

MEASURING THE IMPACT OF GOVERNANCE QUALITY ON BANK VALUATION IN RUSSIA

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Abstract

This paper aims at explaining the differences in valuation of banking firms in Russia from a quality of governance point of view. A sample of acquisition deals and public offerings over the last 5 years is collected with the view of discovering factors that investors deem significant in making a decision whether to invest in a given banking firm and, if so, at what price. In order to standardize the valuations we use price-to-book-value of equity (P/BV) multiple as a dependent variable to be explained. In search of proxies for quality of bank governance and management we arrive at a set of explanatory variables reflecting factors such as managerial experience; degree of compliance with corporate governance best practices (e.g. degree of Board independence, qualification of external auditors); stability of bank's governing bodies (Management Board and Board of Directors); degree of concentration of control in the given bank; economic efficiency expressed in accounting ratios; availability of external credit ratings and solidity of external auditors. We then check which variables significantly contribute to explaining the differences in valuation and devise a least squares multiple linear regression model. The model includes all the factors which have turned out to be statistically significant and relevant to explaining the differences across the valuations of banks in our sample. The outcome allows us to quantify the impact of selected aspects of governance and management on shareholder value.

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1. Introduction

We aim at explaining the differences in valuation of banking firms in Russia from a quality of governance point of view. ‘Common knowledge’ has it that financial markets and individual investors reward better-governed companies and banks by higher price of their equity. Conversely, shortcomings in the area of governance must lead to a destruction of shareholder value. While this assumption does not cause logical difficulties, its accurate testing with empirical data is a challenge in emerging markets like Russia. There is no single widely-accepted methodology to measure the quality of governance. Data on company valuation are not readily available for econometric analysis because very few banking institutions have equity securities in free float in the stock market. Our paper will do its best to start closing these gaps.

The paper is organized as follows. In *Section 2* we give a concise review of publications devoted to the connection between quality of governance on a firm level and the valuation of the firm. *Section 3* lists the main theoretical hypotheses that we would like to test on Russian bank data. *Section 4* indicates the sources of data that we use. *Section 5* offers a detailed discussion of our explanatory variables. *Section 6* contains the description of the model and the results of estimation. In *Section 7* we offer an interpretation of the received results. *Section 8* concludes with the main findings and directions for future research.

2. Review of literature

One can find two main clusters of research related to our subject: one on assessment and quantification of governance quality in Russian banks, and the other on the interplay between governance and firm valuation.

Standard & Poor’s, the rating agency, has developed a methodology for appraisal and scoring of corporate governance resulting in a corporate governance rating in two different scales – national and international (Standard & Poor’s, 2006). The methodology includes basic principles and criteria and differentiates between country background and individual company analysis. The main 4 components of company analysis are: ownership structure and external influence; shareholders’ rights and the relations with affiliated persons; transparency, information disclosure and audit; and Board of Directors structure and effectiveness. The coverage of companies by corporate governance rating has remained extremely limited, and to date only one Russian bank has been awarded such a rating.

In 2008 Standard & Poor’s published its substantially modified methodology of corporate governance ratings under the name of GAMMA — Governance, Accountability, Management Metrics and Analysis (Standard & Poor’s, 2008). The approach shifts its focus away from an

abstract appraisal of governance in the given bank against the background of ‘best practice’ towards an analysis of specific risks taken by investor. GAMMA’s main components are: influence by shareholders; shareholders’ rights; transparency, audit and risk management system; and Board of Directors effectiveness, the process of strategizing, and compensation system.

Since 2004 the Russian Institute of Directors (RID) jointly with Expert-RA rating agency (RID & Expert-RA) have been awarding ‘national corporate governance ratings’ based on proprietary methodology.

Standard & Poor’s also publish regular surveys of transparency and disclosure of Russian banks. The latest survey (Standard & Poor’s, 2007) covers top 30 banks and aims to appraise the degree of disclosure of information relevant for investment community, against ‘international best practice’. The focus is on comprehensiveness and integrity of publicly available information on main operational parameters, financial soundness, ownership structure and corporate governance mechanisms. Although Standard & Poor’s explicitly warn that their transparency and disclosure score should not be used to gauge corporate governance quality, the two concepts have much in common and display high degree of synchronization.

