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Corporate Governance Indicators and Firm Value: Evidence of Sharia Compliant Firms from Pakistan

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Abstract
This letter intents to test the impact of ownership, business, and board structure on the firm value in case of Shariah compliant firms listed on Pakistan stock exchange. The underpinning objective of current study was whether Shariah compliant firms differ from the non-Shariah compliant firms in case of firm value creation. The findings of current study reveal that ownership structure have significantly linked with firm value (family ownership (+), Concentrated ownership (+), and foreign ownership (-)). The business structure indicates a positive and significant relationship with the firm value. Similarly, in case of board structure the relationship is significant (board independence (-), board size (+), and CEO duality (+)). The findings of current study indicate that Shariah compliant firms significant differ from the non-Shariah compliant firms. Furthermore, the future studies need to consider comparative study for better understanding.

Keywords: Ownership structure, business structure, board structure, corporate governance, board size, board independence, family ownership, concentrated ownership, pyramidal group.

Introduction

Weak external and internal governance have led to severe conflicts among stakeholders, which has a significant impact on economic development (country level) and firm performance (firm level) (Huyghebaert & Wang, 2012). Despite a mass recognition of researchers and the realization among policy makers about the importance of an effective governance mechanism in emerging and developing economies, no significant improvement has yet to be seen (Nessim & Bargman, 2008). According Juniarti, (2014)), the little interest of the powerful and politically connected controller in improving external governance is the main reason for the lost focus. Morck, Tian, and Yeung (2005) termed this as economic entrenchment. The political system of the emerging and developing economies have provided these powerful controllers enough power to influence public policy.

The corporate finance researchers have shifted their focus away from the traditional conceptualization of agency theory principal-agency conflict to relatively modern conceptualization known as principal-principal conflict (Su, Xu, & Phan, 2008). In recent years, the principal-principal conflict has emerged as an emerging theoretical perspective in emerging economies where the ownership is concentrated at a different level and family ownership coupled with the pyramidal ownership is the dominant type of ownership structure. The traditional conceptualization of agency theory, which is the principal-agent model argued that there is a conflict of interest between owners and managers (Tsionas, Merikas, & Merika, 2012), and concentrated ownership is seen as the solution to the conflict (Martin, Gómez–Mejía, Berrone, & Makri, 2017). Martin, Gómez–Mejía, Berrone, and Makri, (2017) argued that ownership concentration is seen as the solution to PA (Principal-Agent) conflict as the presence of controllers in the interest of the owners are aligned with managers. However, Ahmad, Ahmed, and Samim (2018) argued that the concentrated ownership in the presence of the controller would provide the opportunity for the controllers to expropriate the wealth of minority shareholders through the mean of related party transactions.

Corporate Governance Challenges in Pakistan

Pakistan started as an underdeveloped country and showed impressive economic growth and has gained the emerging economy status (Saleem, 2018). According to Kahan et al. (2016) like other regional economies, the insider trading in Pakistan is higher, which leads to an intense agency issue (Basheer et al., 2018a; Sheikh & Wang, 2012) and ultimately poor information environment. Meanwhile, the ownership structure is highly concentrated, and in the hands of only a few people (Basheer et al., 2014).

Pakistan is an interesting emerging market setting to analyze principal-principal conflict arising from minority shareholder expropriation due to its high ownership concentration that is dominated by family ownership, and weaker corporate governance as compared with other developed economies (Basheer et al., 2018a; Basheer et al., 2018b; Sheikh & Wang, 2012). One of the main features of the corporate sector in Pakistan is the high level of ownership concentration and involvement in managerial decisions (Basheer et al., 2018a; Basheer et al., 2018b; Sheikh & Wang, 2012). According to a study carried out by Sheikh and Wang (2012), the mean of ownership concentration is 58 percent.

This indicates that ownership in Pakistan corporate sector is highly concentrated, and companies are under control of powerful controllers, which can direct managers to peruse his/ her self-interest at the cost of minority shareholders. Further, in Pakistan, this concentrated ownership is also compounded by cross holdings (Afgan et al., 2016; Javed & Iqbal, 2010; Ikram & Naqvi, 2005).

Along with poor corporate governance problem in the private sector, due to political instability State Owner Enterprises (SOEs) are also facing serious related to corporate governance challenges in Pakistan. Controlled by inefficient executives, SOEs like Pakistan Steel Mills, Pakistan Railway, Pakistan International Airline (PIA), National Bank of Pakistan (NBP) and National Insurance Company Limited (NICL) are marred due to directors' mismanagement, bureaucratic interference, political influence, and bribery and corruption (Salman & Siddiqi, 2013). Domestic liabilities and debt of 200 SOEs in Pakistan have doubled from Rs. 665 billion (2% of GDP) in 2015 to Rs. 1299 Billion (4% of GDP) in 2018. Moreover, gross debt has increased by Rs. 60 Billion, and the external debt of SOEs has raised from Rs. 253 Billion in the financial year of 2015 to 353 Billion in the financial year of 2018 (SBP Annual Report, 2018). According to Fitch Solutions, one of the financial advisory agencies, the week performance of SOEs with net annual losses of Rs. 44.8 Billion would be a major drag on public and government's financing.

