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Does Corporate Governance and Islamic Label Mitigates Over Investment of Free Cash Flow? Evidence from Pakistan

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Abstract

According to the agency theory, managers and shareholders have a conflict of interests that is mitigated by corporate governance (CG). Previous studies indicate that this conflict is high in the presence of higher Free Cash Flows (FCFs) that can be used by the management to maximize their value rather than maximizing the shareholders' value. The study finds that FCF causes over investment. By analyzing a sample of 231 manufacturing firms listed on the Pakistan Stock Exchange (PSX) from 2011 to 2015, we have gathered evidence that good CG negatively mitigates over investment by the firm and negatively mitigates the over investment of FCF. Further, we have obtained evidence that Islamic label mimics good CG and negatively mitigates firms' over investment. Thus, Islamic label can also proxy for good governance. However, we were unable to obtain evidence that Islamic label moderates over investment of FCFs. Our findings are generalizable and robust.

Keywords: Over investment, Corporate Governance (CG), Free Cash Flow (FCF), Islamic Label, Firm Investment

Introduction

According to Modigliani and Miller's (1958) irrelevance theorem, firms do not need to maintain cash to finance their investments. In this ideal world, cash can be obtained at zero cost. However, in the real-world, information asymmetries can cause firms to rely on internal cash holdings for investments in positive NPV projects (Fazzari *et al.,* 1988). Thus, the necessity of cash holding for firm investment has created debate among academicians and researchers.

One side of the debate links the presence of cash holdings to agency conflicts between managers and shareholders. Stulz (1990) indicates that managers possessing FCFs will make unnecessary expenditures. The study by Harford (1999) indicates that firms engage in excessive investments in the presence of higher cash holdings. Further, firms having access to positive FCFs tends to overinvest (Richardson, 2006). This over investment tendency by the firms having access to FCFs has also been proven in the studies of Billet (2011) and Chen *et al.* (2016). These investments in negative NPV

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projects tend to reduce value of firm and reduce the shareholder value. This agency conflict can be mitigated by good CG.

The study of Pinkowitz *et al.* (2006) indicates that countries where investor protection is high, shareholders are happy to let the cash stay with the managers because shareholder trust that the money will be used to increase the value of the shareholder. Further, firms with low CG scores tend to utilize cash by over investment and unnecessary acquisitions (Harford *et al.,* 2008). This study also posits that firms with higher governance scores tend to hold large cash. The study of Richardson (2006) posits that over investment of FCFs is negatively mitigated by certain firm specific CG attributes. Thus, one can argue that good CG can mitigate agency conflicts. However, the study by Jiraporn *et al.* (2012) indicates that debt acts as a disciplining mechanism for managers. The creditors may make their presence on board and managers will be obliged to act upon their instructions or stricter debt covenants. Thus, managers will work hard to avoid this situation. Hence, his study reveals that lower debt firms have better governance and low leverage can proxy for good governance.

Problem Statement

Islamic firms are necessarily low on leverage and thus, one can also argue that adherence to Sharia compliance corporate finance practices can proxy for good governance. However, Islamic firms tends to hold more cash than their conventional counterparts (Hayat & Hassan, 2017; Ullah & Rizwan, 2018), which indicates that managers of these firms have access to large FCFs. This positive FCF is the prime reason for firms’ over investment. Thus, the study aims to conclude whether Islamic label can mitigate firms’ over investment of FCFs.

Objectives of the Study

The study aims to achieve two objectives. First, to investigate the impact of FCF on over investment of Pakistani Firms. Secondly, to ascertain whether the Islamic label can proxy for good governance by mitigating over investment and over investment of FCF by Pakistani Firms.

Significance of the Study

Islamic Finance industry is worth US$ 2.2 trillion (Hayat & Hassan, 2017) and is expected to cross US$ 3 trillion in 2020 by a conservative estimate (Pakistan Observer, 2017). However little or no research is done in the context of Islamic corporate finance. Since Islamic Sharia screening criteria includes lower leverage, Islamic label (Sharia complaint firms) can also mitigate the agency conflict.

This paper has filled this gap by studying the moderating role of CG and Islamic label to mitigate the problem of over investment and over investment of FCFs. The study,

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to the best of our knowledge, that enlists Islamic label's impact on firms' over investment, will be the first of its kind in the world.

