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**INTERNATIONAL BLACK SEA UNIVERSITY
FACULTY of BUSINESS MANAGEMENT
DOCTORATE PROGRAM IN BUSINESS ADMINISTRATION**

**Banking Concentration Impact on Competition and Market
Structure of Financial Markets in Post-Soviet Countries**

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Extended Abstract of Doctoral Dissertation in Business Administration

Tbilisi, 2018

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INTRODUCTION

Both academics and policy makers perceive and underline the essence of a smoothly functioning financial system for an economy (Levine, 2004); (Bodie & Merton, 2005). The structure of the banking sector has long been a subject of policy interest centered mainly around a presumed tendency towards concentration and its effects upon competition, economic efficiency, bank profitability, financial and consequently macroeconomic stability.

The degree of banking market structure that shapes out competition and performance has been a “seriously debated topic”. The global financial crisis intensified the interest of policy makers and academics in bank concentration and competition and the role of the state in competition policies and regulations (policies and laws that affect the market structure and degree of competition). Some argue that increases in competition and financial innovation in markets such as subprime lending produced the financial turmoil. Others worry that the crisis and government support of the largest(big) banks raised banking concentration, correspondingly reducing competition and access to finance, and conceivably contributing to future instability as a result of moral hazard problems associated with “too big to fail” institutions.

Competition in the banking system is desirable for efficiency, effectiveness and maximization of social welfare. Nonetheless, due to its significant roles and functions, there are some properties that distinguish banking from other industries. It is important to not only make sure that banking sector is competitive, transparent and efficient, but also stable.

The outcomes of plentiful researches have resulted in the existence of various bank concentration theories in the literature. These theories could be classified into pro concentration and cons concentration theories.

The literature covering the relationship between the structure of the banking sector and level of competition and financial stability is classified according two separate views with absolutely contradictory conclusions. They are positioned according to either they back the theory that banking concentration has a destabilizing effect (concentration-fragility or competition- stability hypothesis) or either on the opposite it has a stabilizing effect (concentration-stability or competition-fragility hypothesis).

Concentration indicates the degree of control of economic activity by big companies (Sathye, 2002). The increase in concentration levels could be because of significant size enlargement of

the dominant firm(s) and/or significant size contraction of the non-dominant firm(s). Conversely, decrease in concentration levels could be because of significant size contraction of the dominant firm(s) and/or significant size enlargement of the non-dominant firm(s) (Athanasoglou, Brissimis, & Delis, 2005).

Supporters of banking sector concentration state that, enhancing of economies of scale is main trigger of realizing bank mergers and acquisitions resulting in increasing concentration. Such increased concentration promotes efficiency improvements (Demirguc-Kunt & Levine, 2000). Based on theoretical assumptions and research results of country comparisons, low concentrated banking sector containing many small banks is deemed highly vulnerable to financial crises than highly concentrated banking sector with a several large banks. According to the “concentration-stability” and “competition-fragility” theory, high concentration in a banking sector lowers competition between banks and consequently decreases additional risk taking incentives of those institutions, resulting low risk of default and vice-versa. Beside, they argue that larger banks are having better diversification abilities, so banking markets composed by several large banks tend to be less fragile than banking markets with many small banks (Allen & Gale, 2004).

Concentrated banking markets are mainly characterized by high profitability, which decreases fragility of the whole system. High profits act as a buffer mechanism toward adverse shocks and perils in difficult times. Beside, monitoring of several large banks are more easier, than many small banks and corporate control mechanism will be more effective of larger banks, resulting decreasing risks of contagion in a concentrated banking system (Beck, Demirguc-Kunt, & Levine, 2003).

According to the opposite view, high concentration in banking market increases the prices of financial services for consumers. In concentration and less competitive environment banks charge high interest rates on loans and low interest rate on deposits, maintaining high interest rate spreads and enjoying with high profits. Also there is evidence connecting high concentration to reductions of credit supply and access to finance for firms.

If concentration empowers banks with ability of influence on the market, such circumstances will have impact on riskiness of bank assets and will rise both the expected rate of return on assets and the standard deviation of those returns (Beck, Demirguc-Kunt, & Levine, 2004). The rationalise of this connotation is that high power of influence of banks sourced by higher market concentration creates basis for low socio-economic welfare and, consequently, high

concentration is eminently undesirable. Aside, concentrated banking market rises bank fragility incentives, due to larger banks usually are granted by support subsidies from government, based on “too big to fail” policies that small banks do not receive (Boyd & Runkle, 1993).

Supporters of the “concentration-fragility” view do not agree with the statement, that more easier to monitor several large banks, than many small banks. As generally the size of such conglomerates is presented in complexity, monitoring and supervising of activities of large banks becomes much difficult than small banks. This type of relationship underlines and rises positive connection between concentration and fragility. Theoretical results highlight that financing activities of larger banks become more expensive due to their monopolistic market power increases the opportunity costs of capital (Smith, 1998). Thus, lack of proper competition in banking market negatively affects economic development.

Problem Statement

There are various impact of concentration on the market structure and efficiency of banking sectors. The main characteristics of the financial market structure in post-Soviet countries are a comparatively low level of financial intermediation, the dominant banking system within the financial sector on the expense of underdeveloped capital markets in most countries, and a high degree of involvement of banking institutions in secondary business activities, that questions fair competition principles on those financial markets. Therefore, it is very important to construct the optimal model under which efficiency of financial markets will result in high performance and economic development, based on transparency and equally treatment of all participants of financial markets.

Risks and drawbacks of current market situation determined timely and analysed carefully, can be considered beforehand and duly addressed. Foreseen crucial structural changes require to be supported by all participants, from individual player to regulators of the financial system.

Goal Statement and Research Questions

The purpose of the paper is to investigate, measure and analyze the degree of concentration in post-Soviet banking landscape and its impact on competition and market structure of financial markets over the period of 2013-2017.

The primary goal of the research is to investigate impact of banking concentration on competition and market structure in financial markets.

To achieve this goal, the following questions are to be researched:

- What is the degree of banking concentration in post-Soviet countries?
- What is the degree of competition in post-Soviet countries banking markets?
- What is the degree of stability of banking markets of post-Soviet countries?
- How banking concentration impact the level of competition and market structure in post-Soviet countries financial markets?
- What is the desirable level of banking concentration in post-Soviet countries to promote further development of financial markets?

Novelty and Actuality

This topic is quite essential for post-Soviet countries, where financial markets are characterized by the dominant banking system within the financial sector on the expense of underdeveloped capital markets in most countries, and a high degree of involvement of banking institutions in secondary business activities. After 2008 world financial crises, new wave of mergers and acquisitions has started, which resulted in increasing of concentration levels also in post-Soviet countries banking sectors. By 2017 already most countries are characterized with high banking concentration levels. Resulting anxiety of market regulators and others about influence such levels of concentration on competition and structure of financial markets.

