

The Impact of Macedonian Stock Exchange Performance On Economic Growth in Republic of Macedonia

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Abstract: Capital market plays an important role in the economic growth. Capital markets bring numerous efficiencies to the economy in terms of better allocation of resources, efficient process of capital raising, improvement in governance and transparency, productive utilization of savings, development of the corporate sector and growth of companies, expansion of investor base and enlarge the pace and diversity of resource flows etc.

These features of the capital markets and functioning of the stock exchange are considered vital for developing an efficient financial system that could benefit the real economy. One intermediary in the market that operates as a rallying point for the overall activities is the stock exchange.

This paper examines the relationship between stock market performances and economic growth in Macedonian context. The purpose of this study is to analyze and evaluate the performance of the Macedonian Stock Exchange and identify the extent to which it affects the Macedonian economy.

In this research, we are going to carry out an analysis of the connection between the performances on the Macedonian stock exchange and the economic growth. Here, as parameters of the Macedonian stock exchange performances, we shall take the market capitalization of listed companies, the average value of MBI10 (MBI10 shares index value), volume of trading on the stock exchange and the number of listed companies. On the other hand, the annual growth rates of gross domestic product are taken as indicators of the economic growth.

Correlative and regressive analysis of time series was used to examine the relationship between stock market performance and economic growth. The study finds that 95.12% variability of the values of Gross domestic product is explained by the link with the performances of the Macedonian stock exchange, while 4.88% of the variability is a result of other factors which are not comprised by the regression model. Regression model indicates that there is a very strong link between gross domestic product (GDP) and the performances of the Macedonian stock exchange: market capitalization of the listed companies (MK), average value of (MBI10), volume of trading on the Macedonian stock exchange (VOT) and number of listed companies (NLK) (Multiple R=0.975).

Keywords: capital market, stock markets, economic growth, stock market performances

Introduction

Financial resources enable nations to harness economic resources for development. The World Bank (1989) writes that the difference between the rich nations and poor nations is attributed to lack of financial resources to harness the economic resources of poor nations. Thus, an efficient financial sector is key to the efficiency in the real economy. A well-developed financial system promotes investment by identifying and financing lucrative business opportunities, mobilizing savings, allocating resources efficiently, helping diversify risks and facilitating the exchange of goods and services (Mishkin 2001).

Stock market development has assumed a developmental role in global economics and finance following the impact they have exerted in

corporate finance and economic activity. Paudel (2005) states that stock markets, due to their liquidity, enable firms to acquire much needed capital quickly, hence facilitating capital allocation, investment and growth. Stock market activity is thus rapidly playing an important role in helping to determine the level of economic activities in most economies.

Many studies have mainly tried to examine the nature of the causality between stock market performance and economic growth.

In addition to previous research are the studies of Yartey (2008) who argued that economic activities in a country constitute the key drivers of stock market development. In his research he claimed that a percentage point increase in GDP per capita increases stock market development by 7.23

percentage points. Others researchers tend to argue that it is rather growth in the stock market that spurs economic development (Filer et al., 2000).

More recently, the emphasis has been increasingly shifted to stock market indicators and the effect of stock markets on economic development.

Although some analysts view stock markets in developing countries as “casinos” that have little positive impact on economic growth; recent evidence suggests that stock markets may give a big boost to economic development.

In fact, stock markets play a crucial role in mobilizing funds in capital markets. Stock markets provide a platform to investors and borrowers to exchange money by exchanging stocks. A significant chunk of total corpus of the financial institutions like life insurance companies, mutual funds, pension funds e, foreign institutional investors, etc is invested in stock markets resulting into huge fund flow in the stock market. (Bhargav Pandya, 2014)

So, the financial stock market serves as a veritable tool in the mobilization and allocation of savings among competing uses which are critical to the growth and efficiency of the economy (Alile, 1984).

In principle, a well-developed stock market should theoretically increase saving (by enhancing the set of financial instruments available to savers to diversify their portfolios) and efficiently allocate capital to productive investments; which eventually leads to an increase in the rate of economic growth. In doing so, it provides an important source of investment capital at relatively low costs (Dailami and Aktin, 1990; Greenwood and Smith, 1992). A more developed equity market also provides liquidity that lowers the cost of foreign capital that is essential for development. As such the presence of stock markets would mitigate the principal agent problem and reduce asymmetry information, thus promoting efficient resource allocation and growth (Adjasi and Biekpe 2006).

Economic growth indicates the deployment of the funds for productive purposes as measured in terms of higher Gross Domestic Product (GDP) growth rate or higher per capita income. Performance of stock markets is generally perceived as the barometer to gauge the overall performance of the economy. Stock market indices in a sense represent how the market perceives the

overall outlook of the economy. Bullish stock markets are supposed to be the indicators of growing economy where as bearish stock markets represent economic contraction.

