

**THE RELATIONSHIP BETWEEN CORPORATE GOVERNANCE AND INSOLVENCY  
RISK AMONG COMMERCIAL BANKS IN LIBERIA**

**BY**

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**DECLARATION**

I declare that this project is my original work and has not been presented for an award of a degree in any other University.

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This research project report has been submitted for examination with my approval as the University Supervisor.

Signature

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## **DEDICATION**

This project is dedicated to my entity (General Auditing Commission of the Republic of Liberia) and my loving and caring family.

## ACKNOWLEDGMENTS

It has been an exciting and instructive study period in the University Nairobi and I feel privileged to have had the opportunity to carry out this study as a demonstration of knowledge gained during the period studying for my master's degree. With these acknowledgments, it would be impossible not to remember those who in one way or another, directly or indirectly, have played a role in the realization of this research project. Let me, therefore, thank them all equally.

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## LIST OF ABBREVIATIONS

|           |  |
|-----------|--|
| CBL       | Central Bank of Liberia                                |
| CEO       | Chief Executive Officer                                |
| CEODUAL - | Chief Executive Officer Duality                        |
| DIV       | Diversity  |
| IR        | Insolvency Risk  |
| LSE       | Liberia Stock Exchange                                 |
| NEPAD     | New Partnership for Africa's Development               |
| OECD      | Organization for Economic Co-operation and Development |
| ROA       | Return on Assets                                       |
| SD        | Standard Deviation                                     |
| SPSS      | Statistical Package for Social Sciences                |
| TA        | Total Assets   |

## ABSTRACT

The recent scandals and corporate failures in the United States and in Europe have led to a renewed interest in research of corporate governance. Surprisingly enough, despite the importance of the topic, there are only a few studies on the corporate governance of banks. Further, to the knowledge of the researcher, no study has established the link between corporate governance and insolvency risk in Liberia. This is the gap that the present study sought to bridge by determining the relationship between corporate governance and insolvency risk among commercial banks in Liberia.

The present study used a cross-sectional survey design. The population of this study was all the 8 commercial banks which have been operating during the period under study (from 2006 to 2010) in Liberia. Data was collected from the banks' annual statements. The data sought was on board dimensions such as size, duality and cognitive diversity. This was the focus of corporate governance. The insolvency risk data was also sought from the same annual statements. The specific data sought for insolvency risk was measured as return on assets, shareholder capital and total assets. The data was analyzed using correlation and regression analysis.

The study found that there were generally low insolvency risks in the banking industry in Liberia. This is because the highest insolvency risk was 0.411307 while the lowest was -2.5575. The mean insolvency risk was -0.1929. The study found that corporate governance was negatively correlated with insolvency risk (Pearson Correlation Coefficient,  $R = 0.572$  with an adjusted  $R^2 = -0.570$ ). The study concludes that larger boards do not necessarily lead to lack of coordination and eventual increase in insolvency risk as prior studies have often proposed. This study highlights a result which is opposed to the various results of the studies which treats the problems of "corporate governance" of the banking firm in which the authors often suppose that

the manager is averse to risk. The study recommends need to question the wisdom that larger boards are detrimental to corporate governance.

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## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

Corporate governance is the set of processes, customs, policies, laws and institutions affecting the way a corporation is directed, administered or controlled. Corporate governance also includes the relationships among the many players involved (the stakeholders) and the goals for which the corporation is governed. The principal players are the shareholders, management and the board of directors. Other stakeholders include employees, suppliers, customers, banks and other lenders, regulators, the environment and the community at large (Erhardt, et al., 2003).

Another popular definition of corporate governance is the one given by Shleifer and Vishny (1997): "Corporate governance deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment". Corporate governance is concerned with the resolution of collective action problems among dispersed investors and the reconciliation of conflicts of interest between various corporate claimholders (Becht et al., 2005). At the most basic level a corporate governance problem arises whenever an outside investor wishes to exercise control differently from the manager in charge of the firm. Dispersed ownership magnifies the problem by giving rise to conflicts of interest between the various corporate claimholders and by creating a collective action problem among investors (Zingales, 1998).

The debate on the corporate governance of banks can be included among the more general attempt to answer the fateful question: are banks special? Fama (1985) wrote a famous article with the title: "What's different about banks?" This is still today a much debated question and

the answer to this question has a strong impact on which financial regulation arrangement to choose. Three different theories of financial intermediation have stressed the specificity of banks, even though for different reasons. These include, in chronological order, the classical theories (Santomero, 1984), the new view (Gurley and Shaw 1960, Tobin 1985), and the theories based on asymmetric information (Diamond and Dybvig 1983, Diamond 1984).

These theories focused on the three traditional roles of commercial banking: organisations of payment, maturity transformation and liquidity provision (Sarcinelli 2001). In contrast, the new financial intermediation theories (Allen and Santomero, 1996, 1999, Allen and Gale 1997) describe all the financial intermediaries as risk managers, stressing similarities more than differences. Indeed financial and technology innovation, the spread of information (once the monopoly of the banker), the development of securitization techniques have caused a gradual declining in the traditional intermediation business.

The insolvency risk refers to the risk that a firm will be unable to satisfy its debts -also called the bankruptcy risk (Mamoghli and Dhouibi, 2009). Corporate governance and insolvency arrangements are different parts of a continuum in the life of a corporate institution. This continuity, according to Nester (2002), can be gauged by looking at 3 key attributes of the insolvency system: its close relationship to corporate finance arrangements in specific countries; its function as a key benchmark for corporate attitudes towards risk; and its function as a set of governance norms for insolvent going concerns. McDonough (2002), President of the Basle Committee specifies that the financial stability can be realized with the interaction of many factors: "Financial stability begins with good corporate governance, able and experienced directors and management..." So, the aim of this paper consists of exploring the impact of the

board of directors' size and diversity on the insolvency risk of Liberian commercial banks. The model described by Jensen (1993) constitutes the base in developing the study assumptions. To test the impact of board of directors' diversity on insolvency risk of Liberian banks, the study will measure the demographic and cognitive diversity by the proportion of foreign and institutional administrators, respectively.

Commercial banks in Liberia are licensed and regulated under the Banking Act and Prudential Regulations issued there-under. There are currently 9 commercial banks in Liberia, Namely Liberian Bank for Development & Investment (LBDI), Ecobank Liberia Limited (ELL), International Bank Liberia Limited, First International Bank, United Bank of Africa (UBA), Access Bank Liberia Limited, Guaranty Trust Bank Liberia Limited and Global Bank Liberia Limited. Out of the 9 banks, 1 is locally owned and 8 are foreign owned.(Central Bank of Liberia, 2010). The Central Bank of Liberia oversees the operations of all commercial banks. During the on-site inspections all risks are evaluated and necessary remedial actions are recommended. Off-site surveillance is also conducted by reviewing data received from institutions on a regular basis. Corporate governance issues have also taken a center-stage in the supervising process (CBB, 2003).

