

Ownership Structure and Bank Performance: A Case of Banking Industry in Pakistan

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Abstract

This paper provides an empirical investigation on the way in which ownership structure influences bank performance. The impact of ownership concentration and the type of ownership on bank performance have been analyzed using four different profitability measures. The results show that in Pakistan the ownership concentration has S-shaped impact on bank performance. Insider ownership and bank performance also has S-shaped relationship. Among various types of ownerships, government ownership has a significant negative impact on bank performance whereas family ownership and institutional ownership have a significant positive impact on bank performance. The impact of foreign ownership on bank performance is inverse U-shaped. The findings of this paper suggest that type of ownership matters in explaining bank performance in Pakistan.

Keywords: Corporate governance, banks, ownership structure, bank performance.

1. Introduction

Ownership structure is considered to be one of the basic pillars of corporate governance (La Porta, Silanes, Shleifer, & Vishny, 1998). Jensen and Meckling (1976) consider ownership structure to be a useful tool to

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determine a firm's agency costs. While dispersed ownership structure creates free riding problem, concentrated ownership can be used as an incentive to control the management and align its interests with the majority shareholders' interests. On the other side, ownership concentration poses a threat to the minority share holders' interests (Barbosa and Louri (2002), DeAngelo and DeAngelo (1985) and Zingales (1994)). The ownership structure is an internal and external monitoring mechanism that influences performance.

A wide range of previous literature has focused on the impact of ownership structure on firm performance. However, a few studies have analyzed the effect of ownership structure on bank performance. These studies have been carried out mostly for developed countries. This area remains unexplored for developing countries. The present study adds existing literature by providing new evidence for the banking industry in a developing country. No such standard extensive empirical assessment has yet been made with reference to Pakistan. In order to provide advanced evidence on the subject, this paper investigates the connection between ownership structure and bank performance in an emerging economy like Pakistan.

The analysis of banking industry in Pakistan is an interesting example for analysis as it has undergone a major transformation during the last three decades. In mid 1970s the domestic banks were nationalised by the government. The state ownership of banks resulted in financial inefficiencies and deterioration of financial institutions. Realizing the ineffectiveness of nationalisation policy, the government decided to privatise government owned banks in late 1980s. By the end of 1990s the government introduced reforms in the financial sector. Under financial liberalization (one of the financial sector reform) the banking sector was liberalized by allowing private banks to operate in the country along with national banks.

Table 1 shows that by the end of 1990s (when government initiated its financial sector reforms) there were 6 public sector commercial banks (PSCBs), no domestic private banks (DPBs), 21 foreign banks (FBs) and 4

specialized banks (SBs). However, subsequently the DPBs emerged as leading players as PSCBs and FBs relinquished their share to DPBs. Currently, there are 5 PSCBs, 22 DPBs and 7 FBs operating in the country. The resulting changes in ownership of banks from state ownership of PSCBs to private ownership of DPBs raise important issues for research. The debate still abounds about the banks' ownership structure and associated impact on performance.

The panel data on 26 commercial banks from banking industry in Pakistan for the period of 2000 to 2014 is used for the said purpose. This paper makes several contributions to the existing literature. Firstly, it validates the results of the research of Magalhaes, Gutiérrez, and Tribó (2010) in a particular scenario. Selecting a single country allows the researcher to skip the country level variables in the model. The data on sample banks is latest and for a longer time period as compared to the data used by Magalhaes et al. (2010). Secondly, ownership-performance relationship with respect to banking industry in Pakistan has received no attention of researchers for the obvious reason of non-availability of data on banks ownership. For this paper the authors build a database on ownership structure of banks in Pakistan for the period 2000 to 2014. Thirdly, while the existing empirical studies only focus on the role of concentrated ownership and performance this paper identifies various types of ownerships and analyze their effect on bank performance.

Table 1
Number of Different Types of Banks in Pakistan during the Period 1990 to 2014

| Bank/ Year | 1990 | 1995 | 2000 | 2005 | 2010 | 2014 |
|------------|------|------|------|------|------|------|
| PSCBs | 6 | 6 | 6 | 4 | 5 | 5 |
| DPBs | 0 | 15 | 14 | 20 | 25 | 22 |
| FBs | 21 | 20 | 20 | 11 | 13 | 7 |
| SBs | 4 | 4 | 4 | 4 | 4 | 4 |
| Total | 31 | 45 | 44 | 39 | 46 | 38 |

The objective of this paper is to investigate i) the impact of ownership concentration on bank performance in case of Pakistan, ii) the impact of insider ownership on bank performance, and iii) how various types of large

shareholders (government, institution, family and foreign ownership) effect bank performance in Pakistan.

The rest of the paper is presented as follows. Section 2 summarizes the theoretical aspect and literature review on the issue. Data and estimation method is discussed in section 3. It describes the sample, variables and their empirical specification. Results of regression analysis are reported and discussed in section 4. Conclusion of the study is given in section 5.

