Financial Performance of Commercial Banks: The Case of Kyrgyz Republic

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Abstract

The banking sector of Kyrgyz Republic is mainly presented by commercial banks and increase of their financial performance will lead to improve their functions and activities. For this reason, the aim of this research is set as to empirically investigate the financial performance of commercial banks of Kyrgyz Republic for the period of 2008-2014. The financial performance measured by using one indicator, this is Return on Assets. This indicator will be estimated by multiple regression analysis, with explanatory variables, such as bank size, credit risk, operational efficiency and asset management. The model is checked for goodness-of-fit and classical linear model assumptions.

1 Introduction

The banking system of the Kyrgyz Republic consists of two levels: the first level - is the National Bank of the Kyrgyz Republic, the second one is the commercial banks of the Kyrgyz Republic. The Central Bank of the Kyrgyz Republic takes over the role of the banking sector regulator. Until to date, the regulatory basis for the functioning and development of the banking system is the Law of the Kyrgyz Republic "The National Bank of the Kyrgyz Republic" dated 07.29.1997, "On banks and banking activity" from 29.07.1997.

The banking system has gone through several stages in its development (Omorov, 2013):

The first stage (from 1992 to 1996) was characterized by the transition to market relations, and accompanied by high rates of inflation and imbalances associated with the restructuring of the economy. This stage can be called the stage of active reform and lay the foundation of the legislative, regulatory, institutional framework of the banking system.

The second stage (1997-2000) is characterized by the implementation of a program of restructuring the financial system of Kyrgyzstan (FINSAC), which is supported by the World Bank. Implementation of the program has helped to completely reorganize commercial banks. In this stage there was a system of laws and regulations, which amounted to a regulatory framework for banking and banking supervision in the Kyrgyz Republic.

The third stage (2000-2005) is characterized by a decrease in the stability of banks against the background of the external and internal factors. Since the beginning of the 2000 year the National Bank and the government took various measures to strengthen the banking sector, including providing financial support to banks to restructure bad debts. This situation is under the influence of macro-economic destabilization caused by the crisis neighboring countries.

In the fourth stage, from 2005 until now, are carried out the structural reforms on market relations in the banking sector. This stage can be called the stage of stabilization of the banking sector.

In 2005 the banking system continued its positive development, despite the political situation the end of March. However, the sharp economic downturn did not happen, the commercial banks have not only maintained its stability, but also continued to rise (Ayupova, 2008: 52). According to Ayupova one of the main problems that impeded spending development of the banking system remains high proportion of cash payments between legal entities and individuals inside Kyrgyz Republic. It slowed down the process of attracting foreign investment in the financial sector of the economy. Growing demand for international banking services such as trade finance and documentary operations. Nevertheless, many banking products actively used worldwide will remain unused within the country.

After 2005, Kyrgyz banking sector has begun to developing. But the global financial crisis that began in 2008 had a negative impact on the banking sector of Kyrgyzstan. Commercial banks have suspended development of credit products at the beginning of the year, in connection with which noted and some deterioration of the loan portfolio, due to the deteriorating financial condition of borrowers. This contributed to the fact that banks have shifted to risk-free commission operations (Kachkeev, 2010).

In 2010 year, the revolution of Kyrgyzstan has begun. In Kyrgyzstan every sector has effect of this revolution. Of course the banking sector has effect also from this revolution. At this time, banks in Kyrgyzstan along with other countries experienced a credit boom. However, the political instability of the banking system stopped the growth, which resumed only in 2011. Kyrgyz banking sector has felt the global crises of the financial sector during this revolution also. The impact of the global crisis and domestic political events of 2010 proved to be

essential in reducing the solvency of borrowers of banks led to an increase in problem credits and deductions for losses and damages.

Growth of basic indicators of the banking sector was observed by the end of 2014, in particular, growth of assets, a loans portfolio, a resource base, and a net profit. Kyrgyz banking sectors of the level of capital adequacy of the banking sector is high, suggesting that there is some potential to further improve financial intermediation, enhance efficiency of the banking sector, and ensure a "safety cushion" in the future.