According to Johnson et al., (2003) report, the governance and efficacy of listed companies had improved in the years prior to the report, making it comparable to "any other market in the world" (p. 20). By introducing and enforcing the necessary regulations, the central bank have improved governance. Similarly, the 2006 country review report on Liberia published by the NEPAD notes that the corporate governance environment in the country is improving, as a result

of "ongoing efforts to put in place a good corporate governance framework to meet international benchmarks" (p. 158) by related institutions. Liberia has adopted the OECD's Principles of Corporate Governance and "most listed companies are now adopting and implementing good corporate governance practices" (p. 158), according to the NEPAD report.

## **1.2 Statement of the Problem**

Since the onset of the financial crisis bank stability has been yet again at the top of policy makers' agenda across advanced and developing countries. Concerns about the stability of banks of different sizes and ownership have dominated the public debate around the world over the past two years. While some point to the failure of private banks as evidence for the fragility of short-term and profit-oriented banking, others point to governance failures and distorted business models in state-owned banks that came to light during the crisis, such as in Germany and elsewhere.

The recent scandals and corporate failures in the United States and in Europe have led to a renewed interest in research of corporate governance. Scandals are simply manifestations of a number of structural reasons why corporate governance has become a central issue in the last two decades: the worldwide wave of privatization; pension fund reform and the growth of private savings; deregulation and the integration of capital markets (Becht, et al., 2003). In this new environment, the increased importance of the private, market-based investment process calls for a better corporate governance. Claessens (2003) summarizes the channels through which corporate governance affects growth and development: increased access to external financing by firms, lower cost of capital and associated higher firm valuation, better operational performance

through better allocation of resources and better management, reduced risk of financial crises, better relationships with all stakeholders.

Banks are themselves corporations. Corporate governance of banks affects banks' valuation, their cost of capital, their performance and their risk-taking behavior. Formal econometric studies show that banks exert a strong impact on economic development (Levine, 2005). When banks efficiently mobilize and allocate funds, this lowers the cost of capital to firms, boosts capital formation, and stimulates productivity growth (Levine, 2004). Since banks exert corporate governance on firms, as creditors of firms and, in many countries, as equity holders, the corporate governance of banks becomes crucial for growth and development. Surprisingly enough, despite the importance of the topic, there are only a few studies on the corporate governance of banks. Further, to the knowledge of the researcher, no study has established the link between corporate governance and insolvency risk in Liberia.

### **1.3 Objectives of the study**

- i. To establish the corporate governance practices among commercial banks in Liberia,
- ii. To establish the relationship between corporate governance and insolvency risk among commercial banks in Liberia

### **1.4 Significance of the Study**

This study may be important to various groups of people. This study will inform the management of commercial banks in Liberia on whether they should worry about their insolvency risk as determined by their corporate governance mechanisms. If there is any significant correlation, then the boards of commercial banks will need to observe good corporate governance in a bid to reduce or eliminate their insolvency risks.

The policy makers can obtain knowledge of the financial sector dynamics as regards insolvency risk as well as corporate governance in Liberia. They can therefore obtain guidance from this study in designing appropriate policies that may regulate the sector. The study can provide information to potential and current scholars on insolvency risk and corporate governance among commercial banks in Liberia. This can expand their knowledge on corporate governance mechanisms in financial institutions and also identify areas of further study.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

From a general perspective, banks are viewed as any firm with a broad range of stakeholders. In the case of banks, the group of claimants includes shareholders, who contribute to the formation of capital, as well as other categories that have a direct interest, such as: creditors, employees, general public, governments and regulators. Referring to corporate governance models and viewing a comparison between the Anglo-American and the Franco-German models, Macey and O'Hara (2003) note the strange fact that paradigms of corporate governance differ on the basis of national boundaries rather than on the basis of the indigenous characteristics of the firms being governed. The Anglo-American corporate governance approach focuses on the interests of maximizing shareholder value, while the Franco-German model considers the interests of all stakeholders. In the case of banks, the two authors find a hybrid approach, in which most firms are governed according to the US model, while banks are governed according to the Franco-German paradigm. The governance of banks is targeted at the interest of its shareholders, employees, creditors, local communities, customers and regulators.

#### **2.2 THEORETICAL PERSPECTIVE**

There is a significant public dimension to the banking firm. In the banking context, depositors' savings and government interests are at stake (Macey and O'Hara, 2003). When the social costs of an outcome exceed the private costs of an outcome, there is a negative externality effect. In



this case the failure of a bank can influence the functioning of the entire banking system. The positive externality effect is also acknowledged: good individual performance improves the health of the banking system, which benefits all stakeholder groups. In this context, the corporate governance model argues that shareholders are not the exclusive beneficiaries of fiduciary duties. Non-shareholder constituencies claim fiduciary duties from management, in certain circumstances requesting higher protection than the duty performed in relation to shareholders. The special nature of banking requires that management duties are more extensive than those of other directors. Managers function in the light of two distinct sets of interests: one is the private interest internal to the firm and the other is the public interest external to the firm. From the banks' governance perspective, the agent seeks that behavior beneficial to the firm's interest does not compromise the public interest (Ciancanelli and Gonzales, 2000).

Corporate governance includes all types of firms and its definitions could extend to cover all of the economic and non-economic activities. These theories range from the agency theory and expanded into stewardship theory, stakeholder theory, resource dependency theory, transaction cost theory, political theory and ethics related theories such as business ethics theory, virtue ethics theory, feminists ethics theory, discourse theory and postmodernism ethics theory. In this study, only three theories shall be reviewed: agency, stewardship and stakeholder theories.

### **2.2.1 Agency Theory**

Agency theory having its roots in economic theory was expounded by Alchian and Demsetz (1972) and further developed by Jensen and Meckling (1976). Agency theory is defined as "the relationship between the principals, such as shareholders and agents such as the company

executives and managers". In this theory, shareholders who are the owners or principals of the company, hires the agents to perform work. Principals delegate the running of business to the directors or managers, who are the shareholder's agents (Clarke, 2004).

The agency theory shareholders expect the agents to act and make decisions in the principal's interest. On the contrary, the agent may not necessarily make decisions in the best interests of the principals (Padilla, 2000). Such a problem was first highlighted by Adam Smith in the 18th century and subsequently explored by Ross (1973) and the first detailed description of agency theory was presented by Jensen and Meckling (1976). Indeed, the notion of problems arising from the separation of ownership and control in agency theory has been confirmed by Davis, et al., (1997).

In agency theory, the agent may be succumbed to self-interest, opportunistic behavior and falling short of congruence between the aspirations of the principal and the agent's pursuits. Even the understanding of risk defers in its approach. This theory prescribes that people or employees are held accountable in their tasks and responsibilities. Employees must constitute a good governance structure rather than just providing the need of shareholders, which maybe challenging the governance structure.

### **2.2.2 Stewardship Theory**

Stewardship theory has its roots from psychology and sociology and is defined by Davis, et al., (1997) as "a steward protects and maximizes shareholders wealth through firm performance, because by so doing, the steward's utility functions are maximized". In this perspective, stewards

are company executives and managers working for the shareholders, protect and make profits for the shareholders. Unlike agency theory, stewardship theory stresses not on the perspective of individualism (Donaldson and Davis, 1991), but rather on the role of top management being as stewards, integrating their goals as part of the organization. The stewardship perspective suggests that stewards are satisfied and motivated when organizational success is attained.

