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Impact of Islamic Label on Firm's Governance: Evidence from Pakistan

Naeem Ullah[1], Muhammad Faisal Rizwan[2]

[1]Ph.D (Finance) Scholar, Faculty of Management Sciences, IIU Islamabad
[2]Assistant Professor, Faculty of Management Sciences, IIU Islamabad

ABSTRACT

This paper aims to study the impact of Islamic Label on the firm's governance quality. The recent literature indicates that debt can discipline managers to work efficiently in the interest of the firm. Thus low leverage can proxy for good governance. Since Islamic firms are low on debt, thus we may extend that Islamic label can proxy for good governance. To test our hypothesis, we obtained data from 231 nonfinancial firms listed on Pakistan stock exchange out of which 53 were declared as sharia-compliant. The results indicate that the Islamic label has a positive significant impact on a firm's governance quality and Islamic label can proxy for good governance. This study aims to form a nexus between Islamic label, leverage, and governance on which there is little or no literature. It will also be important for investors and managers of Islamic funds who have little or no research support about the governance aspect of Islamic firms.

Keywords: Islamic label, sharia-compliant, Governance Quality, Leverage.

1. INTRODUCTION

Corporate Governance provides a mechanism to mitigate agency problem. According to the traditional view, Debt acts as a disciplining mechanism for the managers of the firms to work with efficiency and reduce their perks and privileges to avoid bankruptcy (Grossman & Hart, 1982). Thus debt can make managers work in the interest of the shareholders. According to Jiraporn et al. (2012), higher corporate governance quality scores are associated with low leverage and that low leverage can proxy for good governance.

Islamic firms are essentially low levered firms. Thus we may extend on the

Address of Correspondence
Naeem Ullah
naeemk1@gmail.com

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findings of Jiraporn et al. (2012) to posit that Islamic label (firms) can proxy for good governance. This has been the main motivation for us to investigate whether Islamic firms are essentially good governed firms and to ascertain whether the Islamic label can proxy for good governance.

This will be an interesting phenomenon to investigate as, to the best of our knowledge, it will be the first study in Pakistan that will study Islamic firms from a governance point of view in developing country settings. Further, the literature on the relationship between Islamic label and firm governance for nonfinancial firms is almost inexistent (except for a paper written by Hayat and Hassan, 2018). Although they found Islamic label (a dichotomous variable that takes the value of 1 if firms are sharia-compliant and 0 otherwise) significant with Bloomberg governance index only and for other indices of governance, they found an insignificant relationship between Islamic label and governance. However, based on the findings of Jaballah et al. (2017), sharia-compliant firms do suffer from country effect. Also, Hayat & Hassan (2017) were of the view that the results were for large US firms and future studies may be conducted in other countries to see if Islamic label can proxy for good governance or not. Thus we will fill the gap identified by Hayat & Hassan (2017) by taking Pakistani manufacturing firms to ascertain whether an Islamic label can proxy for good governance.

Apart from that, this paper will contribute multifold. Islamic Financial market is expected to cross US$ 3 trillion worldwide by a conservative estimate (Pakistan Observer, 2017 http://pakobserver.net/2017-to-be-best-year-for-islamic-financial-market). However, the literature on Islamic Corporate finance is inexistent as most of the Islamic literature caters to financial institutions and capital markets. Further, if Islamic label proxy for good governance, it will be comforting for investors of sharia-compliant stocks that their investment will create value for them as good corporate governance scores have an impact on firm value (Ammann et al., 2011). At present these investors have little or no research at their disposal that can highlight the governance of firms. This paper will outline a comparison between different firm's specific variables to give insight into the differences between sharia-compliant and conventional firms on these variables. This would provide insights for the investors into Islamic firms that may help them in

their investment decisions.

The rest of the paper is organized as follows. Section 2 gives an insight into Islamic finance and reviews its literature. Section 3 highlights the methodology of the study. Section 4 highlights the results. Section 5 highlights different tests for robustness and section 6 concludes the research with future recommendations.