Topic is up to date especially in Georgia as several months ago former minister of finance stated problems of Georgian banking market, naming georgian banks as institutions, that impede development of Georgian economy. In such circumstances it is vital to investigate and analyze influence of concentration on competitions and market structure of banking sectors and draw proper conclusions and recommendation for future purposes.

The novelty of the research lies behind the original attempt of author to measure banking concentration and its impact on financial market structure in content of six post-Soviet countries, having similar past and different level of economic development; employing comprehensive model of evaluation the concentration, competition and stability of banking sectors assists determining the countries' banking market structure; identifying drawbacks of the markets, making contrast benchmarking with other similar countries; draw possible solutions and

elaboration of policy recommendation to improve regulatory framework promoting competitive, stable and efficient financial markets.

Significance of the Problem

Analyzing the structure of the banking system that may serve as obstacles for further stability and development of banking market gives a unique chance to avoid the possible downturns of the entire economy. If the regulatory authorities do not pay proper attention to the issues like concentration and competition in banking market, then the whole financial system stands in front of a big risk to develop big financial conglomerates acting as monopolist, resulting in low efficiency of financial market, low access to finance, low socio-economic welfare, back for several years in terms of losses, as far as financial institutions may find themselves even in front of solvency issues.

Therefore, it is very important to construct the optimal model under which efficiency of financial markets will result in high performance and economic development, based on transparency and equally treatment of all participants of financial markets. Foreseen crucial structural changes require to be supported by all participants, from individual player to regulators of the financial system.

Practical and Theoretical Value

The most important theoretical value of current work is the choice of the comprehensive model (evaluation concentration, competition and stability in complex) for conducting the banking market structure assessment of post-Soviet countries, having same past, but currently on the different stages of development. Comparatively same size six countries were chosen, from which three are still designated as developing countries while rest three are already members of EU and euro-zone. Analysis and exploration of banking market structure of those countries will form entire picture on financial system deficiencies of those countries and enables further actions needed for fixing the problems challenging banking markets of post-Soviet countries.

The practical value of the research lies behind the determination, measurement and analysis impact of concentration phenomena on the competition and market structure in six post-Soviet countries financial markets having the different levels of market development, mechanism of regulation and economic incentives. No such work has been done in case of those countries as per country level as well in certain groups or as common market of six countries. Results of

analysis and findings as well proposed recommendations can act important incentives for policy makers, market regulators as well for managers of those financial institutions and some members of society to address certain goals and challenges.

Research Methodologies and Methods

The research is empirical by nature and it shaped the logic and instruments through which objective and measurable data was collected and analyzed. Intensive and comprehensive review of existing theories enabled us to formulate research questions and hypothesis, define relevant data and the tools and methods for quantitative analysis.

Considering research questions, the study utilizes quantitative and qualitative research methods. But research is mainly based on quantitative methods of analysis. Concentration ratios and Herfindahl - Hirschman index is employed to measure concentration levels. Panzar and Rosse's model is employed for measurements of competition. The "H-statistic" is computed on two stages. First stage includes, employing regression model based on of the logarithmic form of total revenues on logarithmic form measures of banks' input prices. Input prices consist of the price of deposits (commonly measured as the ratio of interest expenses to total deposits), the price of personnel (measured by the ratio of personnel expenses to assets), and the price of equipment and fixed capital (approximated by the ratio of other operating and administrative expenses to total assets). Second stage includes computation the sum of the estimated coefficients for each input price for drawing type and level of competition on the banking markets. The Z score is used for measuring stability levels of banking markets. The Z score envoys the number of standard deviations of return on assets the bank is away from bankruptcy, consequently a higher value of Z-score implies a higher banking stability. Beside, descriptive statistics and correlation analysis are used for assurance of data validation.

The qualitative study will mainly include desk research, case study and interviews with the financial sector professionals and independent experts for fulfilling the whole picture about the structure and levels of competition of banking sectors and draw precise recommendations.

Several variables will be researched using the secondary data. Such as: interest revenues, price of deposits (commonly measured as the ratio of interest expenses to total deposits), the price of personnel (as captured by the ratio of personnel expenses to assets), and the price of equipment and fixed capital (approximated by the ratio of other operating and administrative expenses to total assets), ROA, CAR.

Structure of the Dissertation

Dissertation consists of 155 pages, includes 3 chapters, 11 sub-chapters with their sub headings and conclusions. It contains 41 tables and 45 figures. Author has published three scientific articles devoted to the various aspects of study. All of them are relevant to the dissertation.

The structure of the dissertation includes the literature review on the important aspects of banking concentration, its costs and benefits; its impact on market structure and efficiency. In the pre-last subchapter of the literature review, the existing literature on the measures of the concentration, competition and stability are discussed. This is the most important task in terms of getting correct results. In the second chapter the data description and the research methodology and methods are discussed for conducting the qualitative and quantitative analysis. Particularly, the data for the concentration, competition and stability estimations are described and the validity and reliability assured. In the methodology part the choice of model and used methods are presented for the concentration, competition and stability analysis. The third chapter discusses the results and the estimation process, while the last chapter concludes based on the findings of the research and gives recommendations. The dissertation also provides the lists of tables, figures and abbreviations as well as appendices presented separately.

LITERATURE REVIEW

The literature covering the relationship between the structure of the banking sector and level of competition and financial stability is classified according two separate views with absolutely contradictory conclusions. They are positioned according to either they back the theory that banking concentration has a destabilizing effect (concentration-fragility or competition- stability hypothesis) or either on the opposite it has a stabilizing effect (concentration-stability or competition-fragility hypothesis).

These two tends, concentration and competition seem to contradict each other, based on the theoretical assumption, implying that highly concentrated market consisting of banking institutions with undesirable influential market power will promote low degree of competition on the sector. On the one hand, some academics state that high competition in banking market produces decreasing stability levels and results market failures. High competition will result more pressure on profits by intention for generating higher incentives banks will enter into greater (potentially excessive) risk taking, resulting in greater instability. Alternative theories, such as “contestability theory” argue that, under specific circumstances, there is a possibility of

coexistence of competition and concentration on the market. The “theory of contestability” (Baumol, 1982) implies that firms are able to enter or exit immediately the market not vanishing their capital and the competitors already operating in the market are characterized with the same cost functions. These features define the “contestable market” conditions, where the threat of possible entry stifles companies intentions for setting competitive price on their products. Under such circumstances, the internal conditions will be outweighed by external condition, assuring non-collusive behaviour within that market.