Literature Review

CG and Over Investment of FCFs

According to Lasher (2008), shareholders entrust managers of the firm to increase their wealth. However, managers act in their own self-interest to increase their wealth that gives rise to the agency conflict. This agency conflict hampers economic growth, capital market growth and utilization of economic resources (Eun-Resnick, 2004)

Opler *et al.* (2001) indicates that mangers hold more cash either due to the precautionary motive or speculative motive. Since external finances are costly, managers rely on their cash holdings for investment in new projects (Myers & Majluf, 1984). However, too much cash in the hands of mangers can give rise to the agency conflict. According to Jensen (1986), managers in the possession of positive FCFs tend to invest in projects that have negative NPV and thus reduce shareholders' value.

Debt reduces the cash flow of firms as more of cash flow is diverted to servicing debt and reduces the agency conflict. However, entrenched managers are reluctant to take debt for investment and rely on their cash holdings. Such firms tend to hold large cash for investment and the excess cash flows are distributed as dividends (Almeida *et al.*, 2004; Franzoni, 2009; Jensen, 1986; Myers & Majluf, 1984).

According to the study of Chung *et al.* (2005), when FCFs are used to invest in negative NPV projects (over investment), it has a detrimental effect on firm's value and consequently effects shareholders value. Low investment returns of the US firms in 1980 were attributed to the agency problems created by FCFs (Jensen, 1993). Further, to support the FCF hypothesis, the study of Brush *et al.* (2000) indicates firms with no FCFs benefitted more from sales growth and firms with higher FCFs benefitted less. Based on the prior literature, we hypothesize:

H_1: FCFs have a positive, significant impact on over investment

CG helps to mitigate agency problems. Pinkowitz *et al.* (2006) studied poor and good investor protection in different countries, emphasizing more on legal rights and its enforcement. In firms operating in countries with high investor protection, firms' cash holdings are valued high. Thus, investors entrust cash in the hands of managers if governance quality is high and vice versa. Further, Caprio *et al.* (2013) established the positive effect of strong shareholder rights on cash holdings. Datta and Jia (2014), using indices developed by Spamann (2009) and Djankov *et al.* (2008) found similar results.

Lee and Lee (2009) favor smaller boards. These independent boards result in strong monitoring due to the inexistence of free-riding problems and the independent monitoring of the firms' operations. According to Cheng *et al.* (2013), the duty of the

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board of directors is not limited to the monitoring of financial information, but they also keep an eye on the investing, operating and financial decisions that managers make.

In light of above discussion, it can be hypothesized that:

H_2: CG negatively and significantly impacts over investment

H_{2a}: CG negatively and significantly mitigates over investment of FCFs

Islamic Label and Over Investment of FCFs

In Islam, business is not just a profit seeking activity, but it commands the businessman to be responsible for his business acts, both morally and socially. Islam rationalizes every business transaction with social justice: *"O ye, who belief! Fulfill obligations"* (Al-Maidah:1) *"Allah commands justice, the doing of good, and liberty to kith and kin, and He forbids all shameful deeds, and injustice and rebellion"* (Al-Nahl:90). Islam encourages the profit-making activity of business. However, its main motive is a just profit (profit moderation), and not abnormal profits, which are made at the expense of customers' exploitation and society's. "*Eat not up your property among yourselves in vanities; but let there be amongst you trade by mutual good-will*" (An-Nisa: 29). Islam motivates businesses to not consider profit as the sole motive, but endless and selfless efforts must be put forward to fulfill economic and spiritual obligations (Ramli & Ramli, 2016). These discussions lead us to infer that Islam believes in socially responsible investments and takes care of shareholders value creation.

Islamic finances thus include transactions that are permissible (Halal) by Islamic Law (Sharia). The views of Islam are in alignment with Socially Responsible Investments (SRI). As per the teachings of Islam, there are certain restrictions on the type of investments that can be made. These include prohibition of interest (Riba), excessive risk taking (Gharar), gambling (Maysir), shifting rather than risk taking, investing in unethical businesses and investing in derivatives that are not based on some real or economic assets (Hayat & Hassan, 2017). In order for the firm to be declared Islamic, it has to follow certain criteria. These criteria may vary from country to country (Derigs & Marzban, 2008).

