INVESTIGATING OF ISLAMIC LABEL ON FIRM GOVERNANCE, VALUE AND CORPORATE DECISIONS: EVIDENCE FROM PAKISTAN, USA & ASEAN COUNTRIES

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In the name of Allah, the most merciful and beneficent

DEDICATION

I dedicate this thesis to my parents, my wife, my daughter, my brother, my sisters, my friends, and my supervisor whose support has enabled me to complete this research study successfully.

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Mr. Naeem Ullah

Ph D (Finance)

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APPRECIATION AND GRATITUDE

No words of gratitude will ever be sufficient for the Allah Almighty who made me capable of learning, blessed me with the knowledge & intellect and facilitated me with the finest of the mentors all through my academic years.

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Mr. Naeem Ullah

(Acceptance by the Viva Voice Committee)

Title of Thesis: "Investigating of Islamic Label on Firm Governance, Value and Corporate Decisions: Evidence from Pakistan, USA & ASEAN Countries".

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Date:_____

FORWARDING SHEET

The thesis entitled "Investigating of Islamic Label on Firm Governance, Value and Corporate Decisions: Evidence from Pakistan, USA & ASEAN Countries", submitted by Mr. Naeem Ullah as partial fulfillment of PhD degree in Management Sciences with specialization in Management, has completed under my guidance and supervision. The changes advised by the external and the internal examiners have also been incorporated. I am satisfied with the quality of student's research work and allow her to submit this thesis for further process as per IIU rules & regulations.

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Abstract

Recent literature suggests that debt can proxy for good governance in the sense that low debt firms are better-governed firms. Islamic label firms (Sharia-compliant firms) being low on debt suggest that it can proxy for good governance. Further, in recent economic crises, firms with high governance scores ceased to exist prompting a need to find alternative proxies for good governance. Notably, Islamic firms were resilient in these economic crises and performed well. However, empirical studies on Islamic corporate finance are little or nonexistent. These facts prompted us to investigate Islamic label nexus with firm Governance, Investment, and other corporate decisions to establish Islamic Label as a proxy of good governance.

The study has added to the literature on Islamic finance by providing comprehensive cross country empirical evidence on the Impact of Islamic labels on firm governance and corporate decisions. The study has proven Islamic labels as a proxy of good governance. Thus it can mitigate agency conflicts like corporate governance.

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For empirical analysis, data for 590 nonfinancial firms including 290 sharia-compliant firms (Islamic Label) firms of Pakistan, USA, Malaysia, and Indonesia were obtained from the Thomson Reuters database and COMPUSTAT from 2011 to 2015. Panel Data pooled regression model with fixed industry, time and country effects to empirically test hypothesis of the study.

The main findings suggest that the Islamic label has a positive significant impact on firm governance, cash holdings, and firm value. Further, it successfully mitigates overinvestment of free cash flows and investment efficiency. The study suggests that investor of Islamic firms puts a value of 0.04 cents on 1$ incremental cash holdings by management. All these findings suggest that Islamic label mimics good governance and thus can proxy for good governance.

Key Words: Islamic Label, Corporate Governance, Free Cash Flow, Investment Efficiency, Firm Value, Level of Cash Holdings, Value Of Dividend, and Value Of Cash

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Summary of Thesis

The study was conducted with two objectives. Firstly, to assess and provide empirical proof to answer whether an Islamic label (Sharia certified Firms) can proxy for good governance. Secondly, to assess the impact of the Islamic label on firm value and different corporate finance decisions made by the firm. We felt the need for this study because Sharia-compliant firms were resilient in a time of crisis and the Islamic finance industry will grow to the US $ 3 trillion by the year 2020 according to conservative estimates. Yet, there are little or no empirical studies at disposal of Islamic managers that shed light on the governance and Islamic label nexus or that study the impact of Islamic label on value and firm corporate finance decisions. This study has filled this gap by providing international evidence on the impact of Islamic label on governance, value, and corporate decisions of the firm.

To achieve outlined objectives, an international study was conducted that incorporated firms of Pakistan, USA, Malaysia, and Indonesia. All these countries were selected to study the impact of Islamic label in developing and developed country settings.

Population and sample:

All the manufacturing firms of the above-mentioned countries formed the universe of the population for this study. In Pakistan, the sample included those firms which did not belong to the financial sector, and the data for different variables of the study was available. In Foreign countries, we included only those non-financial firms that remained on the respective indices throughout the estimation period.

The estimation period for this study was from 2011 to 2015. This period was selected as the world economy went through European banking crises and into different phases of economic cycles. Also, some of the Islamic indices have been operational in recent past and sharia-compliant rules outlined by the sharia board did not change much in that period. Overall, we obtained 590 manufacturing firms from all countries out of which 210 firms were Sharia complaint and we had 2,950 firm-year observations for every variable of the study.

Identification of Islamic Label:

In the case of Pakistan, Malaysia, and Indonesia, only those firms were assigned Islamic label who remained on the Sharia list throughout the estimation period. These Sharia lists were published by the respective Sharia boards of these countries. In the USA, we used S&P 500 Sharia as our benchmark for Islamic identification. The same criterion was used in the USA as in the case of the other three countries for assigning Islamic label. However, the Islamic list of USA was provided to us by researchers who had published work on USA Sharia-compliant firms as S&P 500 Sharia list is not publicly available.

Islamic Label and Firm Governance:

We have obtained robust proof that Islamic label has a positive significant impact on firm governance. The results hold even after different tests for robustness.

Islamic Label and Level of cash holdings:

Our study concludes that the Islamic label has a positive significant impact on cash holdings. The literature indicates that well-governed firms hold more cash and thus Islamic label firms replicate traits of well-governed firms.

Islamic Label and Value of dividend:

Our study indicates that the $1 dividend given by Islamic firms is valued at 0.1 cents by a shareholder that indicates that shareholders of Islamic firm value dividend less. According to the literature on dividends, well-governed firms have lower dividends. Our study suggests that there is an insignificant difference between the coefficient of dividend for Islamic label and good governed firm. Thus, the Islamic label replicates the results of well-governed firms.

Islamic label and Value of cash:

Our study suggests that an additional 1$ increase in cash holdings by Islamic firm is valued at $ .04. The study indicates that almost the same value is put on additional cash holdings by shareholders of well-governed firms. Our study proves that the difference between the coefficients for cash holdings between good governed firms and Islamic label firms is insignificant. This indicates that the Islamic label replicates the behavior of well-governed firms.

Islamic Label and Overinvestment of Free cash flow:

This study reveals that the Islamic label negatively mitigates the overinvestment of free cash flow. According to literature, good governance attributes can negatively mitigate the overinvestment of free cash flow. Thus Islamic label mimics good governance. However, the Islamic label failed robustness tests in its mitigation role to check the overinvestment of free cash flows.

Islamic label and Investment efficiency:

The study finds prove that Islamic label discourages deviation from optimal investments. We have obtained a negative significant coefficient of Islamic label for deviation from optimal investments. Further, the study proves that the Islamic label harms overinvestment. However, we obtained insufficient observations of under-investment, and in the case of the USA only; we were able to test for the effect of Islamic label on overinvestment. It had an insignificant but negative coefficient for underinvestment. In the case of Investment efficiency, the Islamic label mimics good governance.

Islamic Label and Firm value:

The study indicates that Islamic label, like good governance, has significant positive coefficient for firm value.

Based on the above discussion we conclude that Islamic label mimics good governance and we have obtained irrefutable evidence that Islamic label can proxy for good governance. However, how it impacts on governance is still unclear as it is not because of low debt or other Islamic criteria.

Chapter 1

Introduction

The studies of Nenova (2003); Dyck and Zingales (2006) indicate that in firms with weak governance, controlling shareholders tend to get maximum benefit by exploiting minority shareholders. Agency problems consequently translate into the adverse value of a firm. Good corporate governance can mitigate it in two ways. Firstly, as indicated by La Porta et al. (2002), it may convince the shareholder that cash flows will not be misappropriated and will be transmitted to them via dividends and interest payments. Secondly, according to Shleifer and Vishney (1997), good governance lowers the monitoring cost of shareholders that causes a reduction in a firm's cost of capital. However, as indicated by the studies of Chhaochharia and Grinsten (2007); Bruno and Claessens (2010), corporate governance impact on firm value is debatable as a higher cost of monitoring associated with good corporate governance may outweigh its benefits. Further, firms with high corporate governance score failed in US subprime mortgage crises that has risen serious doubts about the effectiveness of corporate governance to protect the interest of shareholders. Thus there is a need to establish an alternative proxy of good governance.

Arping and Sautner (2010) indicated that debt can discipline managers in a way that they could not misappropriate cash and thus it can mitigate agency problems between managers and shareholders. Further, the study of Arping and Sautner (2010) indicates that good governance can mitigate agency problems thus substituting debt taken by the firm. However, the study of Jiraporn et al. (2012) indicates that governance score and debt are inversely related. Further, Firms with good governance are low on debt and vice versa. Thus if debt and corporate

governance are related then Islamic firms that are low debt firms will indicate better corporate governance. Alternatively, we can also posit that adherence to Islamic corporate finance principles can act as an alternative to good corporate governance (Hayat and Hassan, 2017).

The study of Ammann et al. (2011) indicates that higher governance scores positively impacts a firm's value. They also indicated that their results are robust to an alternative measure of good corporate governance. Thus we can posit that Islamic label (Sharia-compliant firms) will also have a positive significant impact on a firm's value if it is to act as a proxy of good governance.

Theoretically, the firm's investment should not be impacted by the availability of internal funds (Modigliani & Miller, 1958). However, due to information asymmetries, it's difficult for the firms of the imperfect world to get external financing at a lower cost (Fazzari et al., 1988). Thus they have to rely on internal funds if they face these information asymmetries implicating that internal funds have a positive significant impact on a firm's investment (Fazzari et al., 1988; Hubbard, 1998). This positive relationship of cash flows with investment can also be attributed to agency problems where mangers in possession of free cash flow spend it on projects that may reduce the firm value for personal benefits (Jensen, 1986; Stulz, 1990). Thus, according to Richardson (2006), firms have the propensity to overinvest if they possess higher free cash flows. However, the presence of good corporate governance mitigates the problem of free cash flows and harms the overinvestment practices of managers in charge of higher free cash flows. Based on this premise we trust that adherence to Islamic corporate finance principals will also prevent the manager's tendency of overinvestment in the presence of higher free cash flows and will invest optimally. Pinkowitz et al. (2006) studied how shareholders value cash and dividend in good governance settings and bad governance settings. They were of the view that in countries

in which there is lower investor protection, shareholder's value cash lower (roughly internal cash holding of $1 is valued at $.33 by the shareholder) because internal funds will be used for private benefits by controlling shareholders and thus they will value dividends higher.

Pinkowitz et al. (2006) have used the corruption index and legal settings of the countries to assess the earlier stated results. We will augment the study of Pinkowitz et al. (2006) and use "Islamic Classification" to see how shareholders of Islamic firms value cash and dividend across Pakistan, the USA, and ASEAN countries. We trust that no study has been made in this context to date.

The past literature of corporate governance indicates that good governance increases firm value (Bebchuk et al., 2009; Gompers et al., 2003; Core et al., 2006; Klapper and Love, 2004). Ammann et al. (2011) studied 64 corporate governance attributes (GMI Index) across the sample of 22 countries and found higher governance scores have an impact on the firm's value. They concluded that good governance causes a rise in the firm's value far more than its cost. We will augment their study and include Islamic label to see if adherence to Islamic corporate governance increases the firm value or not.

According to Richardson (2006), when managers are self-centered and their personal interests are not in line with shareholders, the availability of cash flow in excess of what is needed to maintain assets prompts them to invest in projects that do not increase the value of firms. Thus free cash flow has a positive significant impact on over investment. This decreased investment efficiency can be mitigated by good corporate governance. We will augment the study of Richardson (2006) by using the Islamic label as a proxy of good governance to see if it mitigates the problem of overinvestment of free cash flow. We trust that no study so far has

attempted to study adherence to Islamic corporate finance principle impact on overinvestment/underinvestment of free cash flows.

1.2 Problem Statement

Governance is at the heart of the firm performance. The agency problem associated with the firms has been mostly answered by academicians through corporate governance. However, at the outset, we posited that the success of corporate governance depends on two things. Firstly, the existence of legal rights and secondly enforcement of legal rights (Pinkowitz et al.,2006). The main reason why corporate governance has failed to protect minority investors is the former. Thus we require an alternative proxy for good governance that can mitigate the agency problem under different investor protection regimes. We trust that adherence to Islamic corporate finance principles can mitigate agency problems under different legal regimes and should be studied as an alternative to good corporate governance. Further, for robustness, the study will consider if Islamic Label replicates qualities of good governance when it comes to determining the firm value and different corporate decisions under different legal regimes. We are motivated by the successful performance of Islamic firms in subprime mortgage crises of 2008 where the firms with large boards and indexed high on governance failed but Islamic firms survived.

As discussed at the outset, liquid assets can be appropriated by managers at a lower cost. Thus the centre of the universe of corporate governance studies revolves around the level and uses of cash. Managers tend to expropriate cash easily for personal benefits rather than to maximize shareholder value. Corporate governance helps to mitigate this agency problem. However, Islamic Corporate finance has rarely been studied as to how it can help mitigate agency problems regarding the level and uses of cash. Thus the role of an Islamic label needs to

be studied in the context of level and uses of cash. Previous researchers' exhibits that firms tend to spend cash quickly with weaker governance structure as compared to a firm with good governance. But good governance firms also tend to hold large cash that they don't distribute to shareholders. Although shareholder activism can cure this problem, however, the absence of shareholder activism, as it is in most parts of the world and the impact of corporate governance on level and uses of cash may differ across countries. Thus we would incorporate an Islamic corporate finance proxy to establish its role in mitigating this problem.

As posited by Modigliani & Miller (1958), a firm's investments are independent of the availability of internal funds. However, as evident from the work Fazzari et al. (1988), firms in real-world finance most of their investments from internal funds. However, firms with poor corporate governance either over or under-invest that have consequences for the shareholders. Studies conducted around the world indicate that corporate governance mitigates the problem of investment efficiency. However, these studies do not provide an alternative proxy for good corporate governance. We aim to test Adherence to Islamic corporate finance as a proxy that mitigates the problem of over and under investment (Investment Efficiency).

Jensen (1986) indicated that self-interest managers when are faced with larger amounts of excess cash flows that are required for maintenance of assets tend to expropriate these funds into projects that maximize their personal wealth rather than the wealth of the shareholders. These free cash flows are prone to misuse in the presence of an agency problem. Richardson (2006) indicates that free cash flow has a positive impact on a firm's deviation from optimal investment and have proven that positive governance attributes can mitigate this problem. He has used attributes of corporate governance and proved his hypothesis of good governance factors' mitigating role on the problem of overinvestment due to free cash flows. Since we trust the

Islamic label as a proxy of good governance (Hayat and Hassan, 2017), it can help mitigate the problem of free cash flows-overinvestment sensitivity.

1.3 Objectives of the study:

The main objective of the study is to establish adherence to Islamic Corporate finance principles as an alternative to good corporate governance. To achieve this objective, we intend;

1. To empirically prove that adherence to Islamic Corporate finance has a significant positive impact on the firm's Governance

2. To establish the impact of Islamic label on cash holdings of the firm and compare it with the impact of corporate governance on the firm's cash holdings.

3. To establish how much value shareholders put on the cash holdings of the Islamic firms and compare it with the value that shareholders put on cash holdings of well-governed firms.

4. To establish how much value shareholders put on the Dividend paid by the Islamic firms and firms with high governance scores.

5. To investigate if the Islamic label can mitigate the problem of Over/Under Investment.

6. To investigate the impact of free cash flows on a firm's overinvestment in the presence of Islamic label in comparison with firms under conventional Corporate governance regime.

7. To assess the impact of Islamic label on the value of the firm in comparison with firms under conventional corporate Governance regime.

8. To provide cross country evidence to establish the robustness of Islamic label as an alternative of good corporate governance.

1.4 Research Questions:

1. Does Adherence to Islamic Corporate Finance Principle (Islamic Label) have a positive impact on Firm Governance

2. What is the impact of the Islamic label on the level of cash holdings of the firm?

3. a. How much value do the shareholders of Islamic firms put on their cash holdings?

b. How much value do the shareholders of well-governed firms put on their cash holdings?

4. a. How much value do the shareholders of Islamic firms put on their Dividends?

b. How much value do the shareholders of well-governed firms put on their Dividends?

5. Does the Islamic label mitigate the problem of over/under Investment?

6. Does Islamic label mitigate the problem-free cash flow appropriation to over-investment?

7. Does Islamic label impact the value of the firm?

8. Is Islamic Label a robust proxy of good corporate governance across the countries?

1.5 Significance of The Study:

Most of the academic research takes in to account corporate governance as an answer to agency problems (see for example Gompers et al., 2003; Dittmar et al. ,2003; Klapper and Love, 2004; Core et al., 2006; Pinkowitz et al.,2006; Bebchuk et al., 2009;).However, the Islamic label and its impact on governance based on the cross country sample has never been studied. This study will contribute to full fill this shortcoming.

Islamic Finance industry is worth US$ 2.2 trillion (Hayat and Hassan, 2017) and 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. This study is significant for the shareholder of Islamic firms in the context that it would enlighten him regarding the uses, level of cash holdings, and value of cash holdings. Further, it would reflect on them as to whether the Islamic label is adding value to their stocks or not. Recently Investment in Islamic stocks and bonds has got much attention from non-Muslims. However, no research might help them to assess as to whether Islamic label is value additive concept or not.

The problem of free cash flow overinvestment has been analyzed in the context of corporate governance (Richardson, 2006). The person owning Islamic stocks has a right to know as to whether his firm is misappropriating his cash or not. This study will help him in knowing if the Islamic label is mitigating the misappropriation of free cash flow or not.

Corporate governance seems to be impacted by country-level variables (Pinkowitz et al., 2006). Since Islam believes in the unity of GOD and unity of rules (Sharia), the attributes for the firm to qualify as Islamic more or less are the same. Although according to Derigs and Marzban (2008) these criteria may vary which is essential because stringent criteria will leave Islamic firms with very limited investment options, but major criteria remain the same. Based on the unison of majority criteria being the same, Islamic label will exhibit the same results in other countries and will be less prone to country-specific variables.

Most of the countries have a low level of Investor protection and shareholder activism is nonexistent. According to Dittmar et al., (2003) and Pinkowitz et al. (2004), these countries tend to exhibit a lower level of corporate governance that implies that minority shareholders are at the

mercy of big sharks. Thus Islamic label may proxy for good governance as it encourages socially responsible investments. This social responsibility entails that investment should be done in halal businesses and the shareholder's value should be maximized. This study will establish if indeed Islamic label does increase the shareholder's value translated in an increased value of the firm.

1.5.1 Contextual Contribution:

"The systemic failure of corporate governance is particularly associated with the Anglo-American corporate governance model that has enabled, permitted or tolerated excess power and wealth at the hands of CEOs, cultivated a 'greed-is-good' culture in banks, corporations, financial markets and financial capitalism, and incentivized investment bank executives to pursue vast securitization and high leveraging to enrich themselves at the severe cost of shareholders, investors and other stakeholders (Clarke, 2009; Visser, 2010)"

The above quote is significant to establish that corporate governance failed to predict the collapse of the US market in the 2008 subprime mortgage crises. It has happened before and unfortunately, it can happen again. Thus we must have an alternative concept for good governance. Although we do not attempt to degrade corporate governance, we do differ from the practice of academia to consider it as the single alternative for mitigating agency frictions. The subprime mortgage crises had silver lining as Islamic firms survived those crises and academicians started to take the concept of "Islamic" Finance seriously. Thus our study has contextual importance to study Islamic label in different contexts.

Gregory and Austin (2014) believe that corporate governance faces seven major important issues. The main areas for concern were short term gains vs long term gains, shareholder activism impact on board, and rebuilding society trust on corporate governance.

They implied that the firm's managers are under extreme pressure from institutional investors to focus on short term results as compared to long term strategic investments. Further, investor activism may force directors to focus on short term goals to suit their interests instead of the interest of corporations. Lastly, they think that society expects the firms to grow and act responsibly but they are disappointed. These increasing issues further exacerbate the need for an alternative proxy for good governance. This study is significantly based to address this need.

All of the studies quoted above are from the United States, the achiever of high corporate governance score in the studies of Dittmar et al. (2003); Pinkowitz et al., (2006); Harford et al., (2008). One could rationally assume the condition of corporate governance in developing and developed countries that are marked as high on corruption, low investor protection, and low financial development. Thus both for the developed and developing world we try to identify adherence to the Islamic corporate finance principle as an alternative to good governance.

1.5.2 Significance of the study in Pakistani Context:

According to a World Bank report completed on June 16, 2016, Pakistan ranked 27 in the world on minority shareholder protection. Thus it left the US behind that ranked 41 on the list. However, the index was designed keeping in view the legal clauses that protect minority shareholders. However, according to Pinkowitz et al. (2006) shareholder protection has two facets. Firstly, the necessary rules and regulations. Secondly, the strength of institutions to enforce those rules. Pakistan scores very low on the former. Further, as pointed out in the report of Dawn News 2003, most of the directors own majority shares either by themselves or through their proxies in Pakistan. Thus it is very difficult for minority shareholders to raise their voice or to achieve 10% shares necessary to move up an agenda up to the board. This 10% requirement

still stands to date. Further, only one director can represent the minority shareholder which is insufficient as his voice is usually unheard inboard. The only remedy for that director is to write a dissertation note and make it public. Further, minority shareholders are scattered in Pakistan and shareholder activism is nonexistent. This allows the directors to appoint a puppet director who is just a rubber stamp on the will of the controlling shareholders. (see the report published in Dawn September 16, 2012) . Further, my interaction with the business community has identified an alarming practice adopted by Pakistani firms. Most directors work on each other's board as an independent director. Further, most of the business community guard each other's interest and there exists a gentleman agreement of "you scratch my back and I will scratch your back". These practices are detrimental to the concept of corporate governance. Further, institutional investors are gaining the role of minority shareholders in Pakistan. These fund managers are evaluated by quarterly performances. Thus in the future, we assume that like the U.S we too can expect that our boards will be focusing on short term results more as compared to long term results.

The above discussion is sufficient enough to raise eyebrows and the need for an alternative proxy for good governance. We feel that adherence to Islamic corporate finance can be beneficial for both minority and majority shareholders. However, no research has been done in this area. Our attempt to the best of our knowledge is the first.

Furthermore, more Islamic banks are investing in Islamic stocks under different names of Islamic mutual funds. These fund managers have no academic guidance as to convince their customers to put their money in Islamic stocks. This study attempts to provide this research that will be beneficial for both individual and Islamic mutual fund managers in Pakistan

Further Islamic finance is gaining popularity in Pakistan. Being the leader of Islamic banking and Islamic modes of financing, it is expected that Pakistan should also provide leadership in research on promoting Islamic corporate finance too. This study is a humble attempt in this direction.

1.5.3 Theoretical Contributions:

The underlying theories behind our work are

1. Stake holder theory
2. Agency Theory
3. Keynes Theory of Investment & Money

Stakeholder theory by Edward Freeman posits that firms should take care of its stakeholders. For stakeholders, the list includes shareholders and customers. Stakeholder theory is a mirror image of Corporate Social responsibility. Although, Islamic criteria adopted by Scholars to put Islamic label on corporations is silent on Corporate Social responsibility (Hayat and Hassan, 2017) yet our work fulfills the Economic, social and Governance (ESG) criteria. Islamic certification takes governance criteria of ESG into account and all Islamic investments adopt Socially Responsible Investment (SRI) Criteria. All Islamic stocks are essentially SRI stocks that promote "ethical Investment". Thus we contribute to the existing literature by proxying SRI stocks not only works for sustainable development of community and business but can also be used as an alternative to good corporate governance.

The main theory underlying our work is the Agency Theory by Jensen & Meckling (1976). The theory mainly portrayed agents (Managers) as acting in self-interest and advised the

principal (shareholders) to monitor them. The universe of studies is centered on corporate governance as a chief practice to mitigate agency problems. Recent studies indicate that debt can also be helpful in mitigating agency conflict. Since Islamic label firms are low on debt, it can mitigate agency problems. This study will contribute to the existing literature by recognizing the Islamic label as a proxy of good governance to mitigate agency conflicts.

Keynes theory of investment and money supply also comes in to play when we will be discussing firms' investment, Level of cash, and Uses of cash. Regarding investment Keynes posited that the marginal efficiency of capital is responsible for the firm's investment. We contribute to this theory by positing that self-centered managers will over-invest to further their interest even if the investment is not meeting the Keneysian criteria. Thus Islamic label will force the manager to act responsibly and will be a safety valve on unproductive investments. Regarding cash, Keynes theory posited three motives of cash namely precautionary motive, speculative motive, and transaction motive. Our main concern is the precautionary and speculative motive of cash. As pointed out by Harford et al. (2008) self-interest managers will try to expand their firms even if this expansion is detrimental to shareholders when faced with excess liquidity (spending hypothesis). Our study will investigate whether the Islamic label discourages this spending or not. Secondly as pointed out by Harford et al. (2008) under his flexibility hypothesis was of the view that managers tend to accumulate cash for future flexibility and do not invest. In presences of weaker share protection, these managers will hold excessive cash. We add to this notion by positing that adherence to Islamic corporate finance will prevent managers from holding excessive cash reserves and will prompt them to make socially responsible investments. Our Study will investigate label discourages this spending or not. Secondly as pointed out by Harford et al. (2008) under his flexibility hypothesis was of the view

that managers tend to accumulate cash for future flexibility and do not invest. In presences of weaker share protection, these managers will hold excessive cash. We add to this notion by positing that adherence to Islamic corporate finance will prevent managers from holding excessive cash reserves and will prompt them to make socially responsible investments.

1.5.4 Practical Contributions:

As outlined in the outset, the world needs another measure of governance along with corporate governance. This study aims at providing a solution for using adherence to Islamic corporate Finance practices as an alternative to good governance.

Since minority shareholders are not actively represented onboard. Further, the study of Pinkowitz et al. (2006) indicates that in countries where shareholders have weak legal protection, Firms' management has greater incentives to use cash holdings to their advantage. This study will protect minority shareholders who are scattered and do not have the means to influence board actions. If the Islamic label qualifies for good governance, these shareholders' risk should be minimized as its management under best corporate governance practices will use resources of the firm for the benefit of their shareholders rather than to benefit themselves.

Excess cash balances prompt managers to expropriate cash through tunneling and this practice has a high probability of occurrence in weaker governed firms (Pinkowitz et al., 2005). Islam prohibits hoarding and gambling. These two values are at the core of Islamic criteria. Thus Islamic firms would not hoard excess cash that negatively impacts firm value. Shareholders would be a comfort to know that their funds are not expropriated through tunneling as its probability of occurrence is less in Islamic firms.

The newly emerging Islamic finance concept that is currently a $2 billion industry has no academic support when it comes to the impact of Islamic label on firm performance. The success of establishing an Islamic label as a synonym of good governance will help Islamic firms' managers to market their products efficiently and effectively.

The beauty of the Islamic label is in its simplicity. Since an average investor barely knows the board and its characteristic of the firm he is investing in. Neither he is aware of the complex methodology to calculate corporate governance index for a particular firm he intends to invest in. The Islamic label can be easily identified. All the investor has to do is to put his money safely into Islamic stocks if we can establish an Islamic label as a synonym of good corporate governance.

This study will be also beneficial for non-Muslims who want to invest in Islamic stocks. However, when they research it, they find very few studies on Islamic label in corporate finance literature. If we could give them empirical proves that Islamic label increases the firm value and is synonymous with good governance, this will help them to make their decision on investing in Islamic stocks.

If we are successful in establishing a positive relationship between Islamic label and firm performance, it will be an incentive for other managers to follow Islamic corporate finance principles and strengthen their firm values.

Chapter 2

Literature Review

2.1. Corporate Governance

The word corporate governance is defined as the combination of rules, law, and policies that direct the management to control and administrate the operations of an organization. It is the system of distributing the responsibility between the corporate participant (board of directors, stakeholders, and shareholders) of the organization (Brook, 2004). The principle of corporate governance was developed by OECD (Organization for Economic and corporate Development) in 1999. These principles provided the major guideline to policymakers, institutes, and corporations. Good quality governance improves the growth and performance of the organization. It regulates the capital structure, encourages foreign direct investment and improved the efficiency of the organization to minimize its risk level (Daniel, 2003).

Corporate governance focuses on two categories, one is the behavioral pattern of the corporate participant in relation with the performance and growth of the firm (Claessens, 2006, Kaen, 2003) and the second category is a normative framework which regulates the rules of financial markets, labour markets and legal system under which the organizations work (Claessens, 2006). The concept of corporate governance gains importance in modern organizations due to the interest conflict between management and ownership of the company. Shareholders are the supplier of finances to the organization and usually are not involved in the decision making of the company. They delegate these responsibilities to the board of directors

who further appoints the team of managers for monitoring and observing the company growth and regulates the day to day affairs of the company (Holderness, 2003).

