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Internal Mechanism of Corporate Governance and Firms' Profitability: A Comparative Study of Financial and Non-Financial Firms

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Abstract *This research examines comparative effects of corporate governance internal mechanism on Profitability (ROA/ROE) in financial vs non-financial firms indexed on Pakistan Stock Exchange.The data of 296 firms (both types of firms) was taken from companies' audited accounts and various available documents of the State Bank of Pakistan for the period of 14 years (2001-2014). Panel data study is conducted as the data have the characteristics of both time series and cross-sectional. Multiple regression and fixed effect methods were employed to analyze the given dataset. Results revealed significance of both board characteristics and managerial ownership in the profitability of the selected companies.*

Key Words
Board Independence, Managerial Ownership, Panel Data, Return on Equity

Introduction

Corporate governance ensures the protection of investors from any decision of the management which may harm their interests. Broadly, corporate governance can be termed as the policies, procedures and practices to control and impact on the managerial decisions

Corporate governance mechanism comprises two mechanisms i.e. internal and external. First one refers to and include board characteristics and managers 'ownership, whereas external mechanisms refer to rules and regulations, other firms' ownership and industrial procedures etc. Current study is aimed to determine the effect of only internal mechanism on financial profitability of financial vs non-financial firms. There are number of studies on Pakistani firms in this regard (e.g. Javed& Iqbal, 2006; Rehman & Mangla, 2010). But, less attention is given to investigate comparative effect of corporate governance as proposed by this study.

Literature Review

An effective corporate governance mechanism is significant to financial health of the firms. In the following we present various studies to this end.

Independent Boards and Firms' Profitability

Impact of board independence on firms' Profitability has been studied variously by various studies. However, these studies are inconclusive to this end. Liu et al. (2014) revealed board independence as major to these firms' investment decisions and hence improve their Profitability. In a study of 2012 Khan and Awan found those companies with more board independence show growth in their profit through increased ROA and ROE.

Contrary to the above, some studies revealed adverse effect of board independence on firms' Profitability. However, as the independent directors decreases so the profitability increases. Bhagat & Bolton(2008)in their study of American firms found those firms which do not have long profit years are more responsive to board independence in increasing profitability but on larger scale there were no conclusive evidences of board independence and improved profitability. There are also studies which concluded that corporate governance internal mechanisms are not relevant to firms' Profitability. For instance, it was found that for Malaysian firms' independent boards are not

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relevant to the financial performance (Johl et al., 2015; Sheikh & Kareem, 2015). Based on the above we assume that:

H_1: *Board independence has positive on profitability of the PSX listed companies.*

Board Size and Profitability

Board size is considered as on major determinant of a firm's profitability. A research on Islamic banks by Johl et al. (2015) concluded board sizeas having positive relations to profitability. Similarly, results were statedin another study of Islamic Banks for a period of 2008 -2012, where a positive effect of board size was determined on various profitability (ROA, ROE, EPS) of these banks (Haider et al., 2015). However, there are also some studies those concluded that larger board size not necessarily effect profitability positively because larger boards are inefficient in making timely decisions (Al-Matari et al., 2012; Shakir, n.d.). It was also revealed that Malaysian firms in real estate sector usually prefer smaller board to fasten the decision making to make profit (Shakir, n.d.). In another study of Hungarian firms,it was known that due to many problems associated with larger boards these firms like to have smaller board for efficient and timely decisions. Hence, we suggest that:

H_2: Board size has positive effect on the profitability of PSX listed companies

Audit Committee Size and Profitability

This is argued that with more members of committee, there are fewer chances of mistakes in reporting financial results which is considered as a positive notion to the firms' profitability. For example, Al-Matariet al., (2012)revealed that with increase in the size of audit committee there is also increase in profitability (ROA) of the firms. Contrary to this Al-Mamun et al., (2014) reported opposite association among size of committee and profitability. They argued smaller committee with experts and experienced are likely to be more productive in term of profitability. Similarly, Amer et al., (2014) stated adverse relation of two variables. Some scholars argue that number of audit committee members is not much important to the financial performance of a firm (Ojekaet al., 2014). From above we propose that:

H_3: *Audit committee size has positive effectthe profitability of PSX listed companies.*