Concentration and Competition; Concentration and Stability - Ben Ali et al. (2015) investigate and evaluate the relationship between concentration and financial stability in banking markets evaluating the sample of 173 developed and developing countries covering 1980–2011 years by examining both the direct and indirect channels. The outcomes highlight that concentration does not directly influence on the stability of the banking and financial system. Yet, concentration has a positive impact on financial stability through the channel of increased profitability and a negative impact through the channel of holding power for charging high interest rates. Stabilizing notion is supported by additional revenues related to banking concentration resulted increase in banks’ capital and subsequently having capital buffers in case of shocks during financial crises. Channel for destabilizing notion confirm that bank concentration has a destabilizing effect on financial stability. Concentrated banks having power of charging higher interest rates, will result in elimination of the least risky part of the customers who prefer not to borrow at those rates. Accordingly, the quality of banks’ loan portfolio will be downgraded and deteriorated due to the increased probability of default. In comparison cross country heterogeneity, concentration-stability effect for developing countries is supported based on the results and on the same line, the concentration-fragility hypothesis does not hold for these countries. However ambiguous results are uncovered in case of developed counties. The results of analysis firmly confirm the existence of both, stability and fragility effect of concentration on financial stability.

Hence, employing concentration as a proxy for competition can be sorely disputed. This makes difficult the inference of policy implications and make conclusions since concentration does not necessarily promotes low competition, given that factors other than competition may drive concentration. The results from various literature confirm that high level of concentration promotes high profitability of banking institution trough their ability of charging high interest retes on loans and low rates on deposits earning supernormal profits from big interest rate spread

on the bases of low competition; at the same time high profitability guarantess high levels of capital buffers, increases ability to absorb shocks during financial crises, resulting in the stability of the financial system. Situation results large strong banking institutions with diversification abilities and facilitating jobs of regulation of monitoring. However, looking from the other side high concentration makes expensive the financial sources on the market, limites access to the finance and impacts on the financial stability through the loan portfolio deterioration as in good times, perceiving their power large banking institutions do not give prorer attention to the quality of portfolios, increasing probabilidad of default. On the same line, presence of large institutions feeds too big to fail problems resulting low stability of the system with the same tendency to increase influence on the whole economy and make more difficult job of regulators to control such complex conglomerates under possible lobbying pressure. The relationship between competition and stability is more contrasting.

Competition and Stability - The relationship between competition and stability in the academic literature is presented with two contradicting views. First, denoted as the “charter value” view, states a negative relationship between competition and stability. The second, states a positive impact of competition on stability. The empirical works provide a series of ambiguous and contrasting results, changing country to country, related to the sample and period analyzed, and the alternates used for competition and financial stability.

Based on the literature review results, some researches uncover the positive tie between banking competition and financial crises in certain countries, arguing destabilizing effects of high competition by the “charter value” channel, implying that banks losing market power due to high competition, forces them to take on more risk in order to increase return. Vice-versa, the economists e.g. Schaeck et al. (2006) based on cross-country data argue that competition in the banking sector diminishes the probability of crises. Also, Berger et al. (2009) present the theoretical and empirical basis for the justification of “competition-stability” view, stating that high level of competition makes banking institutions behavior more transparent and conventional with increased attention to the risk management, thus ensuring sustainability of the system. Such contravened findings in the economic literature make it complicate to develop precise policy implications.

There is a continuing dispute in academic literature on the relationships between competition, concentration and stability in the banking sector. According to the “concentration-stability” or “competition-fragility” theory, there is positive relationship between concentration and stability,

but negative relationship between concentration and competition, and competition and stability. On the one hand, there are academics and policy makers who believe that more competition in banking results in greater instability and more market failures, other things being equal. This theory suggests that banks operating in a highly concentrated market (or in a market that restricts entry) will earn profits that can serve as a buffer against fragility, and as an incentive against excessive risk taking. More competition, which puts more pressure on profits, is thought to create higher incentives for banks to take greater (potentially excessive) risks, resulting in greater instability. This theory predicts that deregulation, resulting in more entry and competition, would ultimately lead to more fragility. It also holds that a more concentrated banking system might reduce the supervisory burden of regulators, thus enhancing overall stability.

The opposing view is that a more concentrated banking structure in fact results in more bank fragility, supported by concentration-fragility or competition-stability theory. According to this theory, there is negative relationship between concentration and competition and concentration and stability, but positive relationship between competition and stability. In such environment fragility of the market is increased due to banks power to boost the interest rates they charge to firms rising firms default riskiness connected to a higher probability of non-performing loans, which will result in expensive financial product and limited access to finance, consequently affecting economic processes. Beside, high concentration of larger firms is precondition for increased contagion or systematic risk. In the highly concentrated markets, huge conglomerates become very important for the sustainability of the market and is presumed that such banks will receive larger subsidies via “too big to fail” policies, thereby intensifying moral hazard problems by additional risk-taking incentives and consequently increasing banking system fragility. This intension destroys the argument of less need for supervision of big banks in a highly concentrated market with the evidence that highly concentrated banking systems with conglomerates offering a wide array of services, makes them more complicated and difficult to monitor. On the same line high level of competition makes banking institutions behavior more transparent and conventional with increased attention to the risk management, thus ensuring sustainability of the financial system.

As shown in the recent financial turmoil, regulation affects the resilience of financial institutions to a crisis. Countries with strong regulatory and institutional frameworks have been less prone to financial distress. A well-designed regulatory framework can also help reduce the potential detrimental effects of competition on financial stability in particular by improving banks’ risk

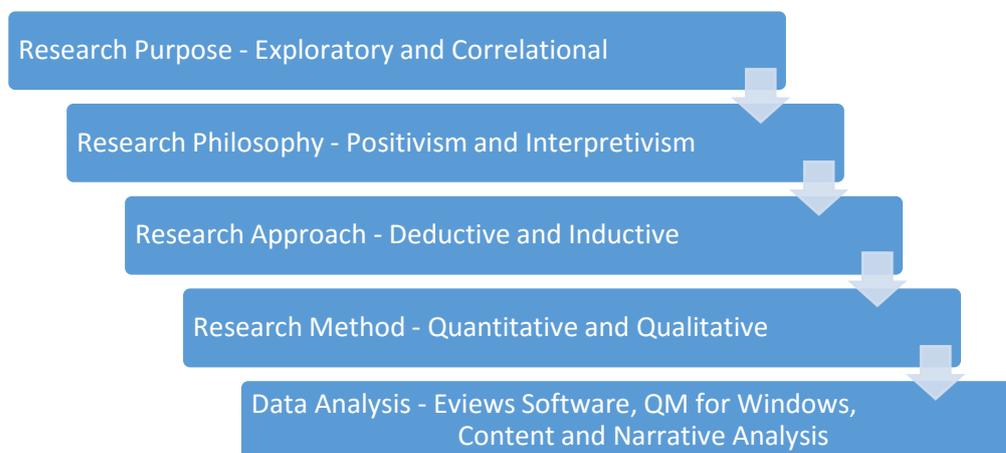
taking incentives. In other words, regulation can make banks less inclined to take on excessive risk. At the same time, ensuring transparency and equally treatments of all participants will promote high performance of overall sector and economic development.