2. LITERATURE REVIEW

Sharia-Compliant Finance & Prior Research

Islamic Finance entails investments that are not forbidden by the Quran (Holy book of Muslims) and Hadith (proven sayings and acts of Prophet Muhammad (PBUH)). Islam prohibits investments that involve Gharar (Uncertainty), maysir (gambling) and Riba (interest) (Adam and Bakar, 2012). Thus Islamic stocks are essentially socially responsible (SRI) investments (Hayat & Hassan, 2017). Sharia scholars have outlined certain boundaries and rules that certify investment in certain stocks as Halal (Permissible according to sharia law) and Haram (Non-Permissible according to sharia law). This Halal certification reduces the transaction cost of investors who are interested to invest in sharia-compliant stocks (Hayat et al., 2011).

In order for the firm to be declared Islamic, it has to follow certain criteria. These Criteria may vary from country to country (Derigs and Marzban, 2008), but basic criteria remain the same that is;

1. The Firm must earn less than 5% of its revenue from unethical business.
2. Debt to the market value of equity (24-month average) must be less than 33%.
3. Accounts receivables to the market value of equity (24-month average) must be less than 49%.
4. Cash to the market value of equity (24-month average) must be less than 33%.

Above criteria are used by Dow Jones to screen the firm as Islamic. PSE 30 index (Formerly known as KMI 30 Index) has following screening criteria

1. The business of Investee Company should be Halal.
2. Interest-bearing debt should be less than 37% of the total assets of the investee company.

3. Non-sharia compliant investments should be less than 33% of the total assets of Investee Company.
4. Noncompliant income (such as income from gambling, nightclubs, prostitution, casino, tobacco, alcohol, dividend income from these businesses, dividend from sharia noncompliant companies etc.) should be less than 5% of the investee company.
5. Illiquid assets should be less than 25% of the total assets of investee companies.
6. Market price per share should be greater than net liquid assets per share.

As can be pointed out in these criteria, socially responsible investments are the guidelines for Islamic firms. Much of the research treats Islamic stocks positively on the premise that Islamic indexed stocks performed better during crises of 2008 (Ho et al., 2014; Bhatt and Sultan, 2012, and Jouaber-Snoussi et al., 2012), Resilience of Islamic banks during crises (Beck et al., 2013), low default rates of Islamic loans as compared to conventional loans (Baele et al., 2014) and Islamic banking contributes to the development of overall banking sector in Muslim countries (Gheeraert, 2014). However, there is very little or no literature that links leverage, governance and Islamic finance.

This negligence is unfortunate. This linkage should be researched as it is extremely relevant especially after 2007-2008 financial crises and 2011-2012 European crises. The notion of debt as a disciplining mechanism for managers is challenged in the study of Admati et al. (2012). Jiraporn and Gleason (2007) found that debt act as a disciplining mechanism for the firms with weaker Governance but found that regulations can also act as a disciplining mechanism. They found that regulated firms had higher debt levels and yet had greater governance quality.

John and Litov (2009) using Gompers et al. (2003) index, found that well-governed firms are low on debt as compared to badly governed firms. Similarly Jiraporn et al. (2012), also found that highly levered firms are low on corporate governance quality and vice versa. Thus they were of opinion that there is reverse causality between debt and governance. Overall recent evidence suggests that debt can be used as an alternative to corporate governance. We build on that and since Islamic firms indicate lower debts, Islamic label may qualify as a proxy for good governance. This enables us to

state our hypothesis.

H_1= Islamic Label has a positive significant impact on firm governance quality.

3. RESEARCH METHODOLOGY

Population for this study includes all nonfinancial firms listed on Pakistan stock exchange. However, only those firms are being included in a sample whose data for different variables of the study are available. Based on this criterion, 231 nonfinancial firms made out to our final sample. This, however, has not compromised the representativeness of our sample as it has a representation of every industry. The period of estimation for this study is 2011-2015 but year 2010 is also included for lag consideration. Our estimation period is robust as the Pakistani economy went through different crises and noncrisis periods during this period. Overall, our sample has 1,155 firm-year observation for every variable of the study. However, due to lag consideration to cure for possible endogeneity, in our final test results, we ended up with 924 observations for every lagged variable of the study.

