

# Overview of Microfinance Performances in CESEE COUNTRIES

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**ABSTRACT**—Micro financing is an important chain of the financial system and represents a good opportunity for the households and for the development of the small and medium size enterprises, especially in developing countries. This paper aims to analyze the microfinance in CESEE countries and brings evidence how it has developed in the last decade, by directing its special focus on the influence of the systemic risks. The estimated results from single panel OLS regressions shows that the performance of microfinance institutions in the region is statistically influenced by the domestic conditions. By same token, we concluded that there is no a clear evidence on the influence of the international capital market in microfinance institutions performance.

**Keywords:** microfinance, non-bank financial institutions, global financial crises, CESEE.

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## 1. MICROFINANCE AT A GLANCE

Small and medium enterprises play a key role on the economic growth and development, especially in developing countries. They are considered as the main driver of the economic growth, due to their positive contribution in terms of employments, value added, productivity etc. Access to finance is essential for small and medium enterprises, because it can become a significant obstacle to their further growth, given that funds generated from retained earnings are insufficient to support the enlargement of their economic activity. Microfinance represents, in particular, a form of support and a good opportunity for the growth and the development of the very small businesses.

Microfinance institutions are involved in micro loans, savings accounts and other financial services to small business and low-income households. The main focus of these institutions is to facilitate financial capital access with the purpose of fostering productivity for their clients.

Moreover, microfinance helps the low-income households adopt a savings scheme and yield the way to a greater social welfare in the future. As a result microfinance is considered as an important sequence of the financial system, especially for developing countries, and represents a very good opportunity for the deepening of financial markets, the poverty reduction and the promoting of social welfare.

Due to the development of this segment of financial system in CESEE countries, this paper aims to bring some evidence about the performance of microfinance institutions (MFIs) in these countries in the last decade. Furthermore based on the data panel approach, the paper investigates the impact of domestic and international conditions on MFIs' performance. The empirical result shows that domestic conditions influence positively the MFIs performance in CESEE countries. Meanwhile, we could not find any significant impact of the global market risk condition to their performance.

This paper is organized as follows: The second section presents some stylized facts on the performance of microfinance in the CESEE. The third section presents the estimated results of the empirical investigation of the panel regression with fixed effects. Finally the paper concludes with a summary of the results and challenges facing microfinance in the region.

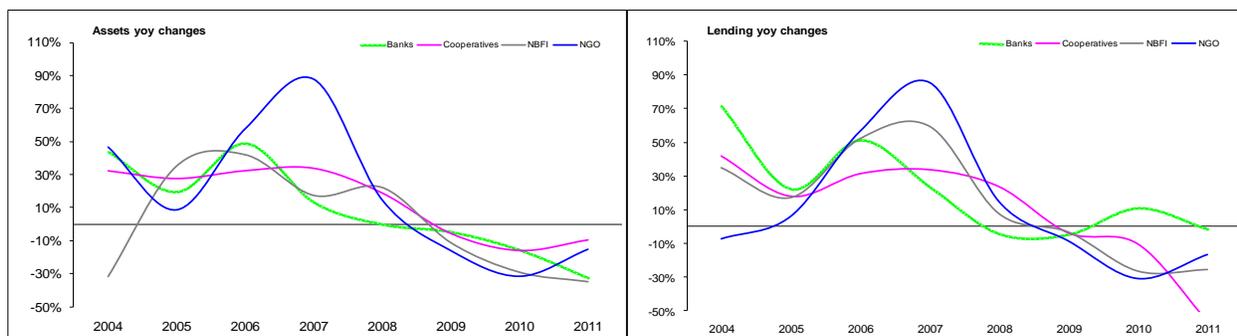
## 2. MICROFINANCE IN THE CENTRAL EASTERN AND SOUTHEASTERN EUROPE (CESEE)

The Central and Eastern European microfinance market is one of the largest markets in the world for microfinance (Di Bella 2011). Since its early stages, at the 90', the microfinance market in these countries has been characterized by a rapid dynamic expansion and development, in line with the overall economic structural changes. Empirical evidences about the development of the microfinance institutions in different countries (Krauss and Walter (2006, 2009), Dieckman (2007), Di Bella (2011)) indicate that this market has experienced steep credit and assets growth in the period before the crisis. These developments reflect not only the favorable macroeconomic environment, but also the relatively high level of the low-income households in these countries. While after the latest financial crises, we observe a shrinking of activities of MFIs in terms of credit growth and lower profitability, due to supply and demand factors.