Resilience of Islamic banks during crises (Beck *et al.*, 2013), low default rates of Islamic loans as compared to the conventional loans (Baele *et al.*, 2014), and Islamic banking contributing to the development of the overall banking sector in Muslim countries (Gheeraert, 2014) are all achievements of Islamic financial institutions. However, there is very little or no literature that links over investment of FCFs, governance and Islamic finance. This negligence is unfortunate. This linkage should be researched as it is extremely relevant, especially after the 2007-2008 financial crisis and 2011-2012 European crisis. Jiraporn and Gleason (2007) found that debt acts as disciplining mechanism for firms with weak governance but found that regulations can

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also act as a disciplining mechanism. They found that regulated firms had higher debt levels and yet, had greater governance quality. Similarly, Jiraporn *et al.* (2012) also found that highly levered firms are low on CG quality and vice versa. Thus, they were of the opinion that there is reverse causality between debt and governance. Overall, recent evidence suggests that debt can be used as an alternative to CG. We build on that, and since Islamic firms indicate lower debt, the Islamic label may qualify as a proxy for good governance.

Unfortunately, literature in Islamic corporate finance is still evolving and we haven't found any paper except Hayat and Hassan (2018), and Ullah and Rizwan's (2018) that links the Islamic label to good governance. Further, we haven't found any study that discusses the moderating role of Islamic label on over investment and over investment of FCF. This paper aims to fill this gap.

Hayat and Hassan (2017) found that the Islamic label can act as proxy of good governance, however they did not obtain robust results for their claim as the Islamic label was positively significant on Bloomberg Index, but failed against other proxies for good governance. Ullah and Rizwan's (2018) paper indicates that Islamic labels can proxy for good governance. We are trying to establish the Islamic label as a proxy of good governance. Thus, based on previous studies, we can posit that:

H_3: *Islamic label has negative and significant impact on over investment*

H_{3a}: *Islamic label negatively and significantly mitigates over investment of FCFs*

Methodology

The data for different variables used in the study was obtained from Balance Sheet analysis published by the State Bank of Pakistan (SBP). However, CG variables were obtained from annual reports of the respective firms.

The universe of the study was the manufacturing firms listed on the PSX. Only those firms were kept in the sample that satisfied two criteria. Firstly, firm remained listed on the PSX throughout the period of estimation. Secondly, firm did not have missing information for accounting and CG variables. In total, 231 non-financial firms that represented all the industries made it to the final sample of this study. Out of 231 firms, 53 firms were Islamic label (Sharia complaint) firms.

The period of estimation for this study was 2011-2015, but 2010 was also included for lag considerations. Overall, we had 1,155 firm year observations for every variable of the study. After lag consideration, we were left with 924 firm year observations for every variable of the study. The period of 2011-2015 is robust as Pakistan went through different cycles of economic upturns and downturns during this. Further, the world economy as a whole witnessed the European banking crisis of 2011

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that impacted the world economy. Thus, our estimation period gives us the impact that has embedded crisis and non-crisis period to give us generalizable and robust results.

Identification of Islamic Label

In order to identify firms as bearing an Islamic label, we followed the double filter criteria. Firstly, we obtained the list of firms from PSX KMI All-share index. This list is prepared by the PSX and Meezan Bank. It lists all the firms that are Sharia complaint. This list is updated semi-annually. Thus, we included only those firms that stayed Islamic throughout a year. Secondly, our final Sharia complaint firms were those that stayed Islamic throughout the estimation period. Thus, the Islamic label indicates firms that remained Sharia complaint from 2011 to 2015. This care was necessary as we wanted to study firms that stayed Islamic for a longer period of time and to construct a time invariant Islamic dichotomous variable for robust results. The firm was assigned the value of "1" if it was under the Islamic label (Sharia complaint) and "0" otherwise. The same methodology was adopted by Hayat and Hassan (2017).

CG Index

To represent firms' governance quality, we constructed an additive index employing the methodology of Aggarwal *et al.* (2011). This methodology was adopted for two reasons. They took firm specific governance variables in the construction of their index as countries differ in their legal systems and degree of investor protection. Secondly, the index constructed by their methodology is robust and comparable across countries. We took firm specific governance attributes that were used by Shah (2009) for the construction of this additive index. These governance attributes were taken for two reasons. Firstly, in his doctoral thesis, the author found that firm level CG quality is better explained by these attributes of governance. Secondly, it is parsimonious as these variables are included in every CG indices. Table 1 lists firm level governance attributes.