Agyris (1973) argues agency theory looks at an employee or people as an economic being, which suppresses an individual's own aspirations. However, stewardship theory recognizes the importance of structures that empower the steward and offers maximum autonomy built on trust (Donaldson and Davis, 1991). It stresses on the position of employees or executives to act more autonomously so that the shareholders' returns are maximized. Indeed, this can minimize the costs aimed at monitoring and controlling behaviours (Davis, et al., 1997).

On the other end, Daily et al. (2003) argued that in order to protect their reputations as decision makers in organizations, executives and directors are inclined to operate the firm to maximize financial performance as well as shareholders' profits. In this sense, it is believed that the firm's performance can directly impact perceptions of their individual performance. Indeed, Fama (1980) contend that executives and directors are also managing their careers in order to be seen as effective stewards of their organization, whilst, Shleifer and Vishny (1997) insists that managers return finance to investors to establish a good reputation so that they can re-enter the market for future finance. Stewardship model can have linking or resemblance in countries like Japan, where the Japanese worker assumes the role of stewards and takes ownership of their jobs and work at them diligently.

Moreover, stewardship theory suggests unifying the role of the CEO and the chairman so as to reduce agency costs and to have greater role as stewards in the organization. It was evident that there would be better safeguarding of the interest of the shareholders. It was empirically found that the returns have improved by having both these theories combined rather than separated (Donaldson and Davis, 1991).

### **2.2.3 Stakeholder Theory**

Stakeholder theory was embedded in the management discipline in **1970** and gradually developed by Freeman (**1984**) incorporating corporate accountability to a broad range of stakeholders. Wheeler et al, (**2002**) argued that stakeholder theory derived from a combination of the sociological and organizational disciplines. Indeed, stakeholder theory is less of a formal unified theory and more of a broad research tradition, incorporating philosophy, ethics, political theory, economics, law and organizational science.

Stakeholder theory can be defined as "any group or individual who can affect or is affected by the achievement of the organization's objectives". Unlike agency theory in which the managers are working and serving for the stakeholders, stakeholder theorists suggest that managers in organizations have a network of relationships to serve - this include the suppliers, employees and business partners. This group of network is important other than owner-manager-employee relationship as in agency theory (Freeman, **1999**). On the other end, Sundaram and Inkpen (2004) contend that stakeholder theory attempts to address the group of stakeholder deserving and requiring management's attention. Whilst, Donaldson and Preston (**1995**) claimed that all

groups participate in a business to obtain benefits. Nevertheless, Clarkson (1995) suggested that the firm is a system, where there are stakeholders and the purpose of the organization is to create wealth for its stakeholders.

Freeman (1984) contends that the network of relationships with many groups can affect decision making processes as stakeholder theory is concerned with the nature of these relationships in terms of both processes and outcomes for the firm and its stakeholders. Donaldson and Preston (1995) argued that this theory focuses on managerial decision making and interests of all stakeholders have intrinsic value, and no sets of interests are assumed to dominate the others.

### **2.3 Mechanisms of Corporate Governance**

Shleifer and Vishny (1997) analyzed solutions for solving the problems of banks' corporate governance. One solution is competition, referring to product competition and takeovers. The two authors conclude that product competition, although being the most powerful force towards economic efficiency, cannot solve the problem of corporate governance. Analyzing the takeover element, the two authors consider it as a second corporate governance mechanism only in the US and the UK markets.

Levine (2004) analyses the effects of opaqueness on the competition in the banking sector. The opaqueness of banks can weaken competitive forces, affecting product competition and the takeover activity. The author observes that product market competition is less frequent in the banking sector due to the personal relationships that banks establish with their clients.

Regarding the takeover activity in the banking sector, empirical research on cross-border mergers and acquisition of financial institutions shows that, between 1996 and 2000, the bulk of financial restructuring occurred on an in-sector and domestic basis. For Europe, cross-border intra-European mergers and acquisitions amounted to 29% of the European total. These figures differ considerably across sectors. The banking sector amounted to 17% of the total figure. According to Walter (2003), these figures possibly suggest somewhat different economic pressures at work. Authors debate whether the low percentage of cross-border activity in the banking sector reflects the abuse of national provisions, formally based on current legislative EU banking framework in a protectionist manner.

## **2.4 Measures of Corporate Governance**

### **2.4.1 The Board of Directors' Size**

Jensen (1993) proposed that a board of directors operating with a reduced number of administrators produces a more effective mechanism of control. Changanti, Mahajan and Sharma (1985), Yermack (1997) and Eisenberg, Sundgren and Wells (1998) also suggested that the boards of directors of reduced sizes play a more important role in the function of control, because the boards of directors with large sizes have difficulties to coordinate their efforts, which will make it possible to the managers to be free in the continuation of their own interests. Lipton and Lorsh (1992) affirm that even if the capacity of the board increases with its size, this advantage would be counterbalanced by the presence of the additional costs because of a lack of coordination and synchronization of the efforts of the administrators. The process of the exchange of the information and the decision-making becomes slower and more difficult.

Conversely, a board of high size could provide multiple experiments that will have a positive impact on the performance. In this direction, Pearce and Zahra (1992) and Dalton et al., (1999) reveal that the diversified structure of the board of directors reinforces the capacity of control and improves his informational sources. Indeed, Baysinger and Zardkoohi (1986) specify that in a strongly regulated industry, the board of large size can have several advantages, such as for example, the links which can exist between the external administrators and the regulators.

With regard to empirical literature Agoraki, Delis and Staikouras (2008) find that the board of directors' size is negatively related to the performance of the 100 larger European banks for the period going from 2002 to 2006. These authors used the cost efficiency and the profit efficiency as performance measurements and their results were robust for the two measurements. Adam and Mehran (2005, 2008) examined the relation between the size of the board of directors and the performance (measured by the Tobin's Q) of the banks by using a sample of 35 large American banks over the period going from 1959 to 1999, and they did not find a negative relation between the size of the board and the performance of the banking firm. Furthermore, Belkhir (2006) examined the same relation within the framework of a simultaneous equations model to take into account the endogeneity of the various internal mechanisms of corporate governance. On a sample of 260 American banks, the author does not find that the size of the board of directors has an impact on the performance of the banks. Consequently, they concluded that the restrictions on the size of the board of directors cannot be fruitful.

The size of the board can have also an impact on the risk taking by the manager. Adams and Mehran (2003) specified that when the size of the board is large, the firms always record high

levels of performance associated with high levels of risk. Simpson and Gleason (1999) studied the impact of the board's size on the probability of failure of American banks and found that the number of the administrators does not have any impact on the probability of the bank financial distress. Blanchard and Dionne (2004) suggested that when the number of administrators increases the use of sophisticated instruments to cover against risk is higher, which justifies the excessive risk taking by managers.