CEO's Affiliation and Profitability

Research regarding effect of CEO's affiliation of firm's Profitability are also inconclusive. Some say that the impact is positive (Anderson &Reeb, 2003; Ang et al., 2000). This is because that CEO belonging to family knows more about the company and has more established social networks then a CEO from out of family. Other studies exhibit negative impact CEO family affiliation of profitability. They argue that affiliation of CEO is not to ensure profit because they are hesitant to take risk. We make argue that:

H_4: *CEO's family affiliation has negative effect on the profitability of PSX listed companies.*

Managerial Ownership and Profitability

Bhagat and Bolton (2008) in their study found managerial ownership is significantly and positively associated to Profitability. Contrarily, Rehman and Shah (2013) concluded significant negativelyeffect of managers' ownership on firms' Profitability. Their study argued as if managers are given enough ownership proportion they will expropriate shareholders' interests. Similar findings were revealed by Kamran and Shah (2014). Manager entrenchment theory also argues the same that managers capitalize resources and use them for their own benefit instead of increasing firm's value (Shleifer &Vishny, 1989).

H_5: *Managerial ownership has negative effect on the profitability of PSX listed companies.*

This detailed review of literature also suggests another hypothesis as under:

H_6: *Corporate governance internal mechanism effects the profitability of financial and non-financial firms in same*

Research Methodology

This is a longitudinal study and is based on panel data. This study considers all registered non- financial companies on PSX as apopulation. The sample is comprised of 266 companies from non-financial sector. To facilitate comparison 29 financial companies were also included.

Independent Variables

Board Independence

It is determined as under

$$BOID_{it} = \frac{independent\ Directors_{it}}{total\ directors_{it}}$$

Board size

To measure Board size following formula is used

$$BOADSIZE_{it} = total\ number\ of\ directors_{it}$$

Audit Committee Size

This is found as under

$$AUDITSIZ_{it} = total\ number\ of\ directors\ on\ audit\ committee_{it}$$

Family Affiliation of CEO

It is measured through dummy variable is used (1 for family affiliation &0 if not).

Managerial Ownership

This is determined by following formula

$$MANOWN_{i,t} = \frac{number\ of\ shares\ with\ executives\ and\ directors_{i,t}}{total\ number\ of\ shares_{i,t}}$$

Dependent Variables

Firm Performance

ROA & ROE are two determinants of firm's performance, shown as under

$$ROA_{it} = \frac{pretax\ income_{it}}{Total\ Asset_{it}}$$

$$ROE_{it} = \frac{pretax\ income_{it}}{Total\ Equity_{it}}$$

Control Variables

Three control variables have also been used which are defined as under.

Firm Size

It is determined as under:

$$Firm\ Size_{it} = ln(Book\ Value\ of\ Assets_{it})$$

Leverage

The other control variable used is leverage and defined as below

$$Leverage_{it} = \frac{Total\ Debts_{it}}{Total\ Assets_{it}}$$

Liquidity

Following measure of liquidity is used

$$Cash\ Ratio_{it} = \frac{cash\ and\ cash\ equivalent\ _{it}}{Current\ Laibilities_{it}}$$

Model Specification

Following two models were used to test the suggested relationships. Model 1 is for non-financial companies, model 2 is for financial companies:

$$FIRMPFR_{it} = \beta_0 + \beta_1^* BOID_{it} + \beta_3^* BOADSIZE_{it} + \beta_5^* AUDITSIZ_{it} + \beta_4^* FAMAFF_{it} + \beta_2^* MNOWN_{it} + \beta_6^* CR_{it} + \beta_7^* LEVERAGE_{it} + \varepsilon_{it}$$

$$FIRMPFR_{it} = \beta_0 + \beta_1^* BOID_{it} + \beta_3^* BOADSIZE_{it} + \beta_5^* AUDITSIZ_{it} + \beta_4^* FAMAFF_{it} + \beta_2^* FIRMSIZE_{it} + F_{it} + \varepsilon_{it}$$

Multiple regression and fixed effect model were used respectively

Results

The relevant results for corporate governance internal mechanism and profitability are shown in table 1. The findings in regard to control variables reflect that they effect profitability statistically significant because cash ratio and leverage have positive and negative impact on ROA respectively. These findings about the control variables shows them as important to firm's Profitability.

Regression coefficient for board independence positive and statistically insignificance related to ROA. For board size it is positive and significant. Remaining dimensions of corporate governance are negatively but significantly related to ROA as shown by regression coefficient. The regression coefficient for managerial ownership negatively and statistically insignificantly related to firm performance measure which is return on assets.