Numeral empirical evidence shows the existence of a strong positive correlation between stock market development and economic growth (Atje and Jovanovich, 1993; Demirgüç-Kunt and Levine, 1996a, b; Korajczyk, 1996, Levine and Zervos, 1996, 1998). However, there exists some authors who could not established any significant link between stock market development and growth such as Bencivenga and Smith (1991), Naceur and Ghazouani (2007) and Adjasi and Biekpe (2006) who looked at developing countries. In fact, previous empirical research has suggested a connection between stock market development and economic growth, but this is far from definitive. (Boopen, Sawkut, Sannasee, Seetannah, 2010)

Given the expected positive role of stock market development in economic growth, and the fact that stock market development have not necessarily impacted positively on economic growth in developing nations, this study sought to empirically investigate the effect of stock market development on economic growth in Republic of Macedonia.

Macedonian Stock Exchange

Modern history of the Macedonian capital market is associated with the structural changes in the 1990s of the 20th century, when the process of country transition started. The process of privatization resulted in formation of larger number of shareholding companies, which posed a need of creating suitable market infrastructure for transfer of newly-created securities. Although many regional stock exchanges of the countries that went through the same transitional period were established earlier, constitution of the Macedonian stock exchange started in 1995.

The Macedonian stock exchange is an important institution, which establishing should have brought capital market development in R. Macedonia.

The Macedonian stock exchange AD is the first organized securities stock exchange in the history of R. Macedonia. Normative conditions for its establishment had been created by bringing the Rules for working conditions of the effective stock exchange in March 1995 by the Securities

Commission, after which the Founding Committee was established, that took over necessary activities for the stock forming and up to the middle of 1995, the Elaborate for establishing and work of the Stock Exchange, the Statute and the Agreement for founding, were prepared. On 13.09 1995, The Founding meeting of the Stock exchange was held, on which it was founded as a shareholding company on non-profit base, with founding capital of 1 million Deutsch marks. Starting from 20.01 2001, the Macedonian stock exchange began working on a profit base with founding capital of 500.000 EUR. Shareholders on the stock exchange can be domestic and foreign legal and natural persons. The ownership of an individual shareholder is limited to 10% of the basic stock exchange principal.

Having in mind the fact that at the moment of its founding, according to the regulations at that time, the Stock exchange founders could be only banks and other financial institutions (saving banks and insurance companies), the Macedonian Stock exchange was founded by 19 legal entities, of which 13 were banks, 3 insurance companies and 3 saving banks, and they became its first members with a right to trade on the Stock exchange. The current number (2016) of the stock exchange members is 10, of which 6 brokers and 4 banks.

The basic aim of the Macedonian stock exchange was to provide effective, transparent and safe functioning of the organized secondary securities market in R. Macedonia, through permanent effort of all investors to provide entrance, i.e. exit of financial instruments for trading in the different stock markets at fair market price, to help trade companies to attract new capital for financing their development and to contribute for building confidence into Macedonian securities market.

In the first several years of the Stock Exchange functioning, (in the period from 1996 to 1998), the Stock Exchange was in the so called "baby" development stage, which was characterized by very low activity. Namely, the stock exchange was firstly formed within the early reform processes in 1990s, because it was thought that part of the privatization models would be realized and were realized through the stock exchange. Then follows the second stage, according to many features, very specific development stage (in the period from 1999 to 2004) , in which the Stock exchange primarily performed the function of indispensable market infrastructure for finishing privatization of public and state capital and consolidation of

proprietary structures created by the privatization. That was manifested in a form of domination of block transactions and state auctions into the realized Stock Exchange turnover and absence of companies' voluntary quotation on the stock market. Starting from 2005, new Stock exchange life cycle has been recognized, in which, although the processes of property consolidation in companies have not been finished yet, a component that should be the top aim can be seen - the Macedonian stock exchange AD Skopje to be a place where with a moderate risk, free money of domestic and foreign investors, will be invested and fructified. Significantly increased turnover in 2005, only confirmed that statement.

The last ten years, it can be seen that capacity of the secondary capital market, of the Macedonian stock, has been moving annually as a turnover in all aspects between 100-200 million EUR. The exception are those good years, 2006 and 2007, when the turnover was 500-600 million EUR, and there was one unsuccessful of less than 100 million EUR in 2013. Concerning price movements on the stock within a longer statistical period, in the last decade we can see that there are several cycles-upward aggressive movements from 2005 to 2007, then from 2008 up to 2012, there was negative price performance in continuity, while in 2013 and 2014 a small improvement and two annual pluses in succession were seen, but it was far away from the previous record levels. The current turnover (2015) and the price levels are not positive at all.

