important for the long-term economic growth. The linkage between the insurance sector and economic growth has been more deeply analyzed than the linkage between insurance sector and capital markets. Rudra, et al. (2015) through VAR analysis examined the impact of the insurance sector development on economic growth in G-20 countries for the period 1980-2011. The results showed that bidirectional causality exists among the insurance sector development and the economic growth. Positive relationship between the insurance sector and economic growth was also determined in the paper of Ege and Sarac (2011). Ojo (2012) analyzed the relationship between the insurance sector and the economic growth in Nigeria for the period 1985-2009, where they found positive results. Hais and Sümegi (2008) are other authors that analyzed the relationship between insurance and economic growth in Europe. Through cross-country panel data analysis for 29 European countries for the period 1992-2005, they found that insurance sector has positive effect on GDP growth. Despite the importance of having economic growth and understanding all of the factors that can positively affect the growth, financial stability is also of great importance. Nowadays, in order to have financial stability, proper functioning of the financial systems is needed. However, financial systems are becoming very complex and the banks that used to serve as the stability pillar in the financial systems are starting to be substituted by non-bank institutions. In this context, following the paper of Trichet (2005) it can be mentioned that the insurance sector is relevant and vital for the overall stability of the financial system.

1.1 Insurance sector in North Macedonia

The insurance sector in N. Macedonia is continuously developing throughout the years and the interest in different types of insurance is also growing. All of the insurance companies are predominantly owned by foreign legal entities (73.53%) or 14 out of 16 insurance companies. The insurance sector in 2022 participated with 1.54% in the GDP, which is much less compared to the developed European countries. In the structure of gross paid damages, the largest share is the damages based on auto liability insurance with 43.2%, followed by property insurance claims with share of 15%, life insurance claims paid with 13%, motor vehicle insurance- 10.7% and voluntary health insurance with 8.3% of the total damages paid. It is also worth mentioning that the structure of the assets of the life and non-life insurance companies in N. Macedonia is slightly different. However, the non-life insurance companies mostly invest in state securities (around 28% of their total assets), while at least they invest in corporate bonds (around 0.06% of their total assets). The rest of their assets are invested in different categories, such as deposits in banks, real estate, shares in open investment funds, shares in National Bureau of insurance etc. Similarly, life insurance companies mostly invest in state securities (around 67% of their total assets), while the rest of their assets are invested in various different categories. Additionally, life insurance companies invest more in stocks compared to non-life insurance companies (around 0.35% of their assets). Moreover, the largest share, or 60.81% of the total sources of funds of the insurance companies are the gross technical reserves. In 2022, the aggregated profit after taxation at the insurance sector level was around 25% higher compared to 2021 (ASO, 2022).

Moreover, literature that focuses on the insurance sector and its importance and impact in North Macedonia is very scarce. Dervishi (2020) in his paper analyzed the investments and portfolio structure of the insurance companies in N. Macedonia. Following his paper, it can be stated that the insurance sector in N. Macedonia is far from the insurance development level of the developed countries. One of the reasons may be the financial illiteracy and the limited analysis and research in this field. Hence, from the analysis in the paper of Dervishi (2020) and the official data available for the insurance sector in N. Macedonia, it cannot be expected that this sector has positive effect on the economic growth. Nevertheless, from the data available on the site of Insurance Supervision Agency in N. Macedonia and from the asset structure of the insurance companies, it can be expected that the insurance sector has an impact on the N. Macedonian capital market. Therefore, the aim of this paper is to analyze the effect that the N. Macedonian insurance sector has on the domestic capital market and economic growth.

2. EMPIRICAL ANALYSIS

The first step when doing empirical analysis is to choose the right model and the right variables in order to obtain reliable results. Following the paper of Onuoha, et al. (2021), as one of the main proxies for the capital market performance is the market capitalization, which shows the total value of all stocks listed on the exchange. Hence, the stock market capitalization and the bond market capitalization are used as variables in this paper. Following the paper of Bello, et al. (2022), GDP represents the size of the economy of one country. Thus, this variable will also be used in the analysis. Nevertheless, the aim of this paper is to show the impact of the insurance companies on the capital market and economic growth in North Macedonia for the period 2014-2022.

Additionally, annual data has been used for the analysis. More specifically, the data for the stock market capitalization and the bond market capitalization was obtained from the official site of the N. Macedonian stock platform. The data for the assets of the insurance companies was obtained from the site of the Insurance Supervision Agency in N. Macedonia, while the data for the Gross Domestic Product was obtained from the World Bank database. It is worth mentioning that the analysis was conducted in E-Views platform. Additionally, three models have been used in the analysis. In the first model, the dependent variable is GDP. Therefore, through the first model the aim is to test the effect of the stock market capitalization, the bond market capitalization and the assets of the insurance companies on the economic growth in N. Macedonia. In the second model, the dependent variable is the stock market capitalization and the aim is to test the effect of the GDP and the assets of the insurance companies on the stock market capitalization. Lastly, in the third model the dependent variable is the bond market capitalization, through which the goal is to test the impact that GDP and the assets of the insurance companies have on the bond market capitalization.