Table 1: *Firm level CG Attributes*

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.

The index converts CG attributes to ordinal variables ranging from 1 to 5. The final index score ranges from 0 to 1. A higher score on the index indicates good CG and

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vice versa. Further, for robustness purposes, reverse coding is used for adverse governance attributes such as BS, CD, and OS.

Variables and their Measurement

Table 2 presents the variables used in the study along with the methodology used for their measurement.

Table 2: *Variables and their Measurement*

Variable	Symbol	Measurement
Firm Investment	Inew	The sum of capital expenditures, R&D expenditures, and acquisitions minus sales of property, plant, and equipment, scaled by lagged total asset for firm i at the end of year t-1.
Value to Price Growth	Vp	The annual value to price growth rate for firm i at the end of year t-1 calculated using methodology employed by Richardson (2006).
Financial Leverage	Lev	The ratio of long-term debt to the sum of long-term debt plus the market value of equity of firm i at the end of year t-1.
Cash	Cash	Cash and cash equitant to total asset of firm i at the end of year t-1.
Size	Sz	The log of total assets of firm i at the end of year t-1.
Firm Age	Age	The difference between the first years when firm i appears in stock exchange at the end of year t-1.
Stock Returns	Ret	stock returns of firm i at the end of year t-1.
Over Investment	Oinv	Positive residuals from investment equation.
Free Cash Flow	FCF	Computed as ($FCF = CFo - I_{maintanance} - I^{*}_{new} + RD$). Where FCF is free cash flow, CFO is operating cash flow, $I_{maintenance}$ is a measure of investment expenditure necessary to maintain to assets in place i-e (Depreciation + Amortization), I_{new} is a measure of the expected level of new investment expenditure that is estimated by fitted value of the estimates of investment equation.
High Quality of Corporate Governance	CG	A dummy variable that take the value of "1" if firms has governance score in higher tercile (3rd tercile) and zero otherwise.
Islamic Label	Islamic	A dichotomous variable that takes the value of "1" if firm is Sharia complaint and "0" otherwise
Years Effect	Year Effect	Year dummies that take the value of 1 if firm is present in a particular year and zero otherwise.
Industry Effect	Industry Effect	Industry dummies that take value of 1 if firm belongs to a particular industry and zero otherwise.

Over Investment

Employing the methodology of Richardson (2006), we will first estimate the following pooled panel OLS regression model termed as investment equation:

$$Inew_{i,t} = \alpha_0 + \beta_1 Vp_{i,t-1} + \beta_2 Lev_{i,t-1} + \beta_3 Cash_{i,t-1} + \beta_4 Sz_{i,t-1} + \beta_5 Age_{i,t-1} + \beta_6 Ret_{i,t-1} + \beta_7 Inew_{i,t-1} + Years\ Effect + Industry\ Effect + error$$

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The residuals from above equation represent deviations from the optimal investments. We will consider positive residuals from the investment equation to proxy for over investment.

Richardson *et al.* (2006) methodology is followed because it provides an accounting-based framework to measure over investment and FCF. The constructs measured through this methodology are robust and generalizable.

Overinvestment and FCF

In order to test our first hypothesis, we will estimate the following pooled OLS panel data regression model suggested by Richardson (2006):

$$Oinv_{i,t} = \alpha_0 + \beta_1 FCF_{i,t} + years\ Effect + Indsutry\ Effect + Error$$

A positive significant coefficient of FCF will indicate that FCFs are responsible for over investment and we will accept H_1 of the study.

CG and Overinvestment of FCF

In order to test H_2 and H_{2a}, we will estimate the following pooled panel data OLS regression model adopted from Richardson (2006):

$$Oinv_{i,t} = \alpha_0 + \beta_1 FCF_{i,t} + \beta_2 CG_{i,t} + (CG * FCF)_{i,t} + years\ Effect + Industry\ Effect + Error$$

Where CG*FCF is the interaction term of high CG quality and FCF. A significant and negative coefficient of CG and CG*FCF will lead us to accept H_2 and $H_{2a.}$

Islamic Label and Overinvestment of FCF

In order to test H_3 and H_{3a}, we will estimate the following pooled OLS panel regression model:

$$Oinv_{i,t} = \alpha_0 + \beta_1 FCF_{i,t} + \beta_2 Islamic_{i,t} + (Islamic * FCF)_{i,t} + years\ Effect + Industry\ Effect + Error$$

Where Islamic* FCF is the interaction between the Islamic label and FCF. The negative significant coefficients of Islamic and Islamic*FCF will indicate that we accept H_3 and H_{3a}.