The market capitalization, after the two processes of obligatory quotation (the development of our total market on the offer side, is based on the two projects for obligatory quotation in 2001 and in 2013), i.e., the market value of 115 listed companies is about 1,6 billion EUR and in relation to GDP is about 18%. The average indicator for this in EU is 65%, while in USA, UK and Switzerland; the figures go even above 100%. This is an indicator that shows what kind of enterprises structure and what kind of structure of the financial market, have been created in these 25 years of market economy in the country. It is obvious that there are not many big and quality shareholding companies on the stock exchange, or, there is not appropriate validation of the listed shareholding companies on the levels as is the average in EU.

In that context, of special importance is the fact that on the level of European Union, the issue how to put more efficiently the capital markets into the function of companies' development is becoming

more actual, with an accent on the small and medium enterprises. So, in Europe opinions that the capital market should be strengthened are predominant, and the links between capital markets, the economic growth increasing, jobs creating etc. are more underlined.

Literature Review

All over the world, the capital market has played significant roles in national economic growth and development. One intermediary in the market that operates as a rallying point for the overall activities is the stock exchange. It is a common postulation that without a functional stock market, the capital market may be very illiquid and unable to attract investment. Essentially, the stock market provides liquidity, contributes to capital formation, and investment risk reduction by offering opportunities for portfolio diversification (Levine, 1991).

In recent times, research interests have focused on investigating whether stock markets, especially in developing countries, have achieved the development-oriented goals for which they were originally conceived.

Many studies have attempted to establish a relationship between the performance of stock exchanges and their resultant effect on economic growth.

Notable among them is one by Adjasi and Biekpe (2006). The results of their study examined the effect of stock market development on economic growth in 14 African countries, which revealed a positive relationship between the two and indicated that stock market developments played a significant role in growth only for moderately capitalized markets. On the basis of these results, they recommended that low income African countries and less developed stock markets needed to grow more and develop their markets to elicit economic gains from stock markets.

The causal nexus between stock market development and economic growth was examined by Vazakidis and Adamopoulos (2009) for France for the period of 1965 to 2007. This study employed co-integration, Granger causality test and Vector error correction model. Results indicate that there is a positive association from economic growth to stock market development and at the same time interest rate has a negative effect on stock market development.

Similarly Brasoveanu et al. (2008) have studied the correlation between capital market development

and economic growth in Romania for the period 2000 to 2006. Results show that capital market development is positively correlated with economic growth by way of feed-back effect.

Gupta and Paramati (2011) examined whether the stock market performance leads to economic growth or vice versa; the study also examined short-run and long-run dynamics of the stock market. Using, monthly Index of Industrial Production (IIP) and quarterly Gross Domestic Production (GDP) data for the time span of 1996 to 2009 the Engle-Granger residual based co integration test suggested that there is a long-run relationship between the stock market performance and economic growth.

Nieuwerburgh, Buelens, & Cuyvers (2006) examined the long term relationship between financial market development and economic development in Belgium. They employed stock market indicators from 1873 – 1935. They found that institutional changes affecting the stock market explain the time-varying nature of the link between stock market development and economic growth.

Chinwuba Okafor and Amos O. Arowoshegbe (2011) research the impact of the Nigerian capital market performance on the economic development of Nigeria. The results indicate that: Market Capitalization, All-Shares Index and number of listed companies were positively related to and capable of influencing Gross Domestic Product; while Volume of transactions and Market Capitalization were positively related to Gross Fixed Capital Formation. The results have proved that the performance of the capital market impacts positively on the economic development of Nigeria.

Soumya and Jaydeep explore the causal relationship between stock market development and economic growth in the Indian economy for the period from 1996:Q4 – 2007:Q1. The authors reported that there is causality between real GDP growth rate and real market capitalization ratio. Secondly, the results suggest unidirectional causality from both stock market activity and volatility to real GDP growth in Indian economy.

Athapathu and Prabhath Jayasinghe empirically examine the causal relationship between stock market performance and economic growth in Sri Lanka based on time series data between the period of 1997 and 2008. Econometric methods such as co-integration analysis, error correction

mechanism and Granger causality tests are employed to investigate the relationship between GDP growth rate and three stock market performance proxies. A unidirectional causal relationship is observed between stock market performance indicators and GDP growth of Sri Lanka.

Surya and Suman (2006) investigate the causality relationship between stock market and economic growth based on the time series data for the year 1988 to 2005 using Granger causality test. The study finds the empirical evidence of long-run integration and causality of macroeconomic variables and stock market indicators even in a small capital market of Nepal. The causality has been observed only in real terms but not in nominal variables. In econometric sense, it depicts that the stock market plays significant role in determining economic growth and vice versa. Interestingly, the causation is evident with a lag of 3 to 4 years. Also, the paper reveals the importance of stock market development for fostering economic development.

