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**FINANCIAL STABILITY AND PERFORMANCE OF BANKS IN TRANSITION ECONOMIES UNDER COMBINED IMPACT OF BANK REGULATORY STANDARDS AND WORLD BANK GOVERNMENT EFFECTIVENESS INDICATORS AS THE PROSPECT OF ESG.**

**Abstract.** With the impact of Government Effectiveness Index and banking regulatory framework, this study examines banking risk and profitability indicators' performance through the application of Generalized Methods of Moments methodology. The effect of impacting factors is examined each separately and in combination. The prospect of governmental effectiveness is taken as a new vision of ESG integration into business processes. The introductory covenants to the case on the ESG prospect integration into the business processes of JSC «Altyn Bank» (SB China CITIC Bank Corporation Limited) are given. The examination covers both crisis and post crisis period.

*Key words:*

Bank Regulation, Bank Financial Stability, Bank Performance, Transition Economies, Crisis and World Bank Government Effectiveness Indicators.

*JEL classification:* G 20, G 21 and G28.

## Introduction

Financial institutions are facing a lot of governmental attention (Boyne et al., 2006). Overall, economic stability is highly dependent on performance of financial institutions. Hence, it is logical for government to actively participate and if necessary impact actions to improve performance levels and reduce idiosyncratic risk that will affect overall economic stability. This is the way we consider the prospect of today's highly anticipated theme of ESG integration into the business processes of financial institutions. Through this study, we examine how imposed regulation standards and governmental effectiveness indicators impact banks in transitional economies perform and reduce risks.

The regulation itself can be the cause of the problem. The regulator's aspect might not be in line with what business practitioners have on their targets. Two sides, business and regulator, can have different aims. Therefore, positive banking performance and low financial risk indicators can be achieved only in the case of collaborative work of two sides. This will require reframing the work of bank managers and policymakers. This is why the agenda of potentially significant risk orientation in regards to environmental, social and governance problems are addressed by many of the states. The integration of norms and values of ESG today are considered as the opportunity rather than the problem. Investors are looking for the opportunities to fund companies that are ESG risk oriented. Banks participating in the business funding and allocation of financial resources through credit processes are turning their attention to this opportunity. We would be discussing how these processes are integrated through the example of Kazakhstani bank JSC "Altyn Bank". The important point to mention is that some of the consulting agencies and financial institutions tend to consider investor as the core stakeholder in regard to ESG agenda.

We consider economies recently switched from planned to free market structures. The hypothesis is that governmental effectiveness in line with regulatory framework will positively affect profitability and financial stability. In the study, we do scattered examination of each region as well as a combined sample. This way we can identify the difference between the regions' performance in banking and apply targeted reforms.

We follow the development of Delis et al. (2012) to examine the risk perception of banks. Specific to bank accounting measures as return on equity, return on assets and net interest margin are utilized to define bank performance level and Z-score to define idiosyncratic risk of banks.

Three measures of bank regulation are observed: reserve requirements, necessary capital structure and restrictions in banking activities. Into the model, we incorporate macroeconomic shocks as devaluation processes during the period of examination.

Following King and Levine (1993), the economic growth is expected to positively correlate with imposed factors of governmental effectiveness and regulatory standards. There are number of governmental effectiveness indicators: control of corruption, government effectiveness, political stability and absence of violence, regulatory quality and voice and accountability.

In this work, we follow Djalilov and Piesse (2018) in examination of efficiency of regulatory norms on performance and financial stability of transition economies. Apart from standard list of transition economies as Eastern and Central European regions, we additionally incorporate countries of former Soviet Union and peer countries of Latin America as Argentina and Brazil.

The use of Generalized Methods of Moments methodology helps to deal with number of empirical problems as heteroscedasticity of the variable, endogenous variable and omitted variable's full effect. We examine these questions during the Global Financial Crisis and aftermath, what helps us see the

changing pattern of the effect. In the study, 97 banks from 15 transition economies worldwide are considered.

The following parts of the paper are organized in the next sequence of sections. Section 2 is the literature. Section 3 is the sample. Section 4 is the results. Section 5 is the conclusion.

## **Literature review**

Three main literature pillars of bank regulation, governmental effectiveness index and external regulatory factors are examined in this section.

In the study of Brewer (2004), author mentioned that examination of governmental effectiveness is not frequently addressed across countries.