To cure for outliers in the data, all variables are winsorized at 1% and 99% level and all regressions are conducted with robust standard errors.

Results and Discussion

Descriptive Statistics

Table 3 represents descriptive statistics of different variables used in the study. Panel A and B of the table highlights descriptive statistics of Islamic and Conventional Firms.

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Table 3: *Descriptive Statistics*

		Panel A: Islamic Firms (265 observations)			
	Description	Mean	Sd.	Min	Max
Inew	Percentage	.0419	.0475	-.0041	.1484
Vp	Percentage	.0014	.0012	.0001	.0051
Lev	Percentage	.2239	.1971	.0000	.7487
Cash	Percentage	.0483	.0438	.0017	.1142
Sz	Log	15.592	1.1921	13.3985	17.495
Age	Log	3.463	.3992	2.9444	4.0943
Ret	Percentage	.1643	.219	-.1508	.4897
FCF	Percentage	.0156	.0897	-.1726	.1603
CG Index	Percentage	.4749	.1767	.0526	.9047
		Panel B: Conventional Firms (890 Observations)			
	Description	Mean	Sd.	Min	Max
Inew	Percentage	.0427	.0497	-.0041	.1484
Vp	Percentage	.0019	.0016	.0002	.0051
Lev	Percentage	.3973	.2568	.0000	.7487
Cash	Percentage	.0258	.0314	.0017	.1142
Sz	Log	15.2833	1.3426	13.3985	17.495
Age	Log	3.5289	.3884	2.9444	4.0943
Ret	Percentage	.1113	.1936	-.1508	.4897
FCF	Percentage	-.0189	.0862	-.1658	.1638
CG Index	Percentage	.4334	.1882	.0000	1.000

The table highlights very interesting facts. Overall, we have 1,155 observations for every variable of the study with 265 firm year observations for Islamic firms and 890 firm year observations for variables of conventional firms. This indicates that our findings will not be a victim of data starvation. Investments by both Islamic and conventional firms are 4.2% which is the same, but if we recall that we have 53 Islamic firms as compared to 178 conventional firms, Islamic firms appear to be having more investments as compared to conventional firms. Further, as expected, Islamic firms are low on leverage (22%) compared to the leverage of conventional firms (39.7%). Lower leverage is considered a sign of good governance (Jiraporn *et al.*, 2012). Further, Islamic label firms have more cash holdings than their conventional counter parts (4.8% vs 2.6%). According to Harford *et al.* (2008), well governed firms tend to hold more cash than bad governed firms. The lower values of Vp, which is the inverse of the price to value ratio, indicate higher growth opportunities. The table suggests that both conventional and Islamic firms tend to enjoy the same growth opportunities. The table further suggests that stocks of Islamic firms tend to have greater returns (16.4%) as compared to conventional firms that have earned less (11.2%) during our estimation period of 2011-2015. Lastly, Islamic firms have higher CG scores as compared to the conventional firms (47.5% vs 43.4%). This highlights the fact that Islamic firms are

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better governed as compared to conventional firms. All these conclusions indicate that the Islamic label like lower leverage can proxy for good governance.

However, Islamic label firms tend to have higher FCF than their conventional counter parts. The negative FCF of conventional firms indicates aggressive investments by these firms and does not represent a loss.

Correlation Matrix

Table 4 represents the correlation between variables used in the study for the overall sample. The table indicates a significant correlation among some of the independent variables of investment equation, thus in order to cure for multi-collinearity and endogeneity, the study uses lagged independent variables instead of level variables.