2. Theoretical Background and Conceptual Model

2.1 Theoretical Background

The conceptual and theoretical framework of research on corporate ownership structure and corporate governance is derived from the theory of ownership structure widely known as agency theory [(Jensen & Meckling, 1976); (Fama & Jensen, 1983b)]. The agency theory states that where ownership and management of a firm are separated from each other, managers acting as agents to the shareholders (the principal) are in a position to exploit the resources provided by the principal. Concentrated ownership has emerged as an important tool to control management by effective monitoring. Therefore, under monitoring hypothesis, a positive impact of high ownership concentration on performance is expected. Fama (1980), Fama and Jensen (1983a) and Fama and Jensen (1983b) argue that efficiencies associated with separated ownership and control are higher than its costs. However, ownership concentration may result in another conflict of interest between majority and minority shareholders, as the majority shareholders may expropriate minority shareholders' funds [(Shleifer & Vishny, 1997); (Faccio & Stolín, 2006)]. Therefore, expropriation hypothesis suggests that ownership concentration may have a negative effect on performance. Thus, the monitoring hypothesis and expropriation hypothesis have opposite predictions in determining ownership concentration and performance relationship.

2.2 Ownership Concentration and Bank Performance

Based on the above discussed theoretical background, a wide range of studies have focused on corporate ownership and performance of non-financial firms. Miguel, Pindado, and Torre (2004) provide a review of such studies. Gedajlovic and Shapiro (1998) recognize the fact that the form of ownership concentration and firm performance relationship may differ for single country analysis. They use cross country data of five developed countries (the US, the United Kingdom, Germany, France and Canada) to study whether relationship between ownership concentration and firm performance varies across countries. Results of the study by Gedajlovic and Shapiro (1998) provide evidence of statistically significant differences across the countries studied.

While there is rich literature on ownership concentration and firm performance there is relatively less literature focusing the effect of ownership structure on bank performance. The majority of literature on ownership concentration and performance of financial and nonfinancial firms focus on economically advanced countries. The survey of various studies on ownership concentration and bank performance provides mixed results. For instance, an insignificant relationship between the ownership structure and contemporaneous and subsequent performance is found by Love and Rachinsky (2007) for banks in Russia and Ukraine in 2003-06. Iannotta, Nocera, and Sironi (2007) evaluate the impact of degree of ownership concentration on profitability of banks from European countries. They provide evidence that ownership concentration does not play a significant role in determining a bank's profitability. Slovin and Sushka (2001) find a significant negative correlation between performance and concentrated ownership.

In the context of ownership concentration and bank performance a significant study is contributed by Magalhaes et al. (2010). Using data on banks from 40 countries around the world they find a significant cubic relationship between ownership concentration and performance of banks.

Cubic relationship states that as ownership concentration rises from very low level, firm performance improves, but as ownership continues to rise, firm performance falls (Morck, Shleifer, & Vishny, 1988). Wen (2010) reports quadratic relationship between ownership concentration and bank performance for Chinese banks.

Following Gedajlovic and Shapiro (1998) it is argued that the relationship between ownership concentration and bank profitability may differ for an individual country. This argument leads to direct empirical investigation of a single country. Secondly, while the previous research ignores the developing countries this research attempts to investigate the relationship between ownership concentration and bank performance in a developing country like Pakistan.

Based on the above mentioned theory and empirical evidence we propose our hypotheses as follows:

Hypothesis 1: As a result of monitoring and cost of expropriation effects, bank performance increases with ownership concentration at a low level and very high level and due to expropriation effect, bank performance decreases at intermediate levels of ownership concentration.

2.3 Insider Ownership and Bank Performance

Jensen and Meckling (1976) put forward that the managerial ownership decreases as the conflict of interest between the owner and managers converge. According to the convergence of interest hypothesis firm value increases when managerial ownership is low and high but firm value decreases on intermediate levels of managerial ownership as a result of entrenchment effect (Miguel et al., 2004). Similarly, according to Fama and Jensen (1983b) high insider ownership has offsetting costs. According to entrenchment hypothesis higher insider ownership is negatively associated with corporate performance. Morck, Nakamura, and Shivdasani (2000) analyze that in Japan there is a positive relationship between firm value and

managerial ownership. Concentrated ownership by corporate block holders is positively related to firm value in Japan.

Hypothesis 2: As a consequence of convergence of interest effect bank performance increases as managerial ownership increases at low and high levels and as a result of management entrenchment effect bank performance decreases at intermediate level of managerial ownership.

2.4 Types of Ownership and Bank Performance

Another relevant phenomenon in corporate ownership structure literature is to examine whether performance depends on who the large shareholders are. Claessens and Djankov (1999) suggest that the overall level of ownership concentration and the type of ownership both determine firm performance. The subject of relation between type of ownership and bank performance becomes more crucial in developing countries as compared to the developed ones because the degree of ownership concentration is higher in developing countries as compared to the developed countries (Morck, Wolfenzon, & Yeung, 2005). In following paragraphs this study reviews the previous literature for impact of state, family, institutional and foreign ownership on performance.