The conflict of interest between shareholders and managers can cause agency problems. Researchers of corporate governance focus on two main problems. The First one arises when the interest of shareholders and board of directors are aligned but the managers are not on the same board with shareholders and board of directors, examples include the official compensation check-out paper, the incentive framework, and other monitoring mechanisms that boards use to ensure that managers take beneficial actions for shareholders (Ahmed and Dulleman, 2007).

The second problem arises when managers and board of directors are aligned but shareholders' interests are conflicting with both of them. Examples include documents that examine the independence of the board of directors, entrenched CEOs, and shareholders' actions to influence or change the decisions of the board of directors (Kelin, 2002).

According to OECD 2004 documents, the main objective of corporate governance is to distribute the responsibility among the board of directors, shareholders, and other stakeholders to establish the objective of the firm and regulate its performance. In April 2004 some changes had been incorporated in OECD principles, it covered the following areas of corporate governance

1. Protecting and providing key ownership Rights to all shareholders.

2. Provide equal rights to all the minor and major shareholders of the corporation.

3. Transparency required in disclosure of the adequate information to the shareholders regarding the company's financial position.

4. OECD corporate governance model identifies the role of stakeholders in a corporation. Mutual understanding of both can bring financial stability to a corporation.

5. The board of directors is responsible to perform their duties with full sincerity in accomplishing the company objective and goals. They are accountable in front of all shareholders and stakeholders.

In the corporate governance board of directors, shareholders and management are the main players. According to the researchers, there is no single definition of corporate governance. It varies from country to country and from company to company. Different models of corporate governance are practiced in different countries of the world (Ahmad and Omar, 2016). Different variables and concepts are used in corporate governance models by different researchers to describe the complex mechanism of corporate governance in two main categories that are capital-related and labor-related. Aspects related to capital contains among other variables, the structure of the organization, role, and identity of the institutional owner. The aspects related to the labor refer mainly to the position of those interested in working in corporate governance (Cernat, 2004). The prominent and notable models are Anglo-Saxon, Continental model, value-based, and Islamic model.

2.2 Models of Corporate Governance:

2.2.1 Anglo-Saxon Model

Anglo-Saxon model is commonly practiced in commonwealth countries (USA, UK, Canada, and Australia), it is based on shareholder theory (Gunay, 2008). In available literature researchers named the model on the bases of its characteristics as shareholders model, Anglo-American, outsiders, and agent-principal model.

It is based on the concept of market capitalism. The Anglo-Saxon model provides the single-tier board, shareholders appoint the group of the executive (insider) and non-executive directors (outsider) who conducts the company management and looks into affairs of shareholders who are not directly involved in the management of the company (Alam Choudhury and Nurul Alam, 2013). Shareholders are the high-risk takers of the company. Thus main responsibility of the corporate managers is to maximize the shareholders' return on their investment (Nwanji and Howell, 2007). The model explains that decentralized and self-interest markets can operate in a balanced way.

Attention has been given to corporate governance by the USA and UK in the last decades. The collapse of Maxwell and the bank of credit in the UK and USA, the scandals of Enron, WorldCom, Tyco, Adelphia, and others led to Sarbanes Oxley Law of 2002. These incidents are linked to the failure of corporate governance in both countries. Some reforms have been addressed in the role and selection process of the board of directors, duties, and responsibilities of the CEO and structure of the audit and nomination committee (Tricker; 2000). The Anglo-Saxon model seems to be a single model however; there are some differences in the practice of corporate governance between the UK and the USA. These differences are prevalent in the role of CEO, degree of dispersion of capital, and capital structure of shareholders. These differences are visible when we study a single firm but the similarities of the Anglo-Saxon model are beneficial at the macro level.

2.2.2 Continental European Model:

The model is based on the concept of stakeholder theory. In management, the word stakeholder was introduced by Freeman and defines the word stakeholder as “those groups without whose support the organization would cease to exist". Group of stakeholders includes

internal (employees and corporate managers) and external (customers, creditors, investors) stakeholders (Donaldson and Preston, 1995). According to the theory of stakeholder, the principal duty of corporate managers is not only to provide benefits to shareholders but also to the relevant group of stakeholders (Maassen, 1999). Many Continental European organizations are working with two-tier boards. In two-tier boards, there are two organizational layers. The upper layer is the supervisory board consisting of non-executive directors (Tricker; 2000). The non-executive directors monitor and control the organizational affairs whereas the second layer is of management executive directors. The role and responsibilities of both boards are separate. Further, the responsibilities of the CEO and Chairman are separate in two-tier boards (Maassen; 1999).

In continental European model organizations meet their financial requirements from banks and other financial institutes. Banks and financial institutes own a significant portion of shares in their portfolio to control the economic activities of their major clients. Financial institute's representatives are mostly found in the board of directors list of these organizations. This banking enterprise relationship creates a positive environment for the organization to grow economically in the long term as compared to stock market companies of Anglo-Saxon (Albert, 1993). Shareholders, stakeholders, and regulators examine the decision making procedure of the organization. They give advice and suggest alternative procedures to make the process more effective. Through and detail studies have been conducted by the researchers to improve the corporate governance laws and system.

However, during the Asian crisis period (1996-1998) and in the world economic recession-era, many firms and corporations were bankrupted except some of the Islamic corporations and banking groups. Although they economically suffered, the damage was not as

colossal as other conventional firms and banking groups. Hence it shows some other factors that contribute to Islamic organizations that protected them from these two crises.

2.2.3 Islamic Corporate Governance Model

In the mid-1970s, the concept of Islamic finance and corporate governance grew rapidly but, unfortunately, there is very little literature available (Hassan; 2008). The first formally Islamic economics and finance (IEF) conference was held in 1976 and the agenda of that conference was to explain the Islamic economics and laws to the financers, law regulators, economists, and politicians in a simple and understandable language (Bhatti and Bhatti, 2010).

Some studies suggested that Islamic corporate governance is the modified form of the Anglo-Saxon model or it is some of the new addition in the corporate governance structure. The purpose of all the corporate models is to increase the wealth of the shareholders. Corporation motive is not only to earn profit but also maintain the moral standards which are acceptable to the communities. Two unique features differentiate the Islamic corporate governance model from the rest of the practicing models. First, Islamic corporate governance is directed by Sharia. Sharia is the code of Islamic law derived from the Quran and Sunnah. In other words, it is a complete way of life. Islamic organizations followed the ethical standards (justice, fairness) governance principles and corporate responsibilities set by the Islamic Sharia. Secondly, it provides certain rules for business, the prohibition of riba (interest), partnership business based on profit and loss sharing, and establishment of zakat centers (Lewis, 2006).

In Islamic organizations, Hisba, shariah, and shura are the main three pillars. Shura is the process in which the elders of the tribes are presented with the problems for discussion and based on the discussion a decision is made by the shura. In Islamic organizations, the director and

senior managers listen to the opinion of the other executive member, shareholder representatives, employees, and customers before making the decision (Baydoun et al, 1999). Hisba is the core element of Islamic corporate governance. The concept of hisba was developed in the early days of Islam; Hisba means accountability that includes encouraging good deeds and forbidding evil. The responsibility of the hisba office is to monitor and ensure that economic or social activities that are carried out in the market or the community are according to the Sharia. Nowadays, different ministries have their special department for the purpose to monitor and regulate the standards of financial markets, trade, and commerce.

Mankind and firm business are inseparable from each other. The business produces goods and services for profit that are consumed by customers to attain utility. Thus both have their own goals to achieve. Thus a business can be viewed as "nexus of contracts" in which producer and customers are parties for different incentives (Jensen and Meckling, 1976; Azid et al., 2007). Islam encourages Muslims to do business as nine out of ten sustenance given by Allah are from Business. Business in Islam is not only viewed as a profit-making activity but its moral duty of businessman to be socially responsible. Islam purports social justice in business transactions: "O ye, who believe! 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).

Attaining profit is the rational and universal motive of business (Hassan, 2008, Ali et al., 2013). Islam does not prohibit the profit-making activity of the business. However, its main motive is just profit (Profit moderation) not abnormal profits that are made at the expense of customers' exploitation and society. "Eat not up to your property among yourselves in vanities; but let there be amongst you trade by mutual good-will" (An-Nisa: 29).

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 the 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%.

The above criteria are used by Dow Jones to screen the firm as Islamic. PSE 30 index (Formerly Known as KMI 30 Index) has the 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.

Kuala Lumpur Stock Exchange Shariah Index (KLSESI) was first introduced in 1997 by the Malaysian stock exchange to promote the Islamic Capital market (ICM) plan. The KLSESI and other Islamic stock products are monitored by Sharia Advisory Council (Securities Commission 2002). Sharia scholars prescribed certain criteria and rules for the investors which help them to differentiate between the Islamic and non-Islamic firms (Abdul Rahman et al., 2010). KLSESI has the following screening criteria;

Companies involved in such activities are declared as non-Shariah compliant if:

1. Involved in the manufacture of alcohol and tobacco-based products.

2. It is Riba (Interest) based on financial institutes.

3. It is involved in gambling, dancing clubs, and casinos.

4. It is in the manufacturing, packaging, and processing of pork or any non-halal food items.

After the screening process of business sector activity, the sharia council declares the company as Sharia complaint after examining their finances. Following are the Sharia approved financial ratios:

1. Debt is less than 33.3% of the total assets.

2. Cash and Interest bearing items are less than 33.333% of total assets.

3. Accounts receivable and cash are less than 50% of total assets.

4. Total interest and non-compliant activities income should not exceed 5% of total revenue.

Islamic market in Indonesia came into being on 3rd July 1997 with the issuance of Islamic mutual funds by PT Danareksa Investment Management. Later in 2000, the Indonesia Stock Exchange (IDX) with the collaboration of PT Danareksa Investment Management launched the Islamic index the purpose is to guide the investors who want to invest in Shariah stock. Bapepam-LK is the financial securities regularity authority in Indonesia, it issued the Shariah-compliant list twice a year (May and November). Two screening methods (business activity and finances) are used in Indonesia by Bapepam-LK.

Screening Criteria of Business sector activity involves;

1. Gambling

2. Interest-based financial institutes

3. Conventional insurance companies

4. The producing and trading of non-halal goods and services as declared by the National Sharia Council.

5. Trading of things in which gambling and uncertainty involved.

Screening Criteria for financial sector includes;

1. Total interest-based debts in comparison with total assets are less than 45%.

2. Non-permissible contribution income to revenue is less than 10%.

Based on the above discussion, the firms that have been categorized as sharia complaint will be named as firms having “Islamic Label”. This name is an indication that these firms adhere to sharia rules when making their corporate finance decisions. This definition is according to the study made by Hassan & Hassan (2017).

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. Further, to the best of our knowledge, there is no literature on manufacturing firms that links value and other corporate finance decisions to Islamic finance.

This negligence is unfortunate. This linkage should be researched as it is extremely relevant especially after the 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 believed 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 labels may qualify as a proxy for good governance. This enables us to state our first hypothesis.

H1= Islamic Label has a positive significant impact on firm governance quality

2.3 Islamic Label and Level of Cash Holdings:

Jensen (1986) was of the view that internal funds are a center of conflict between shareholders and managers. During the period of economic growth, the assets of a firm increase, and managers take some strategic decisions regarding the deployments of these cash reserves, to

invest in some projects, or to stockpiling as cash reserves (Harford et al., 2008). Cash and cash equivalent assets are considered as the most important components of any firm (Bates et al., 2009). Shareholders are seriously concerned about the stockpiling of cash reserves. Firms hold cash reserves to avoid financing in underinvestment projects and transactional costs, a lot of literature is available to value the holdings of cash reserves when the situation of underinvestment is prevailing (Dittmar et al., 2003; Tong, 2010). Low monitoring on the excessive cash holdings results in some of the self-interested managers misused the assets by investing it in low NPV projects for personal benefits (Myers, 1977). These issues lead to some serious agency problems of cash holdings. However, Harford (1999) and Stulz (1990) indicate that agency problems can exist if the firm has higher cash holdings. Dittmar and Smith (2006) indicate that shareholders assign lower values on an additional dollar of cash holdings when the agency problem exists. Agency theory suggested that such a kind of self-interested behavior of the managers is treated by the provisions of corporate governance.

Several empirical studies gave us the inconclusive results regarding the relationship between cash reserves and corporate governance in developed economies framework (US, Spain, and EMU). Prior work in the US gave us a mixed idea about the cash reserves and the concerns of shareholders (Al-Najjar and Clark, 2017). The existing studies of firm-level governance in the US and other international firms find no clear evidence that the poorly governed firms hold high cash reserves and the combination of both harms firm value. La Porta et al. (2002) discussed the shareholders' power motive and explained that the countries with strong protection law of investors forced the managers to return the excess cash to the shareholders in the form of a dividend, in such countries managers are unable to use the excess cash for their welfare. Harford et al (2008) used G-index in their recent study and explained that the firms with weak

shareholder rights protection in the US hold fewer cash reserves. Firms with weak corporate governance spend their excessive cash reserves on value-destroying mergers.

Opler et al. (1999) find out that the transaction cost of a firm with high cash reserves was slow, but managers retained some of the cash for precautionary purposes. A significant coefficient of cash flow volatility on cash holdings indicated that firms hold cash due to a precautionary motive. However, Harford et al. (2008) presented that lower cash reserves are primarily due to his spending hypothesis. Further Mikkelson and Partch (2003) indicated that higher stockpiles of cash do not indicate agency problems as higher values of the firm are due to higher cash reserves.

To investigate the determinants of cash holdings and the impact of corporate governance on cash holdings, Dittmar et al. (2003) gathered the sample of more than eleven thousand (11,000) firms from forty-five (45) different countries including developed and underdeveloped countries. They found out that the poorly governed firms waste their assets, and the countries with low shareholder rights protection hold excessive cash reserves. On the other hand, the firms in the countries with good governance and developed capital market hold less liquid assets. They also explained that the asymmetric information regarding the investment projects is less important in the countries of low investor rights protections.

Lins and Kalcheva (2004) investigated the firm-level corporate governance and country-level investors' rights protection. They found that the firms hold excess cash reserves with low shareholders' right protection. They further added that managerial control over the assets will decrease the firm’s value because managers invested the cash in low profitable projects.

However, Harford et al. (2008) while studying a firm's cash holding in the U.S found that firms with weaker governance have lower cash holdings. The reason for this behavior was that firms want to limit their obligation and resort to share repurchases rather than distributing cash in the form of dividends. On the investment front, he concluded that weaker governed firms tend to make more investments and acquisitions. Thus there is a conflict between international evidence and domestic evidence as to how agency problems impact the stockpile of cash.

Pinkowitz et al. (2006) carried out a cross-countries analysis and found that in countries where investor protection is low (weaker Governance), shareholders value cash holdings lower. The reason for this practice is that the controlling shareholders can expropriate cash for personal use at ease as institutions are weak. Thus shareholder has fewer expectations that they will receive their fair share of a firm's cash holdings by way of dividends or interest payments. The study was also supported by the findings of Dittmar et al. (2006) who found similar results in their cross country analysis.

However, in countries with higher investor protection (higher corporate governance scores), the shareholders value cash more. The literature shows that firms that invest in markets with better investor protection are valued high (Doidge et al., 2004).

As evident from literature, there is mixed evidence on how good corporate firms behave when it comes to the level of cash holdings. Since we are trying to establish an Islamic label as a proxy of good governance, we will test the following hypothesis

H2 (a) = Corporate Governance has a Positive impact on cash holdings of the Firm

H2 (b) = Islamic label has a positive impact on the cash holdings of the firm.

Regarding the value of cash, based on evidence of past literature, we posit the following hypothesis:

H3 (a): Shareholders value Cash at discount in firms with lower scores of corporate governance.

H3 (b): Shareholder value cash high in the firms with Islamic label.

2.4 Dividend Value:

Cash holdings and dividend policy are important topics of research in modern finance. The researchers of the early era treated these two important aspects of finance separately. The only predominated explanation of cash holding was given by Keynes (1936), according to him the firms hold cash reserves only for the transaction and precautionary motives. The dividend is explained as a payout strategy and the distribution of a company's profit among the shareholders is the decision of the company's management. Black (1976) introduced the dividend as a puzzle in the field of finance, managers of some firms pay dividends while facing financial problems and others are reluctant to pay even if they have sufficient available resources. Further, under imperfect market, cash holdings have a significant impact on a company's dividend policy.

Cash holdings include cash in hand and near to cash assets. Recent empirical studies explained the association of cash holdings with investment and dividend policy (Najjar and Belghitar, 2011). The dividend is one of the important determinants of cash holdings (Ferreira and Vilela, 2004). Different researchers explained the relationship of cash holdings and determinants of dividend policy separately.

Dividend policy has always been considered as debatable and frequently researched area in the field of finance. The question arises that why firms pay dividends to shareholders? As an

investor, shareholder assumes that dividend provides the signal about the firm's profitability and its growth level (Aydin, and Cavdar, 2015). The relationship between good corporate governance and dividend policy is considered as a cornerstone in developing the literature of corporate finance. In the early 1980s, researchers investigated the relationship of both and the majority of those researchers concluded that the firms with good corporate governance pay high and stable dividends. The firm with stable dividend policy increases the shareholder's confidence that minimizes conflicts between majority and minority shareholders that reduce the agency problems (Jensen, 1986; Rozeff, 1982).

The firm decides to hold the optimal level of cash after comparing its marginal benefit and marginal cost. The prominent benefits of cash holding are, first, it reduces the financial distress as it reserves to deal with unpredictable losses. Second, it allows firms to follow their investment plan otherwise the financial constraints force the firms to forgo the positive NPV investment projects. Third, it reduces the cost of raising external funds and liquidation costs (Ferreira and Vilela; 2004). In Tradeoff theory the expected relationship between dividend and cash holdings is negative. It explained that dividend-paying firms increase funds at a lower cost by reducing its dividend payment as compare to non-dividend-paying firms (Opler et al., 1999). Therefore it is assumed that dividend-paying firms hold less cash than not paying firms. Greene (2008) used a simultaneous framework to explain the causal relationship between cash holdings and dividend payments. According to his findings, the firm's decision regarding dividend payments depends on the cash holdings and cash holding depends on dividend policy. He further argued that ignoring the causal relationship between both gave us biased and unexplained estimates. Ferreira and Vilela (2004) found a negative relationship between cash holdings and

dividends. Whereas, Ozkan and Ozkan (2004) thought that dividend policy does not influence the cash holdings of the company.

Brealey et al., (2005) supported the sticky dividend policy which means that managers should adopt the low payout ratio policy instead of not paying dividends. Cutting off dividends reduces the value of a firm and an increase in dividends appreciates the value of a firm in a market. It shows that dividend works as a signal to convey information about the firm value to the investors. Bhattacharya (1979); Miller and Rock (1985) developed the signaling theory using an important term of economics "asymmetric information" between managers and investors. Cash dividend play as a signal of the firm's future performance if it only satisfied the following assumption:

(1) Investors have imperfect information regarding the firm's growth and its profitability

(2) The tax rate on cash dividend has to be higher than capital gain (Bhattacharya, 1979)

The changes in dividend policy convey the message to the investors about the changes in future cash flows. Aharony and Swary (1980) studied the effect of a quarterly dividend and profit announcement on the signaling hypothesis. According to them under the efficient capital market condition if cash dividends worked as a signal to convey the future performance of the firms, in this situation the prices of the shares changes with the change of cash dividend after the earnings announcement. They found strong evidence that changes in quarterly cash dividends convey the information about the future cash flows of the firm.

Miller and Modigliani (1961) explained that if the future expected earnings of the firm is affected by the change of dividend at time't' then changes in dividend have the explanatory power to predict the future earnings of the firm. Researchers worked on the information content

of the dividend hypothesis to investigate whether the unexpected changes in the current dividend payout predict future earnings. Allen and Michaely (2003) explained that change in dividends and change in expected future earnings are not going in the same direction. Thus it is not a good option for managers to use dividends as a signal for the prediction of a firm's future earnings and cash flow. Grullon et al. (2005) used Fama and French (2000) methodology and found no evidence that change in dividend explained the future earnings growth of the firm.

Tsuji (2012) supported the dividend- signaling hypothesis of Bhattacharya (1979). He explained that in the prevailing economic situation, managers and investors should behave rationally and managers have to modify their financial policies to compete in the world. The presence of geographical and industrial patterns affects the signaling role of dividends and the growth of the firms.

La Porta et al. (2000) and Mitton (2004) worked on the relationship between corporate governance, dividend policy, and agency theory. They further discussed the outcome and substitution models of corporate governance and dividend policy. The outcome model explained the positive relationship between good corporate governance and dividend policy. La Porta et al. (2000) argued that firms with good corporate governance pay higher dividends to their shareholders. In contrast, the substitution theory shows the negative relationship between good corporate governance and dividend policy. It claims that firms with poor corporate governance pay a higher dividend to their investors to give a positive image of a firm in a market and attract investors.

Research on the relationship between corporate governance and dividends shows inconclusive results. Jiraporn and Ning (2006) tested the impact of corporate governance on the

dividend policy of US firms. Shareholder rights were taken as a proxy of corporate governance and the sample consisted of 1500 firms. Results supported the substitution model and explained that poor governing firms pay high dividends to their investors. Knyazeva (2007) also confirms the substitution theory in US firms.

Renneboog and Szilagyi (2015) took firms in the Netherlands as their sample to examine the relationship between corporate governance and dividend policy. The firms had weaker minority shareholder protection. The result showed that the dividend payout was low in the country under weaker minority shareholder rights.

The managers of Indonesian companies believed that dividend plays an important role and have a significant impact on the value of a firm. Very few studies have been conducted on the dividend policy of Indonesia. Sawicki (2009) and Mitton (2004) conducted the cross country study to investigate the effect of corporate governance quality on dividend policy. They found that before the monetary crisis (1997-1998) poor corporate governance firms pay higher dividends but after monetary crisis firms adopted outcome models instead of substitution models.

La Porta et al. (2000) conducted a study of 4,000 companies from 33 different countries and supported the outcome model. In their study, they examined the impact of general aspects of agency conflicts like minority shareholder rights protection and preferences of taxation on dividend payout. Results further concluded that civil law countries have weaker minority shareholder protection than common law countries. Pinkowitz et al. (2006) indicated that firms in countries with low investor protections tend to pay more dividends. The value put by investors on dividends of the firm with good governance score is significantly low as compared to the

firms with low governance scores. This is due to the belief of the investor that cash will be misappropriated in badly governed firms thus they should have it in the form of dividends.

Based on the above literature on dividend, we posit the following hypothesis;

H4a: Shareholders value dividend high in firms with lower scores of corporate governance

H4b: Shareholder value dividend low in firms with an Islamic label.

2.5. Free Cash Flow and Overinvestment:

Investments in projects are usually done after evaluating it through net present value (NPV). Overinvestment is viewed if the company invests in negative NPV; in other cases, it is considered as underinvestment if the company leaves positive NPV. This classification of over and under investment is known as inefficient investment. Companies in real, demand expansion of investment scale and deals with issues of investment efficiency. Renneboog et al. (2007) suggested that there are two types of errors in firms. Type I error occurs when cash flows are sufficient and lead to overinvestment and type II error occurs when there is a cash flow shortage and leads to underinvestment. As the internal financing increases type I error occurs and lessens type II error. If reduction in internal financing occurs and cash flows start declining then corporations no more meet their investment needs even if investment opportunities are viable with positive NPV. Managers while going for overinvestment by investing in negative NPV projects are deemed as discouraging shareholder value creation motives. This investment behavior speaks about management’s private benefits and low monitoring in corporations. Modigliani and Miller (1958), denounce any link of free cash flows and firm investments in perfect capital markets. Hubbard's (1998) study has recognized the relationship between cash

holdings and firm investments. There are two explanations for the relation: one is information asymmetry and the other is agency costs. For the information asymmetry explanation, It is costly for companies to raise external capital when the cost associated with it increases due to information asymmetry in imperfect markets (Myers and Majluf, 1984). This external finance constraint compels firms to abate investments and further encourages investing with its own internally generated cash flows due to its low cost of capital (Fazzari et al., 1988; Hoshi et al., 1991; Whited, 1992; Hubbard, 1998). Information asymmetry between the managers and shareholders, benefits managers to over-invest as proposed by Jensen (1986), using internal free cash flows for investments in negative NPV projects increases managerial utility. From societal and shareholder stance, it is recommended that free cash flows need to be dispensed at the hands of owners of the firm Further, Lertjirakun (2011) in one of his MIF faculty papers studied asymmetric information impact on limited free cash flows within Thailand listed companies. His study confirms that in the presence of high information asymmetry, there will be higher investment cash flow sensitivity observed. Pinkowitz et al. (2006) further added that private firms in comparison to listed firms strongly endorse financing hierarchy theory because of higher information friction in such firms related to supervisions, minimum disclosures, and external auditing.

Another explanation is agency costs. The separation of ownership and control inside corporations gives birth to agency costs. This usually leads to overinvestment as managers in firms, in presence of excess internal funds, invest in negative NPV projects which makes them reap their incentives and perks (Jensen, 1986; Stulz, 1990). Agency cost explains that management benefits themselves at the expense of corporate owners by investing in those projects which are not paying back in a long term perspective. This hurts the owner's stakes

especially when monitoring in firms is weak and is under management influence. This phenomenon was examined by Tangjitprom (2015), by gathering data related to overinvestment and free cash flow by using listed companies in the SET market between 2001 and 2013. A positive relation was coined out which confirms agency theory since internal cash flow is spent by management for serving their motives. The study of Richardson (2006) verifies that positive free cash flows are vulnerable to misappropriations. He found a significant positive coefficient of free cash flow with the firms over investment. Further study reveals that some strong corporate governance structures within firms appear to eliminate overinvestment. The study was based on the Compustat annual database of which a large sample was studied. His research was based on an accounting framework for measuring overinvestment and free cash flow, thereby allowing more robust tests of the agency cost explanation. His findings were following previous researches (Blanchard et al., 1994; Harford, 1999) that purports the miss appropriation of cash holdings by managers of the firms under agency problem. Bates (2005) found that firms that retain more cash tend to invest more than their peers in the industry.

Chen et al (2016) examined Chinese company data during 2001-2004 and found out how corporate governance affects both under-investment and over-investment. The results of their study were consistent with the agency cost theory that best explained the relation between over-investment and free cash flows. That is, to say that in the presence of excess free cash flows leads likely to the over-investment situation. From the corporate governance standpoint, for the over-investment group, they evidenced that some characteristics such as large board size, high tradable shares, or high leverage can reduce over-investment. For the under-investment group, corporate governance characteristics e.g. large board size, large outside directors increase the level of under-investment. However, some characteristics such as high leverage and high

tradable share decrease the under-investment level of the firms. Chen et al. (2016) also indicate that over investments are mitigated by board size and higher leverage.

Huang et al. (2013) also took data from Chinese listed companies to examine the effect of agency cost. They, however, focused on the impact of top executives' overconfidence and investment cash flow sensitivity. Their study came up with the conclusion that agency cost impacts this relationship. Thus the presence of positive free cash flow prompts managers of firms with weaker governance scores to spend on projects that enhance their wealth and not the wealth of shareholders (Richardson, 2006). However, in the presence of good corporate governance the agency problems associated with free cash flow-Overinvestment sensitivity can be mitigated (Richardson, 2006). Since the Islamic label is associated with lower debt and has the potential to proxy for good governance, we will test the following hypothesis;

H5 (a): Corporate governance negatively mitigates the problem of free cash flow Overinvestment sensitivities.

H5 (b): Islamic label negatively mitigates the problem of free cash flow Overinvestment sensitivities.

2.6. Firm Investment and Investment Efficiency

Investment plays an important role in all the theories of the business cycle including Keynes's theory of investment. Keynesian economics was developed in 1930 during the period of the Great Depression. The defining feature of the Keynesian theory was considering the investment as an important and volatile component of aggregate demand, fluctuation in aggregate demand cause the change in output and employment level in an economy. In his book

“General theory of employment, interest, and money” he argues that when an entrepreneur buys an investment product he buys the future income that he expected to earn from selling the product minus its current expenses. Keynes's theory of investment appeared as a new concept with a newly invented word “Marginal efficiency of Capital” (MEC). In his book, he defined MEC as “the marginal efficiency of capital as being equal to that rate of discount which would make the present value of the series of annuities given by the returns expected from the capital asset during its life just equal to its supply price”.

MEC has a prominent role in the determination of Keynes's investment-demand model. The profitability expectations of the firms make the investment demand curve more volatile. Keynes viewed that during the period of economic boom investors project the high rate of return on their investment. Confronting favorable projection of future demands, they increase their investment in new capital to increase their production capacity. A high rate of investment expand the economy and increase the demand for the other products and encourage the firms to increase their investment.