Moreover, the first model used for the analysis is presented below, where GDP stands for Gross Domestic Product, MCS stands for market capitalization of stocks, MCB stands for market capitalization of bonds and AIC stands for assets of insurance companies:

$$Model_1: GDP_{it}=constant+MCS_{it}+MCB_{it}+AIC_{it}$$

For obtaining the results, the empirical analysis includes several steps. The first steps is the Unit root test through which the stationarity of the data was tested. The null hypothesis for the unit root test is that the time series has a unit root, which indicates non-stationarity. The alternative hypothesis is that the time series is stationary, which means it does not have unit root. Hence, considering that the obtained results showed that the *p*-value for all variables is more than the level of significance (1%, 5% and 10%) they were integrated in second difference. This step was necessary in order to remove the unit root and make the data stationary. Through this step, the stochastic trend which was present in the original data is eliminated, which means that the results will be unbiased and more reliable.

The second step in the analysis included regression analysis. The R^2 is 97%, which means that 97% of the dependent variable (GDP) is explained by the explanatory variables (MCS, MCB, AIC), while the other 3% are explained by other factors. In addition, in the table presented below are presented the results from the regression analysis:

Table 1: Regression analysis for Model 1

Variable	Coefficient	Probability
MCS	0.0773	0.0022
MCB	0.0279	0.4260
AIC	-1.9045	0.0096

Souce: Author's calculations

From the results presented above it can be detected that the significant variables are MCS and AIC. The probability of MCS is 0.0022 and of AIC is 0.0096, which is less than the level of significance (1%, 5%, 10%). MCS has positive effect on the GDP (the coefficient has positive sign: 0.0773), where the AIC has negative effect on GDP (the coefficient has negative sign: -1.9045).

From these results, it can be concluded that the stock market capitalization has positive effect on the GDP in N. Macedonia, while the bond market capitalization did not show any significant results. Additionally, the insurance sector (presented by the assets of the insurance companies) is significant in the regression analysis, but the impact on the economic growth is negative. As main limitation in this analysis may be the fact that the value of the assets of the insurance companies is much smaller compared to the other variables used. However, the aim of the paper is also to test the effect that the insurance sector has on the capital market in N. Macedonia, which in this paper is presented by the stock and bond market capitalization. Therefore, in the Model 2 below, as dependent variable is used the MCS, while the independent variables are AIC and GDP.

$$Model_2: MCS_{it}=constant+AIC_{it}+GDP_{it}$$

Table 2: Regression analysis for Model 2

Variable	Coefficient	Probability
AIC	25.60801	0.0004
GDP	12.48694	0.0005

Souce: Author's calculations

The results presented in Table 2 show that both AIC and GDP are significant variables, since the probability is less than the level of significance. Considering that the coefficient sign for both of the variables is positive, it can be concluded that the insurance sector and the GDP have positive effect on the stock market capitalization in N. Macedonia.

Additional analysis was conducted, where the dependent variable is MCB and the independent are AIC and GDP (Model 3). The results presented in Table 3 show that neither AIC, neither GDP are significant variables, which means they do not have an effect on the bond market capitalization in North Macedonia.

$$Model_3: MCB_{it}=constant+AIC_{it}+GDP_{it}$$

Table 3: Regression analysis for Model 3

Variable	Coefficient	Probability
AIC	-2.0449	0.5509
GDP	0.1764	0.9189

Souce: Author's calculations

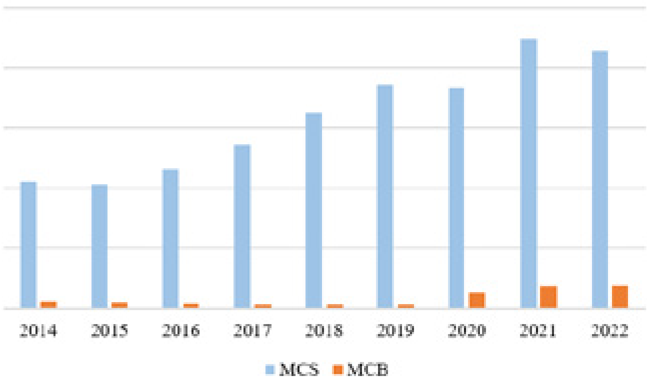
From the results of the regression analysis for the three models it can be concluded that the insurance sector has negative effect on the economic growth in North Macedonia and positive effect on the stock market capitalization. The insurance sector does not have effect on the bond market capitalization in N. Macedonia. The finding in this paper can be related to the finding in the paper of Arena (2008), in which was determined that life insurance affects economic growth only in developed countries and not in the developing. However, in this paper it was estimated that the insurance sector generally negatively affects the economic growth.