Barth, Caprio, and Levine (2001) and La Porta, Silanes, and Shleifer (2002) argue that greater the state ownership of banks lower is the bank efficiency. Barth, Caprio, and Levine (2004) suggest that the government's role as major owner of a bank and regulator increases agency problem in a bank. The reason behind this is that the government decisions may be on development or politicized basis rather than commercial decisions. Under development view government owned banks are involved in development agendas. Their primary objective is to finance government related projects regardless of returns on such projects. Under political view the government banks are associated with politicized projects of the government. Micco et al. (2004) report that in developing countries state own banks have low profitability as compared to private own banks. Sun and Tong (2003) provide

an evidence for negative impact of government ownership on firm performance in China. Omran (2007) reports that post privatization in Egypt, the relative performance measures of privatized banks were higher than those of majority state ownership and lesser than absolute private, absolute state owned and mixed private ownership. Iannotta et al. (2007) test systematic differences in bank performance with different ownership concentration. The study concluded that private banks appear to be more profitable than both mutual and public sector banks.

Agency conflict is reduced in case of family owned banks as they are mostly managed by families themselves. In case of family owned firms all over the world generally family members are appointed as CEOs (Cai, Luo, & Wan, 2012). Chu (2011) provides empirical evidence from Taiwan that family ownership has a significant positive impact on firm performance as long as family members are involved in management and control of the firm. The families may forgo maximum profit as they are unable to separate their financial interests from those of outsiders. Lang and So (2002) report that private ownership is associated with better performance. Maury (2006) provides evidence that family control increases firm's profitability. Filatotchev, Zhang, and Piesse (2011) argue that in Hong Kong listed firms family control over the board is associated with expropriation of minority shareholder's rights and thus obtain private benefits of control. Large institutional shareholders might induce self-interest behavior to finance their own businesses from bank resources. However, Gedajlovic and Shapiro (2002) suggest that financial institutions have a better position to closely monitor the firm management.

The increased foreign bank presence in emerging economies is a hot debated issue. Micco, Panizza, and Yanez (2007) expect foreign banks to be positively related with profitability as they have better management, risk management and advance technology. According to Berger, Clarke, Cull, Klapper, and Udell (2005) foreign own banks are more profitable than domestic banks due to some comparative advantage that domestic banks don't have. Claessens and Djankov (1999) analyze that foreign ownership of

banks is positively correlated with performance. However, the choice of their ownership structure depends on country level factors.

Based on the above mentioned theory and empirical evidence the following hypothesis is proposed:

Hypothesis 3: Various types of ownership (state, family, institution and foreign) effect bank performance differently.

3. Methodology, Data and Estimation Method

To identify sample banks and collect data, this study retrieves all commercial banks scheduled with State Bank of Pakistan for the period 1996 to 2014. Further, departing from all commercial banks database, annual data on largest shareholder and types of ownership is available for limited banks only. This study considers only unconsolidated financial statements for

Table 2
Descriptive Statistics
(Unbalanced Panel Data with 386 Observations of 26 Banks for the Period 2000-2014)

| Variable | Mean | Std. Dev. | Min | Max |
|-----------|--------|-----------|---------|--------|
| ROA | 0.008 | 0.0438 | -0.478 | 0.0943 |
| ROE | 0.106 | 1.393 | -21.596 | 6.471 |
| RAROA | 3.452 | 6.232 | -3.474 | 60.970 |
| RAROE | 3.748 | 6.482 | -2.932 | 65.501 |
| OC | 56.990 | 31.663 | 8.052 | 100 |
| MGT | 5.339 | 10.909 | 0 | 56.43 |
| GOV | 24.744 | 36.270 | 0 | 100 |
| INST | 18.432 | 24.433 | 0 | 92.58 |
| FAM | 6.469 | 16.634 | 0 | 84.65 |
| FOR | 33.639 | 39.324 | 0 | 100 |
| Size | 18.122 | 1.640 | 13.240 | 21.294 |
| Growth | 0.139 | 2.733 | -46.813 | 13.689 |
| Leverage | 1.0322 | 0.8367 | 0.0868 | 8.130 |
| Liquidity | 0.152 | 0.175 | 0.003 | 2.766 |

Table 3
Spearman Correlation Matrix
(Unbalanced Panel with 386 Observations of 26 Banks for the Period 2000-2014)