Expected profitability is not evaluated on the stock of capital but instead against the flow of capital. When the downturn phase of the economy starts, the demand of many products of the firms’ declines and their high rate of investment left them to produce the undesirable amount of output, this excess capacity and a lower rate of return discourage the investors and they stop investing which decline the aggregate demand and output of the economy. In the contraction phase of the economy, investors are more pessimistic and reduce their investment near zero.

On financing investments, Modigilliani & Miller (1958) irrelevance theorem posits that in a perfect world where cash can be obtained at zero cost; there is no need to maintain huge cash

holdings. Since there is no liquidity premium in such a world therefore if firms borrow that money and invest it in liquid assets, it will not impact shareholders' wealth. In other words, they believed that there is no wedge between the cost of internal and external finance. However, in the real world, certain factors prevent firms to take external finance.

The efficient management of capital structure is an important task for the firms to perform better operations. Every firm has its preference for a capital structure to finance their investment. Pecking order theory was first introduced by Myers and Majluf in 1984 and the theory discussed the relationship of capital structure, dividend, and financing policies of a firm (Matemilola and Bany-Ariffin., 2011). This theory is based on the problem of asymmetric information and it is the most influential factor that affects the development of this theory. Managers of the firms will prefer the internal funds over debts and debts over equity to finance their investment opportunities (Myers, 1984). The firm's financial decisions are affected by the firm's level of leverage and profitability. Profitable firms used their retained earnings for investment and avoid borrowing and issuing equity. The debt-equity ratio of profitable firms is low as compared to non-profitable firms.

The pioneering paper by Fazzari, Hubbard, and Peterson (hereafter referred to as FHP, 1988) was a major shift from perfect market assumption. They pointed out that information asymmetries are prevalent in the market and because of these asymmetries the external and internal finance is not perfect substitutes for each other. They used the word "Financial Constraints". They classified the sample into constraint and unconstrained firms based on its dividend payout ratios. These constraints may be in the form of information asymmetries, adverse selection, or incentives that may distinguish the firms from good borrowers to bad borrowers (Stiglitz & Weiss, 1981). Thus Fazzari et al (1988) concluded that firms that are more

financially constrained will rely more on their internal funds for their investment decisions or in other words, their investment to cash flow sensitivities will be higher than that of financially unconstrained firms. The pioneering work of FHP led to a debate on cash flow investment sensitivities analysis. Most of the researchers such as (Vogt, 1997: Almeida et al., 2004; Acharya et al., 2007; Guariglia, 2008; McVanel & Perevalov, 2008) validated the findings of FHP (1988).

The cash flow sensitivity analysis has also been studied in the context of corporate governance. The recent literature is of the view that the more a country enforces corporate governance codes, the less will be the sensitivity of investments to cash flows. These studies think that adherence to cooperate governance conventions generally reduces information asymmetries that in turn allows more firms to get cheaper credit to undertake projects with positive NPVs. Ownership structure (Ozkan & Ozkan, 2004), shareholders rights (Dittmar et al., 2003; Harford et al., 2008), Institutional protection (Pinkowitz et al., 2004) and overall legal system (Francis et al., 2010) concludes that adherence to cooperate governance conventions has a monotonous relationship with cash flow investment sensitivities.

Further Richardson (2006) implies that in the presence of good governance, Investments are efficient. He proved that proxies of good governance mitigate the problem of overinvestment. Building on this and previous literature, we posit the following hypothesis;

H(6a): Corporate governance negatively mitigates Deviations from optimal Investment.

H(6b) Islamic Label negatively mitigates deviations from optimal Investment.

The perfect capital market shows no relationship between cash flow and a firm's level of investment (Modigliani and Miller, 1958). Later on Hubbard; 1998, explained the positive relationship between cash flow and firm-level of investment. Researchers explained the two

sides of a coin; information asymmetry and agency conflicts to explain the relationship of cash flow and investment. It is costly for firms to generate funds from external sources when there is information asymmetry under the imperfect capital market condition. External financial constraints compelling companies to reduce viable investments and invest more in the presence of internal funds due to their lower cost of capital ((Fazzari et al;1988 & Hubbard; 1998).

Jensen (1986) explained the agency conflicts with overinvestment. He argued that agency cost is basically due to the conflict of corporate ownership and control. He further explained that firm managers have a stronger hold on free cash flow and they have all the authority to invest it in negative NPV projects that accommodate the managers' benefits but may not be good for shareholders.

Chen et al., 2016 sampled 865 listed firms in china to investigate the effect of free cash flow and corporate governance on firm investment. According to their findings firm's overinvestment is more sensitive to free cash flow in the presence of agency problems. Higher state ownership concentration boosts the problem of overinvestment while the larger and effective control of board size mitigates the problem of overinvestment. On the other hand, the higher state ownership concentration increases the severity of the underinvestment problem. Larger board size or effective control of external executives and higher leverage reduces the problem of underinvestment.

Richardson; 2006 mainly focused on the issue of overinvestment with free cash flow and governance structure. He concluded that weak corporate governance increases the problem of overinvestment. Huang et al. (2011) examined the relationship of a top executive,

overconfidence, and investment cash flow sensitivity; he argued the in state-owned companies have a high investment cash flow sensitivity as compared to non-state-owned companies.

Based on the above discussion, we are prompted to test the following hypothesis;

H (6c) corporate governance has a negative significant impact on Over Investment.

H (6D) Islamic Label has a negative significant impact on over investment.

H (6E) Corporate Governance has a negative significant impact on Under Investments

H (6F) Islamic Label has a negative significant impact on underinvestment.

2.7. Firm Value under Corporate Governance and Islamic Label:

Agency problem, mitigated by good governance, affects firm value in two ways. Firstly, under good governance shareholders do not fear misappropriation of cash and trust that the cash will be distributed amongst them by way of dividends and interest payments (La Porta et al., 2002). Secondly, good corporate governance reduces the monitoring cost of the shareholders and thus reduces the overall cost of capital of the firm (Shliefer and Vishny, 1997).

Although good governance comes at a cost that may outweigh the benefits (Bruno and Claessens, 2010; Chhaochharia and Grinstein, 2007) but literature is supportive of the fact that good corporate governance benefits outweigh its cost (Ammann et al., 2011). Also, there is strong support in the literature that stronger corporate governance has a positive impact on the value of the firm (Gompers et al., 2003; Yermack, 1996). Studies conducted on cross-sections of countries indicate that higher values of corporate governance are associated with higher firm valuations (Balasubramaniam et al., 2009; Beiner et al., 2006; Black et al., 2006).

In the cross-countries analysis, studying the impact of corporate governance on firm value, Amman et al. (2011) indicates that there is a strong impact of different measures of corporate governance on firm value. The firms that went low on the score of governance had their firm values degraded. Further, they indicated that their study is robust for alternate corporate governance techniques. This and prior literature has prompted us to posit the following Hypothesis;

H (7A): Corporate Governance has positive significant Impact on Value of Firm

H (7B): Islamic Label has a positive significant impact on the Value of Firms.

There are very few studies in the literature that have studied corporate governance in the Islamic perspective and even fewer studies that link the Islamic label with firm governance. Further, we trust that Pakistani firms will tend to hold more cash because of the precautionary motive thus we trust that Islamic labels will be associated with higher cash holdings. Further recent periods have witnessed a boom in the Islamic mode of financing. Thus we can say that Islamic labels will have a positive impact on firm value.

2.8 Hypothesis of the Study:

Based on literature review we posit the following Hypothesis:

H1: Islamic Label has positive significant impact on firm governance quality.

H2 (a): Corporate Governance has positive impact on cash holdings of the Firm

H2 (b): Islamic label has positive impact on cash holdings of the firm.

H3 (a): Shareholders value Cash at discount in firms with lower scores of corporate governance

H3 (b): Shareholder value cash high in the firms with Islamic label

H4 (a): Shareholders value dividend high in the firms with lower scores of corporate governance

H4 (b): Shareholder value dividend low in firms with Islamic label.

H5 (a): Corporate governance negatively mitigates the problem of free cash flow-Overinvestment sensitivities.

H5 (b): Adherence to Islamic corporate finance principals negatively mitigates the problem of free cash flow-Overinvestment sensitivities.

H6 (a): Corporate governance negatively mitigates Deviations from optimal Investment.

H6 (b) Islamic Label negatively mitigates deviations from optimal Investment.

H6 (c) corporate governance has negative significant impact on Over Investment.

H6 (D) Islamic Label has negative significant impact on over investment.

H6 (E) Corporate Governance has negative significant impact on Under Investments

H6 (F) Islamic Label has negative significant impact on underinvestment.

H7 (A): Corporate Governance has positive significant Impact on Value of Firm

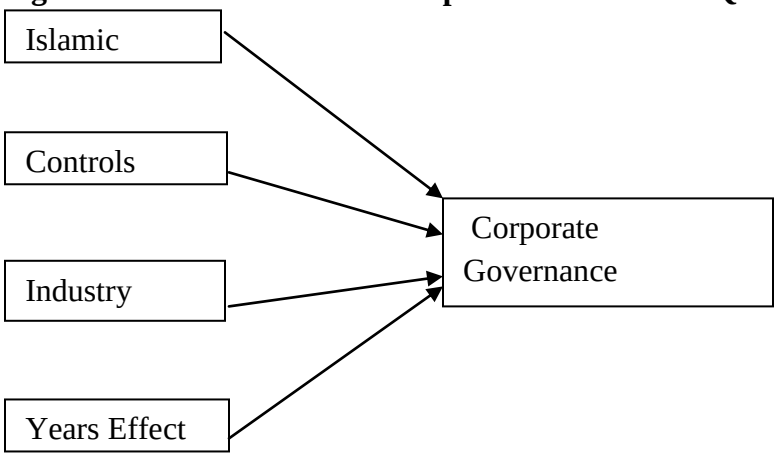
H7 (B): Islamic Label has positive significant impact on Value of Firms.

2.9 Theoretical Frame Works:

2.9.1 Islamic Label and Corporate Governance Quality:

This theoretical framework is adopted from the study of Hayat and Hassan (2017). The aim of this framework is to assess whether Islamic label has impact on firm's governance quality.

Figure 1: Islamic Label and Corporate Governance Quality



CG= Corporate Governance Index

Islamic= a dichotomous variable that takes the value of 1 if firm is Islamic and 0 otherwise

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

Industry Effect= takes value of 1 if firm belong to particular industry and zero other wise

Year Effect: Takes value of 1 for a particular year and zero otherwise.

Country Effect= Take value of 1 if firm belongs to particular country and zero otherwise

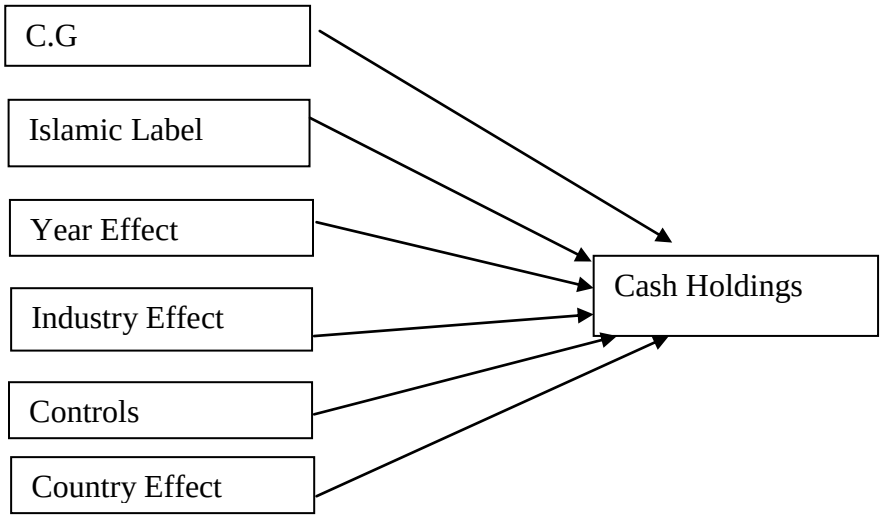
Here "Islamic" is main variable of concern. A positive and significant impact on Corporate Governance (CG) would validate our First Hypothesis (H1). Control variables are explained and discussed in methodology, Industry Effect controls for the bias that may occur if firm belong to a specific Industry. Year's effect controls for time related bias. Above model is adopted from Hayat & Hassan (2017). The model will be estimated at country and cross country level to fulfill the gap identified by Hayat & Hassan (2017)

Underlying Theory: Agency theory

2.9.2 Level of Cash Holdings under Islamic Label & Corporate Governance:

Firms with good governance score hold more cash as compared to firms with low governance score. Following Theoretical framework has been adopted from Harford et al. (2007) to assess the impact of good governance and Islamic label on firm cash holdings.

Figure 2 : Level Of Cash Holdings Under Islamic Label & Corporate Governance



Where;

Cash Holdings= ln (Cash and Cash equilants/Net Assets)

Where Net Assets= Total Assets – Cash and cash equilants

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

CG= Corporate Governance Index

Controls:

Size= Ln(sales)

Leverage= Total debt/Total Asset

Market to book ratio= ratio of the market value to book value of assets

CF= Ratio of operational cash flow to total asset

WC= ratio of net working capital to net assets

Capex= ratio of capital expenditures to net assets

Dividend Indicator= Dummy variable that take value of 1 if firm pays Dividend & 0 Other wise

CF volatility= cash flow volatility measured by standard deviation of cash flows for the past five years

Industry Effect= takes value of 1 if firm belong to particular industry and zero other wise

Year Effect: Takes value of 1 for a particular year and zero otherwise.

Country Effect= Take value of 1 if firm belongs to particular country and zero otherwise

A positive significant coefficient of Islamic label and corporate governance will indicate acceptance of Hypothesis 2(a) and 2(b). The above model is adopted from Harford et al. (2008), augmented with Islamic label to assess its impact on cash holdings.

Underlying Theories: Agency Theory and stake holder theory

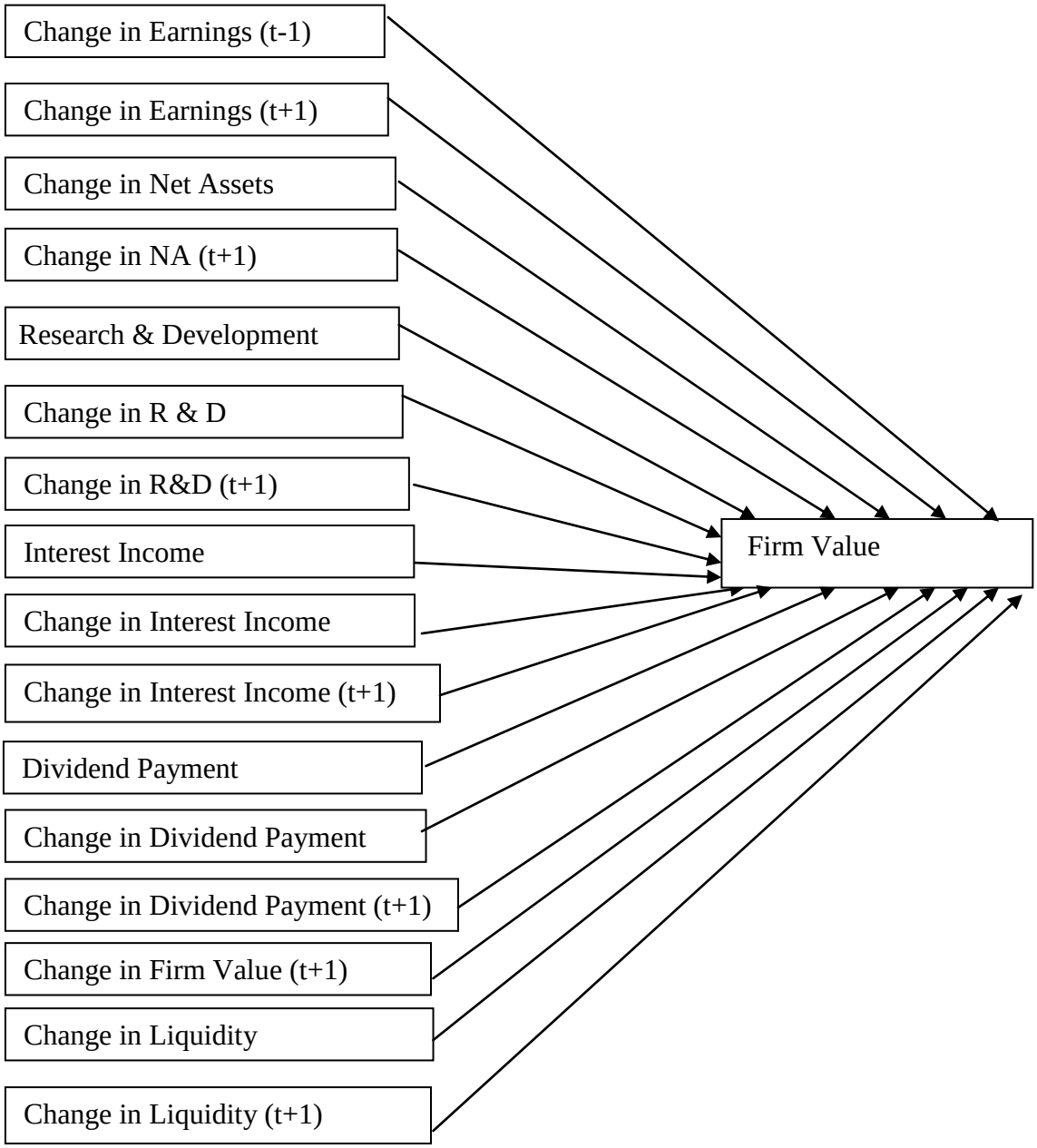
2.9.3 Value of Cash & Dividend under Islamic label and Corporate Governance:

In this model dividend payment is a main variable of interest. A significant coefficient of dividend payment will indicate that low governance firm shareholders value dividend more. This model will be estimated both for corporate and Islamic label. Further Cash will have positive significant coefficient for good governed Firm intimating that shareholder places more value on cash of good governed firms. Model is used to test hypothesis H3(a) to H4(b).

Change in earnings (t-1) is the previous period's earnings of the firm. If in past firm earnings is positive, it will increase firm value today. Change in earnings (t+1) is expected future earnings of the firm. If the prospects of the firm's earnings are bright, it will have a positive impact on the firm's value today. Change in net assets of the firm or investments made by the firm, while the change in net assets (t+1) can be regarded as future investments by the firms. Both of these will have a positive impact on the firm's value. Research & development expense is the current R&D expense of the Firm, while the change in R&D expense captures an increase or decrease in R&D expense from the previous year while the change in R&D(t+1) shows the change in R&D expense for future periods. Generally, spending on R&D will cause the firm value to rise as it will give the firm an edge over its competitors and will give it a larger market share. Similarly, current interest income, change in interest income and expected change in

interest income is indicative of interest-earning capabilities of the firm's investments in interest-bearing investments. These increase the firm's earnings and have a positive impact on the firm's

Figure 3: Value of Cash & Dividend under Islamic label and Corporate Governance



value. Current Dividend, change in dividend and expected change in dividends are variables that interest us the most in this model. Dividends generally have a positive impact on a firm's value

but can also harm value if the stakeholders are more interested in capital gains rather than dividends. Further, we expect that change in dividends will be valued on the lower side by shareholders of well-governed firms as they will like the management to hold more cash and make responsible investments. Liquidity stands for liquid assets i-e cash and cash equivalents. Here the total asset in Fama and French (1998) model has been decomposed into liquid and nonliquid assets (net assets). Change in liquid assets shows how much cash is being held by the firms as compared to the previous year while the change in liquid assets(t+1) indicates how much it expects to hold in the future. Our premise is that good governance firms tend to hold more cash and will have a positive impact on the value of the firm. Shareholders will put more value on additional dollars held by a good governed firm while the same will be valued less by them in case of a badly governed firm. The value of the firm (t+1) indicates the expected change in the value of the firm. If the market has positive sentiments for the future value of the firm, it will have a positive impact on today's value of the firm.

The above model is adopted from Pinkowitz et al. (2006) and will be used to estimate how much value investors place on cash holdings and dividends of Islamic firms.

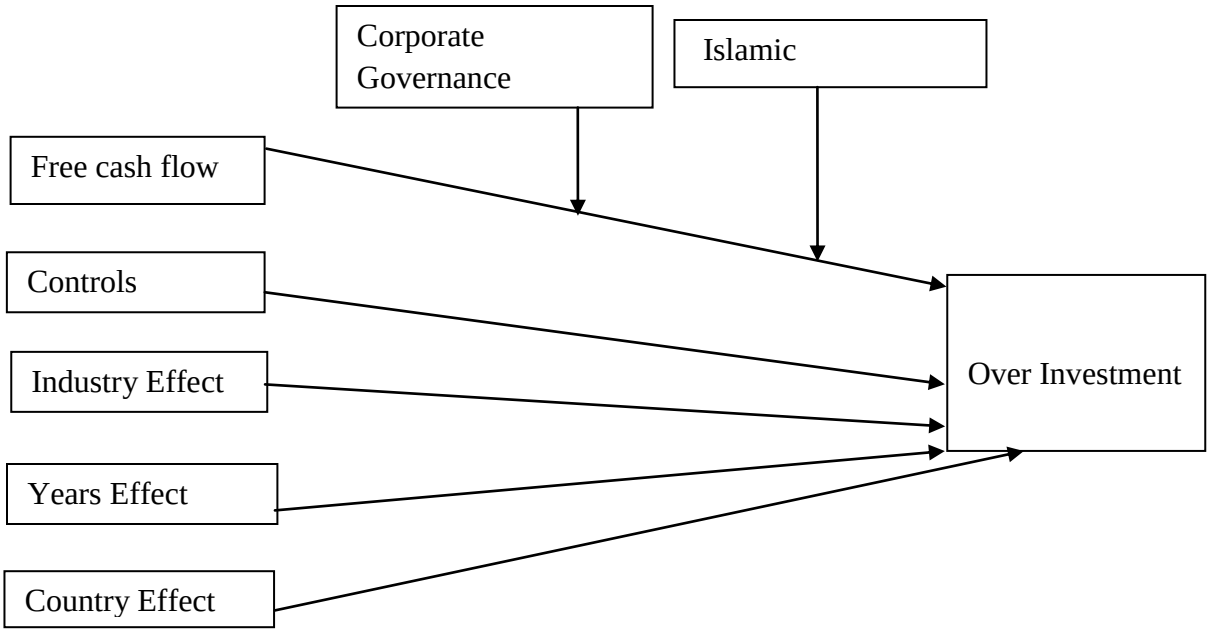
Underlying Theories: Agency Theory and stake holder theory.

2.9.4 Free cash flow and investment Efficiency: effect of corporate governance and Islamic Label

The frame work indicates that corporate governance and Islamic label moderates the free cash flow which reduces the over investment. This model will test hypothesis H5(a) & H5(b). The model is adopted from Richardson (2006) and augmented with moderation of Corporate

Governance and Islamic label. This will help us to assess whether Islamic label mitigates overinvestment of free cash flow like corporate governance.

Figure 4: Free cash flow and investment Efficiency: effect of corporate governance and Islamic Label



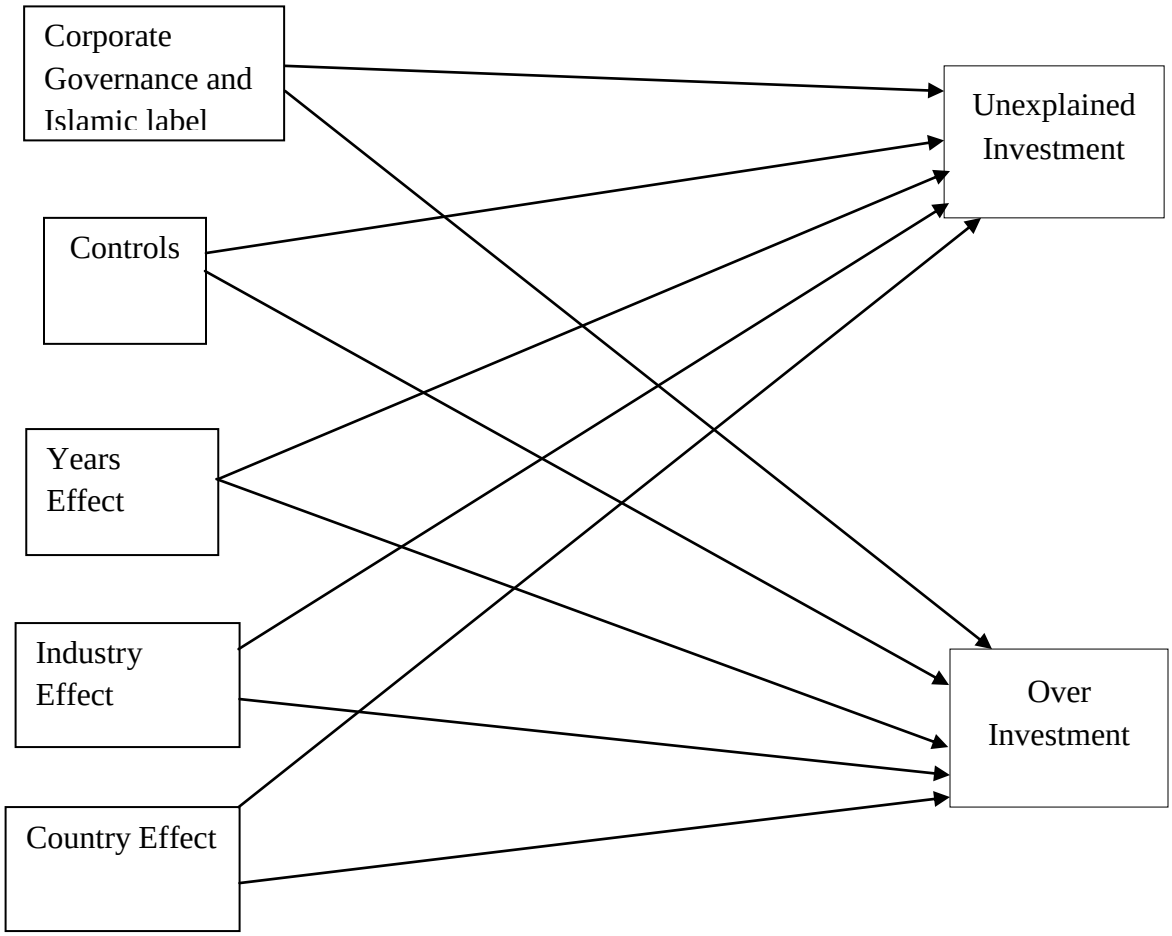
Underlying Theories: Agency Theory, Stake Holder Theory and Keynes Theory of Investment.

2.9.5 Investment Efficiency under corporate Governance and Islamic label:

The below network identifies that corporate governance and Islamic label has impact to reduce the unexpected, over and under investment. This model is adopted from chen et al. (2016).

This model will assess the mitigation role of Islamic Label and Corporate governance on investment in efficiency. The above model will be used to test H6(a) to H6(f).

Figure 5: Investment Efficiency under corporate Governance and Islamic label

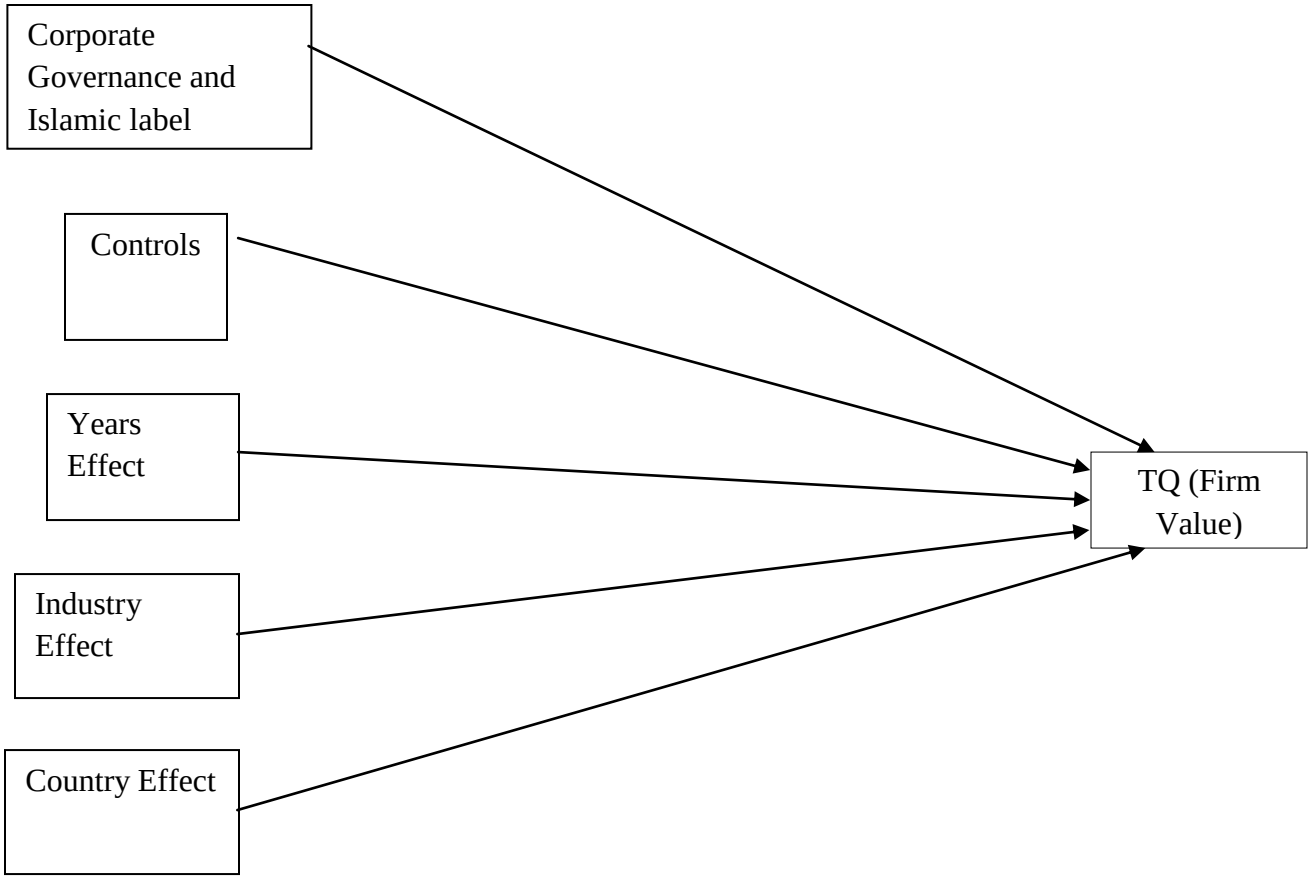


Underlying Theories: Agency Theory, Stake Holder Theory and Keynes Theory of Investment.