Research Questions

Based on the problem statement of the current study, research questions are:

1. Does ownership structure (family ownership, ownership concentration, foreign ownership) has a significant impact on the firm value of sharia compliant listed companies on Pakistan stock exchange?
2. Does the business structure (shareholders with cash flow rights, controlling rights, and cross holding shares) has a significant impact on the firm value of sharia compliant listed companies on Pakistan stock exchange?
3. Does the board structure (board independence, board size, CEO duality) has significant impact on the firm value of sharia compliant listed companies on Pakistan stock exchange?

Research Objectives

Based on above mentioned research questions, research objectives of this study are:

- To examine the relationship between ownership structure (family ownership, ownership concentration, foreign ownership) on firm value of sharia compliant listed companies on Pakistan stock exchange.

- To examine the relationship between business structure (shareholders with Cash flow rights, controlling rights and cross holding shares) on firm value of sharia compliant listed companies on Pakistan stock exchange.
- To examine the relationship between board structure (board independence, board size, and CEO duality) on firm value of sharia compliant listed companies on Pakistan stock exchange.

Historical aspects of Corporate Governance

Across the world, every country implemented a set of codes of corporate governance and sometimes feel the corporate sector of surrounding with system crisis a big reason for revelation is business law and practices, in England failure of governance in the south sea bubble in the 1700s. Likewise, after the stock market crash of 1929 in the USA securities law was introduced (Morck & Steier, The Global History of Corporate Governance: An Introduction, 2005). There was no lack of other crises such as the 1970 secondary banking crisis in England and 1987 and Load fiasco in the US. in addition to scandals the history of corporate governance was also characterized by a number of well-known business failures the attack of the Maxwell group on the mirror newspaper pension fund The Fall of the bank of credit and commerce international and bearings Bank every crisis on major corporate failure often triggered by corruption fraud and abuse was faced by new elements of an improved corporate governance (Windsor & McNicholas, 2012) . Structure through this process of continuous change developed countries have created a complex mosaic of government and private sector laws, regulations, institutions and enforcement capacity the aim is not to shekel companies but to balance the spirit of the company with greater transparency systematic implementation of legislation has created a culture of conformity. That has influenced organizational cultural and corporate management strategy to develop them in the best possible way in order to attract human and financial capital with the increasing diversity and complexity of shareholders and stakeholders this ongoing process of change and adaptation has accelerated globalization (Brown, Brown, Beekes, & Verhoeven, 2011). That also forces much business to tap into international financial markets and complete more this has resulted in consolidation and a greater role for mergers and acquisitions as well as expanding corporate control markets.

Corporate Governance and Shariah-Compliant

During the middle ages, Islamic finance help system and economic growth in the entire Muslim world this has been seen in the last decade special in the aftermath of the first oil shop between 1973 and 1974 beyond the liquidity boom its re-emergence was motivated by the launch of revolutionary Islamic financial products (Farooq & Tbeur, Dividend policies of shariah-compliant and non-shariah-compliant firms: evidence from the MENA region, 2013). The desire for compatible financial services from Muslim populations the industry has recently received our new expectations of the links of gulf cooperation council capital in traditional financial markets renew rises in the oil prices the demand from Western Muslim communities (Farooq & Alahkam, Performance of shariah-compliant firms and non-shariah-compliant firms in the MENA region, 2016) . The growth of the management skills of the Islamic financial services or all part of the UN sure performance of Western financial markets as a consequence 284 institutions operating in Islamic financial services in 38 countries Muslim and non-Muslims are currently operating in the global Islamic financial services industry there is also growth of Islamic capital markets mutual funds and insurance services in saying that "Islamic banks have involved premier league by offering services in a captive market people who only deal with the financial institutions that adhere strictly to Islamic principles" (Ho & Mohd-Raff, 2018). The governor of the Bahraini monetary agency converts a sense of the origin of the IIFS. The operation of Sharia means the organization undertakes to not to engage the transactions based on profit. (2) not to carry out financial transactions strictly separate from the function of the real economy (3) not to participate in transactions where the exploitation of any party takes place (4) not to take place inactivity is considered harmful to society (Sabrun, Muhamad, Yusoff, & Darus, 2018). Originally the IIFS had established the legal and regulatory structure applicable to it in the absence of a clear view the philosophical structures and organizational procedures, however, drive from the concepts outlined below have specific characteristics that challenge regulators and call for solutions beyond simply expanding existing legislation and regulations of the ICFS (Zhang, et al., 2018). Today's and several countries have adopted legislation and regulations and international institutions have been set up to change standards for traditional financial services and to encourage practices in harmonization (Zhang, et al., 2018).

Agency Theory

A firm owned by a single owner would bear all the liabilities and reap all the returns, and this is called a sole proprietorship. This type of firm's owners would manage their own firms, and their interests are aligned with organizational objectives (Rose, 2010). But in many cases, it is difficult for an individual to arrange startup capital or capital for exploiting any anticipated growth opportunity. Even more, he needs technical material and human resources to handle the business affairs; hence, he needs an individual with either finance, technical skills, or similar objective to participate in the business (Lambert, 2006). The group of individuals that provide resources is known as shareholders. Shareholders are a group of individuals, credits providers, financial institutions, and corporations who have a residual claim on the company's assets and net earnings (Lambright, 2008). Therefore, the right to control the use of the assets of the firm is vested in them. These shareholders are reckoned as owners of the company; a separate legal entity. Next, this group of owners appoints a board of directors to select chief controlling authority known as the chairman of the board (COB) (Cuevas-Rodríguez, Gomez-Mejia, & Wiseman, 2012) . COB and board of directors then elect the chief decisional authority CEO and other important personnel to manage the affairs of the company. This is when a separation between ownership and control arises. The COB is acting as the principal and the manager is the agent who is hired to maximize principal wealth (Bahli & Rivard, 2003) . According to the corporate governance literature, the principle of the higher agent to maximize his wealth is termed as Principal-Agent relationship as stated: "An agency relationship is defined as one in which one or more persons (the principals) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent (Hill & Jones, 1992).