METHODOLOGY

The research is empirical by nature and it shaped the logic and instruments through which objective and measurable data was collected and analyzed. Intensive and comprehensive review of existing theories enabled us to formulate research questions and hypothesis, define relevant data and the tools and methods for quantitative and qualitative analysis.

The rationale for employing a quantitative approach in the research was that it involved collecting numerical data and analyzing it in a statistical manner by applying statistical tests (Saunders, Lewis, & Thornhill, 2009). It followed rigorous methods and procedures, which allowed generalization of the findings, to measure and analyze causal relationships between variables. As for qualitative research methodology, it helped the research to study the research problem from different perspectives presenting views and interests of various stakeholders.

Figure 1. Methodology Framework



Source: Developed by the Researcher

The qualitative study used relevant qualitative tools to collect data necessary for the detailed study; the instruments of scholarly enquiry included desk research, a case study and interviews with the financial sector professionals and independent experts for fulfilling the whole picture about the structure and levels of competition of banking sectors and draw precise recommendations. The data obtained through qualitative research methods did not allow

generalization of research findings; however, the use of qualitative instruments was relevant because qualitative approach allowed "... to collect rich data, oriented to the contextual uniqueness of the world that is being studied" (Sekaran & Bougie, 2016, p. 29). Accordingly, through generalization of research findings was not an objective for qualitative enquiry, communication with field specialists helped the researcher locate specific cases to increase knowledge and understanding of the specificity of banking sectors worldwide, and in Georgia in particular, and look at the research problems from different angles and perspectives.

Within the scope of quantitative methodology various quantitative tools and statistical analysis methods were employed in the research. Both the structural and the non-structural measurement approaches of concentration and competition is employed to address research purpose. The structural approach to model concentration includes the Structure-Conduct-Performance (SCP) paradigm related to the concentration ratios (CR_k) and Herfindahl-Hirschman index (HHI). Non-structural models of competitive behavior related to Panzar and Rosse's model (1987) – the H-statistics and the Z-score is employed as a proxy for banking stability. The structural models imply directly measurement of competition in the sector by evaluating the factors, such as concentration and number of banks on the market, while the non-structural models examine banks responsiveness and behavior in connection to the price changes. The Z score proxies the number of standard deviations of return on assets the bank is away from bankruptcy. Beside, descriptive statistics and correlation analysis are used for assurance of data validation.

Based on the research questions and research methods, study intends to test the hypothesis:

H₀: High level of concentration results in low level of competition in post-Soviet financial markets;

H₁: High level of concentration does not result in low level of competition in post-Soviet financial markets.

For measuring concentration levels on post-Soviet countries banking markets the SCP hypothesis, which is based on the concentration ratios (CR_k) and Herfindahl-Hirschman index (HHI) is employed. The so-called structure-conduct-performance paradigm assumes that there is a stable, causal relationship between the structure of the banking industry, firm conduct, and performance. It suggests that fewer and larger firms are more likely to engage in anticompetitive behavior. The SCP hypothesis assumes that banks have ability of extracting monopolistic profits from big interest rate spreads in concentrated markets by using power of offering lower rates on

deposit and charging higher rates on loans, thus enjoying high profitability. This framework imply of setting less favorable prices to customers based on collusive and non-competitive behavior in highly concentrated markets.

The importance of concentration ratios lies in identification abilities of the structural characteristics of the market. Based on this approach, the degree of concentration in banking sector is approximated by the concentration ratio (CR_k) - the share of assets held by the top three and five largest banks in the market. This measure is the cumulative market share of the k largest banks in the sector and is computed according to the following equation:

$$CR_k = \sum_{i=1}^k s_i \quad (2.1)$$

In which, CR_k is the concentration ratio of the k largest banks and S_i is the market share of bank i . Second often used measure of concentration is the Herfindahl-Hirschman Index (HHI). The HHI is commonly used as a scanner and filter device for mergers and acquisitions. According to Motta (2004) concentration level in the market defines the ability of merging firms to accumulate market power. Consequently not only the value of the HHI is significant but also its change subsequent to a merger. The HHI is defined as the sum of the squared market shares of all banks and is computed according to the following equation:

$$HHI = \sum_{i=1}^n S_i^2 \quad (2.2)$$

Where, HHI is sum of the squared market share of each bank in the system and S_i is the market share of bank i .

The concentration ratios are having range between 0 and 100 percents. The HHI can have values up to 10,000. The HHI calculates all banks' market shares in the sector and assigns a larger weight to the biggest banks. If the sector consists with single bank having 100% market share, the HHI will have value of 10,000. But, if the sector consists of many banks and those banks are having very small market share, then the HHI will have value close to zero.

The main difference between the concentration ratio and the HHI is that, the HHI takes into account the market shares of all banks rather than the arbitrary chosen market shares of the k largest banks. While, from concentration ratio calculations, the smaller banks of the sector are totally excluded.

Employing those concentration ratios, concentration levels for each representative banking sector of six post-Soviet countries has been computed.

For evaluation and analyzing the competitive structure of post-Soviet countries banking markets the non-structural model of competitive behavior is employed. Panzar and Rosse's model (Panzar & Rosse, 1987) as a non-structural or a behavioral approach becomes prevalent in a study of bank competition. With the expectation, that prices or sales will respond to a rise in input costs positively, if the market is perfectly competitive; Panzar and Rosse devise a statistical link between the output sales and the input costs as an indicator to identify how competition is close to the state of the perfect competition. According to the approach, change in input costs under certain market structure forces banking institutions for employing different pricing strategies based on presumed market power (Mensi, 2010). Thus, market power is evaluated by the degree of changes in input prices (such as unit price of funds, labor and capital) are mirrored in bank revenues (interest or total revenues). The method is based on a general banking market model, determining the equilibrium number of firms and equilibrium number of output by profit maximization mechanism at both bank and industry levels. Panzar and Rosse prescribe the competition measure, the "H-statistic", as "the sum of the elasticities of the reduced-form revenue function with respect to factor prices". They argue that the "H-statistic" has ability of reflecting the behavior of the bank and the structure of the market. The H-statistic captures the elasticity of bank interest revenues to input prices.