Several others have done studies elsewhere to see the stock market impact on economic growth. Many studies have proved positive relationships between stock market performance and economic growth. The situations in the developed markets have been easy to test, the markets being adequately large to make an impact on the economies (Athapathu A R, Prabhath Jayasinghe, 2009)

With regards to the developing countries, it may be noted that there is no consensus in literature on the effects of the capital market on economic development (Chinwuba Okafor, Amos, 2011). Wai and Patrick (1973) argue that capital markets have generally not contributed positively to the economic development of those countries that created the markets.

However the situation in Republic of Macedonia may be different, the relatively smaller size of the stock market may only have a limited impact on the country's economic activity. Therefore, the main objective of this paper is to examine the relationship between Macedonian Stock Exchange Performance and economic growth of the country.

There are certain key indicators of capital market development which are generally accepted in literature. These, according to the International Finance Corporation (IFC) (1991), are the standard

quantitative indicators of stock market development:

1. Net increase in Market capitalization
2. Number of listed companies
3. Trading of shares in value terms

Based on the above framework, the following variables were identified: Market capitalization, Share index, value of transactions and number of listed companies.

On the other side a country's economic growth is usually indicated by an increase in country's **gross domestic product**, or **GDP**. Generally speaking, gross domestic product is an economic model that reflects the value of a country's output. So, the annual growth rates of gross domestic product are taken as indicators of the economic growth.

The variables which are connected with the stock exchanges performances will be tested for their effect and causal relationship with the gross domestic product in Republic of Macedonia.

Methodology

The study uses time series data on important performance parameters of Macedonian Stock Exchange and their impact on the economic growth. The data set of the study consists of 11 annual observations covering 2005 to 2015. Annual data on stock exchange performance indicators, as market capitalization, share index, value of transactions and number of listed companies and GDP as indicator of growth rate were used for the analysis.

Economic growth data has been collected from the website of State Statistical Office of Republic of Macedonia. Annual data on market capitalization, share index, value of transactions and number of listed companies are official available and were collected from the annual report for 2015 of the official website of the Macedonian Stock Exchange. Correlation and regression models, also and tests of statistical hypotheses were used for the analyses of data collected.

Statistical methods correlative and regressive analysis of time series and tests of statistical hypotheses have been applied. These statistical methods examine the direction and intensity of the connection of the watched factors/phenomena, their trend during the time course with appropriate

forecast, as a statistical conclusion for prior defined hypotheses.

Result and discussion

Variables in the regressive model

Dependent variable: Gross domestic product (GDP) – indicator of economic growth.

Independent variables: market capitalization of listed companies (market capitalization MK), average value of MBI10, number of listed companies (number of listing companies- NLC) and volume of trading on the Macedonian stock exchange (VOT) – parameters of performances on the Macedonian stock exchange.

Table 1. Indicators of economic growth and performances on the Macedonian Stock exchange in R. Macedonia in the period from 2005 to 2015.

Year	GDP (000 000)	MK (000 000)	MBI10	NLC	VOT (000 000)
2005	308,432	33171,01	2291,04	57	8889,568
2006	334,84	51021,28	3702,54	43	31017,93
2007	372,889	113499,1	7740,79	38	41702,32
2008	414,890	35254,83	2096,16	38	12378,96
2009	414,622	38885,76	2751,88	36	6732,333
2010	437,296	30442,61	2278,92	34	5842,963
2011	464,187	27300,26	1974,86	32	13655,86
2012	466,703	25917,76	1731,18	32	5600,305
2013	501,891	97755,77	1738,86	116	3234,558
2014	525,620	101759,1	1844,20	115	8704,058
2015	558,240	99359,1	1833.26	114	2660.494

Descriptive statistics

Table 2. Statistics for the indicators on economic growth and performances on the Macedonian Stock exchange in the observed period.

Variable	Minimum	Maximum	Mean	Median	Standard Deviation	Confidence Level (95,0%)	Coefficient of variation
GDP	308,432	525,62	424,137	426,093	69,99802	\pm 50,07357	16,50%
MK	25917,76	113499,1	55500,75	37070,3	34628,35	\pm 24771,63	62,39%
MBI10	1731,18	7740,79	2815,043	2187,54	1829,232	\pm 1308,553	64,98%
BNK	32	116	54,1	38	33,16441	\pm 23,72439	61,30%
VOT	3234,558	41702,32	13775,89	8796,813	12557,61	\pm 8983,172	91,16%

From the above table, we got information for average values (arithmetic mean and median), average variability, confidence intervals and variation coefficient, of which values it can be concluded that the highest variability in the observed period has the volume of trading on the

Macedonian stock exchange, while the lowest is Gross domestic product GDP.