| Sr. No | Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|--------|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|----|
| 1 | ROA | 1 | | | | | | | | | | | | | |
| 2 | ROE | 0.680* | 1 | | | | | | | | | | | | |
| 3 | RAROA | 0.752* | 0.678* | 1 | | | | | | | | | | | |
| 4 | RAROE | 0.657* | 0.767* | 0.906* | 1 | | | | | | | | | | |
| 5 | OC | -0.069 | -0.335* | -0.323* | -0.342* | 1 | | | | | | | | | |
| 6 | MGT | 0.061 | 0.254* | 0.234* | 0.237* | -0.746* | 1 | | | | | | | | |
| 7 | GOV | -0.057 | -0.029 | -0.107* | -0.081 | 0.393* | -0.325* | 1 | | | | | | | |
| 8 | INST | 0.014 | 0.145* | 0.245* | 0.220* | -0.580* | 0.357* | -0.273* | 1 | | | | | | |
| 9 | FAM | 0.034 | 0.070 | 0.112* | 0.113* | -0.436* | 0.470* | -0.188* | 0.386* | 1 | | | | | |
| 10 | FOR | 0.163* | 0.033 | 0.054 | 0.018 | 0.042 | 0.010 | -0.672* | -0.336* | -0.178* | 1 | | | | |
| 11 | Size | 0.210* | 0.344* | 0.412* | 0.427* | -0.296* | 0.290* | 0.006 | 0.244* | 0.110* | -0.072 | 1 | | | |
| 12 | Growth | 0.274* | 0.230* | 0.183* | 0.177* | -0.140* | 0.109* | -0.132* | 0.113* | -0.027 | 0.033 | 0.017 | 1 | | |
| 13 | Leverage | -0.238* | 0.223* | -0.037 | 0.066 | -0.350* | 0.275* | 0.042 | 0.219* | 0.036 | -0.175* | 0.182* | -0.005 | 1 | |
| 14 | Liquidity | 0.241* | 0.090 | 0.120* | 0.056 | 0.223* | -0.255* | 0.088 | -0.158* | -0.115* | 0.132* | -0.185* | 0.016 | -0.407 | 1 |

* Significant at 5% level.

collecting accounting and financial data. The performance variables risk adjusted return on average assets (RAROA) and risk adjusted return on equity (RAROE) are calculated using standard deviation over a moving window of 4 years. This reduces the time dimension of final panel to the period 2000-2014. The final sample consists of an unbalanced panel of 26 banks over the period 2000-2014 yielding 386 observations. Table 2 and table 3 present descriptive statistics of data and correlation matrix, respectively.

In order to validate non-linear relationship between bank performance and ownership concentration given in hypothesis 1 Magalhaes et al. (2010) is followed in estimating the model.

$$FP_{it} = \alpha + \beta_1 OC_{it} + \beta_2 OC_{it}^2 + \beta_3 OC_{it}^3 + \beta_4 Size_{it} + \beta_5 Growth_{it} + \beta_6 Leverage_{it} + \beta_7 Liquidity_{it} + U_{it} \quad (1)$$

Here, FP_{it} is the financial performance indicator. The return on average assets (ROA), risk adjusted return on average assets (RAROA), return on equity (ROE) and risk adjusted return on equity (RAROE) are used as financial performance measure of a bank at time t . OC_{it} , OC_{it}^2 and OC_{it}^3 are the proportion of outstanding shares held by largest shareholder, its square and its cube, respectively. Control variables include size, growth, leverage and liquidity and risk. Size is measured as natural log of bank's annual total assets. Larger the bank better bank performance is expected. Growth is bank's average growth in net interest income with respect to the previous year. It is expected that better growth opportunities have a positive impact on financial performance of a bank. Leverage is defined as a bank's ratio of total debt to total assets. Liquidity is measured as bank's liquid assets to total assets. Liquid assets are less costly and generate low returns. The net impact of liquidity on profit is expected to be negative. U_{it} is a random error term.

Due to cubic specification of equation (1) there are two breakpoints in the equation. These breakpoints are OC1 and OC2. The signs of coefficients cannot be determined by the above equation. But following our hypothesis it is expected that OC1 is a maximum and OC2 is a minimum. By second

partial derivation a condition where β_2 and β_3 have opposite signs cannot be obtained.

Similarly, equation (2) is estimated for hypothesis 2.

$$FP_{it} = \alpha + \beta_1 MGT_{it} + \beta_2 MGT_{it}^2 + \beta_3 MGT_{it}^3 + \beta_4 Size_{it} + \beta_5 Growth_{it} + \beta_6 Leverage_{it} + \beta_7 Liquidity_{it} + U_{it} \quad (2)$$

MGT_{it} , MGT_{it}^2 and MGT_{it}^3 are the proportion of outstanding shares held by insider shareholder (managers), its square and its cube, respectively.

Similarly, as in equation (1) there are two breakpoints $MGT1$ and $MGT2$ in equation (2). Following our hypothesis $MGT1$ is a maximum and $MGT2$ is a minimum. Consequently, the opposite signs of β_2 and β_3 in equation (2) can be obtained by second partial derivation.

In third regression, it is postulated that the relationship between large shareholders and firm's performance depends who are the large owners. The four separate groups have been identified for this purpose, i.e., state ownership, institutional ownership, family ownership and foreign ownership. The model to determine the relationship between ownership identity and firm's performance is as follows:

$$FP_{it} = \alpha + \beta_1 GOV_{it} + \beta_2 FAM_{it} + \beta_3 INST_{it} + \beta_4 FOR_{it} + \beta_5 Size_{it} + \beta_6 Growth_{it} + \beta_7 Leverage_{it} + \beta_8 Liquidity_{it} + U_{it} \quad (3a)$$

Where, GOV_{it} , FAM_{it} , $INST_{it}$ and FOR_{it} is the percentage share held by government, family, institution and foreign shareholders, respectively in bank i at time t . Other variables such as $size_{it}$, $growth_{it}$, $leverage_{it}$ and $liquidity_{it}$ are same as used in equation (1).

