Bank Ownership and Performance: Evidence from Russia in a Post Crisis Period

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This paper explores relationship between ownership structures and operating performance of top Russian commercial banks. The findings revealed that foreign ownership has a positive impact on bank performance thus supporting the view that foreign investors bring best corporate governance practices to improve operating performance. However, it fails to find positive association between managerial ownership and operating performance. Similarly, the results show that state ownership is not related to operating performance. We believe that this study demonstrates that governance mechanisms utilized in transition markets related to ownership have some relevance and synergies to specific economies such as Russia.

Keywords*: Ownership structure, Bank performance, Governance, Russia*

1. Introduction

This paper is primarily focused on ownership characteristics of the banking sector of Russia, and the impact of management, foreign, and government ownership on bank performance after the recent financial crisis. Over the past few decades, the influence of ownership structure on bank performance has received increased attention due to international consolidation and cross border activities in the banking sector (Akin et al. 2011).The banking sector of Russia is the largest and most complex among the Commonwealth of Independent States (CIS countries) that are currently in transition from centrally controlled to open market economies. For the last two decades, government owned banks have undergone significant privatization reforms that are distinct from the practice of other transitional economies. Therefore, the banking sector of Russia is of particular interest as it is represented by a mix of government-owned banks, foreign-owned banks, privately owned banks, and domestic banks. These rapidly and dynamically changing ownership features in Russian banks raise several important questions. Specifically, does management ownership lead to better bank performance? Do banks with foreign ownership outperform state-owned banks? To address these questions, we analyze the relation between operating performance and bank ownership features by using a specific set of bank data for the years from 2010 to 2012.

Prior studies on the relationship between ownership structure and bank performance in transition economies provide mixed results. Hasan and Marton (2003) for Hungary, Jemric and Vujcic (2002) for Croatia, Weill (2003) for Poland, Lin and Zhang (2009) for China, and Bayyurt (2013) for Turkey conclude that bank profitability is positively associated with

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foreign ownership as opposed to state owned banks and domestic banks. In contrary to above

findings Nikiel and Opiela (2002) for Poland argue that domestic banks perform better in general than banks acquired or controlled by foreign investors. To add to the existing literature in the context of transition economies, we investigate the association between ownership structure and banking performance, and evaluate the relatively understudied ownership practices of Russian banks.

Though, there exist many research studies focusing on ownership and performance relation in banking systems of transition markets, very limited studies have been conducted on ownership structure of Russian banks. Fungáčová and Poghosyan (2011) conclude that bank interest margin determinants such as market structure, liquidity risk, credit risk, and size of operations differ across ownership groups including state, foreign, and private-domestic ownership. Using quarterly data for the period of 2007-2009, Fungáčová et al. (2013) report that that bank ownership has an impact on credit supply during the crisis in Russia because foreign banks reduce their lending more than other banks. Another study by Anzoategui et al. (2012) suggests that state owned banks in Russia seem to exert more market power than privately-owned institutions. All these studies however focus on the relation of ownership structures with different variables other than bank performance. Therefore, the objective of this study is to extend the existing literature to the setting of a transition market to examine whether dynamic ownership attributes are reflected in operating performance of top Russian banks.

This study attempts to make several contributions to the existing literature. Numerous studies have been done in the context of transition economies; however empirical studies regarding ownership and bank performance in the context of Russia, to the best of our knowledge, are limited. Moreover, most prior studies on emerging markets focus mainly on bank performance outcomes such as ROA and ROE. This study extends existing literature in the context of Russia by including other important operating performance variables namely growth, liquidity, management quality, and capital adequacy attributes in the analysis. Overall, the findings of this study have important implications not only for banks of Russia, but also for regulators, practitioners, and global investors worldwide to draw relevant conclusions on the setting of transitional economies such as Russia.

The remainder of the paper is organized as follows: Section 2 reviews relevant literature to develop the research hypotheses, Section 3 describes our sample, data and research methods employed, Section 4 reports empirical results, and finally Section 5 summarizes and concludes the paper.