Table 1: No of firms and Industries

Industry	**No. of Firms**	**Firms**
Textile	72	3
Sugar	18	0
Food Products	9	1
Chemicals, Chemical Products & Pharmaceuticals	37	13
Manufacturing	16	4
Mineral Products	5	2
Cement	16	7
Motor Vehicles, Trailers and Autoparts	17	9
Fuel & Energy	12	4
Information, Comm. and Transport Services	7	2
Coke & Refined Petroleum Products	9	4
Paper, Paperboard, and Products	5	3
Electrical Machinery and Apparatus	4	0
Other Services Activities	4	1
Total`	**231**	**53**

Islamic firms were obtained from PSE KMI All-Share Index. This index list all

stocks listed on Pakistan stock exchange. The index is recomposed semi-annually. For the purpose of this research and to obtain a time-invariant dummy, we first included those companies that remained Islamic throughout the year and then only those firms were assigned as Islamic that remained on index throughout the estimation period. In doing so, we obtained 53 firms that were sharia-compliant throughout the estimation period.

3.1. Corporate Governance Indices

To represent the firm's governance quality we will estimate three corporate governance indices. The corporate governance variables are adopted from Shah (2009). Table 2 represents these variables. We adopted these governance attributes for two reasons. Firstly, in his doctoral thesis, the author found robust results in both develop (U.S) and Developing Country (Pakistan). Secondly, it is parsimonious as it contains all the variables that are present in every index used to study corporate governance quality. Thus parsimony and stability are ensured by adopting these measures of corporate governance.

Table 2: Firm-level corporate governance variables		
Ownership Structure	OS	Shares held by the board of directors/ Total no. of shares outstanding,
Ownership Concentration	OC	Shares owned by top-10 shareholders/ Total no. of Shares
Institutional Ownership	IO	Shares held by institutional owners/ Total No. of Shares
Board Size	BS	Natural log of total No. of Board members.
Board Independence	BI	Non-Executive Directors/ Total No. of Directors in Board
Audit Committee Independence	ACI	Non Executive directors in Audit committee/ Total, No. of Directors in Audit Committee
CEO Duality	CD	Whether CEO and Chairman is the same person.

3.1.1. Index 1

Index 1 is an additive index of corporate governance attributes outlined in table 2. Following the methodology adopted by Aggarwal et al. (2011) and Amman et al. (2011) the index converts corporate governance attributes to ordinal variables ranging from 1 to 5. The final index score ranges for 0 to 1. A higher score on the index indicates good corporate governance and vice versa. Further, for robustness purposes, reverse

coding is used for adverse governance attributes such as BS, CD, and OS.

3.1.2. Index 2

Index 2 is also an additive index. All governance attributes are converted into ordinal variables ranging from 1-5. However, employing Aggarwal et al. (2011) methodology, no reverse coding is done for negative attributes of the governance. The final index score ranges from 0 to 1. Higher scores on this index indicate good governance qualities.

3.1.3. Index 3

Index 3 is constructed by adopting principal component analysis (Shah, 2009). The attributes were not converted into ordinal variables. Higher scores on this index indicate good governance and vice versa.

3.2. Regression Model

The main purpose of this paper is to study whether an Islamic label has an impact on firm governance. In order to test this hypothesis, we estimate the following baseline regression model adopted from Hayat & Hasan (2017)

$$Index_{i,t} = \alpha_0 + \beta_1 ISL_{i,t} + \beta_2 Controls_{i,t-1} + \beta_3\, Industry\, Effect + \beta_4\, years\, effect + \varepsilon_{i,t} \quad (1)$$

Where;

Index= corporate governance indices namely Index 1, Index 2 and Index 3.

ISL= Islamic Label. A dichotomous variable that takes the value of 1 if the firm is and 0 otherwise.

Controls= firm size (SZ)= log of sales., firm age(AGE)= Number of years since the company was founded, Tobin's Q (TQ)= (Market capitalization + Total liabilities + Preferred equity)/ Total Assets, profit margin(NPM)= Net income/sales, dividend payout(DPO)= Common Dividend/Total Assets, free cash flow (FCF)= (Net income - Depreciation, Amortization, and other non-cash items + change in non-cash Working capital - Capital expenditure)/Total Assets, Ownership Structure (OS), Ownership Concentration (OC), Institutional Ownership (IO), Board Size (BS), Board Independence (BI), Audit Committee Independence (ACI), CEO Duality (CD).

All controls variables are lagged by a year to cure for possible reverse causality

that may stem from these variables to governance indices (see, for example, Jiraporn and Liu, 2008 and Harford et al., 2008)

Industry Effect= takes the value of 1 if the firm belongs to a particular industry and zero otherwise.