It should be mentioned that N. Macedonia is a developing country. As it was stated in the paper of Lee (2018), the effect of the insurance sector on economic growth mostly depends on the performance of the investment of insures. Considering that the insurance companies in N. Macedonia mostly invest in stocks and bonds, and having in mind that the N.Macedonian capital market is small, it not a surprise that the results showed negative impact on the economic growth.

Additionally, the results in this research are similar to the results that were obtained in the paper of Phutkaradze (2014). In his paper, he used panel dataset analysis for 10 post-transition countries for the period 2000-2012. The results showed negative and statistically non-significant correlation between insurance and GDP growth, which indicates that the insurance sector does not contribute to economic growth in these countries. Therefore, N. Macedonia is also a country that went during that transition period; hence, same conclusion can be drawn. Following the paper of Phutkaradze (2014), as a suggestion for further analysis can be to analyze separately and for larger time span the impact of each insurance branch on the economic growth.

For further analysis, in the graphs below are presented the Stock market capitalization and Bond market capitalization in N. Macedonia for the period 2014-2022. It can be seen that the values of the stock market capitalization (MCB) are drastically bigger compared to the values of the Bond market capitalization (MCB). This suggests that in N. Macedonia, investors prefer stocks than bonds. One of the reason for that is the fact that stocks offer equity participation and are usually associated with higher returns. Another reason for the higher stock market capitalization is the much higher liquidity of the stocks compared to the bonds. Stocks are also associated with broader ownership, which is not the case for the bonds.

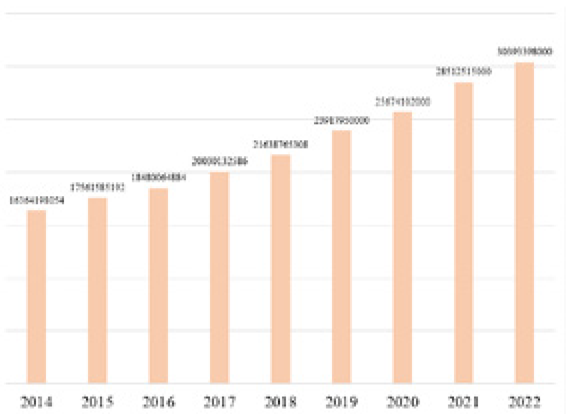
Graph 1: Stock market capitalization and Bond market capitalization in N. Macedonia for the period 2014-2022



Souce: Author's calculations

In the Graph 2 below are presented the values of the assets of the insurance companies in N. Macedonia for the period 2014-2022. It can be noticed that there is an upward trend throughout the years. According to the Insurance Supervision Agency, the insurance companies mostly invest in government debt securities and bank deposits, while investing in stocks is much less. Although their investment strategies are more towards the bond market, the results from the empirical analysis showed that the insurance sector positively affects the stock market capitalization, while the impact on the bond market capitalization is not detectable.

Graph 2: Assets of insurance companies in North Macedonia



Souce: Author's calculations

Conclusion

Finance-growth nexus is evolving throughout the years, due to the fast changing economic environment in every country. The factors affecting the economic growth or the development of the capital markets may vary across the countries. For filling the financing gap that banking sector can no longer cover, institutional investors started to play very important role. More specifically, insurance companies are one of the biggest institutional investors that implement long-term investment strategies, which consequently positively affect the financial sector. However, when it comes to analyzing the relationship between insurance sector and economic growth and insurance sector and capital markets, most of the papers (mentioned above) focus on the more developed countries and the older EU Member states. However, less attention is paid on the Balkan countries and on the developing countries in general. One reason for the limited research may be availability of the data, and the possibility of obtaining results that do not confirm with the results from the existing literature. Hence, the aim of this paper is to add more to the literature that focuses on the insurance sector and its relationship between the economic growth and the capital markets, with main focus on N. Macedonia. In this context, N. Macedonia is a developing small country that went through the transition process. Due to the turbulences that have occurred throughout the years, the country experienced slower economic growth and slower capital market development, compared to the other European countries. However, insurance sector as the third largest sector in the N. Macedonian financial system has not been profoundly analyzed in empirical papers. That limitation in the literature was one of the reason for creating this paper and investigating how the insurance sector affects the N. Macedonian economic growth and capital market. The results are consistent with the expectations. Considering that the insurance sector participated with only 1.54% in the GDP of the country, it can support the finding in this paper that the insurance sector negatively affects the economic growth. This may be due to the very low participation in the GDP. However, as it was stated that the insurance companies mostly invest in various financial instruments offered on the financial market, it supports the finding in this paper that they positively affect the stock market development of the country (but not the bond market capitalization). Therefore, the capital market in N. Macedonia is relatively small and its further development can increase the effect that the insurance companies have on the capital market, and potentially later on the economic growth. Having in mind the finance-growth nexus, that more developed capital markets lead to higher economic growth, it can be expected that if better policies and regulatory frameworks are created, the insurance sector will potentially have a positive effect on the economic growth in the future.

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