2.9.6 Firm Value under Islamic label and corporate Governance:

Here Islamic and corporate governance impacts on Tobin's Q, used this to estimate the value of firm. A Positive significant coefficient of both will indicate that adherence to Islamic and corporate finance principles will have impact on firm value. The controls which represent the set of control variables are explained in methodology in detail while the rest effects are biases due to firm affiliation with particular industry, country and time.

Figure 6: Firm Value under Islamic label and corporate Governance



The above model will be used to test H7(a) and H7(b). The above model is adopted from Ammann et al. (2011) to assess the impact of Islamic label and governance on firm value.

Underlying Theories: Agency Theory & Stake Holder Theory

Chapter 3

Data and Methodology

3.1 Population & Sample:

To get numbers for different variables used in the study, we have used annual reports of firms for Pakistan. Further, the data for the ASEAN region has been obtained from the Thomson Reuters database while data for US firms will be obtained from COMPUSTAT and Thomson Reuters database. From these data sets, we have carved out Islamic firms that comply with sharia criteria exhibited in the literature. In Pakistan, only those firms are excluded whose information for the variables is missing for the period of the study and the firms should not belong to the financial sector such as banks, insurance companies, etc. Further, in the case of foreign countries, we have excluded all the firms that are not the part of main indices during our estimation period from 2011 to 2015. These screening criteria in the case of foreign companies are necessary to obtain companies that are true sector leaders. Further, in the ASEAN region, we have taken those countries that have sharia indexes on their respective stock exchange. We have employed this methodology because sharia certification tends to follow different criteria in different countries. Thus we have followed the sharia index of a particular country for robust results. This added filter has incorporated country effect sharia certification differences in our estimations. The detail of the number of firms along with industry for each country is presented in Appendix 3. From Appendix 3 it is evident that for Pakistan we ended up with a sample of 231 firms out of which 53 firms were sharia complaint (Islamic label Firms). For Indonesia, we ended up with 38 firms with 17 firms bearing Islamic Label. In Malaysia, we

ended up with 17 firms as sharia complaint out of 38 firms while in the USA, out of 304 firms, 128 firms were sharia complaint. The Appendix has included all major industries of a particular country and is a true representative of the population.

Our estimation period is from 2011 to 2015. However, 2010 is included for lead and lag considerations. Our estimation period is robust because during this period the Pakistani economy and world economy faced crises and recovery. Further, in Indonesia, the official Islamic index of the Jakarta Stock Exchange started functioning from the year 2011. Thus for uniformity and robustness, our estimation period is from 2011 and 2015. Further, our sample period incorporates crises, for example, the European Banking crisis (2011), and the non-crises period that will help us to produce robust results.

3.2 Identification of sharia Complaint firms:

As there are differences in sharia compliance criteria in different countries, our Islamic identification criteria depended on country in discussion as elaborated below;

3.2.1 Pakistan:

In Pakistan, only those firms are considered sharia complaints that are present on the PSE KMI All-Share index from 2011-2015. As this is the official index of sharia-compliant stocks in Pakistan, firms that are sharia compliant throughout the estimation period have been assigned the value of “1” and conventional firms have been assigned “0”. Thus we have a time-invariant dummy of the Islamic label of the firms that decided to stay Islamic throughout our estimation period. This is per the methodology adopted by Hayat & Hassan (2017).

3.2.2 Malaysia:

Firms that have been declared sharia-compliant by the Sharia Advisory Council of the Security Commission (SC) Malaysia have been considered as sharia complaints firms of Bursa Malaysia for this study. As pointed in the outset, only those firms are assigned a value of "1" as sharia complaint that remained on the list published by the Sharia Advisory Council of SC Malaysia throughout our estimation period following methodology adopted by Hayat & Hassan (2017).

3.2.3 Indonesia:

Firms that have been declared sharia complaint by OJX Indonesia, the financial service authority entrusted to regulate and monitor the financial service industry in Indonesia, have been considered as sharia complaint. For robust results, the value of "1" has been assigned to only those firms that remained on the sharia complaint list throughout the estimation period following the methodology adopted by Hayat & Hassan (2017). Stocks certified as Islamic constitutes the Indonesia sharia stock index (ISSI) established in 2011.

3.2.4 USA:

In the USA, S&P 500 sharia is maintained that includes the securities of the sharia compliant. However, a list of these firms is not provided publicly by S&P. To identify firms that are sharia compliant, we obtained a list of sharia complaint firms from Mr. Wajid Raza who is the co-author of Broudt et al. (2017), Arsalan et al. (2018) and Raza & Ashraf (2018). The author has been generous enough to communicate his sharia-compliant firms of the USA that were used in researches cited. Further, we crossed checked the list with original S&P sharia firms provided to us by SNL financials and found the list to be an accurate representation of S&P

sharia. The firms that decided to be sharia complaint about the estimations period are assigned "1" and zero otherwise following methodology adopted by Hayat & Hassan (2017).

3.3 Corporate governance measurement

For the measurement of corporate governance we have used corporate governance index (CG Index). CG Index is an additive index of corporate governance attributes outlined in following table. 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. This is used in order to create symmetry in index interpretation. If reverse coding is not done for variables that may adversely affect corporate governance, we may not be in the position to interpret that higher index score for firms will show that governance quality is good. Thus reverse coding is used to create symmetry in the interpretation of index scores.

Firm level corporate governance attributes are adopted from (Shah, 2009). We adopted these 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 is ensured by adopting these measures of corporate governance.

Ownership Structure	OS	Shares held by 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	Ln. 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 are the same person.

In Indonesia, firms are governed by two-tiered boards. Since "Board of Commissioners" are the directors that do not take part in the management of the company, employing methodology used by studies on two-tiered boards, we have included all members of the supervisory board as independent directors. Thus in the case of Indonesia, board independence is a ratio of all members of the supervisory board to total board members. Whereas

total board members include members of the supervisory board added with total members of the executive board.

3.4 Islamic Label and Corporate Governance Quality

In order to test our first hypothesis we have employed the methodology followed by Hayat & Hasan (2017)

$$CG_{i,t} = \alpha_i + \beta_1 Islamic_{i,t} + \beta_2 Controls_{i,t-1} + \beta_3\, Industry\ Effect + \beta_4\, years\ effect + \varepsilon_t \quad (1)$$

Where

CG= Corporate Governance Index

Islamic= a dichotomous variable that takes the value of 1 if firm is islamic and 0 otherwise

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

All control variables are lagged for two reasons. Firstly, our CG variable is an index of governance quality that has used Ownership Concentration, Institutional Ownership, Board Independence, Audit Committee Independence, CEO Duality. Also, low leverage is a proxy of corporate governance quality. Thus their lags are taken to control for

possible reverse causality between these and corporate governance quality. Secondly, lags are taken because corporate decisions of the past affect today's results.

Industry Effect= takes value of 1 if firm belong to particular industry and zero other wise

Year Effect: Takes value of 1 for a particular year and zero otherwise.

As is evident from the above equation, a positive significant coefficient of β_1 will indicate that Islamic label can proxy for good corporate governance.

For robustness, we have included Leverage (LEV) calculated as total debt to Market value of Firm and cash holdings (cash) that is ratio of cash to total assets of firms as additional control variables to estimate whether Islamic Label proxy for good governance or not.

3.5 Level of cash holdings and Islamic Firms:

In order to test our hypothesis H2(a) and H2(b) , we will employ the methodology of Harford et al. (2008) to assess the impact of Corporate Governance and Islamic label on firms' cash holdings by estimating the following equation:

$$
\begin{aligned}
Cash\ Holdings_{i,t} &= \alpha_o + \beta_1\, Islamic_{i,t} + \beta_2 CG_{i,t-1} + \beta_3 Instiurional\ Ownership_{i,t-1} \\
&+ \beta_4 Ownership\ Concentration_{i,t-1} + \beta_5\, Size_{i,t} + \beta_6\, Leverage_{i,t} \\
&+ \beta_7 Market\ to\ Book\ Ratio_{i,t} + \beta_8 CF_{i,t} + \beta_9 WC_{i,t} + \beta_9\, Capex_{i,t} \\
&+ \beta_{10} Dividend\ Indiactor_{i,t} + \beta_{11} CF\ Volatility_{i,t} + \varepsilon_t \qquad (2)
\end{aligned}
$$

Where;

Cash Holdings= ln (Cash and Cash equilant/Net Assets)

Where Net Assets= Total Assets – Cash and cash equilants

Islamic= a dichotomous variable that takes the value of 1 if firm is Islamic and 0 otherwise

CG= Corporate Governance Index

Size= Ln(sales)

Leverage= Total debt/Total Asset

Market to book ratio= ratio of the market value to book value of assets

CF= Ratio of operational cash flow to total asset

WC= ratio of net working capital to net assets

Capex= ratio of capital expenditures to net assets

Dividend Indicator= Dummy variable that take value of 1 if firm pays Dividend & 0 Other wise

CF volatility= cash flow volatility measured by standard deviation of cash flows for the past five years

A positive significant coefficient of β1 indicates that the Islamic label has positive impact on cash holdings. This will help us to indicate that Islamic label firms hold more cash as good governance firms. The governance effect is captured by CG; this will help us to understand that it's the Islamic trait of these firms which contributes to firm's cash holdings.

3.6 Value of Dividend under Islamic Label and Corporate Governance:

To test our hypothesis H4(a) and H4(b), we have employed the methodology of Pinkowitz et al. (2006). we have estimated the following Equation twice. Following their methodology, we have used Corporate Governance as sorting Criteria & estimate the following equation for Good Governance (High Index Scores) and Bad Governance (Low Index scores) firms. The median score of CG Index was estimated and firms with CG index scores of median and higher have qualified as good governance firms and were assigned a value of 1 and vice versa. Then we allowed this dummy variable to interact with all independent variables. Also, we have employed the same methodology for Islamic firms, where the firms will have a value of 1 if they are sharia complaint and zero otherwise. This Islamic variable will then interact with the variables of the equation. The coefficients of the independent variables will be then tested for the difference. We posit that the difference in the coefficient of β11 in the case of well-governed firms and Islamic firms to be statistically insignificant. Following is the Fama & French (1998) valuation regression employed by Pinkowitz et al. (2006):

$$V_{i,t} = \alpha_0 + \beta_1 E_{i,t} + \beta_2 dE_{i,t} + \beta_3 dE_{i,t+1} + \beta_4 dA_{i,t} + \beta_5 dA_{i,t+1} + \beta_6 RD_{i,t} + \beta_7 dRD_{i,t+1} + \beta_8 I_{i,t} + \beta_9 dI_{i,t} + \beta_{10} dI_{i,t+1} + \beta_{11} D_{i,t} + \beta_{12} dD_{i,t} + \beta_{13} dD_{i,t+1} + \beta_{14} dV_{i,t+1} + \varepsilon_{i,t} \quad (3a)$$

Where

Xt is the level of variable X in year t divided by the level of assets in year t; dXt is the change in the level of X from year t - 1 to year t, Xt - Xt-1, divided by assets in year t; dXt+l is the change in the level of X from year t to year t+1, Xt+l - Xt, divided by assets in year t; V is the market value of the firm calculated at fiscal yearend as the sum of the market value of equity,

the book value of short-term debt, and the book value of long-term debt; E is earnings before extraordinary items plus interest, deferred tax credits, and investment tax credits; A is total assets; RD is research and development (R&D) expense; I is interest expense; and D is dividends defined as common dividends paid. When R&D is missing, we set it equal to zero.

Change in earnings (t-1) is the previous period's earnings of the firm. If in past firm earnings is positive, it will increase firm value today. Change in earnings (t+1) is expected future earnings of the firm. If the prospects of the firm's earnings are bright, it will have a positive impact on the firm's value today. Change in net assets of the firm or investments made by the firm, while the change in net assets (t+1) can be regarded as future investments by the firms. Both of these will have a positive impact on the firm's value. Research & development expense is the current R&D expense of the Firm, while the change in R&D expense captures an increase or decrease in R&D expense from the previous year while the change in R&D(t+1) shows expected to change in R&D expense for future periods. Generally, spending on R&D will cause the firm value to rise as it will give the firm an edge over its competitors and will give it a larger market share. Similarly, current interest income, change in interest income and expected change in interest income is indicative of interest-earning capabilities of the firm's investments in interest-bearing investments. These increase the firm's earnings and have a positive impact on the firm's value. Current Dividend, change in dividend, and expected change in dividends are variables that interest us the most in this model. Dividends generally have a positive impact on a firm's value but can also harm value if the stakeholders are more interested in capital gains rather than dividends. Further, we expect that change in dividends will be valued on the lower side by shareholders of well-governed firms as they will like the management to hold more cash and make responsible investments. Liquidity stands for liquid assets i-e cash and cash equivalents.

Here the total asset in Fama and French (1998) model has been decomposed into liquid and nonliquid assets (net assets). Change in liquid assets shows how much cash is being held by the firms as compared to the previous year while the change in liquid assets (t+1) indicates how much it expects to hold in the future. Our premise is that good governance firms tend to hold more cash and will have a positive impact on the value of the firm. Shareholders will put more value on additional dollars held by a good governed firm while the same will be valued less by them in case of a badly governed firm. The value of the firm (t+1) indicates the expected change in the value of the firm. If the market has positive sentiments for the future value of the firm, it will have a positive impact on today's value of the firm.

Pinkowitz et al. (2006) posited that β11 will be higher in countries with weak Governance and Lower with countries in high governance. Thus we estimate a lower co-efficient of β12 in the case of Islamic label and Good Governance score.

3.7 Value of Cash under Islamic Label and Corporate Governance:

To test our hypothesis H3(a) and H3(b), we have employed the methodology of Pinkowitz et al. (2006). We have estimated the following Equation twice. Following their methodology, we have Used Corporate Governance as sorting Criteria & estimated the following equation for Good Governance (High Index Scores) and Bad Governance (Low Index scores) firms. The median score of CG Index is estimated and firms with CG index scores of median and higher qualified as good governance firms and were assigned a value of 1 and vice versa. Then we allowed this dummy variable to interact with all independent variables. Also, we employed the same methodology for Islamic firms. Where the firms had a value of 1 if they were sharia complaint and zero otherwise. This Islamic variable then interacted with independent variables

of the equation. The coefficients of the independent variables were then tested for the difference. We posit that the difference in the coefficient of β15 in the case of well-governed firms and Islamic firms to be statistically insignificant. Following is the Fama & French (1998) valuation regression employed by Pinkowitz et al. (2006):

$$V_{i,t} = \alpha_0 + \beta_1 E_{i,t} + \beta_2 dE_{i,t} + \beta_3 dE_{i,t+1} + \beta_4 dNA_{i,t} + \beta_5 dNA_{i,t+1} + \beta_6 RD_{i,t} + \beta_7 dRD_{i,t+1} + \beta_8 I_{i,t} + \beta_9 dI_{i,t} + \beta_{10} dI_{i,t+1} + \beta_{11} D_{i,t} + \beta_{12} dD_{i,t} + \beta_{13} dD_{i,t+1} + \beta_{14} dV_{i,t+1} + \beta_{15} dL_{i,t} + \beta_{16} dL_{i,t+1} + \varepsilon_{i,t} \quad (3b)$$

Where

Xt is the level of variable X in year t divided by the level of assets in year t; dXt is the change in the level of X from year t - 1 to year t, Xt - Xt-1, divided by assets in year t; dXt+l is the change in the level of X from year t to year t+1, Xt+l - Xt, divided by assets in year t; V is the market value of the firm calculated at fiscal yearend as the sum of the market value of equity, the book value of short-term debt, and the book value of long-term debt; E is earnings before extraordinary items plus interest, deferred tax credits, and investment tax credits; A is total assets; RD is research and development (R&D) expense; I is interest expense, and D is dividends defined as common dividends paid. When R&D is missing, we set it equal to zero. Where NA is net assets defined as total assets minus liquid assets and L corresponds to liquid asset holdings.

Pinkowitz et al. (2006) posited that β15 will be lower in countries with weak Governance and higher with countries in high governance. Thus we expect a higher coefficient of β16 in the case of Islamic label and Good Governance score.

3.8 Free Cash Flow and Over Investment: Moderation role of Islamic Label and Corporate Governance:

To test our hypothesis H5(a) and H5(b), We have adopted the methodology employed by Richardson (2006). This analysis was conducted in two stages. In the first stage, we estimated an augmented version of the investment equation inspired by Fazzari et al. (1998). The residuals obtained from this equation were qualified as an unexplained investment beyond optimal investment. The positive deviations qualified as over-investment while the negative deviations w qualified as underinvestment. Since Richardson (2006) thought that firms tend to over-invest when they have free cash flow, we took positive deviations from the investment equation. In stage two, we qualified these over investments as the dependent variable and regressed it on Free cash flow, Corporate Governance, and the interaction term of Corporate governance and free cash flow. We will repeated stage two and replaced corporate governance and interaction term with Islamic label. We expected negative significant coefficients for both governance and Islamic label in its mean and interaction form. However, we expected a positive coefficient for free cash flow because it tempts the mangers to make overinvestment.

Stage 1:

$$Investment_{i,t} = \alpha_0 + \beta_1 Growth_{i,t-1} + \beta_2 Leverage_{i,t-1} + \beta_3 Cash_{i,t-1} + \beta_4 size_{i,t-1} + \beta_5 Return_{i,t-1} + \beta_6 Age_{i,t-1} + \beta_7 Investment_{i,t-1} + +Industry\ Effect + Country\ Effect + Years\ Effect + \varepsilon_{i,t} \qquad (4a)$$

Where Investment is 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. Growth is the annual value to price growth rate for firm i at the end of year t-1 calculated

using methodology employed by Richardson (2006). Leverage is financial leverage, 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 is the ratio of cash to the total asset of firm i at the end of year t-1. Size is the log of total assets of firm i at the end of year t-1. Return is the stock returns of firm i at the end of year t-1. Age is the difference between the first years when firm i appears in the stock exchange at the end of year t-1. Investmenti.t-1 is the lag of investment. Years Effect takes the value of 1 if the firm is present a particular year and zero otherwise, Country Effect takes the value of 1 if the firm belongs to a particular country and zero otherwise.

Stage 2:

Stage 2 (a)

$$Overinvestment_{i,t} = \alpha_0 + \beta_1 FCF_{i,t} + \beta_2 CG_{i,t} + \beta_3 FCF * CG_{i,t} + Industry\ Effect + Country\ Effect + Years\ Effect + \varepsilon_{i,t} \quad (4b)$$

Where

FCF is free cash flow 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 in stage1 (see Richardson 2006), RD refers to research and development expenditure. CG is corporate governance index, (FCF * CG) is interaction term between FCF and CG. Years Effect takes the value of 1 if firm is present a particular year and

zero otherwise, Country Effect takes value of 1 if firm belongs to a particular country and zero otherwise.

Stage 2b:

$$Overinvestment_{i,t} = \alpha_0 + \beta_1 FCF_{i,t} + \beta_2 Islamic_{i,t} + \beta_3 FCF * Islamic_{i,t} + Industry\ Effect + Country\ Effect + Years\ Effect + \varepsilon_{i,t} \quad (4c)$$

Where

FCF is free cash flow computed as (FCF=CFo- I_maintanance-I_new^*+RD). where FCF is free cash flow, CFO is operating cash flow, Imaintenance is a measure of investment expenditure necessary to maintain to assets in place i-e (Depreciation + Amortization), Inew is a measure of the expect level of new investment expenditure that is estimated by fitted value of the estimates of investment equation in stage1 (see Richardson 2006), RD refers to research and development expenditure. Islamic is dichotomous variable that takes the value of 1 if firm has Islamic certification and zero otherwise, (FCF * Islamic) is interaction term between FCF and Islamic. Years Effect takes the value of 1 if firm is present a particular year and zero otherwise, Country Effect takes value of 1 if firm belongs to a particular country and zero otherwise. If same results are replicated as in governance equation, we may posit that Islamic label negatively moderates overinvestment of free cash flow.

3.9 Investment Efficiency:

To empirically test hypothesis H6(a)-H6(F) that purports a fact that Islamic label and Corporate Governance has same capabilities to check over and under investments, we have estimated augmented version of Fazzari et al. (1988) investment equation adopted by He et al.

(2018) in the first stage. The residuals obtained from the investment equation shows unexplained investments. In the second stage, firstly we took residuals of investment equation in absolute terms as the dependent variable and regressed Corporate Governance and Islamic label as independent variables while controlling for certain factors. The same process was repeated for positive residuals (over Investment) and negative Residuals (Under Investment). With a negative significant coefficient of Islamic label and Corporate Governance, we proved our hypothesis that Islamic label and corporate governance can mitigate unexplained, over, and under investments.

$$Investment_{i,t} = \alpha_0 + \beta_1 TQ_{i,t-1} + \beta_2 Leverage_{i,t-1} + \beta_3 Cash_{i,t-1} + \beta_4 size_{i,t-1} + \beta_5 Return_{i,t-1} + \beta_6 Age_{i,t-1} + \beta_7 Investment_{i,t-1} + Industry\ Effect + Years\ Effect + Country\ Effect + \varepsilon_{i,t} \quad (5a)$$

Where Investment is the sum of capital expenditures, R&D expenditures, and acquisitions minus sales of property, plant, and equipment, scaled by total asset for firm i at the end of year t. TQ is Tobin's Q that represents growth opportunities of the firm measured as sum of market value of equity and book value of debt to book value of total assets measured at start of the year. Leverage is financial leverage in previous year measured as total debt to total assets, Cash is the ratio of cash and cash equivalents to total asset of firm measured at start of the year. Size is the log of total assets of firm i at the end of year t-1. Return is the stock returns of firm i at the end of year t-1. Age is the difference between the first year when firm i appears in stock exchange at the end of year t-1. Investmenti.t-1 is the lag of investment. Industry effect takes the value of 1 if firm belong to a particular industry and zero otherwise, Years Effect takes the value of 1 if firm is present a particular year and zero otherwise, Country Effect takes value of 1 if firm belongs to a particular country and zero otherwise.

Stage 2:

Stage 2 (1a)

$$Unexplained\ Investment_{i,t} = \alpha_0 + \beta_1 CG_{i,t} + \beta_2 lev_{i,t} + \beta_3 CF_{i,t} + \beta_4 Size_{i,t} + \beta_5 ROA_{i,t} + \beta_6 TQ_{i,t} + Industry\ Effect + Years\ Effect + Country\ Effect + \varepsilon_{i,t} \quad (5b)$$

Where

CG is corporate governance index, LEV is leverage computed as total debt scalled down by total assets, CF is operational cash flow scaled down by total assets, Size is log of sales., ROA is return on assets that indicates operating results measured as net profit to total assets, TQ is Tobin's Q measured as sum of market value of equity and book value of debt to total assets. Industry effect takes the value of 1 if firm belong to a particular industry and zero otherwise, Years Effect takes the value of 1 if firm is present a particular year and zero otherwise, Country Effect takes value of 1 if firm belongs to a particular country and zero otherwise.

Stage 2 (1b)

$$Unexplained\ Investment_{i,t} = \alpha_0 + \beta_1 Islamic_{i,t} + \beta_2 lev_{i,t} + \beta_3 CF_{i,t} + \beta_4 Size_{i,t} + \beta_5 ROA_{i,t} + \beta_6 TQ_{i,t} + Industry\ Effect + Years\ Effect + Country\ Effect + \varepsilon_{i,t} \quad (5c)$$

Where

Islamic is dichotomous variable that takes the value of 1 if firm has Islamic certification and zero otherwise , LEV is leverage computed as total debt scalled down by total assets, CF is

operational cash flow scaled down by total assets, Size is log of sales., ROA is return on assets that indicates operating results measured as net profit to total assets, TQ is Tobin's Q measured as sum of market value of equity and book value of debt to total assets. Industry effect takes the value of 1 if firm belong to a particular industry and zero otherwise, Years Effect takes the value of 1 if firm is present a particular year and zero otherwise, Country Effect takes value of 1 if firm belongs to a particular country and zero otherwise.

Stage 2 (2a)

$$over\ Investment_{i,t} = \alpha_0 + \beta_1 CG_{i,t} + \beta_2 lev_{i,t} + \beta_3 CF_{i,t} + \beta_4 Size_{i,t} + \beta_5 ROA_{i,t} + \beta_6 TQ_{i,t} + Industry\ Effect + Years\ Effect + Country\ Effect + \varepsilon_{i,t} \quad (5d)$$

Where

Overinvest are positive residuals from investment equation, CG is corporate governance index, LEV is leverage computed as total debt scaled down by total assets, CF is operational cash flow scaled down by total assets, Size is a log of sales., ROA is the return on assets that indicates operating results measured as net profit to total assets, TQ is Tobin's Q measured as the sum of the market value of equity and book value of debt to total assets. Industry effect takes the value of 1 if a firm belongs to a particular industry and zero otherwise, Years Effect takes the value of 1 if the firm is present a particular year and zero otherwise, Country Effect takes the value of 1 if firm belongs to a particular country and zero otherwise.

Stage 2 (2b)

$$over\ Investment_{i,t} = \alpha_0 + \beta_1 Islamic_{i,t} + \beta_2 lev_{i,t} + \beta_3 CF_{i,t} + \beta_4 Size_{i,t} + \beta_5 ROA_{i,t} + \beta_6 TQ_{i,t} + Industry\ Effect + Years\ Effect + Country\ Effect + \varepsilon_{i,t} \quad (5e)$$

Where;

Overinvestment are positive residuals from investment equation, the Islamic is dichotomous variable that takes the value of 1 if firm has Islamic certification and zero otherwise , LEV is leverage computed as a total debt scalled down by total assets, CF is operational cash flow scaled down by total assets, Size is log of sales., ROA is return on assets that indicates operating results measured as net profit to total assets, TQ is Tobin's Q measured as sum of market value of equity and book value of debt to total assets. Industry effect takes the value of 1 if firm belong to a particular industry and zero otherwise, Years Effect takes the value of 1 if firm is present a particular year and zero otherwise, Country Effect takes value of 1 if firm belongs to a particular country and zero otherwise.

Stage 2 (3a)

$$Under\ Investment_{i,t} = \alpha_0 + \beta_1 CG_{i,t} + \beta_2 lev_{i,t} + \beta_3 CF_{i,t} + \beta_4 Size_{i,t} + \beta_5 ROA_{i,t} + \beta_6 TQ_{i,t} + Industry\ Effect + Years\ Effect + Country\ Effect + \varepsilon_{i,t} \quad (5f)$$

Where; Underinvestment are negative residuals from investment equation, CG is corporate governance index, LEV is leverage computed as total debt scalled down by total assets, CF is operational cash flow scaled down by total assets, Size is a log of sales., ROA is the return on assets that indicates operating results measured as net profit to total assets, TQ is Tobin's Q

measured as the sum of the market value of equity and book value of debt to total assets. Industry effect takes the value of 1 if a firm belongs to a particular industry and zero otherwise, Years Effect takes the value of 1 if the firm is present a particular year and zero otherwise, Country Effect takes the value of 1 if firm belongs to a particular country and zero otherwise.

