

Does Corporate Governance Model of Interest-free Banks Provide better Protection against Financial Crisis? Empirical Investigation on Corporate Governance Perspectives of the Interest-free Banks Globally

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The Financial Crisis Inquiry Report (FCIC, 2011) concludes, inter alia, that dramatic failures of corporate governance and risk management at many systematically important financial institutions coupled with a systematic breakdown in accountability and ethics were responsible for the financial crisis of 2008-10. Banking system globally halted during crisis but Interest-free Banks were not exposed and none of them needed government recapitalization. In this regard, Chapra (2010b) document that the resiliency of the Interest-free Banks was tremendous during crisis. The purpose of this study to test whether a multi-layer corporate governance model instituted by the interest-free banking system and the supposed adherence to ethical behavior which is, at least theoretically, the cornerstone of Interest-free banking offer a protection against its fallibility to financial crises like the one in 2008-10. Using a sample of 42 interest-free banks from Bangladesh, Bahrain, Malasia, and United Arab Emirates over the period of 2006-2009, we tested two hypotheses in this research. This study contributes to determine whether a multi-layer corporate governance model, and the interest-free banking system based on moral values rather than greed and fear can be appeared as an effectual economic authority in tackling the future financial crises.

Keywords: Corporate Governance, Interest-free Banks, Financial Crisis

JEL Classification Codes: G34 , Y90, G01

I. Introduction and Motivation:

The Financial Crisis Inquiry Report (FCIC, 2011) concludes, *inter alia*, that dramatic failures of corporate governance and risk management at many systematically important financial institutions coupled with a systematic breakdown in accountability and ethics were responsible for the financial crisis of 2008-10. Research on the causes of this financial crisis that nearly brought the global financial infrastructure to its knees is undoubtedly going to continue for many years to come. The proposed study seeks to focus on just these two of the many possible factors that might have caused the crisis. As mentioned at the beginning of this paragraph, these two are – possible corporate governance failure and breakdown in ethics. We propose to test whether a multi-layer corporate governance model instituted by the interest-free banking system and the supposed adherence to ethical behavior which is, at least theoretically, the cornerstone of Interest-free banking offer a protection against its fallibility to financial crises like the one in 2008-10. Interest-free banks can be distinguished from non-interest-free banks in at least two significant ways. Firstly, at the top of its governance structure, interest-free banks must institute a supervisory board, called the *Sharia* Board,

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which acts as an additional layer of governance. Together with the regular board of directors and routine executive and other operational committees, the institution of a *Sharia* Board turns their governance into what we call a multi-layer governance. While their conventional peers are likely to have a governance structure featured with a board of governance and routine executive and board committees. We call it a single-layer governance. Secondly, interest is prohibited in interest-free banking. One of the many reasons why interest is forbidden is that it is considered unethical, and often oppressive. Rather, interest-free banking is founded on a system of profit-and-loss sharing. At the root of the prohibition of interest is a commitment, at least, theoretically, to ethical behavior on the part of the bank. Because the source of prohibition of interest is derived from a spiritual underpinning, one would expect that the likelihood of interest-free banks and their executives to engage in unethical practice is low or at least lower than that of their non-interest-free peers.

These first distinction between interest-free and non-interest-free banks are utilized in the proposed study to examine, first, whether the multi-layer governance provided via *Sharia* board acted as an independent control mechanism in restraining the board of directors or other governance agents from engaging in aggressive lending, excessive borrowing and other risk taking activities. The second distinction between the two systems of banking is utilized to test whether interest-free banking's supposed adherence to ethical conduct resulted in any significant way in shielding them from the devastating effects of the financial crisis via smaller or no engagement in unethical practices allegedly carried out by financial institutions during and prior to the financial crisis. Using a sample of 42 interest-free, we tested the two hypotheses. Our first hypothesis is that the corporate governance structure of interest-free banks played a significant role in minimizing their magnitude of losses, measured by write-downs during and immediately after the financial crisis. Our second hypothesis is that interest-free banks, on average, engaged in less reckless behavior as measured by their exposure to so-called toxic assets.

With the century old institution 'Lehman Brothers' filed for Chapter 11 bankruptcy protection in September 2008, the crisis takes its proper shape in US followed by last moment take over of Merrill Lynch and the rescue package for AIG. Britain's biggest mortgage lender HBOS was also taken over by Lloyds TSB, which was followed by the nationalization of European Banking and insurance giant Fortis and German's rescue plan. Crisis spread sharply across globe and soon it become a global issue. However, a large number of emerging market economies, such as those in Hungary, Ukraine, Latvia and Iceland, has suffered severe financial crises and have sought emergency assistance from the International Monetary Fund (IMF). The situation of Greece was even severe in this regard. In short, large financial institutions have collapsed or been bought out, and the governments in even the wealthiest nations have had to come up with rescue packages to bail out their financial systems.

One of the most obvious manifestations of the current financial crisis is that banks are forced to recognize unprecedented amounts of write-offs to acknowledge poor quality, sub-standard loans and other forms of investments, also known as toxic assets, in their balance sheets. The sheer scale of losses incurred by some banks with apparently 'sound fundamentals' sent shockwaves around the world forcing many prestigious brands in global financial sector to seek government bailouts or bankruptcy protection. Even banks with apparently conservative lending policies, such as the Hong Kong and Shanghai Banking Corporation (HSBC, UK) and UBS (Switzerland) were forced to write-off billions of dollars from their asset portfolios. Write-offs announced by Citigroup (USA), Halifax Bank of Scotland (HBOS, UK), Barclays (UK), Bank of America (USA), ABN Amro (The Netherlands), were staggering. According to European Central Bank (ECB, 2009), major banks in the Euro Zone

alone reported a combined write-off of \$150 billion during 2007-08 fiscal year. Bloomberg estimated a further \$215 billion of write-offs for the fiscal 2008-09 (Bloomberg, 2009) while the ECB estimated a potential further loss of \$283 billion in fiscal years beyond 2008-09. The combined total of actual and estimated write-offs by Euro zone financial institutions alone therefore reaches an astonishing \$648 billion! The single biggest contributor to these quarterly or annual losses is the loan loss provision [Cornett et al 2009, Erkens et al 2009)]. As the crisis deepened, the real quality of their loan portfolios became clearer. They were forced to approve large write-offs in the crisis years instead of in the years the losses actually occurred (on an accrual basis) revealing poor matching of expenses against revenues. The financial crisis revealed that banks did not have mechanisms smart enough to ensure timely monitoring of the quality of their loan assets and recognize them sooner or prevent ballooning of such loans in the first place.

Inadequate market discipline resulting from lack of profit-loss sharing (Chapra, 2008), failure of morality (Siddiqi, 2008) and failure of corporate governance mechanisms in global financial system (Kirkpatrick, 2009) among several other factors is largely attributed to the current financial crisis. It is argued that existing corporate governance mechanisms in financial institutions during the recent financial crisis did not prove effective enough in safeguarding shareholder interests. The collapse of leading Wall Street Institutions and subsequent global financial crisis certainly exposes the drawbacks in the governance mechanism and risk management aspects of the global banking system, which has led to search for prospective solutions to the financial crises. Financial crisis reveals misunderstanding and mismanagement of risks at institutions, organizational, and product levels (Ahmed, 2009). Scholars popularly identified the reasons of the crisis as: **First**, Federal Reserve System propounded the view that the financial institutions were capable of self-regulation and there was no need for government bodies to interfere (Fukuyama, 2008). **Second**, Securities and Exchange Commission relax capital requirements for large investment banks, in turn, Merrill Lynch, Lehman Brothers, Goldman Sachs, Morgan Stanley and Bear Stearns increase their leverage in a great extent (Bear Stearns shot up to 33:1). **Third**, Derivatives markets were deregulated and there was resistance in controlling OTC derivatives markets (Faiola et al. 2008), therefore; financial institutions in the unregulated environment made all effort to reap excessive profits through innovations of new products.

