The impact of corporate governance on financial distress; Evidence from Pakistan

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List of Abbreviations

CGI	corporate governance Index
OECD	organization for economic co-operation and development
OCC	Office of the Comptroller of the Currency
CEO	Chief Executive Officer
CG	Corporate Governance
BOD	Board of Director
ROS	Return on Sale
CR	Current Ratio

Abstract

This study empirically investigates the corporate governance practices of KSE 100 index listed non-financial companies and their impact on financial distress in the context of Pakistani market. To assess the corporate governance mechanism we construct the corporate governance index (CGI). And also examine the effect of corporate governance attributes like managerial ownership, institutional ownership, board size, board interdependence and Audit committee on financial distress. By using the panel logit analysis based on 10 year data of the non financial companies for the period of 2004 to 2005. Our finding suggests the low corporate governance practices within a Pakistani market. In addition our finding also indicates an insignificant association between corporate governance practices and probability of financial distress. But this study provides evidence of the control variable is related to likelihood of financial distress.

Keywords: Corporate governance index CGI, Institutional shareholder, Management ownership, Audit committee interdependence, Board size, Board independence.

CHAPTER 1

INTRODUCTION

1.1 Background of Study

The corporate governance is recently emerged in academic and public debates, but the corporate governance has quite a long history since the determining the "principal-agent problem" by Jensen and Meckling (1976). The existence of the principal-agent problem as a result of the difference of ownership and control raises a conflict between the interests of managers and shareholders. Many studies have been made, significant contributions by investigating the role of corporate governance in minimizing the agency problem (Ross, 1973; Fama, 1980; Mallin, 2001). The corporate governance becomes a significant domain in literature. The ignorance of corporate governance practices, global market face unfavorable consequences. Because the corporate governance was the key issue of Asian financial crisis in 1997 and Enron disaster in 2007.

The organization for economic co-operation and development (OECD) (1999) consider corporate governance as a mechanism through business are controlled and directed. According to Zingales (1997) corporate governance is a "system and set of law that protect the shareholder and manager interest". By another comprehensive definition the corporate governance is mechanisms that deal with stakeholder and corporate exercise

control over management and outside stakeholder interest (John and Senbet 1998). According to Coleman and Nicholas-Biekpe (2006) corporate governance is relationship of stakeholders with the whole business. However, Mayer (1999**)** define corporate governance is a structure and information that used for supervising the management effectiveness and organization performance. Governance mechanism depends upon its specifications and responsibilities that give to management, BOD, the supervisory board and shareholders and procedures for decision making.

The corporate governance is multi dimensional subject. In every corporation, corporate governance is the core factor that presents the health of firm's structure and ability to survive crises. So that health of any company relay on the governance mechanism soundness and other components and correlation between them (Coleman et al., 2006). In addition the major factor that improves any firm's stability, which include: good governance structure, soundless regulation, effective monitoring; reliable financial reporting systems (Morck, Shleifer and Vishny 1989). The Corporate governance definition is widely discussed by philosopher, but all of them pointed to the same attributes. So that researcher categories corporate governance into two different patterns. First the actual conduct of the company, in manner of internal control like performance measure, effectiveness, financial formation, growth and dealing with shareholder and include all other stakeholders.

The second pattern of corporate governance is concerned with the normative framework of the corporation. Such as the rules of firms in which firms operate and legal system,

financial markets, and factor (labor) markets. According to organization theory, the strength of the firm depends on cooperation between top management. Therefore the corporate governance plays a significant role in corporate strategies for driving the company and leads to profitable and sustainable (Huang Hui & Zhao Jing-Jing 2008). Father more (Huang et al., 2008) identified eight independent attributes of corporate governance that measured probability of financial distress. And these variables grouped into four different manners, i.e. board structure, shareholder structure, agency problems and controlling variables. And such governance structure can influence the firm performance, especially in distress situations.

According to the OCC (Office of the Comptroller of the Currency, 1988) the causes of corporate failure relate to corporate governance practices like board of directors or management aggressive activities, problem related to CEO, and board oversight and management deficiencies. The deficiencies of poor management and weak implementation of rules and regulations, increases the probability of failure. Furthermore, managers illuminate their personal interest overall the company objective, rather than maximizing the value of shareholder and ensure the company survival in the future. Therefore the firm, theory pursues that the opportunistic behavior of corporate managers arises agency problem cause of splitting of authority (Fama et al, 1983a). The corporate governance mechanism is not only improves the performance of the firm but also provide opportunities to reallocation of resources in a distress situation. Such reallocation can decrease the probability of firm survival

The empirical studies show the contradicted result in various geographical areas, some of study shows positive and some negative relationship between corporate governance and financial distress. Henry, 2008 using the CG variables as a measure of corporate governance practices in Australia for examining the relationship between corporate governance practices and financial distress. They found that the corporate governance has significant impact on financial performance and bankruptcy, and also corporate governance practices help to survive from distress. Parker et al. (2002) conducted a survival for analysis the distressed firms' problems and found that corporate governance practices like insider turnover and ownership structure are positively associated with firm survival. Chaganti, Mahajan, and Sharma (1985) analyzed the twenty-one matched pairs of retail companies and results show that the interdependence and larger board of director reduce the chances of failure.

Daily and Dalton (1994) also found that CEO duality and lower independence of directors are associated with higher probability of bankruptcy by analyzing the fifty matched pairs of bankrupt companies. The effect of ownership concentration on financial distress is not too much clearer. However, Lee and Yeh's (2004) documented that the ownership concentration increases the likelihood of financial distress. But other hand Elloumi and Gueyie (2001) found ownership concentration has a negative effect on financial distress, but the outside director's directorship has a positive effect by examining the forty-six healthy and forty-six distressed company in the Canadian financial market.

In Chinese transitional economy, Wang and Deng (2006) found the negative relationship between corporate governance characteristics and distress probability, by analyzing the proportion of independent directors, ownership structure and the other corporate governance traits, i.e. managerial ownership, board size, CEO duality, has an insignificant impact on financial distress. In Malaysian context Abdullah (2006) analysis ownership structure by using shares held by executive directors, non-executive directors use as a proxy and find negative associations between ownership structure and financial distress. But in UAE corporate governance practices has positive and significant relation between financial distresses (Yet Al-Tamimi 2012).

The disclosure of financial information is also an important part of corporate governance practices. The recent research shows that higher levels of disclosure of financial information reduce the asymmetric information between managers and investor that help to reduce the agency problem and improve firm financial position. The result of reduction asymmetry information improves the investor interest and decrease cost of capital. The previous empirical studies found positive impact of disclosure on cost of capital and less probability of bankruptcy (Diamond and Verrecchia, 1991; Verrecchia, 2001).

1.2. Motivation of study

The compatibility of corporate governance methods with global specifications becomes a substantial part of corporate accomplishment. The practice of good corporate governance has accordingly turned into a necessary prerequisite for every corporation. Johnson et al

(2000) State that corporate governance dimensions provide batter instructive power for the financial crisis than macroeconomic variable. The effects of corporate governance dimensions like ownership, independent directors, and agency costs on financial distress are also examined by (Wang and Xiao 2006, and Li et al. 2008). Many studies conducted in the context of corporate governance and its impact on corporate failure but it's still under examined.

The effect of corporate governance practices and financial distress examined in different contexts (like U.S., Australia, Taiwan and China). However, the ethics codes and legal systems of corporate governance mechanisms to control financial distress situations are different from one country to another. So that the characteristics of corporate governance in Pakistan (i.e. Ownership concentration, good governance practices, unitary board system and voluntary) are different from developed countries and the effect of these variables is also different so that these attributes influence the firm performance and survival of the business. Conversely the empirical evidence of corporate governance impact on financial distress is lacking in Pakistan and other Asian context. These results provide evidence that the lack of using the corporate governance variables for prediction of distress is needed to explore in Pakistan.

1.3. Theoretical support

1.3.1. Agency cost theory

Under this heading there are two things discussed the first one is the discussion on agency theory and the second one is that how agency theory relates to corporate governance and financial distress? The agency theory introduces in academic literature in the early 1970s and explored risk sharing among principle and agent (Arrow, 1971; Wilson, 1968). The agency theory pursues the relationship between principal (owner) and agent (management). The agency relationship is defined as agent performs/ makes decision on behalf of the principal which involves delegation of authority. The agent acts on the behalf of principal and run the business and makes decision for business operations and strives to achieve common goals (Jensen et al, 1976). The major focus of agency theory is an alignment of behavior-oriented (salary) and outcome-oriented (shareholder) wealth compensation (Eisenhardt 1989).