We have evaluated the dynamics of microfinance institutions in CESEE, based on the Microfinance Information Exchange (MIX) market database during the time period 2004-2011. Our analyses focused on the performance of 76 microfinance institutions in total, distributed on the following countries Bulgaria, Romania, Poland, Croatia, Hungary, Bosnia and Herzegovina, Montenegro, Macedonia, Serbia and Albania. According to Di Bella (2011) microfinance institutions are very heterogeneous groups that include different types of institutions, ranging from the rural commercial banks, non-banking financial institutions (NBFI), non-governmental organizations (NGO), to credit unions and cooperatives. With respect to their legal status, these institutions can be regulated or unregulated institutions. These institutions can be profitable or non-profit. The size of the loan portfolio of these institutions varies widely, depending on the type of institution.

The institutional structure of the microfinance in the CESEE, based on the number of the institutions, shows that this market is dominated by NBFI-s represents close to 34% of the market. Meanwhile credit union and cooperatives represent almost 29% of the total of the institutions. The rest are banks and NGO-s. The majority of these institutions, almost 61% are mature, indicating that the microfinance institutions in these countries have been introduced from the early stage of transition period. The young institutions operating more than 4 years and less than 8 years in the market represents 24% of the total of the institutions, showing that the MFIs market in the region is still an attractive market to extend and to invest further. Another characteristic of the microfinance market in CESEE countries is that these institutions are largely regulated; almost 69% of the total number observed showed such a structure.

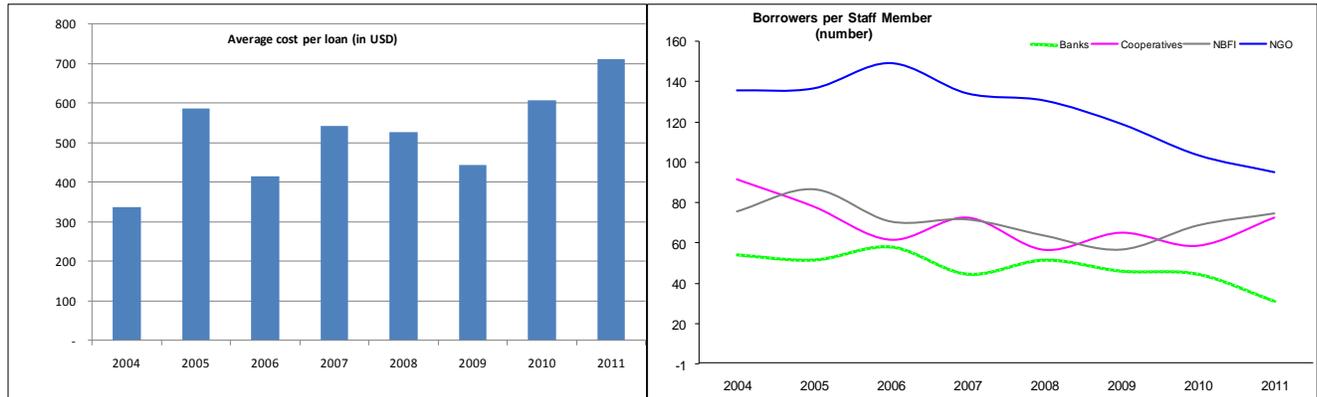
In the pre-crisis period, the microfinance institutions in CESEE-s were characterized by a good performance. Their balance sheet expanded in average almost 30% in a year, supported mostly by the accelerated growth of the loan portfolio. These developments have been influenced by a favorable macroeconomic conditions as well as the availability of external funding from abroad. During this period, the region has grown in average close to 5.6% annually in real term. Meanwhile, the average deposit balance has been low, because deposits are not the main funding sources for the microfinance institutions. According to the Mix Market annual report 2011, the microfinance institutions in Eastern European countries were hit more than other regions from the global financial crises, which have been aggravated due to the spillovers effect in economic activity. The crisis has influenced negatively all the countries of the region. Economic slowdown, rising unemployment and lower remittances flows from Western Europe, have put pressure on the financial situation of microfinance institution' clients to repay their loans. As a result, there has been evidence of a contraction of financial activity and a deterioration of the financial performance of microfinance institutions. During the time period of 2009-2011, the MFIs assets shrunk in average by 3% annually, reflecting mostly strong contraction in the lending activity. The importance of lending to microfinance institutions is also observed in the high share of the loan portfolio to total assets. In the Eastern European microfinance institutions, credit represents almost 80% of the total assets of these institutions.