Further, equation (3b) is estimated to test a non-linear relationship between types of ownership and bank performance.

$$FP_{it} = \alpha + \beta_1 GOV_{it} + \beta_2 GOV_{it}^2 + \beta_3 FAM_{it} + \beta_4 FAM_{it}^2 + \beta_5 INST_{it} + \beta_6 INST_{it}^2$$

$$+ \beta_7 \text{FOR}_{it} + \beta_8 \text{FOR}_{it}^2 + \beta_9 \text{Size}_{it} + \beta_{10} \text{Growth}_{it} + \beta_{11} \text{Leverage}_{it} + \beta_{12} \text{Liquidity}_{it} + U_{it} \quad (3b)$$

Equation (3b) is a non-linear equation in which type of ownership variables GOV_{it} , FAM_{it} , INST_{it} and FOR_{it} with their square terms GOV_{it}^2 , FAM_{it}^2 , INST_{it}^2 and FOR_{it}^2 are included to test the monitoring effects and expropriation effects. This equation proposes one optimal breakpoint for each type of ownership. For example, the equation is differentiated with respect to government ownership to derive this breakpoint. The partial derivative equals zero. Therefore, breakpoint is $\text{GOV}_1 = -(\beta_1/2\beta_2)$. GOV is always positive. Consequently, β_1 and β_2 have opposite signs. Theory suggests that because of expropriation effect a negative relation between ownership concentration and bank performance is expected while due to monitoring effect a positive relation between ownership concentration and bank performance is expected. Therefore, GOV_1 is a minimum, which leads to the condition that $\beta_1 < 0$ and, therefore, $\beta_2 > 0$. Following same pattern we expect FAM_1 , INST_1 , and FOR_1 are maximums. Therefore, β_3 , β_5 and $\beta_7 > 0$ and β_4 , β_6 and $\beta_8 < 0$.

In order to perform dynamic panel data analysis the choice of Generalised Method of Moments (GMM) technique is justified on the basis of characteristics of the data. First, number of banks (cross sections) is larger than the time period. The data set contains 386 bank-year observations, consisting 26 banks for 15 years (from 2000 to 2014). Second, variables RAROA and RAROE are dynamic in nature as they depend on their past values. Both variables of bank performance are constructed by using standard deviation in a moving window of 4 years, which means it depends on its past value. Third, other variables in the model like size, growth, leverage, liquidity and risk are suspected to be endogenous. Fourth, the model is over-identified. There are more strictly exogenous variables than endogenous variables. Finally, heteroskedasticity and autocorrelation within banks is confirmed by using Modified Wald Test and Wooldridge Test respectively. The application of GMM implies that for estimating each model system of two equations is used. First equation is the original one and second equation

is the transformed equation. In transformed equation predetermined variables and not strictly exogenous variables are instrumented with their lag values in level. In original equation, variables in levels are instrumented with suitable lags of their own first differences.

In this paper, the use of forward orthogonal deviations in transformed equation preserves sample size of panel data. This estimation procedure, proposed by Windmeijer (2005) consists of two steps. These steps in estimation are used to produce coefficients that are less biased and also lower standard errors. The choice of GMM-style and IV-style instruments is reported for each regression. Hansen test of over-identification restrictions (Hansen, 1982) confirms over-identification specifications in all regression equations. Difference in Hansen test confirms that GMM and IV-style instruments used in each equation are valid. The values of Arellano-Bond test for autocorrelation are reported for each regression separately.

4. Empirical Results and Discussion

4.1 Ownership Concentration and Bank Performance

Table 4 present the results of impact of ownership concentration on bank performance. Bank performance is measured by four different variables, i.e., return on average assets (ROA), risk adjusted return on average assets (RAROA), return on equity (ROE), risk adjusted return on equity (RAROE). Consistent with theoretical background and previous literature, this study finds that ownership concentration matters in determining bank performance. The expected signs of coefficients OC , OC_2 and OC_3 are found in all regressions given in table 4. β_1 and β_3 are significantly positive while β_2 is significantly negative. This confirms the cubic relationship between ownership concentration and bank performance predicted in Hypothesis 1.

