

## Balkan Countries Financial Markets Analysis and Economic Development Performance

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**Abstract:** The fact of globalization, improvements in efficiency of intermediary services and activities, transactions that can be done in electronic environment and stocks that quoted on more than one stock exchange markets led to close integration process. These developments contribute to financial stability and growth. These developments have affected stock exchange markets in Balkan countries as well, and those countries tried to cope with globalized world. Recent developments and integration in Balkan countries had positive impact on this harmony. Moreover, financial integration leads to structural changes in economy. With the increase in the integration level of Balkan countries, they become more sensitive to global developments, because risks became more easily spreadable, bigger and diverse. Uncertainty or growing risks in a market become easily spreadable to other markets and the changes in the prices. In this study, the data which was collected from Balkan stock exchange markets and financial markets were analyzed and results were compared with ISE. In addition to that, financial integration is analyzed and relationships of stock exchange markets are identified. *Keywords:* legal decision making, case predictions, confidence judgments, metacognitive realism

### Introduction

Financial markets funds in the markets where supply and demand meet. Economic occurred in recent years, technological, the political and cultural changes that result from globalization, refers to a process in which widespread develop the relations between the countries. Globalization has also brought along with the liberalization of financial markets. With these developments and the removal of restrictions on capital movements is provided.

Surplus in the national market with international integration of financial markets is shifting to emerging markets funds. The main reason for this is the relatively high interest rates compared to developed countries due to being a most transition economies and investments by taking advantage of high interest rates investors who move to this country can be achieved higher rates of return. In addition, high earnings potential of equity markets is another attractive reason.

Integrated market for both investors diversity in securities that fund demand, low costs, offers opportunities in terms of risk and return. The increase in securities portfolio diversification and diversity have become important. Consequently, portfolio management has become more important.

The aim of this work with the Balkan countries Turkey stock investigate the movement of integration between stock markets. Analysis of the market with the Balkan countries and the findings are comparisons between these findings and ISE exchanges.

### Literature Review

There are several studies debating the economic development, stock exchange and financial market in the literature. Schumpeter (1911) mentioned the stock market development being useful to the economy since it grants liquidity and an opportunity for risk sharing and diversification, tolerates proficient allocation of resources to creative investment, condenses information and transaction costs and, therefore allows firms to assume profitable investments (Ibrahim, 2011). Winker (1998), in his study have been selected four theories for consideration - neo-classical and Keynesian theory, the New Development Finance approach and the new theory of finance which is grounded in the economics of information. Each emphasizes different aspects of the relationship between financial markets and economic development, but so far it has proved impossible to arrive at a consensus view.

In another research, Nguyen and Pham (2014) examine the causality relationship between stock market development and

economic growth in Canada and Australia based on the time series data for the period of 1981 Q3 to 2012 Q3. The results indicate that stock market and economic growth have a long-run relationship and that the stock market development does help improve the future growth in some developed countries. Hailemariam and Guotai (2014) research is objected to study, to examine the relationship between stock market development and economic growth. Empirically, based on the data for 17 emerging market and 10 developed market economies during the 12 years' period, from 2000 - 2011 using the generalized method of momentum (GMM) for dynamic panel data. The key findings of the study reveal that there exists statistically significant relationship between stock market development and economic growth, both directly as well as indirectly by boosting investment behavior.

Zagorchev (2011) (et al), advocates the dynamic relationship among financial development, ICT and Gross Domestic Product (GDP) per capita in a panel co-integration framework using 86 sample countries, and this relation has a long-run perspective as well. Quardighi and Somun-Kapetanovic focused on comparing the income mobility in the SEE (South-Eastern Europe) region and in the EU (European Union) countries between the 1990-2009 period. The results suggest that, in the long-term, the income mobility is greater in the SEE than in the EU. Bartlett (2009), has assessed the indication on the impact of globalization on the economies of the Western Balkans and the study argued the idea that the region has largely failed to benefit from the advantages of the globalization process, while it has simultaneously suffered from its main defects.

Duca (2007) in his research paper focused on long-term trends and the evidence presented is garnered from five of the top ten stock markets in the world in terms of market capitalization. Humpe and Macmillan (2005) analyzed the extent to which macroeconomic variables explained stock market movements in the US and Japan. Using a log-linear model, they found that a 1 per cent increase in industrial production triggered a 1.09 per cent increase in US stock prices whilst a 1 per cent increase in Japanese industrial production triggered a 0.4 per cent increase in Japanese stock prices. Both parameters were highly statistically significant. Bartlett (2009), in his working paper has assessed the indication on the impact of globalization on the economies of the Western Balkans argued the idea in this region has largely failed to benefit from the advantages of the globalization process, while it has simultaneously suffered from its main defects.