Stage 2 (3b)

$$Under\ Investment_{i,t} = \alpha_0 + \beta_1 Islamic_{i,t} + \beta_2 lev_{i,t} + \beta_3 CF_{i,t} + \beta_4 Size_{i,t} + \beta_5 ROA_{i,t} + \beta_6 TQ_{i,t} + Industry\ Effect + Years\ Effect + Country\ Effect + \varepsilon_{i,t} \quad (5g)$$

Where;

Underinvestment are negative residuals from investment equation, the Islamic is dichotomous variable that takes the value of 1 if the firm has Islamic certification and zero otherwise , LEV is leverage computed as total debt scalled down by total assets, CF is operational cash flow scaled down by total assets, Size is log of sales., ROA is the return on assets that indicates operating results measured as net profit to total assets, TQ is Tobin's Q measured as the sum of the market the value of equity and book value of debt to total assets. 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 if the firm is present a particular year and zero otherwise, Country Effect takes the value of 1 if the firm belongs to a particular country and zero otherwise.

3.10 Firm Value under Islamic Label and Corporate Governance:

To test out hypothesis H7(a) and H7(b), We followed Ammann et al. (2011) and used their model to determine the impact of Corporate Governance and Islamic label on value of firm.

$$Tobin\ Q_{i,t} = \alpha_i + \beta_1 CG_{i,t} + \beta_2 LnTA_{i,t} + \beta_3 PgSales_{i,t} + \beta_4 RD/Sales_{i,t} + \beta_5 Cash/Sales_{i,t} + \beta_6 Capex/Asset_{i,t} + \beta_7 PPE/Sales_{i,t} + \beta_8 EBIT/Sales_{i,t} + \beta_9 Leverage_{i,t} + Industry\ Effect + Country\ Effects + YearEffect + \varepsilon_t \quad (6a)$$

Where

Tobin's Q is the sum of total assets less the book value of equity plus the market value of equity, divided by total assets, CG is corporate Governance Index, LNTA denotes the logarithm of total assets, PGSALES denotes the two-year growth of sales, RD/SALES denotes the ratio of expenditures for research and development to sales, CASH/ASSETS denotes the ratio of cash to total assets, CAPEX/ASSETS denotes the ratio of capital expenditures to assets, PPE/SALES denotes the ratio of property-plants equipment to sales, EBIT/SALES denotes the ratio of earnings before interest and taxes to sales, LEVERAGE denotes the ratio of total debt to total assets. Industry effect takes the value of 1 if a firm belongs to a particular industry and zero otherwise, Years Effect takes the value of 1 if the firm is present a particular year and zero otherwise, Country Effect takes the value of 1 if firm belongs to a particular country and zero otherwise.

For Islamic Label, we specify Following Equation;

$$Tobin\ Q_{i,t} = \alpha_i + \beta_1 Islamic_{i,t} + \beta_2 LnTA_{i,t} + \beta_3 PgSales_{i,t} + \beta_4 RD/Sales_{i,t} + \beta_5 Cash/Sales_{i,t} + \beta_6 Capex/Asset_{i,t} + \beta_7 PPE/Sales_{i,t} + \beta_8 EBIT/Sales_{i,t} + \beta_9 Leverage_{i,t} + Industry\ Effect + Country\ Effects + YearEffect + \varepsilon_t \quad (6b)$$

Where

Tobin's Q is the sum of total assets less the book value of equity plus the market value of equity, divided by total assets, Islamic is a dichotomous variable that takes the value of 1 if the firm adheres to Islamic Corporate Finance Principals and zer other wise , LNTA denotes the logarithm of total assets, PGSALES denotes the two-year growth of sales, RD/SALES denotes the ratio of expenditures for research and development to sales, CASH/ASSETS denotes the ratio of cash to total assets, CAPEX/ASSETS denotes the ratio of capital expenditures to assets, PPE/SALES denotes the ratio of property-plants equipment to sales, EBIT/SALES denotes the ratio of earnings before interest and taxes to sales, LEVERAGE denotes the ratio of total debt to total assets. 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 if the firm is present a particular year and zero otherwise, Country Effect takes the value of 1 if firm belongs to a particular country and zero otherwise.

3.11 Panel Data Regression Model

The panel data estimation technique is a powerful tool that incorporates both time series and cross-sectional data. The common effect model incorporates that all the cross-sections are homogeneous and do not cure for heterogeneity of cross-section units. This disadvantage is cured by a Fixed effect model that cures for unobservable heterogeneity. This is a powerful estimation technique and is commonly used for large cross-sectional data packed in limited periods. However, it does not cure the biases caused by the error term. This particular problem is cured by the Random effect model that cures for the biases caused by the error term. Both Fixed effect and common effect models are usually estimated side by side. However, when large data is used, its Fixed effect model that takes the preference.

Ideally, this study would have used a fixed-effect model but since our “Islamic Label” variable is a time Invariant dummy, we cannot employ the fixed-effect model. Further, since it encompasses large data, the Random effect model generally gives biased results in a large data set.

Thus to solve this problem, we employed pooled panel data regression with years, country, and industry effects. This methodology is preferred because it takes in to account the heterogeneity of cross-sectional units while at the same time it is not impacted by the time-invariant nature of the dummy variable. The same panel data regression model was used by Hayat and Hassan (2017) when they were faced with a time-invariant dummy by the name of Islamic Label.

Thus we have employed pooled panel data regression estimation for all the econometric models of the study. Further, we will conduct our estimations with robust standard errors for greater validity and generalizability.

3.12 Winsorizing:

We have winsorized all variables at 1% and 99% to remove outliers and get robust results

3.13 Correlation Matrix:

Correlation matrix is produced with highlighted values representing significant correlations at 95 percent confidence interval (p-values < .05).

Chapter 4

Results & Discussion

4.1: Islamic Label and Firm Governance

Table 1 represents the summary statistics of different variables used in the study for the sample of all countries. Panel A of Table 1 outlines the summary stats of variables for Islamic firms while Panel B of the table outlines the summary stats of variables for Conventional firms. The last column outlines p-values of difference in mean of the variables between conventional and Islamic firms, under the assumption of unequal variance. Overall our study has 1,050 firm-year observations for each variable of Islamic firms and 1,900 observations for each variable of conventional firms.

The summary stat outlines very interesting results. The governance of Islamic firms has a greater mean as compared to conventional firms. This mean difference is significant at 99% Confidence Interval. This indicates that sharia-compliant firms have better governance than their conventional counterparts. Further, Islamic Firms have a greater significant mean difference in terms of age as compared to their conventional counterparts. This indicates that the asset base of Islamic firms is larger as compared to conventional firms.

The mean of net profit margin is higher for Islamic firms as compared to conventional firms. Its significant difference between the means of profitability indicates that the Islamic firms were more profitable than conventional firms during our sample period. This is consistent with the studies (see for example Bhatt and Sultan, 2012; Jouaber-Snoussi et al., 2012) that indicate

that the Islamic firms showed more profitability than their conventional counterparts after European Banking crisis of 2011.

Table 1 : Summary Stats of Islamic & Conventional Firms (All Countries)

	(Panel A: Islamic Firms)				(Panel B: Conventional Firms)				Mean Difference (A-B)
	mean	sd	Min	max	Mean	sd	min	max	
CG Index	.4874	.1935	0	1	.4530	.1901	0	1	.0344***
Islamic	1	0	1	1	0	0	0	0	
Sz	16.6019	2.3848	10.9302	26.0300	16.1428	2.3775	5.3375	25.3528	.4591***
Age	3.5410	.70805	.6931	5.2203	3.5453	.6326	.6931	5.0937	(.0043)
FCF	.0626	.1252	-.5235	.7709	-.0198	1.0513	-41.0184	2.9746	.0825
NPM	.1089	.1061	-.62144	.6856	-.1499	5.8844	-217.1058	25.4782	.2589**
DPO	.3618	1.0567	-4.66667	27.1578	.4174	3.6377	-17.3084	130.1758	(.0555)
TQ	2.411	2.3296	.2802	57.9492	1.7117	1.7594	.2393	25.4245	.6990***
LEV	.0843	.0879	0	.5025	.1051	.1325	0	.71437	(.0208)***
CASH	.1471	.1435	.0001	1.0188	.08032	.1194	.00011	1.3581	.0667***
OC	.2988	.2796	.035	.97769	.3913	.30542	.0015	.9975	(.0925)***
IO	.1223	.2017	0	.8099	.0992	.17411	0	.96238	.0231***
BI	.76424	.1835	0	1	.7167	.20791	0	1	.0474***
ACI	.90952	.1927	.1666	1	.88586	.2011	0	1	.0236***
N	1050				1900				

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.001$

Further, a higher and significantly different mean value of Tobin's Q that indicates growth opportunities, highlights the fact that Islamic firms have more growth opportunities than their Conventional counterparts. However, it can be viewed that the Islamic Firms hold more cash than conventional firms as indicated by the significant difference in mean. This is a surprise as the Islamic firms are required to hold not more than 33% of their market value in cash. But since the Islamic firms have to invest to exploit their growth opportunities and are constrained to have less debt, they rely on their cash holdings to invest in positive NPV projects. This behavior

is in alignment to findings of Fazzari et al. (1988). According to them, the firms facing constraints rely on internal cash holdings for investment. The significantly lower mean of Leverage in the Islamic firms indicates that Islamic firms have lower debts than their conventional counterparts.

As far variables of governance are concerned, Islamic firms tend to have a higher Institutional Ownership, higher board independence and Audit committee Independence than their conventional counter parts. These positive attributes of Governance may explain why Islamic label firms have higher governance score. However, Ownership concentration is lower in Islamic Firms than their conventional counter parts.

4.1.1 Correlation Matrix:

Table 2 highlights the correlation matrix of the variables used in the study. The correlation matrix indicates that Islamic firms have a positive significant correlation with governance. Further, leverage and cash holdings have a positive and significant correlation with governance. The significance of leverage highlights the fact that debt act as a disciplining mechanism for managers that prompts them to work in the interest of the firms (Jensen & Mecklang, 1976). Further, the study of Harford et al. (2008) indicates that higher cash holdings are associated with good governance as shareholders feel that management will use cash for the benefits of firms rather than personal benefit. However, our interpretations should be approached with caution.

Further, the corporate governance variables of ownership concentration, Institutional Ownership, Board Independence, and Audit committee independence have positive and significant correlations with governance index. This has not come as a surprise to us as most

literature on corporate governance indicates a positive association of these variables on a firm's governance (see for example Aggarwal et al.,2011; Hayat and Hassan, 2017; Jiraporn and Liu, 2008).

Table 2 Correlation Matrix

	CG Index	Islamic	SZ	AGE	FCF	NPM	DPO	TQ	LEV	CASH	OC	IO	BI	ACI
CG Index	1													
Islamic	0.09***	1												
SZ	-0.05**	0.09***	1											
AGE	-0.07***	-0.00	0.10***	1										
FCF	0.02	0.05*	0.05**	0.02	1									
NPM	0.03	0.03	0.12***	0.03	0.02	1								
DPO	-0.01	-0.01	-0.00	0.00	0.01	0.00	1							
TQ	0.05*	0.17***	0.04*	-0.02	-0.00	0.01	0.02	1						
LEV	0.07***	-0.08***	0.26***	0.05**	0.01	0.02	0.02	-0.12***	1					
CASH	0.08***	0.24***	0.12***	-0.10***	0.03	0.03	0.00	0.27***	-0.02	1				
OC	0.07***	-0.15***	-0.02	-0.09***	-0.01	-0.02	-0.04*	-0.12***	-0.49***	-0.21***	1			
IO	0.12***	0.06**	0.50***	-0.06***	0.02	0.02	0.02	0.05**	0.03	0.05**	0.31***	1		
BI	0.33***	0.11***	-0.10***	0.06**	0.03	0.02	0.01	0.08***	0.36***	0.12***	-0.59***	-0.27***	1	
ACI	0.23***	0.06**	-0.41***	0.02	0.03	0.03	0.00	0.07***	0.12***	0.06**	-0.42***	-0.45***	0.56***	1

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.001$

As its evident form correlation matrix, most of the independent variables have significant correlation with each other; we are prompted to use lags of independent variables to avoid multi collinarity.

4.1.2 Regression Results:

Table 3 summarizes regression results for the impact of Islamic label on firm governance. The table has results for overall sample that includes all countries and for robustness purposes; we

have also included results of individual countries to exhibit the impact of Islamic label on firm governance on each of the country.

It is evident form the results of all countries that Islamic label has positive significant impact on firm governance. it has positive significant coefficient of 0.0264 (p-value<0.001). This momentous significant coefficient indicates that Islamic label can proxy for good governance.

Another interesting observation from the results indicates that we have achieved a higher level of R-square at the individual country level rather than the overall sample. According to Doidge et al. (2007), variation in governance to a larger extent is explained by country-specific factors as compared to firm-level factors. Our higher R-squares indicate that firm-level factors, after controlling for time and industry effect, are explaining governance more than country-level factors. However, our results may give rise to a doubt that positive significant coefficients of Islamic label for a firm's governance may be in fact due to leverage or cash holdings. Both of these two criteria are central points in declaring whether a firm is a Sharia-compliant or not. Thus we may be estimating the impact of low leverage and cash on firm governance proxied by Islamic label. Thus for added robustness and to see whether Islamic Label still stands significant throughout the countries, we will re-estimate the equation with added variables of Cash holding and Leverage as additional control variables.

Table 3: Regression Results Of Islamic Label Impact On Firm Governance

	(All Countries) CG Index	(Pakistan) CG Index	(Malaysia) CG Index	(Indonesia) CG Index	(USA) CG Index
Islamic	0.0264***	0.0302**	0.200**	0.0415**	0.0149*
	(0.00633)	(0.0104)	(0.0574)	(0.0207)	(0.00837)
Sz_1	-0.00482**	0.00392*	-0.00428	-0.00841	-0.0345***
	(0.00191)	(0.00228)	(0.0257)	(0.0105)	(0.00377)
Age_1	-0.00861*	-0.00224	-0.0182	0.0629**	-0.0152**
	(0.00467)	(0.00884)	(0.0180)	(0.0237)	(0.00551)
Fcf_1	-0.00325**	-0.00512***	0.266*	-0.0257	0.0383
	(0.00102)	(0.000695)	(0.142)	(0.0931)	(0.0453)
Npm_1	0.00143***	0.000770**	0.107	-0.000668	-0.0541
	(0.000299)	(0.000318)	(0.103)	(0.0750)	(0.0401)
Dpo_1	-0.0000447	0.000854	0.0401	-0.000185	-0.000828
	(0.00134)	(0.00395)	(0.0318)	(0.0291)	(0.000998)
Tq_1	-0.00440**	-0.00555**	-0.0370***	-0.00695*	-0.0105***
	(0.00175)	(0.00231)	(0.00810)	(0.00402)	(0.00272)
Oc_1	0.339***	0.389***	0.774***	-0.00380	0.260***
	(0.0217)	(0.0217)	(0.117)	(0.0754)	(0.0707)
Io_1	0.240***	0.337***	0.274***	0.324***	0.203**
	(0.0292)	(0.0440)	(0.0646)	(0.0880)	(0.0621)
Bi_1	0.209***	0.135***	0.261*	0.581***	0.592***
	(0.0227)	(0.0236)	(0.140)	(0.0662)	(0.0696)
Aci_1	0.0995***	0.104***	0.419	0.147**	-0.241
	(0.0240)	(0.0256)	(0.301)	(0.0626)	(0.210)
Intercept	0.249***	-0.0804	-0.530	-0.0971	0.779***
	(0.0438)	(0.0518)	(0.601)	(0.224)	(0.227)
N	2360	924	68	152	1216
R Sq	23%	35%	93%	67%	20%
Years Effect	Yes	Yes	Yes	Yes	Yes
Industry Effect	No	Yes	Yes	Yes	Yes
Country Effect	Yes	No	No	No	No

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.001$

Agency theory indicates that shareholders of the firm should monitor the management of the firm. Corporate Governance is the mechanism by which they can achieve this goal. Since Islamic label has an impact on a firm's governance, we may imply that "Islamic label" just like low leverage can proxy for good governance to mitigate agency problems.

4.1.2.1 Discussion on Control Variables:

All the control variables are firm-specific variables that have an impact on corporate governance as they are responsible for variation in corporate governance quality (Hugill and Siegel (2014). The size of the firm serves as an anti take over deterrent for a potential hostile takeover of the company. The evidence on size is mixed. Some studies are of the view that due to economies of scale, a firm with greater size has a positive impact on a firm's governance quality. Also, larger firms are more complex and require refined corporate governance (Black et al., 2006). Other studies reveal that the higher the size of the firm, the higher will be the agency problems faced by the firm (Abed et al., 2012). However, in the overall sample, firm size has negative significant co-efficient for firm governance. The result is in accordance with the findings of Aggarwal et al. (2011). Their study also had a negative insignificant coefficient for size. This indicates that managers of the larger firm have more access to resources and because of governance complexities, they may serve their interest rather than the interest of their shareholders.

Firm age also has mixed evidence in the literature. The firms when they were incorporated, governance quality was not of paramount importance (old firms). However, newer firms now take governance quality seriously due to the imposition of stricter governance codes by the governing bodies. Thus negative significant coefficient indicates that as compared to older firms, newer firms have the highest score for governance quality. Thus age is inversely related to

governance quality. However, older firms may change their governance in time, in response to the pressure of shareholders, and age will have a positive impact on firm governance (see for example Black et al., 2006).

The availability of free cash flow (FCF) tempts the mangers to undertake negative NPV projects and causes agency conflicts (Jensen, 1986). The evidence of free cash flow impact on the firm's governance is mixed. The study of Linck et al. (2008) obtained a positive and significant coefficient of FCF on board size indicating that in the presence of private benefits (proxied by FCF) incentivize the induction of more independent directors on the firm's board of directors that increase the firm's governance. The study of Coles et al. (2008) found a negative significant impact of FCF on board size indicating that availability of FCF, without an adequate number of Independent directors will reduce governance quality. We have obtained a negative significant coefficient of FCF for governance quality. This result is in accordance with the findings of Hayat and Hassan (2017). Managers with access to free cash flow will help them to serve their own interests, rather than interests of the shareholders.

Net profit margin which is proxy of a firm's performance has also mixed evidence from the literature. The study of Black et al. (2006) indicates that profitability makes the firm invest in future projects from internal sources and thus they do not need external finance. This will harm the firm's governance as it has no incentive to indulge external financiers. However, Aggarwal et al. (2011) study indicate that well-governed firms are more profitable and thus have higher performance. Our results tend to favor the findings of Aggarwal et al. (2011) and we have a positive significant coefficient of profitability for governance quality.

Tobins Q (TQ) which is the measure of growth opportunity faced by the firm has mixed evidence in the literature. The study of Black et al. (2006) indicates that firms facing growth opportunities will need external finances and will cause it to improve governance. The study of Linck et al. (2008) found that TQ has a negative significant coefficient for board size. The induction of independent directors, sources of external advice needed to avail growth opportunities, increases the board size thus cause an increase in monitoring cost. Thus they indicate that TQ has a negative relationship with board size. Our results confirm the findings of Hayat and Hassan (2017) who also obtained negative coefficients of TQ for different governance measures.

Other control variables such as ownership concentration (OC), institutional ownership (IO) , board Independence (BI), and audit committee independence (ACI) are all attributes of good governance (see for example Aggarwal et al.,2011; Linck et al. ,2008). These attributes of firm governance have a positive significant impact on the firm's governance quality as evident from our results.

4.1.3 Islamic Label Impact on Firm Governance by Including Sharia Compliance Criteria

Table 4 summarizes the results of the impact of Islamic label on firm governance by including sharia compliance criteria of cash and leverage. The results clearly indicate that coefficients of Islamic label stand significant and positive.

The results of the overall sample that includes all countries and the results of regression test for individual country indicates that Islamic label has a positive significant impact on firm governance quality even after the inclusion of debt and cash holdings. How exactly the Islamic

label impacts firm governance is still unclear however, it's not because of low leverage and cash. For the sake of brevity, all other control variables are not reported in Table 4.

Table 4: Islamic Label Impact on Firm Governance by Including Sharia Compliance

	(All Countries) CG Index	(Pakistan) CG Index	(Malaysia) CG Index	(Indonesia) CG Index	(USA) CG Index
Islamic	0.0304***	0.0275**	0.0997*	0.0486**	0.0214**
	(0.00650)	(0.0107)	(0.0525)	(0.0211)	(0.00876)
Lev_1	0.154***	0.178	-0.421*	0.110	0.151**
	(0.0406)	(0.304)	(0.226)	(0.0764)	(0.0505)
Cash_1	0.0803**	0.0790	0.421**	0.182*	0.0713**
	(0.0275)	(0.0535)	(0.131)	(0.107)	(0.0337)
Intercept	0.201***	-0.0797	-0.746	-0.128	0.714**
	(0.0453)	(0.0527)	(0.578)	(0.231)	(0.227)
N	2360	924	68	152	1216
R-Sq	23.6%	35%	93%	68.42%	21%
Control Var.	Yes	Yes	Yes	Yes	Yes
Years Effect	Yes	Yes	Yes	Yes	Yes
Industry effect	No	Yes	Yes	Yes	Yes
Country Effect	Yes	No	No	No	No

Criteria

Standard errors in parentheses

* p < 0.1, ** p < 0.05, *** p < 0.001

4.2 Islamic Label and Level of Cash Holdings

4.2.1 Univariate Analysis:

Prior work suggests that there is a strong relationship between size and cash holdings. Thus employing the methodology used by Harford et al. (2008), we have sorted our sample based on size.

In panel A of Table 5, we have used double sorted our sample first on size and then within size quintiles, we have sorted our CG Index into 5 quintiles. Then we carried Wilcox rank sum test to see whether the means of cash, Institutional owners (IO) and ownership

Table 5: Cash holding and Governance Variables relative to Firm Size

	SZ=1 CG Index=1	SZ=1 CG Index=5	SZ=3 CG Index=1	SZ=3 CG Index=3	SZ=5 CG Index=1	SZ=5 CG Index=5
	Mean	Mean	Mean	Mean	Mean	Mean
Cash	.0566	.2552	.1155	.1288	.1745	.1921
IO	.0625	0926	.0454	.0547	.2189	.2635
OC	.4861	.5377	.2571	.2797	.2743	.4793
N	121	118	124	110	119	114

Panel A: Cash holding and Governance Variables relative to Firm Size

Panel B: Cash & Governance Variables within Islamic by Firm Size Quintiles

	SZ=1 Islamic	SZ=1 Conventional	SZ=3 Islamic	SZ=3 Conventional	SZ=5 Islamic	SZ=5 Conventional
	Mean	Mean	Mean	Mean	mean	mean
cash	.3562	.0725	.1784	.0851	.1906	.1689
io	.0678	.0772	.1018	.0579	.2248	.2471
oc	.3234	.5890	.3036	.2931	.32801	.4166
N	188	402	227	363	246	339

concentration (OC) are significantly different across 1st and 5th quintiles of CG Index controlled by size quintiles.

The results of panel A indicate that firms with higher corporate governance scores within size quintiles have higher means for cash, IO, and OC. For the sake of brevity, we have reported results of extreme low and high quintiles of CG Index. These means are significantly different across CG Index quintiles as elaborated by the Wilcox rank sum test. However, means of cash in size quintile 5 across CG Index quintiles are not significantly different from each other.

The results indicate that firms with high governance scores tend to have more cash holdings than firms with lower governance scores. Further ownership concentration proxied by IO and OC tends to be higher in firms with higher CG scores as compared to firms with lower CG Scores. These results replicate the findings of Harford et al. (2008) who found similar results in their study.

Since we are establishing Islamic Label as proxy of good governance, we have replicated the work in panel A by first sorting the firms based on size quintiles and then within size quintiles we have reported the means of Islamic and conventional firms in Panel B. in all size quintiles, Islamic firms have statistically significant and higher mean for cash than conventional firms. It can be observed in panel B that Islamic label tends to replicate the results of High CG Index firms as reported in panel A with respect to cash holdings.

However, Islamic firms have a lower means of IO and OC as compared to conventional firms. The conventional firms have higher mean for IO but is statistically significant larger in size quintile 3 only. However, OC mean of Conventional firms is statistically significant in size quintile 1 and 5. Thus it is unclear as to how Islamic label impacts governance. As it is evident from the previous result reported in table 4.4, the Islamic label impacts governance but it's not because of leverage or cash. The univariate analysis further deepens the mystery as to how Islamic label impacts governance as it has lower means of IO and OC that are regarded as proxies of good governance.

4.2.2 Regression Results

Table 6 summarizes the regression results of the impact of Islamic label and corporate governance on the firm's cash holdings. The dependent variable is cash holdings while the main

variable of interest is the Islamic label that is a dichotomous variable that assumes the value of 1 if firms are sharia complaint and zero otherwise.

Of equal importance are the governance variables namely CG Index, Institutional ownership (IO), and ownership concentration (OC). Remaining Variables are firm-specific control variables taken from the prior literature of cash holdings (see for example Opler et al., 1999; Harford et al., 2008). These variables include size (SZ), firm leverage (LEV), market to book ratio (MBR), cash flow from operations (CF), net working capital (NWC), capital expenditure (CAPX), dividend dummy that takes the value of 1 if firms pay a dividend for the year and zeroes otherwise (DIV) and cash flow volatility that is the standard deviation of cash (CFVolt). For added robustness, the results are also reported for individual countries. All variables are winsorized at 1% and 99%. Firms fixed effects and years fixed effect are used to control years and industry effects at country level estimation. Further, the "country effect" is used as an additional control variable to accommodate unobservable factors at the country level for estimation of pooled regression for the overall sample that includes all countries.

The result indicates that the Islamic label has a positive significant coefficient for cash holdings of the firm. This indicates that Islamic label firms hold more cash. According to Harford et al. (2008), well-governed firms hold more cash as shareholders are confident that management will use the cash in the interest of shareholders and not for personal benefits.

Table 6: Regression Results Of Islamic label and Corporate Governance on Cash Holdings

	(All Countries)	(Pakistan)	(Malaysia)	(Indonesia)	(USA)
Dep. Var.	Cash	Cash	Cash	Cash	Cash
Islamic	0.0204***	0.0301***	0.132**	0.0447**	0.0119*
	(0.00475)	(0.00705)	(0.0597)	(0.0190)	(0.00650)
CG Index_1	0.0130	0.00661	0.151*	0.160***	0.0180
	(0.0133)	(0.0134)	(0.0783)	(0.0471)	(0.0190)
IO_1	0.0592**	0.0289*	0.401***	-0.281***	0.0359
	(0.0245)	(0.0168)	(0.104)	(0.0682)	(0.0459)
OC_1	-0.00222	0.0393***	-0.821***	0.153***	-0.0342
	(0.0142)	(0.0117)	(0.278)	(0.0434)	(0.0311)
SZ	0.00215	0.000733	0.0129	0.0216**	-0.00267
	(0.00187)	(0.00122)	(0.0231)	(0.00856)	(0.00301)
Lev	-0.131***	-0.0299***	-0.232	-0.229***	-0.201***
	(0.0137)	(0.00962)	(0.204)	(0.0767)	(0.0244)
MBR	0.0281***	0.00231**	-0.0564	-0.00787*	0.0247***
	(0.00283)	(0.000953)	(0.0419)	(0.00416)	(0.00550)
CF	0.142***	0.0811***	0.516	0.0536	0.369***
	(0.0334)	(0.0230)	(0.521)	(0.147)	(0.0823)
NWC	-0.0537***	-0.0203***	-0.933***	-0.0202	-0.0847***
	(0.0176)	(0.00743)	(0.344)	(0.0442)	(0.0299)
Capx	-0.106***	0.00412	0.0929	-0.160	-0.382***
	(0.0398)	(0.00902)	(0.350)	(0.152)	(0.0911)
DIV	-0.0224***	0.0115**	0.128*	0.0427	-0.0268***
	(0.00497)	(0.00452)	(0.0715)	(0.0272)	(0.00850)
CFvolt	0.474***	0.0417	0.602	0.0113	1.874***
	(0.0759)	(0.0774)	(0.833)	(0.00944)	(0.163)
Intercept	0.0683**	-0.00737	0.0344	-0.224	0.152***
	(0.0313)	(0.0203)	(0.406)	(0.198)	(0.0545)
N	2356	924	68	152	1212
Years Effect	Yes	Yes	Yes	Yes	Yes
Industry Effect	No	Yes	Yes	Yes	Yes
Country Effect	Yes	No	No	No	No
R-Sq	34%	30%	67%	48%	36%
Standard errors in parentheses			* p < 0.1, ** p < 0.05, *** p < 0.001		

Further, investors value cash more in case of a good governed firm as compared to a firm with a low governance score. The results of Harford et al (2008) and Pinkowitz et al.(2006) indicate that well-governed firms have a positive significant coefficient for cash holdings. Thus based on these studies, we can imply that the Islamic label is a proxy of good governance as it replicates the behavior of a good governed firm.