Wiseman and Gomez-Mejia (1998) stipulates that with the increase of the administrators' number, the criteria suggested to appreciate the behavior of the manager multiply and become more ambiguous. Consequently, the manager becomes undecided and confused and thereafter it becomes most averse to risk and careful. One can conclude consequently that the impact of the size of the board of directors on the control of the firm is not clear, but strong arguments suggest that a board of directors with a large size will act negatively on the risk of insolvency of the bank. In fact, according to the "disaster myopia" theory developed by Guttentag and Herring (1986), the manager of a banking firm is regarded as lacking ability to estimate the width of the damage which can occur when there is an excessive risk taking. Consequently, a diversified structure and the best expertise which characterizes a board of directors of large size we suppose that a board composed with a large number of administrators could help to a better evaluating the risk level of the investment projects which will reduce the insolvency risk. Then, the study proposes that:



## **2.4.2 Board Independence**

The studies which analyze the characteristics of the board of directors within the banks hold into account the criterion of the independence of the board by analyzing the presence of the independent "external" administrators and its influence on the firm performance. In fact, the board of directors is a mechanism of governance designed to control the behavior of the manager and to give a hand in the strategic planning of the company.

However, to play its role in an effective way, the board must contain independent directors. Fama and Jensen (1983) specify that the independent administrators are more inclined to defend the interests of shareholders because they seek to protect their reputation on the administrators' market. Daily and Dalton (1994), McAvoy and Millstein (1999) and Bhagat and Black (1999) affirmed that the relation between the presence of independent administrators and performance of the firm is positive. In effect, their presence increases the effectiveness of the control function and influences the boards' decisions.

Moreover, their decisions will be more objective than the internal administrators and they act in the best interests of the firm (Fama, 1980; Fama and Jensen, 1983; Beasley and Petroni, 2001; Lennox, 2005 and Yeh and Woidtke, 2005). In addition, Weishbach (1988) finds that the rotation of the managers following bad performance is much higher when the board of directors is composed principally by independent administrators.

For the case of banking firms, Nam (2004) stipulates that independent administrators are most efficient to control the managers' behavior. Nevertheless, Pi and Time (1993) and Adams and

Vlehran (2003) find that the percentage of external administrators does not have any effect on bank performance. Prowse (1997) specifies that to discipline the bank managers the regulation is more important than the board of directors.

### **2.4.3 CEO-Chairman Duality**

The duality of the manager has received a considerable attention in recent times because it was observed in a significant number of large firms (Kesner, Victor and Lamont, 1986). Duality means the non-separation between the functions of decision and control. In the case of duality of the function of the CEO and the chairman there would be obviously a deterioration of the degree of control and supervision. Thus, the manager will probably have a power on the board. This fact could probably generate a reduction of the usefulness of the governance mechanisms. For this reason Jensen (1993) specifies that the manger should not be the president of the board because he cannot be able to make the distinction between his own interests with those of the shareholders.

In addition, Paquerot (1997) specifies that in the case of the duality, the bank's manager will have higher level of information than the administrators and a direct control on the credits which acquires him the possibility of using them in a manner which enables him to develop its human capital and to reinforce the safety of his employment. In an empirical study Godard and Schatt (2000) show that the duality improves the performance of the firm. However, by examining the impact of the duality on the performance of American commercial banks for the period 1988-1990, Pi and Timme (1993) find that the efficiency of the bank is weaker; and Fogelberg and Griffith (2000) and Griffith and al. (2002), find that the duality does not have any impact on the

economic performance. Moreover, Simpson and Gleason (1999) examined the relation between the duality and the probability of failure of 287 banks in 1989 and found that the duality contributes to limit the default risk of the bank. The authors find the explanation of this result within the framework of the agency theory by specifying that the manager is of nature more averse to risk than the shareholders, and when he is also the chairman of the board, he would be less aligned with the interests of the shareholders who prefer more risk taking by the bank.

#### **2.4.4 Diversity of Board of Directors**

Cox (2001) defines diversity as a multitude of the social and cultural identities between people working together within the same group. The social and cultural identities refer to the personal affiliation to groups which has a significant influence on the experiments of their members. These affiliations include the sex, the race, the national origin, the religion, the age and the specialities. Slocum and Hellriegel, (2007) specify that the principal criteria of diversity include the age, the race, the sex..., and the secondary criteria of diversity are education, the income, and the matrimonial situation.

The studies treating diversity consider both the cognitive and the demographic dimensions. Demographic diversity includes the criteria of the sex, the age, the race and the ethnic origin and cognitive diversity includes the criteria of knowledge, education, perception, and the characteristics of the personalities (Maznevski, 1994; Milliken and Martins, 1996; Pelled, 1996; Boeker, 1997; Watson and al., 1998; Peterson, 2000 and Timmerman, 2000).

The current literature reveals the fact that the relation between diversity and the firm performance could be either positively or negatively correlated. Certain empirical studies indicate that diversity led to a better knowledge, to a better creativity and to multiple innovations and by consequent the firms tend to become more competitive (Watson and Al, 1993). Moreover, Bantel (1993), Siciliano (1996) and Pelled and Simons, (1999) find that the improvement of the decision-making at the strategic level can be also observed at the presence of diversity. Furthermore, Michael and Hambrick (1992) specify that cultural heterogeneity is associated to a better resolution of the conflicts of interest between the manager and the shareholders. So diversity is related positively to the performance.

However, certain studies show that diversity is not advantageous for the firm (Hambrick and al., 1996). In this direction, Murray (1989) suggests that the coordination of the work of a homogeneous group would result in a better performance. In the same way, Knight and al. (1999) show that the effectiveness of the direction tends to be worsen when the level of diversity increases.

#### **2.4.5 Insolvency Risk**

According to Baxter et al., (2007) corporate insolvency risk is the probability that a company will become insolvent in the next 12 months. Corporate insolvency risk is used, often in tandem with credit risk scores, to identify debtors who are at risk of becoming insolvent. Debt collection strategies can then be selected with the insolvency risk in mind. For example, an important debt collection strategy is early intervention to avoid an insolvent company increasing its debt, thus avoiding an increase in the eventual legal write-off of debt at insolvency.

Conventionally, an insolvency system has five elements: substantive and procedural law; courts; government agencies to administer some types of bankruptcy and to regulate implementation; out-of-court mechanisms for liquidation or re-organization, but which exist in the shadow of the court; and professions, usually lawyers, accountants and insolvency practitioners (Halliday and Carruthers, 2004). According to Mamoghli and Dhouibi (2009) insolvency risk is measured as follows:

$$IR = \frac{SDjROA}{M\{ROA\}+E/TA}$$

Where the SD (ROA) is the standard deviation of the ROA (Return on Assets), M(ROA) is the mean of the ROA and E/TA is the ratio of equity to total assets.

## 2.5 Review of Empirical studies

A firm's various corporate governance practices shape its behaviour and eventually affect its stock market performance and accounting performance (Chow 2005). Various researchers examined the relation between state ownership and firm performance. Tian (2002) finds that government ownership worsens a firm's performance when government ownership is small, but improves a firm's performance when government ownership gets significantly larger.