The shareholder hires manager to make decisions on behalf of the owner and run the activity of corporations. However, shareholder bears all the costs associated with management actions (Berle and Means 1932). The self-interested behavior of management creates the asymmetric information in weak governance system due loose measure of monitoring (Eisenhardt 1989). So that the delegation of authority create gap between owner and manager and also increases the agency problem and the likelihood of financial distress as will. So how owners monitor the management activities either they strive to secure the shareholders' interests or their own?. For eliminating the agency

problem corporate governance improves monitoring, control and reduces asymmetry information and helps to align executive management, interest with the interests of shareholders (Walsh and Seward 1990). Therefore the role of corporate governance is the alignment of shareholders' interests with the passions of managers hired to run the firm (Berle & Means 1932). The corporate governance enhances the access of shareholders to direct the management for organization success. Friend and Lang (1998) observe that corporate governance mechanism plays a significant role to control and direct the management to take the interest of shareholders. However, only the check and balance not only ceases to reduce the agency problem, but as well resolves the issues between managers and owners.

The corporate governance aligns the interest of shareholder with organizing and designing the effective and efficient corporate control mechanisms to accountable the manager's action (Allen and Gale, 2001). And the current empirical studies in agency theory, design a suitable structure for such control and to improve the effectiveness of the board of directors and that helps to design effective control mechanisms for corporate governance. However, the corporate governance practices reduce the uncertainty and risk associated with decision, disclosure of transparency, and also resolve the agency problem (Dissanike 1999).

1.3.2. Stakeholder Theory

In this head first paragraph explains the stakeholder theory and the second part provides how stakeholder theory relates to corporate governance and financial distress. Stakeholder theory was implanted in the management, regulation in 1970 and developed by Freeman (1984) incorporate corporate management and stakeholders. Stakeholder theory may define as "*any group or individual who can affect or is affected by the achievement of the organization's objectives*". And stakeholders are those who have a lawful claim on the firm (Hill and Jones, 1992). According to (Freeman 1994) focus of stakeholder theory surrounding on two major elements the purpose of firm and responsibility of management for treatment with stakeholder.

The modern stakeholder theorists suggest that an organization's management has a value added network of relationships like business partners, employees and suppliers. Freeman, (1999) argues that this valuable network of relationships more important rather than agent and principal relationship as in agency theory. On the other hand Clarkson (1995) documented that the firm is like a system, where stakeholders and organization create wealth for its shareholder. So that this network of relationship has potential to influence the decision making process and business survival or bankruptcy (Freeman 1984). The stakeholder model prevents the firm to distress situations and increase the profitability (Daily, Dalton, & Cannella 2003).

The major concern of stakeholder theory is creating the relationship with management and stakeholders and reduces the likelihood of default. Donaldson & Preston (1995)

suggested that the stakeholder theory impasse on executive decision making and protect the interests of shareholder and that relationship eliminates the probability of distress.

1.3.3. Transaction Cost Theory

Transaction cost theory was first initiated by Cyert and March (1963) and later theoretically described and exposed by Williamson (1996). The transaction cost occur when making an economic exchange the transaction cost occurrence divided into different categories like search for lower cost of collecting information and Bargaining costs paid commission. Williamson (1981), argues that transaction cost occurs "when management paid commission for providing the services and give extra benefits. The transaction cost theory state that director are opportunists and make transactions to their interests (Williamson, 1996). Corporate governance improves monitoring effectiveness and makes manager accountable Abdullah (2006). According to Al-Tamimi (2012) the corporate governance is instruments use for managements accountable and control transaction cost.

1.4 Problem Statement

The present study examines the impact of corporate governance mechanisms on financial distress in the context of Pakistan. The ethics codes and legal systems of corporate governance mechanisms to control financial distress are different from one country to another, so that the characteristics of corporate governance are different in Pakistan. Li

(2004) investigates the impact of corporate governance on business survival in Chains economy. But the empirical evidence of corporate governance and financial distress is still lacking in the Asian context, moreover the impact of corporate governance on financial distress remains unexplored in Pakistan.

1.5. Research questions

This study investigates and establishes the relationship between corporate governance and financial distress. This paper, based on that financial distress is a result of the correlations of corporate governance structure. And corporate governance practices are accountable for value addition and failure of the company. The major research question in this research is to find a link between corporate governance and financial distress in the context of Pakistan? So it is theorized that corporate governance practices such as ownership concentration, characters of board of director, audit committee, board composition, and CEO duality have significant impact on financial distress.

- Impact of corporate governance mechanism on financial distress in the context of Pakistan?
- What is impact of corporate governance attributes on financial distress?

1.6. Research Objectives

- To investigate the impact of board size on financial distress.

- To investigate the impact of board dependency on financial distress.
- To investigate the impact of audit committee dependency on distress.
- To examine the effect of managerial ownership of firms, on financial distress.
- To investigate the impact of institutional ownership on financial distress.
- To examine the effect of CEO duality on financial distress.
- To investigate the impact of corporate governance mechanism (CGI) on financial distress.

1.7. Significance of the Study

This study provides value to firm's regulators, academics, investors, and other related stakeholders. This study introduces the connection between governance practices and financial distress. And provide opportunity for future researchers with an alternative measure of financial distress. It further provides an insight of firm's corporate governance codes and in which degree companies reporting their issues and give best practice where they are experiencing difficulties. For Boards of director's research provide basic information of value in benchmarking the performance of their organization. The finding of this study also serves as inciter for further researchers in this domain.

Our finding provides better forecasting technique for to investor. Investor predicts distress through financial ratio but accounting base ratio has less ability to predict the firm's failure (Wang et al, 2006). This study identifies corporate governance variables for

predicting distress companies that will stay alive and those which fails. Moreover many researchers emphasis that only economic and financial data not provide sufficient information's to predict future insolvency; therefore it is necessary to include dimensions of ownership and/or corporate governance attributes to improve the predictive power of models (Chang, 2009). And other researcher documented that corporate governance characteristics are significant for forecasting the financial crisis (Chen, 2008 and Deng & Wang, 2006). Fich & Slezak,(2008) notes that without including the ownership/ or corporate governance attributes the predicted result are unreliable. Many of empirical evidences proves that corporate governance structure play core role to improve prediction power for financial crisis (Lee et al, 2004; Simpson et al, 1999; Wang et al. 2006). Poston et al. (1994) also state the financial ratio ore not sufficient and these ratios are the cause for failure of prediction models. And force to identify other variables that are more relevant for distress forecasting.

The current study also provides evidence that firm-specific characteristics could be useful as a determining the likelihood of financial distress. Our findings may be of interest to those academic researchers who wish to discover the quality of corporate governance practices in a developing market such as Pakistan and its impact on financial distress. There are several significant roles of the corporate governance such as performance measures and incentives planning for accomplishment of business objectives, for the equal distribution of resources corporate governance mainly focus on the accountability and transparency. It assists to minimize the agency costs that reduce the chances financial

distress. Moreover this study indicate that corporate governance rules are linked with lower agency costs, stronger firm corporate governance associated to financial distress.

1.8. Plan of the Study

This study includes five different chapters. The chapter 1 is an introductory chapter that includes the introduction, objectives, significance and organization of the study. The second chapter is a literature review and hypotheses development which consists of detail arguments on relationship of corporate governance practices and probability of financial distress. Chapter 3 is methodology represents the characteristics of data and measurement all variables. Chapter 4 includes data analysis and result discussion. Final chapter 5 includes conclusion and recommendations.

CHAPTER 2

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Review of Literature

Altman and Hotchkiss (2006), explain the corporate financial distresses as it is a unclear term which can be grouped into four generic terms which are commonly used in business research: failure, insolvency, bankruptcy and default. Moreover, the default is usually described in two instances as either technical or legal. Both types of default represent a signal of deteriorating firm performance and financial distress (Altman, 2000; Altman and Hotchkiss, 2006). The likelihood of financial distress increases when risk shift to shareholder by agent (Maksimovic and Titman, 1991; Eberhart and Senbet, 1993; Thorburn, 2004). And another researcher Ross, Westerfield, and Jaffe (2002) define financial distress as it is a situation where a firm's operating cash flows is not sufficient to satisfy current obligations (such as trade credit or interest expenses).

Whitaker (1999) defines the financial distress situation as where a company which cash flows are less than current debt obligations and the firm have not sufficient funds to pay its creditors. Nevertheless, financial distress indications are not restricted to firm unable to meet debt obligations. According to Boritz (1991) the process of a financial distress occurs in bad economic conditions and poor governance system. The financial distress is not too good for the financial health of organizations, but it creates opportunities for a

firm reallocation of resources through the use of corporate governance mechanisms such reallocation can enhance the firm survival.