Research Methodology

This chapter begins with the discussion of the research framework extracted from the essence of previous literature and theory, hypotheses development, and research design followed by the measurements of variables used in current research. Besides, this chapter also deals with the sampling process followed by elaborations of data collection. Finally, explanations of the types of panel data analyses are discussed.

Research Framework

The research framework of this study is based on the integration of agency theory. The research framework of the current study is grounded on the previous literature of similar work, as explained in literature review. The dependent variable of the present study is firm value. This study used critical factors that affect the firm value as repressors' on firm value. These variables were taken after critical literature review and supported by the theory, and their relationship has been described in the previous literature review. The independent variables are ownership structure, business structure, and board structure. Additionally, the direct relationship between independent and dependent variables of the present study is widely discussed in past research.

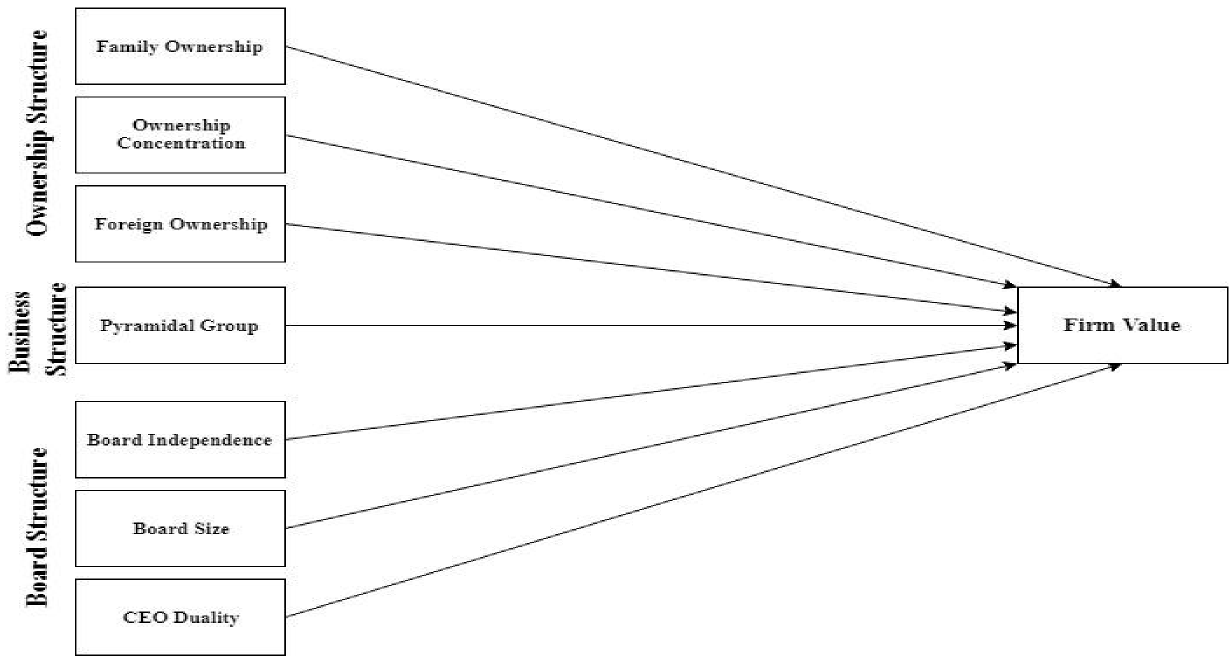

Figure 1: Research Framework

Hypotheses Development

A hypothesis is defined as "a tentative yet testable statement, which predicts what you expect to find in your empirical study" (Sekaran & Bougie, 2009, p. 87). Therefore, once hypotheses have been developed to delineate the relationship between two or more variables, testing can be carried out to confirm the relationship so that a solution can be found to overcome identified problems (Sekaran & Bougie, 2009). This section consists of four main hypotheses. These hypotheses are explained below:

H_{1a}. Family ownership has a significant relationship with firm value.
H_{1b}. Concentrated ownership has a significant relationship with firm value.
H_{1c}. Foreign ownership has a significant relationship with firm value
H2a. Pyramidal business groups have a significant relationship with firm value.
H3a. Board size has a significant relationship with firm value.
H_{3b}. The proportionate of independent directors on the board has a significant relationship with firm value.
H_{3c}. CEO duality has a significant relationship with firm value.

Firm Value

The dependent variable of the current study is firm value. There are several measurements of performance, and each one has its own pros and cons. Due to the limitations of accounting-based measurements for models, which included intangibles, this study used the market-to-book ratio to gauge firm value. Market-to-book ratio is measured by following Ahmed Sheikh et al. (2013) as this proxy is more appropriate to measure the firm value.

