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## Research Article

# Financial Performance of Banking Industry of Pakistan: The Role of Corporate Governance Index and Earnings Management Practices

Saira Ashfaq and Muhammad Ali Saeed

Department of Management Sciences, Bahria University, Islamabad, Pakistan

## Abstract

**Objective:** This study investigated the impact of corporate governance index and earning management on firm performance by considering the financial sector of Pakistan. **Methods and Materials:** Generalized method of movement (GMM) is applied for the analysis of corporate governance index, loan loss provision, non-performing loans, borrowings from financial institutions and book value of equity to return on assets. The time period considered for the analysis starts from 2005-2015 considering entire population of banking industry of Pakistan. **Results:** All variables show significant results except loan loss provision. Whereas, the results show a negative coefficient for loan loss provision which means that increase in provisions adversely affect the profitability. **Conclusion:** Analysis of this study, clinches that considered variables do contribute a significant impact on financial performance of banking industry of Pakistan. Non-performing loans does not create an impact on firm performance which shows that firms create this account just for the tax reasons.

**Key words:** Corporate governance index, earnings management practices, firm performance, banking industry, GMM

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**Corresponding Author:** Saira Ashfaq, Department Management Sciences, Bahria University, Islamabad, Pakistan

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**Competing Interest:** The authors have declared that no competing interest exists.

**Data Availability:** All relevant data are within the paper and its supporting information files.

## INTRODUCTION

Corporate governance is a system that improves agency problems between managers and shareholders. The subject of corporate governance has continued to gain pervasive importance among regulators and practitioners, especially after corporate accounting scandals of various investment banks including Merrill Lynch, Salomon, Smith Barney, Credit Suisse, Goldman Sachs, J.P. Morgan and others, due to their deceptive practices of earnings management<sup>1</sup>. Investment banks skirted the regulations rather than emphasizing the financial and economic reality which encouraged the banking business irrespective of the respective performance potential. Partial accounting manipulations created argument in terms of the effectiveness of corporate governance mechanism. Earnings management is the tactic used by the management with intent to maneuver the earnings, so that the stats match the determined target<sup>2</sup>. Managers give the facade of good performance via earnings management by compromising on corporate governance attributes, due to conflict of interest between management and shareholders. Managers have incentives to expropriate the profits, that benefit them<sup>3,4</sup>.

Managers tend to prefer accounting choices that benefit them cost-effectively and maximize their efficiency. Furthermore, Gonzalez and Garcia-Meca<sup>5</sup> also mentioned that the probability of such an opportunistic behavior mounts in the existence of feeble governance structures, which become the cause of reported earnings to weaken and sinking investors buoyancy in financial reports. Therefore, effective corporate governance attributes and mechanisms can be used as a tool to diminish agency costs by rising the monitoring and surveillance of management's activities and restricting manager's opportunistic behavior. Finance companies are the pivotal components of the financial system in most emerging economies<sup>6</sup>.

The governance of financial sector is of importance due to transformation from the traditional operations based on interest income earned from deposits and loans to customers, non-traditional services like wealth management<sup>7</sup>. In order, to prevent negative effects of poor corporate governance on the financial sector, good corporate governance attributes are essential. Corporate governance in financial sectors in developing country like Pakistan is still untapped, despite the wide interests, which this sector needs to address. Corporate governance in Pakistani banking system has been one of the major concerns of all market participants. Further, the banking sector is well thought-out as spine of economy in Pakistan, as it consolidates economic accomplishments. To date, there are

many studies on corporate governance in non-financial sector of Pakistan, yet just limited studies have focused on the bank's corporate governance. Therefore, fundamental aspects of the corporate governance can be applied to banks. This study contributes to the literature as this study is the first to examine the impact of corporate governance on earnings management in financial sector of Pakistan. There is no particularly general definition of corporate governance. It can be defined as practices, law, procedure, policies and codes to monitor and control a corporation<sup>8</sup>. Boards of directors are at the heart of the governance structure of any corporation for its long term performance and performing well. Boards are at the key of any corporate governance system as they bridge a link among three parties of concentration, the shareholders, management and the stakeholders by ensuring appropriate disclosure and transparency. Independent directors increases the monitoring ability of the board as compared to the insider directors, because they are not only less aligned with management but also encourages firms to disclose information to stakeholders. The term independent directors were used interchange with term non-executive directors and outside directors.

