

Financial Market's Contribution to Economic Growth in Romania

Ioana Andrada MOLDOVAN (GAVRIL)

*Bucharest University of Economic Studies
6 Piața Romană, sector 1, Bucharest, 010643, Romania
ioanaa.gavril@gmail.com*

Abstract. *Modern economies are characterized, among other things, by developed financial sectors. This reality has stimulated scientific research on identifying correlations between the level of financial market development and economic growth, especially for emerging countries. Romania is an interesting case to question the correlation between financial markets and economic growth, as it recently acquired the status of a functioning market economy and joined the complex of high economic development given by the EU. Using VECM modelling, as well as Wald and Granger causality tests, this paper analyses the nature and direction of causal relationships between the real economy and the financial sector in Romania, both on the short and long run. This paper is based on the Anglo-Saxon approach of the financial market, according to which it includes money market and capital market, and our econometric analysis takes into account both monetary and capital market components, in identifying correlations with the real economy. The results show that on the long run, between real GDP and credit to the private sector there is a one-way relationship, namely real GDP influences credit, but not vice versa. Also, on the long run, there is no correlation between market capitalization and real GDP. However, on the short run, there is a unidirectional causality from credit to real GDP, and also from real GDP to market capitalization. The results of the econometric analysis show that, in Romania, the financing function is met almost entirely by the banking system, while the capital market is small and does not fulfil yet the function of financing the real economy. Despite these empirical evidences, the author considers that the development of capital market is a sine qua non condition for modernizing the Romanian economy, by increasing funding potential and enhancing competition in the financial market. The author claims the need for government support and recommends economic policy measures in order to accelerate financial market's expansion in the Romanian economy.*

Keywords: *financial resources, capital market, real economy, economic growth, Romania.*

Introduction

This paper aims to test the direction and nature of links between financial markets and the real economy in Romania. Specifically, it answers the following questions: Are there bi-univocal relationships between the real economy and financial markets? What are the characteristics and

determinants of the relationships between the financial and the real sectors?
Does the financial system in Romania contribute to economic growth?

Determining the direction of the relationship between the two sectors of the economy is important for the foundation of necessary economic policy. Therefore, if empirical analysis concludes that the financial system is an important factor that stimulates growth, it would be recommended for the government to prioritize the implementation of policies for the development of the financial system (Levine, 1998). Otherwise, when it is found that the influence of the real economy upon the financial system is dominant, the government should prioritize policies for real sector growth. In our view, such a situation is characteristic rather for developing countries than developed ones.

Literature review

Starting from Paul Samuelson's metaphor, which states that money is the blood that irrigates the economic system, we are trying to identify theoretical arguments that reveal the great importance of the financial system within the market economy. Even since the nineteenth century, banks were considered a very important factor in the process of economic growth, Walter Bagehot (1873) and Joseph Schumpeter (1934) stating that banks can spur innovation and economic growth by financing productive investments (Moldovan, 2012).

One of the first empirical analyses of the correlations between finance and economic growth has been done by Goldsmith (1969), who used data for 35 countries from 1860 to 1963 and showed that there is a positive correlation between financial intermediaries' assets and economic growth. The results of Goldsmith were criticized for the fact that they have not demonstrated whether financial development was one that had a causal effect on growth (Panizza, 2013). However, Goldsmith's analysis is also blamed for not specifying whether the causal relationship between financial and economic development is determined through productivity channel or factor accumulation channel (Levine, 2004).

An efficient and stable financial system has the ability to provide a continuous and seamless way of allocating funds to investment opportunities. Also, such a financial system should be able to ensure the pooling and allocation of resources to finance large investment projects. Therefore, the financial system has an important role in the growth process, which it can promote through various channels, such as: capital

accumulation, efficient resource allocation, technological innovation and increasing factor productivity.

In turn, the financial system is influenced by the activities and fundamentals of the real economy. The intensification of economic activities determines the need for financial services, so that this need depends largely on the degree of economic development. Increases in economic activities and trade volume determine increased needs for financial services.

Moreover, the financial system depends on real economic activity in the sense that its development determines surplus or deficit of funds, and that the financial system has the task to reconcile them (Howells & Bain, 2007). For instance, in times of positive economic growth, the occupancy is high and income level increases, which determines a surplus of funds induced by the difference between the revenues of economic agents and their consumption needs, so that the disparity between the two will be saved. In large part, these savings are taken by the financial system, either as deposits or as investments in securities. In such situation, the role of the financial system is to allocate these funds for effective, major investment projects that require high financial efforts. In the opposite situation, i.e. during recession, employment and national income are reduced, resulting in a shortage of funds within the economy, and financial system's task is to cover this deficit. Therefore, the financial system is influenced by the income and savings levels, which represent inputs for the financial markets.