The corporate governance indicators namely CG Index and Ownership concentration have insignificant coefficients for cash holdings in the overall sample. However, Institutional ownership (IO) has a positive significant coefficient for cash holdings. This indicates that firms with higher scores of institutional ownership tend to hold more cash as compared to the firms with lower scores of institutional ownership. This result is in line with the findings of Harford et al.(2007) whose study came up with the same conclusion. Across the countries, we find mixed evidence of corporate governance variables. In Pakistan, we have evidence that IO and OC have positive significant coefficients for cash holdings. This has not come as a surprise as most of the Pakistani firms are family-owned or owned by Institutions (Cheema et al.,2003). Thus under interest alignment theory, shareholder's in Pakistan feel comfortable when firms hold more cash as they deem that this asset will be used in their interest because ownership concentration has a positive significant impact on firm performance in Pakistan (Javid & Iqbal ,2009). In Malaysia, all corporate governance variables have a significant impact on cash holdings. CG Index and IO have positive significant coefficients for cash holdings. This indicates that firms with high values of CG index (Good Corporate governance scores) and Institutional ownership, hold more cash. These results are in line with the study of Harford et al.(2007) and Jain et al. (2013). In Malaysian firms, high ownership is prevalent (Mohammad et al., 2015), OC harms cash holdings indicating that more powerful inside ownership provides the incentive for the expropriation of

cash in Malaysia. Thus lower cash holdings are associated with higher ownership concentration. In Indonesia, most of the firms in our sample are controlled by the government or families. Thus the positive significant coefficient of ownership concentration for cash holdings has not come as a surprise to us. Further, like Malaysia, CG Index has a positive impact on firms' cash holdings. However, IO has a negative significant coefficient. As stated earlier, most of the institutional ownership in our sample for Indonesian firms are long term institutional ownership such as investments into shares by government-controlled enterprises, pension funds, etc. Thus according to Brown et al. (2011), long term institutional ownership has a negative impact on cash holdings as they are interested in long term growth as opposed to short term profit takings. However, in the USA, all corporate governance proxies have an insignificant impact on cash holdings and firm-level variables contribute significantly to determine the level of cash holdings.

The firm-level control variables have the expected signs as predicted by previous literature on cash holdings (see for example Opler et al. (1999); Porta et al. (2000); Ozkan & Ozkan (2004): Al-Najar (2013). Size (SZ) has a negative significant impact on a firm’s cash holdings for over al sample indicating that fewer constraint firms have access to financial markets and need a lower level of cash. Market to book ratio that indicates the growth opportunity for the firms has a positive significant impact on a firm’s cash holdings.

Thus to finance their growth, firms with higher growth opportunities have higher levels of cash. Cash Flow has a positive significant coefficient for cash holdings. The reason is that firms take out more cash from their cash flows for investments in positive NPV projects. Networking capital (NWC) compete for cash to conduct business operations. Thus firms with higher needs of NWC will have lower cash holdings. The negative significant coefficient for capital expenditure (CAPX) indicates that firms with weaker governance spend cash more

quickly on investments. The negative significant co-efficient of dividend (DIV) indicates that firms retain their income to increase their cash holdings and pay fewer dividends. Cash flow volatility (CFVolt) has a positive significant coefficient. This indicates that firms, under precautionary motive for holding cash, hold more cash if future cash flows are uncertain. Leverage (LEV) has a negative significant coefficient that indicates a fact that as the firm gets higher on debt, it will need cash to repay it. Thus the level of cash decreases with an increase in leverage.

The results obtained in Table 6 conform with agency theory that indicates that good corporate governance mitigates agency problems. Islamic label having positive significant co-efficient thus indicates that it can proxy to mitigate agency conflicts. Further, the cash flow volatility has positive coefficients for cash holdings. This is in line with Keynes's liquidity preference theory that indicates that people hold more cash under a precautionary motive. Thus firms facing future uncertainty will hold more cash.

4.3: Value of Dividend and Cash under Islamic Label and Corporate Governance

In order to determine what value share holders place on dividends and cash in firms under sharia compliance and good governance; we have estimated the equation employed by Pinkowitz et al. (2006). The first section reports the results for value of dividends and the second section reports results for value of cash holdings.

4.3.1: Value of Dividend

Table 7 highlights the results for value that investor puts on the dividends given by the firms with Islamic Label, High Governance score and Low governance scores. Employing the methodology used by Pinkowitz et al.(2006) the last three columns of the table indicates p-value

that symbolizes whether coefficient differences are significant or not firstly between Islamic label firms and firms with high governance score. Secondly, Between Islamic label firms and firms with low governance score and lastly between high governance score firms and low governance score firms.

As predicted in the literature, we accept the hypothesis that firms with Islamic label and Good governance scores pay less dividends as compared to firms with low governance scores. The shareholders of Islamic firms value dividends less as compared to firms with higher governance scores. However, it can be evidenced by the table that all coefficients of dividends are not statistically different from each other (P-value> 0.05). Thus our results reject the hypothesis that firms under good governance and Islamic label pay less dividends than low governance score firms.

The table indicates that shareholders of the Islamic label firm place value of 0.1 cents on the dividends. However, contrary to the findings of Pinkowitz et al. (2007) firms with high governance score values dividend lower as compared to the firms with low governance scores (0.19 cents VS 0.16 cents). However, these differences in coefficients are insignificant.

For robustness, we have conducted a similar analysis for the individual country of the sample (Results reported in Appendix 1). The results are not consistent with the findings of the overall sample.

In the case of Pakistan, we found the results complying with the findings of Pinkowitz et al. (2006). The table reported under Appendix 1.1 indicates that Islamic firms pay lower dividends than firms with low corporate governance score. Similarly, firms with high governance

Table 7: Value of Dividend Under Islamic Label, High Governance Score & Low Governance Score Firms (All Countries)

	(1. Islamic)	(2.High Governance Score)	(3.Low Governance Score)	P-Value Diff 1&2	P-Value Diff 1&3	P-Value Diff. 2&3
	V	V	V			
E	0.665***	0.398***	0.702***	0.0037	0.6009	0.0072
	(0.0478)	(0.0464)	(0.0447)			
DE	-0.0791*	-0.0200	-0.0748*	0.1949	0.9249	0.2938
	(0.0449)	(0.0421)	(0.0389)			
DEt+1	0.220***	0.197***	0.258***	0.6629	0.4990	0.4087
	(0.0394)	(0.0428)	(0.0305)			
DA	0.00655	0.0448	0.00000173	0.4194	0.8650	0.4223
	(0.0472)	(0.0476)	(0.0351)			
DAt+1	0.0575	-0.0185	0.0383	0.1534	0.6252	0.3156
	(0.0414)	(0.0483)	(0.0313)			
R&D	0.00550	0.256***	0.00587	0.0436	0.9918	0.0444
	(0.0427)	(0.0427)	(0.0388)			
DR&D	0.163***	-0.0380	0.166***	0.0499	0.9381	0.0557
	(0.0465)	(0.0397)	(0.0406)			
DR&Dt+1	0.179***	0.226***	0.0789**	0.6324	0.0570	0.1866
	(0.0442)	(0.0475)	(0.0351)			
INT	0.0449	0.0856	0.0917***	0.3893	0.2865	0.9242
	(0.0496)	(0.0644)	(0.0353)			
DINT	-0.0390	-0.0273	-0.0524	0.7600	0.7383	0.6282
	(0.0433)	(0.0550)	(0.0380)			
DINTt+1	-0.0140	0.0162	-0.0799**	0.0779	0.1049	0.0287
	(0.0296)	(0.0325)	(0.0346)			
DIV	0.108**	0.191***	0.160***	0.1682	0.4144	0.7084
	(0.0520)	(0.0479)	(0.0427)			
DDIV	-0.0154	-0.0168	-0.0259	0.9758	0.7624	0.8687
	(0.0486)	(0.0434)	(0.0447)			
DDIVt+1	-0.0114	-0.0127	0.0157	0.9447	0.3387	0.4219
	(0.0285)	(0.0295)	(0.0363)			
Vt+1	0.101**	0.182***	0.120***	0.3477	0.7975	0.5951
	(0.0425)	(0.0469)	(0.0342)			
Intercept	-0.0796***	0.00593	-0.0111	0.0000	0.0003	0.4410
	(0.0236)	(0.0241)	(0.0207)			
N	1436	1436	1436			
R-Sq	0.257	0.200	0.411			

Standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

scores pay a lower dividend than firms with low governance scores. Pinkowitz et al. (2006) believed that firms that have lower governance scores tend to pay higher dividends as shareholders feel that cash is not safe in the hands of the management and that management may expropriate cash for personal benefits. However, firms with higher governance scores have the faith of the shareholders that cash will be used for the benefit of firms and not for personal goals. Thus these firms pay fewer dividends. The results indicate that in Pakistan, shareholders place a value of 0.22 Rs for Rs.1 dividend disbursed. Similarly, shareholders of firms with good governance scores in Pakistan values dividend at 0.33 Rs as compared to value of 0.7 Rs for the dividend of firms with a lower score of corporate governance. An interesting finding is that difference between the coefficients of dividends under Islamic label and high corporate governance is insignificant (p-value = 0.2896 > 0.05). Further, both have coefficients statistically different form firms with lower corporate governance scores. This indicates that Islamic label firms and high governance score firms adopt a similar dividend policy. Thus in Pakistan, we accept our hypothesis and posit that Islamic label can proxy for good governance.

The results of Malaysia are reported in Appendix 1.2. The results for dividend replicate the findings in Pakistan. In Malaysia, Islamic label firms and firms with a higher score of corporate governance pay significantly less dividends than the firms with lower governance scores. In the case of Malaysia, the shareholders of Islamic and good governance score firms place value of 0.51 cents and 0.50 cents respectively. The difference between both coefficients is statistically insignificant (p-value= 0.9313> 0.05). However, the difference between both of these coefficients and the coefficient of dividends of firms with lower corporate governance score is statistically significant. Thus we can say that in Malaysia, Islamic label can proxy for good governance..

However, in Indonesia and the USA, we could not confirm the findings we made in Pakistan & Malaysia. In Indonesia, Islamic label and firms with low governance scores have higher coefficients for dividends as compared to firms with high governance scores. Thus in Indonesia, Islamic label tend to replicate the firms with low governance scores. In the USA however, we have an insignificant difference between the coefficients of dividends under Islamic label firms, Firms with high governance scores, and firms with low governance scores.

The results on dividends are mixed. Overall there is no significant difference in the value put on the dividend by firms with higher governance scores and firms with lower governance scores. However in some countries, the results in accordance with the agency theory that purports that people trust the management with higher cash holdings in case of well-governed firms as they trust that it will not be miss appropriated. Thus they put a lower value on dividends of well-governed firms and vice versa.

4.3.2: Value of cash

Table 8 highlights the result of cash under Islamic label firms, firms with higher governance scores, and firms with lower governance scores. The results indicate that shareholders of Islamic label firms, firms with good governance scores, and firms with lower governance scores values cash the same. The statistically insignificant difference between these coefficients proves this fact. The shareholder of the Islamic label firm values cash at 0.04 cents for 1$ of cash holdings. Similarly the shareholder of the firms with good corporate governance and firms with lowers corporate governance score value cash at 0.02 cents & 0.06 cents respectively. However, the difference between these coefficients is insignificant.

For the robustness of results, we have estimated the same equation at the country level. The results are reported in Appendix 2. In all countries, we have obtained the same results as indicated by the results of the overall sample. In all countries, there is an insignificant difference

Table 8: Value of Cash under Islamic Label, High Governance Score & Low Governance Score Firms (All Countries)

	(1.Islamic) V	(2.High Governance Score) V	(3.Low Governance Score) V	P-Value Diff 1&2	P-Value Diff 1&3	P-Value Diff 2&3
E	0.650****	0.400****	0.679****	0.0046	0.6625	0.0089
	(0.0483)	(0.0466)	(0.0454)			
DE	-0.0862*	-0.0200	-0.0844**	0.1437	0.9672	0.2112
	(0.0453)	(0.0423)	(0.0390)			
DE_{t+1}	0.209****	0.203****	0.252****	0.9129	0.4226	0.5014
	(0.0398)	(0.0434)	(0.0306)			
DNA	0.0295	0.0566	0.00975	0.5506	0.5497	0.3672
	(0.0460)	(0.0473)	(0.0347)			
DNA_{t+1}	0.0446	-0.0234	0.0346	0.2002	0.7774	0.3201
	(0.0396)	(0.0454)	(0.0308)			
R&D	-0.000302	0.258****	0.00803	0.0368	0.8268	0.0433
	(0.0429)	(0.0428)	(0.0389)			
DR&D	0.155****	-0.0388	0.159****	0.0538	0.9120	0.0585
	(0.0465)	(0.0403)	(0.0406)			
$DR\&D_{t+1}$	0.183****	0.225****	0.0653*	0.6695	0.0331	0.1549
	(0.0443)	(0.0477)	(0.0353)			
INT	0.0445	0.0912	0.104****	0.3692	0.1789	0.8501
	(0.0496)	(0.0655)	(0.0354)			
DINT	-0.0347	-0.0304	-0.0504	0.9140	0.6926	0.7179
	(0.0433)	(0.0552)	(0.0380)			

$DINT_{t+1}$	-0.0170	0.0200	-0.0847**	0.0758	0.0923	0.0211
	(0.0297)	(0.0331)	(0.0347)			
DIV	0.127**	0.191****	0.186****	0.2734	0.3429	0.9483
	(0.0526)	(0.0480)	(0.0434)			
DDIV	-0.0181	-0.0185	-0.0279	0.9936	0.7858	0.8647
	(0.0486)	(0.0435)	(0.0446)			
$DDIV_{t+1}$	-0.00726	-0.0156	0.0188	0.6503	0.3199	0.2935
	(0.0288)	(0.0298)	(0.0366)			
DV_{t+1}	0.0815*	0.190****	0.105****	0.1885	0.7482	0.4628
	(0.0436)	(0.0478)	(0.0350)			
DCASH	0.0422	0.0175	0.0638**	0.5047	0.5596	0.3798
	(0.0359)	(0.0389)	(0.0305)			
$DCASH_{t+1}$	0.0859**	-0.0395	0.0572*	0.0377	0.5400	0.2003
	(0.0385)	(0.0478)	(0.0312)			
Intercept	-0.0789****	0.00510	-0.0117	0.0000	0.0004	0.4492
	(0.0236)	(0.0242)	(0.0207)			
N	1436	1436	1436			
R-Sq	0.259	0.201	0.414			

Standard errors in parentheses

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

between the coefficients of Islamic label firms, firms with high governance scores, and firms with low governance scores. Thus we conclude by rejecting our hypothesis that purports the investors of good governance firms and Islamic label firms put more value on cash holdings as compared to firms with lower governance scores.

4.4: Impact of Islamic Label and Corporate Governance on Over Investment of Free Cash Flows

In this section we will investigate whether the corporate governance and the Islamic label mitigate overinvestment due to free cash flows. We will begin by reporting the summary stats of the variables used in the study. Employing methodology adopted by Richardson (2006), we will

first report the results of investment equation. In the later stage we will present the impact of the Islamic label and the corporate governance on overinvestment and whether their interaction with free cash flow mitigates the problem of over investment due to free cash flow.

4.4.1: Descriptive Statistics of Variables in Investment Equation

Table 9 reports summary statistics of variables used in investment equation along with free cash flow. Panel A reports Islamic firms while Panel B reports summary statistics of conventional firms. Inew is the new investment made by the firms in the current period. The results indicate that conventional firms have made more investments than Islamic firms. This is of interest as Islamic firms have more free cash flow as compared to conventional firms. This may indicate that Islamic label is mitigating the use of free cash for overinvestment. Another Highlight is leverage (LEV). It can be observed that the mean of leverage is lower in case of Islamic firms as compared to its mean in case of conventional firms. This may explain higher mean of cash in Islamic firms. Since they have constraint to be low on leverage, the Islamic firms finance their growth opportunities from internal cash holdings. The growth opportunities indicated by inverse of price to value ratio are higher in case of Islamic firms as compared to conventional firms. The mean size (SZ) of Islamic firms and conventional firm is not that much different indicating that conventional and Islamic label firms has almost same assets base. Islamic firms appear to be having more age than conventional firms.

The stock returns (RET) of the Islamic firms are higher than conventional firms. This indicates that the Islamic stocks have performed better than conventional firm. This confirms that prior literature on Islamic stocks that have indicated that Islamic stocks performed better than

Table 9: Descriptive Statistics of Variables in Investment Equation

		(Panel A: Islamic Firms)			
		mean	Standard Deviation	min	Max
Inew		.0397	.0398	-.0142	.1485
Lev		.2347	.1488	0	.7487
Vp		.3045	.2649	.0002	1.4419
Cash		.1148	.1009	.0018	.3349
Sz		15.1995	3.6195	2.8904	18.0526
Age		5.0854	5.5193	1.7917	24.7593
Ret		.1406	.1667	-.1561	.5243
Fcf		.0661	.0732	-.20431	.2588
N	**1050**				

		(Panel B: Conventional Firms)			
		Mean	Standard Deviation	min	Max
Inew		.0417	.0422	-.0142	.1485
Lev		.3414	.2068	0	.7487
Vp		.2577	.3016	.0002	1.4418
Cash		.0785	.0912	.0017	.3349
Sz		15.2523	3.1127	2.8904	18.0526
Age		4.6895	4.6045	1.7917	24.7593
Ret		.1104	.1660	-.1561	.5243
Fcf		.03185	.0864	-.1658	.4517
N	**1900**				

their conventional counterparts. Lastly, the overall sample that includes all countries of the study, we had 1050 firm year observations in case of Islamic firms and 1,900 firm year observations in case of Conventional firms.

4.4.2: Results of Investment Equation

Table 10 reports the results of the Investment equation. All the variables are winsorized at 1% and 99%. Further, we have tabulated the results with robust standard errors. Due to lags, we have 2,360 firm-year observations for every variable of the investment equation for the overall sample that includes all countries. For robustness purposes, the investment equation is

also estimated at the individual country level. Country and years effects are included in the estimation of the overall sample while industry effect is included along with year's effect at country level estimation.

Table 10: Regression Result of Investment Equation

	(All Countries) INEW	(Pakistan) INEW	(Malaysia) INEW	(Indonesia) INEW	(USA) INEW
VP_1	-0.00979***	-0.972	-0.00895	-0.00450	-0.00361
	(0.00304)	(1.207)	(0.0157)	(0.00910)	(0.00249)
LEV_1	0.00426	0.00766	0.0343	-0.0348**	-0.00397
	(0.00489)	(0.00725)	(0.0271)	(0.0158)	(0.00358)
Cash_1	0.0698***	0.0710	0.0651	0.0385	0.0171***
	(0.00744)	(0.0503)	(0.0446)	(0.0245)	(0.00465)
SZ_1	0.000495	0.00419***	-0.00607	0.00354	-0.0000852
	(0.000825)	(0.00143)	(0.00585)	(0.00671)	(0.000403)
AGE_1	-0.000554	0.000459	0.00533	-0.00367	-0.000421
	(0.000997)	(0.00448)	(0.00525)	(0.00399)	(0.000538)
RET_1	0.0146***	0.0332***	-0.0156	0.0263**	0.00180
	(0.00530)	(0.00856)	(0.0152)	(0.0121)	(0.00322)
INEW_1	0.419***	0.0532	0.330**	0.530***	0.885***
	(0.0242)	(0.0335)	(0.145)	(0.0750)	(0.0152)
Intercept	0.0119	-0.0329	0.112	0.0894	0.00833
	(0.0138)	(0.0273)	(0.101)	(0.102)	(0.00675)
N	2360	924	68	152	1216
R-sq	25%	10%	65%	63%	85%
Years Effect	Yes	Yes	Yes	Yes	Yes
Industry Effect	No	Yes	Yes	Yes	Yes
Country Effect	Yes	No	No	No	No

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The results for the overall sample indicate that VP harms cash holdings. According to Richardson (2006), VP is inverse of market value to price thus it will have a negative coefficient

instead of positive co-efficient that we obtain using Tobin's Q. However, in our estimation, it has insignificant co-efficient. The other main variable of interest is Cash. This variable proxy for internal financing. In the overall sample, cash has positive significant coefficients for investment. This result is in accordance to Fazzari et al (1988) that indicates that firms laboring under information asymmetry finance their investments from internal funds. The remaining control variables have their expected signs except leverage.

The results are in line with Keynes theory of liquidity preference. When firms are faced with higher growth opportunity they will need more cash. The positive significant value of cash holdings supports this theory. Further this result negates Modigiliani and Miller (1958) irrelevance theorem that indicates that firms' investments are not dependent on availability of internal funds.

4.4.3: Results of the Impact of Corporate Governance and Islamic Label on Overinvestment of Free Cash Flow

Table 11 highlights the results of the impact of corporate governance and Islamic label on the overinvestment of free cash flows. Panel A of the table reports results of the impact and interaction role of corporate governance on the overinvestment of free cash flows. While Panel B represents the results of the impact and interaction of Islamic label on the overinvestment of free cash flows. Overinvestment is positive residuals obtained from the investment equation. In both panels, pooled OLS estimation is adopted. The overall sample consists of 2,357 firm-year observations and the regression was estimated using robust standard errors. The overall sample includes years and country fixed effects. The country-level estimation includes the year and industry fixed effects

In panels A and B, the free cash flow (FCF) has a positive significant impact on overinvestment. This indicates that firms tend to overinvest when they have free cash flows (Richardson, 2006). Although free cash flow can have alternative uses such as payments to the shareholders and debt providers. However, this will depend on the management's decision of maintaining optimal capital structure and this will determine the optimal distribution of free cash flow.

Further, according to Harford (1999), the optimal level of free cash flow retained will depend on the firm's cash flow variability and its ease of obtaining external finance through the capital market. Thus it is unclear to determine the use of free cash flow beyond avoiding overinvestment.

Thus the study has focused on the use of free cash flow for overinvestment and governance to mitigate over investment.

In Panel A, Idx is the dummy variable that takes the value of 1 if firm's governance score measures by CG Index lies in the 5th quintile of CG Index. This represents high governance score and is used as proxy of good governance. The results indicate that in overall sample, good corporate governance has failed to mitigate over investment. FCFIdx is the interaction between FCF and Idx. It too has insignificant coefficient for over investment indicating that good governance has failed to mitigate use of free cash flow for over investment. The result is not surprising as Richardson (2006) indicated that there is very weak relation between governance proxies and free cash flows. The lower level of R-square obtained in his study for 13 governance attributes indicated that since governance factors do not vary substantially over time. However, despite of insignificant coefficients of mean and interaction dummy of governance, it has negative sign. This indicates that good governance reduces overinvestment and overinvestment

of free cash flows. For Robustness, we have conducted the estimation for individual country. In Pakistan, good governance has negative significant coefficient for overinvestment. This indicates that good governance strongly mitigates overinvestment in Pakistan. Further, the interaction

Table 11: Results of Governance and Islamic label Impact on Overinvestment of Free Cash Flow

Panel A	(All Countries) Overinv	(Pakistan) Overinv	(Malaysia) Overinv	(Indonesia) Overinv	(USA) Overinv
Fcf	0.0544***	0.0355***	0.124***	0.0267	0.181***
	(0.00759)	(0.00704)	(0.0461)	(0.0263)	(0.0239)
Idx	-0.000690	-0.00524***	-0.00977	-0.00190	-0.00460
	(0.00104)	(0.00103)	(0.00601)	(0.00789)	(0.00440)
Fcfidx	-0.0109	-0.0353***	-0.0400	-0.0217	-0.0194
	(0.0115)	(0.0121)	(0.0591)	(0.104)	(0.0466)
Intercept	0.0375***	0.0447***	0.0216***	0.0509***	0.0158***
	(0.00107)	(0.00107)	(0.00365)	(0.00472)	(0.00375)
N	2357	924	66	152	1216
R-Sq	7%	11%	17%	9%	10%
Years Effect	Yes	Yes	Yes	Yes	Yes
Industry Effect	No	Yes	Yes	Yes	Yes
Country Effect	Yes	No	No	No	No
Panel B	(All Countries) Overinv	(Pakistan) Overinv	(Malaysia) Overinv	(Indonesia) Overinv	(USA) Overinv
Fcf	0.0506***	0.0302***	0.0780	0.0133	0.161***
	(0.00747)	(0.00684)	(0.0785)	(0.0208)	(0.0275)
Islamic	-0.000936	-0.00645***	-0.00124	-0.00173	-0.00794*
	(0.00117)	(0.00127)	(0.00396)	(0.00432)	(0.00406)
Fcfisl	-0.0231*	-0.00324	-0.0260	-0.0420	-0.0445
	(0.0126)	(0.0145)	(0.0776)	(0.0450)	(0.0428)
Intercept	0.0374***	0.0448***	0.0456***	0.0490***	0.0185***
	(0.00108)	(0.00103)	(0.00582)	(0.00638)	(0.00374)
N	2357	924	66	152	1216
R-Sq	7%	11%	75%	60%	11%
Years Effect	Yes	Yes	Yes	Yes	Yes
Industry Effect	No	Yes	Yes	Yes	Yes
Country Effect	Yes	No	No	No	No

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

variable FCFidx has negative significant co-efficient too, this indicates in Pakistan, good governance mitigates overinvestment of free cash flows. However, in remaining countries we have obtained insignificant co-efficient of governance dummy and its interaction with free cash flows.

In Panel B, Islamic label has negative insignificant coefficient for overinvestment in overall sample. However, when it is interacted with free cash flow, the interaction variable FCFisl has negative and significant coefficient for overinvestment. Thus Islamic label mitigates overinvestment of free cash flows. Since there is no research on Islamic label and free cash flow interaction, we are unable to provide any evidence from the study that has same findings as ours. However, since good governance mitigates the problem of overinvestment of free cash flows, our results indicate that we should accept our hypothesis that Islamic label negatively mitigates overinvestment of free cash flows. For robustness, we have estimated the equation for individual countries. The result is a mix. In Pakistan and the USA, we have obtained evidence that the mean dummy of Islamic label has a negative and significant impact on over investment. However in both countries the interaction dummy FCFisl is negative but insignificant. In Indonesia and Malaysia, both mean and interactive dummy of the Islamic label is statistically insignificant. It appears that the Islamic label is facing the same problem as that of the governance index. In our sample, Islamic Label indicated firms that remained Islamic throughout the estimation period. Since governance scores change little over time, Islamic label showed no variation. Thus we can say that if Islamic label is allowed to vary over time and interacted with high free cash flow quintiles we may find significant negative coefficients. However, we are unable to take this step in this study as we wanted to study firms that stay Islamic throughout the estimation period to obtain robust results.

From a theoretical point of view, the agency theory states that managers tend to overinvest only when they are in the possession of free cash flow. The positive significant coefficient of free cash flow for overinvest proves the theory. Further according to agency theory, good governance mitigates agency problems. The significant and negative coefficients of governance index and Islamic label prove that it prevents the mangers to squander free cash floes at their disposal.

4.5: Impact of Corporate Governance and Islamic Label on Investment Efficiency:

To test our investment efficiency hypothesis, we will employ the model used by He et al. (2018) who has used a modified version of Richardson (2006). We will first estimate the investment equation and report its results. After that, we will estimate the impact of corporate governance and Islamic label on overinvestment (positive residuals from investment equation) and underinvestment (negative residuals from Investment equation). However, we might report at the outset that we obtained negative residuals (N=29) from the investment equation estimated for the USA. The overall sample that includes all countries rendered very few negative residuals that were not sufficient for conducting OLS. While in the case of Pakistan, we obtained no negative residuals from the investment equation. In Malaysia and Indonesia, we obtained a few negative residuals that were not sufficient for conducting OLS.

All variables were winsorized at 1% and 99% and OLS was estimated with robust standard errors. For the overall sample that included all countries, years fixed effect, and country fixed effects were used as additional control variables. In case of estimation for an individual country, years fixed effect and Industry fixed effects were to control for time and industry effects. In total, we have 1,900 firm-year observations for conventional firms and 1,050 firm-year observations for Islamic firms.

4.5.1: Investment Equation Results

Table 12 presents results of investment equation. In Overall sample, Tobin's Q (WTQ) , cash, stock returns (WRET) and previous year investment (L.Winv) had positive and significant coefficient for investment (INV). While, leverage (LEV) has a negative significant coefficient for firm's investment. Firm's age and size had insignificant but positive coefficients for firm's investment.