Several other studies examine the impact of other governance mechanisms on listed firms' performance. Ning and Zhou (2005) find that employee stock ownership does not improve firm performance significantly in China, suggesting that a negligible fractional ownership does not provide a meaningful employee incentive. Kato and Long (2005) find evidence that CEO

**turnover**-firm performance sensitivities are larger for privately controlled listed firms than for state controlled firms, indicating the inefficiency of state ownership from the CEO turnover perspective.

Bai et al. (2004) offer a comprehensive analysis of the impact of various governance mechanisms on firm market valuation. They find evidence that the degree of concentration of shares held by other large shareholders positively affects firms' market valuation. It is argued that when shares are concentrated in the hands of other large shareholders, they are more likely to monitor the largest shareholder and prevent him from tunneling a firm's resources. Bai, Lin and Song (2004) provide evidence that the degree of concentration of shares by other large shareholders is a good proxy for the likelihood of an emerging corporate control market. As such, it captures the effects on firm performance of an active takeover market, which has been widely touted as an effective external governance mechanism. Bai et al. (2004) find that issuing shares to foreign investors helps to improve firms' valuation, partly due to the monitoring effect of the relatively more sophisticated foreign investors, and partly due to more transparent financial disclosure required for cross-border listings. Among other governance mechanisms, they find that CEOs being the chairmen of boards negatively affect firm valuation, indicating that increasing the independence of boards of directors helps to enhance firm performance. They also find that when the largest shareholder is the state, the firms tend to have lower market valuation.

The control-based corporate governance model may hurt the performance and corporate governance of newly listed state enterprises. Chen, Fan and Wong (2004) find that the 3-year

post-IPO average stock returns of these politically connected firms under-perform the market by almost 30 percent. They conclude that the appointment of politically connected CEOs does not enhance shareholder value but rather fulfils the political goals of politicians. Corporate governance practices shape a firm's behaviour. It is therefore natural to expect that they also affect a firm's stock returns (Gompers et al. 2003). Wang and Xu's (2005) argue that due to the speculative nature of the capital markets and low quality of the accounting information, book-to-market does not reflect fundamentals in the stock market. Instead, they suggest that a firm-specific floating ratio is a good proxy for expected corporate governance, which helps to predict a firm's future cash flow.

Better corporate governance is likely to improve the performance of firms, through more efficient management, better asset allocation, better labour practices, or similar other efficiency improvements (Claessens, 2006). Drobetz et al. (2004) argue that agency problem, the foundation of agency theory, is likely to exert impact on a firm's stock price by influencing expected cash flows accruing to investors and the cost of capital. Firstly, low stock price result from the investors' anticipation of possible diversion of corporate resources. Theoretical models by La Porta, et al (2002) and Shleifer and Wolfenzon (2002) also predict that in the existence of better legal protection, investors become more assured of less expropriation by controlling bodies and hence, they pay more for the stocks. Secondly, through reducing shareholders' monitoring and auditing costs, good corporate governance is likely to reduce the expected return on equity which should ultimately lead to higher firm valuation.

There exists a well number of anecdotal evidence of a link between corporate governance practices and firm performance. But the empirical studies mainly focus on specific dimensions or

attributes of corporate governance like board structure and composition; the role of non-executive directors; other control mechanisms such as director and managerial stockholdings, ownership concentration, debt financing, executive labour market and corporate control market; top management and compensation; capital market pressure and short-termism; social responsibilities and internationalization.

Though the relationship between shareholders, directors and management has been the central topic of corporate governance research for a long time, focusing merely on the legal company and the firm as the agent of the shareholder seems no longer sufficient and time has come to view the governance of the firm as a whole (Van den Berghe, 2002). Moreover, as Ho (2005) argues, evaluating corporate governance on individual dimension or attribute may not capture the total effect of corporate governance as much as the case where all the attributes are considered collectively. Hence, researchers often attempt to measure overall corporate governance and try to identify the relationship between corporate governance and firm performance.

Adams and Mehran (2003) specify that in addition to the regulation and the supervision, opacity constitutes a third characteristic which make the corporate governance of the bank quite particular. Moreover, Levine (2004) insists on the fact that the banking crises result mainly from the bad governance of the banks.

Datar (2004) precise that the board of directors plays a fundamental role in the determination of the bank performance and insists also on the need to provide him strict responsibilities such as the nomination, the control and the revocation of managers. He recommends that the



administrators must take care about the various stockholders interests and must as well straight the activities and the behaviors of the managerial team towards the respect of regulation. According to Nam (2004), the board of directors is responsible for the success of governance mechanisms and specifically of the internal control systems.

According to Jensen (1993), the board of directors is a crucial corporate governance mechanism. Its role is to discipline and to fix the game's rules with the manager. However, Jensen (1993) proposed several basics on the board of directors' composition to better control the manager. First of all, directors must have free access to all relevant information and not only those selected by the manager. Then, the directors have to be competent to better evaluate pertinent information. Thirdly, the administrators must have the suitable incentives to take actions that create value to the company; their role shouldn't be limited to the reduction of agency problems. Fourthly, managers as directors should have important participations in the capital to generate a certain convergence of interest with the shareholders in order to maximize the firm value. Fifthly, the size of the board should be limited to seven or eight members to be more efficient. In the same way, the CEO should be the only internal member sitting at the Board of directors because the presence of other internal members can support the influence of the manager on them. Finally, the CEO and the chairman of the board haven't to be the same person. There must have a separation between the two functions, because in the case of duality, the manager holds the major part of decisional rights and this fact exacerbates the conflicts of interests between him and the Board of directors.

Indeed, according to Jensen and Meckling (1976), shareholders choose administrators to control management and to establish the firm's strategy, so managers will be encouraged to choose projects that improve the firm's value. However, Wiseman and Gomez (1998) specify that when the control level is high and administrators establish difficult objectives, the manager will be stimulated to choose a high level of risk; Morellec and Smith (2005) maintain this assumption and precise that board of directors can influence the taking risk by the managers. The board of directors can influence each decision and it can even threaten the manager when he shows negligence or a lack of responsibility. In this way, Charlety (2006) proposes to determine the impact of the board of directors on the risk taking through its composition, its size and its leadership structure.

Indeed, the concept of corporate governance within banks is more complex than for the other non-banking firms. The nature of their activities and the existence of deposits insurance and the structure of the liabilities are important factors which distinguish the banking firm from any other non-banking establishment. All the more, the environment changes due to globalization deregulation and technological progresses are sources to boost insolvency risk of the banking firms. So, given that the bankruptcy of a bank can degenerate easily into a bankruptcy in cascade of the other banks, taking into consideration the importance to search for an adequate system of corporate governance at the banks is of vital importance to the well-being of all the economy.

Furthermore, it evaluates the bank performance, exerts control on managers, fixes their remuneration plans and establishes the information disclosure system concerning all the bank operations. In the same way, the board has to check procedures used to evaluate the various situations of risk to which the bank is exposed. Bies (2002) affirms that the board of directors has

to verify if the bank has an audit process and an effective system of control adequate with the nature of the bank activity. Beaker et al. (2004) affirm that the deregulation has increased the need to exert more control by the internal mechanisms of governance namely the board of directors. The nature of the banking environment exposes the banks to important problems of moral risk. This fact requires from banks administrators an additional attention compared to those in firms of other sectors. The authors insist on the fact that their role should not be ignored under pretext that the authorities supervise this vital sector.