After the regulating of the Kyrgyz Republic of Central Bank, systemic risks in the banking sector are moderate. After all the regulator of the sector, nevertheless the banking sector is still poorly integrated into international financial markets.

By the end of 2014 are operated 24 commercial banks, including the Bishkek Branch of the National Bank of Pakistan and 292 branches of commercial banks operated in the Kyrgyz Republic. Among the commercial banks, 16 banks are noted for foreign participation in the capital (Annual Report of the NBKR for 2014). At the end of 2014, the share of foreign capital accounted for 35.8 percent of banks' capital (in 2013 – 36.5 percent). During the reporting period the total assets of the banking sector increased by 23.9 percent and amounted to 137.6 billion Kyrgyz Soms.

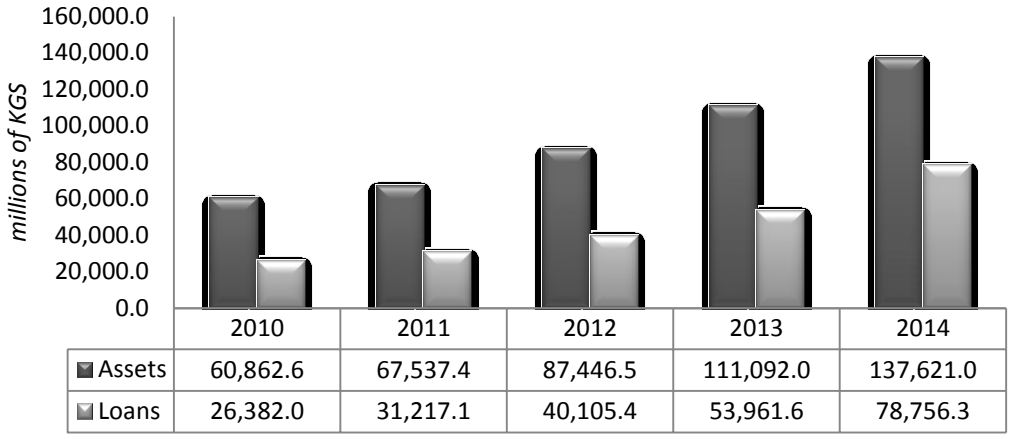

Figure 1. *Pattern of Assets and Loan Portfolio of Banks;* ***Source:*** *Annual Report of the NBKR, 2014*

The main share of the banks' assets 56.7% accounted for the loans issued. The volume of loans to customers of the banking system by the end of 2014 grew by 67 percent and reached 78.8 billion soms.

Assets of Kyrgyz banking sector has increased from 60 billion Kyrgyz Soms to 137.6 billion Kyrgyz Soms between of 2010-2014. It has increased really considerable for banking sector.

Loans to clients of Kyrgyz banking sector has increased from 26.4 billion Kyrgyz Soms to 78.8 billion Kyrgyz Soms between of 2010-2014. It has increased nearly 67% during this time. The assets have increased 56% by this period. In the future, this situation would bring some risks to Kyrgyz banking sector.

The share of the loan portfolio in the assets of the banking sector increased by 8.6 percentage points compared with 2013 and made up 57.2 percent. The number of borrowers of banks at the end of 2014 increased in comparison with 2013 by 35.6 percent to 226,881 people.