Table 1: Market-to-Book Ratio

Dimensions	Measurement	Source
Market-to-Book Ratio	Average of the high and low market price per share ratio for the year to book value per share	Ahmed Sheikh et al. (2013)

Ownership Structure

Family Ownership

Family ownership denotes the percentage of shares owned by the family members. It can be calculated by dividing the common shares owned by the family members with total outstanding shares (Filatotchev et al. (2005; Lodh et al., Choi et al., 2015).

Table 2: Family Ownership

Dimensions	Measurement	Source
Family Ownership	A total number of shares held by families and relatives/ Total number of shares outstanding.	Filatotchev et al. (2005), Choi et al. (2015)

Ownership Concentration

Ownership concentration refers to the total shares owned by large companies which can be determined by percentage of shares held by largest shareholders that owned minimum 5% or greater number of the company's shares divided by total firm's shares (Javid & Iqbal, 2008; Prommin *et al.*, 2016;Yasser & Mamun, 2017).

Table 3: Ownership Concentration

Dimensions	Measurement	Source
Ownership Concentration	Total percentage of shares held by the largest stockholders (Ownership of at least 5% or more shares)	Javid and Iqbal, (2008), Prommin *et al.*, (2016), Yasser and Mamun (2017)

Foreign Ownership

Foreign ownership refers to the states when any individual or a company hold a share in local company which can be determined based on the percentage of total number of shares by the individual or foreign company divided by the total number of shares (Lee & Chung, 2018).

Table 4: Foreign Ownership

Dimensions	Measurement	Source
Foreign Ownership	Total percentage of shares held by the foreign shareholder/company (Ownership of at least 5% or more shares)	(Lee & Chung, 2018).

Pyramidal Business Structure

Pyramidal business structure refers to the sum of cross-held shares owned by more than one firm in the same business group. It is determined through the separation of cash flow rights and voting rights of shareholders (Chung & Chan, 2012; Ratnawati et al., 2016)

Table 5: Pyramidal Structure

Dimensions	Measurement	Source
Pyramid Business Group	Percentage Sum of the cross-holding shares held by more than one affiliate firm in the same business group.	Chung & Chan, (2012), Ratnawati et al., (2016).

Board Structure

Board Size

Board size refers to the total number of directors on the board. The proxy to measure board size is mentioned in the below table by following (Chen, 2012; Fauzi & Locke, 2012; Vo and Phan, 2013).

Table 6: Board Size

Dimensions	Measurement	Source
Board Size	Total number of directors on the board	Chen (2012), Vo and Phan (2013)

Board Independence

Different proxies have been used to measure board independence, such as the percentage of non-executive directors on the board as well as the percentage of outside directors (Basheer, 2014; Yasser & Mamon 2017). However, this study measures board independence as a number of independent directors (outside directors) divided by the total number of directors or board size.

Table 7: Board Independence

Dimensions	Measurement	Source
Board Independence	Total number of independent directors on the board / Board size	Fauzi and Locke (2012), Vo and Phan (2013)

CEO Duality

CEO duality refers to the situation where CEO also hold the position of chairman. When the CEO and chairman are two different persons will minimize the agency issues. Particularly in family-owned businesses CEO is major shareholder and family member to minimize the PP conflict and agency issue there must be two separate leaders (Singh, Tabassum, Darwish, & Batsakis, 2018).

Table 8: Board Independence

Dimensions	Measurement	Source
CEO duality	Two separate leaders as CEO and Chairman. If two leaders are separate means 0 and otherwise 1.	(Singh, Tabassum, Darwish, & Batsakis, 2018)

Population and Sample Selection

The Pakistan Stock Exchange Limited (PSX) has been one of the best performing stock exchanges in Asia in the last few years (Iqbal, 2012). PSX deals with two main sectors, named, the financial sector (Service) and the non-financial sector (industrial). There is a total of 535 companies listed in PSX out of which 426 companies in total registered in the Karachi Meezan Islamic Index (KMI). Out of 426 firms, 230 are listed as sharia-compliant, and 196 are declared as non-sharia compliant firms. For the current study, the target population would be 230 Sharia complaint firms in Pakistan. Furthermore, the time span selected for the study is limited to 10 years, starting from 2009 to 2018.

Data Collection Sources

This study will use secondary sources of data. The data will be collected from audited accounts and annual reports of Shria and non-sharia compliant firms in Pakistan. Annual reports can be accessed through the official website of selected companies as well from the PSX website. Further, Thomson Reuter and Bureau van Dijk OSIRIS data streams will also be explored to access the required data.

Methods of Data Analysis

This study will use descriptive statistics to obtain information on dependent and independent variables, and the correlation between these variables will also be examined through data analysis procedures. The analysis may be followed by different diagnostic tests, and panel data tests will be performed to find out the results. Stata 13.0 will be used for data analysis. All the diagnostic test has been performed before moving to panel data analysis.

Panel Data Analysis

Panel data has the characteristics of both time series data and cross-sectional data, and it is also known as longitudinal data. There are two types of panel data, namely, balanced panel and unbalanced panel data.