These results suggest that the bank performance in Pakistan increases as ownership concentration increases from 0 to 31 percent on average. The increase in performance is explained by efficient monitoring. Bank

Table 4
Ownership Concentration and Bank Performance

| Independent Variables | ROA R1 | RAROA R2 | ROE R3 | RAROE R4 |
|-------------------------------------------------------------------|--------------------------|-------------------------|--------------------------|--------------------------|
| 1 L1 | 0.4489014*** (8.285) | 0.3460515*** (4.512) | 0.0624789 (1.332) | 0.4354331*** (18.353) |
| 2 Ownership Concentration | 0.0017394* (2.639) | 0.6540400* (2.488) | 0.1728772** (3.414) | 0.2611796* (2.625) |
| 3 Ownership Concentration ² | -0.0000430** (-3.140) | -0.0156054* (-2.781) | -0.0033074** (-3.058) | -0.0063152* (-2.707) |
| 4 OwnershipConcentration ³ | 0.0000003** (3.276) | 0.0000971** (2.954) | 0.0000180** (2.785) | 0.0000390* (2.703) |
| 5 Size | 0.0055490** (2.983) | 0.8041320** (3.175) | 0.1137092** (3.389) | 0.5696582* (2.442) |
| 6 Growth | 0.0010048*** (4.025) | 0.0656962 (0.436) | 0.0195015 (0.956) | 0.001255 (0.038) |
| 7 Leverage | -0.0063704 (-1.201) | -0.0117932 (-0.009) | -0.1355567 (-0.634) | -0.2276976 (-0.359) |
| 8 Liquidity | 0.0689063* (2.350) | 5.0535175 (1.008) | 1.9364478*** (4.375) | -4.0711906 (-1.579) |
| No. of Observations | 386 | 385 | 386 | 385 |
| No. of Groups | 26 | 26 | 26 | 26 |
| No. of instruments | 57 | 56 | 57 | 56 |
| GMM-Style Instruments | 1,2 | 1,2 | 1,2 | 1,2 |
| IV-style Instruments | 3,4,5,6,7,8 | 3,4,5,6,7,8 | 3,4,5,6,7,8 | 3,4,5,6,7,8 |
| F (variables; groups-1) | 191.56*** | 33.41*** | 12.08*** | 1440.09*** |
| Arellano-Bond test for AR(2) in first differences (z; Pr>z) | 1.25 0.21 | -0.77 0.44 | 1.11 0.269 | -1.09 0.277 |
| OC ₁ | 66.49% | 78.57% | 89.70% | 80.07% |
| OC ₂ | 29.07% | 28.58% | 37.80% | 27.88% |

Dependent variables: Return on average assets (ROA), Risk adjusted return on average assets (RAROA), Return on equity (ROE), Risk adjusted return on equity (RAROE) in R1, R2 R3 and R4 respectively. Dynamic panel data regressions over the period 2000-2014. (Two-step system GMM, orthogonal deviations transform, Windmeijer's standard errors correction) Standard errors in parentheses

Note: Significance levels: ***1%, **5%, *10%

performance decreases as ownership concentration increases from 31 to 78 percent on average. This decline in bank performance is a consequence of highly concentrated ownership that allows expropriation of minority shareholders. Finally, for extreme levels of ownership concentration (from 78 to 100 percent) the relationship between bank performance and ownership concentration is positive. This is supported by the hypothesis that expropriation by a very large shareholder reduces as cost of expropriation to the giant shareholder increases (Bukart et al., 1998).

While majority of other researchers provide a linear relationship our results are consistent with Magalhaes et al. (2010). The explanation to this S-shape ownership-performance relationship is that ownership concentration is useful in alignment of interests of shareholders and management at low level of ownership concentration. At intermediate levels of ownership concentration the expropriation of resources by majority shareholders takes place in banks. At a high level of ownership concentration it is expected that shareholder's large proportion of wealth is in banks' equity participation. Therefore, alignment of interests takes place at high level of ownership concentration. In control variables size and growth is positively related to bank performance. These findings are consistent with the predicted signs for size and growth. But unexpectedly liquidity is also positively related to bank performance. The impact of leverage on bank performance is not significant. The explanation to this discrepancy may be explained by existence of endogeneity between size, leverage and bank performance variables. The positive correlation between size and leverage in table 2 shows that if a bank is large it is likely to be highly levered. Therefore, results suggest that leverage is not significant in determining bank performance.

4.2 Insider Ownership and Bank Performance

The results of impact of insider ownership on bank performance are shown in Table 5. The results show that the impact of insider ownership on bank performance is cubic (S-shape). Coefficients MGT and MGT3 are positive and MGT2 is negative. The results suggest that from 0 to 13 percent