Firms overall performance is explicated by board independence that indicates the sound corporate governance structure. Independent directors in local banks are in better position to exchange information because of the fact that they advantage in accessing other privately owned firms data that might reveal favorable opportunities for the firm<sup>9,10</sup>. Further, Stepanova and Ivantsova<sup>11</sup> found a positive relationship among board independence and bank performance. This is because of the fact that not only outside knowledge but also experience brought in the organization that eventually turns as unique resources for the organization.

Moreover, De Andres and Vallelado<sup>12</sup> advised that optimum numbers of independent directors along with organization executive directors create value for the organization. Board size is defined as the total number of directors in a board<sup>13</sup>. Best possible board size constitutes the executive and non-executive directors<sup>14</sup>. The efficiency in composition of the board is significant for governing the company. De Andres and Vallelado<sup>12</sup> found a non-linear effect of board size on bank performance. On the other side, Adams and Mehran<sup>15</sup> suggested that there is positive relationship between board size and the bank performance. Board of directors having diverse educational background blended with experience assist the management in achieving corporate objectives. Germain *et al.*<sup>16</sup> also found that boards with more directors are able to delegate more human resource to supervise and advice. Whereas, on other side it

was proven that smaller boards are strongly connected, efficient and able to monitor the firm more effectively<sup>16</sup>. The latent empirical investigation on board size discover that a larger board influences the performance of a corporation in a negative way due to hurdles with communication, reaching the consensus and agency problems. Audit committee size is one of the vital corporate governance structures that hold the responsibility of financial reporting and disclosure and the audit committee members to be decisively aware of and fully understand their oversight responsibilities. Audit committee, helps the board of directors in discharging their duties in overseeing the financial reporting process<sup>17,18</sup>. Major issue in corporate governance is of determining whether audit committee is an effective sub-committee of a board of directors. The recent corporate scandals have shifted some blame on audit committees in terms of their effectiveness, perhaps because of the reason that they were asleep at the switch<sup>19</sup>. Therefore, need of effective audit committee size cannot be undermined, keeping in view recent corporate scandals. Effective audit committee size can play pivotal role in enhancing public confidence in the credibility and objectivity of the financial reporting and reduced earnings management<sup>20</sup>. Audit committee also increases the integrity of financial statements and minimizes the audit risk and ultimately enhancing the quality of reported figures<sup>21</sup>. Further, an effective audit committee can reduce information asymmetry between management and stakeholders<sup>22</sup>. Vafeas<sup>23</sup> concluded that audit committee's performance can be measured by the size of its members, earlier studies showed mixed results.

Audit committee comprising of majority of independent directors is likely to monitor in a better manner, due to its ability to resist pressure from the management. Further, independent audit committee performs its functions better as compared to less independent committee<sup>24</sup>. Review conducted by Ghafran and O'Sullivan<sup>25</sup> also found independence of the audit committee is not dominated by the management. Further, Woidtke and Yeh<sup>26</sup> also reported that fully independent Audit Committee (AC) with majority independent directors is associated with enhanced informativeness of accounting earnings. In order to incorporate the above components of corporate governance, corporate governance index is developed through the literature<sup>27</sup>.