**Graph 1;** Assets and loan portfolio development in the CESEE countries<sup>1</sup>

The loan portfolios of microfinance institutions in CESEE countries experienced high and largely volatile growth in the 2004-2008 time periods. The annual growth rate of the loan portfolio is estimated to range from 20% -90% during this period. After the 2008 crisis, the annual credit growth has slowed down considerably and then contracted by an average of -20% for the last 3 years. The performance of the microcredit portfolio reflected the demand and supply factors. From a demand perspective, the economic slowdown and the perceived high uncertainties have influenced the low -incomes households not to request new loans, especially because of the high interest costs associated with a small loan (micro). From a supply perspective, the microfinance institutions that have to handle the rapid deterioration of the loan quality were more conservative in expanding their lending activity. Meanwhile the increase of the average amount per depositor, confirms the households propensity to save and the slow consumer spending in line with the high uncertainties exhibited during this period (Unicredit, 2011). Furthermore fundraising from investors or donors in terms of a global crisis has become even more challenging.

As mentioned by Hardy et. al. 2002, the microfinance business is characterized by high cost relative to the size of the loans provide. The financial transactions in a microfinance institution are accompanied by high fixed costs that are independent from the size of transaction. These costs include mostly administrative costs of payment transaction, cost of business management, and cost of loan monitoring, as well as high labor cost due to the extensive use of the human resources in microfinance operations. After the economic crisis, the cost of credit in dollar amount has been estimated to have increased significantly due to the cost of handling the nonperforming loans.