Table 12: Results of Investment Equation

	(All Countries) Inv	(Pakistan) Inv	(Malaysia) Inv	(Indonesia) Inv	(USA) Inv
TQ_1	0.00506***	0.00821**	0.0152***	0.00528	0.00236*
	(0.00125)	(0.00411)	(0.00335)	(0.00695)	(0.00121)
Cash_1	0.0642***	0.0337	0.191**	0.0533*	0.0457***
	(0.0106)	(0.0423)	(0.0720)	(0.0318)	(0.0106)
Age_1	0.000780	0.00759*	0.0103*	-0.00107	-0.00121
	(0.00130)	(0.00417)	(0.00570)	(0.0116)	(0.00116)
SZ_1	0.000730	0.00551***	0.00964	-0.00740	-0.000184
	(0.000859)	(0.00161)	(0.00644)	(0.00624)	(0.000765)
Lev_1	-0.0159**	-0.0237**	-0.0544	0.0272	-0.0118*
	(0.00623)	(0.0116)	(0.0470)	(0.0465)	(0.00669)
Ret_1	0.0123**	0.0438***	0.00193	-0.000433	-0.00341
	(0.00607)	(0.0109)	(0.0196)	(0.0190)	(0.00648)
Inv_1	0.434***	0.185***	0.164	0.368***	0.678***
	(0.0214)	(0.0344)	(0.138)	(0.0804)	(0.0271)
Intercept	-0.00493	-0.0930***	-0.154	0.183	0.0160
	(0.0158)	(0.0293)	(0.118)	(0.155)	(0.0149)
N	2360	924	68	152	1216
R-Sq	0.290	0.164	0.865	0.307	0.580
Years Effect	Yes	Yes	Yes	Yes	Yes
Industry Effect	No	Yes	Yes	Yes	Yes
Country Effect	Yes	No	No	No	No

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The positive significant coefficient of WTQ indicates that firms with higher growth opportunities tend to invest more. This result is in accordance with the findings of Fazzari et al.(1988) and Arsalan et al. (2006). The positive significant coefficient of cash indicates that firm finances their investments through internal funds. This result complies with the findings of Fazzari et al. (1988); Kaplan and Zingales (2000); Almeida et al. (2004) and Arsalan et al. (2006). Since there is a wedge between internal and external financing, firms use internal finances to undertake positive NPV projects. According to Almeida et al. (2006), the reliance of firms on cash holdings for investment is greater for those firms who face high information asymmetries. However, Kaplan and Zingales (2004) thought that both constrained (firms facing extreme information asymmetries) and unconstrained (firms facing fewer information asymmetries) firms finance their investments from internal sources namely cash holdings. The positive significant coefficient of WRET indicates that firm's stock higher returns facilitate firms to invest more (Richardson, 2006). Leverage has a negative significant impact on a firm's investment. This indicates that an increase in debt prevents firms to take positive NPV projects because of increasing debt servicing. This result is per the findings of Myers (1977): Jensen (1986) and Stulz (1990).

4.5.2. Impact of Corporate Governance and Islamic Label on Investment Efficiency

Table 13 summarizes the results relating to the impact of corporate governance and Islamic Label on a firm's investment efficiency. Investment Efficiency (Inv Eff) represents absolute residuals Obtained from the Investment equation. Panel A of the table presents the results of the impact of corporate governance on investment efficiency while Panel B of the table indicates the impact of Islamic label on the firm's Investment efficiency.

Table 13: **Impact of Corporate Governance and Islamic Label on Firm's Investment Efficiency**

Panel A	**(All Countries)**	**(Pakistan)**	**(Malaysia)**	**(Indonesia)**	**(USA)**
	Inv Eff	Inv Eff	Inv Eff	Inv Eff	Inv Eff
CG Index	-0.00323	-0.0133***	-0.0300**	-0.0118	-0.00394
	(0.00221)	(0.00320)	(0.0120)	(0.00908)	(0.00400)
Lev	-0.0321***	-0.0108**	-0.116***	0.0325	-0.0542***
	(0.00338)	(0.00444)	(0.0392)	(0.0225)	(0.00656)
Cf	0.0318***	0.0173*	0.0428	0.0422	0.137***
	(0.00890)	(0.00973)	(0.0546)	(0.0328)	(0.0280)
Sz	0.00161***	0.00282***	0.0208***	-0.00372	-0.000386
	(0.000438)	(0.000518)	(0.00523)	(0.00356)	(0.000893)
ROA	0.0385***	0.0773***	0.254	-0.0478	-0.0745**
	(0.0112)	(0.0188)	(0.157)	(0.107)	(0.0370)
TQ	0.00767***	0.00877***	0.0136***	-0.00277	0.00825***
	(0.000634)	(0.00159)	(0.00482)	(0.00436)	(0.00192)
Intercept	0.00720	0.00277	-0.269***	0.149*	0.0487***
	(0.00768)	(0.00830)	(0.0900)	(0.0824)	(0.0166)
N	2360	924	68	152	1216
R-Sq	27.5%	22%	92%	45%	23%
Years Effect	Yes	Yes	Yes	Yes	Yes
Industry Effect	No	Yes	Yes	Yes	Yes
Country Effect	Yes	No	No	No	No
Panel B	**(All Countries)**	**(Pakistan)**	**(Malaysia)**	**(Indonesia)**	**(USA)**
	Inv Eff	Inv Eff	Inv Eff	Inv Eff	Inv Eff
Islamic	-0.00159*	-0.00552***	-0.0220***	-0.00757*	-0.00388**
	(0.000888)	(0.00155)	(0.00770)	(0.00387)	(0.00153)
Lev	-0.0322***	-0.0127***	-0.0876***	0.0338	-0.0544***
	(0.00348)	(0.00458)	(0.0274)	(0.0221)	(0.00648)
Cf	0.0321***	0.0200**	0.0771	-0.0412	0.136***
	(0.00983)	(0.00981)	(0.0643)	(0.0334)	(0.0280)
Sz	0.00159***	0.00269***	0.0288***	-0.00359	-0.000524
	(0.000442)	(0.000529)	(0.00621)	(0.00347)	(0.000898)
ROA	0.0400***	0.0834***	0.306*	-0.0597	-0.0751**
	(0.0119)	(0.0192)	(0.180)	(0.105)	(0.0370)
TQ	0.00763***	0.00903***	0.0162***	-0.00144	0.00824***
	(0.000691)	(0.00161)	(0.00512)	(0.00435)	(0.00192)
Intercept	0.00671	0.000528	-0.413***	0.142*	0.0530***
	(0.00788)	(0.00851)	(0.105)	(0.0804)	(0.0165)
N	2360	924	68	152	1216
R-Sq	27.5%	21%	92%	46%	24%
Years Effect	Yes	Yes	Yes	Yes	Yes
Industry Effect	No	Yes	Yes	Yes	Yes
Country Effect	Yes	No	No	No	No

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Panel A of the table indicates that for the overall sample, that includes all countries, the corporate governance Index (CG Index) has a negative insignificant coefficient for the firm's investment efficiency. This indicates that the corporate governance mechanism failed to mitigate firm's deviation from optimal investment. However, its sign as expected is negative that indicates that corporate governance mechanism discourages investment efficiencies. However, for robustness, we have also estimated OLS under robust standard errors for each country of the sample. The result indicates that in Pakistan and Malaysia, corporate governance mechanisms successfully mitigate inefficient investments. Both countries, CG Index has a negative significant coefficient for investment efficiency. These results are in accordance with the study of Richardson et al (2006) who have claimed that some corporate governance attributes have a negative impact on firm's investment inefficiency but since corporate governance attributes change little over time, that's the reason why we are unable to obtain significant coefficient for corporate governance attributes.

In Overall sample, the control variable of Leverage (LEV) has negative significant co-efficient for investment efficiency. This indicates that as debt increase, due to higher debt servicing cost enables management to refrain from inefficient investments. Thus debt acts as a disciplining tool for management (Jensen, 1986). However, operating cash flow (CF) , that proxy for the availability of internal funds, has a positive significant impact on a firm's investment efficiency. The results are in line with prior literature that indicates that higher growth opportunities invite the firm to invest more (see for example Hoshi et al. (1991) and Schaller (1993) but due to management's overconfidence, firms can sometimes take negative NPV projects (He et al., 2018). Further, to increase short term profitability by young executives, firms tend to overinvest (He et al., 2018).

The results of the Islamic label impact on the firm's deviation from the optimal investment are indicated in Panel B. The results indicate that Islamic label has negative significant coefficient for deviation from optimal investment. Where Firm-specific corporate governance index failed to actively mitigate investment inefficiency (as discussed previously for the overall sample, Indonesia and USA), Islamic label has consistently mitigated investment inefficiency. The exact reason as to why Islamic label mitigates investment inefficiency is unknown to us. However, the probable cause lies in the fact that investment avenues of Islamic label firms are limited due to sharia constraints and that's why managers of these firms invest optimally to give better returns to their investors. However, this qualitative explanation is open for debate and further studies.

4.5.3. Impact of Corporate Governance and Islamic Label on Firm's Overinvestment

Table 14 summarizes the results for the impact of corporate governance and Islamic Label on the firm's overinvestment. Here overinvestment (Over Inv) of the firm is represented by positive residuals obtained from the Investment equation whose results are displayed in Table 12. Panel A of the table indicates the impact of corporate governance (CG Index) on the Firm's overinvestment. While panel B indicates the impact of the Islamic label (Islamic) on the firm's overinvestment.

The results indicate that both corporate governance and Islamic label negatively mitigates overinvestment. However, the Islamic label has a negative significant coefficient for overinvestment. For robustness purposes, we have estimated the equation at the country level. The results indicate that firm-level corporate governance mechanism has negative significant coefficients for Pakistan and Malaysia. This indicates that good corporate governance restrains managers to invest in negative NPV projects. More ever, in the case of Indonesia and the USA,

firm-level corporate governance has failed to effectively mitigate the overinvestment by the firms. However, in case of Islamic Label, we have negative significant co-efficient for over investment in all countries. This indicates that it effectively mitigates the problem of Overinvestment in both developed and developing economies.

Table 14: **Impact of Corporate Governance and Islamic Label on Firm's Overinvestment**

Panel A	(All Countries) Over Inv	(Pakistan) Over Inv	(Malaysia) Over Inv	(Indonesia) Over Inv	(USA) Over Inv
CG Index	-0.00313	-0.0134***	-0.0300**	-0.0132	-0.00314
	(0.00217)	(0.00321)	(0.0120)	(0.00905)	(0.00403)
Intercept	0.00641	0.00255	-0.269***	0.165*	0.0493***
	(0.00794)	(0.00832)	(0.0900)	(0.0836)	(0.0167)
N	2358	924	68	152	1187
R-Sq	0.270	0.217	0.921	0.500	0.227
Control Variables	Yes	Yes	Yes	Yes	Yes
Years Effect	Yes	Yes	Yes	Yes	Yes
Industry Effect	No	Yes	Yes	Yes	Yes
Country Effect	Yes	No	No	No	No

Panel B	(All Countries) Over Inv	(Pakistan) Over Inv	(Malaysia) Over Inv	(Indonesia) Over Inv	(USA) Over Inv
Islamic	-0.00151*	-0.00555***	-0.0220***	-0.00827**	-0.00398**
	(0.000889)	(0.00156)	(0.00783)	(0.00386)	(0.00155)
Intercept	0.00414	0.000287	-0.413***	0.157*	0.0535***
	(0.00725)	(0.00854)	(0.106)	(0.0811)	(0.0165)
N	2358	924	68	152	1187
R-Sq	27%	21%	92%	51%	23%
Control Variables	Yes	Yes	Yes	Yes	Yes
Years Effect	Yes	Yes	Yes	Yes	Yes
Industry Effect	No	Yes	Yes	Yes	Yes
Country Effect	Yes	No	No	No	No

Standard errors in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

4.5.4. Impact of Corporate Governance and Islamic Label on Firm's Underinvestment:

As indicated in the outset, we obtained insufficient observations for underinvestment that is proxied by negative residuals of investment equation. The results presented in Table 15 are the

residuals obtained from investment equation conducted for USA firms. We obtained twenty five negative residuals from USA investment equation. The results indicate that both corporate governance and Islamic label negatively mitigates under investments. However, both have insignificant coefficients

Table 15: **Impact of Corporate Governance and Islamic Label on Firm's Underinvestment**

	(USA) Under Inv	(USA) Under Inv
CG Index	-0.000940	
	(0.00330)	
Islamic		-0.00125
		(0.00144)
Intercept	0.0105	0.0000931
	(0.0158)	(0.0178)
N	29	29
R-Sq	79%	79%
Controls	Yes	Yes
Years Effect	Yes	Yes
Industry Effect	Yes	Yes
Country Effect	No	No

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

4.6. Impact of Corporate Governance and Islamic Label on Firm Value

In this section we will estimate the impact of corporate governance and the Islamic label on firm value. Following the studies of Aggarwal et al. (2008) and Ammann et al. (2011) we have obtained a positive significant coefficient of Corporate Governance Index (CG Index) and Islamic Label for firm value proxied by Tobin's Q (TQ). For Robustness, the estimation was also conducted at individual country level and the results indicated the same findings presented by overall sample.

4.6.1. Descriptive statistics for Value Equation

Table 16 highlights descriptive statistics of variables used in the study. Panel A of the table indicates descriptive statistics for conventional firms while panel B highlights Sharia complaint firms. The Table indicates that, in Overall sample, we had 1,900 and 1,050 firm year observations for each variable of the study for conventional and Islamic firms respectively. This indicates that estimates of our regression will not be victim of biases caused by inadequate observations.

The descriptive statistics highlights some interesting comparison between the Islamic and the conventional firms. TQ used as proxy for value has greater mean for the Islamic firms as compared to the conventional firms. This indicates that Islamic firms enjoy higher economic value as compared to its conventional counterparts. The corporate governance index (CGI Index) has greater mean score for the Islamic firms as compared to the Conventional firms. This indicates that the Islamic firms are better governed as compared to the conventional firms. According to Aggarwal et al. (2008), better governance score has a positive impact on firm's value. Thus we may imply that Islamic label, being proxy of good governance, will also have a positive significant impact on firm's value. However, this interpretation should be approached with caution as arithmetic means tend to give erroneous results in the presence of outliers and difference in observations between two samples. Since the conventional firms in our study has 850 firm year observation more than the Islamic firms, the difference in mean may be due to outliers in the data or larger observations for the conventional firms.

The control variables indicate that the Islamic firms are less levered (LEV) as compared to their conventional counterparts. Further Islamic firms have higher mean values for cash and earnings before interest and tax (EBIT) as compared to the conventional counterparts. As

outlined in level of cash discussion of this study, firms with good governance hold more cash.

Thus the Islamic firms have higher cash mean than conventional firms. Also Islamic firms has to stay in limits for debt ratio, thus it will invest in a positive NPV projects from internal sources primarily through cash. The ratio of property, Plant and Equipment to sales

Table 16: **Descriptive Statistics of Variables in Value Equation**

	(Panel A: Conventional Firms)			
	Mean	Standard Deviation	Max	Min
TQ	1.6280	.8740	3.6098	.7587
CG Index	.4541	.1890	1	0
SZ	16.2425	1.4235	18.7002	14.2685
PGS	.0481	.1021	.2633	-.0717
Cash	.0789	.0858	.2580	.0044
CAPX	.0378	.0427	.1172	-.0178
PPE	.7101	.7054	2.2808	.0925
EBT	.1321	.0949	.3117	.0114
LEV	.2776	.1603	.5158	.0218
R&D	.0111	.0231	.0715	0
N	1900			
	(Panel B: Islamic Firms)			
	Mean	Standard Deviation	Max	Min
TQ	1.9309	.9192	3.6097	.7587
CG Index	.4832	.1974	1	0
SZ	16.4975	1.2806	18.7002	14.2685
PGS	.0557	.0942	.2633	-.0718
Cash	.0996	.0836	.2580	.0044
CAPX	.0426	.0375	.1172	-.0178
PPE	.6614	.7312	2.2808	.0925
EBIT	.1552	.0914	.3117	.0114
LEV	.2339	.1453	.5158	.0218
R&D	.0129	.0247	.0715	0
N	1050			

(PPE) has a lower mean for the Islamic firms than the conventional firms. This indicates the Islamic firms employ less fixed assets as compared to the conventional counterparts. If this observation is combined with profitability (EBIT), we can imply that the Islamic firms generate

more profit by employing less assets as compared to their the conventional counterparts. The remaining control variables have somewhat same means for the Islamic and conventional firms.

4.6.2. Regression Results of Impact of Corporate Governance and Islamic Label on Firm Value

Table 17 highlights the results of the impact of the corporate governance and the Islamic label on firm's value. Panel A highlights the impact of the corporate governance index on firm value while Panel B highlights impact of Islamic Label on firm Value. All variables in equation were winsorized at 1% and 99%. Further all results are with robust standard errors. The standard errors are reported in parenthesis.

4.6.3. Impact of Corporate Governance on Firm Value:

Panel A highlights the results of the Impact of the corporate governance on Firm Value. It can be witnessed from the results of the overall sample that corporate governance index (CG Index) has a positive significant co-efficient for firm value (TQ). This result is in accordance with the findings of Aggarwal et al. (2009) and Ammann et al. (2011). Both the studies indicated that a higher value of governance (Good Governance) has a positive significant impact on the firm value. According to Aggarwal et al. (2009), investment in the corporate governance is not beneficial for controlling shareholders but beneficial for minority shareholders. Thus implementation of good the corporate governance mechanism is translated in to increased firm valuation (Ammann et al., 2011). For robustness purposes, we have estimated the equation at individual country level. The results are mixed. For Pakistan and USA, the corporate governance index has a positive but insignificant coefficient while for Malaysia and Indonesia, the corporate governance index has a positive and significant coefficient. This is due to the fact that our corporate governance index is constructed by using firm level the corporate governance

attributes. According to Aggarwal et al. (2009), investors put more value on the firm specific the

Table 17 : **Regression Results for Impact of Corporate governance and Islamic Label on firm performance**

Panel A:	(All Countries)	(Pakistan)	(Malaysia)	(Indonesia)	(USA)
	TQ	TQ	TQ	TQ	TQ
CG Index	0.165**	0.0902	0.329*	0.543**	0.109
	(0.0711)	(0.115)	(0.176)	(0.253)	(0.0845)
SZ	-0.250***	0.0332**	-2.199***	-0.0259	-0.272***
	(0.0263)	(0.0167)	(0.268)	(0.0492)	(0.0157)
PGS	0.785***	0.606***	-0.441	0.956**	0.0778***
	(0.153)	(0.168)	(0.913)	(0.408)	(0.0158)
Cash	0.205***	0.153***	-0.0472	-0.579	0.178***
	(0.0183)	(0.0304)	(0.172)	(0.705)	(0.0225)
CAPX	-0.00532	-0.750*	0.516***	0.0834*	0.176***
	(0.0214)	(0.420)	(0.160)	(0.0444)	(0.0248)
PPE	-0.240***	-0.138***	0.367	-0.509***	-0.359***
	(0.0185)	(0.0307)	(0.277)	(0.0891)	(0.0306)
EBIT	0.0120	0.00416	0.333*	0.123**	0.148***
	(0.0110)	(0.00257)	(0.178)	(0.0528)	(0.0494)
LEV	-0.490***	-0.358***	0.526**	-0.285***	0.0249
	(0.0955)	(0.118)	(0.212)	(0.0578)	(0.139)
R&D	0.218	-	0.218*	0.0619	0.811
	(0.771)	-	(0.116)	(0.0394)	(0.746)
Intercept	2.324***	1.066***	2.607***	2.218*	6.931***
	(0.0609)	(0.257)	(0.597)	(1.195)	(0.275)
N	2950	1155	85	190	1520
R-Sq	38%	16%	89%	65%	47%
Years Effect	Yes	Yes	Yes	Yes	Yes
Industry Effect	No	Yes	Yes	Yes	Yes
Country Effect	Yes	No	No	No	No
Panel B:	(All Countries)	(Pakistan)	(Malaysia)	(Indonesia)	(USA)
	TQ	TQ	TQ	TQ	TQ
Islamic	0.110***	0.0980*	1.280***	0.345***	0.0466
	(0.0288)	(0.0560)	(0.397)	(0.0793)	(0.0344)
SZ	-0.248***	0.00469	-2.013***	-0.0430	-0.269***
	(0.0263)	(0.0142)	(0.239)	(0.0464)	(0.0157)
PGS	0.727***	0.0533	0.0894	0.762*	0.0786***
	(0.153)	(0.0449)	(0.798)	(0.395)	(0.0158)
Cash	0.208***	0.172***	0.00646	0.000611	0.178***
	(0.0185)	(0.0301)	(0.176)	(0.706)	(0.0227)
CAPX	-0.00424	-0.464***	0.521***	0.108**	0.177***
	(0.0219)	(0.125)	(0.158)	(0.0426)	(0.0248)

PPE	-0.240***	0.000609***	-0.0280	-0.549***	-0.362***
	(0.0185)	(0.000233)	(0.338)	(0.0882)	(0.0309)
EBIT	0.0120	0.00131	0.477**	0.131**	0.149***
	(0.0112)	(0.00187)	(0.203)	(0.0535)	(0.0495)
LEV	-0.454***	-0.402***	0.465**	-0.268***	0.0359
	(0.0957)	(0.133)	(0.182)	(0.0562)	(0.139)
R&D	0.336	-	-0.0597	0.0591*	0.832
	(0.771)	-	(0.151)	(0.0342)	(0.748)
Intercept	2.346***	1.425***	2.209***	2.678**	6.834***
	(0.0526)	(0.233)	(0.589)	(1.138)	(0.270)
N	2950	1155	85	190	1520
R-Sq	0.385	0.144	0.903	0.672	0.470
Years Effect	Yes	Yes	Yes	Yes	Yes
Industry Effect	No	Yes	Yes	Yes	Yes
Country Effect	Yes	No	No	No	No

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

corporate governance variables where country has weak share holder protection. However, the firm specific the corporate governance variables have insignificant coefficients for countries having strong investor protection.

4.6.4. Impact of Islamic Label on Firm Value

Panel B of Table 17 highlights results of the Islamic Label (Islamic) on the firm value. It can be evidenced from the results of the overall sample that the Islamic label has a positive significant coefficient for the firm value at 1% confidence interval. This momentous significant coefficient of the Islamic label indicates that it positively contributes to the firm value. Since our previous results in panel A indicated that a good corporate governance has a positive significant impact on the firm value, the result is replicated by Islamic label identifying that it can proxy for the good governance. For robustness purposes, we have conducted estimation at the country level. The results indicate that, with the exception of USA, the Islamic label has a positive significant coefficient for firm value in Pakistan, Malaysia and Indonesia. What makes it impact the firm value is still unclear. It is not because of debt or high cash holdings. Neither it's because

of increased profitability as indicated in summary statistics. Unfortunately, there is no literature or prior studies, to the best of our knowledge that has studied the Islamic label, governance and value nexuses. One plausible explanation may lie in the fact that since the Islamic label firms have a higher governance score mean, the Islamic label in fact is proxing for a good governance.

From a theoretical point of view, good corporate governance mitigates agency problems. Thus according to agency theory, firm value is related to governance. The higher the governance, the higher will be the value of the firm. This is because, a good governance mitigates misappropriation of free cash flows and make optimal investments. This in turn increases the value of the firm by increasing share prices of firm. Also, good governance reduces the monitoring cost of fund providers and thus reduces the cost of capital of the firm that increases firm value. A positive significant coefficient of the Islamic label and governance validates this theoretical discussion.

4.6.5. Discussion on Control Variables

Control variables have the same signs as obtained in the study od Aggarwal et al. (2009) and Ammann et al. (2011). In the overall sample, size has a negative significant co-efficient for firm value. This indicates that firms with larger assets have low growth opportunities and thus the management face decreasing returns to scale. Firm's management tend to invest in negative NPV projects for personal gains (Jensen & Mecklang, 1986) that decreases the firm's value.

The past two year growth in sales (PGS) has a positive significant coefficient for value in our study. This indicates that a positive growth in sales increases the economic value of firm. Cash has a positive significant coefficient for the firm value. According to Aggarwal et al. (2009), investors of the firms with good corporate governance tend to put more cash in the hands of the management. This indicates their belief that this cash will be eventually used for their

benefit. This increase in cash holdings increases the value of the firm.

The property, plant and equipment (PPE) has negative impact on the value of firm. According to Ammann et al. (2011), the companies operating with a higher or lower proportion of fixed assets may find it less optimal to implement strict the corporate governance practices as these assets are hardly misused. Leverage has a negative significant impact on the value as an increase in leverage may compel the management to accept board members that represent financial institutions. These members make management those decisions that serve the interest of financial institutions and causes reduction in value.

Chapter 5

Conclusion and Recommendations

The study was primarily conducted to see whether the Islamic label can proxy for good governance. In this context the Islamic label was empirically tested for the impact on firm's governance, value and different corporate finance decisions of the firm. The Islamic label was tested alongside corporate governance to verify if the Islamic label replicates the results of a good governance firms.

In order verify our hypothesis and to answer our research questions, cross country study was conducted. The countries included Pakistan, USA, Indonesia and Malaysia. Thus our study examines the results in both developing and developed economies. For robustness purposes, only those firms were declared Islamic that were present on the sharia list of the respective country sharia Indices throughout the estimation period.

We now conclude our study by answering the research questions outlined in the introduction of study.

5.1. Islamic Label and Firm Governance

The study found compelling evidence that the Islamic label firms have a positive significant impact on the firm governance.

We have provided the evidence that the Islamic label in the overall sample that included all countries had a positive and significant impact on firm governance. Further at the country level, we obtained a positive significant co-efficient of I the slamic label for firm governance. We conducted variety of robustness test such as examination at country level and inclusion of

Islamic criteria to see if results stay the same. The results indicated that the Islamic label maintained its positive significant impact on firm governance. This result helped us to achieve our first objective that indicated that Islamic label has positive impact on firm's governance.

5.2. Islamic Label Impact on Level of Cash Holdings

The study found compelling evidence that the Islamic Label has a positive significant impact on cash holdings of the firm.

As pointed out in the literature of governance, good governed firms tend to keep a higher level of cash holdings. The reason is that shareholders of these firms have confidence on the management that they will not misappropriate cash and that cash will be used for their benefit. Here too, the Islamic label replicated the behavior of good governed firms and we found a statistically significant co-efficient of Islamic label on the level of cash holdings. This indicates that shareholders of the Islamic Firms have faith in management that cash will be used for their benefit.

For robustness of the results, estimation for the impact of the Islamic Label on the level of cash holdings was also conducted at the country level. The results replicated the findings of the Overall sample and we found a positive significant coefficient of the Islamic Label for the level of cash holdings for each country. These results helped us in attaining our second objective to assess the impact of the Islamic label on cash holdings of the firms.

5.3. Islamic Label and Value of Cash

The study obtained the evidence that the Islamic Label firms and firms with a good corporate governance tend to value cash same. Shareholder of I the slamic Firms tends to value cash at .04 cents for $1 of additional cash holdings. Similarly, shareholder of a good governed

firms tends to put a value of .02 cents for $1 of additional cash holdings. The p-value of difference in co-efficient of change in cash holdings between the Islamic label firms and the good governed is statistically insignificant. This indicates that co-efficient of the change in cash holdings of the Islamic and the good governed firms are not different from each other.

For robustness purposes, we estimated the results at individual country level and end up with the same conclusion. All results indicated that there is no significant difference between the co-efficient of change in cash holding of Islamic and good governed firms. This indicates that the Islamic Label firms replicate the results of the good governed firms. These results helped to achieve the third objective that aimed at finding how much value investor of the Islamic firm put on its cash holdings

5.4. Islamic Label and Value of Dividend

The study obtained the evidence that the Islamic label firms and firms with the good corporate governance scores value dividends same. We found that shareholder of Islamic firm value dividend of $1 at 0.1 cent while the shareholder of firms with good corporate governance values it at 0.19 cents. The difference in coefficients of dividends between the Islamic label firms and firms with the good corporate governance scores is insignificant. This indicates that Islamic label tend to replicate the good governance. These results helped to achieve fourth objective that aimed at finding how much value investor of the Islamic firm put on its dividends.

For robustness, we replicated the results at the country level and with the exception of Indonesia; we found results similar to previous findings. In Pakistan, Malaysia and USA the study obtained insignificant difference between the coefficient of dividends the of Islamic and good governance score firms. Since dividends have country, Industrial and behavioral patterns, in Indonesia firms that pay dividend are perceived positively by general investors. Thus we may

conclude that Indonesian results regarding dividends should be approached with caution as we did not control for behavioral patterns in our estimations.

5.5. Islamic Label and Investment Efficiency

We have strong evidence that the Islamic label ensures investment efficiency. Despite the fact that the firm level corporate governance variables failed to effectively mitigate deviation from optimal investment in the overall sample, Indonesia and USA, Islamic label has negative significant coefficient for deviation from optimal investment in the overall sample and at country level.

Further, we have obtained evidence that the Islamic label negatively mitigates overinvestment by the firms. However, due lack of observations, we could not investigate its impact on the underinvestment in case of the overall sample, Pakistan, Indonesia and Malaysia. In case of USA, we found that both Islamic label and corporate governance had a negative coefficient for the underinvestment. However, these coefficients were statistically insignificant. Overall, we found that in case of Investment Efficiency, Over Investment and Under Investment, both the Islamic Label and the Corporate Governance had a negative co-efficient, this indicates that the Islamic label firms replicate the qualities of the good governance. These results helped us achieving our fifth objective to assess the mitigation role of the Islamic label on the firm Governance.