International Finance Corporation published in 2007 a new survey of corporate governance in Russia’s banking sector (IFC, 2007), covering 82 private institutions. IFC examines commitment to good corporate governance; practices of the Supervisory and Management Board; transparency and disclosure; internal control and risk management; and shareholder rights. The survey stops short of awarding individual ratings to banks and comparing them against a common scale. This survey insightfully examines the practices of both the Supervisory and Management Boards together and their interplay, while most other publications tend to limit their scope to the structure and practices of the Supervisory Board only.

The link between the quality of governance and the valuation of companies is sufficiently researched with regard to mature markets but much less so for emerging markets. Morck *et al.* (2005) review the large literature that explores the connection between country-level rules affecting corporate governance and firm behavior and the strengths of securities markets. Klapper and Love (2004) analyze connection between a measure of firm-level governance and share price on a cross-country basis. On the level of one emerging market country (Korea) Choi and Hasan (2005) examine the effect of ownership and governance on firm performance and discover evidence that: the extent of the foreign ownership level has a significant positive association with the bank return and a significant negative association with the bank risk; the number of outside board of directors does not have any significant affect on performance; the presence of a foreign director on that board is significantly associated with bank return and risk.

Bernard S. Black has made a seminal contribution to the study of the impact of governance on firm valuation in Russia and other emerging markets (Black, 2001; Black *et al.*, 2006). In order to obtain a combined index of governance in Russian firms, 6 indices produced by 6 different agencies for irregular periods are standardized and put together. Black *et al.* find an economically important and statistically strong correlation between governance and market value. At least in Russia, governance predicts firm value in a firm fixed effects framework. There are large differences between OLS¹ and fixed effects results. This casts doubt on OLS results, and thus on most prior work on the connection between governance and firm value. How one measures governance matters.

3. Theoretical hypotheses

Corporate governance is the system by which companies are directed and controlled. In a narrow definition governance is a mechanism for defending shareholders' interests and property. Corporate governance contributes to the development of the public and private capital markets. There is assumed to exist a positive connection between broad measures of firm-level corporate governance quality and higher share prices (Black *et al.*, 2006). If so, then specific factors usually associated with 'international best practice' of corporate governance must also display positive connection with firm's value. Among such factors we list disclosure of information and transparency of the bank; coverage by major and internationally recognized external auditors and credit rating agencies; existence of a strong, competent and independent Board of Directors; presence of a coherent and competent banking team; fair representation of all shareholders, including minority ones, and reliable systems to protect their interests; and built-in constraints to opportunistic action by bank insiders and affiliated persons. Financial markets are presumed to reward by a higher valuation of equity what they perceive as good governance. Conversely, the perceived insufficient quality of governance leads to loss of shareholder value in companies from emerging market countries including Russia.

These are some of the theoretical hypotheses that we try to test in the paper.

4. Data

We have collected a sample of acquisition (takeover) transactions and public offerings of common stock by Russian banks over 2005-2008 to analyze differences in valuation. Data on deals come from a variety of sources including major industry databases (such as *Hoover's* and

¹ Ordinary least squares

Bankers' Almanac) and press reviews. Initially the sample consisted of 25 transactions including several transactions by the same entity (e.g. the consecutive public offerings by Vozrozhdenie Bank and a series of transactions with the shares of Rosbank). The sample only includes major transactions, i.e. concerning entities with over USD 100 million equivalent in assets. This filter was introduced to avoid having to analyze the acquisition of licenses rather than of working businesses. We only managed to collect part of the data necessary for the analysis and had to exclude more than half of the initial sample for various reasons. Some of the banks did not make adequate disclosure of information. Other banks have reorganized so deeply that any data about the initial entity has been completely pulled from information systems (e.g. Investsberbank has removed all pre-acquisition data from public databases). The so-called 'people's IPOs'² of Sberbank and VTB were dropped because, in our opinion, those deals were largely off-market, given the degree of state support received and the emphasis on non-qualified investors.

The final sample includes 11 deals starting with 2005 sale of KMB-Bank to Intesa and the last deal being the sale of Uniastrum Bank to the Bank of Cyprus in mid-2008 (see Appendix). Our data can broadly be classified into several categories of transactions. One major category would be the direct sale of business or a controlling stake in its equity – a recent example would be the sale of 80% stake in Uniastrum Bank to the Bank of Cyprus in June 2008. Another broad class of transactions would be the public offering, including both the initial public offerings and seasoned public offerings. An example of the former would be the IPO of Vozrozhdenie in August 2006, an example of the latter one would be the SPO³ of Vozrozhdenie in May 2007.