Wilson (2010) view that gifts were provided to entice the feckless to sign up and the mortgage often exceeds the value of the property. By the end of 2006, 55% of estimated total value of mortgage loans (USD10.2 trillion) in US was packed and sold to local and international investors (Norge Bank, 2007). By the end of 2007, amount of OTC contracts reached USD596 trillion with USD58 trillion of CDS, which increases by 36% during the second half of the year (BIS, 2008). Importantly, some of these derivatives were used for hedging but most of them were used for speculation; therefore, financial innovative products had no relation with the real economic situation, e.g., GDP in US was USD13.8 trillion and the World GDP was USD54.3 trillion in 2007 but the derivative products were many more times higher than the GDP (Ahmed 2009).

Banking system globally halted during crisis but Interest-free Banks were not exposed and none of them needed government recapitalization but world's biggest giants e.g., Lehman Brothers and Merrill Lynch were bailed out during crisis. Interest-free Banks strictly comply Basel II (capital adequacy requirements) and requirements from Interest-free Financial Services Board (provides guidelines on compliance). Interest-free Financial Services Board (IFSB) maintains a close contact with Bank for international Settlements. Interest-free banks build up a profit equalization reserve, which is used to finance pay-outs during difficult years;

therefore, depositors benefit from protection to their returns during economic downturns. Importantly, Bank Melli, the largest Interest-free Bank, has profit exceeds USD540 Million in 2007.

Interest-free Financial institutions were not exposed to toxic securities that caused the crisis due to the Shariah prohibition; therefore, they were not directly affected by the crisis (Desai, 2008, and Brewster, 2008). Ahmed (2009) pointed that debt cannot be traded because it can lead to interest and usury (riba) and products like CDO and MBS would not exist in an Interest-free system. However, derivative products like CDS are prohibited under Interest-free law due to the existence of risky or hazardous sale, where details concerning the sale item are unknown or uncertain (gharar). Current financial crisis demonstrates that Interest-free finance is an effectual economic authority. Despite the massive failure of global banking sector, none of the Interest-free Banks collapsed or announces massive write-offs. While the causes of the crisis will be debated for years to come, at least two questions have drawn considerable attention among the academia, investors, and policy makers. First, how Interest-free Banks tackle the situation when financial sectors globally shaken or what are the strengths in the Governance system of Interest-free Banks globally? Second, what role did the regulatory bodies play during the years of aggressive, and viewed by many as irresponsible, lending that led to a credit boom laden with high volume of poor quality (subprime) lending whereas nothing of this kind happened to Interest-free Banks?

II. Hypotheses Development:

Immorality of market participants, financial market indiscipline, and the role of governments were blamed to be the reasons of recent financial crisis (Green, 2010). Chapra (2010a), however, pointed three causes of the crisis namely living beyond means, gambling, and creating credit against credit. The absence of profit loss sharing in the financial system breaks discipline, which leads to excessive risk taking and speculation, and imprudent lending, which, in turn, destabilize the financial system. All false sense of assurance like collateral, securitization, which switched the 'originate-to-hold' model to the 'originate-to-distribute' model of financing, the spread of derivatives like CDS, which made it possible for the lenders to insure themselves against the risk of default, and banks' 'too-big-to-fail' self concept.

Profit and risk sharing model of Interest-free Banking system motivate financial institutions to assess risks more carefully and monitor the use of funds by borrowers more meticulously, reducing excessive lending and depositors, in turn, play more active role in enforcing discipline. Interest-free Finance ensures that credit expansion is consistent with the growth of real economy. There is no room for speculation in interest-free finance because credit is only allowed for the purchase of real goods and services that the seller owns and possesses. However, interest-free financial system never allows creating derivative instruments, which have no link to the real transactions or assets. In this regard, Wilson (2010) highlighted on the growing importance for products that meet genuine customer needs in a sustainable way instead of illusory profits. He also added that Interest-free Banks are unscathed despite of recent financial crisis because Interest-free Finance concentrates on the justice in financial contracts to ensure that none of the parties is being exploited.

The resiliency of the Interest-free Banks was tremendous during crisis (Chapra, 2010b). Green (2010) also emphasis the growing importance of Interest-free banking in avoiding future crises. Two unique aspects, among others, distinguish interest-free banks from conventional banks. *First*, an in-built mechanism of board independence via *Shariah Council*. Generally, Interest-free Banks are driven by Shariah law (ethical law) and they are under strict supervision of Shariah Board (composed of people with high ethical standard);

therefore, they should strictly follow profit-loss sharing and prohibit themselves in creating unethical products, which, in turn, provide them immunity for protection against financial events like crisis. Theoretically, we expect the interest-free banks to have the better governance because all Interest-free Banks have an extra layer of independent supervision via *Shariah Board* from the very inception of Interest-free Banking idea even before Cadbury Report (1981). *Second*, the prohibition of interest and creation of credit against credit, which forbids creating unethical financial innovative products like CDS. The aim of this study is to investigate whether these two differentiating features of Interest-free banks have played roles in shielding banks from loss incurred during global crisis and especially the corporate governance models followed by Interest-free Banks provide them any immunity for protection against crisis. This research will address the following research questions:

RQ1: Does corporate governance model followed by Interest-free Banks provide a better protection against crisis?

RQ2: Does interest prohibition prevent Interest-free Banks in creating innovative derivative products, which, in turn, exposes Interest-free banks in less risky assets?

II.i Risk Taking, Incentive System and CEO pay

Failure of risk management system in financial institutions compounded by poor incentive system encouraged and often rewarded high levels of risk taking. Therefore, failure in risk management system is the major function of incentive and remuneration systems in financial institutions. Executive compensation formulae in most large banks are accused to provide incentives to aggressive risk taking. In an aggressive risk-taking regime, managers are instantly rewarded for short-term profits without adequate safeguards to prevent costly consequences of such actions. This can be referred to as ‘asymmetric risk-reward formula’ whereby compensation plans are biased towards risk taking but not fairly balanced in penalizing managers for actions that expose the whole institution to unacceptable losses. It is important to stress that CEO compensation schemes have not closely followed the performance. The median CEO pay in S&P 500 companies was about USD 8.4 million in 2007, which had not come down although the economy was weakening and company profits shrunk³. Interestingly the CEO pay has risen steadily even during the crisis⁴.⁵ Chen, et al. (2006)⁶ also drew attention to the danger of incentive systems that encourage excessive risk taking in this regard. Erkens, Hung, and Matos (2009) confirmed that financial institutions having CEO compensation contracts with a heavier emphasis on annual bonuses (as opposed to equity-based compensation) experienced larger losses during the crisis and took more risk before the crisis.

Ladipo et al. (2008) noted that in 2006, fixed salary accounted for only 24 per cent of CEO remuneration while annual cash bonuses and long term incentive awards accounted for 36 and 40 per cent respectively. Remuneration plans attaching such high weights to bonuses might encourage short run herding behavior even if they involve unsustainable levels of risk taking. More recently, Nestor Advisors (2009) studied six US financial institutions and found that

³ http://www.shareholderforum.com/sop/Library/20080919_Deal.htm

⁴ The median CEO pay increased by 27 percent between 2009-2010 for 160 CEOs, where bonuses rose by 47 percent and equity awards by 32 percent.