2. Literature Review

2.1 Managerial Ownership and Firm Performance

Jensen and Meckling (1976) note that managerial ownership can minimize agency conflicts between managers and shareholders because managers who hold firm's shares have more incentives to maximize firm value. Prior studies that, examine the relationship between managerial share ownership and bank performance, however, yield contradicting results. Krivogorsky (2006), and Kapopoulos and Lazaretou (2007) report a positive relationship between managerial share ownership and firm performance for European and Greek public companies respectively. Analyzing Zimbabwean listed firms for the period of 2002-2004,

Mangena and Tauringana (2008) conclude that directors' share ownership is positively associated with financial performance. Some studies (Ho and Williams, 2003; Sandra et al., 2005; Hannifa and Hudaib, 2006) find that managerial share ownership is negatively related to a firm's financial performance. For example, Ho and Williams (2003) report a negative association between directors' shareholdings and physical and intellectual capital performance in a sample of 84 South African listed firms. Sanda *et al.* (2005) also document an inverse relationship between directors' shareholdings and financial performance in a sample of 93 Nigerian listed firms from 1996 to 1999. For the Malaysian market, Haniffa and Hudaib (2006) provide supporting evidence that the link between directors' share ownership and firm performance is negative. Another stream of literature argues that directors' share ownership has no impact on performance. In particular, Demsetz and Lehn (1985) find no cross sectional relationship between accounting returns and insider shareholding for 511 US companies. Using a sample of 600 US listed firms from 1984 to 1992, Himmelberg *et al.* (1999) find that directors' share ownership is not correlated to Tobin's Q. Similarly, Vafeas and Theodorou (1998) and El Mehdi (2007) provide empirical evidence which is consistent with the view that managerial ownership has no impact on firm financial performance in the case of 250 UK and 24 Tunisian listed firms, respectively. Although prior studies provide conflicting results, the agency theory suggests that managerial share ownership improves firm financial performance. Therefore, the following hypothesis is proposed:

H1: There is a positive association between directors' shareholdings and banking performance.

2.2 Foreign Ownership and Firm Performance

It is assumed that foreign ownership improves corporate performance through effective corporate governance practices. These are investors who come to invest in the economy of another country for a good return on their investment and would therefore ensures effective monitoring of management to avoid any managerial expropriation. These are global investors that come from countries with best practices of corporate governance that uphold the tenets of effective governance practices and would like to implement those them where they invest. In other words, the institution of these stringent control mechanisms leads to better performance. For instance, Hasan and Marton (2003) conclude that foreign banks in the banking sector of Hungary are associated with lower inefficiency. Similarly, Kasman and Yildirim (2006) provide evidence that foreign ownership is positively associated with bank performance in the eight Central and Eastern European countries. Using a sample of foreign and domestic banks in Turkey, Bayyurt (2013) also reports that banks with foreign ownership provide better performance than domestic banks. Therefore, based on the majority of prior studies supporting positive relation between foreign ownership and bank performance, it is hypothesized:

H2: There is a positive association between foreign ownership and banking performance.

2.3 Government Ownership and Firm Performance

Government ownership is another common feature of Russian business environment. The government's involvement in the financial sector is particularly evident in commercial banks of CIS countries. Empirical findings on the association between government ownership and performance are, however, mixed. For example, Hovey et al. (2003) report that firm performance is negatively associated with state ownership in China. Similarly, Bai et al. (2003) conclude that market valuation was lower in government owned corporations which in turn means that state interference leads to negative performance. In contrast, Ang and

Ding (2006) document that government linked companies show higher market valuation than non–government linked companies in Singapore. Hossain et al. (2013) also report that state ownership of banks, particularly in the Asia-Pacific region, prevents sharp losses during financial crises without sacrificing earnings in normal periods. Given significant influence and control by the government in the banking sector of Russia as well as the majority of prior studies providing positive relationship between government ownership and performance, it is hypothesized:

H3: There is a positive association between government ownership and banking performance.

3. The Data and Methodology

The data used in our empirical analysis include top 30 publicly traded Russian banks that are listed in the Russian Stock Exchange (RST). After eliminating potential outliers by dropping 1 percentile from both tails, we obtain a final sample consisting 85 year observations from 30 Russian banks for the period of 2010 through 2012. By the end of 2012, the sum of total assets of these 30 banks totaled approximately $750 billion thereby representing a relatively large portion of total economic resources of the banking system of Russia according to Pareto principle (80/20 Rule). Data on operating performance were obtained from financial statements, while data on ownership characteristics were hand collected from annual reports and investment memorandums that are available in websites of the sampling banks. Following Wang et al. (2012), we use performance variables including capital adequacy, asset quality, management, earnings, and liquidity characteristics (CAMEL) to measure accounting and operating performance of the sampling banks. In total, there are seven output performance ratios that assess five components of CAMEL criteria. Since financial reports of the sampling banks are presented in Russian Ruble, accounting and finance data are converted to US dollars based on exchange rates provided by the Central Bank of Russia for the period of 2010 and 2012. In particular, income statement items are converted based on average annual exchange rates while balance sheet items are converted based on spot rates at a reporting date.