We have chosen to use only the acquisition deals and stock offerings primarily because they provide a measure of the firm's value that is straightforward to interpret. We have also considered the use of yields on fixed-income instruments, yield spreads and similar measures (Bokov, 2007), but these require additional assumptions to be included into the model and would create multiplicative uncertainty in the outcome. It might appear that for consistency's sake we should have eliminated from the sample the deals involving acquisition of one foreign-controlled bank by another foreign bank, such as Intesa taking over KMB-Bank from EBRD and the Unicredit's purchase of control over International Moscow Bank from its Finnish partners. Perhaps at the next stage of analysis we will replace these cases by 'genuine' Russian bank cases, but at this point we could not afford losing the two observations from the sample.

² Initial public offering

³ Secondary (seasoned) public offering

Financial indicators and ratios have been taken from Bankscope database and also from Bankers' Almanac. Finally, the data on shareholding and personal details of top managers and Directors come from regulatory statements submitted on a quarterly basis by all issuers of securities to the Russian regulatory authority (Federal Financial Markets Service).

5. Variables

We chose price-to-book-value (P/BV) ratio of banks as the *dependent variable* in our model. This indicator has the advantage of being the most commonly used measurement of bank valuation, particularly in the absence of highly developed and sophisticated stock markets that involve a broad range of equities issued by banks. The choice of P/BV allows to sterilize the effects of banks' sheer size on valuation. At the same time, some of the P/BV multiples result from single large transactions, rather than from an infinite number of small market-based interactions. Large single transactions, especially those involving shift of control over the bank, are by definition always unique and may be concluded on terms well beyond market-proven price corridors at each point in time.

As for *explanatory (independent) variables*, having just one explanatory variable for differences in bank valuation would have rendered simplicity to the econometric analysis. At the outset we were tempted to employ one of the existing ratings of corporate governance, e.g. that assigned by Standard & Poor's, but the use of already-available indices is deterred by their meager coverage of banks – e.g., just one Russian bank holds a corporate governance rating from Standard & Poor's, and another one bank a rating from RID & Expert-RA.

We focus on the following *range of candidate independent variables*:

1. Quality of auditors (AUDITORS) is used as a proxy of bank transparency that is an essential component of governance quality. AUDITORS is a dummy variable taking a value of 1 if the bank's external auditor is a 'Big-4' accounting firm (Ernst & Young, Deloitte, KPMG, or PricewaterhouseCoopers), and a value of 0 otherwise. We think that, *ceteris paribus*, it is better-governed banks that undertake efforts to increase transparency, to disclose more information and subject themselves to the scrutiny of external auditors of proven integrity and rigor. Global capital markets generally require the issuer to provide investors with highly reliable financial information. Quality of audit and the integrity of the auditors significantly affect the quality of information available to financial markets, while lack of proper audit impairs a bank's ability to raise funding from those markets. We expect that the more transparent the bank is, the smaller the acquirer's discount for possible risk of accounting fraud. Overall AUDITORS is assumed to have a positive correlation with bank valuation.