⁵ 17th of April 2011 – 13:48 - <http://www.usatoday.com/money/companies/management/2011-03-31-ceo-pay-2010.htm>

⁶ Chen, C. et al. (2006), “Does stock option-based executive compensation induce risk taking? An analysis of the banking industry”, *Journal of Banking and Finance*, 30.

fixed salary component of top executives averaged only 4-6 per cent of total compensation with stock related compensation hovering at very high levels. At UBS, long-term incentives accounted for nearly 70 per cent of CEO compensation Coles et al (2006) found a strong causal relationship between managerial compensation and investment and debt policy as well as firm risk concluding that a higher Vega (sensitivity of CEO wealth to stock return volatility) induce riskier policy choices (higher leverage, investment in riskier assets and projects with positive NPV, higher investments in R&D and less in property, plant and equipment). While lower Delta (Sensitivity of CEO wealth to stock price) could align the interest of managers and shareholders, by sharing gains and losses, and therefore encourage management to work efficiently and effectively. They also highlight the convex relationship between these two measures, where Vega, as option-based compensation, could lower the aversion to risky policies hired by managers resulted from high Deltas (Equity-based compensations). A higher Vega means relatively aggressive risk-taking by managers, as a low Delta implies the same.

CG code VI.D.4. calls for alignment of incentives and remuneration systems with longer term interests of the company and its shareholders. A number of other CG codes also stress on meaningful shareholdings by executive directors with the same end in view. Early literature found a non-linear relationship between the fraction of the shares held by a member of a board and firm performance by market-based measure (Tobin's Q) and less significant by an accounting-based measure (ROA/ROE) (e.g., Morck, Shleifer and Vishny, 1998, McConnell and Servaes, 1990, Hermalin and Weisbach, 1991 and Agarwal and Knoeber, 1995). Although only a few European banks had formalized such policies in 2006, the actual amount of stock owned by the top executives in the banks studied by Ladipo et al. (2008) was well above 100 per cent of annual fixed salary. Interestingly, Nestor Advisors (2009) reports that financial institutions that collapsed had CEOs with rather high stock holdings and, therefore; had incentives to be risk averse, whereas the ones that survived had strong incentives to take risks. With respect to non-executive directors, it is often argued that they should acquire meaningful shareholdings but not so large as to compromise their independence. Only a few European banks so far disclosed having such policies. UBS actively encourages director share ownership and pays board fees either as 50 per cent in cash and 50 per cent in UBS restricted shares, which cannot be sold for four years from grant, or as 100 per cent in restricted shares. Credit Suisse also has a similar plan.

However, Merrill Lynch moved to reduce incentives for bankers to take short-term risks and out-sized bets. Others such as Citibank appear to be attempting to link bonuses of senior managers and junior employees to bank's overall performance (Financial Times, 30 June, p. 1). UBS also announced reforms taking effect in 2009. Heller (2008) highlights the asymmetric nature of the system of bonuses in investment banks that provide incentives for substantial risk taking while allowing no room for banks to reduce costs when they have to. These plans tend to offer unlimited upside potential to the executive concerned without any downside risks. Losses are borne entirely by the bank and consequently by the shareholders while big chunks of gains accrue to executives in the forms of bonuses. In support, Heller (2008) notes that a staff member who wanted to look like an exceptional trader and achieve a higher bonus undertook the alleged fraud at Société Générale. Along the lines of Heller, the International Institute of Finance (2008b) has proposed principles to cover compensation policies that illustrate the concerns about many past practices. The senior Supervisors Group (2008, p. 7) and Financial Stability Forum (2008a) noted whether compensation and other incentives have been designed well enough to achieve an appropriate balance between risk

appetite and risk controls, between short run and longer run performance, and between individual or local business unit goals and firm-wide objectives.

In addition, incentive systems at sub-executive levels also cause concern for non-financial companies, e.g., transactions-based compensation and promotion might lead to corrupt practices contrary to company policies and interests. Audit Committees, a key component of the corporate governance structure, appear to be becoming aware of the issues as well. KPMG survey noted that, *“while oversight of compensation plans may generally fall within the responsibility of the remuneration committee, audit committees are focusing on the risks associated with the company’s incentive compensation structure. In addition to risks associated with an emphasis on short-term earnings, audit committees want to better understand the behaviour and risks that the company’s incentive plans encourage and whether such risks are appropriate.”*⁷

II.ii CEO Pay-for-Performance (PPS) Sensitivity:

Bergstresser and Philippon’s (2006) measure of incentive to manage firm performance is popular in CEO PPS. The higher the PPS, the more sensitive is management’s pay to the performance of the firm. This ratio of top executive officer pay-for-performance (PPS) is important to investigate. A natural measure of the sensitivity of CEO wealth to firm performance would compare the value of option grants to other compensation. Indeed, option grants have been used as a proxy for incentives to manage earnings in several studies (e.g., Bergstresser and Philippon, 2006; Cheng and Warfield, 2005; and Cohen et al. 2005). Because option grants are skewed, however, the ratio of option holdings to other compensation could contain extreme outliers.

II.iii Board of Directors Stock Ownership and Monitoring Management

Literature on the role of the board of directors in the modern corporation has focused on board effectiveness in monitoring management (Fama and Jensen, 1983). It is argued that stock ownership by board members creates incentives to closer board monitoring of managers and thus helps resolve agency conflicts between directors and shareholders (e.g., Brickley et al. 1988; and Brown and Maloney, 1999). When board members own stock they are more likely to monitor managers, directing them to improve firm performance and, consequently, the value of the firm. Members of the boards are divided into three categories: inside directors, affiliated directors, and unaffiliated directors. Inside directors could be defined as directors or bank executives and any director who was an executive officer of the bank and who is currently serving as chairman of the board of directors. Affiliated directors are those directors who have relationships with the bank listed in the proxy statement beyond loans made in the normal course of business. Outside or unaffiliated directors are those directors who have no discernable association with the bank other than the directorship.

In addition to Non-CEO ratios discussed, we might adopt another measure based on Tournament theory, as a branch of agency theory to quantify the level of risk-taking by top executives depending on the CEOs compensation (Possible measure, the CEO compensation over next highly paid management team member or over total compensations of the board. It can be also connected to alignment of boards and shareholder interests if we emphasize on the fraction of long-term equity-based compensations (Carpenter and Sanders (2002)))

⁷ Kirkpatrick, G. (2009). The Corporate Governance Lessons from the Financial Crisis. Financial Market Trends. Vol. 2009/1, p. 16.

II.iv Board of Director Independence and CEO Turnover

There is considerable literature on the impact of board composition, specifically, the ratio of inside *versus* outside directors, on firm performance. Boards dominated by outsiders, i.e., independent directors, are arguably better suited to monitor and control managers. Outside directors are likely to be more independent of the firm's management and to bring a greater breadth of experience to the firm. A number of studies link the proportion of outside directors to financial performance and shareholder wealth (Cornett et al., 2008; Byrd and Hickman, 1992; and Rosenstein and Wyatt, 1990). These studies consistently find better stock returns and operating performance when outside directors hold a significant proportion of board seats. Inside and affiliated board members are expected to be more easily influenced by the CEO than are outside board members. Therefore, larger percentage of outside directors reflects greater board independence. If, as prior research has shown, outside directors on the board enhance monitoring, they are likely to be associated with superior performance during the financial crisis. Independent members in the board are expected to have a constraining effect on executive as well as CEO behavior. Thus, a higher level of board independence is associated with boards that are less dominated by the CEO.

CEOs were more likely to be replaced following large losses in firms with greater board independence, higher institutional ownership, and lower insider ownership (David Erkens, Mingyi Hung, and Pedro Matos, 2009). Ironically, firms with more independent boards and institutional ownership appear to have experienced larger losses during the crisis, and firms with more institutional ownership are found to have taken more risks before the crisis (David Erkens, Mingyi Hung, and Pedro Matos, 2009). We expect a positive association between board independence and performance. Board independence will be measured by the number of independent directors in the board divided by the total number of directors in the board. Linck et al (2008) also found that high managerial ownership (as a proxy for managerial power) is associated with smaller and less independent boards, consistent with the hypothesis that managerial ownership and board monitoring are substitute governing mechanisms. Therefore we suggest introducing level of managerial ownership as a proxy for board dependence, in order to parallel to our results from the parameter introduced below, we have a measure functioning in the reverse order to examine the board dependence. As higher the managerial ownership becomes, we do expect that the board independence jeopardize and therefore higher managerial ownership would be associated with the less performance and perhaps be less in shareholders' interest. Another support for this argument is that, when the insider directors (board members) have more opportunities to extract benefits for private use, they would be more willing to open up to outsiders, and usually in this case CEO has stronger power and control over the board. Therefore the physical presence of the independent board might not only be a comprehensive measure of corporate governance quality.