The significant purpose of corporate governance is to enforce the ethical activities, build the trust of stakeholders by ensuring the transparency and accountability of policy makers and managers of the organization to avoid the principal-agent problem as well. Shleifer and Vishny<sup>28</sup>

explained corporate governance as practices to make sure returns on investments. Asian financial crises and globalization of capital market are 2 major reasons of corporate governance reforms in emerging economies<sup>29</sup>. Rural banks in many emerging economies are implementing the Western corporate governance structure without analyzing the contextual factors of the organization<sup>30</sup>. Keeping in view its importance, this study aimed to estimate the impact of earnings management on performance of Pakistani banking institutions. Further, global financial crises in 2007-2008 had impacted on the financial system of many countries<sup>31</sup>. Banking institutions are not exempted from EM practices, rather they are also more susceptible to this upshot compared to nonfinancial organizations<sup>32</sup>. During the period of high profit, banks managers tend to smooth the earnings by recording more loan losses and vice versa. Loan loss provisions have crucial impact on earning management because these are larger accruals for banks. Therefore, it has the significant impact on the performance and regulatory capital of banks. Less volatile earnings are significant predicate for smooth earnings, stable stock price and performance<sup>33</sup>.

Hasan *et al.*<sup>34</sup>, Fang and Jiang<sup>35</sup>, Kou *et al.*<sup>36</sup> and Lin and Viswanathan<sup>37</sup> determined that failure of one bank effects the performance of others. Association of high level of non-performing loans with failure of banks is evident in prior research. Therefore non-performing loans is one of significant reasons of financial problems in banks.

- H<sub>1</sub>:** There is positive relation between corporate governance index and banking sector performance
- H<sub>2</sub>:** Sound mechanism of loan loss provision maintenance has significantly positive impact on firm's performance
- H<sub>3</sub>:** Non-performing loans are negatively associated with performance of banks

The variables of the study have been selected in compliance to the objectives. The explanatory variables include both market based measures and accounting based measures. Klapper and Love<sup>38</sup> used corporate governance index to measure the firm-level performance, present study has also created a governance index for the financial sector in Pakistan. Non-performing loans was the major reason for the causes of global financial crisis. Financial crisis is an on-going phenomenon which emerged on the surface in 1929 called the great depression, it slows down the economic environment and affects the performance of the firm. Yang<sup>39</sup> studied non-performing loan and its impact on financial performance on Asian financial crisis. Central bank of Pakistan has a close monetary system and its prudential regulations

demand financial institutions to create provisions against loans. In the competitive financial environment it is important for the top management how they manage their internal finances and generate a better financial performance. In such regard governance of borrowings from financial institutions and book value of owner's equity creates an impact of financial performance.

**MATERIALS AND METHODS**

This study will delineate the relationship among corporate governance (Board size, audit committee, non-executive directors, independent directors, inside director, CEO duality and director's meetings) along with non-performing loans, loan-loss provision, borrowings from financial institutions and book value of owner's equity on financial performance (return on assets) as presented in Fig. 1. Data of the financial institutions for the period of 2005-2015 is collected from the annual reports of these institutions listed in Karachi stock exchange. The financial institutions (22 banks) represent the entire population of banking industry in Pakistan.

**Methods:** For testing the hypothetical relationship between variables, description of the econometrics model will be provided. Panel data estimation is used for the econometric analysis. Compared to time series analysis and cross-sectional data, panel data estimation is more effective to capture the effects<sup>40</sup>. Previous studies have used different methodologies for the panel data estimation. In order to test the contemporaneous effect of corporate governance index and other explanatory variables we use the mentioned regression. The econometric specification to test the main hypothesis is:

$$Y_{it} = \beta_0 + \beta_1 CGI_{it} + \beta_2 LLP_{it} + \beta_3 X_{it} + e_{it}$$

where,  $Y_{it}$  is a vector of dependent variable in the model. Furthermore,  $\beta_0$  is the constant term,  $\beta_1$ ,  $\beta_2$  and  $\beta_3$  are the vector's coefficient,  $CGI_{it}$  is the corporate governance index,  $LLP_{it}$  is the loan loss provision,  $X_{it}$  is a vector of explanatory variables and  $e_{it}$  is the error term for the period  $i$  and time  $t$ .