The notion of financial distress and corporate governance had been merged in academics' debate since the 1980s. Many of empirical studies have done in order to check the how the corporate governance mechanism in healthy firms differ from those in distressed firms and corporate governance practice effects on the probability of default (Daily et al. 1994; Elloumi et al. 2001; Lee et al. 2004; Wang et al. 2006; Persons, 2007; Swain, 2009; Al-Tamimi, 2012. Daily et al., (1994) comparing the healthy firms which already in bankruptcy situations and provide evidence that bankruptcy is related to corporate governance characteristics.

Regarding the relationship between corporate governance and financial distress, Hambrick and D'Aveni (1992) documented that dominant CEO and its work practices of corporate governance are more associated with firm bankruptcy. Daily and Dalton (1994) confirm the positive association between bankruptcy and bad practices of corporate governance measured by CEO duality and lower independence among directors. The effect of ownership concentration on financial is unclear. But Donker et al., (2009); Elloumi & Gueyie, (2001); Mangena & Chamisa, (2008); Parker et al., (2002) argue that greater ownership concentration increases the financial distress. And the ownership concentration increases the shareholders' problems to monitor management and also increase the probability of financial distress.

According to Lee and Yeh (2004) the weak corporate governance mechanism increases the bankruptcy rate. The impact of corporate governance practices on the survival of the distressed firms, Parker et al. (2002), finds a negative and significant relation with CEO duality. However, the large proportion of shareholder and insider ownership positively associated with firm survival. The relation between corporate governance and failures of financial distress is a case of lack of board independence imbalance power of board (Muranda 2006). Such imbalances between executive and non-executive board members lead to the collapse of board effectiveness.

Corporate governance has potential to effect corporate performance and lead to distress. The current financial scandals (WorldCom and Enron) are evidence that's indicates loose governance structure is a key factor of manipulating the financial data and increases the probability of bankruptcy. Therefore, corporate governance mechanisms have the potential to influence the company's financial performance (Parker et al. 2002). The corporate governance structure reflects the effectiveness of management control and performance. And the Financial distress is more likely to relay on the characteristics of corporate governance structure (Lee and Yeh 2004). Thus, avoidance of corporate governance codes and conducts or loose governance mechanism is the greater probability of financial distress or bankruptcy. And for saving the bankruptcy is also depend on firm's governance structure. The relationship of financial distress with corporate governance is matter of unsound governance mechanism and interest of stakeholder (Donker et al., 2009).

2.2 Hypothesis Development

2.2.1. Audit Committee Interdependence and Financial Distress

The notion of interest conflict among shareholders and managers come from corporate management when they make decisions against the interest of owner specifically when opportunistic behavior involved (Jensen and Meckling 1976). And that behavior creates asymmetry of information for shareholder. The independent and valuable control measures always protect the shareholders' interests (Fama and Jensen, 1983). However Keasey and Wright (1993) recognized several of corporate governance mechanisms that diminish agency costs problems and also reduce delegations of authority conflict. These structures include auditors, interdependence BOD, institutional shareholders and corporate system for control. And this interdependency is considered as major governance mechanism that monitors the activities of managers (Short et al., 1999). So that effective reporting system and transparency disclosure eliminate conflict and also improve financial performance. Hence the efficient audit committees enhance financial reporting style reduce asymmetry information and resolve agency problem (Klein, 2002). However independed audit committee enhances performance and decrease probability of defaults (Ainuddin and Abdullah, 2001).

According to (Burke and Guy 2002; Sarbanes-Oxley Act of 2002) Audit committees of the boards of directors supervise the financial reporting process. Therefore Independent directors have reason to monitor the management (Fama, 1980; Fama and Jensen, 1983).

So that director also have liability to indicate the wrong financial practices if they found (Gilson, 1990; Parker, 1998; Sahlman, 1990). The independent directors are more focus on quality of financial reporting, information disclosure and concerned with financial distress. The core role of the audit committee is to check the quality financial reporting, and inspect the overall corporate governance mechanism (Braiotta, 1999).

The existing empirical studies provide evidence on impact of audit committee interdependence on financial distress and result is mix. According to Meta analysis of (Delton et al) the independent audit committee is positively concerned with financial distress by conducting the 54 empirically researches on board compositions and financial performance by 69 country data as a sample. Although Mark and Francis (2005) use the logistic regression analysis on 77 distressed companies for the period of 2000 to 2004 and they observe that high independent audit committee gives batter decision quality and positively associated with firm distress. The McMullen & Raghunandan (1996) take 100 non financial sector companies for the period of 1990 to 1995 and their empirically result indicates that the interdependent audit committee (appearance of non exsative director) decrease the possibility of financial problem protects the interests of shareholders.

According to Sharma and Errol R Iselin (2006) investigation the relationship of independent audit committee and probability of financial survival is negatively associated and improve reporting quality. By examining the 138 U.S. public listed firm for the period of 1 January 2001 to 31 December 2002. Iselin (2006) finds that the greater the percentage of affiliated director in the audit committee has lower probability of distress.

These results support regulators' concern about financial-reporting quality and the recent calls for more independent audit committees. Moreover Carcello & Neal (2000) find negative effect of audit committee independence on financially distressed companies by analyzing the financial distress firms during 1994.

H_{10}: Audit Committee Interdependence has no impact with financial distress.

H_{1A}: Audit Committee Interdependence has a significant impact with financial distress.

2.2.2 Board Size and financial distress

The board of directors core part of decision making and control (Jensen, 1993; Fama, 1980). And play a significant role in monitor management actions and gives direction and reduce the agency problem and also improve shareholder value (La Porta et al., 2000). In the context, of previous study board size influence management efficiency and improve the quality of its decision-making (Jensen, 1993). There are wide debate exist in literature in the context of board size and risk of financial distress. So that there are two main arguments are existing smaller board is the best or larger board.

There are a number of studies that supports the small number of boards reduced the likelihood of financial distress and improve the performance of the firm and management efficiency. Whereas Lipton and Lorsch (1992) conducted an empirical study using the sample of 86 distressed firms in the non financial sector listed on the NASDAQ and using the 10 year financial data. They found that the small size of board is more active

and more effective and have greater ability to coordinate and quicker in making decisions. So due to the smaller size of board they maker quicker decision and easy to communicate these abilities improve survival of the firm (Chaganti et al., 1985; Goodstein, Gautam, & Boeker, 1994; Judge & Zeithaml, 1992; Yemarck, 1996).

But other empirically studies suggest that the large board improves the firm performance. According to (Pearce and Zahra, 1992) the relationship of board size on firm distress by using the 200 companies and 88 are already in distress situations and other 112 was non distress by using the number of boards as proxy and argue that larger boards is better because of more ideas, skill, information and draw quality advice. Examining the relationship of corporate governance and corporate bankruptcy Adams and Ferreira, (2007) use the logistic regression analysis of default companies and compare with survivor corporations by using the proxy of financial indicators, ordinary share holdings, board size, quality of board director, and also mechanism of corporate governance for forecasting the bankruptcy. And they found larger board is positively and significantly related to firm failure and reduce the likelihood of firm financial distress.

Dalton et al., (1999) conducted empirically study on differentiation between board composition and board size by analyzing the 21 pairs of companies which are in distress and non distress firms. And their results suggested that the bigger number boards boost the synergy of firm and contributions skills knowledge and also assist the manager in decision making process help to improve performance, and decrease financial distress. Hence we hypotheses:

H_{10}: Board size has no impact on financial distress.

H_{1A}: board size has a significant impact on financial distress.

2.2.3 CEO Duality and financial distress

The board independence is usually used for distinguish for responsibility Chief Executive Officer and the Chairman role. Many researches documented that the division of roles and responsibility of CEO and Chairman are required to guarantee the autonomy and efficiency and also improve monitoring effectiveness of board (Jensen, 1993; Baysinger & Hoskisson, 1990). Many researches defend duality in various manner according to (Donalson & Davis, 1991; Davis, Choorman, & Donaldson,1997) holding the powers and authority of two positions by single person. CEO duality for attaining the strong control, leadership, smooth the progress of getting information, reducing long channel of communications and coordination costs, eliminate the conflict of interests in two positions.

The Chief Executive Officer Chairman roles (duality) have been discussed in corporate governance academic literature. The agency theory states that duality means is give the more power to an individual that may reduce the independence and effectiveness of boards (Fama et al., 1983; García and Guillamón, 2011). Another philosopher Finkelstein and D'aveni (1994) support the agency theory statement and argue that CEO duality

reducing board monitoring expertise. But some researcher suggested CEO duality beneficial for companies' performance. For reason CEO duality reduce the coordination costs and reduce the decisions making time (Davis et al., 1997; Mangena and Chamisa, 2008).