This method is considered superior to previously used proxies for the degree of competition, since it describes competitive behavior of financial institutions using comparative static properties of reduced-form revenue equations based on cross-sectional data. Moreover, the H-statistic also captures competitive behavior of other market participants and is therefore a measure of direct competitive conduct.

Paper follows equation adopted by Sun (2011) and Claessens and Laeven (2004) based on the Panzar and Rosse's (1987) approach in order to asses banking competition with researchers modification, using bank total revenue instead of originally used interest revenue for thesis purposes. The "H-statistic" is estimated based on the reduced-form bank revenue equation:

$$\ln(R_{it}) = \alpha_0 + \beta_1 \ln(w_{1,it}) + \beta_2 \ln(w_{2,it}) + \beta_3 \ln(w_{3,it}) + \gamma_1 \ln(Y_{1,it}) + \gamma_2 \ln(Y_{2,it}) + \gamma_3 \ln(Y_{3,it}) + \varepsilon_{it} \quad (2.5)$$

Where, R is the ratio of total revenue to total assets (proxy for output price of loans and other services). This variable includes total interest revenue, fee income, commission income, and other operating income. The reason for including all these forms of income is that, banks compete in different types of activities, not only interest revenue generating activities. $W_{1,it}$ is calculated as the ratio of total interest expenses to total deposits and money market funding, as proxy for input price of deposits; $W_{2,it}$ is the ratio of personnel expense over total assets, as the proxy for labor cost; $W_{3,it}$ is the ratio of other operating and administrative expenses over total assets, as the proxy for input prices of equipment and other fixed capital. $Y_{1,it}$, $Y_{2,it}$ and $Y_{3,it}$ are the ratio of total capital over total assets, the ratio of net loans to total assets and the total assets respectively, which are used as the control variables for bank specific effects; ϵ_{it} denotes bank-level fixed effects. Each coefficient (β), which is a measure of elasticity between input and output price, is estimated by (1) OLS pooled regression - pooling and regressing all observations together, neglecting heterogeneity or individuality among these banks; (2) cross-sectional fixed effects, which allows heterogeneity or individuality among banks by allowing to have its own intercept value. The term Fixed Effect is due to the fact that, although the intercept may differ across banks, but intercept does not vary over time, which means it is time invariant; (3) cross-sectional random effect - all banks have a common mean value for the intercept. Based on the (Hausman, 1978) test with statistically significant P-value, fixed effect model will be used, otherwise random effect model. The regression analysis are carried by the E-Views statistical package.

The H-statistic, which is the sum of the elasticities (β) is calculated as follows:

$$H = \beta_1 + \beta_2 + \beta_3 \quad (2.6)$$

Based on the results of the H Statistic's estimation,

$H \leq 0$, indicates monopoly equilibrium, perfectly colluding oligopoly or conjectural variations short-run oligopoly;

$H = 1$, indicates perfect competition;

$0 < H < 1$, indicates monopolistic competition.

Interpreting the "H-statistic" value, (Panzar & Rosse, 1987) explain that, "H-Statistic" is having negative value or is equal to zero, when the competitive market structure is characterized by the monopoly, a perfectly colluding oligopoly, or a conjectural variations short-run oligopoly. Under

such market circumstances, rise in input prices consequently will rise marginal costs, accordingly equilibrium output will be reduced, followed with decrease in total revenues. The “H-statistic” having value between zero and one, represents the market structure characterized by monopolistic competition. In monopolistically competitive market any new entry will lead to the “contestable markets equilibrium”. In such environment, percentage increase of revenues will always be less than percentage increase in the input prices, as the demand for banking products facing individual banks is inelastic. Values of the “H-statistic” near to unity are associated to the high levels of competition in banking sector. The “H-statistic” having value of one, represents perfect competition. In this condition, any rise of input prices will result in increase of both marginal and average costs without reducing the equilibrium output of any individual firm under certain conditions. Later leaving market by some non-profitable firms, causes increase the demand faced by each of the remaining firms, thereby leading to an increase in prices and total revenues by the same amount as the rise in costs, as demand is perfectly elastic in perfectly competitive market.

For conducting Panzar and Rosse, H statistic analysis yearly balanced panel data of 8 ratio time-series variables was constructed. Variables are: total revenue over total assets denoted by TR/TA, interest expenses over total deposits and money market funding denoted by IntExp/TD, personnel expense over total assets denoted by PersExp/TA, other operating and administrative expenses over total assets denoted by OthOperAdmExp/TA, total capital over total assets denoted by TC/TA, net loans over total assets denoted by NetLoans/TA, total assets respectively TA, return on assets denoted by ROA. The natural logarithms of the variables have been taken and all the variables are used in their logarithmic form. Because ROA can take on negative values, the dependent variable is computed as $\text{LOG}(1+ROA_{it})$.

For addressing the stability issue of post-Soviet banking landscape, the Z-score measure of bank stability is employed. Researchers often measure stability with the distance to bankruptcy. The Z-score is the sum of capital-assets ratio and return on assets, divided by the standard deviation of return on assets and is calculated as follows:

$$Z = \frac{ROA+CAR}{\sigma(ROA)} \quad (2.7)$$

Where, ROA is the rate of return on assets and CAR is the capital adequacy or capital asset ratio and $\sigma(ROA)$ is an estimate of the standard deviation of the rate of return on assets of the whole sample period. The Z-score represents “the numbers of standard deviations below the mean by

which profits have to fall so as to just deplete equity capital” (Boyd, De Nicolo, & Jalal, 2006). The resulting Z score proxies the number of standard deviations of return on assets the bank is away from bankruptcy, meaning that, a higher Z-score indicates a higher banking stability. A lower z-score indicates that the bank is expected to take more risk and that its distance from insolvency is smaller. Furthermore, caused by negative income or equity, this Z-score can be negative as well. A negative Z-score indicates that the stability is even worse. In addition, forecasting technique such as Exponential Smoothing is employed for prediction of Z scores of 2018 years of banking markets for firming the stability results and showing the trend of soundness of post-Soviet countries banking markets.