Coefficients of correlation that present partial links among the watched phenomena are shown in the following table:

Table 3: Matrix of partial coefficients of correlation

	GDP (000 000)	PK (000 000)	MBI10	BNK	VOT (000 000)
GDP (000 000)	1				
PK (000 000)	0,25753581	1			
MBI10	-0,46238838	0,504872478	1		
BNK	0,512364349	0,666735872	-0,27546	1	
VOT (000 000)	-0,520417762	0,398825759	0,901405	-0,29982244	1

From the above table it can be concluded that there is:

- very weak positive link between Gross domestic product GDP and market capitalization of the listed companies (MK),
- weak negative link between the Gross domestic product GDP and the average value of (MBI10),
- significant positive link between the Gross domestic product GDP and the number of listed companies,
- significant negative link between the Gross domestic product GDP and the volume of trading on the Macedonian stock exchange.

Partial links of the performances of the Macedonian stock exchange: market capitalization of the listed companies (MK), average value of MBI10, volume of trading on the Macedonian stock exchange (VOT) and number of listed companies (NLK) and the indicator of the economic growth of Gross domestic product (GDP), can be seen on the following dispersion diagrams.

By using linear regression model (See Table 4.), many conclusions can be drawn, that refer to the links of the watched phenomena. I.e.:

- there is a very strong link between gross domestic product (GDP) and the

performances of the Macedonian stock exchange: market capitalization of the listed companies (MK), average value of (MBI10), volume of trading on the Macedonian stock exchange (VOT) and number of listed companies (NLK) (Multiple R=0.975),

- 95.12% variability of the values of Gross domestic product is explained by the link with the performances of the Macedonian stock exchange, while 4.88% of the variability is a result of other factors which are not comprised by the regression model;
- Partial regression coefficients are not equal, and that means that the listed performances of the Macedonian stock exchange have different influence on the gross domestic product (GDP) as an indicator of economic growth. That can be seen from the table ANOVA ($F_{pr} = 24.37291 > F_t = 4.35$ or $p_{pr} = 0.001775696 < p_t = 0.05$);
- P – values referring to independent variables, i.e. to the performances of the Macedonian stock exchange, with exception of the volume of trading on the Macedonian stock exchange (VOT), in the regression model for the basic set, are significant, i.e. different from zero.

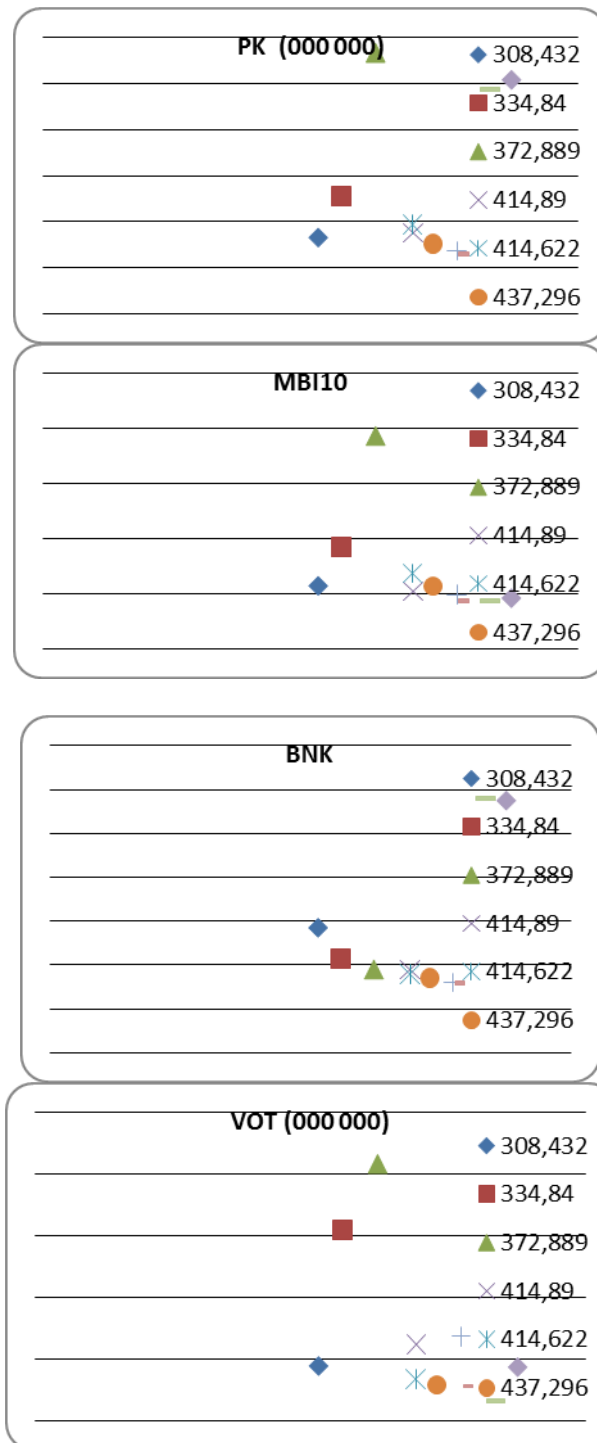


Figure 1: Dispersion diagrams for partial links of the performances of the Macedonian stock exchange and the indicator of the economic growth Gross domestic product (GDP)

Table 4. Regression analysis of the economic growth indicator: gross domestic product (GDP) and performances of the Macedonian stock exchange: market capitalization of the listed companies (MK), average value of (MBI10), volume of trading on the Macedonian stock exchange (VOT) and number of listed companies (NLK).