The table also reflects the effect of time and industry dummies (negative and insignificant and positive and significant respectively).

Table 1. Results of Regression

Linear	Regression	Nos. of observations	=	1926
		F(24, 1900)	=	27.33
		Prob> F	=	0
		R^2	=	.287
ROA	Coefficient	Standard Error	T	Prob. T
MNOWN	-0.0043	0.0126699	-0.33	0.733
AUITSIZ	-0.0083	0.003882	-2.140	0.031
BOID	0.00296	0.00677	0.440	0.661
CR	0.14555	0.023990	6.070	-
Leverage	-0.1582	0.010718	-14.760	-
FAMAFF	-0.0205	0.004760	-4.320	-
BOADSIZE	0.005156	0.001699	3.030	0.001
T_1	-	(omitted)		
T_2	-0.0116	0.01393	-0.840	0.402
T_3	-0.0076	0.012323	-0.620	0.536
T_4	-0.0010	0.012370	-0.080	0.934
T_5	-0.0075	0.013943	-0.540	0.586
T_6	0.00519	0.011722	0.440	0.657
T_7	-0.0216	0.011780	-1.840	0.065
T_8	-0.0121	0.011442	-1.060	0.287
T_9	-0.0168	0.01126	-1.490	0.134
T_{10}	-0.0057	0.01168	-0.490	0.624
T_{11}	-0.0009	0.011821	-0.080	0.934
T_{12}	-0.0105	0.011338	-0.930	0.352
T_{13}	-0.00021	0.011545	-0.020	0.984
T_{14}	-0.02376	0.011689	-2.020	0.041
Ind_1	-	(omitted)		
Ind_2	0.13525	0.022855	5.910	-
Ind_3	0.09956	0.024514	4.050	-
Ind_4	0.08693	0.044093	1.960	0.048
$Iind_5$	0.1180	0.024636	4.780	-
Ind_6	0.26000	0.032447	8.020	-
_cons	0.01449	0.029490	0.480	0.622

Above control variables seem vital factors for profitability. Coefficient of regression in case of relationship among independent board and ROE is insignificantly negative. The coefficient for BOADSIZE is in significant and positive relation to profitability. It is negative and significant in case of audit committee size. For managerial ownership regression coefficient is negative and insignificant as related to profitability. Time and industry dummy an insignificant effect over ROE. Similarly mix results for time and industry dummy are shown for return on assets.

Table 2. Regression Results for Board Characteristics Managerial Ownership and Firm's Profitability (ROE)

Linear	**regression**	**Nos. of observation**	**=**	**1917**
		F(24, 1891)	=	6.45
		Prob F	=	0
		R-squared	=	0.0385
ROE		Std. Err.	T	Prob. t
MNOWN	-0.0052	0.013256	-0.39300288	0.733
AUITSIZ	-0.0240	0.0064711	-3.7123	0
BOID	-0.0091	0.043503	-0.22	0.834
CR	0.58483	0.087796	6.65	0
Leverage	-0.0530	0.072017	-0.75	0.462
FAMAFF	-0.0273	0.0121733	-2.2434	0.002
BOADSIZE	0.02641	0.01016	2.60	0.008
T_1	-0.0429	0.097930	-0.43	0.662
T_2	0	(omitted)		
T_3	-0.1604	0.099786	-1.62	0.107
T_4	-0.0356	0.095643	-0.36	0.710
T_5	-0.1064	0.09026	-1.17	0.237
T_6	-0.1599	0.105262	-1.53	0.128
T_7	-0.1535	0.089388	-1.71	0.087
T_8	-0.1682	0.09745	-1.72	0.083
T_9	-0.1254	0.099808	-1.25	0.208
T_{10}	-0.0532	0.10427	-0.52	0.610
T_{11}	-0.1075	0.099110	-1.08	0.277
T_{12}	-0.1273	0.092625	-1.39	0.168
T_{13}	-0.05011	0.090891	-0.56	0.582
T_{14}	-0.1657	0.089858	-1.83	0.064
Ind_1	0	(omitted)		
Ind_2	0.75653	0.535888	1.42	0.157
Ind_3	0.75855	0.536696	1.42	0.157
Ind_4	0.57509	0.555650	1.04	0.302
$Iind_5$	0.77595	0.535231	1.44	0.146
Ind_6	0.78522	0.536870	1.45	0.145
_cons	-0.6462	0.54275	-1.18	0.236

The comparison of above two tables reflects the control variables are most important to profitability while the independent variables are of less significance and hence the rejection of first hypothesis of study.