Empirical studies show the diverse finding for CEO duality and likelihood of business failure. Regarding relationship between CEO duality and financial distress Simpson et al., (1999) and Daily et al., (1994b) use logistic regression analysis for **5** years and 3 years financial data of bankruptcy firms by using the corporate governance characteristics i.e. board composition and interdependence and its structure, CEO duality for predicting the bankruptcy probability of organizations. While controlling the firm size, other macroeconomic factor their result indicate that CEO duality has positive relationship with probability of bankruptcy. In Chinese transitional economy Wang et al., (2006) found significant and positive association between CEO duality and firm failure only in state controlled companies. Through taking the ninety-six financially distressed companies as a sample and ninety six non distress firms.

In context of negative evidence Gleason (1999) analyzed the impact of ownership and structure and internal control mechanism on survival business taking approximately 300 non financial sector firms. And their empirical result shows negative relation when a person have both CEO and Chairman power and have lower impact on probability of financial distress. Another researcher Chaganti et al. (1985) found negative relationship

of CEO duality and financial distress by examining the difference of board size and board composition through 21 Distress Companies and non distress firms.

According to the monitoring hypothesis, we suggest that:

H_{10}: CEO Duality has no impact on financial distress.

H_{1A}: CEO Duality has a significant impact on financial distress.

2.2.4 Independent Directors and financial distress

The board of directors plays a vital role in monitoring over management, strategic decision in the corporate governance system (Kose and Senbet, 1998). According to modern corporate governance of America the notions of the board's independence are narrowly associated with firm efficiency. In American corporate governance mechanism companies must require a larger number of independent directors on the board (section 303A.01). The monitoring effect theory argues that outside directors have an advantage to polish reputation and monitors the management and firm performance. However outsider director has more ability to control firm's top management (Fama, 1980; Fama et al., 1983).

The independent board of directors is a corporate level board that has a large number of external directors. The outsider board member not associated with the top management and no involvement in business activity only avoids the conflicts of interests and enhances shareholder value. According to the CSRC, independent directors are not allowed to executive positions in organizations. And Also cannot take any responsibility

and become part of a business dealing they only can act for preventing the shareholder interest and independently objectively. However, the independent directors are restarted to hold company share directly or indirectly. Agency theorist suggests that the independence directors are important characteristics of management as a monitoring role (Fama 1980; Fama et al., 1983). Independent directors have obliged to assess management and monitoring the management performance (Jensen and Meckling 1976). According to Chang, (2009), Daily (1995) and Fich & Slezak, (2008) the outside directors reduces the agency cost and also eliminate the information asymmetry problems.

The managerial control theory state that non executive directors have limited ability strategic decision making (Westphal and Fredrickson 2001). The other researcher Baysinger and Hoskisson (1990) indicate that outside directors have less knowledge, skills and experience to perform well. But the empirical proves shows that outside directors perform better than inside directors and also protect the interests of the shareholders (Brickley, Coles, & Terry, 1994; Weisbach, 1988). And Johnson et al. (1996) documented that the high independence in decision making examines managerial actions. However, findings of existing empirical studies in context of board independence studies and business distress are contradictory.

Regarding the relationship between board interdependence and business failure, Gueyie and Elloumi (2001) Analyzed the 92 Canadian publicly traded companies and 46 are already in distress by covering the financial data period 1996 to 1998 and Wang and

Deng (2006) conducted the empirically study in Chinese transitional economy taking the ninety-six financially distressed firms and ninety-six non distressed companies and they conclude that higher interdependence of board is less connected to probability of failure because of more efficient measures of performance and monitoring. Fich & Slezak, (2008) examined the governance characteristics affect on financially distressed firms and firm's ability to avoid bankruptcy and there finding indicate that corporate governance characteristics are significantly and positively related with firm's bankruptcy. And also state that more independent boards with larger number of outsider director more effective at reduce the likelihood of bankruptcy.

According to a Meta analysis of thirty-seven studies accomplish by Rhoades et al. (2000) and found a positive relation of board interdependence with firm performance and less likely to firm survival. However, La Porta et al. (2002) argue that high ratio of outsider director help to neutralize the conflict forces and improve the financial condition through coordination and enhance company survival. In American context Lajili and Zéghal (2010) tested the impact of board interdependence on distress by analyzed the financially distressed firms and group of financially healthy firms financial conditions of financial year of 2001 and 2003. And they're finding shows that the characteristics of corporate governance have significant impact on distress and also suggested that board independence reduce the probability of bankruptcy.

The existing empirical studies finding is mixed. So that Simpson and Gleason (1999) investigate the effect of board of directors and the internal control mechanism on survival

of the firm by taking the approximately 300 firms as a sample. And their empirical tests indicated an insignificant relationship between financial failure and board interdependency. But the other hand Weir and Liang (2000) and Kiel and Nicholson (2003) explored the negative relation through the proportion of outside directors and financial distress. However Elloumi and Gueyie (2001) run a logit regression analysis to check the Relationships of corporate governance characteristics and financial distress examined by 46 distressed and 46 healthy Canadian companies. Using financial indicator as proxy they indicate that greater board interdependency is less likely to relate with distress.

H_{10}: Independent Directors have no effect on financial distress.

H_{1A}: Independent Directors have a significant effect on financial distress.

2.2.5 Institutional shareholder and financial distress

The many empirical studies investigated the impact of institutional investors (trust funds or mutual, banks, pension fund, insurance companies) on firm financial survival. And these studies highlight their effectiveness and role in the governance system to monitor corporate management. The major role of institutional shareholder is not only achieving the current or short term performance, but they focus on long-term achievement and guide the management to enhance company long-term financial performance (Blair, 1995; Daily, 1995). Institutional block holders are more focus on long-term performance expect the short-term achievements (Donker et al., 2009). However, in concentrated

ownership perspective, where governance structure is unproductive, then institutional shareholder play important role to monitor management. Gillan & Starks, (2000) pointed out that the expertise of the institutional owner boosts the management performance. And this instructional factor may influence management effectiveness (Donker et al., 2009).

The finding of empirical evidence is also mixed. Daily and Dalton (1994b), investigated the relationships between governance mechanisms and corporate financial bankruptcy. They use logistic regression for 57 financial distressed businesses and compare with 57 healthy firms. By using the proxy of financial indicators, block holdings, quality of BOD, and corporate governance factor for projection of financial distress. And the financial information of the company has been used for 10 years from 1972 to 1982. And they found institutional ownership is negatively associated with firm survival and also state that institutional shareholders reduce the probability of financial distress and increase the management efficiency.

Moreover Chung, and Kim (2005) they Analyzed 22,576 companies' financial data for the period of 1984–1996 by using the audit quality and institutional shareholders as a proxy. And they found that audit quality and institutional investors enhance monitoring effectiveness, and negatively connected with corporate distress. Furthermore Mangena and Chamisa (2008) used logistic model to investigate the effect of the corporate governance system on firm performance in JSE Securities Exchange of South Africa listed firms by analyzing the 81 companies through year wise observation for the period

of 1999 to 2005 by taking the size and time as a control variable. And the finding shows the negative relations of institutional investors and financial distress probability.

In other hand Donker et al. (2009) they analyzed the relationship between ownership structure and the probability of financial distress. By investigating Amsterdam Stock Exchange listed firms from 1992 to 2002. Their empirical finding suggested that a larger number of outside shareholders decreased the likelihood of financial distress. And they also indicate that evidence that high ration of institutional shareholdings is positively associated with a lower likelihood of financial distress. According to the above arguments hypothesized that.

H_{10}: Institutional shareholder has no impact on financial distress.

H_{1A}: Institutional shareholder has a significant impact on financial distress.

2.2.6. Managerial Ownership and financial distress

Mostly organizations face the interest's conflicts among management, investors and debt holders. So the fears of job security managers makes prejudice decisions and try to protect their own income flow rather than making long-term strategic decisions and maximizing shareholder value that reason increase probability of financial distress (Eckbo and Thorburn 2003). Eckbo et al., (2003) also indicates the probability of firm survive increase when the management has ownership in company. As a result, management prefers effective corporate strategy which is interest of share holder and organization value. Therefore managerial ownership reduces the agency problems and

management align themselves with the interests of shareholders and reduces agency costs and also probability of financial distress (Parker et al. 2002)

The empirical study conducted by Morck et al. (1988), and they investigated the affect of management ownership and firm survival using Tobin's *Q* as measure In 1980 500 firms cross-section data ware used and they found negative and significant relationship between firm survivals and managerial ownership. Short and Keasey (1999) examined the performance of firms and equity shares held by management. And Sample was chosen from London Stock Exchange listed companies for the period of 1988 to 1992. Their research evidence claimed that managerial ownership is less expected to financial distress.