SUMMARY OUTPUT						
Regression Statistics						
Multiple R	0.97530279					
R Square	0.951215533					
Adjusted R Square	0.912187959					
Standard Error	20.74258212					
Observations	10					
ANOVA						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	4	41946.23735	10486.56	24.37291	0.001775696	
Residual	5	2151.273566	430.2547			
Total	9	44097.51091				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	654.5935099	38.41452216	17.04026	1.27E-05	555.8458371	753.3412
X Variable 1	0.00727219	0.000977102	7.442612	0.00069	0.00476047	0.009784
X Variable 2	-0.108281993	0.017173841	-6.30505	0.001477	-0.152428757	-0.06414
X Variable 3	-5.768137486	0.912677629	-6.32002	0.001461	-8.114250021	-3.42202
X Variable 4	-0.001248108	0.001292171	-0.9659	0.378456	-0.00456974	0.002074
RESIDUAL OUTPUT			PROBABILITY OUTPUT			
<i>Observation</i>	<i>Predicted Y</i>	<i>Residuals</i>	<i>Standard Residuals</i>	<i>Percentile</i>	<i>Y</i>	
1	307.8620438	0.569956238	0.036865	5	308.432	
2	337.9679069	-3.127906863	-0.20231	15	334.84	
3	370.5541438	2.334856221	0.15102	25	372.889	
4	449.3574481	-34.46744812	-2.22937	35	414.622	
5	423.3434674	-8.721467355	-0.56411	45	414.89	
6	425.8026322	11.49336777	0.743397	55	437.296	
7	437.660025	26.52697498	1.715778	65	464.187	
8	464.0465805	2.656419545	0.171819	75	466.703	
9	504.0637949	-2.172794907	-0.14054	85	501.891	
10	520.7119575	4.908042494	0.317455	95	525.62	

Additional information on other indicators of the regression analysis are shown in the following table:

Table 5: Partial and standard coefficients of elasticity

Variable	Partial coefficients of elasticity	Standard coefficients of elasticity
PK	0,951608	3,597587
MBI10	-0,71868	-2,82999
BNK	-0,73574	-2,73289
VOT	-0,04054	-0,22391

- By increasing the market capitalization of the listed companies by 1% gross domestic product is
- increased by value of 0,951608%.
- Market capitalization of the listed companies has the highest participation in the gross domestic product and
- Market capitalization of the listed companies has the largest growth reserve.

The trends for development of the market capitalization of the listed companies (MK), average value of (MBI10), number of listed companies (BNK) and volume of trading on the

Macedonian stock exchange (VOT), are important as parameters of the performances of the Macedonian stock exchange and gross domestic product (GDP), as indicators for economic growth. Namely, their developing tendency is approximated best on a cube trend (Figures 1-7) according to the highest value of the determination coefficient, and on that basis, their values can be forecasted in the following time period.

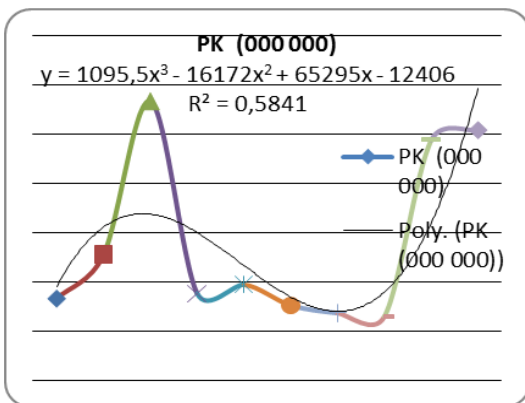


Figure 1. Cube trend for developing tendency of the market capitalization of the listed companies (MK)

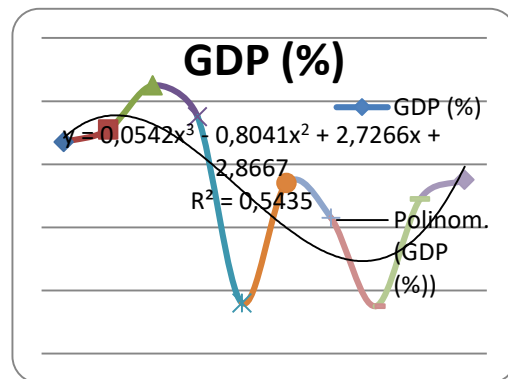


Figure 2. Cube trend for developing tendency of the gross domestic product (GDP)