Balanced panel data refers to data in which time remains constant over all cross-sectional units while the case is reversed in the unbalanced panel as the time may vary over cross-sectional units. Moreover, scholars argued that panel data account for issues of both time series and cross-sectional data, which is not possible when time series or panel data are used separately (Greene, 1990). In fact, the combined methods of time series and cross-sections can improve data quality and quantity in a manner that would not be possible when using any of the two separately (Gujarati, 2009; Baltagi & Wu, 1999).

Another justification for the use of panel data is its solution to the omitted variable issue (Wooldridge, 2005). Thus, the present study uses ten years and 436 firms, which may make the nature of data unbalanced due to eliminating years or missing data. Moreover, panel data includes some of the invariant variables; some of them are time-invariant that means these variables can vary over subjects or cross-sectional units but remains constant over the time period. While the subject invariant variables indicate that these variables may vary over time but remains constant over the cross-sectional units.

Both types of variables have a significant effect on the dependent variable and need to be handled carefully for unbiased results. Therefore, panel data analysis includes properties of both time-based and cross-sectional analysis with numerous analytic model options, such as the random effect model and the fixed effect model. A fixed-effect model or random effect model can be used to control for heterogeneity effect in panel data regression due to invariant variables (Wooldridge, 2010).

Fixed Effect Model

The fixed effect model is a model that shows the difference in intercepts for different entities with a constant slope across entities and time. It can be a one-way entity fixed effect, and the one-way time fixed effect or two ways fixed effects (entity and time). In a fixed-effect model, each cross-sectional unit considered heterogeneous and the unobserved time-invariant variables of individual cross-sections are considered. Fixed effects examine the relationships between variables within an individual, whether it is a firm or country etc. This means that the fixed effect model takes into consideration the differences between the individual and itself within the period, and this could control for any unobserved unique characteristics or the time-invariant factors which may bias the results. The error term in a fixed effect method is correlated with the independent variables. Where,

$$H_0 : \alpha_1 = \alpha_2 = ,\dots\dots\dots = \alpha_n$$
$$H_1 : \alpha_1 \neq \alpha_2 \neq ,\dots\dots\dots \neq \alpha_n$$

If F-statistics is below 5 percent, we will accept the null hypothesis and reject otherwise.

Random Effect Model

The main advantage of the random effect estimate is its ability to examine time-constant independent variables which are dropped in the fixed effect estimate. This assumes that the unobserved effect is not correlated with the independent variables regardless of the variation over time (Schmidheiny & Basel, 2013). Therefore, the random effects method might be preferable if the main concern of the research is time-constant variables.

$$H_0 : \delta v^2 = 0$$
$$H_1 : \delta v^2 \neq 0$$

If the null hypothesis is rejected, then random effect exists and vice versa

Hausman Test

This study employs panel data so, the analysis to choose the most appropriate panel data model for the study will be conducted using the Hausman test. The Hausman test was proposed by Hausman in 1978. The null hypothesis underlying the Hausman test is that the random effect model is more appropriate. Hence, it is supposed that if the null hypothesis is rejected, the conclusion is that the random effect model is inappropriate and, therefore, the fixed-effect model should be used. In order to decide further between random effect and fixed effect, the Hausman test will be conducted to test whether the regressors are correlated with the unique errors in the model.

$H_0:$ Random effects are consistent and efficient

$H_1:$ Random effects are inconsistent and inefficient that, the fixed effect is consistent and efficient.

If the Chi-square x^2 probability value is significant, the null hypothesis will be rejected, and the fixed effect model will be more consistent and efficient.

Breusch and Pagan Lagrangian Multiplier Test

If the random effect is considered most efficient and appropriate from the above discussed Hausman test, the analysis will be proceeded to decide between the random effect model and pooled OLS model using Breusch and Pagan Lagrangian multiplier test.

$H_0:$ There are no individual differences that are, no random effect.

$H_1:$ There is an individual difference between the co-efficient that is, random effect exists.

If the null hypothesis is rejected, random effect exists and if the null hypothesis accepted than the random effect does not exist, thus pooled OLS would be more appropriate.

Advantages of Static Panel Models

The advantage of panel data analysis over other techniques include reducing the collinearity among independent variables and increasing the number of observations and degree of freedom; improving the efficiency of econometrics estimation and also account for heterogeneity of the variables as well as its suitability of studying dynamics changes in a firm or industry (Baltagi, 2008).

DATA ANALYSIS

Table 9: Final Sample and Observations

	Firms		**Observation (Years)**
List firms (Pakistan Stock Exchange)	543		5,430
List with PSX-KMI All	426 (312)		4,260 (3,120)
Shariah compliant listed firm	**230 (164)**		**2,300 (1,640)**
Non-compliant list firms	196 (148)		1,960 (1,480)
Total Observations	312		3,120
Missing Values	114		1,140
	Frequency		
Firm Years	**Compliant**	**Non-Compliant**	**Observations**
2009	162	148	3,120
2010	162	148	3,120
2011	162	148	3,120
2012	162	148	3,120
2013	162	148	3,120
2014	162	148	3,120
2015	162	148	3,120
2016	162	148	3,120
2017	162	148	3,120
2018	162	148	3,120

Total	**162**	**148**	**3,120**

Descriptive Statistics

The descriptive statistics are important to any data and contain a lot of insights. In doing so, they reveal some important features of data that are forgotten if the data is void of this descriptive. Moreover, the table 4.2 to 4.3 below illustrates the results of descriptive statistics for Shariah complaint and Shariah Non-compliant firms during the period 2009 to 2018. These descriptive statistics includes the mean, maximum, minimum and standard deviations for each variable in study, moreover, the Stata version 12 was used to generate these descriptive results.