Some authors like La Porta (1999) and Islam and Montenegro (2002) have opposing view towards how cultural aspects affect performance of institutions. La Porta (1999) in example state that the effect is significant, but Islam and Montenegro (2002) in their study admit no significant relationship between performance and differences in ethnic belongings.

Another interesting relationship was indicated in the study of Brunetti and Weder (1999) and Afonso et al. (2003). Authors stated that poor performance is positively correlated with size of the government. The bigger the size, the lower the quality of performance.

The openness of the economic trade positively correlates with governmental effectiveness indicators impact following the studies of Brunetti and Weder (1999) and Islam and Montenegro (2002).

Government is effective when the level of democracy in the country of examination is high as both studies of Adsera et al. (2003) and Brewer and Choi (2007) indicate.

We take into observation three commonly well-known pillars of regulation. Namely, capital regulation, activity restrictions and necessary reserve requirements.

There are many opinions on the effect of regulation of capital. Motivation for managers is much better off in comparison to the regulation of capital as John et al. (1999) stated. Ownership is another significant factor affecting regulation perception by banks affecting management performance as was indicated by Laeven and Levine (2008). Shleifer and Vishny (1993) stated that banks use capital regulation as a tool to win votes by subsidizing political candidates. It helps in potential long-term sustainable refund of this investment. However, Shehzad et al. (2010) consider this as potential risky investment as alternative thinking to Pasiouras (2008) opinion stating that allocation of funds can help and that way of development can help diminish systemic risk.

The idea of activity restrictions regulation tool might help decrease the volume of bank NPL Barth et al. (2010) stated. Some other studies as Barth et al. (2004) and Barth et al. (2013) point that diversification of activities is a tool to enhance and boost potential returns.

The spending or the liquidity regulation in the market significantly affects the movement of the funds, however, positively affects systemic risk as was indicated in the studies of Bolt and Tieman (2001), Barth (2001), Claessens and Laeven (2004) and Laeven and Levine (2008). The other point is that supervision of the internal financial flows decrease managers' willingness to misbehave.

## Sample

We collect data on regulation variables from Bloomberg financial resource. We use dummy variables to indicate the use of crisis, country specific, bank specific and macroeconomic variables. The crisis years are indicated as the fall of Lehman Brothers investment bank back in 2008 following the work of Pak (2017).

The study covers 97 banks from 15 countries of transition economies, which are Central and Eastern Europe – Bulgaria, Poland, Russia, Ukraine, Estonia, Lithuania, Czech Republic, Slovakia, and Hungary; four Balkan and Caucasus countries – Serbia, Slovenia, Armenia, and Georgia; and two peer countries – Argentina and Brazil in line with our previous study on bank regulation (Kaliyev and Nurmakhanova, 2021).

We use World Bank Databank for collection of data on governmental effectiveness indicators. Government effectiveness, political stability and absence of violence, regulatory quality, rule of law, voice and accountability, and control of corruption are six categories we use as the main impacting factors.

In the study sample, we examine the years of 2008-2019. We follow our previous work of Kaliyev and Nurmakhanova (2021) and follow International Financial Reporting Standards (IFRS) for the data in use. World Bank papers were used for the collection of regulation data.

### Regulation variables

Following the studies of Barth et al. (2004), Laevin and Levine (2008) and Djalilov and Piesse (2019) we construct three main regulatory variables, which are Capital Requirements, Reserve Requirements and Restrictions of Activities that are considered non-banking.

Capital index is composed of assets that are combining securities, borrowings and cash following Barth et al. (2004). Non-banking activities are considered trading in securities, non-banking commission and fees, different types of insurances and securities markets in line with Agoraki et al. (2011) definition. And the later one is Reserve Requirements that must satisfy Basel requirements condition.