3.1 Operating Performance Variables

Following prior studies, we define capital adequacy (CAPAD) as total equity divided by total assets. A higher ratio suggests that a sampling bank has higher ability to absorb unpredicted capital losses (Wang et. al, 2012). Asset quality (GROWTH) is measured as annual asset growth ratio that captures abilities of banks to expand their business activities. Management quality is assessed to determine the managerial efficiency of bank performance in adhering with regulatory compliance and maintaining effective internal control systems (Wang et. al, 2012). To measure management quality, we define net interest income ratio (NIM) as net annual interest income divided by average bank earning assets. A higher ratio indicates higher management quality, which in turn leads to better bank performance.

To measure earnings quality, we use two accounting profitability variables namely return on assets (ROA) and return on equity (ROA). High ratios indicate effective and efficient use of a bank's assets by management in maximizing shareholders' value. As for proxies to measure liquidity, loan to assets ratio (LOAN1) and loans to deposits ratio (LOAN2) are employed. High ratios indicate that a sampling bank is loaned up, and therefore there is a high probability of financial default.

3.2 Independent Variables

The independent variables in this study include three ownership characteristics namely 1) management ownership, 2) foreign ownership, and 3) government ownership. Management ownership is measured as the proportion of shares held by executives of the bank to total shares outstanding. Managers with higher ownership stakes are motivated and, therefore have more incentives to increase bank performance. Hence, the estimated coefficient for MOWN is expected to be positive. Foreign ownership measures ownership levels held by foreign investors and is proxied as the proportion of shares held by foreign investors to total shares outstanding. It is assumed that foreign investors bring effective corporate governance practices to improve bank performance. As a result, the estimated coefficient for FOWN is expected to be positive. Government ownership measures state ownership of control of a sampling banks the Russia government. GOWN is a dummy variable that takes a value of "1" if the Government holds at least 20 percent of ownership in the bank, otherwise zero. According to IAS 28 ("Investments in Associated and Joint Ventures"), if an investor holds at least 20% of ownership, then it is presumed that an investor has significant influence over activities of an investee. Therefore, we classify state ownership and assign 1, if the government is holding at least 20% of the voting power of a sampling bank. It is assumed that significant influence, control, and substantial state support from the government side lead to better bank performance, so the estimated coefficient for GOWN is expected to be positive.

Two control variables are included in our analysis namely bank age (AGE) and bank size (SIZE) to account for the potentially confounding effects of bank specific factors. SIZE is the natural log of total assets of the bank, included as proxy to capture the size of bank activities and operations. Finally, AGE is measure as a number of years since foundation of the bank.

To analyze the relationship between ownership structure and bank operating performance, the following model is employed based on a stepwise regression technique:

$$BANK\ PERFORMANCE_{it} = \alpha_0 + \beta_1 MOWN_{it} + \beta_2 FOWN_{it} + \beta_3 GOWN_{it} + \beta_4 AGE_{it} + \beta_5 SIZE_{it} + \varepsilon_{it,}$$

Where indices i and t stand for bank and year respectively, α_0 is the fixed effects intercept, MOWN is the managerial ownership, FOWN is the foreign ownership, GOWN is the government ownership, SIZE is the bank size, AGE is the bank Age, and ε is the error term. In the stepwise regression analysis, first we selected operating performance as dependent variables, and then we inserted the control variables. The next step, we inserted corporate governance variables one by one. This was essential to reveal the influence of individual or identical variables on the operating performance of the banks.

4. The Findings

Table 1 presents descriptive statistics for performance variables in a post crisis period of 2010-2012. The mean value of ROA and ROE is 1.60% and 13.05% respectively. In terms of growth, the result shows that the sampling banks grew on average by 25.62% after the economic crisis. The mean value of capital adequacy ratio is 12.26% and varies between 7.14% and 23.11%. The net interest margin ratio has a mean value of 5.63%. Finally, the average value of LOAN 1 and LOAN 2 is 65.45% and 100.96 % respectively.

Table 2 reports descriptive results for independent and control variables. The results for ownership structure show the mean of management and foreign ownership is 4.63% and

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20.78% respectively. The age characteristic of the sampling banks ranges between 10 and 171 years. Finally, the results for SIZE show that the average value of total assets is $33 billion, and varies between $3 billion and $497 billion.

Table 1: Descriptive statistics
The table 1 reports the descriptive statistics on operating performance of Russian banks for the period of 2010-2012.