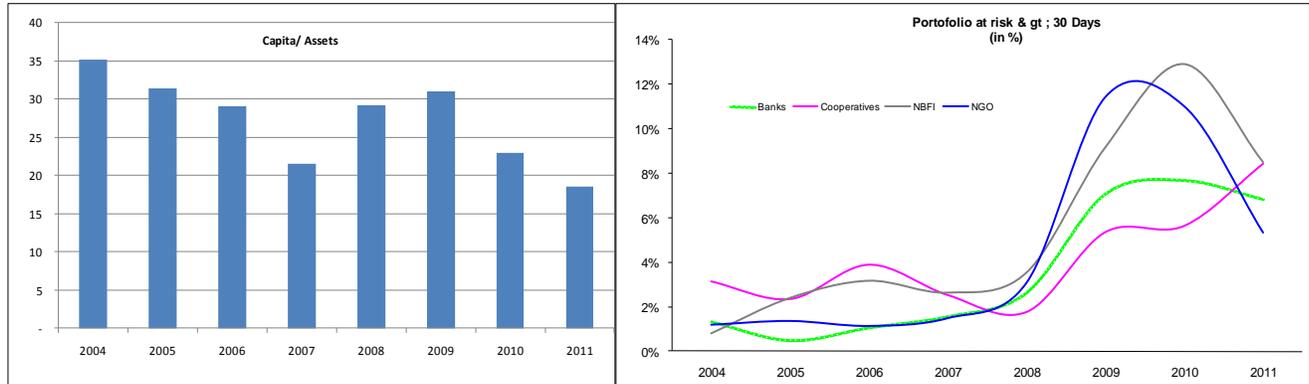


**Graph 2;** Average cost per loan and the number of borrowers per staff of MFI-s in CESEE<sup>2</sup>.

The microfinance institutions in the CESEE countries have been highly capitalized during the expansionary period. In the early 2000's the capital to assets ratio represented almost 45% in average for the all region. This performance has reflected mostly the worldwide high funds' availability and also the low economic activity due to the early stage of these institutions' development. According to Hardy et. al. 2002, the microfinance institutions seems to lose money in the early stage of their activity, and for this reason they need to have substantial amount of capital. While after 2003 the capitalization ratio (capital to assets) has dropped significantly, in line with the expansion of their financial activity. In particular, after the global crises the capital ratio of these institutions has dropped quite a lot, influenced by the lack of investors/donors. At the end of 2011, the capital of MFIs in the region represented in average 18% of total assets.

<sup>1</sup> Source: Mix Market database and authors calculations

<sup>2</sup> Source: Mix Market and authors calculations



**Graph 2;** Average capital to assets ratio and the risk portfolio MFI-s in CESEE<sup>3</sup>

Microfinance institutions in CESEE, as well as around the world, have shown in the period following the crisis, considerably deterioration of the profitability indicators, reflecting both the decline in credit quality and the significant slowdown in the credit growth. Thus the return on equity indicator (ROE), has deteriorated from an average of 3.8% in the pre-crisis period, to minus 1.8% in average for the 2009-2011. Meanwhile the ratio of credit past due more than 30 days, to total credit picked up from the 2004s' moderate level of 2%, to close of 9% at the end of 2010. This has led banks to shift their focus from the microcredit sector, to small and medium size businesses. The following section provides an overview, of how the domestic and global conditions have influenced the performance of MFIs in CESEE countries.

### 3. MICROFINANCE AND ECONOMIC PERFORMANCE IN CESEE-PANEL DATA APPROACH

The first empirical analysis of panel data to measure the impact of systemic risk of microfinance institution performance was conducted by Krauss and Walter in 2006. Based on the emerging market commercial bank approach, these authors found a low correlation between domestic and international capital market related to the MFIs performance, due to lower profitability and lower asset exposure of these MFIs.

While in 2007, Gonzales after controlling for MFIs and country specific for 639 MFIs in 88 countries during 1999-2005 periods found statistically significant relationship between changes in gross national income and different measures of asset quality. They conclude that MFIs have the ability to recover quickly form domestic economic shocks.

In 2009, Krauss and Walter further investigated the systemic risk of microfinance institutions by applying a regression to a number of key financial variables against domestic variables, as well against some proxies of global market risks. They concluded that MFIs did not display any statistically significant relationship with global market movements during 1998-2006. Meanwhile, the MFIs performance was impacted statistically significantly by the domestic factors. They concluded that the correlation between global markets and MFIs may become greater while the difference in financial leverage between other financial institutions may diminish.

Di Bella, (2011) followed Krauss and Walter's (2009) methodology of analyzing the systemic risk of microfinance institutions by utilizing a larger set of data that included those collected during the global economic crisis. One of the main findings was that global financial crisis had affected microfinance institutions and that the MFIs performance had correlation with both the domestic economic conditions and, the changes in international capital markets.

This paper follows the same approach presented by Di Bella (2011) when analyzing how domestic and global conditions have influenced the performance of the microfinance institutions in CESEE countries during the period of 2005-2011. The data that we have used are those from MIX database, but to ensure a high quality of dataset we have chosen from the whole database, data on the MFIs in following countries: Albania, Bulgaria, Bosnia and Herzegovina, FYR Macedonia, Montenegro, Romania and Serbia that have reported at least 7 consecutive years. So final dataset in total includes 49 MFIs, each of them is representative based on their age and their activity as a part of this specific segment of financial system.