The regression equation can be expressed as:

$$ROA_{it} = \beta_0 + \beta_1 CGI_{it} + \beta_2 LLP_{it} + \beta_3 NPL_{it} + \beta_4 BE_{it} + \beta_5 BFI_{it} + e_{it}$$

where, explanatory variables can correlate with the error term. In order to robust the analysis, generalized method of movement also used.

**RESULTS AND DISCUSSION**

The descriptive statistics and correlation analysis is presented in Table 1. There are annual observations of 22 banks of Pakistan for the period of 2005-2015. It shows that data is normally distributed. Only CGI has a larger deviation from mean which shows a larger variability in index data that has been constructed after thorough literature review. In Table 1 results show that all variables have positive correlation with return on assets (ROA) except Non Performing Loan (NPL) which can be seen as increase in number of non-performing loans can create adverse effect of returns of assets. Furthermore, a high value of correlation is reported between book value of equity and loan loss provision.

The results of regression analysis are presented. From the Table 2 and 3 is evident that book value of equity, borrowing from financial institutions, corporate governance index and loan loss provision shows the significant results.

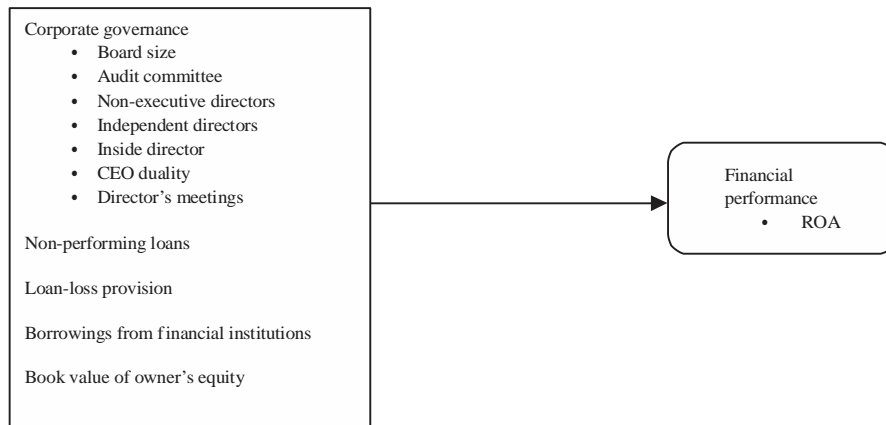


Fig. 1: Over review of research model

Table 1: Overview of descriptive statistics and correlation

Parameters	BE	BFI	CGI	LLP	NPL
Mean	4.19	4.08	4.38	3.69	2.76
Median	4.15	4.19	4.40	3.77	3.36
Max	5.25	5.60	6.90	4.89	4.68
Min	2.21	1.70	0.80	0.00	0.00
Standard deviation	0.49	0.63	0.85	0.78	1.42
BE	1.000				
BFI	0.697	1.000			
CGI	0.154	0.242	1.000		
LLP	0.732	0.759	0.258	1.000	
NPL	0.360	0.357	0.094	0.545	1.000

BE: Book value of equity, BFI: Borrowings from financial institutions, CGI: Corporate governance index, LLP: Loan loss provision, NPL: Non-performing loans

Table 2: Summary of parameters estimation

Variable	Coefficient	Standard error	t-statistic	p-value
C	-0.11347	0.01626	-6.97514	0.0000
BE (-1)	0.02344	0.00511	4.58552	0.0000
BFI (-1)	0.01209	0.00414	2.91633	0.0040
CGI (-1)	0.00527	0.00197	2.67252	0.0082
LLP (-1)	-0.01177	0.00395	-2.97573	0.0033
NPL (-1)	-0.00161	0.00136	-1.18147	0.2389
R <sup>2</sup>	0.254886			
F-statistic	12.58838	Durbin-Watson stat		1.931512