Table 10: Descriptive Statistics Shariah Complaint Firms

Variable	Mean	Std. Dev.	Min	Max
MTB	1.674	5.900	-26.08	112.53
FOW	0.713	0.452	0	1
OC	0.653	0.264	0	5.34
FO	0.032	0.118	0	1
PBS	0.333	0.405	0	6.61
BS	7.862	1.556	3	21
BI	5.325	1.789	2	19
CD	0.254	0.435	0	1
PPC	0.138	4.593	-192.23	15.41

Correlation Analysis

Pallant (2007) stated that correlation analysis is useful in describing the strength and direction of the linear relationship between two variables. More specifically, the Pearson correlation analysis is employed to evaluate and clarify the strengths of the relationship among the studied variables.

The next part is the correlation analysis, and the relationship between independent directors and market to book ratio is significant, but at 10%, and the correlation is negative and weak, about (-0.034). Moreover, the correlation between foreign directors is positive, but it does not account to be significant as well. Also, the board size has a negative medium relationship (-0.212) with market to book ratio and is highly significant as well.

Moving on, the dependent variable, market to book value, indicates that females have negative (-0.018) and insignificant relation with the variable. It can be seen however that educational heterogeneity has a negative (-0.1) and significant relationship with the ratio. Prestigious education on the other hand has positive (0.037) and partially significant relationship with the ratio at 10%.

Moreover, there exists two proxies for the capital experience on average for the board, along with the interlocks that happened. This indicates that the interlocks were correlated significantly, and positively. The experience of directors is positive (0.022) and partially significant, the interlocks correlation amounts to 0.054. Additionally, the ownership structure is highly significant, and the correlation with the ratio is positive. The correlation here is 0.165. The family and the foreign ownership are both negative and amount to -0.26 and -0.061 respectively, while the first one being highly significant, whereas the second one being only partially significant.

Table 11: Correlation analysis of Shariah Compliant Firms

MTB	1.0000		
FOW	-0.0517	1.0000	
OC	-0.0027	0.0067	1.0000

PBS	-0.0002	0.0109	-0.0013	1.0000					
BS	0.0505	-0.0765	-0.0550	-0.0152	1.0000				
BI	0.0101	0.0625	-0.0268	-0.0055	0.5971	1.0000			
CD	-0.0604	0.1000	-0.0127	0.0564	0.0033	0.0638	1.0000		
FO	0.1852	-0.2249	-0.0037	-0.0040	-0.0006	0.0894	-0.0643	1.0000	
PPC	0.0451	-0.0276	0.0038	-0.0064	-0.0119	-0.0385	-0.0244	0.0260	1.0000

Hausman Test

The test for Hausman is to evaluate the optimization of a model, and whether a fixed or a random effects model should be run in a regression. Moreover, the potential difference in both the coefficients of the fixed and random effects, this is passed through the Hausman test. In the test there are two hypotheses, the first one is the null hypothesis. This indicates that the random effects model is more appropriate, while the second is the alternative hypothesis, this indicates the feasibility of the fixed effects model. This is tested at a significance level of 0.05, and the rejection and acceptance of the null hypothesis remain the same (Wooldridge, 2010). Additionally, the F test can also reject or accept null hypothesis to pick a model from fixed and random effects. In this case the F test value should be greater than the critical F value to reject the null hypothesis and move towards the fixed effects model. Otherwise the movement is towards the random effects model.

Table 12: Hausman Test

	Coefficients			
	(b) **fe**	(B) **re**	(b-B) Difference	sqrt (diag(V_b-V_B)) S.E.
OC	0.005	0.004	0.004	0.009
PBS	-0.002	-0.008	-0.009	0.006
BS	0.699	0.566	0.132	0.290
BI	-1.079	-0.492	-0.586	.252
CD	0.412	-0.632	1.044	1.146
PPC	0.064	0.149	-0.084	0.052
FO	5.783	11.590	-5.807	3.492
Prob>chi2				**0.0766**

b = consistent under Ho and Ha; obtained from xtreg
B= inconsistent under Ha, efficient under Ho; obtained from xtreg
Test: Ho: difference in coefficients not systematic
chi2(7) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 8.95

Multiple Regression Analysis and Hypothesis Testing

The multiple regression methodology has been applied in terms of a direct relationship between independent and dependent variables. This is illustrated in the table 4.17 and 4.18. The results of the above discussed regression are also illustrated there. R square is the key measure in any regression, and it predicts the amount or proportion of the dependent variable that is being predicted by the independent variable. Moreover, this proportion is the key metric in determination whether the model is a good fit or not. Here the R square is 0.275 in case of Shariah compliant firms while 0.207 in case of non-shariah compliant firms. This means that 27.5% of the independent variable is predictable by the independent variables of the said model in case of Shariah compliant firms and 20.7% in case of non-shariah compliant firms. Moreover, there is no absolute rule for this determination, but the amount is considerable for the dependent variable of this model.