Impact of size of the board over profit was found positively significant and to accept second hypothesis. The audit committee size has inverse relation to profit and to reject the hypothesis. Lastly, the findings conclude the accepting the hypothesis that family affiliation of CEO has inverse effect on firm's profitability. Lastly effect of managerial ownership on profitability is insignificantly negative. Therefore, the hypothesis on association of managerial ownership and profitability has been accept.

Results Financial Firms

Table 3 & 4 show relevant results. In table 3 and 4 show that managerial ownership has significant impact on return on assets and equity. Fixed effect model reflects both determinants of corporate governance as important. Both have positive and significant effect on profitability. Following tables show the relevant results.

Table 3. Corporate Governance and Profitability (ROA)

Fixed-effects (within) regression	**Number of obs**	**=**	**164**	
Group variable: gvkey	Number of groups	=	28	
R-sq: within = 0.0802	Obs per group: min	=	2	
between = 0.0026	Avg	=	5.7	
overall = 0.0021	Max	=	10	
	F(6,127)	=	1.87	
corr(u_i, Xb) = -0.9338	Prob> F	=	0.0924	
ROA	Coef.	Std. Err.	T	P>t
FAMAFF	-0.0096287	0.06311	-0.16	0.878
BOADSIZE	0.0014617	0.01263	0.13	0.907
AUITSIZ	-0.004939	0.01740	-0.27	0.776
Firmsize	-0.00359	0.01370	-0.25	0.795
MNOWN	-1.6560	0.51785	-3.21	0.003
BOID	-0.038413	0.08102	-0.46	0.637
_cons	0.144781	0.17414	0.831	0.406

sigma_u .30285883
sigma_e .09032881
rho .9183113 (fraction of variance due tou_i)
F test that all u_i=0: F(28, 128) = 2.69 Prob>F = 0.0001

Table 4. Corporate Governance and Profitability (ROE)

Fixed-effects (within) regression	**Number of obs**		**161**	
Group variable: gvkey	Number of groups		29	
R-sq: within = 0.0612	Obs per group: min		2	
between = 0.0025	Avg		5.6	
overall = 0.0027	Max		10	
	F(6,126)		2.37	
corr(u_i, Xb) = -0.8242	Prob> F		0.021	
ROE	Coefficient	Std. Error	T	P>t
FAMAFF	0.436172	0.21084	2.070	0.042
BOADSIZE	0.031382	0.04218	0.73	0.457
AUITSIZ	-0.075193	0.05809	-1.28	0.197
Firmsize	0.006795	0.04585	0.16	0.881
MNOWN	-3.72523	1.76343	-2.10	0.036
BOID	-0.053244	0.27064	-0.20	0.843
_cons	0.110062	0.58256	0.18	0.84

sigma_u .64938967
sigma_e .30149722
rho .82267023 (fraction of variance due to u_i)

F test that all u_i=0: F(28, 126) = 3.46 Prob > F = 0.0000

Discussion and Conclusion

This research has objective of measuring impact of corporate governance internal mechanism over profitability. Hypothesis of the study states that more independent directors is sign of profit, but no evidence were found of this. Results are steady to studies of Johl et al., (2015) and Sheik & Kareem (2015)and to the stewardship theory (Davis et al., 1997).The hypothesis about the impact of board size was resulted into accepting null hypothesis and align to studies of Anderson et al., (2004), Haider et al (2015) and Johl et al. (2015)and to the resource dependency theory (Johnson et al., 1996).The impact of CEO affiliation and characteristics of board was found to be negative and significant in relation to profitability. This is because CEO from family may lack professional competencies (Lauterbach &Vaninsky, 1999). In the same way the impact of managerial ownership was found negative and not significant (Davis et al., 1997). Lastly, it was also revealed that board characteristics and managerial ownership effect profitability of financial vs non-financial firms differently. Corporate governance mechanism is much important to the profitability of both financial and non-financial companies. The findings are of importance to investors for making investment decisions. This study also sheds some light on the corporate governance structure and its importance in a novel context and hence helps us to understand the importance of a sound corporate governance mechanism.

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