In this study, economic development issues will be investigated by the recent data and macro-economic indicators about the Balkan region countries.

## Theory and Hypothesis

For studying stock market effect, stock exchange performance and market penetration of Balkan countries economies, the following hypotheses are tested:

H1: Developments in the stock market affects the growth of the economy

H2: Has integration between the Balkan countries stock exchanges

## Research Method and Empirical Results

The data obtained from the exchange indicators was examined by panel data analysis. Applied method "panel data least squares" method. Examples range 2000-2010, and panel observation for every year is 77. The total is  $10 \times 77 = 770$ . Is selected 7 Balkan countries' (Greece, Bulgaria, Serbia, Macedonia, Croatia, Slovenia and Turkey) macro-economic data, which covers inflation, export, GDP, growth rate on model 1 in order to test first hypothesis. Second hypothesis tested the integration of financial markets indicators, which includes real interest rate, total trading volume, monetary growth, market capitalization of listed companies, stock market total value, portfolio investment effect on stock market performance for selected Balkan countries.

$$\text{Model 1: } BP_{it} = \alpha + B1UNEMPLOYMENT_{it} + B2BANKCAPITAL_{it} + \text{uit}$$

In model 1 stock market performance for the dependent variable and other selected economic and market data are being all the arguments.

$$\text{Model 2: } SK_{it} = \alpha + B1SCGDP_{it} + B2STOCTOTVAL_{it} + u_{it}$$

In model 2 we tested Stock capitalization of the dependent variable, and other market data and arguments to reach for our results.

Where i indicates the İth country, t indicates time period, and the other variables are defined as follows:

INF = Inflation ratio of İth country at time t

EXPORT = Export US dollar value percentage change of İth country at time t

GDP = Gross domestic product of İth country at time t

GROWTH = Economic growth ratio of İth country at time t

REALINTERRATE = Real Interest Rate of İth country at time t

MGROWTH = Monetary Growth of İth country at time t

TOTTRADVAL = Totat Trading Value of İth country at time t

STOCKPERF = Stock performance ratio of İth country at time t

UNEMP = Unemployment ratio of İth country at time t

STOCKTOTVAL = Total stock capitalization of İth country at time t

PORTFOLIO = Portfolio investment of İth country at time t

## Correlation of Stock Performance

### Research Framework

The direction of the relationship between different variables are correlated with the stock market performance analysis and analysis are located in the right intensity.

Table 1

Correlation matrix of stock market performance between 2000 – 2010

	TÜRKİYE	YUNANİSTAN	BULGARİSTAN	SİRBİSTAN	ARNAVUTLUK	MAKEDONYA	HRVATİSTAN	SLOVENYA
TÜRKİYE	1,00							
YUNANİSTAN	0,68	1,00						
BULGARİSTAN	0,76	0,60	1,00					
SİRBİSTAN	0,54	0,61	0,10	1,00				
ARNAVUTLUK	-0,21	-0,73	-0,40	-0,19	1,00			
MAKEDONYA	0,69	0,92	0,50	0,81	-0,49	1,00		
HRVATİSTAN	0,53	0,86	0,41	0,65	-0,45	0,91	1,00	
SLOVENYA	0,45	0,78	0,48	0,60	-0,66	0,80	0,81	1,00

The correlation between the stock market performance of the countries is quite high, as shown in Table 1. The correlation between countries, except Albania, is above 0.40. The correlation coefficients between Macedonia and Serbia, Slovenia and Croatia is 0.81. The highest correlation coefficient is 0.91 ratio between Macedonia and Croatia.