### Control variables

We follow Djalilov and Piesse (2019) in use of accounting profitability, performance, bank specific and macroeconomic measures. Please see the Table 1 below:

**Table 1. Definitions and formulas for the variables.**

<b>Variables</b>	<b>Definitions</b>
<b>Performance measures</b>	
NIM	<i>Net Interest Income/Total Assets</i>
ROA	<i>Net Income/Total Assets</i>
ROE	<i>Net Income/Average Shareholders' Equity</i>
<b>Industry specific measures</b>	

Loan growth	$Loan(t)/Loan(t-1)-1$
Credit risk	$TotalLoans/TotalAssets$
Liquidity risk	$(Total\ Loans - Total\ Assets)/Total\ Assets$
Borrowing	$Debt/Assets$
Investments	$Trading\ securities\ as\ a\ percentage\ of\ overall\ investments$
<b>Country specific and macroeconomic measures</b>	
GDP growth	$GDP(t)/GDP(t-1)-1$
Inflation	$CPI(t)/CPI(t-1)-1$
Crisis	$Dummy\ variable\ of\ "1"\ in\ case\ of\ crisis\ and\ "0"\ otherwise$

## Model

The use of Generalized Methods of Moments helps to deal with number of technical and theoretical problems as the problem of endogenous variable that helps to deal with dynamic nature of the variables. The period of examination is very turbulent. Hence, the use of the methodology is highly justified.

## Methodology

We construct the following equation for the evaluation of risk and performance. The baseline is constructed following the works of Altunbas et al. (2014), Dietrich et al. (2014) and Pak (2017).

$$Y_{it} = C_{it} + \mathbf{Regulation}_{it} + \mathbf{Crisis}_{it} + \mathbf{Bank}_{it} + \mathbf{Industry}_{it} + \mathbf{Macro}_{it} + e_{it}$$

(equation 1)

Regulation are represented by three pillars of banking prudential norms of Capital Requirements, Reserve Requirements and Activity Restrictions. We take bank specific variables as loans, deposits, growth ratios following Pak (2017) to represent internal bank performance and idiosyncratic risk. Crisis is taken as internal macroeconomic shock of devaluation and Global Financial Crisis of 2008.

Following Blundell and Bond (1998), we assume the persistence of dependent variable and, therefore, the use of GMM is justified. The system helps to deal with the problem of endogenous variables. We use fixed effects model following the explanation of Lemmon and Zender (2008) and Gropp and Heider (2007) who state that bank data variables are dynamic in nature and hence will be more helpful to identify the variability of institutional factor. Using Hausman (1978) test we identify better applicable effect, fixed or random. Instruments are valid following Hansen test.

## Descriptive statistics

For the examination of financial stability, we utilize Z-score. The average for the sample is 67, what shows overall stability. However, the range is wide. This shows the difference in perception of risk between the countries under examination. The margin of revenue and cost is negative. Average Return on Assets is 1.8 % and 8% on Return on Capital.

## Risk and Return

Following Delis et al. (2012) we apply Z-score risk evaluation for financial institutions. Our sample is quarterly taken. The sum of return on assets divided by the standard deviation of its return on assets is the way of Z-score calculation. For performance measures we use Net Interest Margin (NIM)



All the mean values are significant at 1 % level \*\*\*.

The average picture for Kazakhstan is showing negative signs of governmental indicators at Table 3. Only Political Stability and Absence of Violence is indicating positive sign. Under economically stressful conditions, when governmental effectiveness tools are weak, the only regulatory factor indicating positive effect is the Reserve Requirements for Kazakhstan. This indicates that the banking development model is highly reliable on funding from government and has weak strategy how to perform on its own in a negative state economy.

A separate regard is taken with respect to Kazakhstani bank JSC “Altyn Bank”, where the approach of funding is risk oriented allocated finance with regard to ESG concern is addressed. The bank is in the process of accumulation of data that is necessary to have to build the efficient ways of taking right decisions in the credit process through cooperation with bank stakeholders as corporate companies. The bank is taking steps to build a sustainable long-term business infrastructure with regard to ESG risks and officializing it through its project named Pro ESG from Altyn Bank. A separate study on the project itself will be given further.