The development of financial institutions and the creation of an efficient financial system involve several costs. The advanced economies with high income levels are the ones that have the necessary resources to create efficient financial systems, while less developed economies do not have the resources to create such environments. Therefore, from a theoretical viewpoint, the financial system and the real economy are intertwined and mutually reinforcing, but given the fact that the economic system is permanently influenced by many factors, the intensity and the nature of these relationships varies from one economy to another.

Correlations between finance and economic growth have been, over time, the subject of an impressive number of studies, both theoretical and empirical.

There are studies that show that financial intermediation plays an important role for long-term economic growth, capital accumulation and productivity improvements (King & Levine, 1993a). King and Levine have shown, using data from 80 countries for the period 1960 to 1989, that several indicators

of financial development are strongly associated with the growth rate of real GDP per capita, the rate of physical capital accumulation and the increase in the efficiency of physical capital (King & Levine, 1993b). De Gregorio and Guidotti (1995) analysed the relationship between financial development (measured by the ratio of bank credit to the private sector as a share of GDP) and economic growth, showing that between the two there is a positive relationship, but with different impact from country to country. However, according to the analysis of the two authors, for some Latin American countries, the correlation was negative, as explained by financial liberalization carried out within an inadequate regulatory framework. Also, the main transmission channel of financial development in the real economy is given by the efficiency of investment, rather than their volume (Gregorio & Guidotti, 1995).

Levine, Loayza, and Beck (2000) conducted an analysis of 71 countries in the time interval from 1961 to 1995 and found that financial development affects long-term economic growth. Likewise, Beck, Levine, and Loayza (2000) conducted an analysis using panel data for 77 countries and showed that there is a causal relationship between financial and economic development, and that this relationship was determined by increased productivity, and not by accumulation of factors.

The literature provides analyses that confirm a bidirectional causal relationship between finance and growth. For instance, using data for nine OECD countries and China, Shan, Morris and Sun (2001) found a bidirectional causality between financial markets and the real economy in half of the countries analysed, while for the other countries, they found a unidirectional link from growth to financial development.

Some works (Levine, 1991; Becivenga, Smith, & Starr, 1995) showed that stock markets with high liquidity, where securities trading has low costs, eliminate investing aversion for long-term projects because investors can always transform their investments into cash when in need. Another study, conducted by Ross Levine and Sara Zervos, demonstrated that the development of the banking system and stock market liquidity are positively and significantly correlated with current and future rates of economic growth, capital accumulation and productivity growth, while other indicators of stock market, such as volatility, size and degree of integration, are not significantly correlated with economic growth (Levine & Zervos, 1998).

There are also some empirical analyses that infirm the existence of a causal relationship between financial development and economic growth. For example, Demetriades and Hussein (1996) used data for 16 countries and for

half of them did not find any evidence that there is a causal relationship between financial development and economic growth process.

Using a VEC model on panel data, Loayza and Ranciere (2006) found a positive long-run relationship between financial development and economic growth, while on the short run this relationship is negative.

Masten, Coricelli, and Mastern (2008) conducted a study on advanced and emerging economies in Europe, noting that the depth of the financial system has a strong effect on economic growth in the developing countries, but no effect in advanced economies.

Given all the above, we can state that most of the works capture a positive, sometimes bidirectional, relationship between financial development and economic growth. However, it cannot be asserted that these links are universally valid, given the fact that, under certain circumstances, within an economic system, several disturbing factors and phenomena may intervene and invalidate the relationships described above.

Econometric analysis

The analysis involves Vector Error Correction modelling, Wald testing and Granger causality testing in order to analyse the nature and direction of causal relationships between the real economy and financial markets in Romania, both on long and short run.

The Data

We use the real Gross Domestic Product (RGDP) to estimate the size of the real economy. Besides this indicator of the size of the real economy, the analysis involves the use of indicators to estimate the depth of the financial system. Financial development can be expressed through a variety of indicators, such as monetary aggregates as a share of GDP or the financial sector assets to GDP. However, it is considered that the indicators expressing the size of the monetary aggregates as a proportion of GDP only consider the depth of the financial system, and do not reveal the source of funding, or the direction in which capital is allocated (Levine, 1998). The literature provides a wide range of papers that drive a consensus that the best indicator for measuring financial depth is credit to the private sector as a share of GDP (Panizza, 2013).