Table 5
Insider Ownership and Bank Performance

| Independent Variables | ROA R1 | RAROA R2 | ROE R3 | RAROE R4 |
|-------------------------------------------------------------------|--------------------------|--------------------------|-------------------------|--------------------------|
| 1 L1 | 0.46556*** (31.757) | 0.51216*** (33.228) | 0.08446*** (8.523) | 0.46442*** (52.315) |
| 2 MGT | 0.00442*** (6.404) | 0.75580*** (12.100) | 0.05090*** (4.546) | 0.84051*** (9.794) |
| 3 MGT ² | -0.00023*** (-6.129) | -0.03980*** (-12.401) | -0.00300*** (-4.872) | -0.04317*** (-10.973) |
| 4 MGT ³ | 0.00001*** (5.830) | 0.00051*** (13.031) | 0.00004*** (5.022) | 0.00054*** (11.514) |
| 5 Size | 0.00015 (1.725) | 0.05627** (3.077) | 0.00787*** (9.135) | 0.01552 (0.334) |
| 6 Growth | 0.00126*** (21.224) | 0.04556** (3.223) | 0.03839*** (16.188) | 0.02378 (0.658) |
| 7 Leverage | -0.00586*** (-24.814) | -0.04089 (-0.076) | -0.03422*** (-5.765) | 0.47425 (0.803) |
| 8 Liquidity | 0.01752*** (7.752) | -0.44237 (-0.130) | 0.24307*** (4.605) | 1.41266 (1.426) |
| No. of Observations | 386 | 385 | 386 | 385 |
| No. of Groups | 26 | 26 | 26 | 26 |
| No. of Instruments | 57 | 56 | 57 | 56 |
| GMM-style Instruments | 1,2 | 1,2 | 1,2 | 1,2 |
| IV-style Instruments | 3,4,5,6,7,8 | 3,4,5,6,7,8 | 3,4,5,6,7,8 | 3,4,5,6,7,8 |
| F (variables; groups-1) | 37543.26 | 4982.72 | 3677.23 | 10879.01 |
| Arellano-Bond test for AR(2) in first differences (z; Pr>z) | 1.23 0.219 | -0.4 0.69 | 1 0.319 | -1.19 0.233 |
| MGT ₁ | 41.82% | 39.98% | 40.24% | 40.47% |
| MGT ₂ | 12.58% | 12.45% | 12.84% | 12.87% |

Dependent variables: Return on average assets (ROA), Risk adjusted return on average assets (RAROA), Return on equity (ROE), Risk adjusted return on equity (RAROE) in R1, R2 R3 and R4 respectively. Dynamic panel data regressions over the period 2000-2014. (Two-step system GMM, orthogonal deviations transform, Windmeijer's standard errors correction)
Standard errors in parentheses, significance levels: ***1%, **5%, *10%

of insider ownership the bank performance increases due to convergence of interest hypothesis. From 13 to 41 percent of insider ownership the decline in bank performance is explained by entrenchment hypothesis. Beyond 41 percent of managerial ownership the bank performance is positive.

This represents that on extreme levels of insider ownership entrenchment effect is dominated by convergence of interest effect. According to La Porta, Silanes, and Shleifer (1999) greater expropriation by insiders is related to weak investor protection. This argument explains that weak legal protection of shareholders in Pakistan allows managers to get entrenched easily even at low levels of ownership concentration.

4.3 Types Of Ownership and Bank Performance

Table 6 presents regression results that assess the impact of ownership type on bank performance. Column R1 and R3 show the results of impact of government, institution, family and foreign ownership on risk adjusted return on average assets and risk adjusted return on equity, respectively. The results reflect that there is a significant negative relationship between government ownership and bank performance. Consistent with the previous literature (Barth et al. (2001), La Porta et al. (2002), Sun and Tong (2003)) this relationship can be explained by the political view and development view under which government owned banks have politically motivated development objectives rather solely profit maximization.

Table 6
Types of Ownership and Bank Performance

| Independent Variables | RAROA R1 | RAROA R2 | RAROE R3 | RAROE R4 |
|-----------------------|-----------------------|----------------------|-----------------------|----------------------|
| 1 L1 | 0.62154*** (0.061) | 0.37114* (0.146) | 0.26280* (0.114) | 0.24034* (0.114) |
| 2 GOV | -0.00044* (-0.000) | -0.00034 (-0.001) | -0.02932* (-0.013) | -0.02306 (-0.031) |
| 3 GOV ² | | 0.00005 (0.001) | | 0.00002 (0.000) |

Ownership Structure and Bank Performance

| | | | | | |
|----|-------------------------------------------------------------------|-------------|------------|-------------|------------|
| 4 | FAM | 0.017386* | 0.00017 | 0.16769 | -0.00747 |
| | | (0.007) | (0.001) | (0.301) | (0.032) |
| 5 | FAM ² | | -0.00003 | | -0.00027 |
| | | | (0.000) | | (-0.001) |
| 6 | INST | 0.015107*** | 0.00040 | 1.34326* | 0.00402 |
| | | (0.003) | (0.000) | 0.555 | (0.021) |
| 7 | INST ² | | -0.00002 | | 0.00031 |
| | | | (0.000) | | (0.000) |
| 8 | FOR | 0.007666 | 0.00117** | 0.30014 | 0.06537* |
| | | (0.011) | (0.000) | 0.546 | (0.029) |
| 9 | FOR ² | | -0.00001** | | -0.00077* |
| | | | 0.000 | | (0.000) |
| 10 | Size | 0.00652* | 0.00548* | 0.10589 | 0.16566 |
| | | (0.003) | (0.002) | (0.200) | (0.202) |
| 11 | Growth | 0.015450*** | .017146*** | 0.45029 | 0.51350** |
| | | (0.003) | (0.003) | (0.099) | (0.137) |
| 12 | Leverage | -0.12681 | -0.15946 | (6.235087)* | -7.74918* |
| | | (-0.060) | (-0.072) | (2.589) | (-3.608) |
| 13 | Liquidity | 0.01255 | 0.02230 | 0.88889 | 1.60128 |
| | | (0.022) | (0.026) | (1.516) | (1.795) |
| | Constant | 0.18774** | 0.04934 | 6.1853* | -0.69271 |
| | | (0.052) | (0.030) | (2.225) | (-1.640) |
| | No. of Obs | 385 | 385 | 385 | 385 |
| | No. of Groups | 26 | 26 | 26 | 26 |
| | No. of Instruments | 128 | 132 | 128 | 132 |
| | GMM-style Instruments | 1,2,4,6,8 | 1,2,4,6,8 | 1,2,4,6,8 | 1,2,4,6,8 |
| | IV-style instruments | 10,11,12,13 | 3,5,7,9-13 | 10,11,12,13 | 3,5,7,9-13 |
| | F (variables; groups-1) | 173.57*** | 115.77*** | 26.25*** | 39.62*** |
| | Arellano-Bond test for AR(2) in first differences (z; Pr>z) | -0.52 | -0.37 | 1.09 | 0.93 |
| | | 0.600 | 0.712 | 0.275 | 0.350 |