II.v Number of Board Meetings per Year

Vafeas (1999) finds that a greater level of involvement and oversight by the board of directors is a characteristic of firms that are value maximizers for their owners. Specifically, he finds that a greater number of board meetings per year is associated with increased firm performance. Pertinent to this study, previous findings suggest that if frequent board meetings lead to more effective monitoring in a firm they would also be associated with better performance before and during the financial crisis. Cornett et al (2009) report an average of 10.40 meetings per year in the crisis period.

Brick et al (2010) introduces two alternative proxies for the level of Board Monitoring Activity, firstly the log of the annual number of board meetings (taking log is based on the

assumption of non-linearity and therefore efficacy of the return to scales diminishes by having larger number of board meetings) and second proxy is the log of the product of the number of independent directors and the number of times the board meets in a year)

II.vi CEO/Chair Duality

In about 80 percent of U.S. companies the CEO is also the chairman of the board (Brickley et al. (1997)). CEO/chair duality concentrates power in the CEO's position, potentially allowing for more management discretion. The dual office structure also permits the CEO to effectively control information available to other board members and thus impedes effective monitoring (Jensen, 1993). Consequently, if CEO/Chair duality impedes effective monitoring, it could affect bank performance before and during the financial crisis. We expect a negative association between CEO-Chair duality and performance. A dichotomous variable will be used to proxy CEO-Chair duality.

II.vii Friendly Nominating Committee (Sarbanes-Oxley Act 2002)

The primary duty of the nominating committee is to lead the recruitment process for qualified members of the board of directors. Given that the nominating committee is charged with finding members of the board, and that the board is charged with monitoring the firm's management, the composition (insiders vs. outsiders) of the nominating committee can affect the quality of monitoring and ultimately, firm performance. Shivdasani and Yermak (1999) observe that when the CEO is on the nominating committee or no nominating committee exists, firms appoint fewer independent outside directors. As a result of this conflict of interest in the set up of a firm's nominating committee, the Sarbanes-Oxley Act 2002, requires nominating committees to be "independent." Accordingly, after 2002, only a few firms have the CEOs serving on the nominating committee. However, nominating committees that are not composed entirely of independent directors can still be "friendly" to the CEO in the selection process. We expect a negative association between a friendly nominating committee and firm performance.

There is a set of literature contrary to the argument above, argues for "friendliness" of the boards and social ties between CEO and the board, meaning that higher independence and lower friendliness is not necessarily in best interest of shareholders, but it might encourage CEOs to not share the inside information with independent directors, and therefore depending on the specific needs of the company friendly boards (perhaps also nominating committees) have both costs and benefits (Schmidt (2008)).

II.viii Golden Parachute⁸

Golden parachutes took center stage during the financial crisis as many bank executives, fired from their failing banks, received lavish payouts by dint of a golden parachute clause in their compensation contracts. A golden parachute is an agreement between a company and an upper executive specifying that the executive will receive certain significant benefits (e.g., severance pay, cash bonuses, stock options) if employment is terminated prior to maturity. Proponents of golden parachutes argue that they provide value enhancing benefits for a firm.

⁸ "Companies receiving federal aid are going to have to disclose publicly all the perks and luxuries bestowed upon senior executives, and provide an explanation to the taxpayers and to shareholders as to why these expenses are justified. And we're putting a stop to these kinds of massive severance packages we've all read about with disgust; we're taking the air out of golden parachutes."

President Barack Obama

February 4, 2009 - The full speech by president Obama can be viewed at:

http://www.whitehouse.gov/blog_post/new_rules/

For example, golden parachutes make it easier to hire and retain executives, especially in industries like banking that are prone to mergers. Further, they allow executives to remain objective about the firm during a takeover. Finally, they discourage takeover attempts by increasing the cost of takeovers. However, critics point out that executives are already well compensated and do not deserve significant payouts upon termination. Further, executives have a fiduciary responsibility to their companies, and should not need additional incentives to remain objective. It could be interesting to investigate whether each bank offers its top executive golden parachute protection in the event of termination. We do not expect the existence of golden parachutes to impact performance in either direction.

On the other hand adoption of takeover readiness provisions (e.g. golden parachute, poison pills, etc) might be due to the correlation of these factors to the low firm value that might lead to a takeover, and it might be already regarded as a sign of poor governance in the subject firm (Bebchuck, Cohen, and Ferrel, 2004).

II.ix Risk Management Committee/Team

In order to strengthen board capability to foresee risk, boards need to be educated on risk issues and equipped with tools to understand risk appetite and its impact on firm performance. It is suggested that a number of members of the risk or its equivalent committee should be individuals with technical sophistication in risk disciplines or with solid business experience having clear perspectives on risk issues⁹. A separation between risk and audit committees could also be considered. At Lehman Brothers, there was a risk committee but it only met twice a year in 2006 and 2007. Bear Stearns' only established a full risk committee shortly before it failed. Above all, boards need to understand the firm's business strategy from a forward looking perspective, not just review current risk issues and audit reports. However, Ladipo et al. (2008) emphasized on the risk governance and the responsibility of the board and in that respect it appears that a majority of the banks' boards were broadly knowledgeable rather than extremely knowledgeable of their company's risk measurement methodology. The efficiency of the risk management process and its connection to board oversight has led a number of firms to establish a Chief Risk Officer (CRO) with board membership in unitary board systems.

In addition, lower prestige and status of risk management staff vis-à-vis traders also played an important role (CG code VI.D.2.). The inability of risk management staff to impose effective controls was also noted at Credit Suisse (FSA, 2008b). A strong internal voice of the risk management staff can strengthen supervision of risk management. This could be designed either by arranging the CRO to report directly to the CEO or by offering CRO a seat on the board or management committee. In many cases, the CRO will be engaged directly with a risk committee or the audit committee as appropriate. Some banks made it a practice for the CRO to report regularly to the full board to review risk issues and exposures, as well as more frequently to the risk committee¹⁰. The IIF (2008b) study recommended the CRO to have a mandate to bring to the attention of both line and senior management or the board any situation that could materially violate risk-appetite guidelines. Ladipo et al. (2008) report that in their sample of 11 European banks with risk committees, one half staffed their committees with non-executive directors and that in such cases the CEO, the CFO and the CRO were always in attendance at the committee meetings and are reported to have played a major role

⁹ Kirkpatrick, G. (2009). The Corporate Governance Lessons from the Financial Crisis. Financial Market Trends. Vol. 2009/1, p. 19.

¹⁰ Ibid, p. 19.

in the committee's deliberations. In US, a number of financial institutions do not have separate risk committees but rather have it under the purview of the audit committees. KPMG (2008) survey reports that audit committees feel that their effectiveness may be hampered by agenda overloaded and compliance activities.

Liebenberg & Hoyt (2003) state that unlike the traditional silo-based risk management systems, Enterprise Risk Management (ERM) will transform the approach from an defensive to an increasing offensive and strategic risk management. They found that firms with greater financial leverage are more likely to appoint a CRO.