Consequently we have regressed separately different measures of MFIs performances with variables that measure domestic and external conditions. So as a proxy for economic conditions we have used real GDP annual growth for each country in the sample. Meanwhile, the global market conditions are represented by the annual average percentage change of

<sup>3</sup> Source: Mix Market and authors calculations

MSCI emerging market index. Variables that measures MFIs performance are: asset and lending annual growth expressed in percentage terms, Return on equity (ROE) expressed in annual percentage terms and portfolio at Risk ratio (PAR-30), which present the percentage of loans that have been in arrears for the past 30 days. Table 1 present some of the main characteristic of the series that we have used for these estimations.

**Table 1:** Descriptive statistics of the sub-data set (selected sample, 2005-2011)

Variables	Return on Equity	Asset Growth	Lending growth	Portfolio at Risk	GDP growth	MSCI Emerging Markets
Mean	0.050	0.205	0.223	0.058	0.035	0.028
Maximum	0.350	1.941	1.196	0.242	0.107	0.270
Std. Dev.	0.136	0.454	0.396	0.049	0.034	0.210
Observations	49	42	42	49	49	49

The methodology that we have used is a fixed-effect model that control for the differences of variables associated with individual microfinance institutions in all countries. As a standard OLS approach that we follow, the main assumption is that the impact of the independent variable is the same for a given type of financial institutions. The linear presentation of this equation can be written as follows;

$$Y_{it} = \alpha + X'_{it}\beta + c_i + u_{it} \quad \text{(Equation 1)}$$

Where,  $Y_{it}$  is the dependent variable,  $X'_{it}$  is a K-dimensional row vector of explanatory variables excluding the constant,  $\alpha$  is the intercept,  $\beta$  is a K dimensional column vector of parameters,  $c_i$  is an individual-specific effect and  $u_{it}$  is an idiosyncratic error term.

So we have regressed each of microfinance performance indicators with domestic and international conditions separately, to see whether the performance of MFIs is statistically correlated to these variables. All the variables enter as stationary variables, to ensure unbiased estimations. The main estimated results are presented in table 2.

**Table 2:** Performance Regressions (selected sample, 2005-2011)

	Return on Equity		Asset Growth		Lending growth		Portfolio at Risk	
GDP growth	<b>0.377 ***</b>		<b>0.054***</b>		<b>0.517***</b>		<b>-0.76***</b>	
MSCI Emerging Markets		-0.14		<b>0.53*</b>		<b>0.39***</b>		0.02
R <sup>2</sup>	0.43	0.04	0.2	0.1	0.23	0.1	0.54	0.29
Nr of observations	49	49	42	42	42	42	49	49

Notes; \*\*\* 95 level of confidence, \*\* 90 level of confidence, the shaded cells represents coefficients with both expected sign and that are statistically significant.

Based on the results above we found a positive and statistically relationship between all variables of MFIs and domestic conditions, which is confirmed from shaded regression coefficient. So, domestic conditions have influenced positively asset growth, lending growth and profitability ratio. This means that good economic conditions have increased the optimistic view of investors and borrowers, which has caused a higher demand for lending and asset and has increased the profitability of MFIs. Thus we found that asset quality measured in terms of portfolio at risk have been affected negatively from domestic conditions, while for international capital market we didn't find any expected results. Based on the impact of international

capital market, proxies by MSCI emerging market index in MFIs performance, we didn't find strong and significant evidence. In our opinion this behavior reflects the development of our financial system in general, and especially micro finance market in this region. To check about the stability of our equations we have performed CUSUM of square test, that are presented in annex 1. We have found that for all equations where regression coefficients are found statistical significant, the CUSUM tests square moved inside the critical lines that suggested for parameter or variance stability of our equation, for example for equations 1, 3, 4 and 7. While for the others we have found instability parameters or variance. .

Some of the results confirmed the finding as suggested by Di Bella (2011) and by Krauss and Walter (2009), but further elaboration is needed, due to the new nature and the role of MFIs in the region and the difference that exists between the different types of MFIs.