However Mathiesen (2002) argue that Managerial ownership help to improve confidence of manager to make decisions and also increase firm financial performance and reduces the probability of financial distress. Moreover if manager's has large proportion of share they want to improve firm performance and neglect distress. Although Demsetz (1983) take 223 companies by random sample from the population of 511 corporations from every sectors of the American economy and analyzed the relation of ownership structure and firm performance and using the financial data of 1976 to 1980. His empirical study indicates that managerial ownership and financial survival of firms have negative association. Parker et al., (2002) take 176 companies as a sample and found that managerial equity reduce the likelihood of firm failure. Moreover managerial ownership

has negative association with risk of failure (Simpson et al., 1999; Teall 1993). Thus we hypotheses that:

H_{10}: Managerial ownership has no impact on financial distress.

H_{1A}: Managerial ownership has a significant impact on financial distress.

2.2.7 Corporate Governance Mechanism and Financial Distress

Financial marketplaces have recently triggered the link between corporate governance and satisfaction among academics and organization press. And the organizations face new difficulties of increased competition, demands to adapt new involved technology and environment modification. Thus fit currently staying debated that the set up systems of corporate financing and corporate control happen to be still appropriate or not. Many empirical studies are conducted to examine the relationship of corporate governance and financial distress. Henry, (2008) found the corporate governance has significant impact on financial performance and bankruptcy, and also corporate governance practices help to survive from distress. By using the CG variables as a measure of corporate governance practices in Australia for examining the relationship between corporate governance practices and financial distress. Parker et al. (2002) conducted a survival for analysis the distressed firms' problems and found that corporate governance practices like insider turnover and ownership structure are positively associated with firm survival.

Chaganti, Mahajan, and Sharma (1985) argue that the corporate governance practices like interdependence and larger board of director have significant associations and also reduce the probability of failure. By examining the twenty-one matched pairs of retail companies. Daily and Dalton (1994) also found that CEO duality and lower independence of directors are associated with higher probability of bankruptcy by analyzing the fifty matched pairs of bankrupt companies. According to Lee and Yeh's (2004) the corporate governance practices are significantly linked with bankruptcy and also found that ownership concentration increases the likelihood of financial distress.

But on the other hand Elloumi and Gueyie (2001) found ownership concentration has a negative effect on financial distress but the outside director's directorship has a positive effect by examining the forty-six healthy and forty-six distressed and fifty four distress firm in Canada. Wang and Deng (2006) found that the corporate governance traits, i.e. managerial ownership, board size, CEO duality, have an insignificant impact on financial distress. But corporate governance practices have negatively and significantly related to probability of financial distress, by analyzing the proportion of independent directors and ownership structure. In Malaysian context Abdullah (2006) analysis ownership structure by using shares held by executive directors, non-executive directors use as a proxy and find negative associations between ownership structure and financial distress. But in UAE corporate governance practices has positive and significant relation between financial distresses on UAE national banks (Yet Al-Tamimi 2012).

The current financial scandals (WorldCom and Enron) are evidence that's indicates loose governance structure is a key factor of manipulating the financial data and increases the probability of bankruptcy. Therefore, corporate governance mechanisms have the potential to influence the company's financial performance (Parker et al. 2002). The corporate governance structure reflects the effectiveness of management control and performance. And the Financial distress is more likely to relay on the characteristics of corporate governance structure (Lee and Yeh 2004). Thus, avoidance of corporate governance codes and conducts or loose governance mechanism is the greater probability of financial distress or bankruptcy. And for saving the bankruptcy also depend on the firm's governance structure. The relationship of financial distress with corporate governance is a matter of unsound governance mechanism and interest of stakeholder (Donker et al.,2009).

H_{10}: Corporate governance mechanism has no effect financial distress.

H_{1A}: Corporate governance mechanism has a significant effect financial distress.

CHAPTER 3

METHODOLOGY

3.1. Data description

The aim of this study is to investigate the effect of corporate governance attributes on firm's financial distress. The sample has been selected on the bases of market capitalization from Pakistani Stock Exchange listed nonfinancial companies. And sample size is 100 companies and data observation period is 2005 to 2014. The sample includes various industries of the nonfinancial sector, such as textile, cement, Telecommunication, Steel industry, Oil companies, and refinery industry. The reason of selecting only the non-financial firm was that the financial companies have different capital and financial structure. In this study secondary data used and data were obtained from company financial statement and Pakistan Stock Exchange (KSE 100) for the periods of 2005 to 2014. In this study financial, material also collect from Central Bank of Pakistan (SBP) some of the data that were not available on SBP site collected from the corporate websites. Hence this is the study limit for non-financial firm only.

3.2. Variable Specification

3.2.1. Depended variable

Financial Distress

This study the Altman Z-score used as a proxy for financial distress. The reason of using the Altman (1968) Z score technique is that Z score model considered as most effective instruments for predicting the health of corporations. Furthermore Altman (1968) Z-score model gives quite accurate result and more reliable tool for assessing the distress (Begley, Ming, and Watts 1996). The z-score model is a perfect model to measure the health of firms (Lugovskaya and Lyudmila 2010, Gutzeit and Yozzo 2011, Goswami et al. 2014). This model also used for financial distress by Yi (2012). First time Z-score was introduced by Altman in 1968 as a good predictor of bankruptcy. The Z-score model is mostly used for predicting the distress and Z score has more predictive power or accuracy then other model. Altman's Z-score is collections of various financial ratios. Altman defined the 1968 Z-score as follows:

$$Z - \text{Score} = 1.2X1 + 1.4\ X2 + 3.3\ X3 + 0.6\ X4 + 1.0\ X5 \quad \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

X1 = Working capital divided by total assets

X2 = Retained earnings divided by total assets

X3 = Earnings before interest and taxes divided by total assets

X4 = Market value equity divided by book value of total debt

X5 = Sales divided by total assets

According to Altman (1968), a company with having Z-Score over 2.67 is considered to be healthy firm and below the 1.81 value predicted as a bankruptcy and between the '1.81' to '2.67' consider as a gray area. In 1983 Altman, modified this model by changing the one variable in (X4) book value of stock substituted by market value (Altman, 1983). This model shows the firm's stability and instability. Following Cardwell et al. (2003), the modified Z-score can be defined as follows:

$$Z - Score = 0.717\,X + 0.847\,X + 3.107\,X + 0.42\,X + 0.998\,X \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

After that in 1993, Altman revised his model and exclude the (X5) and that model is consisting of four variables. This model can apply on non-manufacturing firms. In this study Alman Z score 1968 used .

$$Z - Score = 6.567\,X + 3.26\,X + 6.72\,X + 1.05\,X \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

3.2.2. Independent Variables

Corporate governance is measured through seven variables in this analysis. These are Managerial Ownership, Board Size, CEO Duality, and Independent Directors, Audit Committee independent and Institutional shareholder.

Board size

Board size (SIZE) is measured as the number of directors in a board.

Managerial Ownership

Managerial ownership measured by the proportion of shares owned by management divided to the total number of shares (Henry 2008).

CEO Duality

Dummy variable used for measurement of CEO duality if the CEO has both position CEO/chairman give value 1and 0 otherwise.

Independent Directors

Board independence (OUTSIDERS) measure by number of outsiders in board composition to total number of board size (Elloumi and Gueyle 2001).

Audit Committee independent

Audit committee independent measure by number of outsider member divided by the total number of committee members.

Institutional shareholder

Institutional shareholder measured by the proportion of the institutional hold by large shareholders divided by the total number of shares.

3.2.3. Control variable

To investigate the relationship of corporate governance and financial distress, some company-specific variables used as control variables which are derived from the previous literature? Control variable consists of firm size, leverage, current ratio and return on sales.

Firm size

Firm size measured by the natural log of total assets. According to Ehikioya (2009) total assets can be used for measuring the firm's size. So the log of total assets is a proper proxy of a firm's size. According to Altman (1968) the small size firms have more probability of financial distress relative to large size firms. The previous empirical studies indicate that

the reason of less likelihood of default of larger firms is more management skills and the ability to bear the shock. But larger companies have larger board and monitoring problems at result larger corporation face difficulties (Rommer 2004). Therefore the probability of financial distress is minimized in the case of large size. And larger firm's size can influence the probability of financial distress (Altman 1968). And the size of company positively associated with financial performance (Elloumi et al., 2001).