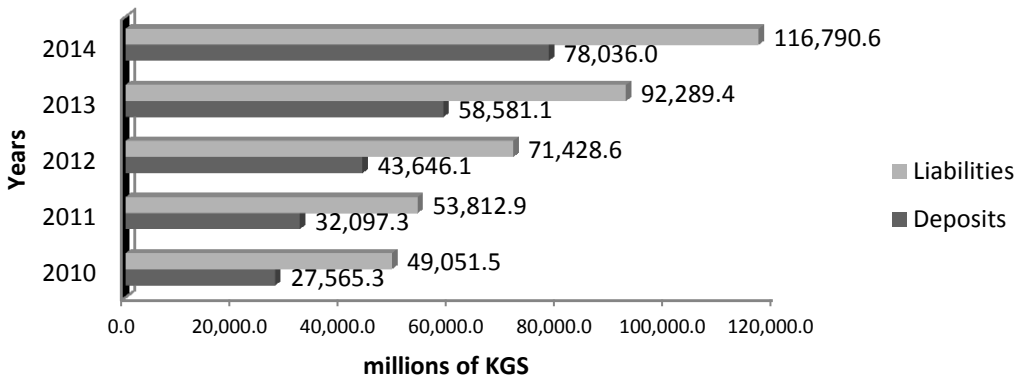

Figure 2. *Pattern of Liabilities and Deposit Base of Banks between 2010-2014;* ***Source:*** *Annual Report of the NBKR, 2014*

In figure 4, the deposit base of banks could be seen. In the figure it has explained the deposit bases of banks have become 78 billion Kyrgyz Soms from 27.6 billion Kyrgyz Soms during the 2010 to 2014. It has increased 64% percentage. It is increasing faster than loans to clients. There is the better indicator for Kyrgyz banking sector.

By the end of 2014, the volume of liabilities of commercial banks increased by 26.5 percent to KGS 116.8 billion. The share of the deposit base in the gross volume of liabilities developed at the rate of 66.8 percent. For the reporting period, growth of the deposit base of the banking sector amounted to 22.3 percent.

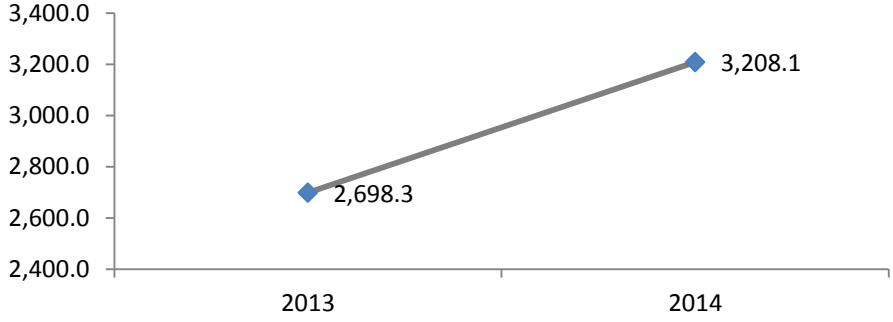

Figure 3. *Net Profit of Kyrgyzstan Banking Sector between 2013-2014;* ***Source:*** *Annual Report of the NBKR for 2014*

By the end of 2014, the net profit of the banking system amounted to 3.2 billion Kyrgyz Soms, having increased by 0.5 billion Kyrgyz Soms or by 18.5 percent compared to the previous year. Annual growth of deposits indicates maintaining public confidence in the banking system.

The paper is organized as follows: in section two, the empirical studies on financial performance are reviewed; in section three and four, the methodology with data description and empirical results are given respectively; in the final section conclusion is provided.

2 Literature Review

Empirical studies investigating the financial performance of commercial banks in general conclude that bank performance is conditional economic fluctuations, macro indicators, ownership characteristics, electronic banking operations. Thus, according to Boyd et al. (2001) there are a significant, and economically important, negative relationship between inflation and both banking sector development and equity market activity. While, there exist positive relationship between e-banking and bank performance (Aduda & Kingoo, 2012).

The commercial bank efficiency in transition economies influenced by foreign ownership and this leads to more efficient banks (Grigorian & Manole, 2002; Bonin et al., 2005). While findings of Verbrugge et al. (1999 suggest that, continued significant government ownership of banks raises serious problems for establishing market-oriented governance and decision-making systems in the banks.

DeYoung & Rice (2004) demonstrated a number of empirical links between bank noninterest income, business strategies, market conditions, technological change, and financial performance between 1989 and 2001. The results indicate that well-managed banks expand more slowly into noninterest activities, and that marginal increases in noninterest income are associated with poorer risk-return tradeoffs on average. These findings suggest that noninterest income is co-existing with, rather than replacing, interest income from the intermediation activities that remain banks' core financial services function.