Therefore, we included in the analysis the credit to the private sector rate (CREDIT), calculated as a share of credit to the private sector to GDP, as an indicator for measuring the depth and financing capacity of the banking system. We only considered domestic credit to the private sector because government credit may have also other purposes than financing the real economy.

Although the capital market in Romania is small, we appreciated as necessary to test for possible interdependences between it and the real economy. Thus, we included in the analysis Bucharest Stock Exchange capitalization to GDP (MCAP), to estimate the depth of the capital market.

We use quarterly data series for the corresponding period 2000 - 2015 Q1. The choice of this period is based on the fact that in the early years of transition, the Romanian economy was not working properly and the financial system was not sufficiently developed to have a significant influence on the real economy. Only since the late 90's - early 2000s, the Romanian economy has begun to be characterized by certain stability, with convergent evolution towards a functioning market economy. The data is provided by the monthly reports of the National Bank of Romania, the National Institute of Statistics and the Bucharest Stock Exchange.

Methodology and empirical findings

This section explains the econometric modelling used for the estimation of the causal links between the financial system and the real economy in Romania. This involves Johansen cointegration testing, vector error correction modelling and Granger causality testing.

We have first analysed the time series graphs and we concluded that the data series show seasonality, so we proceeded at their seasonal adjustment. We then applied Augmented Dickey Fuller (ADF) unit root test in order to determine whether the three series are stationary, and if not what the degree of integration is. We have found that all the three series have a unit root and are integrated of the same order, $I(1)$ (Table 1)

Table 1. ADF Unit Root Test (Trend and Intercept)

Variables	I(0)		I(1)		Order of integration
	t-Statistics	Prob.	t-Statistics	Prob.	
RGDP	-1,62	0,77	-4,17	0,0089	I(1)
CREDIT	0,32	0,99	-7,13	0,0000	I(1)
MCAP	-1,94	0,61	-6,22	0,0000	I(1)

Source: author's calculations

As we intended to estimate a vector autoregressive model (VAR), we needed to determine the optimum lag number. Determining the number of lags is a very important issue as it captures the dynamic of the model. Too many lags cause the loss of too many degrees of freedom, while too few lags may result in incorrect model specification. The number of lags can be determined based on several selection criteria, including Akaike information criterion (AIC), Schwarz information criterion (SC), Final Prediction Error (FPE), and Hannan-Quinn information criterion (HQ). There are works that suggest that the AIC and FPE are superior that the other criteria (Liew, 2004).

Table 2 shows the results of the optimal lag length testing. As may be observed, four of the five criteria suggest an optimal number of six lags.

Table 2. Lag length Selection

Lag	Log	LR	FPE	AIC	SC	HQ
0	-876.8173	NA	7.92e+11	35.91091	36.02674	35.95485
1	-675.8703	369.0863	3.14e+08	28.07634	28.53964*	28.25212
2	-658.7602	29.33172	2.26e+08	27.74531	28.55609	28.05292
3	-650.7943	12.68037	2.39e+08	27.78752	28.94578	28.22696
4	-635.7328	22.13120	1.91e+08	27.54011	29.04585	28.11139
5	-623.9660	15.84910	1.76e+08	27.42718	29.28040	28.13029
6	-607.0398	20.72603*	1.35e+08*	27.10366*	29.30435	27.93860*
7	-602.5433	4.955324	1.75e+08	27.28748	29.83565	28.25425
8	-592.4583	9.879170	1.87e+08	27.24320	30.13884	28.34180

Source: author's calculations

The next step was testing the cointegration of the three series. Cointegration of two or several time series refers to a long-run relationship or long-run equilibrium between them. Two or more non-stationary time series are considered to be cointegrated if a linear combination of them is stationary. So, a simple definition of cointegration would say that the series x_t and y_t ,

integrated by the same order ($I(1)$), are cointegrated if there exist unique β_0 and β_1 parameters so that

$$v_t = y_t - \beta_0 - \beta_1 x_t$$

is a stationary process.