Leverage

Leverage measured as the ratio of total debt divided by total assets. And leverage is also used as a proxy of financial risk. Many empirical studies analyzed the link between leverage and financial performance of firms (Jensen, 1986; Johnson, 1997; Michaelas et al., 1999, Nickell and Nicolitsas, 1999,). However the empirical finding is mixed. So that according to Elsayed (2007) leverage is negatively associated with the risk of bankruptcy. Contrary to Chen and Church's (1992) argue that leverage is significantly associated with bankruptcy. But the other hand Parker et al. (2002) found positive associations with financial distress.

Current ratio

The current ratio is expressed as current assets to current liabilities. The current ratio is used as proxy of short term insolvency (Ross et al. 2005). And also provide information's about company liquidity and firm ability to meet its current obligations. The higher current ratio indicates more ability of meet its obligations and lower likelihood of

bankruptcy. If the level of liquidity is less than one its indicate the negative net working capital, mostly in the distress firm (Ross et al. 2005). Altman et al., (1977) argue that liquidity negatively associated with probability of bankruptcy. Whereas, the poor liquidity ratio indicates greater probability of default (Parker et al. 2002, & Wang et al., 2006).

Return on sales

Return on sales as a proxy for profitability and measure by earnings before interest and taxes (EBIT) divided by sales. The return on sales also used as a proxy for capturing the company's ability to recover the financial distress. According to Parker et al. (2002), lower level of return on sale is greater the probability of financial distress.

3.3. Model specification

In this study binary logistic regressions model used as an estimation technique the major cause of applying the logistic regression is that in this study the depended variable bounded in zero and one. Moreover the dependent variable consists of zero and one, whereas binary logistic regressions model does not require independent be interval or unrestrained. However the binary logistic regressions, does not need normally and even error terms. So that logistic regression performs better when normality and homogeneity of variance-covariance assumption is not met (Hair et al. 1998, and McLeay and Omar 2000). According to Collins and Green (1982) and Lennox (1999 logistic regression

model works more accurately on discriminate analysis. In addition Logistic regression is a superior estimation model than discriminate analysis, (Einsenbeis, 1977). Finally, many researchers also used discriminate analysis (Altman and Sabato 2005). In this research, the binary logistic model applies to investigating the impact of corporate governance mechanism on firm financial distress. The major reason of using logit model is in finance discipline mostly logit model use and probit use in economic. The second reason is lower value of AIC (Akaike info criterion). The dependant variable represents 1 for the distressed companies and 0 for the healthy companies.

In this study panel logit and cross sectional both techniques are used. The reason of using the both techniques is panel model does not observe the individual effect. To minimize this limitation, cross sectional logit used to obtain the each company and each year effect. Therefore, cross sectional regression model use for examining the effect of corporate governance characteristics on firm financial distress. And also investigate through panel data analysis means overall effect. The variables of this model derive from existing literature of corporate governance and financial distress (Al-Tamimi, 2012; Ehikioya, 2009; Coles et al., 2008 and Elsayed, 2007).

And also cross sectional & Panel logistic regression both analysis use for investigating the effect of corporate governance mechanism on firm financial distress by making the corporate governance index (CGI). There are two major approaches are for creating the index weighted and un-weighted. In this study weighted approach used for developing the corporate governance index. The reason of using this approach is that the empirical

evidence of (Coombs and Tayib, 1998 and Wallace and Naser, 1995) shows that both of approaches are closely co-related and capture the same effect. So the logistic regression model is developed to test the relationship.

Logit $P_i = \beta_0 + \beta_1$ (aud)i + β_2 (BI)i + β_3 (BS)i + β_4 (CEO)i + β_5 α (MGHT)i + β_6 (INST)i + β_7 (LEVG)+ β_8 (CR)+ β_9 (ROS)+ β_{10} (SIZE)+ i ε…….(1)

Pi represents financial distress of the *i*th company. *Pi* takes "1" for distress companies and "0" otherwise.

- AUD represents the independence of the audit committee.
- BI represents board independence
- BS represents board size
- CEO represent the duality of CEO
- MGHT represents the proportions of management's own
- INST represents the proportions of institutional shareholders
- LEVG represent the proportions of debt
- CR represents current ratio
- ROS represents return on sale
- SIZE represent log of total assets

***Logit Pi* = 0 α + 1 α *(CGI)i* + 2 α *(ROS) i* + 3 α *(CR)i* + 7 α *(LEV)i* + 8 α *(LN_TA)i* + *i* ……... (2)**

Pi represents financial distress of the *i*th company. *Pi* takes "1" for distress companies and "0" otherwise.

- Pi represents the estimated probability of financial distress
- CGI refer to corporate governance index
- CR for current ratio
- LEV refers to leverage
- LN_TA = the log of the firm's total assets

3.3.1. Panel Logit Model

Logit P*it* = β_0 + β_1 (aud) *it* + β_2 (BI) *it* + β_3 (BS) *it* + β_4 (CEO) *it* + β_5 (MGHT) *it* + β_6 (INST) *it*+β_7 (LEVG) *it*+β_8 (CR) *it*+β_9 (ROS) *it*+β_{10} (SIZE) *it*+iε……(3)

All variables are denoted i for the individual cross sectional unit (i=1,…, N) and a t denoted for time period (t=1,…, T).

- AUD represents independency of audit committee.
- BI represents board independency
- BS represents board size

- CEO represent duality of CEO
- MGHT represents proportions of managements ownership
- INST represents proportions of institutional share hold
- LEVG represent proportions of debt
- CR represent current ratio
- ROS represents return on sale

Logit P*it* = 0 α + 1 α (CGI) *it* + 2 α (ROS) *it* + 3 α (CR) *it* + 4 α (LEV) *it* + 5 α (LN_TA) *it* + i ε …….. (4)

All variables are denoted i for the individual cross sectional unit (i=1,…, N) and a t denoted for time period (t=1,…, T).

- Pi represents the estimated probability of financial distress
- CGI refer to corporate governance index
- CR for current ratio
- LEV refers to leverage
- LN_TA = the log of the firm's total assets

CHAPTER 4

RESULTS AND DISCUSSION

4.1 Descriptive Statistics

TABLE 1

Descriptive Statistics

Corporate Governance and Firm Financial Distress

Variables	Mean	Max	Min	Std. Dev.	Skew	Kurtosis
Audit	0.25121	0.99995	0.00527	0.31187	1.06397	2.67931
BI	0.43720	0.57143	0.28571	0.09408	-0.16303	1.95232
BS	8.32685	15.0000	5.00000	1.71717	1.20815	4.44512
CEO	0.32593	1.00000	0.00000	0.46894	0.74276	1.55170
CGI	0.17815	0.31755	0.10403	0.03355	0.68618	3.60559
CR	1.33294	3.54087	0.33922	0.83001	1.33323	4.07365
INST	0.15996	0.51109	0.00000	0.10233	0.46367	2.75839
LEV	0.63917	1.49976	0.14922	0.33588	0.88790	3.55123
Mght Own	0.06362	0.13425	0.00003	0.05961	0.27808	1.19318
ROS	0.10389	0.41426	-0.9995	0.19532	-0.07877	4.57410
SIZE	15.38068	20.41334	7.83677	1.74042	-0.61576	4.76797
Distress	0.41389	1.00000	0.00000	0.49276	0.34967	1.12227

Table 1 shows the descriptive statistical analysis for all variables of this study for the period of 2005 to 2014. The mean value represents the average value of variables and standard deviation measure of the dispersion from the mean. And the maximum value identifies the highest value and minimum shows the lower value of data. The skewness value indicates the probability distribution of data and kurtosis measure its tallness.

The mean value of audit interdependence is (0.251206) it shows the average number of outsider member of the audit committee is 25 percent by having a deviation from the mean is 0.311867. The maximum level of the independed committee member is 0.999953 and minimum level is 0.005271 observe during the sample period. The mean value of board size is (8.326852) which means that the average company has 8 directors and stranded deviations is (1.717171) and minimum level is (5) and maximum number of board of director is (15). The Average value of board interdependency is (0.437199) it means that 43% outsider member in the executive board. And the stranded deviation value is (0.094078) and maximum level is (0.571429) and minimum level of board interdependent are (0.285714) in over all period.