However, the empirical literature that investigates the financial performance of banks by efficiency ratios, shows that ranking of banks differ as the financial ratio changes, that capital adequacy, asset quality, management efficiency and liquidity had weak relationship with financial performance, while earnings had a strong relationship with financial performance (Alam et al., 2011; Fredrick, 2012).

Hernando & Nieto (2007) estimated the impact of the adoption of a transactional web site on financial performance using a sample of 72 Spanish commercial banks over the period 1994-2002. Since brokerage is one of the main drivers used for banks for acquiring new customers on-line, the paper also analyzes the impact on the performance of the multichannel banks of the provision of on-line brokerage. The impact on banks´ performance of transactional web adoption (or the broker on line business model) seems to vary over time. The adoption of the Internet as a delivery channel has a positive impact on banks´ profitability (ROA and ROE) after one and a half years, mainly explained by the lower overhead expenses and, in particular, staff and IT costs after the same period. The paper also concludes that the Internet is used as a complementary mean of transacting rather than a substitute for physical branches/ATMs.

Jha & Hui (2012) compared the financial performance of different ownership structured commercial banks in Nepal based on their financial characteristics and identify the determinants of performance exposed by the financial ratios, which were based on CAMEL Model. Eighteen commercial banks for the period 2005 to 2010 were financially analyzed. In addition, econometric model (multivariate regression analysis) by formulating two regression models was used to estimate the impact of capital adequacy ratio, non-performing loan ratio, interest expenses to total loan, net interest margin ratio and credit to deposit ratio on the financial profitability namely return on assets and return on equity of these banks. The results show that public sector banks are significantly less efficient than their counterpart are; however domestic private banks are equally efficient to foreign-owned (joint venture) banks. Furthermore, the estimation results reveal that return on assets was significantly influenced by capital adequacy ratio, interest expenses to total loan and net interest margin, while capital adequacy ratio had considerable effect on return on equity.

Nazir (2010) evaluated the financial performance of the two major banks operating in northern India. This evaluation has been done by using CAMEL Parameters, the latest model of financial analysis. Through this model, it is highlighted that the position of the banks under study is sound and satisfactory so far as their capital adequacy, asset quality, Management capability and liquidity is concerned.

Ongore & Kusa (2013) used linear multiple regression model and Generalized Least Square on panel data to estimate the determinants of financial performance of commercial banks. The findings showed that bank specific factors significantly affect the performance of commercial banks in Kenya, except for liquidity variable. But the overall effect of macroeconomic variables was inconclusive at 5% significance level. The moderating role of ownership identity on the financial performance of commercial banks was insignificant. Thus, it can be concluded that the financial performance of commercial banks in Kenya is driven mainly by board and management decisions, while macroeconomic factors have insignificant contribution.

Said &Tumin (2011) investigated the impact of bank-specific factors which include the liquidity, credit, capital, operating expenses and the size of commercial banks on their performance, which is measured by return on average assets (ROAA) and return on average equity (ROAE). The results imply that ratios employed in this study have different effects on the performance of banks in both countries, except credit and capital ratios. Operating ratios influence performance of banks in China, but this influence is not true for Malaysian banks regardless of the measure of performance.

3 Methodology and Data Description

The financial performance is measured by using one indicator; this is Return on Assets (ROA). In general, financial literature suggests using not only ROA indicator, but also to use the Tobin's Q model and Economic Value add indicators. But in case of Kyrgyzstan's banking sector, there is a data limitation on these indicators. For this reason we do not include Tobin's Q and Economic Value add indictors to our investigations.

The sample of the study consists of the all commercial banks of Kyrgyz Republic. Annual Time series data for independent - dependent variables were extracted from Bulletin of the National Bank of the Kyrgyz Republic for the period 2008-2014.

To assess the financial performance of the Kyrgyz commercial banks, we estimated multiple regression model, which consists of dependent variable and four independent variables, where the ROA is used as an internal financial performance indicator.