### F-test and p-value summary for the World with the analysis of GVT indicators -2

**Table 4. Means of World Bank Government Indicators, World.**

	Control of Corruption	Government Effectiveness	Political Stability and Absence of Violence	Regulatory Quality	Rule of Law	Voice and Accountability
Argentina	-0,33687	-0,1061	0,025961	-0,69416	-0,56615	0,417572
Armenia	-0,51646	-0,12176	-0,18715	0,278813	-0,31457	-0,53333
Bulgaria	-0,22787	0,08957	0,307698	0,596	-0,08582	0,439469
Brazil	-0,19552	-0,18476	-0,26169	-0,04874	-0,1515	0,454131
Czech Rep.	0,448683	0,972431	1,003775	1,158826	1,028187	0,975587
Georgia	0,394861	0,497362	-0,5615	0,804269	0,065515	0,051071
Hungary	0,255204	0,604824	0,728225	0,846088	0,641433	0,671334
Lithuania	0,462673	0,892952	0,773268	1,103326	0,883412	0,935822
Poland	0,604209	0,580079	0,786966	0,943048	0,620053	0,910253
Slovenia	0,873591	1,070557	0,930832	0,740162	1,029601	-0,92443
Serbia	-0,3231	-0,01318	-0,1507	-0,0097	-0,27673	0,181918
Slovakia	0,222703	0,743117	0,919023	0,54364	0,940493	0,924947

All the mean values are significant at 10 % level \*. Indicators that are more precise require more sophisticated regression tools. This part of examination is a preliminary study finding.

The achievements and the perception level of different regions under consideration of this study are very diverse. Largely, we can observe that European region indicates positive means with some logical statistical deviation within countries like Armenia and Serbia, where almost all indicators apart from Regulatory Quality and Voice and Accountability are negative, respectively for these two countries. The peer countries like Brazil and Argentina indicate negative signs as well as Kazakhstan. Overall, we can observe that the mean scores are significantly different. The results indicate that the

performance of Kazakhstan is weaker on the measures of governance compare to other countries under examination.

**Table 5. Means of World Bank Government Indicators, ANOVA test, World.**

	Mean	Std. Dev.	Std. Err. of Mean
All countries	0,185439	0,650254	0,018319

  

Method	df	Value	Probability
Anova F-test	(89, 1170)	157,613	0

All the countries under the test indicate differences among each region. Hence, the perception of the governmental indicators for each country is very different.

The average mean for all countries for World Bank Government Indicators is statistically significant underutilization of ANOVA test. However, the differences among countries for each of the indicators is significant. Hence, the average positive mean score is not a precise answer one would like to have as the fact to make conclusions. Our task here is to indicate the direction, the sign is positive.

## Conclusion

In this study, we have examined the performance of banks in transition economies within the framework of government effectiveness measures in a setting utilizing World Bank Governance indicators.

The idea of this study is to examine how banks perform under different scenarios. First, the effect of core regulatory norms on bank performance when all other factors are constant. Second, how banks perform under turbulent macroeconomic conditions like devaluation and financial crisis.

The results of the findings indicate that out of three regulatory norms only Reserve Requirements indicate positive impact on both financial stability and profitability measures of banks in transition economies under stressful macroeconomic conditions. This finding points that additional funding is the only safe land for the banks to be floating in times of negative macroeconomic environment. This banking model safeguarded only in case of additional funding. However, our expectation was that other regulatory norms as Activity Restrictions and an increase in the level of Reserve and Capital Requirements would have positive impact on bank performance in both scenarios with and without macroeconomic shocks.

For Kazakhstan, the indicators of governmental effectiveness are almost all negative. The only two indicators are Political Stability and Absence of Violence positively affecting performance of banks. Both factors having negative signs will be the last resort for the stable country macroeconomic situation. Moreover, for Kazakhstan, the only regulation variable indicating positive impact in times of macroeconomic shock is the liquidity reserves.

Other regions under examination show diverse mean scores of Government Effectiveness Indicators. However, one point clearly indicates that performance of Kazakhstan is weaker on the measures of governance compare to other countries under examination creating additional difficulties for the banks to perform.

There is no best model build for all countries for the development of banking industry, especially in case of transition economies. Economic environment is largely different even between similar countries under transition. Regulatory norms, financial stability, the effectiveness of government with their diverse approaches to solve problems differently affect the result. The best possible option is to take steps into understanding of risks that might be idiosyncratic for a sole bank or general for many. This can be done through the integration of the efficient decisions into processes of practical business like it is taking place worldwide today, and in the case of this particular study, in JSC “Altyn Bank”. The more details on this case will be given in a separate study.

The optimal option is to create cooperative groups that include business, government and reformers to target objectives optimally satisfying all parties. Like in a Nash Equilibrium: no best solutions for all, but optimal options enrolled parties. These comprehensive decisions will positively affect idiosyncratic risk for banks and will decrease systemic risk that will eventually positively affect macroeconomic condition.

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