Macey and O'Hara (2003) advocate that the existence of the deposit insurance and the high leverage level can lead to great interest conflicts in the banks and they think that administrators are more qualified to reduce these conflicts in banks than in industrial firms. Caprio and Levine (2003) recommend that it is imperative to exert more strict control on the managers in order to reduce the agency costs because in banks the public monitoring is difficult because of their increased opacity. In the same way it is difficult to the potential purchasers to obtain all the necessary data to decide for an acquisition or another form of takeover. Consequently, the discipline of the market is limited because of the banks opacity.

These various obstacles which avoid a better control of the managers offer the board of directors a crucial role in the bank's corporate governance. This is why, the fact of better knowing the impact of this internal mechanism of governance in the credit institutions would help to avoid bankruptcies and their enormous financial and social costs. Indeed, within the framework of the strategic theory, the board of directors is considered as a cognitive instrument which contributes to the creation of competence. The creation of competences is very necessary for banking firms.

The board of directors should help to reduce the disaster myopia that characterizes banks' managers. In this theory the role of the board of directors exceeds the only protection of the shareholders' interests which constitutes its principal role within the restricted framework of the agency theory.

Within the framework of the agency theory its role consists in reducing the conflicts of agency and aligning the incentives of the manager supposed more averse to risk because of its human capital completely invested in the bank. The shareholders are supposed less averse to risk because of the banks high leverage level and the clause of their limited responsibility. However, within the framework of the cognitive strategic theory, the board of directors must be composed in priority by administrators being able to contribute to a best competences creation and to help managers to have a clearer vision on the damages which can occur during the investment in projects with high levels of risk. The question that arises in this context is: which would be the best composition of the board of directors which could reduce myopia to the disaster of the managers and could consequently reduce the insolvency risk of the banks? Certain empirical studies relating to the effects of the composition of the board of directors such as Rechner and Dalton (1991), Yermack (1996) and Eisenberg and al. (1998) find that there is an optimal structure for the board and if it diverges from this optimal structure it records a less performance.

Only two empirical studies done in Liberia by Johnson and Gerald (2005) in line of banks charter value and governance depends on the bank's authorized powers, including power to do business within specified areas, the market structure in the area, the expertise of the bank's employees, and the customer relationships it has to develop. In this view, charter value is the present value of

future profits that a bank is expected to earn from its access to protected markets, its reputation, economies of scale and superior information in financial markets. It is an intangible asset, which would be foregone if the bank goes bankrupt or is closed by the chartering authority.

### 2.5.1 Capital Structure

An aspect that distinguishes banks from other firms is their capital structure, which is unique in two ways (Macey and O'Hara, 2003). Firstly, banks have little equity relative to other firms and receive 90% of their funding typically from debt. Bond holders and depositors provide the rest. Second, banks hold illiquid assets that often take the form of loans without maturity. Banks have liabilities in the form of deposits that they issue to creditors or depositors, thus creating liquidity for the economy.

A mismatch between deposits and liabilities may cause a collective-action problem among depositors. This can cause the failure of a bank, with externalities effects. Consequently, the liquidity function may create problems in the governance of banks. High loan growth raises bank capital requirements, as regulators consider most loans to be risky assets. One regulatory measure against such risks is the deposit insurance, which is considered successful in achieving what had been a major objective of banking reform for at least a century, namely the prevention of banking panics. Banks react to these risks through different mechanisms. Different size banks pursue different strategies. Small- to medium- size banks continue to concentrate on loans but seek to strengthen customer relationships by offering personal service. Large banks respond through securitization, a process of converting assets into marketable securities. These strategies reflect banks' governance control.

### **2.5.2 Equity Ownership**

As with all publicly-owned firms, the diffuse and concentrated ownership of banks are aspects that influence their governance mechanisms. Diffuse ownership can effectively exert corporate control directly through their voting rights and indirectly through electing the board of directors. Information asymmetries are an impediment for shareholders and debt holders to exert control over management. In the case of banks, due to their opaqueness, diffuse shareholders and diffuse debt holders find it difficult to exercise control. This situation is managed by more concentrated ownership and increased regulation.

Concentrated ownership enhances firm's control and monitoring of its activity through a better flow of information. Large shareholders and large debt holders are more effective in exercising their rights, thus having more control over management. This context should theoretically lead to better governance of firms. In practice, evidence shows that large shareholders may exploit their interest in the firm, thus undermining its governance.

Generally, banks have a concentrated equity ownership, which makes it more difficult for small equity holders to exert influence over the management of banks. Controlled ownership by large investors may also affect the interest of debt holders - either diffuse or concentrated - and on other stakeholders, leading to a more complex corporate governance environment for banks. A legal system that prevents large shareholders controlling a bank from taking advantage of the small and diffuse stakeholders has the potential to stimulate good corporate governance.

### **2.5.3 Transparency and Disclosure**

**Transparency** is one of the main principles of corporate governance. This principle is applied to a lesser extent in the banking sector. The opaqueness of banks is factored by their sensitive **operational** environment: loan operations to individuals, to large entities and to governments, **capital** funding of firms, banks' interaction with Central Banks and governments.

An explanation for the lesser transparency is that the risk of banks' failure is not as high as the risk of non-financial firms' failure. It is often argued that banks are "too large to fail", in reference to the major stakes that governments have in these entities. In addition to funding the economy, banks also perform in a political context, which enhances the gravity of a potential failure. As a result, entities such as states and prudential supervisory bodies dominate the banking sector in order to minimize the risk of failure.

Literature presents different points of view with regard to the transparency of banks. Levine (2004) examines the implications of opaqueness for the governance of banks by diffuse equity holders and diffuse debt holders. Opaqueness may help controlling holders to exploit their stake, to facilitate the manipulation of loan operations and compensation packages. This comes at the expense of the long-run health of the banks, their diffuse shareholders and their diffuse debt holders. The opaqueness of banks may weaken market competitive forces, affecting the efficiency of the securities market. All stakeholders are negatively affected, including diffuse shareholders, customers and governments.

Morgan (2002) states that banks appear to be among the more opaque industries, but not the most opaque ones. Macey and O'Hara (2003), based on a statement by Furfine (2001), argue the notoriously opaqueness of banks' balance sheet and the effects of the technology on the difficulty of monitoring banks by traditional regulation and supervision. Flannery et al (2002) consider that special government supervision can enhance banks' transparency. Governments impose strong regulations on the banking system, by restricting the concentration of bank ownership. This is to avoid the concentration of power and control of banks, thus enhancing disclosure. Improving the flow of information through increased disclosure enhances market discipline. This is the rationale behind the third pillar of the Basel Capital Accord.