2. Average age of top-managers and Board of Directors members (MB_AGE and BOD_AGE, respectively). We take age as a proxy of quality of governance on the assumption that the length of general work experience counts towards maturity. Suitability of age as proxy for experience and maturity can be challenged. However, the Russian market economy is relatively young, its market-based banking system has only been in existence for less than 20 years, and there are very few individuals with over 20 years of relevant banking experience. Many management teams in Russia tend to be ‘outrageously’ young by Western standards (in the 1990s, bank CEOs in their early 20s were not uncommon), so members of the Board of Directors (hereafter also called ‘Directors’) must possess a different mix of qualities and competencies to balance those of the executive management. At the Board of Directors level one hopes to see experience, wisdom and maturity rather than youth and creativity, hence age is a positive quality for a Director, provided that it does not reach an extreme level well beyond the official retirement age. Therefore we intuitively expect BOD_AGE to impact value positively. We are less confident with respect to the sign of indicator MB_AGE. Excessively young top-managers can be volatile and lack essential experience, while advanced-age managers may lack drive, ambition and modern know-how.
3. Rating agency coverage (RATINGS) – a variable counting the number of credit rating agencies that cover the bank. The range of this variable is from 0 when the bank is not rated by either of the major globally recognized ratings agencies - Moody’s, Standard & Poor’s, or Fitch Ratings, to 3 when rated by all 3 of these agencies. Rating agencies are expected to perform a thorough and impartial risk assessment on behalf of investors. Similarly to AUDITORS, the extent of ratings agencies’ coverage could significantly impact the ability of the firm to raise funds from public financial markets. Higher value of RATINGS indicator might reflect greater transparency and better governance.
4. Size of the Board of Directors (BOD_SIZE) – the number of people sitting on the Board. We assume that going over some notional threshold of the Board size⁴ would jeopardize the Board’s inefficiency for two reasons: (a) an excessive numerical composition is usually an indicator of irrelevance of at least some of Board members; (b) big size of the Board might inhibit productive discussion, lead to a bureaucratization of the Board functioning and thus adversely impact the ability of the firm to make swift and timely policy decisions. At the same time, too small a Board may not allow different views and interests to be represented.

⁴ From practical experience and empirical evidence of corporate governance in Russia we take the number of 7 directors as a tentative threshold of optimal size of a Board.

5. Degree of Board independence (BOD_IND) – share of independent⁵ Directors sitting on the Board. This variable might counter-balance our previous variable BOD_SIZE. The Board has to be reasonably independent from the bank management in order to avoid conflicts of interest in deciding on policy matters. It is worth mentioning here that the Russian legislation expressly limits the maximum number of members of the Management Board to sit on the Board of Directors to 25% of the Board of Directors. The law also forbids the same person to combine the positions of CEO and Chairman of the Board of Directors. We assume that the investors expect the Board to perform fiduciary duties and the independent directors will not have the conflict of interest unlike the managers whose actions the Board is expected to monitor.
6. Shareholder concentration (SCRATIO) – the sum of shares of top 3 shareholders in the charter capital of the bank. We expect this indicator to have positive impact on price in case of acquisitions, while its impact in the case of public offerings is uncertain. An acquirer who wishes to quickly gain control and not to have to deal with minority shareholders must be inclined to pay a premium to book value of the bank. At first glance, SCRATIO appears to express a premium paid for control over the bank. Actually SCRATIO is less about the price at which control over the bank is sold but more about dispersion of remaining stock after acquisition. At the same time, minority stake holders and potential investors in bank shares at an IPO or SPO can reasonably doubt their potential clout over decision-making in a bank where one or a few intimately affiliated individuals have been firmly entrenched (on entrenchment of blockholders against new shareholders see LaPorta et al., 1999).
7. Stability of the Management Board (MB_STABILITY) – average tenure of Management Board (*pravlenie*) members. Low turnover among top managers can mean that there are no major conflicts within the Management Board, the management team is coherent and balanced and one of high quality. The assumption stands that an acquirer depends on the cooperation and goodwill of the previous top-management, be it only for statutory reasons and for the sake of business continuity. An acquirer should also want to keep in place a successful and competent management team that has performed so well in the past. In turn, a stable management team can be assumed more likely to stay with the bank after ownership change. If so, then high value of MB_STABILITY should lead to an extra premium that an acquirer is prepared to pay for the bank.

⁵ Russian law defines an independent Director as a person who is not a member of the firm's management and has not been one over the previous year.