The average value of CEO duality is (0.325926) the value of the mean is near to zero, it means that most companies haven't CEO duality. And stranded deviation value is (0.468937) and maximum value (1) and minimum value is (0). The Institutional ownership mean value (0.159959) represents the 15% of share holed in average by the institution and maximum level of institutional ownership is 51% and minimum value is (0.0002%) with (0.102325) stranded deviations respectively. The average managerial ownerships about (0.063621) it means that 6 percent share hold by management on average. And the maximum level of management ownership (0.134253) is about 13 percent and minimum level is (0.00003) having stranded deviation (0.059613) respectively. The mean value of the corporate governance index (CGI) (0.178146) has lower average value about 17 percent. It means that the corporate governance practices within Pakistani firms are weak. The average percentage of the corporate governance

index within Pakistani firms is lower as compared to other emerging markets. Like the average percentage of CGI in Brazil is 67% (Lima et al., 2013), Korea has 46% (Pae & Choi, 2010), and India 31% respectively (Varshney et al., 2012). The maximum level of CGI is about (0.317553) and minimum level is (0.104033) having stranded deviation (0.033551).

Financial distress is captured by Altman Z-score (1968) the average value of is about (0.413889) and maximum value is (1) and minimum value (0) with deviations of (0.492757). The mean value of current ratio (CR) (1.332938) implies that average firms have current assets for every 1 in current liability covered 1.31 times over. The stranded deviations (0.830013) and maximum level of liquidity is (3.540868) and minimum level is (0.339216) observed during the sample period. The mean value of leverage is (0.639168) which means 63 percent debt observed during the sample period. And the maximum level of debt (1.499755) and minimum level of leverage is (0.149223) observed by having (0.335881) stranded deviations respectively.

Board size, size and return on sale are negatively skewed while all other variables are positively skewed. In case of Kurtosis, if the value is equal to 3 then this pattern is called mesokurtic. If the value is > 3 then the pattern is called leptokurtic that are associated with simultaneously peaked and fat tail. But when the value of kurtosis is less than 3 it is called platykurtic and is associated with simultaneously less peaked and have thinner tail. Price and BI indicate the platykurtic behavior while all other variables are showing mesokurtic behavior.

4.2 Correlation Analysis

TABLE 2

Correlations among Variable

Corporate Governance and Firm Financial Distress

	DIST	AUD	BI	BS	CEO	CGI	CR	INST	LEV	MGO	ROS	SIZ
DIST	1											
AUD	0.0126	1										
BI	0.0307	-0.051	1									
BS	-0.030	0.0955	0.2171	1								
CEO	-0.062	-0.037	-0.021	-0.034	1							
CGI	-0.053	-0.146	0.2237	0.4469	0.1990	1						
CR	-0.332	-0.051	-0.022	0.0859	-0.000	0.0493	1					
INST	-0.060	0.0065	0.0513	0.0840	-0.0210	0.3575	-0.014	1				
LEV	0.1537	-0.006	0.0657	-0.067	0.0487	-0.007	-0.333	-0.005	1			
MGO	0.0026	0.0921	0.0449	-0.009	0.0019	0.0214	-0.012	0.0702	-0.002	1		
ROS	-0.335	-0.068	0.0051	-0.003	0.0776	0.0206	0.3256	0.0107	-0.305	-0.026	1	
SIZE	0.0644	0.0271	-0.164	-0.036	-0.017	-0.017	-0.031	-0.025	-0.122	-0.001	0.11	1

Before testing the logit regression model, we need to address the probability of multicollinearity problem among the variables. Multicollinearity carries out to capture the level of correlation among variables. Table 2 provides the correlations between all variables. According to Anderson et al. (1990), Tabach & Fidell (1996) if correlation value exceeds form 0.7 range then data have multicoreanarity problem. Our correlation analysis shows no multicollinearity problems in this data because values relay below the 0.7 our result shows the significant correlations all the values are below 0.4.

4.3 Logistic Regression

TABLE 3

Cross Sectional Logistic Regression (2005-2014)

Corporate Governance and Firm Financial Distress

Variable	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
C	-2.556	-11.385	3.976	-4.172	-1.996	-7.844	4.436	0.066	0.529	5.440
AUD	-0.845	-1.425	1.063	-0.754	0.096	-0.146	0.503	-0.781	0.463	-0.649
BI	3.371	7.732	-2.019	2.471	-3.792	8.050	-4.277	0.820	-3.109	-3.158
BS	0.185	0.603	0.044	0.025	-0.104	0.486	-0.137	0.162	-0.194	-0.119
CEO	0.665	1.295	-0.105	0.411	-0.064	0.243	-1.402*	-0.709	-1.049	-0.649
CR	-2.14**	-1.78**	-2.52*	-0.407	-0.832*	-0.488	-1.274*	-0.870*	-0.365	-1.08*
INST	3.259	-0.013	2.294	-0.241	-1.223	1.688	-9.218	-2.527	-7.64**	-3.686
LEVG	1.441	0.272	0.457	0.407	0.806	1.288	-1.294	-0.441	1.092	-1.052
MGO	-2.709	1.725	2.796	0.625	2.304	-2.233	1.188	-1.793	-5.553	-2.333
ROS	-4.01**	-1.686	-1.660	-7.87**	-3.707*	-3.842*	-4.901**	-4.275*	-2.81**	-2.211
SIZE	0.191	*0.509	-0.047	0.275	0.169	*0.335	0.015	0.062	0.046	-0.108
Total Obs	107	107	107	107	107	107	107	107	107	107
McFadden R^2	0.253	0.249	0.273	0.265	0.199	0.260	0.298	0.184	0.195	0.148
Prob(LR statistic)	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.005	0.003	0.043

The above table 3 reports the result of the cross sectional logistic regression for the period of 2005 to 2014. For examining the relationship of corporate governance structure like (ownership structure, board composition, and transparency disclosure) with financial distress we performed logistic regression analyses to test the hypotheses. In all the logistic regressions analysis return on sale, current ratio, leverage and size were stated as control variables. The above logistic regression model shows the value P-state of C is above the level of confidence interval (0.05) it means there is no omitted variable. And

Prob (LR statistic) value at significance level 0.05 it means that the model accuracy is 95%. McFadden, R-squared is observed round about 25% for the period of 2005 to 2011 and 17% for the period of 2012 to 2014.the value of McFadden R-squared shows the 25% variation occurs in depended variable for the period of 2005 to 2011 and 17% variations occur in depended variable for the period of 2012 to 2015.

In 2011 logistic analysis CEO duality has statistically significant at the level of (0.05). As the coefficient of the CEO duality has *(*β = -1.402949, *Pvalue*< 0.05*)* negative and significantly impact on financial distress and decreasing the probability of financial distress. And in 2013 institutional shareholder (INST) also has significant impact on financial distress. With a coefficient value of (β = -7.6429, Pvalue< 0.05) and also decrease the likelihood of financial distress.

And we found that company specific variable has a significant association with firm's financial distress. The current ratio has a negative coefficient *(*P value< 0.05) at significant levels and negative impact on corporate financial distress. This means that greater firms' liquidity decreases the probability of financial distress. And return on sale (ROS) also has a significant and negative impact financial distress. So the higher return on sale minimizes the probability of bankruptcy. However, other attributes of corporate governance, i.e. audit committee, board size board interdependence, and managerial ownership has an insignificant impact on firm's financial distress.

4.4 Panel logit analysis of governance attributes

Robustness Checks

In order to check the robustness of the result panel logit analysis run. Results are reports in Table 4.

TABLE 4

Logistic Regression

Corporate Governance and Firm Financial Distress

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-1.0616	0.9063	-1.1714	0.2415
AUDIT	-0.1773	0.2420	-0.7325	0.4638
BI	0.9959	0.7634	1.3046	0.1920
BS	0.0019	0.0730	0.0261	0.9792
CEO	-0.2128	0.1652	-1.2882	0.1977
CR	-0.8852	0.1173	-7.5482	0.0000
INST	-1.0929	0.7871	-1.3886	0.1650
LEVG	0.0289	0.2326	0.1245	0.9009
MGHTOW	-0.2092	1.1679	-0.1791	0.8578
ROS	-3.5899	0.4493	-7.9901	0.0000
SIZE	0.1387	0.0437	3.1752	0.0015
Total obs	1080			
McFadden R-squared	0.1584			
Prob(LR statistic)	0.0000			

The table 4 reports the result of corporate governance mechanism and impact on probability of financial distress. The above logistic regression analyses shows that the value of p-state of C is above to significant level (p-value >0.05). Its means that is no other omitted variable. And Prob (LR statistic) value (0.00000) is below the (0.05) it

represents the model is significant and McFadden R-squared (0.158416) shows that depended variable explain 15 percent by in-depended variable.

This results confirms the proposed cross sectional analysis and others is statistically test used.