Table 3: Estimation of generalized method of movement

Variable	Coefficient	Standard error	t-statistic	p-value
C	-0.181449	0.038184	-4.751957	0.0000
BE	0.042501	0.008785	4.837789	0.0000
BFI	0.022265	0.007796	2.856092	0.0048
CGI	0.005853	0.007309	0.800708	0.4244
LLP	-0.029918	0.011417	-2.620579	0.0095
NPL	0.002411	0.003612	0.667428	0.5053
R <sup>2</sup>	0.396309 mean dependent variable			0.009423
Adjusted R <sup>2</sup>	0.379633 standard deviation dependent variable			0.025507
Standard error of regression	0.020090 sum squared resid			0.073056
Durbin-Watson stat	1.361840	J-statistic		3.825444
Instrument rank	7	prob (J-statistic)		0.050480

Whereas, non-performing loans has no significant impact on the financial performance of the banking sector in Pakistan. The only coefficient that shows a negative sign is loan loss provision which indicates an inverse but significant relationship between ROA and LLP. Durbin Watson shows that there is no auto-correlation in among the variables of the study.

$$ROA_{it} = -0.113 + 0.005CGI_{it} - 0.011LLP_{it} - 0.001NPL_{it} + 0.023BE_{it} + 0.012BFI_{it} + e_{it}$$

where, explanatory variables can correlate with the error term, In order to robust the analysis, generalized method of movement is also used.

In addition, Hausman test shows the problem of endogeneity in data sample. As indicated by Wintoki *et al.*<sup>41</sup>, “Endogeneity always arise from 3 main reasons: Unobservable heterogeneity, simultaneity and dynamic endogeneity. To rule out the impact of endogeneity would bring to the regression results and use the dynamic panel generalized methods of moments (GMM) estimator, which was originally raised by Arellano and Bond<sup>42</sup> and Blundell and Bond<sup>43</sup>. It has been shown to be an efficient method of instrumentation when there is not sufficient instrumentation data for the endogenous variables.

The results of GMM are presented in appendix which indicates that Book value of equity (0.00), borrowings from financial institutions (0.004) and loan loss provision (0.009) has a significant impact on return of assets whereas non-performing loans (0.50) and corporate governance index (0.42) shows an insignificant relationship. Results of the study in hand contradict with the study of Erkens *et al.*<sup>44</sup> which considers a pool of bigger banks. As, Pakistan’s central bank monitors entire banking industry and it further reports to the parliament not the finance minister keeps a vigilant eye on the banking policies which makes it a closed banking system. Hence, governance within the banks seems to have less space and reports insignificant empirical results. Whereas, indicators to earnings management shows significant results which means a vigilant maneuvering in earnings can report good results for the organization. The J-statistics value 0.06 validates the model and it is well specified. Whereas, R<sup>2</sup> shows model explains 40% variability of the response data.

## CONCLUSION AND LIMITATIONS

The study has incorporated the impact of corporate governance index, book value of equity and earnings management practices that constitutes loan-loss provision, non-performing loans and borrowings from financial institutions. For the purpose, generalized method of movement has been used which helps to capture the problem of endogeneity. Further, this study has been concluded that earnings management and book value of equity has a significant impact on the returns of banking industry of Pakistan whereas, corporate governance index reports insignificant results due to a closed banking environment that is monitored by State Bank of Pakistan. There are several limitations of this study. The study was conducted on Pakistan’s banking industry, other countries have could be included in order to have more specific results of corporate governance and its role in banking industry.

## **SIGNIFICANCE STATEMENTS**

Corporate governance practices have never been studied before in financial sector of Pakistan. The combination of these variables provides an insight to financial managers and policy makers to make better decision regarding earnings management. Most of the previous studies have used regression analysis (which doesn't detect the problem of endogeneity and correlation among the explanatory variables), hence GMM model is used in this study.

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