8. Stability of the Board of Directors (BOD_STABILITY) – average tenure of Directors. This variable can impact valuation with either positive or negative sign. On the one hand, low rates of turnover in the Board can be viewed as an indicator of maturity, stability, continuity and firm control by key shareholders, thus attributing a positive sign to this indicator. On the other hand, a protracted period of Directors' duties might be an unequivocal sign of entrenchment of key shareholder (-s) against all other parties, including minorities. Russian law does not support the institution of 'staggered boards' and the entire Board is re-elected every year at the regular annual meeting of shareholders. Voting usually follows the 'cumulative' model, meaning that a single drop-out between regular annual meetings triggers full Board re-election at an extraordinary meeting. The absence of such corporate events might reflect various phenomena. Another consideration is that a bank with an overly 'stable' Board is prone to enjoy comfort, become lazy and averse to risk-taking, innovation and adjustment. There is also a risk that over time material interests of Board Directors might become increasingly aligned with those of the bank management rather than its shareholders. Aforementioned phenomena would denote poor governance and explain a possible negative impact of BOD_STABILITY on bank valuation.
9. Financial efficiency measured through accounting ratios - return on average assets (ROAA) and return on average equity (ROAE). Financial efficiency is widely recognized as a proxy for management quality. The obvious hypothesis is that more profitable and efficient firms should have higher price-to-book-value ratios because higher ability to earn profits allows the acquirer to recover the costs of acquisition sooner. A higher price is offset by a shorter payback period.
10. Time period (TIME) – a variable, representing the quarter in which our observation is made (a transaction is completed). The variable takes on integer values between 1 and 22, with 1 corresponding to Q1 2003, and 22 corresponding to Q2 2008. This variable was included to account for any possible overall increase or decrease in bank acquisition activity over time thus confounding with the specific company characteristics affecting valuation. We decided to include TIME in our sample, along with variables featuring the quality of governance and management in a bank, in order to control for the effect of natural market evolution. Rising confidence in the Russian banking sector, cheaper targets bought first. Variables 1 – 10 (and especially variables 1, 2, 3, 5, 7 and 8) might display co-linearity with TIME because the natural evolution of governance quality is expected to be one of gradual improvement over time.

Table 1 summarizes in alphabetic order a tentative set of independent variables to be included in the model and anticipates the sign of these variables' impact on the dependent variable (P/BV).

Table 1: *Ex-ante* set of explanatory variables

Variable	Stands for	Expected impact
AUDITORS	Dummy variable, checking if the bank has a Big-4 auditor	Positive
BOD_AGE	Average age of the members of the Board of Directors	Positive
BOD_IND	Share of independent directors on the Board	Positive
BOD_SIZE	Size of the Board of Directors	Negative
BOD_STABILITY	Average tenure of directors measured in months	Uncertain
MB_AGE	Average age of the members of the Management Board	Uncertain
MB_STABILITY	Average tenure of the members of the Management Board measured in months	Positive
RATINGS	Number of major rating agencies covering the bank	Positive
ROAA	Return on average assets	Positive
ROAE	Return on average equity	Positive
SCRATIO	Sum of top 3 shareholders' shares of equity	Positive for acquisitions, uncertain for public offerings
TIME	Quarter in which the transaction has been completed	Positive

We have also considered several other candidate variables, but decided not to include them in the model either on theoretical grounds or for practical reasons. Western concepts of corporate governance may attach weight to factors that in the Russian circumstances play a different role. For instance, S & P focuses on ownership structure and external influences as one of four main areas driving the cumulative rating of corporate governance. Russian banks display a very high degree of ownership concentration with a blockholder present in each bank, so this indicator becomes a dummy variable with value next to constant. Another example is a dummy variable reflecting whether the CEO and the Chairman of the Board of Directors is the same person (situation quite common in American banks). Russian legislation prohibits such practice, so all companies in the sample share this feature, therefore inclusion of this variable would not add value. Some of the indicators of corporate governance quality suitable for mature markets

(e.g. frequency of Board meetings, the number of Board committees, and proportion of outside Directors) become mutilated by the basic Russian cultural institution of tolerating a huge gap between form and substance. Most of the recorded Board meetings may have never taken place; Board committees can exist on paper only; and many Directors positioned as non-affiliated to the executive management of the company are actually insiders or beneficial owners. Invitation of foreign nationals to a Board of Directors might be used as a proxy for good corporate governance in Korea (Choi, Hasan, 2005), but in Russia this indicator can work with an opposite sign: it is highly likely to be a pure window-dressing and attempt to manipulate investors, which in our opinion constitutes bad governance practice.

Relevant basic education and banking background of top managers and Directors appear to be pre-requisites of good governance. It would have been preferable to proxy the experience of managers and Directors by relevant banking background rather than by MB_AGE and BOD_AGE, but publicly available data on banking experience of each individual is limited to 5 years preceding the moment of reporting, which prevents us from appraising the full extent of banking backgrounds. Also, the Bank of Russia, the national bank regulator, demands a relevant (economic, financial or legal) education for all Management Board candidates, along with at least two years of immediate managerial experience in banking, so absolute majority of top-managers would pass a formal test. As regards Directors, while key competences need to be represented at the Board level, we acknowledge the school of thought that values diversity of backgrounds and personalities among directors. A Board consisting of look-alikes with very similar life patterns is not necessarily the most efficient Board. Thus the criterion of availability of relevant basic education and banking background does not fully apply to Directors.