	Capital Adequacy	Asset Quality	Management	Earnings		Liquidity	
N=85	CAPAD (%)	GROWTH (%)	NIM (%)	ROA (%)	ROE (%)	LOAN1 (%)	LOAN2 (%)
Mean	12.26	25.62	5.63	1.59	13.05	65.45	100.96
SD	3.21	25.95	3.90	1.33	9.31	8.87	22.99
Median	11.60	19.96	4.50	1.50	12.72	65.18	99.59
Minimum	7.14	-10.00	1.20	-0.78	-4.94	31.72	39.78
Maximum	23.11	132.39	19.30	6.91	37.12	85.95	159.08

Notes: CAPAD = total equity/total assets*100, GROWTH = (total assets$_t$ – total assets$_{t-1}$)/ total assets$_{t-1}$*100, NIM = annual interest income/average banking earning assets*100, ROA = net income/total assets*100, ROE = net income/total equity*100, LOAN1 = total loans/total assets*100, total loans/total deposits*100.

Table 2: Descriptive statistics
The table 5 presents the descriptive statistics on ownership characteristics and control variables including age and size of Russian banks for the period 2010-2012.

OBSER		MOWN	FOWN	GOWN	AGE	SIZE (ln)	SIZE (US$ millions)
	Mean	4.63	20.78	0.31	23.36	16.45	32,928,225.55
N = 85	SD	11.22	33.61	0.46	28.39	1.08	72,789,783.38
	Median	0.00	0.00	0.00	19.00	16.16	10,391737.37
	Minimum	0.00	0.00	0.00	10.00	14.92	3,008,491.73
	Maximum	56.43	100.00	1.00	171.00	20.02	497,115,574.58

Table 3 presents the Pearson correlation results between variables. The results show that foreign ownership is positively and significantly correlated with operating performance variables except GROWTH and LOAN1. Management ownership is negatively correlated with operating performance variables, but the correlation is not statistically significant. Government ownership is negatively correlated with net interest margin ratio. Significant negative correlation is found between foreign ownership and state ownership.

To test for the presence of multicollinearity, the variance inflation factor (VIF) is used for each independent variable in the sample. The results show the VIF values of all independent variables are less than 10 thereby suggesting that a little multicollinearity is present between variables.

Table 4 reports regression results on the influence of ownership variables on bank operating performance for the period of 2010-2012. The results show that foreign ownership is statistically significant and positively associated with operating performance variables except GROWTH. This suggests that banks owned by foreign investors have higher operating performance in a post crisis period in the context of Russia. The findings support Hasan and Marton (2003), Kasman and Yildirim (2006), Bayyurt (2013) who reported that foreign ownership is positively associated with bank performance.

In terms of management ownership, the results indicate that management ownership is unrelated to bank performance except capital adequacy ratio at 10% significance level. Contrary to expectations, these findings do not support the agency theory argument that managerial ownership improves banks performance. The findings are consistent with empirical evidence provided by Demsetz and Lehn (1985), Vefeas and Theodorou (1998), and El Mehdi (2007) who concluded that managerial ownership has no impact on firm financial performance.

Finally, the results for government ownership indicate that state influence and control have no impact on bank performance. However, government ownership is statistically significant and positively related to loan to deposits ratio (LOAN2) at 5% significance level. This means that the government injects capital into struggling industries via state owned banks' in a post crisis period for macroeconomic stabilization. Another possible explanation is that state banks increased their lending in order to support presidential election in 2012, when Vladimir Putin became Russia's president for the third time. As noted by Dinç (2005) state owned banks in emerging countries substantially increase their lending during election years relative to private banks. Given that the estimated coefficients are positive, our findings partially support Hossain et al. (2013) who conclude that state ownership of banks prevents sharp losses during financial crises. This can be explained by the government involvement in the banking sector to support financially during the crisis and provide a balanced risk–reward trade-off even after the crisis.

With respect to control variables, there are several major significant results. For example, AGE is positively related to ROA and ROE. This indicates that older banks performed better in terms of earnings in the period of 2010-2012. The results also show a negative association between SIZE and net interest margin ratio which indicates that larger banks demonstrated lower efficiency in terms of managing economic resources.