One such type of moving average technique is the exponential smoothing with trend model. The idea is to develop an exponential smoothing forecast and then adjust this for trend. Two smoothing constants, α and β are used in this model, and both of these values must be between 0 and 1. The level of the forecast is adjusted by multiplying the first smoothing constant, α by the most recent forecast error and adding it to the previous forecast. The trend is adjusted by multiplying the second smoothing constant, β by the most recent error or excess amount in the trend. A higher value gives more weight to recent observations and thus responds more quickly to changes in the patterns (Render, 2012). The accuracy of calculations is measured by the mean absolute percent error (MAPE) (Render, 2012). The MAPE is the average of the absolute values of the errors expressed as percentages of the actual values and is computed as follows:

$$MAPE = \frac{\sum \frac{|error|}{actual}}{n} 100\% \quad (2.13)$$

Research uses bank level yearly data from audited financial statements available on web pages of commercial banks and also data available on web pages of central banks of six post-Soviet countries. Such as: Armenia, Estonia, Georgia, Latvia, Lithuania and Moldova. Even though for the post-Soviet Union countries the data availability is a big problem, for current study data is available with annual frequency.

Bank-level accounting data for this study contain and are composed by bank total revenue consisting of total interest revenue, fee income, commission income, and other operating income; total interest expenses; personnel expenses; sum of other operating and administrative expenses; net income; net loans; total deposits; total capital; total assets; return on assets. All accounting data represents end-of-year data.

Yearly balanced panel data set for the years 2013-2017 of 68 commercial banks was compiled. The 68 banks that are taken into account for the period of five year periods resulted in 340 bank year observations. For estimating purposes of regression equation study employs a panel data approach. The reason of adoption such approach lies on better ability of panel data to identify and measure effects that would not be detectable in pure cross-section or pure time series data using them separately. Panel data empowers the construction and testing of more complicated behavioral models than purely cross-sectional or time-series data (Gujarati & Porter, 2009). The data obtained and explained in this paragraph was used to calculate the dependent and independent variables.

Before conducting analysis of regression models, so called problem of multicollinearity was addressed. Multicollinearity generally occurs when there are high correlations between two or more independent variables. In other words, one predictor variable can be used to predict the other. This creates redundant information, skewing the results in a regression model. The basic problem is that, multicollinearity results in unstable parameter estimates which make it very difficult to assess the effect of independent variables on dependent variables. According to Gujarati and Porter (2009) if the correlation between independent variables is above 0.8, there is existing a problem of multicollinearity in data set. All independent variables with the correlation coefficients value within less than 0.8 can be employed in the estimation of the regression model.

The key assumption of the Panzar and Rosse's model, includes regressing the observations that are in long-run equilibrium, meaning that, the banking institutions under analysis are required to be operating in long-run equilibrium. For confirming this condition, a robustness test was carried out. The relationship was tested by employing the return on assets (ROA) in place of the dependent variable in (2.5) equation, by testing the hypothesis, $H_0: H=0$, indicating the equilibrium condition versus alternative hypothesis $H_1: H<0$ indicating, disequilibrium. The test for the long-run equilibrium was undertaken using the Wald coefficient restriction test.

RESULTS

The study has undertaken an empirical assessment of competition level and market structure of the post-Soviet countries banking sectors (between 2013 and 2017) and its impact on competition and market structure in other financial markets, employing data sets which consisted of a balanced panel of fourteen banks in Georgian case, sixteen banks in Armenian case, eleven banks in Moldovan case, nine banks in Estonian case, twelve banks in Latvian case, six banks in

Lithuanian case, forty-one banks in Group One's case, twenty-seven banks in Group Two's case, and sixty-eight banks in Six Post-Soviet countries case. The study shows that:

Georgian banking system is characterized with high concentration level which results in low competition and fake market stability. Monopolistic market structure of Georgian banks, with two conglomerates acting as universal services providers and at same line participating in secondary business activities, excludes fair competition circumstances on the market, increases adverse selection and moral hazard problems, increases vulnerability of system and results with expensive and limited access to finance. With practically no capital market and weak regulation framework, Georgian banking system is one of the main impede factor of economy development.

Armenian banking system is characterized with low concentration level which results in moderate competition and low market stability. Monopolistic market structure of Armenian banks, with entry barriers and high service fees due to weak competition from capital market participants, dominate the whole financial market. Exclude alternative sources of financing. Such "good" competition level is fake and do not promotes fair competition circumstances on the market, increases adverse selection and moral hazard problems, increases vulnerability of system and results with expensive and limited access to finance. In spite of existence diverse financial institutions and normal regulation framework, Armenian banking and financial system lacks desire volume of investment and institutional investors that will stimulate full range of financial activities aimed for development of Armenian economy.

Moldovan banking system is characterized with high concentration level which results in low competition and moderate market stability. Monopolistic market structure of Moldovan banks, with high entry barriers, high service fees along with credit institutions to serve only the interests of a small group of bank owners dominating the whole financial market, excludes fair competition circumstances on the market, alternative sources of financing, results in reductions of credit supply, increases adverse selection and moral hazard problems, increases vulnerability of system and results with expensive and limited access to finance. Corruptive structure of Moldovan financial market based on UBOs, acting as shadow cardinals in management of the system, having interests in strategic entities in the economy including banks and non-bank financial institutions represent critical danger to the country's financial system to which the NBM has been unable to effectively address.

Estonian banking system is characterized with high concentration level coexisting with high competition and resulting high market stability. The leading largest banks are representing Scandinavian banking groups in form of affiliates and subsidiaries. Monopolistic market structure of Estonian banks, with very low entry barriers and high segmentation promotes increase in credit supply and provides financial services with competitive prices under fair competition circumstances. Competition with capital market participants enables alternative sources of financing and increases access to finance of small firms. Large universal banking institutions under the Euro-standard regulation framework, with high share of foreign capital, owning insurance, investment, brokerage and pension management firms, also enjoy dominant position in the rest of the financial sector, thus ease access to the information, reduce adverse selection and moral hazard problems and increasing the stability of whole market. In spite of extremely high concentration levels and existing of universal service providers, the supervisory authorities have not detected serious problems threatening to the competition in the banking and financial market of Estonia.

Latvian banking sector is the largest among the Baltic countries with high segmentation of the market, dominated by Nordic banks mainly serving local clients offering the various types of financial services, is matched with the local banks mainly concentrating their services for the foreign clients. Moderate level of concentration is balanced with moderate level of competition. Monopolistic market structure with low entry barriers forces Latvian banks of setting competitive prices on their product and services under fair competition circumstances. Competition with capital market participants enables alternative sources of financing and increases access to finance of small firms. As Latvian banking market is dominated by foreign-owned banks, the stability of country's banking system is connected to the soundness of Scandinavian banking groups. The "Scandinavian-connected" banking system of Latvia is modern, profitable, efficient, resilient and well capitalized with upgraded and solid AML/CFT framework along with tougher regulatory environment ready to support the expanding ambition of Latvian economy.