6. The model and estimation results

In order to quantify the impact of selected indicators on the valuation of banks we tried to build a multiple linear regression model, explaining the dependent variable – P/BV ratio.

Our first step was to determine the statistically significant regressors. We approached this task by defining a simple least-squares regression model:

$$P/BV = \beta_0 + \beta_1 * VARIABLE_i \quad (1)$$

where $VARIABLE_i$ is one of the dependent variables defined in the preceding section. We have run a series of ordinary least-squares regressions to see which regressors were statistically significant. We had to employ this procedure rather than running a multiple regression due to a limited number of data points and a wide array of explanatory variables. Having established the set of significant regressors, we built a multiple regression model using P/BV as the dependent

variable and the significant regressors discovered in the previous stage as the independent variables. The results of the estimation appear in Table 2.

Table 2: Significance of individual regressors

Variable	Coefficient	Standard error	P-value
TIME	0.0186	0.0483	0.7096
ROAA	8.2858	32.0697	0.8019
ROAE	0.1269	3.7484	0.9737
BOD_AGE	0.0271	0.0256	0.3161
MB_AGE	-0.0023	0.0352	0.9497
AUDITORS	0.0321	0.3436	0.9275
BOD_SIZE	-0.0104	0.0596	0.8648
RATINGS	-0.4173	0.2104	0.0787
BOD_IND	-0.7224	0.5809	0.2450
SCRATIO	0.7865	0.6503	0.2573
MB_STABILITY	0.0072	0.0052	0.1964
BOD_STABILITY	0.0012	0.0059	0.8433

Comparing these results to *a priori* expectations regarding the impact of our candidate regressors on the dependent variable, it is noteworthy that the first four variables (TIME, ROAA, ROAE and BOD_AGE) have a positive sign as we thought they would. More interesting is the case of MB_AGE where we were uncertain, and it has produced a negative sign. The next two factors (AUDITORS and BOD_SIZE) were in line with our expectations. Going further down the list, two indicators - RATINGS and BOD_IND - actually displayed signs contrary to what we had expected (negative instead of positive). Then we see a strongly positive impact of SCRATIO, in line with our expectations and in view of the predominance of acquisition deals in our sample. The final two factors (MB_STABILITY and BOD_STABILITY) are also consistent with our *a priori* consideration. Overall we missed on two variables (RATINGS and BOD_IND) out of 12 and, judging by the p-value of RATINGS, it appears to be a serious miss.

We then use the criterion of p-value less than or equal to 50% to determine whether a variable is statistically significant or not, and get the list of possible regressors (Table 3).

Table 3: Candidate regressors

Variable	P-value
BOD_AGE	0.3161
RATINGS	0.0787
BOD_IND	0.2450
SCRATIO	0.2573
MB_STABILITY	0.1964

Using this list of candidate regressors we devised the following least-squares multiple regression model:

$$P/BV = \beta_0 + \beta_1 * BOD_AGE + \beta_2 * RATINGS + \beta_3 * BOD_IND + \beta_4 * SCRATIO + \beta_5 * MB_STABILITY \quad (2)$$

Having run a least-squares estimation procedure we have obtained the following output:

Table 4: Preliminary model - regression statistics

R-squared	0.6373
Adjusted R-squared	0.2746
Standard Error	0.4432
Observations	11

Table 5: Preliminary model - analysis of variance

	Degrees of freedom	Sum of squares	Mean sum of squares	F-value	F-significance
Regression	5	1.7253	0.3451	1.7569	0.2756
Residual	5	0.9819	0.1964		
Total	10	2.7073			

Table 6: Preliminary model - regression coefficients

	Coefficient	Standard Error	T-Statistic	P-Value
Intercept	3.7451	1.7735	2.1117	0.0884
RATINGS	-0.1892	0.2665	-0.7098	0.5095
BOD_IND	-0.2234	0.6046	-0.3695	0.7269
SCRATIO	1.2333	0.7789	1.5832	0.1742
MB_STABILITY	0.0138	0.0087	1.5969	0.1712
BOD_AGE	-0.0259	0.0404	-0.6439	0.5479

Considering the output we received from the model, we can further improve our model by eliminating the least significant variables, namely RATINGS, BOD_IND and BOD_AGE. Thus, the new model can be formulated as:

$$P/BV = \beta_0 + \beta_1 * SCRATIO + \beta_2 * MB_STABILITY \quad (3)$$

Running the estimation procedure again we get the following results (Tables 7, 8 and 9).