5.6. Impact of Islamic Label on Overinvestment of Free Cash Flow

Our study has obtained the evidence that the Islamic label negatively mitigate the problem of free cash flow appropriation to overinvestment. However, the results failed the test of robustness. Similarly, we found that the firm level corporate governance negatively mitigates the

overinvestment of free cash flow but it has statistically insignificant coefficient. However, in robustness tests we obtained mixed evidence of mitigating role of the corporate governance. In the case of Pakistan, it strongly mitigates overinvestment of free cash flow but in the case of remaining countries it failed to mitigate overinvestment of free cash flow. The results however show that both the Islamic label and the corporate governance proxy had same signs. This indicates that the Islamic Label replicate the results of the good corporate governance. These results helped us attaining our sixth objective to assess if Islamic label mitigates overinvestment of free cash flow.

5.7. Impact of Islamic Label on Firm Value

The study found a compelling evidence that Islamic label has a positive impact on firm's economic value. Similarly, corporate governance also had positive impact on firm value. Both have statistically positive significant coefficient for firm value. These results helped us in attaining our seventh objective to assess the impact of Islamic Label and corporate governance on firm value.

In case of the corporate governance, it has mixed results when tested for robustness. In case of Malaysian and Indonesian firms, Firm level corporate governance has a positive significant impact on firm value. However, in case of Pakistan and USA, it has a positive but insignificant coefficients. The Islamic label, with exception of USA, has a positive significant coefficients for firm value. However, in USA it has positive but insignificant coefficient.

5.8. Islamic Label as Proxy of Good Governance

Based on the above discussion, we suggest that Islamic label can proxy for good governance. It's worthwhile to note that the Islamic label mimics the results of good corporate

governance. Thus we have successfully achieved our eighth objective to establish the Islamic Label as proxy of the good governance. However, how it ensures the good governance is still unclear. We have introduced leverage as the control variable but even then the Islamic label has a positive significant coefficient for the firm governance. This indicates that its impact on the governance is not due to low debt characteristic of Islamic firm. Further, it's also not due to other the Islamic criteria of cash holdings as we got statistically positive coefficient for the Islamic label by using cash as control variable.

However, in all estimations, the Islamic label consistently gave results that are associated for good governance firms by the literature of governance. Thus we conclude that the Islamic label can be used as proxy of the good governance.

5.9. Recommendations

Islamic stocks are necessarily socially responsible investments. Thus certification of the Islamic label should also incorporate economic, social and governance criteria. Currently, this criteria is absent in certification of sharia compliance.

All sharia-complaint firms should include sharia scholars in their boards and should be made mandatory for sharia certification. At present this is not a mandatory requirement for sharia certification. These sharia boards will help management to make decisions in accordance with the teachings of Islam and will compel the firm to contribute to economic welfare of the society.

At present, the Islamic scholars that give sharia complaint certification are also members of the board of Islamic firms. This creates conflict of interest. Thus we recommend that scholars who issue sharia complaint certifications should be restrained to take any position as director of the sharia complaint company.

Our study recommends that the Islamic firms should focus on availing their growth

opportunities. They should invest more as our study indicates that Islamic firms make less investment as compared to their conventional counter parts. Further our study indicates that the Islamic firms have more growth opportunities than their conventional counterparts. Since Investors value cash higher in the hands of management of Islamic firms, they should utilize it to increase their investments in positive NPV projects to increase wealth of their shareholders.

The Islamic teachings indicate that firms should not only operate under profit motive but have to be socially responsible. However, expenditure on corporate social responsibility (CSR) is not included in the criteria for the Islamic certification. We recommend that expenditure on CSR should be included in sharia compliance as it is in line with the spirit of Islamic way of doing business.

Our study observed that the Islamic firms make their investments from internal cash holding and refrain from taking interest bearing debt. Thus because of limited options to finance their investments, the financial institutions should lend to the Islamic firms on profit and lost sharing basis. This facility will enable these firms to increase investments as Islamic firms have higher growth opportunities than their conventional counterparts.

As we have observed that the Islamic label has a positive impact on firm value, the government should provide incentives to the firms to embrace sharia compliance. Since they are low on debt, they could not reap tax benefits as their conventional counterparts. Thus government should give tax rebates to firms who have decided to stay Islamic as a matter of policy. This will urge reduce the Islamic firm's cost and urge the management to stay Islamic for longer period of time.

Our study indicated that Islamic stocks have more returns than their conventional counterparts. Further Islamic firms have lower cash flow volatilities than their conventional

counterparts. These two characteristics make us recommend that investors should invest more in Islamic stocks for greater returns and low risk.

Most of the researches made on Islamic Firms is regarding banking industry but research on value, governance and other corporate finance decisions of manufacturing firms that are sharia complaint is nearly inexistent. We recommend that further studies should be carried out to fill this gap.

We recommend practitioners to use the findings of our study to motivate potential investors to invest in Islamic Stocks. We have tried to fill the gap of academic research that was needed by the practitioners of Islamic finance to convince general public that their wealth is safe in Islamic securities.

5.10 Future Research Directions

The future research can be carried out by incorporating CSR as moderator with Islamic label to study its impact on firm governance, value and other corporate finance decisions. Further, we have included time invariant Islamic dummy. The future research may accommodate time variant dummy to allow for other powerful panel data estimation techniques such as fixed effect model and dynamic panel data model. Further, a comparative study can also be conducted to see what happens to firm governance and value in years when the firm was Islamic and in years when it practiced conventional corporate finance practices.

The same research can be replicated with larger samples by including other regions such as MEENA countries for robustness of results. Also the study can be replicated by including larger time periods for enhanced generalizability and robustness.

Appendix 1

Appendix 1.1 Value of Dividend Under Islamic Label, High Governance Score & Low Governance Score Firms (Pakistan)

	(1.Islamic) V	(2.High Governance Score) V	(3.Low Governance Score) V	P-Value Diff 1&2	P-value Diff 1&3	P-value Diff 2&3
E	0.204	-0.218***	-0.0266	0.0026	0.0503	0.1495
	(0.136)	(0.0633)	(0.0546)			
DE	-0.163	0.143***	0.0104	0.0050	0.0457	0.1440
	(0.121)	(0.0421)	(0.0486)			
DE_{t+1}	0.0261	0.00915	0.0225	0.8261	0.9648	0.8333
	(0.121)	(0.0524)	(0.0502)			
DA	0.101	0.0349	-0.00771	0.3189	0.0876	0.3771
	(0.115)	(0.0677)	(0.0322)			
DA_{t+1}	0.0476	0.0264	0.00310	0.6691	0.5146	0.7151
	(0.0967)	(0.0572)	(0.0335)			
INT	-0.0858	-0.112**	-0.0136	0.6804	0.2387	0.0376
	(0.0855)	(0.0546)	(0.0385)			
DINT	-0.0277	-0.00506	0.0261	0.5983	0.2029	0.3708
	(0.0973)	(0.0597)	(0.0325)			
$DINT_{t+1}$	-0.0767	-0.0726	0.00931	0.9282	0.0226	0.0365
	(0.101)	(0.0753)	(0.0350)			
DIV	0.221**	0.311***	0.701***	0.2896	0.0379	0.0901
	(0.0920)	(0.0687)	(0.0493)			
DDIV	0.00301	-0.106*	-0.168***	0.0485	0.2412	0.6505
	(0.0518)	(0.0566)	(0.0398)			
$DDIV_{t+1}$	0.138**	0.0824*	0.0344	0.4233	0.2026	0.5598
	(0.0690)	(0.0483)	(0.0334)			

DV_{t+1}	0.0866	0.152***	0.0982*	0.3834	0.9514	0.7887
	(0.0577)	(0.0491)	(0.0508)			
Intercept	-0.0731**	-0.0471	-0.00930	0.0596	0.0027	0.0903
	(0.0302)	(0.0290)	(0.0248)			
N	924	924	924			
R-Sq	0.0611	0.0649	0.316			

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Appendix 1.2 Value of Dividend Under Islamic Label, High Governance Score & Low Governance Score Firms (Malaysia)

	(1.Islamic) V	(2.High Governance Score) V	(3.Low Governance Score) V	P-Value Diff 1&2	P-Value Diff 1&3	P-Value Diff 2&3
E	0.591***	0.559	-0.320	0.8873	0.0107	0.0125
	(0.205)	(0.675)	(0.691)			
DE	-0.0663	-0.0812	0.0472	0.8335	0.2522	0.1899
	(0.0880)	(0.237)	(0.290)			
DE_{t+1}	0.0468	0.151	-0.0163	0.0938	0.3873	0.0025
	(0.0824)	(0.180)	(0.268)			
DA	-0.0253	0.0365	0.00260	0.4605	0.7660	0.4975
	(0.0852)	(0.168)	(0.240)			
DA_{t+1}	-0.0904	0.0149	0.000120	0.2825	0.4235	0.8349
	(0.114)	(0.242)	(0.223)			
R&D	0.0247	-1.441*	0.00699	0.0046	0.6748	0.0048
	(0.0622)	(0.730)	(0.162)			
DR&D	0.00336	1.570*	0.0636	0.0033	0.0826	0.0049
	(0.0619)	(0.883)	(0.165)			
$DR\&D_{t+1}$	0.0169	1.064	0.0796	0.0066	0.1281	0.0107
	(0.0700)	(0.691)	(0.190)			
INT	0.0297	-0.0498	-0.104	0.1334	0.1808	0.5325
	(0.0792)	(0.166)	(0.239)			

DINT	-0.00551	-0.00906	0.0954	0.9526	0.0779	0.0848
	(0.0769)	(0.219)	(0.231)			
$DINT_{t+1}$	0.0103	0.0269	0.0270	0.7535	0.7321	0.9978
	(0.0704)	(0.220)	(0.195)			
DIV	0.519***	0.501	1.911**	0.9313	0.0016	0.0017
	(0.191)	(0.628)	(0.748)			
DDIV	-0.0573	-0.0108	-0.391	0.2491	0.0481	0.0218
	(0.0892)	(0.152)	(0.511)			
$DDIV_{t+1}$	0.0747	0.171	0.130	0.2283	0.7082	0.7367
	(0.115)	(0.248)	(0.719)			
DV_{t+1}	-0.111	-0.188	0.185	0.2262	0.0470	0.0064
	(0.0934)	(0.170)	(0.565)			
Intercept	-0.190***	-0.264***	0.332**	0.5059	0.0018	0.0033
	(0.0600)	(0.0982)	(0.150)			
N	68	68	68			
R-Sq	0.880	0.758	0.315			

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Appendix 1.3 Value of Dividend Under Islamic Label, High Governance Score & Low Governance Score Firms (Indonesia)

	(1.Islamic) V	(2.High Governance score) V	(3.Low Governance Score) V	P-Value Diff 1&2	P-value Diff 1&3	P-Value Diff 2&3
E	0.0319	0.414	0.127	0.0062	0.6376	0.0863
	(0.437)	(0.372)	(0.117)			
DE	-0.00654	-0.0574	-0.0569	0.3672	0.5369	0.9958
	(0.235)	(0.180)	(0.0844)			
DE_{t+1}	0.0859	0.119	-0.0227	0.6458	0.0579	0.1091
	(0.223)	(0.196)	(0.0725)			
DA	0.00368	-0.0107	0.0372	0.7628	0.4024	0.4095
	(0.173)	(0.175)	(0.0498)			

DA_{t+1}	0.0347	0.128	0.00849	0.2320	0.5735	0.1228
	(0.245)	(0.343)	(0.0435)			
R&D	0.214	0.205	0.347***	0.8282	0.0091	0.0103
	(0.175)	(0.202)	(0.0782)			
DR&D	0.0178	-0.0469	-0.183	0.2333	0.8061	0.8685
	(0.267)	(0.160)	(0.785)			
$DR\&D_{t+1}$	-0.101	0.00423	-0.408	0.0124	0.4921	0.3503
	(0.183)	(0.122)	(0.424)			
INT	0.0125	0.0604	0.00593	0.2490	0.8954	0.2538
	(0.153)	(0.181)	(0.0571)			
DINT	-0.0264	-0.0276	0.0501	0.9795	0.0639	0.1522
	(0.132)	(0.236)	(0.0478)			
$DINT_{t+1}$	-0.0298	0.0475	0.0406	0.1648	0.0286	0.9068
	(0.118)	(0.234)	(0.0386)			
DIV	0.623	-0.000563	0.776***	0.0098	0.5791	0.0000
	(0.641)	(0.438)	(0.103)			
DDIV	-0.00431	0.00945	0.0510	0.7945	0.5321	0.6665
	(0.216)	(0.162)	(0.0634)			
$DDIV_{t+1}$	0.204	0.0426	0.306***	0.1475	0.4197	0.0183
	(0.297)	(0.202)	(0.0956)			
DV_{t+1}	-0.139	-0.0544	0.130**	0.1795	0.0006	0.0344
	(0.197)	(0.234)	(0.0633)			
Intercept	0.0413	0.0166	-0.0425	0.4677	0.3676	0.5291
	(0.0866)	(0.0854)	(0.0417)			
N	152	152	152			
R-Sq	0.109	0.0655	0.844			

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Appendix 1.4 Value of Dividend Under Islamic Label, High Governance Score & Low Governance Score Firms (USA)

	(1.Islamic) V	(2.High Index Score) V	(3.Low Index Score) V	P-Value Diff 1&2	P-Value Diff 1&3	P-Value Diff 2&3
E	0.669***	0.390***	0.705***	0.0030	0.6299	0.0058
	(0.0508)	(0.0484)	(0.0481)			
DE	-0.0809	-0.0272	-0.0739*	0.3494	0.8948	0.4541
	(0.0497)	(0.0467)	(0.0434)			
DE_{t+1}	0.241***	0.215***	0.282***	0.6871	0.5089	0.4237
	(0.0430)	(0.0475)	(0.0335)			
DA	-0.00681	0.0533	-0.0334	0.3060	0.5514	0.1912
	(0.0545)	(0.0544)	(0.0413)			
DA_{t+1}	0.0570	-0.0443	0.0704*	0.0903	0.7795	0.0937
	(0.0459)	(0.0518)	(0.0379)			
R&D	0.00220	0.266***	-0.0340	0.0369	0.4355	0.0167
	(0.0508)	(0.0449)	(0.0470)			
DR&D	0.192***	-0.0273	0.196***	0.0544	0.9407	0.0501
	(0.0585)	(0.0440)	(0.0498)			
$DR\&D_{t+1}$	0.207***	0.277***	0.0837**	0.5404	0.0802	0.1357
	(0.0546)	(0.0540)	(0.0417)			
INT	0.0151	-0.0240	0.117***	0.5866	0.0698	0.1188
	(0.0641)	(0.0860)	(0.0411)			
DINT	-0.0446	0.0496	-0.0808	0.0933	0.4606	0.0735
	(0.0553)	(0.0678)	(0.0532)			
$DINT_{t+1}$	-0.0143	0.0132	-0.0910*	0.2281	0.2160	0.0992
	(0.0331)	(0.0336)	(0.0499)			
DIV	0.0868	0.168***	0.115**	0.1779	0.6787	0.4886
	(0.0562)	(0.0506)	(0.0467)			
DDIV	-0.0142	-0.0389	-0.0340	0.6785	0.6210	0.9392
	(0.0589)	(0.0496)	(0.0528)			

$DDIV_{t+1}$	-0.00709	-0.0146	0.00881	0.6689	0.5723	0.5037
	(0.0296)	(0.0311)	(0.0381)			
DV_{t+1}	0.147***	0.227***	0.109***	0.4139	0.6593	0.3770
	(0.0482)	(0.0527)	(0.0394)			
Intercept	-0.0934***	-0.00193	-0.0173	0.0000	0.0002	0.5244
	(0.0259)	(0.0263)	(0.0229)			
N	1216	1216	1216			
R-Sq	0.262	0.209	0.396			

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Appendix 2

Appendix 2.1 Value of Cash Under Islamic Label, High Governance Score & Low Governance Score Firms (Pakistan)

	(1.Islamic) V	(2.High Governance Score) V	(3.Low Governance Score) V	P-Value Diff 1&2	P-Value Diff 1&3	P-Value Diff 2&3
E	0.201	-0.222***	-0.0297	0.0029	0.0500	0.1435
	(0.137)	(0.0634)	(0.0545)			
DE	-0.163	0.142***	0.00161	0.0051	0.0598	0.1283
	(0.121)	(0.0420)	(0.0487)			
DE_{t+1}	0.0242	-0.00179	0.0109	0.7333	0.8712	0.8423
	(0.122)	(0.0526)	(0.0504)			
DNA	0.0844	0.0128	-0.0208	0.2774	0.1067	0.4936
	(0.116)	(0.0666)	(0.0323)			
DNA_{t+1}	0.0430	0.0204	-0.0154	0.6458	0.4072	0.5921
	(0.0947)	(0.0553)	(0.0338)			
INT	-0.0820	-0.104*	-0.00935	0.7270	0.2337	0.0363
	(0.0864)	(0.0548)	(0.0385)			
DINT	-0.0281	0.000638	0.0270	0.5061	0.1882	0.4560
	(0.0977)	(0.0596)	(0.0324)			
$DINT_{t+1}$	-0.0675	-0.0511	0.0134	0.7126	0.0414	0.0786
	(0.103)	(0.0757)	(0.0350)			
DIV	0.225**	0.322***	0.712***	0.2575	0.0341	0.0893
	(0.0928)	(0.0691)	(0.0496)			
DDIV	-0.00196	-0.124**	-0.172***	0.0357	0.2215	0.7157
	(0.0532)	(0.0572)	(0.0404)			
$DDIV_{t+1}$	0.139**	0.0784	0.0396	0.3797	0.2072	0.6259
	(0.0700)	(0.0485)	(0.0335)			
DV_{t+1}	0.0877	0.153***	0.0845*	0.3931	0.9861	0.7317

	(0.0580)	(0.0494)	(0.0511)			
DCASH	0.0409	0.100**	0.0712*	0.2082	0.5208	0.6262
	(0.0515)	(0.0417)	(0.0403)			
DCASH$_{t+1}$	0.0125	0.0346	0.0738*	0.4129	0.2813	0.5039
	(0.0539)	(0.0451)	(0.0386)			
Intercept	-0.0731**	-0.0481*	-0.00722	0.0672	0.0021	0.0695
	(0.0302)	(0.0289)	(0.0248)			
N	924	924	924			
R-Sq	0.0613	0.0706	0.319			

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Appendix 2.2 Value of Cash Under Islamic Label, High Governance Score & Low Governance Score Firms (Malaysia)

	(1.Islamic) V	(2.High Governance Score) V	(3.Low Governance Score) V	P-Value Diff 1&2	P-Value Diff 1&3	P-Value Diff 2&3
E	0.656***	0.526	-0.378	0.5939	0.0116	0.0342
	(0.215)	(0.751)	(0.870)			
DE	-0.0818	-0.0368	0.0226	0.5775	0.2655	0.5237
	(0.0902)	(0.286)	(0.311)			
DE$_{t+1}$	0.0338	0.183	-0.0493	0.0267	0.2826	0.0000
	(0.0847)	(0.216)	(0.305)			
DNA	-0.0273	0.0589	0.0174	0.2698	0.6260	0.4128
	(0.0857)	(0.169)	(0.258)			
DNA$_{t+1}$	-0.102	-0.0195	-0.0398	0.4436	0.6155	0.8021
	(0.116)	(0.259)	(0.257)			
R&D	0.0270	-1.485*	0.0198	0.0035	0.8596	0.0035
	(0.0638)	(0.749)	(0.181)			
DR&D	-0.00589	1.593*	0.0662	0.0026	0.0495	0.0042
	(0.0630)	(0.899)	(0.170)			

$DR\&D_{t+1}$	0.00803	1.202	0.0848	0.0020	0.0751	0.0038
	(0.0709)	(0.770)	(0.195)			
INT	0.0421	-0.0614	-0.102	0.0949	0.1507	0.6347
	(0.0805)	(0.184)	(0.242)			
DINT	-0.00611	0.00781	0.101	0.8319	0.0661	0.1322
	(0.0775)	(0.235)	(0.237)			
$DINT_{t+1}$	-0.00210	0.0422	0.0289	0.4539	0.5617	0.8027
	(0.0721)	(0.249)	(0.200)			
DIV	0.444**	0.522	1.976**	0.7260	0.0023	0.0063
	(0.204)	(0.694)	(0.934)			
DDIV	-0.0460	0.0278	-0.405	0.1692	0.0479	0.0154
	(0.0917)	(0.177)	(0.565)			
$DDIV_{t+1}$	0.0708	0.177	0.139	0.2262	0.6556	0.7613
	(0.117)	(0.270)	(0.790)			
DV_{t+1}	-0.101	-0.162	0.274	0.4160	0.0820	0.0279
	(0.105)	(0.206)	(0.757)			
DCASH	-0.0884	0.0546	0.00264	0.0027	0.1518	0.3275
	(0.0764)	(0.163)	(0.308)			
$DCASH_{t+1}$	-0.0559	0.0682	0.0594	0.0472	0.1107	0.8366
	(0.0755)	(0.163)	(0.252)			
Intercept	-0.198***	-0.264**	0.336**	0.5594	0.0016	0.0034
	(0.0610)	(0.1000)	(0.154)			
N	68	68	68			
R-Sq	0.883	0.759	0.316			

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Appendix 2.3 Value of Cash Under Islamic Label, High Governance Score & Low Governance Score Firms (Indonesia)

	(1.Islamic) V	(2.High Governance Score) V	(3. Low Governance Score) V	P-Value Diff 1&2	P-Value Diff 1&3	P-Value Diff 2&3
E	-0.0289	0.442	0.127	0.0028	0.4666	0.0596
	(0.472)	(0.412)	(0.117)			
DE	0.0452	-0.0606	-0.0307	0.0637	0.3942	0.7273
	(0.271)	(0.184)	(0.0892)			
DE_{t+1}	0.0744	0.141	-0.0169	0.3177	0.0977	0.0525
	(0.227)	(0.211)	(0.0747)			
DNA	0.00690	0.00991	0.0403	0.9473	0.4388	0.6061
	(0.166)	(0.205)	(0.0501)			
DNA_{t+1}	0.0308	0.0574	0.00596	0.7794	0.5381	0.5763
	(0.246)	(0.379)	(0.0419)			
R&D	0.233	0.193	0.351***	0.3535	0.0227	0.0039
	(0.187)	(0.208)	(0.0798)			
DR&D	-0.0212	-0.0301	-0.107	0.8737	0.9179	0.9274
	(0.290)	(0.172)	(0.793)			
$DR\&D_{t+1}$	-0.108	0.00445	-0.448	0.0084	0.4566	0.3154
	(0.192)	(0.124)	(0.428)			
INT	0.0242	0.0664	0.000241	0.3172	0.6434	0.1744
	(0.157)	(0.183)	(0.0576)			
DINT	-0.0277	-0.0206	0.0468	0.8918	0.0693	0.2382
	(0.133)	(0.245)	(0.0481)			
$DINT_{t+1}$	-0.0258	0.0598	0.0336	0.1555	0.0668	0.6761
	(0.120)	(0.246)	(0.0396)			
DIV	0.728	-0.0193	0.772***	0.0051	0.8846	0.0000
	(0.711)	(0.457)	(0.106)			
DDIV	-0.00847	0.0301	0.0532	0.4230	0.4867	0.8098
	(0.218)	(0.177)	(0.0641)			

$DDIV_{t+1}$	0.242	0.0555	0.311***	0.1166	0.6140	0.0167
	(0.324)	(0.212)	(0.0970)			
DV_{t+1}	-0.123	-0.0809	0.126*	0.4491	0.0022	0.0147
	(0.207)	(0.253)	(0.0646)			
DCASH	-0.0945	-0.0178	-0.0426	0.2212	0.4324	0.6210
	(0.256)	(0.118)	(0.0690)			
$DCASH_{t+1}$	-0.0118	0.0671	-0.0150	0.0986	0.9479	0.1562
	(0.216)	(0.158)	(0.0761)			
Intercept	0.0438	0.0171	-0.0406	0.4264	0.3724	0.5430
	(0.0877)	(0.0862)	(0.0419)			
N	152	152	152			
R-Sq	0.110	0.0662	0.845			

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Appendix 2.4 Value of Cash under Islamic Label, High Governance Score & Low Governance Score Firms (USA)

	(1.Islamic) V	(2.High Governance Score) V	(3.Low Governance Score) V	P-Value Diff 1&2	P-Value Diff 1&3	P-Value Diff 2&3
E	0.655***	0.398***	0.677***	0.0038	0.7431	0.0084
	(0.0514)	(0.0489)	(0.0489)			
DE	-0.0890*	-0.0239	-0.0851*	0.2552	0.9428	0.3253
	(0.0505)	(0.0470)	(0.0435)			
DE_{t+1}	0.228***	0.231***	0.277***	0.9651	0.4168	0.5785
	(0.0438)	(0.0489)	(0.0335)			
DNA	0.0261	0.0728	-0.0185	0.3960	0.2632	0.1317
	(0.0533)	(0.0530)	(0.0406)			
DNA_{t+1}	0.0459	-0.0486	0.0679*	0.1120	0.6192	0.0995
	(0.0439)	(0.0487)	(0.0376)			

R&D	-0.00353	0.270***	-0.0302	0.0305	0.5884	0.0158
	(0.0514)	(0.0452)	(0.0472)			
DR&D	0.176***	-0.0231	0.188***	0.0727	0.8325	0.0581
	(0.0589)	(0.0451)	(0.0498)			
DR&D$_{t+1}$	0.213***	0.276***	0.0637	0.5765	0.0463	0.1028
	(0.0549)	(0.0542)	(0.0420)			
INT	0.0121	-0.00515	0.131***	0.8378	0.0384	0.1837
	(0.0641)	(0.0884)	(0.0413)			
DINT	-0.0362	0.0374	-0.0646	0.2439	0.5838	0.2158
	(0.0552)	(0.0688)	(0.0539)			
DINT$_{t+1}$	-0.0171	0.0208	-0.106**	0.1635	0.1509	0.0508
	(0.0332)	(0.0345)	(0.0510)			
DIV	0.1000*	0.169***	0.141***	0.2398	0.5242	0.6967
	(0.0565)	(0.0506)	(0.0472)			
DDIV	-0.0170	-0.0424	-0.0365	0.6700	0.6370	0.9286
	(0.0589)	(0.0498)	(0.0527)			
DDIV$_{t+1}$	-0.00430	-0.0190	0.0122	0.4247	0.5373	0.3430
	(0.0299)	(0.0313)	(0.0384)			
DV$_{t+1}$	0.124**	0.242***	0.0879**	0.2051	0.6904	0.2480
	(0.0503)	(0.0539)	(0.0409)			
DCASH	0.0363	0.00428	0.0602*	0.5032	0.5473	0.3847
	(0.0386)	(0.0462)	(0.0338)			
DCASH$_{t+1}$	0.0784*	-0.0761	0.0722**	0.0328	0.9069	0.0929
	(0.0426)	(0.0569)	(0.0350)			
Intercept	-0.0931***	-0.00285	-0.0170	0.0000	0.0003	0.5599
	(0.0259)	(0.0263)	(0.0229)			
N	1216	1216	1216			
R-Sq	0.264	0.210	0.399			

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Appendix 3

Appendix 3.1 No. of firms and Industries in sample taken for Pakistan

Industry	Total No. of Firms	Islamic 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**

Note: out of 231 firms, 53 firms were certified sharia complaint firms

Appendix 3.2: No of firms and Industries in sample taken for Indonesia

Industry	**Total No. of Firms**	**Islamic Firms**
Agriculture	1	1
Automotive And Components	2	1
Basic Industry& Chemicals	3	1
Consumer Goods Industry	4	1
Infrastructure, Utilities & Transportation	5	3
Metal And Mineral Mining	1	0
Mining	8	2

Property And Real Estate	9	6
Trade	5	2
Total Firms	**38**	**17**

Note: out of 38 firms, 17 firms were certified sharia complaint firms.

Appendix 3.3: No of firms and Industries in sample taken for Malaysia

Industry	**Total No. of Firms**	**Islamic Firms**
CONSUMER PRODUCTS & SERVICES	5	3
HEALTH CARE	1	1
INDUSTRIAL PRODUCTS & SERVICES	1	0
Properties	2	1
Telecom	4	4
Transportation and logistics	2	1
Utilities	**2**	**2**
Total`Firms	**17**	**12**

Note: out of 17 firms, 12 firms were certified sharia complaint firms.

Appendix 3.4: No of firms and Industries in sample taken for USA

Industry	**Total No. of Firms**	**Islamic Firms**
Consumer Discretionary	59	17
Consumer Staples	29	14
Energy	23	11
Health care	40	25
Industrials	48	20
Information Technology	48	30
Materials	19	7
Others	4	1
Real Estate	6	3
Telecommunication Services	3	0
Utilities	25	0
Total`	**304**	**128**

Note: out of 304 firms, 128 firms were certified sharia complaint firms.

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