To check the robustness of the results we have estimated the same equations for the all MFIs during all the period and broadly we have found similar results for the effects of domestic conditions on MFIs performance indicators. The results show a positive relationship between real GDP growth and some indicators of MFIs performance, such as ROE, but the size and coefficient significance are weaker than those presented in table 1. One of the reasons is related to the diversity and heterogeneous of our sample related also with the financial development stage of these institutions. In the future, after more data become available we wanted to check this relationship with different group of MFIs divided by their status, their type and by different groups of countries.

#### **4. CONCLUSIONS**

Microfinance institutions have been an important source of savings and credit services especially to low-income group by helping them in increasing their standard of living. Microfinance also provides extensive support for micro businesses, especially the newly created ones, by offering them the opportunity to grow, develop and make a positive contribution to economic activity.

Investigation of microfinance development in CESEE has nevertheless shown that this market has undergone significant changes in terms of growth, expansion and consolidation during 2004-2011. During and after the global crisis, the activities of microfinance institutions experienced a significant contraction, influenced by economic developments and a higher use of financial leverage where the contraction of lending activity continued until 2011. One of the main challenges for these countries is to increase and strengthen the efficient functioning of this scheme, with the aim to conduct successful social policies.

The empirical evidence confirms the positive relationship between domestic conditions and all MFIs performance indicators, such as asset growth, lending growth and return on equity, while the last financial crisis highlights more this relationship. Our results also found that asset quality proxy as the ratio of PAR is negatively correlated with real GDP figures, but we did not find a strong relationship between international capital market and MFIs performance indicators, despite asset growth indicators. Almost the same findings are confirmed from the whole sample, but the correlation is lower between GDP data and MFIs performance. We do not support any influence of the international capital market on MFIs performance, where the main reason from our perspective is related to the new nature of MFIs and their diversities. Part of further research will be the investigation of these linkages for different type of MFIs based on size, legal status and on different groups of countries.

#### **5. ACKNOWLEDGEMENT**

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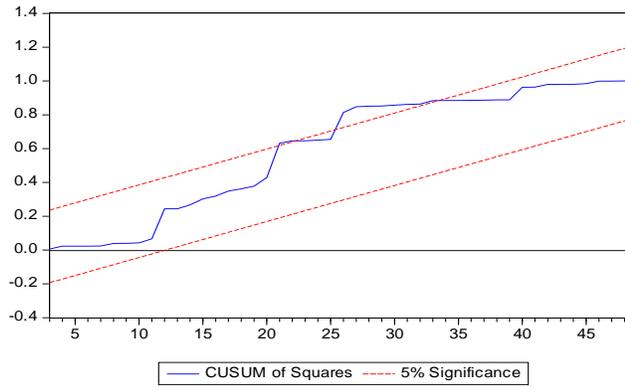
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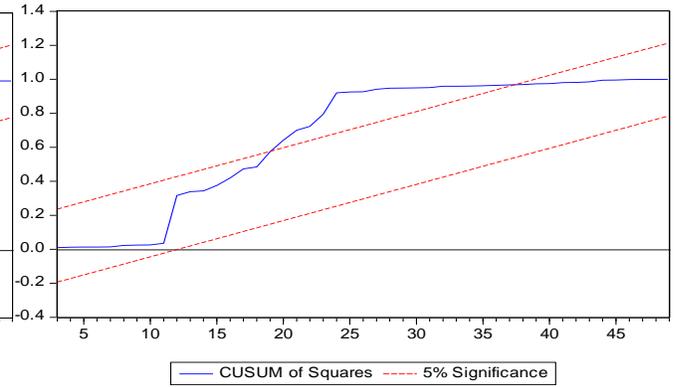
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Annex 1: Stability test for all regression estimations