Table 7: Final model - regression statistics

R-squared	0.5384
Adjusted R-squared	0.4230
Standard Error	0.3952
Observations	11

Table 8: Final model - analysis of variance

	Degrees of freedom	Sum of squares	Mean sum of squares	F-value	F-significance
Regression	2	1.4577	0.7288	4.6659	0.0454
Residual	8	1.2496	0.1562		
Total	10	2.7073			

Table 9: Final model - regression coefficients

	Coefficient	Standard error	T-Statistic	P-Value
Intercept	2.0039	0.5267	3.8049	0.0052
SCRATIO	1.3856	0.5543	2.4999	0.0369
MB_STABILITY	0.0118	0.0045	2.6284	0.0303

7. Interpretation of results

The model has a below-average fit, i.e. it explains approximately half of the variation in the dependent variable (P/BV). The model thus successfully passes the F-test⁶, and all its regressors (including the intercept) are statistically significant. Holding all else equal, a 1% increase in the combined share of top 3 shareholders in a bank leads to 0.0138 units increase in P/BV ratio,

⁶ F-test is a statistical test of null hypothesis that all regression coefficients are simultaneously equal to zero. Failure to accept the null hypothesis means that at least one of our regressors is linearly related to the dependent variable.

while an increase in average tenure of Management Board members by 1 month increases the P/BV ratio by 0.0118 units.

More specifically, our results might be interpreted in the following way from the viewpoint of economics and management theory.

Acquirers are likely to attach positive value to the fact that the target bank is closely held, i.e. to the degree of control exercised by top 3 shareholders (SCRATIO). The higher the ownership concentration, the lower the bargaining power of minority shareholders and less cost for the controlling owner to re-align his new subsidiary.

Stability of the Management Board of the target bank (MB_STABILITY) increases its valuation. This outcome of our modeling does not come as a surprise. Interestingly, empirical evidence suggests that within the first year after ownership change a shake-over of the management team takes place (examples: International Moscow Bank and Impexbank). In most cases it happens at the initiative of managers themselves who do not accept an inevitable reduction of their status within a larger institution, or do not wish to adjust to a totally different corporate culture, or find the new compensation packages unattractive while opportunities for opportunistic action shrinks. By paying a premium for MB_STABILITY, are investors wasting their money on an asset they will not be able to take full advantage of? This matter requires further analysis.

Lack of significance of the number of credit ratings (RATINGS) could mean several things. One reason could be that ratings *per se* are a proxy for credit risk and generally substitute rigorous credit analysis. But any acquisition transaction inevitably includes a very thorough due diligence procedure that may reveal more information than a credit opinion from a ratings agency. There may also be a simple explanation that international credit ratings remain a rarity among Russian banks beyond the first tier, while it has been precisely second- and third-tier banks, with the exception of Rosbank, to fall prey to strategic foreign investors. Buyers just may not expect target banks to have external credit ratings. Another yet explanation is that investors' confidence in external credit ratings has been eroded by recent scandals when the rating agencies failed to do their job diligently.

A similar argument can apply to the lack of significance of the quality of auditors (AUDITORS), because the acquirer will bring in his own team of auditors from a firm he deems qualified enough.

Our study did not find statistically significant correlation between BOD_AGE, BOD_STABILITY and BOD_INDEPENDENCE, on the one hand, and bank valuation, on the other. This sad finding serves as a reality check for the proponents and promoters of corporate

governance in Russia. Even the degree of independence of the Board of Directors apparently creates insufficient value in the perception of the acquirer. Total lack of significance of indicators related to the Board of Directors most likely means that the acquirer intends to reappoint the Board regardless of its qualities. In our sample most transactions represent acquisitions, and it introduces a bias into the regression. Had the sample consisted of a more balanced mix of acquisitions and share offerings, the outcome could have been different because minority investors can be expected to appreciate more the *status quo* of governance in the bank if they have little chance of completely overhauling it. (The same bias may have acted against the significance of indicators RATINGS and AUDITORS). Anyhow, the rationale for setting up strong corporate boards with high degree of independence now looks shakier if there are other options besides an IPO – such expense may not pay back.