Years Effect: Takes the value of 1 for a particular year and zero otherwise. We only use dummies from the year 2013, 2014 and 2015. The year 2011 is omitted because our variables are lagged and year 2012 was omitted to avoid perfect multicollinearity (Dummy Trap).

A positive significant coefficient β_1 will indicate that the Islamic label can proxy for good corporate governance.

In addition to this, we will conduct a simple parametric t-test, assuming unequal variances, to see if there is any difference between the means of governance quality of Sharia-compliant and conventional firms. The same test will also be conducted for control variables used in the study. Since our main variable of interest is "Islamic" that is a time-invariant dichotomous variable, we could not conduct a fixed effect model. However, we have preferred the random effect model to common effect model as it is a powerful panel data estimation technique. It is superior to common effect model as it accounts for biases that may be caused by the error term.

4. RESULTS AND DISCUSSION

Table 3 represents the correlation matrix of variables used in the study. It is evident that all three indexes representing corporate governance quality are highly correlated with each other. An important observation is that ISL has a positive significant correlation with all corporate governance indices. This positivity indicates that sharia-compliant firms tend to proxy for good governance. It can be also observed that leverage has a negative significant correlation with Index 2 and 3 but insignificant correlations with Index 1. This tends to indicate that well-governed firms are low on leverage and vice versa. However, these interpretations should be approached with caution, but however, it does indicate that Islamic label does shed light on the firm's governance.

Table 4 represents the descriptive statistics of the variables used in the study and

analysis of the difference in means between sharia-compliant and conventional firms. Panel A represents an overall sample. It can be interpreted that Index 1 has the mean value of 0.44, the standard deviation of 15% and ranges from the lowest of 0.21 to the maximum value of 0.68. Index 2 has a mean value of 0.55, the standard deviation of 16% and ranges from a minimum of 0.28 to maximum of 0.79. However, index 3 has wider fluctuation between lowest and maximum values. This is a surprise as all three indexes should not fluctuate that much within a single country. These findings are in contradiction to the study conducted by Doidge et al. (2007). They were of the opinion that governance variance is to a greater extent explained by country-level characteristics rather than a firm-level characteristic. Based on their findings, such larger differences between our indices should not have existed that uses firms level characteristics in their construction.

Panel B sheds light on the mean differences of the variables used in the study between and conventional firms. These mean differences between Islamic and conventional firms shed light on some interesting facts. It can be witnessed that Islamic firms have better governance quality than conventional firms. Islamic firms have a larger size but are relatively younger than their conventional counterparts. Also, Islamic firms are more profitable and have less free cash flow.

Table 3.Correlation Matrix. Significant Correlations are in Bold

	Index1	Index2	Index3	ISL	SZ	AGE	FCF	TQ	NPM	DPO	LEV	AR	CASH	IO	BS	OS	BI	CD	OC	ACI
Index1	1																			
Index2	**0.1891**	1																		
Index3	**0.433**	**0.6485**	1																	
ISL	**0.1162**	**0.0924**	**0.1448**	1																
SZ	**0.0827**	**0.1413**	**0.2078**	**0.1215**	1															
AGE	0.0458	**0.0936**	0.0435	**-0.083**	**0.0655**	1														
FCF	0.0156	**0.0823**	0.0338	0.046	**0.0697**	0.0199	1													
TQ	-0.0001	-0.0168	**0.081**	**0.082**	**0.0775**	0.0292	-0.0483	1												
NPM	0.036	0.0515	0.0408	0.0281	**0.2079**	**0.0584**	0.0133	0.0009	1											
DPO	-0.0145	-0.0138	-0.0087	-0.0022	-0.0348	-0.0105	0.0045	0.0107	0.0045	1										
LEV	-0.0213	**-0.0909**	**-0.1192**	**-0.1591**	**-0.1101**	-0.0417	**-0.0757**	**-0.0582**	-0.0246	-0.0284	1									
AR	**0.1535**	**0.1158**	**0.2336**	-0.0246	**0.1508**	**-0.1138**	0.0323	-0.0529	0.038	0.0079	0.0471	1								
CASH	**0.1374**	0.057	**0.1306**	**0.2256**	**0.1506**	-0.0079	0.0293	**0.1337**	0.0192	-0.0037	-0.1161	0.0169	1							
IO	**0.2747**	**0.2689**	**0.2681**	0.0403	**0.1732**	**0.0904**	0.0175	**-0.0733**	0.0289	0.0421	**-0.0013**	**0.0826**	0.0387	1						
BS	**-0.1558**	**0.4236**	**0.4278**	**0.0659**	**0.3085**	**0.1047**	-0.0252	**0.1307**	0.0227	-0.0072	-0.0503	**0.0703**	0.0406	**0.128**	1					
OS	**-0.4774**	-0.0293	**-0.653**	**-0.1593**	**-0.2303**	-0.0216	0.0184	**-0.142**	-0.0186	0.002	**0.096**	**-0.151**	**-0.186**	**-0.1769**	**-0.1848**	1				
BI	**0.413**	**0.4564**	**0.584**	0.0247	-0.0782	**-0.0586**	-0.0105	-0.0251	-0.0045	-0.0186	-0.0449	**0.1345**	-0.0393	0.0518	**0.1063**	**-0.1557**	1			
CD	**0.2508**	**-0.5185**	**-0.4465**	**-0.0669**	**-0.0509**	-0.0116	**-0.1063**	-0.0363	0.0114	-0.0197	**0.154**	**-0.1147**	**-0.0687**	-0.0497	**-0.0914**	0.1115	**-0.1518**	1		
OC	**0.4472**	**0.2504**	**0.0864**	0.0322	0.0656	**0.1151**	**0.0753**	**0.0633**	0.0166	-0.0655	**-0.0736**	0.0038	**0.1698**	**-0.1292**	**-0.0728**	**-0.0691**	0.007	-0.0112	1	
ACI	**0.298**	**0.3377**	**0.4333**	0.0342	-0.0697	-0.0274	0.0257	0.0083	0.0332	-0.0109	0.0014	**0.1887**	0.0153	-0.014	0.0252	**-0.0616**	**0.2694**	**-0.1245**	0.0378	1