Table 13: Random Effect

Hypo.	Market to Book	Coef.	Std. Err.	t-Stat	Decision
H1	Family Ownership	12.060	1.434	8.407	Supported
H2	Concentrated Ownership	0.512	0.188	2.724	Supported
H3	Foreign Ownership	-0.638	0.307	-2.079	Supported
H4	Pyramidal Group (PG)	0.602	0.294	2.045	Supported
H5	Board Independence	-0.559	0.110	-5.066	Supported
H6	Board Size	0.479	0.122	3.934	Supported
H7	CEO Duality	0.341	0.141	2.423	Supported
	cons	0.590	0.051	11.574	
	R-sq:		**0.275**		

Hypotheses Testing of Direct Relationships

In current section statistics of direct relationship proposed in hypothesis will be discussed in detail based on the findings of multiple regression analysis revealed in table 4.17 and 4.18.

Ownership Structure

Family-ownership

H1a: Family ownership significantly linked with the firm value.

The results of direct relationship between family ownership and firm value indicates that there is positive and significant relationship in case of Shariah compliant firms while, in case of non-shariah compliant firms there is significant but negative relationship indicated statistically in current study. Hence, H1a of current study is accepted at the significant level of 5% with the confidence interval of 95% the results of coefficients are (β = 12.060, t-value = 8.407, p-value = 0.000) and (β = -0.501, t-value = -3.852, p-value = 0.000). The results of current study in case of non-shariah compliant firms is well aligned with the literature which affirms that in family ownership has negative and significant relationship with performance or firm value in developed and developing economies (Khan & Khan, 2011; Li & Ryan, 2015). However, in case of shariah compliant firms the results are quite different as compare to non-shariah compliant firms the results indicate a positive and significant relationship. These results could be the effect of shariah compliance because when firms follow the shariah compliance rules and regulations the effect of family particularly with respect to influence or power (Grassa, 2016).

Concentrated ownership

H1b: Concentrated ownership significantly linked with the firm value.

The concentrated ownership refers to the largest percent of shares held by shareholders that owned minimum 5%. Literature reveals that there is positive and significant relationship between firm value and concentrated ownership. The results of current study in case of shariah compliant and non-shariah compliant firms indicates a positive and significant relationship between concentrated ownership and firm value. Hence, we fail to reject H1a at (β = 0.512, t-value = 2.724, p-value = 0.037) and (β = 0.500, t-value = 8.684, p-value = 0.000). The similar findings have been reported in literature by a number of studies (Yangfan, 2015; Shan & Gong, 2017; Yasser & Mamun, 2017). The results also affirm that the major shareholders have close interest because they have huge investments, so they are more concern about the firm value. The majority shareholders have close interactions with the board of directors and monitor all the activities closely to ensure the higher firm value (Yasser & Mamun, 2017). Moreover, the results reject the arguments of agency theory that major shareholders only working for self-interest as compare to overall performance (Jensen & Meckling, 1976).

Foreign ownership

H1c: Foreign ownership significantly lined with firm value.

Foreign ownership facilitates the firm in acquiring the knowledge and best practices from the other countries. Literature suggested that foreign ownership have positive and significant impact on the firm value. The current study proposed that foreign ownership have significant relationship with the firm value. H1c is accepted at 95% of confidence interval in case of shariah compliance and non-compliance firms with (β = -0.638, t-value = -2.079, p-value = 0.047) and (β = 1.054, t-value =7.150, p-value = 0.000) respectively. However, the findings of current study against the H1c reveals that foreign ownership have significant relationship with firm value but in case of shariah compliance it indicates a negative association while in case of non-shariah compliance it indicates a positive relationship with firm value. The literature supports the finding in case of non-shariah compliance firms (Le & Phung, 2013) . However, in case of shariah compliance firms the finding does not indicates the destination of foreign ownership and might be this magnitude is due to religious factors. The same results have been reported in a few recent studies (Grassa, 2016).

Business Structure

Pyramidal group (PG)

H2a: Pyramidal group significantly linked with firm value.

Several studies have been documented on the pyramidal group and firm value. The underpinning objective of considering this factor was testing the effect of separation of ownership and controlling effect. More recent literature indicates that there is positive association between pyramidal group and firm value however, there is ambiguity on the significance of relationship in literature. However, current study consider dataset of Shariah and non-Shariah compliance firms and the findings affirms that there is positive and significant relationship between pyramidal group and firm value with (β = 0.602, t-value = 2.045, p-value = 0.041) and (β = 0. 567, t-value =2.211, p-value = 0.039) respectively and H2a accepted at 5% level of significance.

The findings of current study rejected the second school of thought that there is negative or insignificant effect of pyramidal group on the firm value. The findings affirm that firm having owners with voting right have better firm value (Lin, Ma, Malatesta, & Xuan, 2013).

Board Structure

Board independence

H3a: Board independence significantly associated with firm value.

Independent directors on the board is a measure as proportion of independent directors to board size. Most of studies related to corporate governance considered this as underpinning factor. The literature affirms that board independence has positive or negative association with the firm value. However, major part of literature acknowledged that independence of board of directors has positive relationship with the firm value in non-family owned businesses from the developed economies however, this relationship is not significant and negative association in case of family owned businesses from the developing nation. The findings of current study are well aligned with the literature and indicates a negative and significant relationship in case of Shariah compliant firms with (β = -0.559, t-value = -5.066, p-value = 0.000) while negative but insignificant in case of non-Shariah compliant firm with (β = -0.663 t-value = -1.641, p-value = 0.072). H3a is accepted at the 5% level of significance case of Shariah compliance while rejected in case of non-Shariah compliance respectively.