The Lithuanian banking market faces extremely high level of concentration with high share of foreign capital. The Lithuanian financial system is dominated by banks offering basic retail banking services, leasing, and insurance services. All six Lithuanian banks are retail banks that do not engage in cross-border activities. Branches of EU banks specialize in corporate loans, leasing, or have a retail business model. The banking sector in Lithuania operates under

monopolistic market structure with moderate level of competition. Afterwards joining of Lithuania to the common European currency family, on the ground of intensifying of competition level due to deregulation of interest rates and low entry and exit barriers, credit growth in Lithuania started to pick up. Funding conditions remain very supportive, as final interest rates on loans for both non-financial enterprises and households remain among the lowest in the euro area. With a rise in lending and a decline in funding costs, net interest income of banks has steadily increased. In terms of cross-sector activities, bank groups are extensively engaged in the statutory private pension savings market, the leasing market and the insurance market, either directly or through companies belonging to the parent company. As Lithuanian banking market is dominated by foreign-owned banks, the stability of country's banking system is connected to the soundness of Scandinavian banking groups. In spite of small volume of capital sources, Lithuania is deserved member of huge European financial market.

To generalize according to group of countries, the banking markets of Georgian, Armenian and Moldova are characterized with high concentration level. Especially Georgia and Moldova bear high concentration while Armenia shows moderate level of concentration. Concentration level has been increased since 2013 year with the tendency of decreasing number of banking institutions due to the permanent mergers and acquisitions on those markets. Banks have merged and large groups of the banks have developed. In contrast to the concentration, the banking sector of those three countries operates under monopolistic market structure with moderate level of competition, accounting 0.63 point. In fact there is existing low level of competition on Georgian and Moldovan banking markets balanced with the moderate level of competition on Armenian banking sector. The banks have ability of extracting monopolistic profits from big interest rate spreads in concentrated markets by using power of offering lower rates on deposit and charging higher rates on loans, thus enjoying high profitability. This framework imply of setting less favorable prices to customers based on collusive and non-competitive behavior in highly concentrated markets. Thus, more the degree of concentration, lower the level of competition on the market. The market structure with high level of concentration and small number of institutions increases probability of achieving a joint price-output configuration by leading market participants that approaches the monopolistic solution. The stability measure of the banking market of Georgia, Armenia and Moldova seems to be on low level. The reason may be connected with no presence of big foreign banking institution on the Georgian and Armenian banking markets, while in Moldova 25% of market share is controlled by western-owned banks resulting consequently moderate level of stability.

The banking markets of Baltic countries are characterized with high concentration level. In contrast to the concentration, the banking sector in Baltic countries operates under monopolistic market structure with high level of competition. The competition measure accounts 0.91, indicating that market is evolving toward perfect competition. Baltic banking institutions' revenues are derived under conditions of monopolistic competition, in such environment any new entry will lead to the "contestable markets equilibrium", where percentage increase of revenues will always be less than percentage increase in the input prices, as the demand for banking products facing individual banks is inelastic. Large banks with high share of foreign capital operate as universal banks, providing various services to the different market segments, offering wide array of products to both local and foreign customers, while smaller banks concentrate on a specific range of services. That monopolistic competition is optimal for the Baltic banking sector, as it encourages product segmentation and differentiation on the market. Banks market differentiated products based on product quality and promotion strategies. However, close substitutability of the services reduces the level of monopolistic competition. Such environment makes banks able to generate more profits due to distinctive features of their services like brand, quality and advertising. The "Scandinavian-connected" banking market of Baltic countries is modern and efficient, including the strongest and best-regulated banking institutions in the region, providing a full range of financial, insurance, accounting and legal services to both domestic and international clients at very competitive rates. The stability measure of the Baltic countries banking sector seems to be on high level. As their banking market is dominated by foreign-owned banks, the stability of countries banking system is connected to the soundness of Scandinavian banking groups. The banks operating in Baltic market are quite well-capitalized, ensuring high protection of invested funds.

CONCLUSION AND RECOMMENDATIONS

The banking markets of Post-soviet countries are characterized with high concentration levels. However this concentration carries different character according to the countries. In the developing countries such as Georgia, Armenia and Moldova high concentration (especially Georgia and Moldova bear high concentration, while Armenia shows moderate level of concentration) implies low or moderate competition levels and relationship between concentration and stability seems to be negative, meaning that high concentration results low stability of those banking markets. The situation is opposite in case of EU member Baltic countries markets. High level of concentration in Estonia, Latvia and Lithuanian banking market

coexist with the high (in Estonia) and moderate levels of competition (in Latvia and Lithuania). The relationship between concentration and stability is positive ensuring high stability of Baltic banking institutions in highly concentrated market structure.

In contrast to the concentration, the banking sector of six post-Soviet countries operates under monopolistic market structure with moderate level of competition, accounting 0.55 point. In fact there is existing high level of competition on Baltic banking markets (the competition measure accounts 0.91, indicating that market is evolving toward perfect competition) balanced with the moderate level of competition on Georgian, Armenian and Moldovian banking sector (accounting 0.63 point).

The small size of the post-Soviet countries banking markets defines the stability levels of those countries related with the ability of additional capital sources. Market structure of Georgia, Armenia and Moldovian banking markets imply low level of stability connected with no presence of big foreign banking institution on the Georgian and Armenian banking markets, while in Moldova 25% of market share is controlled by western-owned banks resulting consequently moderate level of stability. At the same time the stability measure of the Baltic countries banking sector seems to be on high level. As Baltic banking market is dominated by foreign-owned banks, the stability of countries banking system is connected to the soundness of Scandinavian banking groups owning huge capital sources.

The banks in Georgia, Armenia and Moldova have ability of extracting monopolistic profits from big interest rate spreads in concentrated markets by using power of offering lower rates on deposit and charging higher rates on loans, thus enjoying high profitability. This framework imply of setting less favorable prices to customers based on collusive and non-competitive behavior in highly concentrated markets. The markets lead by several big banks offer mainly homogenous product and price leadership strategy, while other banking institution are forced to follow the leaders and try to differentiate their product in order to maintain existence on the market. Competition level and market structure of those countries results in high prices of financial product and low access to finance.

The opposite situation is on monopolistically competitive Baltic banking market based on the contestable market equilibrium. As banking sector is prone to the existence of high segmentation and product differentiation. Banks market differentiated products based on product quality and promotion strategies. However, close substitutability of the services reduces the level of

monopolistic competition. Such environment makes banks able to generate more profits due to distinctive features of their services like brand, quality and advertising. Large banks with high share of foreign capital operate as universal banks, providing various services to the different market segments, offering wide array of products to both local and foreign customers, while smaller banks concentrate on a specific range of services. The Scandinavian-connected banking system of EU member Baltic countries is modern and efficient, with best-regulation and high level of transparency in the region. As a result banking markets provide both domestic and international financial services at very competitive rates.