We have tested for the cointegration of the three series using Johanssen Cointegration Test, which rejects the null hypothesis of no cointegration at the 5% significance level and indicates one cointegration equation (Table 3). The Johansen procedure estimates multivariate cointegrating systems based on the error correction mechanism of a VAR model, and if the variables are cointegrated, then error-correction terms must be included in the VAR model (Davidescu, 2015).

Table 3. Results of the Johanssen Cointegration Test

Null Hypothesis	Test Statistics	5% Critical Value	Probability	Conclusion
$r=0$	31,67	29,79	0,03	One co-integration equation
$r \leq 1$	11,74	15,49	0,16	
$r \leq 2$	0,53	3,84	0,46	

Source: author's calculations

Given the fact that the data series are cointegrated, we proceeded at estimating vector error correction models (VECM), which enabled us to analyse the correlations between the variables both on the short and the long run.

Considering a single-equation model of cointegration, where y is the dependent variable and x is the independent variable, the error correction model can be specified as follows:

$$\Delta y_t = \alpha_0 + \alpha_1 \Delta x_t + \lambda v_{t-1} + \varepsilon_t$$

By replacing the cointegration equation, we get the following form of the error correction model:

$$\Delta y_t = \alpha_0 + \alpha_1 \Delta x_t + \lambda(y_t - \beta_0 - \beta_1 x_t) + \varepsilon_t$$

The Vector Error Correction Model (VECM) is an extension of this simple error correction model, allowing the variables to evolve jointly over time. As the Johansen cointegration test indicated one cointegration equation in our three variables, we shall specify a VECM with three variables (x, y, z) and one cointegration equation ($v_t = y_t - \beta_0 - \beta_1 x_t + \beta_2 z_t$):

$$\Delta x_t = \alpha_1 + \sum_{i=1}^n \alpha_{i11} \Delta x_{t-i} + \sum_{i=1}^n \alpha_{i21} \Delta y_{t-i} + \sum_{i=1}^n \alpha_{i31} \Delta z_{t-i} + \lambda_1 (y_t - \beta_0 - \beta_1 x_t + \beta_2 z_t) + \varepsilon_{1t}$$

$$\Delta y_t = \alpha_2 + \sum_{i=1}^n \alpha_{i12} \Delta x_{t-i} + \sum_{i=1}^n \alpha_{i22} \Delta y_{t-i} + \sum_{i=1}^n \alpha_{i32} \Delta z_{t-i} + \lambda_2 (y_t - \beta_0 - \beta_1 x_t + \beta_2 z_t) + \varepsilon_{2t}$$

$$\Delta z_t = \alpha_3 + \sum_{i=1}^n \alpha_{i13} \Delta x_{t-i} + \sum_{i=1}^n \alpha_{i23} \Delta y_{t-i} + \sum_{i=1}^n \alpha_{i33} \Delta z_{t-i} + \lambda_3 (y_t - \beta_0 - \beta_1 x_t + \beta_2 z_t) + \varepsilon_{3t}$$

Where: $\Delta x_t, \Delta y_t, \Delta z_t$ are the independent variables of each equation.
 n is the number of lags,
 α_i are the coefficients of each lagged value of the three variables,
 $\Delta x_{t-i}, \Delta y_{t-i}, \Delta z_{t-i}$ are the lagged values of the three variables,
 $\lambda_1, \lambda_2, \lambda_3$ are the coefficients of the cointegration equation,
 $\alpha_1, \alpha_2, \alpha_3$ are the free terms of the three equations,
 $\varepsilon_{1t}, \varepsilon_{2t}, \varepsilon_{3t}$ are the error terms of the three equations.

If y is out of equilibrium, then some combination of adjustments in y, x and z is expected to move back towards long-run equilibrium and such responses are measured by the cointegration coefficients $\lambda_1, \lambda_2, \lambda_3$, which we expect to be negative.

Using an error correction specification to test for causality gives the advantage that, on the one hand, it allows testing for short-run causality through the lagged differenced explanatory variables and, on the other hand, for long-run causality through the lagged error correction term (Davidescu, 2014).

Table 4. Estimated long run (cointegration) coefficients

Dependent Variable	Coefficient	t-Statistics	p-value	Conclusion
RGDP	-0,002517	-1,175554	0,2490	Negative coefficient, but not significant
CREDIT	-0,195352	-3,510858	0,0014	Negative and significant coefficient
MCAP	-0,77975	-0,318969	0,7520	Negative coefficient, but not significant

Source: author's calculations

The long run coefficients should also be statistically significant in order to describe a long run equilibrium relationship from one variable to another. Regarding our model, this is the case for credit only, meaning that, on the long run, only credit is influenced by the independent variables, while real GDP and market capitalization are not influenced by the correspondent independent variables.