Table 4. Descriptive statistics											
	Panel A						Panel B				
	Overall Sample						Islamic Firms (A)		Conventional Firms (B)		
Variable	Unit	Obs	Mean	Std.Dev.	Min	Max	Obs	Mean	Obs	Mean	Difference A-B, t-test
Governance Indices											
Index1	%	1155	0.440916	0.155489	0.210526	0.684211	265	0.474027	890	0.4310571	0.04***
index2	%	1155	0.54731	0.165199	0.277778	0.789474	265	0.575262	890	0.5389875	0.04***
index3	%	1155	0.017439	1.090433	-1.73701	1.64938	265	0.306578	890	-0.0686532	0.38***
Firm Attributes											
SZ	ratio	1155	15.27914	1.936204	5.337538	20.89523	265	15.71018	890	15.15079	0.56***
AGE	log	1155	3.492087	0.489021	1.098612	4.859812	265	3.417706	890	3.514235	-0.1***
FCF	ratio	1155	-0.0518	1.346611	-41.0184	2.974655	265	0.061781	890	-0.0856186	0.15***
TQ	ratio	1155	1.434753	2.331378	0.23934	57.94929	265	1.784952	890	1.33048	0.45**
NPM	%	1155	-0.30727	7.541531	-217.106	25.47821	265	0.081292	890	-0.422965	0.5*
DPO	%	1155	0.312406	3.955514	-17.3084	130.1758	265	0.296806	890	0.3170503	-0.02
Islamic Criteria											
LEV	%	1155	0.004687	0.011815	0	0.152622	265	0.001245	890	0.0057118	-0.0045***
AR	%	1155	0.113447	0.126575	0	0.738287	265	0.107743	890	0.1151458	-0.01
CASH	%	1155	0.049358	0.102508	0.000107	1.35816	265	0.091713	890	0.0367459	0.05***
Board Characteristics											
IO	%	1155	0.088798	0.114726	0	0.962386	265	0.097265	890	0.0862767	0.01
BS	log	1155	2.061032	0.184643	1.098612	2.995732	265	2.083308	890	2.0544	0.03**
OS	%	1155	0.256984	0.275382	0	0.974793	265	0.176616	890	0.280914	-0.1***
BI	%	1155	0.595652	0.207535	0	1	265	0.605055	890	0.5928522	0.01
CD	1 or 0	1155	0.174892	0.380039	0	1	265	0.128302	890	0.188764	-0.06**
OC	%	1155	0.644572	0.197146	0.027582	0.997559	265	0.656203	890	0.6411086	0.02
ACI	%	1155	0.833089	0.198687	0	1	265	0.845538	890	0.829382	0.02

*Where * , **, *** indicates significance at .1, .05 and .01 respectively.*

Based on Islamic criteria, it's not surprising that Islamic firms have lower leverage than their conventional counterparts. However, surprisingly, Islamic firms have more cash holdings than their conventional counterparts. Since literature on cash holdings of Islamic firms is nearly nonexistent, we may posit that they finance their positive NPV projects mostly through their internal sources rather than obtaining loans from financial institutions. As it's evident that TQ of Islamic firms is significantly greater than

conventional firms, our argument seems plausible.