4.5 Logistic Analysis of corporate governance mechanism:

TABLE 5

Cross Sectional Logistic Regression (2005-2014)

Corporate Governance index and Firm Financial Distress:

Variable	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
C	-0.5554	-5.0145	3.7929	-3.0180	-2.7726	-1.5322	2.0629	-0.3560	-0.2854	2.6359
CGI	2.5653	9.6040	-9.8691	-0.5238	5.0189	-6.5185	-8.5049	0.3890	-5.1081	-2.7654
CR	*-2.223	*-1.424	*-2.246	-0.4873	*-0.844	-0.5215	*-0.980	*-0.750	-0.4855	*-0.955
LEVG	1.1806	0.6009	0.1784	0.6069	0.6764	0.4805	-1.5961	-0.5447	0.5319	-0.8464
ROS	-3.4522	-1.1728	-2.5255	*-7.235	*-3.732	*-3.983	*-6.462	*-4.543	*-2.923	-2.0548
SIZE	0.0794	0.2780	0.0057	0.2462	0.1873	0.2003	0.1224	0.0979	0.0924	-0.0479
McFadden R^2	0.2292	0.1573	0.2470	0.2523	0.1807	0.1766	0.2320	0.1479	0.1082	0.1075
Prob(LR stat)	0.0000	0.0004	0.0000	0.0000	0.0001	0.0001	0.0000	0.0007	0.0077	0.0113
Total obs	108	108	108	108	108	108	108	108	108	108

**** Significant at 0. *01,* *significant at 0. 05.**

The above table 5 reports the results of corporate governance index cross sectional logistic regression for the period of 2005 to 2014. For investigating the impact of corporate governance mechanism on financial distress by creating the index of corporate governance practices. Cross sectional logistic regression analyses performed to test the hypotheses. In all the logistic regression analysis entered return on sale, current ratio, leverage and size as control variables.

According to above logistic regression analysis, corporate governance mechanism (CGI) has an insignificant impact on financial distress. But we found the firms specific variable current ratio (CR) and return on sale (ROS) have a negative and significant impact on financial distress. The higher level of current assets sand higher return on sale decreases the likelihood of financial distress. But in the period of 2008 and 2013 has insignificant effect. Whereas Prob (LR statistic) value (0.05) are below than 0.05 and significant at 95% confidence level. And the average explains the power of McFadden R-squared around 18 percent.

4.6 Panel Logistic Regression of corporate governance:

TABLE 6

Panel Logistic Regression

Corporate Governance index and Firm Financial Distress

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.6736	0.8181	-0.8234	0.4103
CGI	-1.9507	2.0580	-0.9479	0.3432
CR	-0.8769	0.1163	-7.5415	0.0000
LEVG	0.0455	0.2287	0.1990	0.8423
ROS	-3.6176	0.4451	-8.1270	0.0000
SIZE	0.1331	0.0426	3.1226	0.0018
McFadden R-squared	0.1537	**Mean dependent var**		0.4139
S.D. dependent var	0.4928	**S.E. of regression**		0.4409
Akaike info criterion	1.1592	**Sum squared resid**		208
Schwarz criterion	1.1869	**Log likelihood**		-619
Hannan-Quinn criter.	1.1696	**Deviance**		1239
Restr. deviance	1465	**Restr. log likelihood**		-732.50
LR statistic	225.1	**Avg. log likelihood**		-0.5740
Prob(LR statistic)	0.0000			
Total obs	1080			

In order to check the robustness of the results we run Panel logistic analysis. And regresses 10 year panel data of 100 companies to examine the impact of corporate governance mechanism CGI on financial distress. And found negative and insignificant relation between corporate governance mechanism and survival of the business. Our result also highlights the significance of current ratio with coefficient value of (β = -0.876934, Pvalue< 0.05) have negative and significance association with distress. The

return on sale is also statistically significant and negative linked with financial distress with coefficient value of (β = -3.617611, Pvalue< 0.05). The value of Prob (LR statistic) 0.05 at significant level its means that the model accuracy 95%. And the value of McFadden R-squared (0.153661) shows that depended variable explains 15% by in depended variables.

4.7. DISCUSSION:

To explore the effect of corporate governance mechanism on the financial distress logit model has used. The corporate financial distress regressed by on the corporate governance index and four control variables. Finding of this research show insignificant relationships among corporate governance practice and financial distress and our results did not confirm stated hypothesis. But in the cross sectional analysis, some corporate governance factor has significant impact on financial distress during different periods of observation.

In 2011 our result shows CEO duality has a negative and significant impact on financial distress and results are also supported by Simpson et al., (1999) and Daily et al., (1994b) they also found that CEO duality has a negative relationship with probability of bankruptcy while controlling the firm size, other macroeconomic factor. In context of board compositions our finding indicates insignificant relations. Our finding alight with Monk et al,. (2000) analysis. According to Liang (2000) board size does not matter in firm's profitability. Our results supported by finding of Teall (1993); Diamond and

Verrecchia, (1991); Verrecchia, (2001) they also found the corporate governance characteristics like proportion of independent directors, ownership structure and the other corporate governance traits i.e. managerial ownership, board size, CEO duality, has an insignificant impact on financial distress. In Malaysian context Abdullah (2006) analyzed ownership structure by using shares held by executive directors; non-executive directors use as a proxy and find insignificant associations between ownership structure and financial distress.

In 2013 institutional ownership also has a significant effect on financial distress. And our finding supported by Mangena and Chamisa (2008), Chung, and Kim (2005) they also found institutional ownership is negatively associated with firm survival and also state that institutional shareholders reduce the probability of financial distress and increase the management efficiency. Another reason of insignificant result may be a cause of firms heavily depends on debt financing. And the Pakistani market has crucial economic situations. So that macroeconomic factor has greater influence on the likelihood of firm's survival (Cadbury, 2002).

These results show the control variables (leverage, return on sale and current ratio) statistically significant effect on financial distress. So that these results are angling with of Parker et al. (2002), and Wang et al., (2006) finding. They state that company poor liquidity conditions increased probability of financial distress. Higher returns on sales, reduce the probability of distress (Cadbury, 2002). Our empirical study indicates an insignificant association among corporate governance practices and probability of

financial distress. But on the other hand, our findings also proven that company specific variable, like, return on sale and liquidity, have a significant role in probability financial distress.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

This study contributes in the academic literature about corporate governance practices and corporate financial distress to fulfilling the geographical context, such as Pakistan where this issue does not explore. We assume two theoretical looms agency and stakeholder theories. Therefore, this study investigates the impact of corporate governance mechanism on firm's financial distress in the Pakistani market during 2005 to 2014. We divide corporate governance structure, into two interesting issues. First, we investigated whether different attributes of corporate governance like (institutional shareholder, board structure, CEO duality and transparency disclosure) and of effect on financial distress.

Second, we analyzed the association of corporate governance mechanisms with financial distress by making the corporate governance index. However, this study suggests important empirical evidence on corporate governance practices and its influence on business survival in the context of Pakistan. This is one of the first studies which explore the corporate governance structure in prospective of agency problems and stakeholder theory impact on likelihood of financial distress in the context of Pakistanis economy. The finding of this study suggests a corporate governance mechanism an insignificant impact on financial distress, but in cross sectional some attributes of corporate

governance have significant effects (e.g. CEO duality and institutional ownership). This study has also proven that company specific variable has a significant role in probability financial distress.

5.2 Recommendations

This study also contributes important policy and practical implications. Our finding indicates that the level of corporate governance is low in Pakistani companies on average. This study provides basic guidelines for policy makers for the development of good corporate governance mechanism witch help to protect minority shareholders. In addition, the implementation of codes and conducts of corporate governance must control by Pakistani legislative authority and consider as a mandatory for every organization. Therefore the macroeconomic factors also have a great influence on firms' performance. According to Cadbury, 2002 the economic factors affect the likelihood of firm's survival. So that Pakistani market not only needs to develop a good corporate governance structure, but also improve legal protection measure for creditor interest.

In the perceptive of investors this study helps to explore the likelihood of distress. And provide an alternative measure for financial distress. In additions, investors must consider the influence of large stakeholder on firm decisions. The current study also provides evidence that firm-specific characteristics could be useful as a determining the likelihood of financial distress. Our findings may be of interest to those academic researchers who

wish to discover the quality of corporate governance practices in a developing market such as Pakistan and its impact on financial distress.

Although this study has several implication for firms governance and corporate distress, but also have some limitations and unobserved factor as well. First, this study more focused on internal control mechanisms like reporting quality, audit committee dependency, design of ownership concentrations, board design and other measure of internal structure, but financial policy and external factor also have significant influence on the firms' performance. And this study only takes into account high capitalized listed companies that issue financial reports on a regular basis. Furthermore, this study considers only non-financial firms that are listed in KSE Pakistan. Finally the study is limited to KSE 100 index and results are generalized to the non- financial companies which are operating in Pakistan.

Future research can be conducted on the issues of complexity of the financial distress process and their causes.

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