Table 3: Pearson correlations among variables in the post crisis period of 2010-2012 (N=85)

	ROA	ROE	GROWTH	CAPAD	LOAN1	LOAN2	NIM	MOWN	FOWN	GOWN	AGE	SIZE
ROA	1											
ROE	.914**	1										
GROWTH	.323**	.384**	1									
CAPAD	.264*	-.042	-.113	1								
LOAN1	.279**	.231*	-.083	.087	1							
LOAN2	.301**	.178	.111	.344**	.474**	1						
NIM	.728**	.551**	.161	.400**	.343**	.285**	1					
MOWN	-.144	-.111	-.084	-.228*	.053	-.172	-.122	1				
FOWN	.444**	.282**	.075	.426**	.148	.178*	.414**	-.156	1			
GOWN	-.016	.078	-.002	-.032	.100	.162	-.212	-.280**	-.368**	1		
AGE	.175	.249*	.036	-.104	.067	-.059	.004	-.048	-.106	.256**	1	
SIZE	.143	.208	-.036	-.028	.112	-.036	-.052	-.145	-.129	.422**	.893**	1

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 4: Regression Analysis: Ownership – performance relation

This table presents regressions of operating performance variables on ownership variables and controls in the post crisis period of 2010-2012.

	CAPAD	GROWTH	NIM	ROA	ROE	LOAN1	LOAN2
Constant	11.416	2.906	4.635	0.963	6.493	63.202	175.496
	(.000)***	(.005)***	(.000)***	(.000)***	(.000)***	(.000)***	(.000)***
MOWN	-.165	-.138	-.059	-.063	-.050	.162	-.191
	(.100)*	(.221)	(.566)	(.524)	(.630)	(.169)	(.421)
FOWN	.041	.068	0.048	.019	0.086	.056	.193
	(.000)***	(.536)	(.000)***	(.000)***	(.003)***	(.068)*	(.020)**
GOWN	0.145	.099	.068	0.120	0.148	3.396	17.229
	(.176)	(.426)	(.577)	(.261)	(.190)	(.126)	(.011)**
AGE	-.060	0.188	-.069	0.011	0.092	.047	.010
	(.551)	(0.153)	(.521)	(.023)**	(.007)***	(.676)	(.926)
SIZE_LN	.001	-3.896	-.817	-.134	-0.093	.078	-5.064
	(.993)	(0.136)	(.022)**	(.255)	(.457)	(.531)	(.101)
N	85	85	85	85	85	85	85
R-square	.182	.027	.292	.247	.157	.050	.135
Adj.R-square	.172	.025	.248	.228	.136	.026	.080
F-stat	18.409	2.269	6.526	13.285	7.556	2.140	2.469

***, **, and * indicate the significance level at the 1 percent, 5 percent, and 10 percent respectively based on two tailed tests

5. Summary and Conclusions

Using ownership characteristics of top 30 listed banks in Russian Stock Exchange with a total of 85 observations during the 2010-2012, this paper sheds some light on the relation between ownership structure and bank performance. The banking sector of Russia is of particular interest as it is represented by a complex mix of government-owned banks, foreign-owned banks, privately owned banks, and domestic banks. Our findings show that foreign ownership has a positive impact on bank performance thus supporting the view that foreign investors bring best corporate governance practices in order to improve operating performance. This is consistent with empirical evidence provided by Kasman and Yildirim (2006) and Bayyurt (2013). They indicated that foreign ownership has a positive impact on banking performance. However, our findings contradict with earlier studies as it does not support the agency theory in terms of association between managerial ownership and operating performance. More specifically, our results support empirical findings of Sandra et al (2005) and Hannifa and Hudaib (2006) who concluded that managerial ownership is not associated with bank performance. Similarly, the results show that state ownership is not related to operating performance. We believe that this study demonstrates governance mechanisms utilized in transition markets related to ownership have some relevance and synergies to specific economies such as Russia.

The findings our study could assist foreign investors to improve banking performance in emerging markets such as Russia by focusing on corporate governance structure of the companies. Furthermore, our results suggest that banks with a greater degree of managerial ownership and state ownership exhibit lower performance. Therefore, regulators in emerging markets like Russia may wish to revisit their reforms and polices in terms of ownership structure. The findings presented in this study are subject to several limitations that should be taken into account when interpreting the results. For example, the sample of 85 year observations covers only three years after the recent financial crisis. It would be

interesting to add multiple years and conduct comparative analysis for pre-crisis and post-crisis periods. Moreover, the study focuses only on the banking industry of Russia. Further investigations of ownership – performance relationship in other sectors of the financial system including insurance companies, pension funds, investment firms, and other financial institutions would be useful extensions of the study. Another limitation of the study is that the effects of other corporate governance mechanisms such as corporate disclosure practices, board characteristics, CEO compensation and executive education are not studied in this research. Therefore, consideration of these limitations in further analysis would provide more research opportunities in the future. Despite the limitations outlined above, we believe that the findings from this study add to the existing literature on corporate governance in transitional economies such as Russia.

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