Based on board characteristics, Islamic firms tend to have larger boards than conventional firms. Further, an ownership structure that represents a number of shares held by directors and CEO of the company, Islamic firms have significantly lower mean than conventional firms. This is generally considered a negative attribute of governance. Similarly, CEO duality is less in Islamic firms as compared to conventional firms. The lower score of Islamic firms on most of the negative governance attributes may indicate that Islamic firms have good governance quality.

4.1. Regression Results.

Table 5 represents the regression results of eq.1. As it is evident from the regression results, Islamic label has positive significant coefficients for all indices used in the study. Islamic firms score almost two points higher on Index 1 and 2 while it scores 8 points higher on Index 3, after controlling for other variables, Industry effects and years effect. The coefficient of the Islamic label is statistically significant at 5% and 10% level respectively that leads us to accept our hypothesis. These results clearly indicate that the Islamic label has a positive significant impact on a firm's governance quality. Thus we may posit that since low leverage is considered as a proxy of good governance, we may extend that Islamic label too can proxy for good governance.

Table 5. Regression Results of Model 1

Independent Variable		Dependent Variable	
	Index 1	Index 2	Index 3
ISL	0.019676** (0.01003)	0.023449** (0.01181)	0.082834* (0.04844)
SZ	0.002083 (0.002388)	0.003044 (0.002792)	-0.00131 (0.01181)
AGE	0.002192 (0.008559)	0.013034 (0.01007)	-0.01217 (0.041427)
FCF	-0.00102 (0.002471)	0.002442 (0.002804)	0.007892 (0.013535)
TQ	-0.008*** (0.002587)	-0.001 (0.002985)	-0.01182 (0.01335)
NPM	0.000574 (0.000847)	0.000279 (0.000964)	0.0012 (0.004599)
DPO	0.000664 (0.003903)	0.001236 (0.004392)	0.013961 (0.02215)
IO	0.247082*** (0.035437)	0.242594*** (0.040807)	1.8908*** (0.18143)

BS	-0.11583*** (0.022628)	0.255358*** (0.026117)	1.3048*** (0.116352)
BI	0.095974*** (0.019004)	0.138073*** (0.021716)	1.0918*** (0.101245)
CD	0.075879*** (0.010104)	-0.10102*** (0.011626)	-0.491*** (0.052518)
OC	0.3408*** (0.021564)	0.235326*** (0.025188)	0.141724 (0.106326)
OS	-0.20867*** (0.01584)	0.084756*** (0.018465)	-1.422*** (0.078947)
ACI	0.094708*** (0.01951)	0.091281*** (0.022296)	1.0078*** (0.103931)
Intercept	0.274167*** (0.062521)	-0.40871*** (0.072808)	-3.935*** (0.313306)
Model	**Panel Data Random Effect Model**	**Panel Data Random Effect Model**	**Panel Data Random Effect Model**
Industry Effect	YES	YES	YES
Years Effect	YES	YES	YES
Observations	924	924	924
Adjusted R2	53%	45%	63%
Where *, ** and *** indicate significance at 0.1, 0.05 and .01			

(Note: 1. All independent variables are lagged by one year except ISL, Industry effects and years effect. 2. Standard Errors are reported in Parenthesis.)

However surprisingly we have larger R2 values in our regressions. According to doge et al. (2007), the variation in governance is to a larger extent explained by country-specific factors. However, in our case, the average R2 is 53% that indicates a higher explanatory power of our model by using firm-specific variables after controlling for time and industry effects. The study of Hayat & Hasan (2017), also obtained an average R2 of 30%. Thus surprisingly, our model does explain more variation without the inclusion of any country-specific governance variables. Since our main aim is to study the impact of the Islamic label on firm governance, we will refrain to discuss control variables.