Table 4: *Correlation Matrix*

	Inew	Vp	Lev	Cash	Sz	Age	Ret	FCF
Inew	1.00							
Vp	.02	1.00						
Lev	.06*	.10***	1.00					
Cash	.03	-.25***	-.37***	1.00				
Sz	.07*	-.10***	.05	.06*	1.00			
Age	.00	.06*	-.16***	-.03	.06	1.00		
Ret	.22***	-.19***	-.11***	.09**	.07*	.03	1.00	
FCF	.05	-.08**	-.31***	.11***	.06*	.03	-.07*	1.00

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Investment Equation Results

Panel A of Table 5 represents the results of the investment equation conducted for the overall sample. The results indicate that size and past year returns have played a significant role in determining today's investment by the firm. Since our primary interest is to study the effects of FCF on over investment and to answer whether good CG and Islamic label mitigates over investment, we will refrain to comment further on the investment equation.

FCF and Overinvestment

Panel B of Table 5 highlights the results of FCF's impact on over investment. The result clearly indicates that FCF has a positive significant coefficient (β=.02, p-value<.01) for firm's over investment. Thus, our hypothesis H_1 stays accepted. This result is in line with the findings of Richardson (2006). According to him, managers of the firms with higher FCF tend to over invest. Jensen (1986) and Stulz (1990) were of the opinion that mangers in possession of FCF tend to engage in wasteful expenditures. They may end up investing in those projects that have a negative NPV and will cause a reduction in shareholders' wealth. Thus, presence of FCFs is indicative of the agency problem. Further the studies of Blanchard *et al.* (1994) and Harford (1999) indicate that firms with larger cash holdings tend to make excessive investments and acquisitions. All

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these studies and our results indicate that the presence of FCF in the hands of managers presents agency problems that require monitoring on the part of shareholders. This result further endorses the findings of Richardson (2006) that indicate that over investment by the firms is due to the presence of FCF.

In the next lines we will see how good CG and the Islamic label may mitigate firms from over investment and over investment of FCFs.

CG and the Islamic Label Impact on Overinvestment of FCFs

Panel C of Table 5 represents the results of CG's impact on firms' over investment while Panel D highlights the impact of the Islamic label on firms' over investment.

Panel C indicates that CG has a negative, significant co-efficient for firms' over investment (β= -0.005, $p<.01$). This clearly indicates that good CG negatively mitigates firms' over investment. This finding prompts us to accept H_2. The result is in line with the previous findings. Richardson (2006) found that good CG attributes tend to mitigate managers' tendency to over invest. Pinkowitz *et al.* (2006), while examining the value of cash that shareholder puts on the extra dollar retained by management, indicates that the shareholders of firms with good governance value cash higher than the cash retained by poorly governed firms. They indicate that shareholders of the firms with a high governance score trust their management that they will create value for them. Since value can be created by optimum investments, good CG has the tendency to mitigate over investment by managers. The study by Billet *et al.* (2011) indicates that strong shareholder governance mitigates manager's tendency to make large investments. Further, they provided the evidence that good CG mitigates over investment based on long term stock returns. The study conducted by Chen *et al.* (2016) indicates that firms with higher FCF tend to overinvest, while the firms specific CG attributes mitigates over investment by the managers.

Panel C also indicates that good CG helps mitigate over investment of FCFs. Thus, good CG negatively moderates over investment of FCF (β= -.035, p-value<.01). This prompts us to accept H_{2a}. This result supports the findings of Pinkowitz *et al.* (2006). According to their study, managers are answerable to shareholders in the countries with strong institutional protection. Thus, good CG makes managers answerable for the use of cash at their disposal. Thus, they would not make unnecessary investments even in the presence of positive FCFs.

Thus, in order to avoid debt, managers have to perform well. For that, they make optimum investments to increase firms' value and avoid debt. Thus, the Islamic label representing low debt firms does not enter in to taking negative NPV projects or over

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investment to avoid debt that they may end up taking if they start making losses on bad projects.

Table 5: *Regression Results*

	(Panel A) Inew	(Panel B) Oinv	(Panel C) Oinv	(Panel D) Oinv
Vp	-.972			
	(1.207)			
Lev	.008			
	(.007)			
Cash	.071			
	(.050)			
Sz	.004***			
	(.001)			
Age	.000			
	(.004)			
Ret	.033***			
	(.009)			
Inew	.053			
	(.034)			
FCF		.024***	.036***	.030***
		(.006)	(.007)	(.007)
CG			-.005***	
			(.001)	
CG * FCF			-.035***	
			(.012)	
Islamic				-.006***
				(.001)
Islamic * FCF				-.003
				(.015)
Intercept	-.033	.043***	.045***	.045***
	(.027)	(.001)	(.001)	(.001)
Years Effect	Yes	Yes	Yes	Yes
Industry Effect	Yes	Yes	Yes	Yes
R-Sq	.098	.076	.107	.106
N	924	924	924	924

Robust standard errors in parentheses
* $p < .1$, ** $p < .05$, *** $p < .01$
All Independent Variables in investment equation are lagged by one year.