Therefore, strictly regarding the interdependences between the real economy and the financial system, the empirical analysis states that, on the long run, real GDP influences the credit to the private sector as a share of GDP. The impact of economic activities on the financial system can be explained primarily by the fact that increased economic activity leads to a greater need for money, and, secondly, by the fact that the favourable economic situation and outlook helps companies become more profitable, which stimulate bank lending. Conversely, when real GDP declines, the need for credit decreases as well.

We then determined the causal relationship on the short run by testing the significance of the short run coefficients through Wald tests. Wald tests are used to test the joint significance of the coefficients of the lagged values of each independent variable. The restriction we included is that the short run coefficients of each independent variable are jointly 0, e.g. $\alpha_{111} = \alpha_{211} = \alpha_{311} = \alpha_{411} = \alpha_{511} = \alpha_{611} = 0$, $\alpha_{112} = \alpha_{212} = \alpha_{312} = \alpha_{412} = \alpha_{512} = \alpha_{612} = 0$, and so on. The results of the tests are presented in Table 5.

Table 5. Wald testing for the significance of short run coefficients

Dependent Variable	Independent variables	F-statistic	Chi-square	Probability	Conclusion
RGDP	CREDIT	3,347244	20,08346	0,0027	Short run causality from credit to real GDP
	MCAP	0,670913	4,025480	0,6732	NO short run causality from market capitalization to real GDP
CREDIT	RGDP	1,733957	10,40374	0,1086	NO short run causality from real GDP to credit
	MCAP	4,967004	29,80203	0,0000	Short run causality from market capitalization to credit

MCAP	RGDP	2,530807	15,18484	0,0189	Short run causality from real GDP to market capitalization
	CREDIT	2,168435	13,01061	0,0529	NO short run causality from credit to market capitalization

Source: author's calculations

Regarding the interdependences between credit and real GDP on the short run, we can observe a unidirectional dependence from credit to real GDP, while between real GDP and market capitalization there is a unidirectional dependence starting from real GDP. Therefore, on the short run, credit stimulates real GDP, as the raise of credit stimulates investment and consumption, thus enhancing economic activity, and real GDP's movements enhance the market capitalization, because economic growth makes the companies profitable and attractive for investors.

We also tested the validity of the three equations in which real GDP, credit and capital market capitalizations are, in turn, dependent variables. The results are presented in Table 6.

Table 6. Validity of the three equations

	R2	F-statistic (probability)	Breusch-Godfrey Serial Correlation LM test	Heteroskedasticity Breusch - Pagan - Godfrey test	Normality test
Eq 1 RGDP dependent variable	0,795306	6,134740 (0,000006)	Obs. R-squared: 8,626759 Prob. Chi Square: 0,1957	Obs. R-squared: 15,85636 Prob. Chi Square: 0,7777	Jarque Berra: 5,087597 Prob: 0,078579
Eq 2 CREDIT dependent variable	0,775346	5,441412 (0,000020)	Obs. R-squared: 10,83088 Prob. Chi Square: 0,0937	Obs. R-squared: 36,04312 Prob. Chi Square: 0,2016	Jarque Berra: 0,112349 Prob: 0,945374
Eq 3 MCAP dependent variable	0,557531	1,989549 (0,044579)	Obs. R-squared: 7,301332 Prob. Chi Square: 0,2939	Obs. R-squared: 18,09638 Prob. Chi Square: 0,6429	Jarque Berra: 0,414628 Prob: 0,812764

Source: author's calculations

For equations 1 and 2, R squared is quite high, almost 0.8, which means that the change of the dependent variable may be explained by the movements of the independent variables at a rate of nearly 80%. For the third equation, R

squared is only 0.55, which means that the independent variables have a weaker influence on the dependent variable, which is market capitalization.

For each of the three equations, the probability of F-Statistic is less than 5%, so that the models are correctly specified.

We have also tested the serial correlation of the errors using Breusch-Godfrey Serial Correlation LM test. For each of the three equations, the probability associated to Observed R-squared is more than 5%, which means we accept the null hypothesis, which states that the errors are not serially correlated.