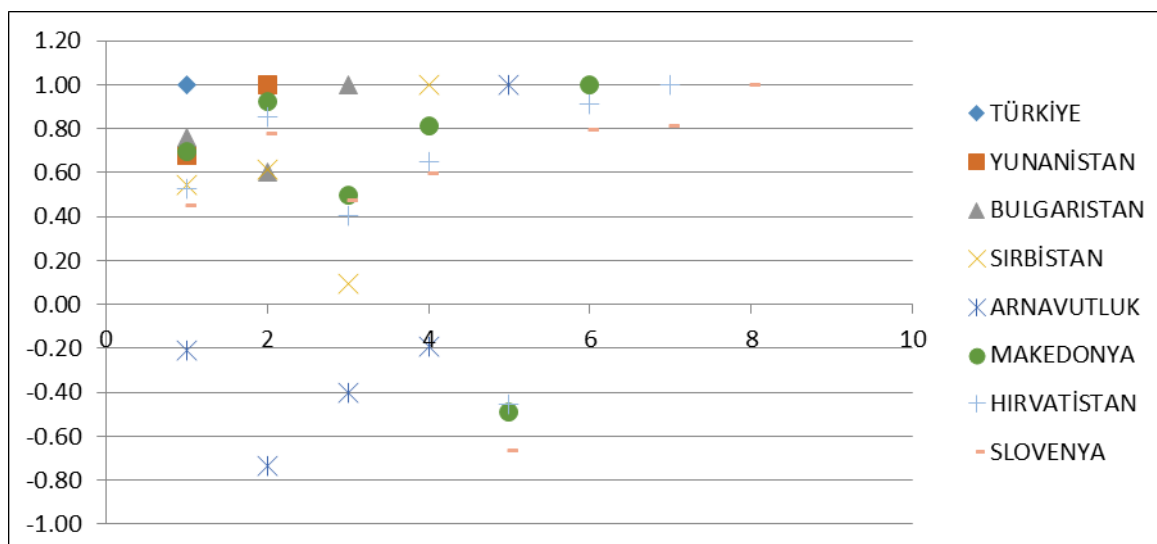


Figure 1. Correlation matrix of stock market performance between 2000 – 2010

In terms of stock market performance in Slovenia, Croatia and Macedonia are moved along. Greece and Turkey are separated from this group. Turkey is the closest country in terms of stock market performance in Croatia, Macedonia, Serbia and Bulgaria has emerged as exchanges.

## Panel Data Results

### Hausman Test Analysis

Correlated random effects results of model 1 and model 2 of Housman test results can be seen in table 2. Probability values of cross section random result is higher than 0.05. According to Housman test fixed affect is used on panel data regression.

Table 2

#### Housman test results

Cross-section random	Chi-Sq. Statistic	Chi-Sq. degrees of freedom	Probabilities
Model 1	3.516110	2	0.1724
Model 2	2.004686	2	0.3670

### Model 1

In Table 3 is presented stock market performance dependent variables and all other selected economic and stock market data obtained from independent variable values on the regression.

Table 3

#### The dependent variable stock market performance: Independent variables; economic and stock market data

Variable	Coefficient	Std. Error	t-value	Probability
UNEMPLOYMENT	49.50917	10.88632	4.547834	0.0000
BANKCAPITAL	-31.84659	13.59621	-2.342313	0.0218

Table 3.1

*Model 1 Time series results*

Model	R-square	Adjusted R-squared	S.E. of regression	Sum squared resid	Log likelihood	Durbin-Watson stat
1	0.19909	312.300	0.18841	5710085	-629.6445	1.730007

As shown in Table 3.1, R-squared analysis is 0.288724, our appreciation to this considers that there is a relationship which is so slight between variables. Durbin Watson's analysis gives us such a result as 1.861472, which shows that there is an autocorrelation between these variables. The number of Durbin Watson analysis is around 2 and it means this hypothesis cannot be denied.

**Model 2**

In panel dataset; Stock market capitalization and other dependent data in the last 10 years based on the arguments and Durbin Watson regression obtained values are shown in table 4.

Table 4

*The dependent variable stock capitalization, independent variable stock market data, time series analysis results*

Variable	Coefficient	Std. Error	t-value	Probability
SCGDP	26008014	10910174	2.383831	0.0197
STOCTOTVAL	-594868.1	372973.5	-1.594934	0.1149

Table 4.1

*Model 2 Time series results*

Model	R-square	Adjusted R-squared	S.E. of regression	Mean dependent var	S.D. dependent var	Durbin-Watson stat
2	0.051266	0.038616	1.17E+09	2.57E+08	1.80E+09	2.401030

In Table 4.1 R-squared dependent variables according to the results Dependent variable had no effect, in the fact results are 0.079 and variables give a result very dependent on each other. Durbin Watson's analysis is that the results are over 2, and that means between variables autocorrelation is high. According to these analyzes, the stock market capitalization has low impact on other data but has a relationship between them.

**Conclusion**

Balkan countries, according to the results obtained from the ISE stock market data and analysis of data; Turkey is the country with the best situation in terms of the highest throughput and performance between countries. However, because of the global crisis in 2008, there has been a serious decline in the stock of all countries. According to comparative data exchanges the most affected countries are Greece and Bulgaria.

If we look at the time series panel data analysis, economic and stock market performance of the stock market don't have too much impact on the data, it was concluded that there is a relationship with them. In the Durbin-Watson autocorrelation analysis shows that it exists between them. The effects of the stock market capitalization of variable data has had a positive

outcome, but are not connected to each other.

When we look at these analysis, the relationship between Balkan countries stock exchange and ISE is not stronger, but in the interim there is a connection. This is because Balkan countries' stock markets are not transparent and there are no large transaction volumes. I think this study is to demonstrate the continuity of the stock market, it also seems to shed a light on the academic integration of future studies.

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