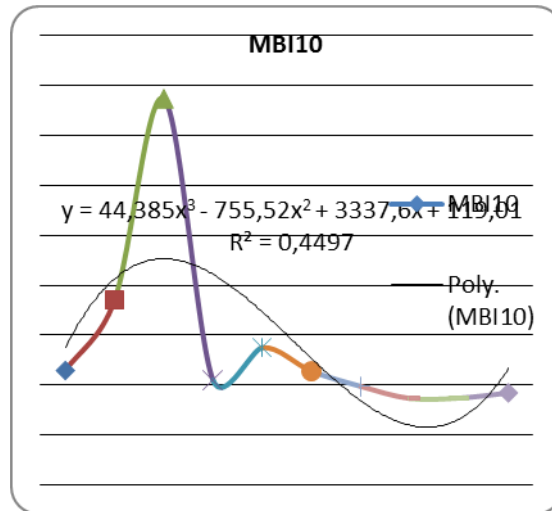


Figure 3. Cube trend for developing tendency of the average value of MBI10

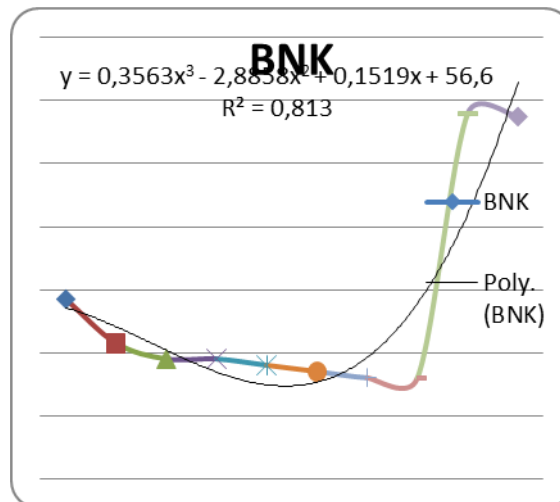


Figure 4. Cube trend of developing tendency of the number of listed companies (NLC)

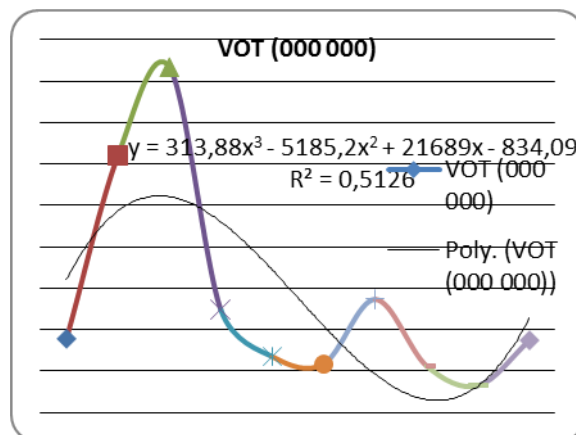


Figure 5. Cube trend for developing tendency of the volume of trading on the Macedonian stock exchange (VOT)

Conclusion

This paper examined the relationship between stock market performance indicators and economic growth using time series data from 2005 to 2015. Annual time series data on stock exchange performance indicators and GDP growth rate were collected from the Macedonian Stock Exchange and the State Statistical Office of Republic of Macedonia. Correlative and regressive analysis of time series was used to examine the relationship between stock market performance indicators and economic growth.

The results of the performed analysis have shown that there is a strong link between gross domestic product (GDP) and the performances of the Macedonian stock exchange: market capitalization of the listed companies (MK), average value of (MBI10), volume of trading on the Macedonian stock exchange (VOT) and the number of listed companies (NLK) (Multiple R = 0.9750.)

ANOVA test has shown that partial regression coefficients are not equal and that means that the mentioned performances of the Macedonian stock exchange have different influence on gross domestic product (GDP) as an indicator of the economic growth. ($F_{pr} = 24.37291 > F_t = 4.35$ or $p_{pr} = 0.001775696 < p_t = 0.05$).

Despite the obtained results for existence of a link between the performances of the Macedonian stock exchange and the economic growth, on the basis of the latest reports on financial stability (NBRM), we can conclude that the role and importance of the Macedonian stock exchange in the total economic system are still very small (the share of the turnover of the classic stock exchange trading in GDP is minimal 0,5%).

Namely, the Macedonian capital market is still characterized by insolvency and unattractiveness, and by expressed sensitivity of the investors and their decisions of the economic and non-economic regional and international events.

On the basis of the previous results, in future, it is recommended to carry out more aggressive campaign for promoting stock exchange operations, i.e. measures for increasing the awareness of people and business entities of the benefits of investing into financial instruments and capital mobilization through securities issuing.

On the other hand, it is necessary to make changes in the law regulative for protecting investor's

interests, which will increase their trust and their participation in the Macedonian stock exchange and in that way, it will enlarge stock ownership base in the economy.