5. ROBUSTNESS

In order to validate our results, we will conduct a number of robustness tests. Firstly, we will add financial criteria that qualify the stock to be Islamic. Among these, leverage is more pertinent as it has an effect on firm governance and also it's important criteria for a stock to qualify as Islamic. Since Islamic stocks are low levered stock, our Eq.1 may be biased as Islamic label may be in fact reporting the effect of leverage. Thus by adding

leverage and other Islamic financial criteria as control variables, we may want to test whether Islamic label still stands significantly or not.

Secondly, we have used multiple control variables that are responsible to have an impact on firm governance. Thus we will drop insignificant variables to see whether Islamic label still stands significantly after these changes.

Thirdly, we will estimate a regression with cross-sectional data rather than panel data to see whether the results still hold.

5.1. Islamic Screening Criteria.

We augment eq.1 with Islamic screening criteria and estimate the following regression model

$$Index_{i,t} = \alpha_0 + \beta_1 Islamic_{i,t} + \beta_2 Controls_{i,t-1} + \beta_3 Islamic\ Criteria_{i,t-1} + \beta_4\ industry\ Effects + \beta_5 years\ effect + \varepsilon_{i,t} \quad (2)$$

Where β3 is the vector of three coefficients that represent Islamic screening criteria. First, we have taken leverage (LEV) that represents the total debt of the firm scaled down by total assets. Secondly, we have used accounts receivables ratio that represents accounts receivable of the firm scaled down by total assets and thirdly, we have used cash ratio that represents cash held by the firm scaled down by total assets. The results of Islamic criteria along with other variables and fixed effects used in eq.1 are reported in table 6.

The results in table 6 clearly indicate that Islamic label has a positive significant coefficient for all governance indices. However, it clearly indicates that the significance of the Islamic label is not because of leverage or any other Islamic criterion. Leverage, as expected, have negative significant coefficients with all indexes except index 1, indicating that leverage has an impact on governance and low levered firms have better governance. However the question as to how Islamic label effects governance is still unclear as Islamic label is still significant in the presence of Islamic screening criteria.

Table 6. Regression Results of Model 2 for Islamic Criteria			
Independent Variable	**Dependent Variable**		
	Index 1	**Index 2**	**Index 3**
ISL	0.021194** (0.010254)	0.022996* (0.012084)	0.098542* (0.051134)
LEV	-0.01937 (0.314201)	-0.27461 (0.360819)	0.576852 (1.711403)
AR	0.089425*** (0.033173)	0.029429 (0.038744)	0.462289*** (0.170288)
CASH	0.010841 (0.042451)	-0.00096 (0.049017)	-0.1024 (0.226579)
Intercept	0.276674*** (0.062686)	-0.40352*** (0.073153)	-3.99944*** (0.323347)
Model	Panel Data Random Effect Model	Panel Data Random Effect Model	Panel Data Random Effect Model
Industry Effect	YES	YES	YES
Years Effect	YES	YES	YES
Observations	924	924	924
Adjusted R2	53%	46%	62%
Where *,** and *** indicates significance at 0.1, 0.05 and .001 respectively			

**All Independent variables are lagged by 1 year except ISL, Industry effect and year's effect*
**Standard errors are reported in parenthesis.*

5.2. The omission of Explanatory Variables:

Tables 5 and 6 have a lot of explanatory variables. This may provoke a fact that results might be biased by the combination of a different set of variables. This fact can greatly reduce the efficiency of our model. Thus for robustness purposes, we will exclude all variables that are insignificant. The results may dramatically change by the inclusion of fewer explanatory variables. Table 7 represents the result with fewer explanatory variables Once again it can be observed that Islamic label has a positive significant coefficient for all indices and the results obtained in previous regressions still holds.

5.3. Cross-sectional regression:

Finally, we will use cross-sectional data and not panel data for regression purposes. The reason for conducting cross-sectional regression is that it uses the recent time and since our time-invariant Islamic label may deteriorate from the distant past, it will be beneficial to see if it still holds significant without deterioration. The result of

cross-sectional regression has been conducted for the most recent year that is 2015. The result is reported in appendix A1 and it can be noted that Islamic label is positive and significant for all governance indices. The results for the year 2012, 2013and 2014 though not reported, bears the same result.