The variables used for model represented below:

Dependent variable:

ROA = Net Income / Total Assets

Independent variables:

Bank Size = LOG (Total Assets)

Credit Risk (CR) = Reserves for doubtful loans / credit facilities

Operational Efficiency (OE) = Total operating expense / net interest income

Asset management (AM) = Operating income / total assets

4 Data Analysis and Empirical Results

In table 1, the multiple regression model results are given, which were estimated with least squares method. The parameters estimated have expected signs and statistically significant. The model is checked for goodness of fit, where the adjusted R-square is 97%, so we can conclude that 97% of the variation in the dependent variable (ROA) is explained by the independent variables. This implies that there is strong explanatory power of independent variables. The test for normal distribution, autocorrelation, heteroscedasticity of residuals show that in general there is no autocorrelation and heteroscedasticity in the residuals, and that they are normally

distributed. F-statistics results show that there exist a significant impact of asset size, operational efficiency and asset management on ROA of commercial banks. While we could not find significant impact of credit risk on ROA, and did not include it to the estimation.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	103.1425	10.01395	10.29988	0.0093
LOG(ASSETS)	-6.690830	0.634739	-10.54107	0.0089
AM	-0.806880	0.256685	-3.143460	0.0880
EFFICIENCY	-0.192390	0.034383	-5.595505	0.0305
DUMMY	-2.938533	0.425222	-6.910584	0.0203

R-squared	0.990153	Mean dependent var	3.542857
Adjusted R-squared	0.970460	S.D. dependent var	1.624661
S.E. of regression	0.279236	Akaike info criterion	0.462287
Sum squared resid	0.155945	Schwarz criterion	0.423651
Log likelihood	3.381996	Hannan-Quinn criter.	-0.015242
F-statistic	50.27795	Durbin-Watson stat	3.182984
Prob(F-statistic)	0.019597		

Breusch-Godfrey Serial Correlation LM Test:	Obs*R-squared	2.829108
Heteroskedasticity Test: Breusch-Pagan-Godfrey	Obs*R-squared	4.478302
Jarque-Bera Normality Test	Jarque-Bera stat.	1.278971

Table 1. *Demographic Data for the Study (Efficient ROA with Independent Variables)*

The empirical results show that with increase of asset for 1% the ROA decreases for 6.69 point, which means that if the net income is constant and do not change, then the increase in asset the efficiency of the commercial bank decreases. The other explanatory variable of efficiency, the asset management is not statistically significant. While with increase in operational efficiency the ROA decreases for 0.19 points, this could be explained by the increase in expenditure level in operational efficiency variable, which has negative effect on net income level, which is in ROA indicator. The dummy variable for 2008-2009 years is included for model to adjust the structural break effect of financial crisis in 2008 and its impact in 2009. The result for this variable show that in general return on assets is higher in 2010-2014 period than in 2008-2009.

5 Conclusion

This paper's aim is set to empirically investigate the financial performance of commercial banks of Kyrgyz Republic for the period of 2008-2014. There are a lot of methods for measuring the performance of the banks, such as graphical application, mathematical applications and the others. We have used statistical method on explaining the Kyrgyz Banking system performance. Thus we used Return on Assets as indictor of efficiency of commercial banks, and estimated by multiple regression analysis with explanatory variables, such as bank size, credit risk, operational efficiency and asset management. The model has checked for goodness-of-fit and classical linear model assumptions.

According to results, we find that all the indicators have negative impact and in general return on assets is influenced by assets amount and operational efficiency of commercial banks. This can be due to many reasons. The most important one is, the increasing of profitability may be lower than the growth rate of total assets. In other words, banks are investing more their earned profits. The other one is, profit of the banks is stable but the assets of banks are increasing.

This study contributes to the literature by empirically investigating the determinants of efficiency in commercial banks of Kyrgyzstan. But limitation on data availability for all efficiency indicators, and short period of investigation suggest on further researches to focus for the longer period and include more efficiency indicators to justify the results of this study.

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