II.x Regulatory Framework (CG Code I.C. and I.D.) and Deficiencies in terms of adequate supervisory staff resources

The experience during the financial turmoil has highlighted the importance of CG code I.C. that states, "the division of responsibilities among different authorities in a jurisdiction should be clearly articulated and ensure that the public interest is served", and CG code I.D. that specifies, "the supervisory regulatory and enforcement authorities should have the authority, integrity and resources to fulfill their duties in a professional and objective manner. Moreover rulings should be timely, transparent and fully explained". The FSA (2008a) noted in their review of supervision at Northern Rock that inadequate staff resources and training might be the reason why its risk based system of supervision was not effective. FSA also concluded that "we cannot provide assurance that the prevailing framework for assessing risk was appropriately applied in relation to Northern Rock, so that the supervisory strategy was in line with the firms risk profile" (p . Under-resourcing was also an issue, the internal report noting shortage of expertise in some fundamental areas, notably prudential banking experience and financial data analysis.

II.xi Board Competence (CG code VI.E. and VI.E.3)

It is often asserted that bank boards lack banking and financial expertise. Guerra and Thal-Larsen, (2008) estimated that two thirds of directors at eight US major financial institutions had no banking experience. Moreover, many of the directors without a financial background happen to sit on highly technical board committees including those overseeing audit and risk. In a pre-crisis study based on a wider population of banks including smaller regional lenders, Moody's (2005) concluded that "too few banks have adopted the approach in other financial service sectors of appointing retired industry executives or advisors with industry experience such as accountants or consultants." However, board members' banking experience is clearly not enough in many cases. At Northern Rock, only two board members had any banking experience while at Bear Stearns seven of its thirteen directors had banking backgrounds. The accusation that boards have become a "retirement home for the great and the good" might be a sarcastic expression but at Lehman Brothers, four in its ten member board were over 75 years of age and only one had current financial sector knowledge. The Citigroup board in 2007 had seven serving and past chief executives. A survey of European banks reported that all wanted "heavy hitters" on their boards with current experience. The survey found that 40 per cent of non-executive directors have at least one other directorship in a FTSE Eurofirst 300 company and three fourths of the banks also have at least one "high calibre" non-executive director who holds a senior executive post in a FTSE Eurofirst 300 company (Ladipo, 2008, p. 19). We expect a positive association between board competence and firm performance. Board competence will be measured by the proportion of board members having banking and/or finance expertise.

II.xii Capital adequacy (Basel I Accord)

Capital adequacy requirements set forth in Basel II are important deterrents to excessive risk taking as the accord sets a rigorous capital maintenance regime whereby banks are required to hold capital appropriate to the risk it is exposed to through its lending and investment activities. Fearing failure to maintain adequate capital, banks have incentives to hold certain assets off their balance sheets adopting an “originate to distribute” model. Maintaining mortgages on the balance sheet would require increased regulatory capital and thereby a lower rate of return on shareholder funds. In their attempts to circumvent Basel II requirements, some banks market some of their financial assets through off-balance sheet entities (Blundell-Wignall, 2007) permitted by accounting standards, with the same effect as economizing on bank’s capital. Therefore, Basel I factors like adequacy and deficiency of capital using on-balance sheet and off-balance sheet items (Tier 1 and Tier 2) are worth examining. Possible failure of applying the Value at Risk (VaR) model could have some impact as well.

II.xiii Risk Disclosure and Accounting Standards (CG Code V.A. and V.B.), Misuse of off-balance sheet entities, fair value of assets, which either trade in thin markets or in no markets at all (Basel I Accord):

Research on the major OECD economies suggests that the readability of the risk disclosures is “difficult” or “very difficult” and that there is no consistent global set of generally accepted risk management accounting principles and additional guidance available for risk disclosures in the annual report (Van Manen, 2009). In the years after Enron, the US accounting authorities (FASB) tightened the potential to misuse off-balance sheet entities, yet the problem has resurfaced in the current financial market turmoil. Prudential standards encouraged banks to engage in regulatory arbitrage by taking mortgages and other assets off the balance sheet and to finance them separately in conduits (Qualified Special Purpose Entities -QSPE). This allowed them to economize on bank’s regulatory capital while pocketing booking fees from the transaction. In some cases (e.g., Citibank), the securities CDOs carried a liquidity put that allowed any buyer who ran into financing problems to sell them back at original value to Citibank. This was not disclosed to shareholders and the bank/board seemed unaware of the potential risk until November 2007 when USD 25 billion had to be brought back onto the balance sheet. In a number of banks, off-balance sheet CDO/conduits were brought back on to the balance sheet in order to protect the bank’s reputation. In many cases, these potential reputational risks had never been disclosed in a transparent manner and as noted above, the associated risks were likely not managed.

Another area where accounting standards have been put to the test concerns fair value of assets, particularly that of complex financial instruments, which either trade in thin markets or for which no markets exist. There has also been a feeling in the markets that different banks use very different valuations for the same asset contributing to market opacity and reduced integrity. Two International Accounting Standards – IAS 32 and IAS 39 (recently replaced by AFRS 9) were in force during the whole period of the financial crisis and before. IAS 32 deals with disclosure of financial instruments including derivatives while IAS 39 deals with measurement and recognition issues. Yet, many large banks apparently failed to recognize and hence disclose many categories of financial instruments. Correct application of IAS 39 would result in fair value measurement of all financial instruments and immediate recognition of fair value gains or losses from those instruments. The FASB has introduced a three way classification describing how assets have been valued that is now being used by banks

reporting under US GAAP. The FSF has called on the IASB to strengthen its standards to achieve better disclosures about valuations, methodologies and uncertainties associated with valuations. The IASB has also enhanced its guidance on valuing financial instruments when markets are no longer active. The International Auditing and Assurance Standards Board (IAASB) is also considering the lessons learned during the market turmoil and, where necessary undertook to enhance the guidance for audits of valuations of complex or illiquid financial products and related disclosures¹¹.

II.xiii Board Oversight, Stress Testing and Basel II Accord (CG code VI.D)

The large losses at financial firms could have been perceived by investors as being caused by a lack of oversight by directors, and therefore could have repercussions for these directors, especially if they were responsible for overseeing risk management. While some prior studies find that director turnover increases around corporate failures (Gilson, 1990, Srinivasan, 2005), some do not find such an association (Agrawal, Jaffe, and Karpoff, 1999). If investors attribute the loss to a lack of oversight from outside directors, we expect that outside directors are more likely to leave boards of firms that experienced larger losses during the crisis, especially if they oversaw risk management. However, if investors attribute the losses to bad managerial decisions and view the role of directors as confined to replacing poorly performing CEOs.

As noted earlier, failure of risk management systems in financial services industry may be attributable to weaknesses in corporate governance. One of the key responsibilities of the board is to review and guide risk policy of the organization. Boards could use risk management tools such as stress testing and scenario analysis as part of their oversight function, but recent experience has shown numerous deficiencies at a number of banks¹². Senior Supervisors Group (2008) noted that *“some firms found it challenging before the recent turmoil to persuade senior management and business line management to develop and pay sufficient attention to the results of forward-looking stress scenarios that assumed large price movements”* (p. 5). The IIF (2008b) report also noted that *“stress testing needs to be part of a dialogue between senior management and the risk function as to the type of stresses, the most relevant scenarios and impact assessment”*. Stress testing must form an integral part of the management culture so that results have a meaningful impact on business decisions. Clearly, this did not happen at a number of financial institutions. Some of them might have used externally conceived stress tests that were inappropriate to their business model. Stress testing in some banks is also believed to have been inconsistent or not comprehensive enough to produce accurate diagnosis. It is clear that firms need to ensure that stress testing methodologies and policies are consistently applied throughout the firm, evaluating multiple risk factors as well as multiple business units and adequately deal with interactions between different risk factors.

The IIF (2008a) concluded that *“firms need to work on improving their diagnostic stress testing to support their own capital assessment processes under Pillar II of the Basel Accord”*. Some expect regulators to use the second pillar of the Basel II accord to oblige banks to hold additional capital to reflect the risk of inappropriate compensation structures¹³.