Board size

H3b: Board size associated significantly with firm value.

Based on the literature review the current study proposed that board size has a significant association with the firm value. The findings of current study indicate that board size has a positive and significant relationship with firm value in case of Shariah compliant firms (β = 0.479, t-value = 3.934, p-value = 0.000). While, there is negative and significant association between board size and firm value in case of non-Shariah compliant firms (β = -0493, t-value = -2.200, p-value = 0.047). However, literature from the developed economies indicates that there is positive and significant association between board size and firm value which is based on the resource dependence theory. However, this is not true in case of Pakistan or like developing economies where the implementation of codes of corporate governance is not that effective as compare to developed economies (Ahmed Sheikh, Wang, & Khan, 2013).

CEO duality

H3c: CEO duality associated significantly with firm value.

CEO duality has been considered as point of discussion since the emergence of codes of corporate governance to dilute the powers in two positions instead of controlling by one person. CEO duality refers to the situation were CEO also holds a position of chairman (Nguyen, Rahman, & Zhao, 2018) . Codes of corporate governance emphases that CEO and chairman position must be hold by two separate persons to reduce the agency issue among the majority and minority shareholders. Literature affirms that affirms that there is positive and significant relationship between CEO duality and firm value (Nguyen, Rahman, & Zhao, 2018). The findings of current study are well aligned with literature in case of Shariah compliant (β = 0.341, t-value = 2.423, p-value = 0.039) and non-Shariah compliant (β = 0.149, t-value = 5.965, p-value = 0.000) firms positive and significant respectively.

Table 14: Summary of Hypothesis

Family-Ownership	(+) Supported	Family ownership positively and significantly linked with the firm value.
Concentrated-Ownership	(+) Supported	There is direct positive and significant relationship between concentrated ownership and firm value.
Foreign-Ownership	(-) Supported	There is negative but significant relationship between foreign ownership and firm value.
Pyramidal Group	(+) supported	Pyramidal group have positive and significant relationship with firm value.
Board Independent	(-) Supported	Independent directors have direct and significant relationship with firm value the direction of relationship is negative.
Board-Size	(+) Supported	There is positive and significant relationship between board size and firm value.
CEO Duality	(+) Supported	There is positive and significant relationship between CEO duality and firm value.

DISCUSSION AND CONCLUSIONS

The current chapter is about the discussions based on the findings reported in chapter four in the light of research objectives were designed in chapter one. This summary will facilitate for the quick and comprehensive understanding of the current research. The discussion is based on the findings of current research in the light of research objectives and research questions of current study one by one. Second portion of current chapter is based on the practical, methodological, and theoretical implications for the researchers, business community, investors, the most important government, and policymakers. Concluding remarks about the current study has been reported in last portion of the current study along with the limitations and future research directions.

Discussion

This section is based on the findings given in chapter four and discussion will be in the light of research objectives and research questions. The discussion includes on the direct relationship between the dependent and independent variables. The discussion is based on the research objectives.

Contributions of the Study

The findings of current study contributed theoretical, methodological, empirical, contextual contribution will be discussed in this session.

Theoretical Contributions

The current study contributed in the existing body of literature in the domain of corporate governance, and agency theory. There are number of studies has been documented so far on the corporate governance and agency theory and its impact on the firm value however, a few studies considered the pyramidal group to test the output variable firm value. Moreover, the previous results are inconsistent literature reported no impact, positive impact and negative impact of corporate governance practices on the firm value. However, pyramidal group factor was ignored by the literature those need to be considered test the explanation power of model. The current study considered the factor to test its impact on the firm value.

This study contributed to the existing literature of corporate governance as well as agency theory.

Furthermore, the current study considered ownership structure (family-ownership, concentrated ownership, and foreign ownership), business structure (pyramidal group), and board structure (board independence, board size, and CEO duality) towards the firm value. Therefore, the current study contributed significantly to the corporate governance and agency theory and firm value by adding the empirical and theoretical support for the relationship being used in the current study.

Conclusion

The underpinning objective of current study was to test the direct effect of ownership, business, and board structure on the firm value. To achieve the research objective current study, secondary dataset was collected from the annual reports of listed companies based on Shariah compliant firms. The underpinning scale for the segregation of Shariah compliant and non-Shariah compliant firms we use the KMI (Karachi Meezan Islamic) all index which segregate the companies based on the Shariah compliance and Noncompliance. Total sample 168 Shariah compliant has been considered for the period of 2009 to 2018.

The current study considered ownership structure (family-ownership, concentrated ownership, and foreign ownership), business structure (pyramidal group), and board structure (board independence, board size, and CEO duality) and their effect towards the firm value. To test this model three research questions, objectives and seven hypotheses were developed.

To achieve the research objectives of current study, basic regression assumption was tested before moving towards the testing of hypothesis. The findings shown that random effect model is more appropriate based on the Hausman test. The results of panel regression there is significant relationship between ownership, business, and board structure and firm value.

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