## **2.6 Chapter summary**

This study is interested particularly to the board of directors because it constitutes the most important component of bank corporate governance structure. The banking environment is subjected to supervision. However with the environment changes which contributed to the creation of mega banks, a successful control could not be realized only by the public supervisor. In addition, the other specificity of the banking firm is the strong regulation compared to other non-banking firms. However in an evolutionary banking environment, the banking regulation cannot answer all the financial innovations in an effective and instantaneous way. Consequently, problems of banks' corporate governance become very complex and must be treated in separated manner, in concentrating primarily to conceive corporate governance structures which ensure control and reduction of the excess of risk.

Banks are themselves corporations. Corporate governance of banks affects banks' valuation, their cost of capital, their performance and their risk-taking behavior. Formal econometric



studies show that banks exert a strong impact on economic development (Levine, 2005). When banks efficiently mobilize and allocate funds, this lowers the cost of capital to firms, boosts capital formation, and stimulates productivity growth (Levine, 2004). Since banks exert corporate governance on firms, as creditors of firms and, in many countries, as equity holders, the corporate governance of banks becomes crucial for growth and development. This study therefore aims to establish insolvency risk and its close relationship to corporate finance arrangements in Liberia and its function as a key benchmark for corporate attitudes towards risk. Further, to the knowledge of the researcher, no study has established the link between corporate governance and insolvency risk in Liberia.

## CHAPTER THREE

### RESEARCH DESIGN AND METHODOLOGY

#### 3.1 Research Design

The study used a cross-sectional survey design. The cross-sectional design is the most commonly used when a researcher seeks to collect cross-sectional data at one point in time. This method has been selected because the researcher seeks to collect data from a cross-section of banks at one point in time.

#### 3.3 Population and Sample

The population of this study were all the 8 commercial banks which have been operating in Liberia during the period of the study. Namely Liberian Bank for Development & Investment (LBDI), Ecobank Liberia Limited (ELL), International Bank Liberia Limited, First International Bank, United Bank of Africa(UBA), Access Bank Liberia Limited, Guaranty Trust Bank Liberia Limited and Global Bank Liberia Limited. According to the Central Bank Supervision Report (2011) there are 9 licensed commercial banks operating in Liberia. However, one of the banks is under statutory management. All the banks were surveyed.

#### 3.4 Data Collection

Data was collected using both primary and secondary data. The insolvency risk data was sought from the same annual statements. Data on insolvency risk was measured using shareholder capital, total assets and return on assets. The period under study was 2006-2010.

### 3.5 Data Analysis

The data was analyzed using correlation and regression analysis. This was aided by the SPSS. The model to be used is the one that was successfully used by Mamoghli and Dhouibi (2009) to study bank corporate governance and insolvency risk in emerging markets.

$$IR = a + p_1(BOARDSIZE) + p_2(CEODUAL) + p_3(DIV) + p_4(BANKSIZE) + p_5(AGE) + \text{error}$$

Where:

I IR is the insolvency risk. This was measured using the following formula:

$$IR = \frac{SD(ROA)}{M(ROA)+E/TA}$$

Where the SD (ROA) is the standard deviation of the ROA (Return on Assets), M(ROA) is the mean of the ROA and E/TA is the ratio of capital to total assets.

BOARDSIZE means size of the board of directors. This was measured using the number of board members

CEODUAL means CEO duality. The study fixed the value of 1 in the case of duality and the value of 0 if the two functions are separate

DIV means the cognitive diversity measured as a proxy the proportion of institutional administrators sitting at the boards of directors of banks.

**BANKSIZE** means size of the bank measured by the logarithm of total assets

**AGE** means age of the bank in years measured by the number of years since the bank was licensed until the year 2010.

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + \dots + u$$

**Where**

**Y**= Dependent variable which is bank corporate governance and insolvency risk

**X<sub>1</sub>**= **BOARDSIZE**

**X<sub>2</sub>**= **CEODUAL**

**X<sub>3</sub>**= **DIV**

**X<sub>4</sub>**= **BANKSIZE**

**X<sub>5</sub>**= **AGE**

**A, B<sub>1</sub>, B<sub>2</sub>, B<sub>3</sub>, B<sub>4</sub>** ESTIMATED COEFFICIENTS OF THE REGRESSION MODEL

**u** = RESIDUAL TERM THAT INCLUDES THE NET EFFECT OF OTHER FACTORS NOT IN THE MODEL AND MEASUREMENT ERRORS IN THE DEPENDENT AND INDEPENDENT VARIABLES

### **3.6 Reliability and Validity of the Instrument**

Reliability can be referred to as the degree to which a research instrument can be depended upon or yield consistent results after a repeated trial. (Mugenda and Mugenda (2003). It enhances accuracy, clarity and adequacy of the instrument, (Bennet, 1999). To test reliability a researcher may use test-retest method. This involved administering the same instrument twice to the

respondents in a lapse of one week, and then the results was checked if it correlates using correlation coefficient. The higher the correlation co-efficient the higher the test-retest reliability.

Validity can be referred to as the accuracy and meaningfulness of inferences which are based on research results. (Mugenda and Mugenda (2003). The instrument is said to be valid when it measures what it purports to measure. For instance, if the outcome from the results analysis of the pre-test data reveals the intended purpose, then the instrument is said to be valid. The pilot study will involve chosen respondents. The pilot study will assist the researcher to identify items in the instrument which might be ambiguous and difficult hence the use of standardized graph. Amendments will be made on the instrument in order to improve the quality and validity.

## CHAPTER FOUR

### DATA ANALYSIS, RESULTS AND DISCUSSION

#### 4.1 Introduction

This **chapter** presents the data analysis, results and discussion of findings. The researcher **managed to** collect data from 8 commercial banks. This means that the study covered 88.9% of the **industry**. This is a fairly large sample thus the results and conclusions made can apply to the whole **industry** as regards the influence of corporate governance on insolvency risk. These were the **banks** that had complete data available for analysis for the period 2006-2010. These data were **collected** from the banks themselves, the Central Bank of Liberia.

This chapter is organized as follows. First, the descriptive results of the analysis are shown where explanatory variables are presented in tables and the values of descriptive statistics such as mean, standard deviation, minimum and maximum are provided. An explanation of the variables and the figures is provided beneath the table. Secondly, a presentation on the results for the relationship between corporate governance and insolvency risk is provided. Here, the results of regression analysis are shown. Lastly, a discussion on the chapter findings concludes this section.

#### 4.2 Descriptive Statistics of Explanatory Variables

These results show the descriptive analysis on the variables in the study. First, the results of insolvency risk (IR) are shown. It is worthy to remember that the following formula was used to **calculate IR:**

$$\frac{SD(ROA)}{M(ROA)+E/TA}$$

In this formula, the SD (ROA) was the standard deviation of the ROA (Return on Assets), M(ROA) was the mean of the ROA and E/TA was the ratio of capital to total assets. These values are shown in appendices 1-4 on pages 52-55.