All the above mentioned six post-Soviet countries financial markets are bank dominated, characterized with monopolistic banking structure, with leading roles of a few universal profile banking institutions, dominating not only banking sector, but whole financial market. The large banks in all six countries operate under the monopolistic competition and are conglomerates influencing competition and market structure in other financial markets. Clear example is Georgia, where two biggest banks enjoy dominant position in insurance and capital markets and are involved in productive businesses as well.

The lack of competition in banking and financial markets in general, influencing by banking concentration is perceived common and major concern for stability and development. According to the international organizations, for solving basic problems in banking market, there is a need to improve institutional environment in such countries. Country's institutional framework is a major determinant of banking competition. To do this, all banks should be treated equally and avoided from special treatment that may damage transparency in banking markets. Prudential regulation, which often includes antitrust policies, significantly improves the competitive climate. Also, the communication of regulators and policy makers have to be transparent and in timely manner for proper intermediation of the banking.

Recommendations:

Considering positive and negative effects of concentration, it is vitally important to construct a model of regulation in which the benefits of concentration will be realized and at the same time will be avoided the concomitant/potential problems of concentration. A special task is to achieve a level of competition that ensures stability and conditions for non-discriminatory activities on the market.

The fact of strengthening concentration in the banking sector is mainly achieved through mergers and acquisitions, increases the actuality of preliminary state control and monitoring over those processes. Considering that, the concentration and exercising of market power can be achieved in a completely legitimate way, regulators and policy makers should carefully consider concentration control issues and find the margin that will not impede the realization of benefits of the concentration and at the same time prevent the banking institutions from abuse of power. In addition, it should be taken into consideration that under the circumstances of effective regulation, concentration of market power in the hands of a particular economic agent, does not create bases of collusive and non-competitive behavior.

Studies have shown that, more threatening than impact of degree of concentration on the market structure is consolidation of banking and non-banking services in the hands of one conglomerate, that creates firm basis for strengthening the influence of banking conglomerates in non-banking sectors and consequently threats to competition. The degree of consolidation of Georgian banking sector is a good example of this, confirmed by statistics, cases and interviews. The leading banks in banking sector also dominate (through their affiliate companies) in related sectors (insurance, capital market) that creates conflict of interest and will negatively impact competition not only in banking but in other financial sectors as well. Thus, lack of fair competition in banking market and its spillover effects on other markets negatively affects economic development.

1. To ensure competitive environment in banking and promote further development of financial markets in general we would recommend: to revise regulatory framework and seriously considering competition policy (prudential regulation must be coordinated with competition policy); to redesign institutional architecture/framework of banking regulation combining prudential regulation with strong competition policy.

2. Various type of analysis evidence that major problem for competition and market structure in financial markets is not banking concentration level itself, but conglomerate mergers, acquisitions and other types of consolidation activities, especially with participation of dominant banking institutions; It is common that large banking institutions directly or indirectly participate in various non-bank financial activities and dominate corresponding market segments (BoG's 100% owned subsidiaries dominate insurance, capital and other markets in Georgia). Financial conglomerates and their potential anti-competitive behavior became more challenging. Existing model of regulation is not able and does not react effectively on the existing and potential

problems of competition. Prudential regulation, which often includes antitrust policies, significantly improves the competitive climate but it is clearly not enough to prevent mergers with anti-competitive effects and unilateral conducts by dominant companies.

3. Therefore, it is essential: to apply general competition policy to all banking and non-bank financial institutions; to define optimal model of banking regulation and combine prudential regulation with general competition policy for financial sector to prevent anti-competitive mergers and restrict all types of anti-competitive behavior by market players.

4. Effective merger control system has to be established and implemented. The role of competition agency responsible over the implementation of general competition law should be expanded in merger control. It should have power to investigate potentially anti-competitive mergers to minimize or eliminate any anti-competitive effects from such mergers. The overall objectives should be the application of merger control in a manner that takes into consideration the requirements of financial stability for banking system and preventing the anti-competitive actions in all financial markets.

5. Conglomerate mergers seriously impact on related market structures (not only financial markets), therefore, regulatory institutions should consider all aspects of proposed mergers and conduct anti-competitive impact assessment taking into account broader set of objectives (not only financial stability).

6. Preliminary merger control procedures should be elaborated and employed to avoid mergers which result in: a) a substantial reduction of a competition in a given market; b) creation or strengthening dominant position; c) prevention, distortion or restriction of competition.

7. To avoid bureaucratic burdens and unnecessary administrative costs, it is necessary to focus on mergers and acquisitions which have potential anti-competitive effects described above. Therefore appropriate thresholds and procedures for pre-merger notification should be established.

8. To avoid potential conflict of interests between different policy objectives, clear distinction of responsibilities of independent regulatory agencies for competition policy and for prudential oversight with well defined missions should be established. Along with separations of responsibilities, it is essential to ensure effective collaboration and coordination in

implementation, enabling the better exploitation the complementary expertise of prudential regulators and competition agency.

9. The merger policies should have in mind the optimal degree of competition. Concentration levels should be definitely reduced. Desired concentration level must not exceed 50% in case of top 3 banks and 70% in case of top 5. HHI value should be decreased to un-concentrated level. On the other hand increasing market shares leading to increased market concentration may be result of otherwise competitive behavior and successful competitive market strategy employed by economic agents. It is proved that in a contestable markets, high concentration can coexist with high level of competition (which can be explained by banking sector characteristics and product diversification in particular). Estonian banking market is clear example. Due to the above mentioned, we think that direct limitation of concentration level using market share test only would not be reasonable. As to the optimal/desirable level of concentration in terms of contestable markets we do not consider reasonable to establish maximum level or otherwise restrict market shares (it should be noted that according to international practice, market share is not only, but one among the other criteria to define dominant position and dominance itself is not illegal) which can be result of legitimate competitive behavior.

10. To ensure elaboration and effective implementation of the competition law and policy, appropriate legislative initiatives should be made. In case of Georgia it includes changes aimed to: broadening scope of application of existing competition law to all product and service markets, including financial ones. b) prohibiting commercial banks in activities with anti-competitive effects; c) improving merger control mechanisms d) improving coordinating mechanisms in collaboration between prudential regulator and competition agency, etc.

Effective implementation of these policy recommendations will ensure effective and efficient banking regulation oriented to the set of objectives not only the stability. Prudential regulation framework with effective execution mechanisms lead by political intention can be commitment of moving Georgian banking system on new stage of development and become of driver of Georgian economic progress.

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