¹¹ Ibid, P. 26.

¹² Ibid p. 10.

¹³ Financial Times, 22 May 2008, p.17.

Deficiency in risk management and distorted incentive system are the part of responsibilities of the board or deficiency of board oversight, which covers CG-VI.D.1 (guiding corporate strategy, major plans of action, and risk policy), CG-VI.D.7 (integrity of accounting, reporting, and monitoring systems), and CG- VI.D.4 (whether executives remunerations are aligned with long-term interest of company and shareholders).

II.xiv Liquidity Risk Management:

A marked feature of the current turmoil has been the liquidity risk, which led to the collapse of Bear Stearns and threatened that of Northern Rock, AIG and many others including Citigroup and Bank of America. Both argued that they could not foresee the risk of a liquidity crisis and rather had adequate capital. However, the warning signs were clear during the first quarter of 2007 as the directors of Northern Rock acknowledged that they had read the Bank of England's Financial Stability Report and a FSA report both of which drew explicit attention to liquidity risks yet adequate emergency borrowing lines were not put in place. In the US, Countrywide had a similar business model which had put in place emergency credit lines at some cost to themselves (House of Commons, 2008, Vol 1 and 2). However, managing liquidity risk was not a new concept. The Institute of International Finance (2007), representing the world's major banks, drew attention to the need to improve liquidity risk management in March 2007, with their group of senior staff from banks already at work since 2005, well before the crisis emerging in September 2008.

There are several ways of establishing whether the bank has sound liquidity policy and complies to it. A direct method will involve computing quarterly or semiannual (if quarterly data is not available) liquidity ratios and comparing it with industry average or that of a stable period. An indirect, and perhaps, more objective method of detecting it would be to identify occurrence of liquidating investment securities prior to maturity. Both volume and frequency will be used to determine the magnitude of liquidity shortage faced by the bank. We expect a negative association between weakness in liquidity management and performance.

III.v Credit Rating: (CG Code V.F)

Credit rating agencies came under serious scrutiny during the current financial crisis from many quarters. SEC (2008) observes that credit rating agencies (CRAs) were under considerable commercial pressure to meet the needs of their clients and to undertake ratings quickly. The quality of the work by CRAs has been a significant issue in the current turmoil. IOSCO (2008) recommended a strengthening of the voluntary code, the Financial Stability Forum (2008) and the SEC also took the issue seriously. The FSA notes that *"poor credit assessments by CRA have contributed both to the build up to and the unfolding of recent events. In particular, CRAs assigned high ratings to complex structured sub-prime debt based on inadequate historical data and in some cases flawed models. As investors realized this, they lost confidence in ratings and securitized products more generally"*. The SEC (2008) has released a report highly critical of the practices of CRAs and proposed a three-fold set of comprehensive reforms to regulate conflicts of interest, disclosures, internal policies and business practices of CRAs. The Senior Supervisors Group also noted that some banks relied entirely on the ratings and did not establish their own risk analysis of the instruments (e.g., UBS, 2008). Such banks have fared badly in the crisis. Some market participants and regulators have proposed to eliminate references in regulations that establish a specific use of ratings (e.g., restricting some investors from buying securities less than investment grade) in

favour of one that in principle encourages internal risk assessments and due diligence by investors, banks etc.

III.vi Degree of Risk-Taking by Firms' Insiders to Enhance the Value

John, Litov & Yeung (2007) tested the relationship between investor protection and corporate insiders' incentive to take value-enhancing risks and they found empirical evidence supporting the hypothesis that managers or insiders in the countries with poor investor protection would hire conservative investment decisions, skipping risky, but value enhancing investments contrary to what they are required from the outsiders, while better investor protections will lower the expected level of private benefits and causes the managers/insiders to be less risk-averse and act aligned with shareholders' interest. They introduced three measures for the degree of risk-taking in firms' operations based on the volatility of corporate profitability (i) The market adjusted volatility of firm level profitability; (ii) a country average of the volatility of firm profitability; (iii) an imputed country risk score, based on industry risk characteristics. We would expect risk-taking that enhances the bank value is desired by the shareholders and motivated by outsiders and therefore a better CG will be positively associated with the higher degree of risk-taking which results in value-enhancing.

III. Data and Method:

Data: Interest-free banks are operating in 48 countries including UK, USA, France, Germany, Japan, and obviously in most of the Muslim countries. There are 315 Interest-free Banks operating in 48 countries right now. The research considers a sample of 42 Islamic banks from Bangladesh, Bahrain, Malaysia, and UAE over the period of 2006-2009 to test the hypotheses. This research is divided into three sections based on the methodologies applied.

Part I: Corporate Governance of Interest-free Banks and Shareholder Value

Existing evidence on the relationship between corporate governance and firm value erosion during financial crisis is limited. However, most observers believe better governance would have at least mitigated some of the effects of the crisis if not prevented it from occurring at the first place. The proposed study aims to test a set of corporate governance variables against abnormal amounts of write offs recognized by the interest-free banks during the crisis and pre crisis periods. Based on existing evidence on corporate governance and firm value erosion (e.g., aggregate amounts of abnormal write-offs), we developed the following null hypothesis relevant to this project:

H_{01} : There is no relation between the quality of corporate governance model of Interest-free banks and Shareholder Value Erosion during global financial crisis.

Models:

$$SHAREHOLDER_LOSS_{it} = \alpha_0 + \beta_1 CORPORATE_GOVERNANCE + \beta_2 RISK_TAKING / AGGRESSIVE_LENDING + \beta_3 CONTROL + \varepsilon_{it} \dots (1)$$

$$\begin{bmatrix} WRITE_DOWN \\ LOAN_LOSS \\ DOUBTFUL_DEBT \\ IMPAIRED_LOSS1 \\ IMPAIRED_LOSS2 \\ NON_PERFORMING_LOANS \\ RRVALUATION_RESERVE \end{bmatrix} = \alpha_0 + \beta_1 \begin{bmatrix} BOARD_SIZE \\ NON_INDEPENDENT_DIRECTOR \\ BOARD_ATTENDANCE \\ CEO_BANKING_EXPERIENCE \\ CEO_QUALIFICATION \\ CEO_INDEPENDENCE \\ SMT_LISTING \\ SMT_EXECUTIVES \\ SMT_NON_EXECUTIVES \\ RISK_MGT_ACTIONS \\ LIQUIDITY_RISK \\ MARKET_RISK \end{bmatrix} + \beta_2 HOUSING_LOANS + \beta_3 \begin{bmatrix} LEERAGE \\ SIZE \\ BIG4 \\ BASEL \end{bmatrix} + \varepsilon \dots (2)$$

Part II: Corporate Governance Model of Interest-free Banks and Risky Investment:

The major objectives of this research are twofold: First, to investigate whether incentives and remuneration systems in the interest-free banks encourage aggressive lending and/or excessive risk taking, Two, multi-layer corporate governance mechanism of the interest-free banks acted as a restraint to engaging in excessive risk taking. Existing evidence is limited in identifying the relationship between aggressive risk taking and corporate governance during the recent financial crisis. However, no recognized study can be found on this issue; therefore, the proposed study may be a pioneering research in the field. Existing evidence allows us to develop the null hypothesis for this study as:

H₀₂: There is no relation between creating financial innovative products/risk taking/aggressive lending behavior and corporate governance model of interest-free banks in general and incentives and remuneration systems in particular during the financial crisis.