We have then tested for the errors' heteroskedasticity using Breusch - Pagan – Godfrey test. Similarly, for all of the three equations, the probability associated to Observed R-squared is more than 5%, which means we accept the null hypothesis that states that the errors are not heteroskedastic.

We also applied the normality test, and the Jarque Berra statistic shows that the error terms are normally distributed, as the associated probability is more than 5% for each of the three equations.

Therefore, all the three equations are valid, so that the results we obtained are statistically correct.

We last tested for Granger causality using Granger Causality Test. This test allows determining the direction of dependence relationships between two processes, i.e. whether the process A it has influenced the process B, or vice versa, or if the connection between them is a two way interdependence. We say that B causes (determines) A, if the relevant information about B from the past allows us to achieve a better prediction of the process A only if we use this information. The Granger causality test determines which of the variables changed first.

Table 7. Results of Granger Causality Test

Dependent variable	Independent Variables	Chi Squared	Probability	Conclusion
Real GDP	Credit	20,08	0,0027	Credit influences real GDP
	Market capitalization	4,025	0,6732	Market capitalization does not influence real GDP
	Real GDP	10,4	0,1086	Real GDP does not influence credit

Credit	Market capitalization	29,8	0,0000	Market capitalization influences credit
Market capitalization	Real GDP	15,18	0,0189	Real GDP influences market capitalization
	Credit	13,01	0,0429	Credit influences market capitalization

Source: author's calculations

As can be seen in Table 7, the Granger Causality Test indicates unidirectional causality links from credit to real GDP, and also from real GDP to market capitalization. Thus, the results of Granger Causality Test indicate the same causality relationships as the short-run coefficients of the vector error correction model.

Conclusions

The analysis conducted shows that in Romania, between the real economy and the financial system there are bidirectional relationships, but the nature of these links differ on the short and long run.

On the long run, real GDP influences credit, while there is no causal relationship starting from credit to real GDP. Also, on the long run, there is no causal link between market capitalization and real GDP. So, on the long run, the only causal relationship is the one starting from real GDP to credit. However, on the short run, there exists a unidirectional causal relationship from credit to GDP, and also from real GDP to market capitalisation. The results of the Wald tests regarding the short run coefficients indicate the same causality links as the Granger causality test.

In conclusion, we state that, in Romania, for the period 2000 Q1 – 2015 Q1, there are two-way causal relationships between the financial system and the real economy, but some mentions should be considered. The causal link from real economy to financial markets is valid on the long-run, if referring to credit to private sector. The development of the economy on the long run enhances credit to the private sector, and we believe this is a rather common feature for developing countries whose financial systems are not sufficiently developed and are influenced largely by developments in the economy as a whole. Generally, as the economy develops, the need for financial services grows, so that it becomes a determinant of financial market's development. Also, as the income level is high, the financial system benefits from larger

funds in order to implement modern and effective infrastructure. These two features lead to financial development, which, in turn, will stimulate economic growth.

In addition, we found that the real economy influences the market capitalization, but only on the short run. This may be explained by the fact that stock prices react quickly at any news or economic development, and when the economy grows this makes companies profitable and attractive for investors, which will enhance stock prices and also market capitalization.

Regarding the causality links starting from the financial system to the real economy, we found a short run causality relationship from credit to real GDP, which means that credit contributes to output growth, on the short run. This may mean that credit is mostly used for financing short run investment or consumption. Also, we found no causality from the capital market to real GDP.

The results of the econometric analysis reveal that, in Romania, the financing function is performed almost exclusively by the banking system, while the capital market is small and does not fulfil the function of financing the real economy. Market capitalization does not influence real GDP neither on the short nor on the long run, while credit positively influences the real economy on the short run.

Therefore, the authorities should implement policies for the development of the stock market, and probably the best measure in this direction would be the privatization and listing of the state owned companies. This would enrich and diversify the stock offer and would enhance the attractiveness of Bucharest Stock Exchange for foreign investors, so that its liquidity would increase. Given the fact that the secondary market would experience a significant development, Romanian private companies would be encouraged to finance their activities through the capital market, so that the stock market could become a means of financing the real economy.

Also, by the privatization of the state owned companies, their management would improve, which would certainly enhance profitability and would require investments, and that would lead to the achievement of efficiency and enhanced competitiveness of the Romanian economy. In addition to these important benefits, the privatization of state owned companies would bring significant revenues to the state budget and would help finance its deficit or these funds could be used for strategic development of certain sectors or infrastructure. Therefore, the privatization through the stock market would be beneficial to both the real economy and the stock market.