Panel D of Table 5 highlights the result of the Islamic label on firms over investment. The results indicate that the Islamic label, like good CG, negatively mitigates over investment. The Islamic label has a negative significant co-efficient (β= -.006, p-value<.01) for firm's over investment that leads us to accept our H_3. Since literature on the mitigating role of the Islamic label on firm's over investment is nonexistent, we cannot cite studies that may have come up with the same conclusion. In the outset we

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described that the Islamic firms exhibit the properties of a well governed firm, and in the same fashion the Islamic label is mitigating over investment as good governance does. Thus, we can infer that the Islamic label is a proxy of good governance. However, how it mitigates over investment is still unclear. One possible explanation is the presence of low debt. According to Jiraporn *et al.* (2012), debt disciplines managers.

However, panel D also indicates that the Islamic label fails to moderate over investment of FCF. However, it has a negative coefficient in the moderation role with FCF. Thus, we reject H_{3a}.

Conclusion

The study was conducted with three objectives. First, to understand the role of FCF on firm's over investment; second, to study the impact of good governance and the Islamic label on over investment of FCF, and lastly, the study wanted to establish the Islamic label as a proxy of good governance.

In order to achieve our objectives, we obtained a sample of 231 non-financial firms listed on the PSX, out which 53 firms were declared Sharia complaint firms (Islamic label firms). The estimation period was 2011 to 2015 while 2010 was taken for lag consideration.

The results indicated that FCF had positive significant coefficient for over investment of the firm, indicating that firms tended to over invest in the presence of positive FCF. The result was consistent with the prior studies.

These studies indicated that agency conflicts will be high in the presence of FCF as it gives the incentive to the managers to invest in those projects that maximize their values rather than the value of the shareholders. Since CG mitigates agency problems between shareholders and managers, we found that good CG indeed can mitigate the problem of over investment and over investment of FCFs. Well governed firms make managers accountable and thus they spend shareholders money on those projects that maximizes their value and refrain from projects that causes the firm's value to deteriorate.

To establish the Islamic label as proxy of good governance, we expected that it will behave in a similar fashion as that of good governance. The descriptive statistics prove that our expectations were not ill founded as the Islamic label firms displayed the traits of firms having high governance scores. The results indicated that the Islamic label mean dummy was negative and equally significant as the good CG dummy. It indicated that the Islamic label too can negatively mediate over investments by a firm. However, we failed to gather evidence that Islamic label negatively moderates over investment of FCFs.

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Implications, Limitations and Future Research Directions

Our study has implications for both the managers and investors in Sharia complaint firms. The study will be comforting for the investors that the Islamic label firms are better governed. As indicated in our results, thus their money will be well spent to increase their value because the Islamic Label negatively mitigates over investment. Further, these investors should not worry about the presence of high cash holdings with managers as investors' value cash more if the firms are better governed (Pinkowitz *et al*., 2006). The managers of Sharia complaint firms have little or no research support regarding the Islamic label, governance and over investment to convince the public to invest in their firms. This paper will provide managers with the much-needed empirical support. Academically, agency conflicts were deemed to be mitigated through
CG and leverage. This paper proves a fact that the Islamic label can act as a proxy of good governance.

However, this study has certain limitations. Firstly, it studies the impact of the Islamic label in the context of Pakistani firms. Future studies may also take firms in other countries where Sharia compliant firms exist such as the USA, Malaysia, Indonesia, etc. Further, time period of this study is limited to a few years. Future studies may be conducted by taking extended time period to see if the Islamic label is persistent in being a proxy of good governance over extended periods. Furthermore, the Islamic label firms are essentially SRI firms and should also be studied by incorporating firm's expenditure on corporate social responsibility as an additional Islamic criterion. Also, this study is limited to over investment of FCF. The Islamic label can also be studied on the firm's corporate decisions such as level of cash holdings, dividend policy, etc.

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