Methods:

$$RISKY_INVESTMENT_{it} = \alpha_0 + \beta_1 CORPORATE_GOVERNANCE + \beta_2 CONTROL + \varepsilon_{it} \dots (3.1)$$

$$AGGRESSIVE_LENDING_{it} = \alpha_0 + \beta_1 CORPORATE_GOVERNANCE + \beta_2 CONTROL + \varepsilon_{it} \dots (3.2)$$

$$\begin{bmatrix} HOUSING_LOANS \\ PROPERTIES_INVESTMENT \\ NPL_RESIDENTIAL_LOANS \end{bmatrix} = \alpha_0 + \beta_1 \begin{bmatrix} INDEPENDENT_CHAIR \\ NON_INDEPENDENT_DIRECTOR \\ BOARD_ATTENDANCE \\ CEO_BANKING_EXPERIENCE \\ CEO_QUALIFICATION \\ EXECUTIVE_COMPENSATION \\ FUND_MGT \\ RISK_MGT_ACTIONS \\ LIQUIDITY_RISK \\ MARKET_RISK \end{bmatrix} + \beta_2 \begin{bmatrix} SIZE \\ BIG4 \\ BASEL \end{bmatrix} + \varepsilon \dots (4.1)$$

$$\begin{bmatrix}
 \text{SECURITIES_HELD_FOR_TRADING} \\
 \text{SECURITIES_AVAILABLE_FOR_SALE} \\
 \text{PURCHASE_OF_SECURITIES} \\
 \text{TRADING_SECURITIES}
 \end{bmatrix}
 = \alpha_0 + \beta_1
 \begin{bmatrix}
 \text{EXECUTIVE_DIRECTORS} \\
 \text{NON_EXECUTIVE_DIRECTORS} \\
 \text{NON-INDEPENDENT_DIRECTOR} \\
 \\
 \text{CEO_BANKING_EXPERIENCE} \\
 \text{CEO_QUALIFICATION} \\
 \text{BOARD_SIZE} \\
 \text{CHAIR_INDEPENDENCE} \\
 \\
 \text{SMT_LISTED} \\
 \text{SMT_SIZE} \\
 \text{FUND_MGT}
 \end{bmatrix}
 + \beta_2
 \begin{bmatrix}
 \text{LEVERAGE} \\
 \text{SIZE} \\
 \text{BIG4} \\
 \text{BASEL}
 \end{bmatrix}
 + \varepsilon_t \quad (4.2)$$

IV. Empirical Results:

We have analysed the data for 42 interest-free banks from Bangladesh, Bahrain, Malaysia, and United Arab Emirates over the period of 2006-2009. The summary statistics for the data is presented in the table below:

Table 1: Descriptive Statistics

Name of the Variables	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
Write Down	149	-0.0581	.0071	-.002722	.0082635	-4.756	26.221
Loan Loss	150	-.1681	4.2	.197921	1.8576877	0.992361111	141.457
Doubtful Debt	150	-.277102	.8044	-.173331	2.2656286	-12.211	149.417
Impairment Loss1	80	-.2699	.0000	-.005493	.0318552	-7.587	61.985
Impairment Loss2	122	-.0079	.0005	-.000148	.0009216	-6.762	49.080
Non-performing Loans	45	.0000	0.177777778	.375327	.3593629	.300	-1.435
Revaluation Reserve	142	.0000	.0116	.000324	.0017005	0.679166667	32.505
Board size	94	5	15	0.401388889	0.327083333	.432	-.096
Non-independent non-executive directors	50	0	6	0.216	0.702777778	.401	-.966
Board Attendance	29	2	13	0.746	0.354166667	.082	.367
CEO Banking Experience	29	0	1	.79	.412	-1.527	.352
CEO Qualification	38	0	1	.84	.370	-1.954	0.679166667
Chair Independence	64	0	1	.44	.500	.258	-1.997
Senior Management Team (SMT) listing	39	0	1	.82	.389	-1.738	1.073
Executive Directors	59	0	7	0.156	0.420833333	0.656944444	0.263888889
Non-executive Directors	57	1	13	0.702	0.634027778	-.065	.310

Risk management Action	129	0	1	.13	.340	0,224305 556	0,70625
Liquidity risk	97	0	1	.94	.242	-3.695	1,081944 444
Market risk	103	0	1	.69	.465	-.830	-1.337
Housing Loans	148	.0000	.9314	.113955	.2252436	0,178472 222	0,53125
Leverage	150	.0000	1870.522 8	22.765962	166.0173 292	1,027777 778	106.437
SIZE	159	4,8520 83333	1,810416 667	12.268989	3.684899 9	-.153	-.603
Big4 Auditor	129	0	1	.88	.322	-2.422	0,769444 444
Capital Adequacy	159	-.3082	6,244444 444	1.672974	3.325758 6	4.071	1,236805 556
Properties Investment	149	.0000	1,918055 556	.099363	.3130557	0,482638 889	32.004
NPL in Residential	47	.0000	5,291666 667	.188126	.5779392	0,586111 111	1,048611 111
Securities held for Trading	148	.0000	6,203472 222	.139173	.7441734	11.088	129.751
Securities available for Sale	150	.0000	152.9094	2.304912	14.28040 02	9.081	89.167
Purchase of Securities	150	.0000	.0344	.000597	.0034584	8.056	70.661
Securities Traded	145	-.0005	.0605	.000970	.0064903	0,834027 778	63.073
Note:							

This paper accommodate 168 bank year data were captured in the research. The Islamic banks generally have very low write downs and/or losses and doubtful debts. The data for corporate governance and control variables are presented in the table but the distribution is not normal. Neither housing nor securities investment are significant in the interest-free banks. The governance data is available for the interest-free banks.

Table 2a: Correlation Analysis - Shareholder Loss Model

	Write Down	Loan Loss	Doubtful Debt	Impaired Loss1	Impaired Loss2	Non-performing Loan	Revaluation Reserve
Board size	.053	.052	-.009	-.102	-.148	-.176	.202
Non-independent Non-executive Directors	-.545**	-.430**	-.294*	-.552*	-.379*	-.316	.368*
Board Attendance	-.131	-.393*	.021	-.144	-.120	-.375	.080
CEO banking experience	-.142	-.382*	-.173	.a	.a	.a	.a
CEO Qualification	-.160	.062	-.199	.a	.a	.a	.a
Chairperson independence	.408**	.220	.103	.a	.a	.241	-.173
Senior Management Team (SMT) listing	-.053	.142	.121	.a	.a	-.038	.a
Executive directors	.199	.122	.126	.068	.054	-.343	-.076
Non-executive Directors	-.078	-.153	-.100	-.177	-.247	-.351	.160
Risk management actions	-.345**	-.052	.033	.083	.074	.166	-.062
Liquidity risk	.477**	.037	.077	.336*	.123	.029	-.072
Market risk	-.243*	-.151	-.246*	-.150	-.081	.309	-.059
Housing Loans	-.598**	-.059	.036	-.361*	-.370*	.295	.253**
Leverage	.042	.140	.006	-.067	.024	.137	-.020
SIZE	.387**	.065	.149	.163	.175	.170	-.099
Big4 Auditor	-.085	.042	-.052	-.085	-.028	.287	-.163
Capital Adequacy ratio	-.110	-.021	.019	.057	.080	.060	.197*

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

a . Cannot be computed because at least one of the variables is constant.

Directors' independence, risk management activities, housing loans, proxy for risky investment, appears as the key variables for the shareholder loss. Higher the directors' independence enforces lower the loss by the banks. Interestingly, housing loss has a very high degree negative relation with shareholder loss. The banks invest more in the housing, in turn, the make less loss and vice versa. This is indeed very surprising because supreme mortgage has blamed to be triggered the global financial crisis. However, risk management actions are identified as the prime safeguard for the shareholder loss.