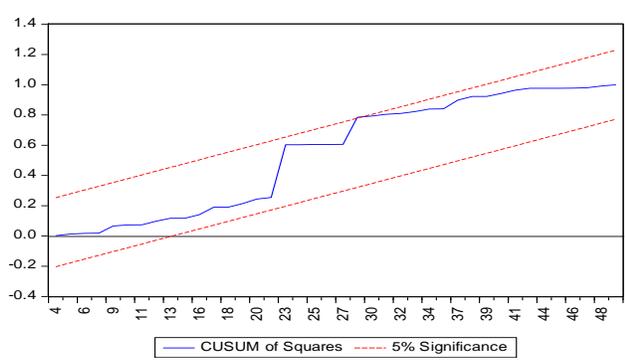
Equation 1: Return of Equity-GDP Growth



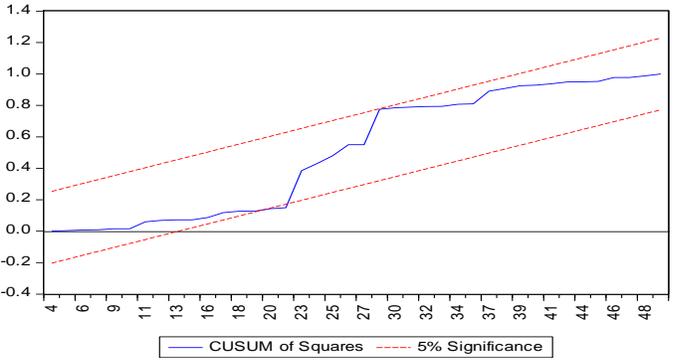
Equation 2: Return of Equity-MSCI



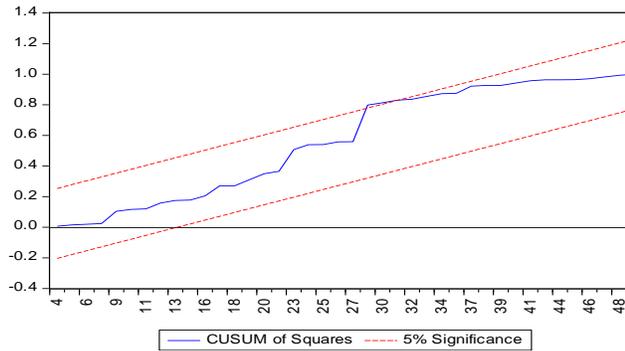
Equation 3: Asset Growth -GDP Growth



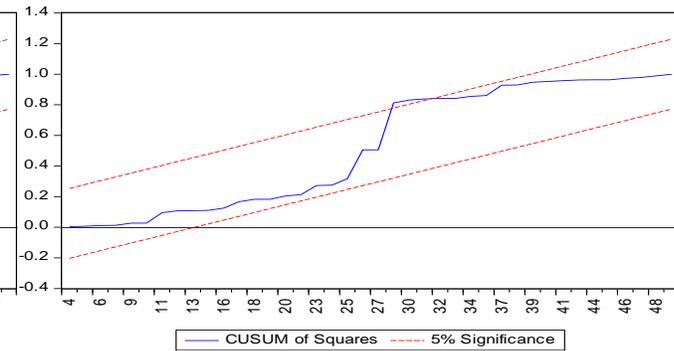
Equation 4: Asset Growth-MSCI



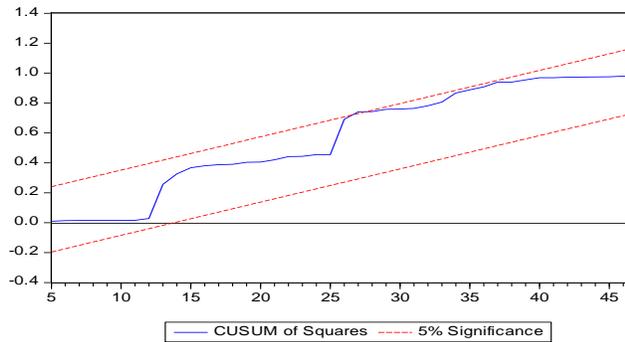
Equation 5: Loan Growth -GDP Growth



Equation 6: Asset Growth-MSCI



Equation 7: PAR -GDP Growth



Equation 8: PAR-MSCI