Table 7. Results of Omitted Significant Variables

Independent Variable	**Dependent Variable**		
	Index 1	**Index 2**	**Index 3**
ISL	0.021616** (0.009971)	0.023853** (0.011889)	0.093992* (0.049207)
SZ	---	---	---
AGE	---	---	---
FCF	---	---	---
TQ	-0.0075*** (0.002574)	-0.00113 (0.002991)	
NPM	---	---	---
DPO	---	---	---
LEV	---	---	---
AR	0.0897*** (0.03255)	0.027766 (0.037931)	0.45889*** (0.165722)
CASH	---	0.001218 (0.048831)	---
IO	0.244195*** (0.035001)	0.2526*** (0.04041)	1.34900*** (0.185088)
BS	-0.10993*** (0.021706)	0.2654*** (0.025131)	1.30836*** (0.113404)
BI	0.088446*** (0.018729)	0.1308*** (0.021506)	1.0517*** (0.101803)
CD	0.077783*** (0.010071)	-0.1013*** (0.011623)	-0.4776*** (0.053651)
OC	0.340921*** (0.021217)	0.2436*** (0.024961)	0.111612 (0.105865)
OS	-0.20653*** (0.01571)	0.0830*** (0.018423)	-1.4270*** (0.079021)
ACI	0.086263*** (0.019563)	0.0879*** (0.02243)	0.9710*** (0.1073)
Intercept	0.300763*** (0.051486)	-0.340*** (0.0596)	-3.9672*** (0.270207)
Model	**Panel Data Random Effect Model**	**Panel Data Random Effect Model**	**Panel Data Random Effect Model**
Industry Effect	YES	YES	YES
Years Effect	YES	YES	YES

Observations	924	924	924
Adjusted R2	53%	44%	61%
Where *,** and *** indicates significance at 0.1, 0.05 and .001 respectively			

Aside from these robustness tests, we have estimated equation 1 & 2 using common effect model and quantile regression. The results of these tests though not reported but are in accord with the results shared in this paper. All tests revealed that Islamic label had a positive significant coefficient for governance indices.

6. CONCLUSION

Since the crises of 2007 and 2011, the world witnessed that firms that had good governance scores filed for bankruptcy. However, Islamic firms survived the crises. This prompted us to investigate whether the Islamic label has an effect on firm governance. The study incorporated 231 nonfinancial firms listed on Pakistan stock exchange. Out of these 231 firms, 53 firms were identified as Sharia compliant. The results indicated that the Islamic label has an impact on firm governance and just like debt, it can proxy for good governance.

These results are of utmost importance for investors and policymakers. Since Islamic finance has seen a tremendous growth in Pakistan, there is very little research on the governance of Islamic firms. Most of the research is directed at Islamic financial institutions but very little has been done on nonfinancial sharia-compliant firms. This paper may help investors that Islamic firms are better governed than conventional firms. Since better governance increases shareholder's value, Islamic label stocks may provide better value to its investors.

Further, since most of the investors are unaware of corporate governance terminologies and jargon, it will be comfortable for these investors to know that Islamic label is a proxy of good governance. Thus by investing in Islamic stocks, they will face fewer agency conflicts and managerial malpractices than conventional stocks.

This paper may prompt policymakers to facilitate firms to adopt socially responsible corporate practices. Since Islamic stocks essentially fulfill socially responsible investments criteria (SRI), the resources of the country can be directed at the greater benefit of the society. Also, the religious scholars and policymakers may include

CSR expenditure and governance criteria when screening an Islamic stock.

6.1. Future Research

Since this paper uses Pakistani firms in its estimation for a limited number of years, it may be beneficial if future research is conducted on multinational data for the extended number of years. Further, Islamic criteria do not incorporate corporate social responsibility (CSR). Thus it will be beneficial to conduct a study that uses the interaction between Islamic label and CSR.

Appendix A1. Table showing results of Cross-Sectional Regression for the Year 2015			
Independent Variable	**Dependent Variable**		
	Index 1	Index 2	Index3
ISL	0.040074** (0.017642)	0.03844* (0.021239)	0.312667*** (0.110525)
Model	OLS	OLS	OLS
Industry Effect	YES	YES	YES
Control Variables Included	YES	YES	YES
Observations	231	231	231
Adjusted R2	54%	37%	65%
Where *,** and *** indicates significance at 0.1, 0.05 and .001 respectively			

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