Dependent variables: Risk adjusted return on average assets (RAROA) and Risk adjusted return on equity (RAROE) in R1-2 and R3-4 respectively. Dynamic panel data regressions over the period 2000-2014. (Two-step system GMM, orthogonal deviations transform, Windmeijer's standard errors correction)

Standard errors in parentheses, significance levels: ***1%, **5%, *10%

Domestic ownership is classified into family ownership and institutional ownership. Results indicate that family ownership and institutional ownership both have positive significant impact on bank performance. This finding is consistent with the theoretical argument that a family's large shareholding, control of management and holding director posts gives them opportunity to influence and monitor the bank efficiently. Similarly, financial institutions are also in a better position to closely monitor the management and thus minimize agency conflict. Column R2 and R4 show the results of regressions that estimate non-linear relationship of type of ownership and bank performance. The results show that among various types of ownership only foreign ownership has a non-linear relationship. This suggests that on average from 0 to 43 percent foreign ownership has positive impact on bank performance and beyond that break point foreign ownership has a negative impact on bank performance. This non-linear relationship is, however, a discrepancy found in case of banks in Pakistan. Generally, researchers find a positive linear relationship between foreign ownership and performance. Our results contribute a possible insight that even at intermediate levels foreign ownership is in a position to exploit domestic shareholders' resources in their private benefit.

5. Conclusion

In this research, first evidence on the relationship between ownership structure and bank performance in Pakistan has been provided by using latest data of 26 commercial banks for the period 2000 to 2014. The results provide evidence of monitoring effects and expropriation effects for ownership concentration and bank performance in Pakistan. The results confirm that monitoring effect dominates when ownership concentration is from upto 31 percent and from 78 to 100 percent. As ownership concentration ranges from 31 to 78 percent the expropriation of minority shareholders takes place. These results confirm convergence of interests and entrenchment effect on the relationship between insider ownership and bank performance. The convergence of interest effects exist when managerial ownership ranges from 0 to 13 percent and 41 to 100 percent. From 13 to 41 percent of insider

ownership the entrenchment effect dominates the relationship. Overall results obtained are consistent with literature. However, any discrepancies are due to differences in corporate governance systems, legal protection laws for investors, bank regulations of Pakistan and rest of the countries in the world. The results confirm negative impact of government ownership on bank performance. The results also show that family and institutional ownership have positive impact on bank performance. This is evidence of monitoring hypothesis. This study provides first ever evidence of non-linear effect of foreign ownership on bank performance. This indicates that as foreign ownership increases above 43 percent expropriation begins.

Conclusively, this study provides evidence that support theoretical hypotheses of i) monitoring hypothesis by shareholders, ii) hypothesis of expropriation of minority shareholders by controlling shareholders, iii) convergence of interests hypothesis and iv) loss of managerial discretion hypothesis. The results confirm entrenchment effect at intermediate level of insider ownership and convergence of interests at low and high level of ownership by managers. The study suggests that while ownership concentration matters in determining bank performance; it's more important to know the effect of type of ownership on bank performance. We confirm negative impact of government ownership on bank performance.

Existence of a domestic large shareholder (family ownership or institutional ownership) confirms effective monitoring effect. In case of foreign ownership, the evidence supports effective monitoring by foreign shareholders but at high level of foreign ownership expropriation of minority shareholders begins.

The key limitation of this study is its limited sample size because of non-availability of data on ownership structure of banks. However, the authors believe that a larger sample with more diversity of banks would not have altered the research results but would have strengthened the findings. Secondly, due to unavailability of data on ownership structure of banks, this study focuses on the impact of only the largest owner on bank performance.

However, in reality there may be more than one large owner affecting the performance of a bank. Thirdly, sample in this study consists of listed and non-listed commercial banks in Pakistan. Therefore, market value based performance measures in the study could not be used.

This study provides possible directions for future research. Firstly, the research may be extended by taking into account the capital structure of a bank along with its ownership structure to analyze the impact of bank ownership structure. For further research the impact of business cycle in the country can also be assessed using the same model.

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