In this way, encouraging of activities on the Macedonian stock exchange is enabled, and indirectly of its performances, which has positive implications on the total economy.

References

- Abel E., Ebele O., Ndi O.O. (2009) STOCK MARKET DEVELOPMENT AND PRIVATE INVESTMENT GROWTH IN NIGERIA. *Journal of Sustainable Development in Africa Volume 11. No.2*, Clarion University of Pennsylvania, Clarion, Pennsylvania, pp.20-35
- Charles K.D. Adjasi, Nicholas B. B. (2006) COINTEGRATION AND DYNAMIC CAUSAL LINKS AMONGST AFRICAN STOCK MARKETS. *Investment Management and Financial Innovations. Volume 3, Issue 4*
- Alile, H. I. (1984) The Nigerian Stock Exchange: Historical Perspective, Operations and Contributions to Economic Development. *Central Bank of Nigeria Bullion, Silver Jubilee edition vol. II* pp. 65- 69.
- Athapathu A.R., Prabhath J. (2009) STOCK MARKET PERFORMANCE AND ECONOMIC GROWTH: THE CASE OF SRILANKA. *Working paper*. pp.83-92
- Bhargav P. (2014) Impact of performance of Bombay stock exchange. *Conference paper, Role of Financial Industry in Accelerating Economic Growth*
- Boopen S., Rojid S., Vinesh S., Binesh S. (2010) Stock Market Development and Economic Growth in Developing Economies, *Evidence from Panel VAR framework*
- Brasoveanu L. O., Dragota V., Catarama D., Semenescu A. (2008) Correlations between Capital Market Development and Economic Growth: The Case of Romania. *Journal of Applied Quantitative Methods. Vol.3, No.1*, pp. 64-75.
- Charles K.D. Adjasi, Nicholas B. Biekpe, (2006), COINTEGRATION AND DYNAMIC CAUSAL LINKS AMONGST AFRICAN STOCK MARKETS. *Investment Management and Financial Innovations, Volume 3, Issue 4*, pp.102-119
- Chinwuba O., Amos O.A., (2011) STIMULATING ECONOMIC DEVELOPMENT THROUGH THE CAPITAL MARKET: THE NIGERIAN EXPERIENCE. *JORIND 9(2) December*, www.transcampus.org, www.ajol.info/journals/jorind (accessed on 13.12.2015)
- Emmanuel A.S., King S. (2014) Effect of Capital Market Development on Economic Growth in Ghana, *European Scientific Journal. Vol.10, No.7*, pp.511-534
- Gupta R., Paramati S. (2011) An Empirical Analysis of Stock Market Performance and Economic Growth: Evidence from India. *International Research Journal of Finance and Economics. 73*, pp 133-149
- Hicks, John. (1969) *A Theory of Economic History*. Oxford, U.K.: Clarendon Press.

- Levine R. (1991) Stock Markets, Growth, and Tax Policy. *Journal of Finance*, pp.1445–1465
- Mishkin Frederic S. (2001) *The Economics of Money, Banking, and Financial Markets*. 6th ed. New York : Addison Wesley Longman
- Nieuwerburgh S., Buelens F., Cuyvers L. (2006) Stock Market Development and Economic Growth in Belgium. *Explorations in Economic History*, 43(1), pp. 13-38
- Paudel N. P. (2005) *Financial System and Economic Development*. Nepal Rastra Bank in Fifty Years, Part – II, Financial System. Kathmandu: NRB.
- Robinson J. (1952) *The Rate of Interest, and Other Essays*. London: Macmillan
- Schumpeter J. (1912) *Theorie der Wirtschaftlichen Entwicklung [The Theory of Economic Development]*. Leipzig: Dunker & Humblot Cambridge, M.A.: Harvard University Press, 1934. Translated by Redvers Opie
- Soumya G. D. Jaydeep M., Does Stock Market Development Cause Economic Growth? A Time Series Analysis for Indian Economy. *International Research Journal of Finance and Economics - Issue 21*, pp.142-149
- Surya B. G.C., Suman N., (2006) Stock Market and Economic Development: a Causality Test, *The Journal of Nepalese Business Studies Vol. III No. 1*, p.36-44
- Vazakidis A., Adamopoulos A. (2009) Stock Market Development and Economic Growth. *American Journal of Applied Science 6 (11)*, pp. 1933-1941.
- Wai, U., Pattrick, H.T. (1973) Stock and Bond Issues and Capital Markets in less developed countries, *IMF Staff papers*, No,20
- World Bank (1989) Financial systems and development. *World Development Report, World Bank and Oxford University Press, Washington DC*, pp 26
- Yartey, (2008) The Determinants of Stock Market Development in Emerging Economies: Is South Africa Different? *IMF Working Paper, WP/08/32*, pp.1-31