Table 2b: Correlation Analysis- Risky Investment and Aggressive Lending Model

	Housing Loans	Properties Investment	NPL in Properties	Securities held for Trading	Securities Available for Sale	Purchase of Securities	Securities Traded
Board size	-.159	.006	.376*	.010	-.021	.033	.197
Non-independent non-executive	.682*	.543**	.292	-.117	-.018	.308*	-.161
Board Attendance	.519*	-.092	.003	.124	.256	.239	-.268
CEO banking experience	.145	.223	.a	-.344	-.506**	.097	.075
CEO Qualification	.191	-.730**	.a	-.426**	-.135	.117	.109
Chair Independence	-.246	.216	-.128	.215	.358**	-.208	.175
Senior Management Team (SMT) listing	-.202	-.088	.245	.156	.089	.085	.117
Executive directors	-.309*	-.122	-.096	.052	-.010	-.070	-.064
Non executive directors	.011	.096	.295	-.014	.142	.114	.215
Risk management actions	.585*	.286**	.257	-.030	-.050	.072	-.052
Liquidity risk	-.501*	-.093	-.084	.097	.037	.029	-.485*
Market risk	.199	.011	.071	.009	.087	.122	.133
Leverage	-.065	-.041	-.155	-.021	.991**	-.022	-.019
SIZE	-.582*	-.106	.335*	.087	.098	-.186*	-.020

Big4 Auditor	.115	.126	-.933*	.029	.057	.062	.055
Capital Adequacy ratio	.065	-.033	-.097	.034	-.003	-.036	.115

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0,05 level (2-tailed)

a. cannot be computed because at least one of the variables is constant.

Directors' independence, risk management actions, CEO qualification, size, and Financial Transparency (Big4 auditor) appear as the key parameters for the risky investment and aggressive lending.

IV.i Diagnosis of the OLS Models:

Ramsey's RESET test (Ramsey, 1969) and White test (White, 1980) are employed for checking heteroskedasticity problem of the models but both the tests are unable to reject the hypothesis of homoskedasticity. Moreover, Durbin-Watson is close to 2 for cross-section and pooled models, which signals no autocorrelation problem of the models. However, collinearity diagnosis has been conducted based on the criterion in the following table:

Table 3: Collinerarity Diagnosis:

Measures	Thresholds (no sign of multicollinearity)	Sign of Multicollinearity	Diagnostic Checking of the Analysis in this Study
Correlation Matrix (Pearson Correlation)	$r < 0,90$	$r \geq 0,90$	$r = 0,808$
Tolerance Value (TOL)	$\frac{1}{r^2} > 0,10$	Below 0,10	$TOL > 0,10$
Variance Inflated Factor (VIF)	$1 - r^2 < 10$	Above 10	$VIF < 2$
Condition Index (CI)	$CI < 30$	Above 30	$CI < 30$
Durbin-Watson Test	$1,50 < d < 2,20$	$D < 1,50$ or $d > 2,20$	$d < 1,50$

Note: The table is adopted from Mobarek and Mollah (2005)

It is quite clear that the regression models are free from heteroskedasticity, auto-correlation, and collinearity; therefore, the results are free from biases.

Table 4: Results for Shareholder Loss equations (OLS Models)

Proxy for Shareholder Loss	Write Down	Loan Loss	Doubtful Debt	Impaired Loss 1	Impaired Loss 2	Non-performing Loans	Revaluation Reserve
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Periods	Pre-crisis crisis All	Pre-crisis crisis All	Pre-crisis crisis All	Pre-crisis crisis All	Pre-crisis crisis All	Pre-crisis crisis All	Pre-crisis crisis All
Constant	0.000 -0.014** -0.013**	-0.229** 3.458** 2.691**	-1.513 0.680*** -0.204	-0.003** -0.004 -0.003*	0.000 -0.001* -0.003*	0.271*** 0.358*** 0.271***	0.001** -.002** 0.000
Housing Loans	- -0.287** -	- -	0.465*** -	- -	- -.590*** -	-.218* -	0.369*** 0.775*** -
Liquidity Risk	0.404*** 0.146** 0.149**	0.146** -	-176* -	0.146** -	0.146** -	0.146** -	0.146** -
Board Attendance	0.237** -	0.237** -	0.237** -	0.237** -	0.237** -	0.237** -	0.237** -
non-independent non-executive directors	-0.275** -	-0.275** -	-0.275** -	-0.275** -	-0.275** -	-0.275** -	-0.275** -
CEO banking experience	- -	- -	0.166** -	0.166** -	0.166** -	0.166** -	.192** -

Adj. R ²	0,557	0,602	0,565	0,715	0,492	0,599	0,501	0,029	0,080	0,265	0,481	0,236	0,987	0,335	0,983	0,034	0,031	0,032	0,373	0,317	0,028
Note:																					

Directors' independence, risk management actions, CEO qualification and banking experience and board attendance appeared as the key elements of corporate governance in the interest-free banks, which prevents the banks in taking excessive risks. However, size, leverage, and Financial Transparency (Big4 auditor) appeared as the key control parameters for the risky investment and aggressive lending models for interest-free banks.

V. Conclusion and contribution:

Interest-free Banking system has been established with strong footage in the Muslim world and the growing popularity is substantially increasing in the developed countries like USA, UK, Germany, France, and Japan. Developed countries have recognized the potential contribution of Interest-free banking towards restoring credibility and stability to the international financial market. Findings of this research will be an invaluable source of knowledge for policy makers and regulators alike, particularly in the financial services sectors all over the world in devising strategies for the future. This research contributes to determine whether a multi-layer corporate governance model, and the interest-free banking system based on moral values rather than greed and fear can be appeared as an effectual economic authority in tackling the future financial crises. Time will say whether the current position of Interest-free Banks is the mere coincidence or fact.

Corporate governance models were tested on 42 interest-free banks in Bangladesh, Baharin, Malasia, and United Arab Emirates over the period of 2006-2009. The empirical results indicate that the corporate governance model followed by Interest-free Banks provide a better protection against crisis. The results also support that interest prohibition prevent Interest-free Banks in creating innovative derivative products, which, in turn, exposes Interest-free banks in less risky assets.

References:

- Ahmed, H. (2009), Financial Crisis: Risks and Lessons for Islamic Finance, ISRA International Journal of Islamic Finance, Vol. 1(1), pp. 7-32.
- Brewster, D. (2008), Amana stays ahead of faith-based Funds, Financial Times (December 26).
- Chapra, U. (2008), The Global Financial Crisis and the Islamic Financial System, Paper presented at Forum on the Global Financial Crisis, Islamic Development Bank.
- Chapra, U. (2010a), Global Perspective on Islamic Finance, LSE-Harvard Public Lecture on Islamic Finance (February 24).

Chapra, U. (2010b), Islamic Solution to Financial Crisis, Public Lecture organized by Pakistan Writer's Forum, Jedda, February 26. www.soudigazette.com.sa

Cornett, M. M., J. J. McNutt, and H. Tehranian (2009), The Financial Crisis: Did Corporate Governance Affect The Performance of Publicly-traded U.S. Banks Holding Companies?, www.ssrn.com.

Desai, U. (2008), Credit Crisis gives Islamic Finance a chance to Shine, International Herald Tribune.

Erkens, D., M. Hung, and P. Matos (2009), Corporate Governance in the 2007-2008 Financial Crisis: Evidence from Financial Institutions Worldwide, www.ssrn.com

Faiola, A., E. Nakashima, and J. Drew (2008), What Went Wrong? The Washington Post (October 15).

Fukuyama, F. (2008), The Fall of America, Inc. Newsweek (October 13).

Green, S. (2010), Global Perspective on Islamic Finance, LSE-Harvard Public Lecture on Islamic Finance (February 24).

Hassan, K. (2009), The Global financial crisis and the Islamic Finance Solution, SESRIC (November 17).

Siddiqi, M. N. (2008), Current Financial Crisis and Islamic Economics, Mimeo, October 31.

The Financial Crisis Inquiry Report (FCIC, 2011),
http://c0182732.cdn1.cloudfiles.rackspacecloud.com/fcic_final_report_full.pdf

Wilson, R. (2010), Why is Islamic Banking Successful? Islamic Banks are unscathed despite Financial Crisis, www.islamonline.net