Acknowledgement: This work was cofinanced from the European Social Fund through Sectoral Operational Programme Human Resources Development 2007-2013, project number POSDRU/159/1.5/S/142115 „Performance and excellence in doctoral and postdoctoral research in Romanian economics science domain”.

References

- Bagehot, W. (1873). *Lombard Street: A Description of the Money Market*. London: Henry S. King & Co.
- Becivenga, V., Smith, B., and Starr, R. (1995). Transactions Costs, Technological Choice and Endogenous Growth. *Journal of Economic Theory*, 67(1), 153-177.
- Beck, T., Levine, R., and Loayza, N. (2000). Finance and the Sources of Growth. *Journal of Financial Economics*, 58(1-2), 261-300.
- Davidescu, A.A., (2015). Active Ageing and Shadow Economy in Romania. An Empirical Causality Analysis. *Management Dynamics in the Knowledge Economy*, 3(2), 237-256.
- Davidescu A.A., (2014). Investigating the impact of unemployment rate on the Romanian shadow economy. A complex approach based on ARDL and SVAR analysis. *Romanian Journal of Economic Forecasting*, 4(1), 109-127.
- De Gregorio, J., and Guidotti, P.E. (1995). Financial Development and Economic Growth. *World Development*, 23(3), 433-448.
- Demetriades, P., and Hussein, K. (1996). Does financial development cause economic growth? Time-series evidence from 16 countries. *Journal of Development Economics*, 51(2), 387-411.
- Goldsmith, R.W. (1969). *Financial Structure and Development*. New Haven: Yale University Press.
- Howells, P., and Bain, K. (2007). *Financial Markets and Institutions* (Fifth Edition). Essex: Pearson Education.
- King, R.G., and Levine, R. (1993a). Financial Intermediation and Economic Development. In C. Mayer and X. Vives (Eds.), *Capital Markets and Financial Intermediation* (pp. 156-189). London: Centre for Economic Policy Research.
- King, R.G., and Levine, R. (1993b). Finance and Growth: Schumpeter Might Be Right. *Quarterly Journal of Economics*, 108(3), 717-737.
- Levine, R. (1991). Stock Markets, Growth and Tax Policy. *Journal of Finance*, 46(4), 1445-1465.
- Levine, R. (1998). The Legal Environment, Banks and Long-run Economic Growth. *Journal of Money, Credit and Banking*, 30(3), 596 - 613.
- Levine, R., Loayza, N., and Beck, T. (2000). Financial Intermediation and Growth: Causality and Causes. *Journal of Monetary Economics*, 46(1), 31-77.
- Levine, R., and Zervos, S. (1998). Stock Markets, Banks and Economic Growth. *American Economic Review*, 88(3), 537-588.
- Levine, R. (2004). Finance and Growth: Theory and Evidence; NBER Working Paper 10766. Retrieved from <http://www.nber.org/papers/w10766.pdf>.
- Liew, V.K.S. (2004). Which Lag Length Selection Criteria Should We Employ?.

Economics Bulletin, 3(33), 1–9.

Loayza, N., and Ranciere, R. (2006). Financial Development, Financial Fragility, and Growth. *Journal of Money, Credit and Banking*, 38(4), 1051–1076.

Masten, A., Coricelli, F., and Masten, I. (2008). Non-linear growth effects of financial development: Does financial integration matter?. *Journal of International Money and Finance*, 27(2), 295–313.

Moldovan, I.A. (2012). *Sistemul financiar – factor mobilizator sau inhibitor în economia de piață [The financial system – a stimulating or inhibitor factor in the market economy]*. Bucharest: ASE Publishing.

Panizza, U. (2013). *Financial Development and Economic Growth - Known Knowns, Known Unknowns, and Unknown Unknowns*. Graduate Institute of International and Development Studies Working Paper No.14. Retrieved from <http://graduateinstitute.ch/home/study/academicdepartments/international-economics/working-papers.html>.

Schumpeter, J.A. (1934). *The Theory of Economic Development*. Cambridge, MA: Harvard University Press.

Shan, J.Z., Morris, A.G., and Sun, F. (2001). Financial Development and Economic Growth: An Egg-and-Chicken Problem. *Review of International Economics*, 9(3), 443–454.