The lack of impact of managers' age was predictable and should probably be replaced in subsequent studies by finer proxies of managerial experience, like level of relevant education or relevant banking experience.

Finally, for the irrelevance of profitability measures (ROAA and ROAE) we would suggest three possible explanations: (a) investors mistrust and disregard the reporting disclosed by Russian banks; (b) investors buy Russian banks because they need presence in the rapidly expanding Russian market, and distribution networks have higher potential value than flow of profits; (c) minority investors expect to benefit from capital gains rather than from dividends flow, especially in view of erratic dividend policy of Russian banks and their poor governance.

8. Conclusions

This was our first attempt at quantifying the impact of quality of governance on valuation of banking firms in Russia. Formalizing the measurement of the quality of governance is quite a nontrivial task. We suggest an original set of variables to reflect quality of governance and management. A least squares multiple linear regression model includes statistically significant factors and is applied to explain differences in valuation of 10 banks in our sample. Methodological imperfections notwithstanding, our attempt yielded some interesting findings.

First, investors appreciate the stability of the management team in charge of the target bank and are prepared to pay extra for it, although in practice the chances of such a team remaining in place after an ownership change are slim. Still, having in place a strong coherent management team creates value.

Second, investors seem to prefer closely held banks, probably with the view of avoiding additional hassle of dealing with minority stakeholders and the absence of reliable institutions of corporate governance.

Third, the fact that profitability measures were insignificant for bank price was an unexpected finding, and we keep looking for reasons underpinning it.

Fourth, efforts and expenses incurred in the process of upgrading corporate governance do not necessarily pay off - investors seem to disregard the independence, stability, maturity and size of the Board of Directors, maybe because the intention is to reappoint the Board in any case.

Fifth, investors do not sufficiently reward a bank's exposure to the scrutiny of reputable external auditors and rating agencies. One explanation is lack of trust, another the acquirer's intention to carry out an own thorough due-diligence. Expenses on ratings and 'Big-4' auditors may not yield adequate return.

As for *directions for future research*, we plan to upgrade the approach set out in this paper in two main respects. The *first* way of improvement would be to go back and refine the set of independent variables meant to feature quality of governance. The main challenge here will be finding reliable and comprehensive data to cover various aspects of governance. Several new indicators can be tested for statistical significance – e.g. efficiency ratio (cost/income) that helps to gauge the quality of bank management, and degree of transparency as measured with the Standard and Poor's rating of public disclosure of information.

The *second* possible direction for future research implies broadening the coverage and increasing the sample size. M&A activity in the Russian banking sector has picked up in 2007-2008, partly due to the global financial crisis, so we expect to see more deals throughout the rest of 2008 and 2009. Apart from registering new M&A transactions and including them in the database, we shall try to capture data from stock market trading of Russian bank stocks. We must learn to control for price differences between transactions implying shift of control (acquisitions) and those not affecting control (IPOs, SPOs and stock trading). We may also try going beyond price-to-book-value multiples to employ alternative methods of valuation of the banking business, e.g. by considering yields on senior bonds or hybrid capital products issued by the Russian banks. We will study the impact of a stable set of explanatory variables on bank 'price' resulting from different valuation techniques.

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Appendix

Sample of transactions

Date	Target	Acquirer	Type	P/BV
21.04.2005	KMB-Bank	Intesa	Sale	3.90
31.01.2006	Impexbank	Raiffeisen	Sale	2.90
01.08.2006	Vozrozhdenie	n/a	IPO	4.00
10.10.2006	International Moscow Bank	Unicredit	Sale	2.90
08.11.2006	Orgresbank	Nordea	Sale	4.30
04.12.2006	Promsvyazbank	Commerzbank	Sale	3.40
18.05.2007	Vozrozhdenie	n/a	SPO	3.80
10.09.2007	Absolut Bank	KBC	Sale	3.80
06.11.2007	Bank SPB	n/a	IPO	2.90
03.03.2008	Expobank	Barclays	Sale	4.00
27.06.2008	Uniastrum Bank	Bank of Cyprus	Sale	3.10

Sources: public disclosure; media; our database