**Table 1: Descriptive Statistics of Explanatory Variables**

| Descriptive Statistics |   |         |         |          |                |          |
|------------------------|---|---------|---------|----------|----------------|----------|
|                        | N | Minimum | Maximum | Mean     | Std. Deviation | Variance |
| IR                     | 8 | -2.5576 | .4113   | -.192968 | .9652291       | .932     |
| CEODUALITY             | 8 | .0000   | .0000   | .000000  | .0000000       | .000     |
| BOARDSIZE              | 8 | 2.0     | 14.0    | 6.500    | 3.3806         | 11.429   |
| AGE                    | 8 | 3.0     | 51.0    | 12.750   | 15.8813        | 252.214  |
| BANKS IZE              | 8 | 6.0616  | 9.8557  | 8.208320 | 1.3567280      | 1.841    |
| diversity              | 8 | .00     | 1.00    | .6250    | .51755         | .268     |

As shown in Table 1, insolvency risk (IR) had a minimum value of -2.5575 (truncated to 2 significant figures) and a maximum value of 0.411307. The results show that the highest insolvency risk was at 0.411307 which is considered low given that the value shows the probability of a firm becoming insolvent. The mean IR was -0.1929 which indicates that there were less than 5% chances of banks becoming insolvent in the near future. The standard deviation of 0.96523 also shows that the variance of insolvency risk was low.

Board size was measured by the number of members sitting on the board of directors. It can be noted from Table 1 that the minimum number of board members was 2 while the maximum number was 14. This means that the board members were within the limits provided for by best corporate governance practice. An analysis that was not provided here also revealed that size of the firm was significantly related to board size. What this means is that the large banks tended to have higher number of board members than the smaller banks. The average number of board members for the banks surveyed was 6.50 which mean that most of the banks had an average of 7 members. The standard deviation was 3.38 suggesting a variance of about 11 people on bank board of directors.

**CEO duality** measured whether the CEO was also the chairman of the board. The study used a **dichotomic** variable where the value of 1 was fixed in case of duality and the value of 0 if the **two functions** were separate. Table 1 show that the minimum was 0 and maximum was also 0. **The mean was 0** which suggests that most of the banks did not have duality as a problem. The **standard** deviation of 0 also suggests very low variance from the mean duality value.

**Cognitive** diversity was measured on the grounds of whether an institutional shareholder also sat **on the board**. A dichotomic variable of 1 was given if an institutional shareholder sat on the **board** and 0 otherwise. Table 1 reveals that the minimum was 0 and maximum was 1. The mean was **0.6250** meaning that the banks tended to have institutional board members on their boards. **The standard** deviation was 0.51755 suggesting that the deviation from the mean was average.



Bank size was one of the control variables. It was measured using the natural logarithm of total assets. The total assets values for each of the banks from 2006 to 2010 can be observed from appendix 2 while the natural logarithm values can be observed from appendix 4. The results shown in Table 1 reveal that minimum bank size was 6.0616 while the maximum was 9.85566. The mean was 8.2083 meaning that most of the banks surveyed can be considered as large. The standard deviation was 1.3567 suggesting that the bank sizes did not vary as much from one another.

**j** **The age** of the bank was another control variable. This was measured by the difference between **the current** year (2010) and the year of establishment of the respective banks. When this method **was used**, serious autocorrelation problems were observed. To counter this problem, banks with **20 years** or less were coded as 1, those with 21-40 years were coded 2, and those with 41-50 **years** were coded 3 while those over 50 years were coded 4. This solved the problem. This can **be observed** from the min and max values in Table 1. The table also reveals that the mean age **was 12.75** (about 50 years old). The standard deviation was 15.8813 suggesting a large deviation **from** the mean.

### **4.3 Relationship between Corporate Governance and Insolvency Risk**

In order to test for the relationship between corporate governance and insolvency risk, a regression analysis was performed. This was aided by the following regression model:

$$IR = a + p_1(\text{BOARDSIZE}) + p_2(\text{CEODUAL}) + p_3(\text{DIV}) + p_4(\text{BANKSIZE}) + p_5(\text{AGE}) + e$$

The results of the analysis are shown in Table 2 and Table 3.

Table 2: Relationship between Corporate Governance and Insolvency Risk

| Model Summary |                   |          |                   |                            |
|---------------|-------------------|----------|-------------------|----------------------------|
| Model         | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1             | .572 <sup>a</sup> | .327     | -.570             | 1.2093345                  |

a. Predictors: (Constant), diversity, BOARDSIZE, BANKSIZE, AGE

Table 2 shows that the Pearson correlation coefficient, R, was 0.572. This means that there was a **low correlation** between corporate governance and insolvency risk. The R<sup>2</sup> shows that corporate **governance** influenced 32.7% of the variance in insolvency risk. The adjusted R<sup>2</sup> reveals that the **relationship** was negative. It reveals that a change in corporate governance lead to a decline in **insolvency** risk. This means that when good corporate governance mechanisms are upheld, the **insolvency** risks of banks tend to decline by up to 57% (adjusted R<sup>2</sup> = .570). The standard error **of estimate** was 1.2093 which is considered very high. The variable coefficients are shown in **Table 3**.

**Table 3:** Variable Coefficients

Coefficients<sup>3</sup>

| Model | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig.  |       |
|-------|-----------------------------|------------|---------------------------|-------|-------|-------|
|       | B                           | Std. Error | Beta                      |       |       |       |
| 1     | (Constant)                  | .118       | 3.226                     |       | .037  | 0.472 |
|       | BOARDSIZE                   | -.280      | .295                      | -.980 | -.947 | 0.375 |
|       | AGE                         | .060       | .064                      | .982  | .938  | 0.041 |
|       | BANKSIZE                    | .147       | .420                      | .206  | .349  | 0.342 |
|       | diversity                   | -.732      | .941                      | -.393 | -.778 | 0.022 |

a. Dependent Variable: IR

**Table 3** reveals that the constants alpha and error terms were 0.118 and 3.226 respectively. The **beta values** for board size and cognitive diversity suggest that they had a negative influence on **insolvency** risk. Thus, the large the board size, the smaller is the insolvency risk and the more the **institutional** investors sitting on the board, the lower the insolvency risk.

**Table 3** also shows that CEO duality, bank size and age of the bank were positively related to **insolvency** risk. This means that when the CEO doubles as the chairman of the board, then the **insolvency** risk rises. Further, the results mean that large banks will tend to have high insolvency **risks and** that the more mature the firm, the higher the insolvency risk. These results are not **puzzling as** agency theory suggests that duality increases bank risk. Studies have also **documented** that large firms tend to have more risks than small firms and that age also influenced **insolvency of** firms. However, significant tests (T-tests and P-values) revealed that none of these

**relationships** were significant. Thus, the study failed to establish a significant relationship between corporate governance and insolvency risk of commercial banks in Liberia.

#### **4.4 Discussion**

The size of the board of directors (BOARDSIZE) has an insignificant and negative effect on the insolvency risk of the commercial banks in Liberia. This result is in deviation with the recommendations of Jensen (1993) who proposed that a board of directors operating with a reduced number of administrators produces a more effective mechanism of control and the [results of Changanti, Mahajan and Sharma (1985), Yermack (1997) and Eisenberg, Sundgren and Wells (1998) who also suggested that the boards of directors of reduced sizes play a more important role in the function of control but the boards of directors with a higher size have difficulties in coordinating their efforts, which will make it possible to the managers to be free in the continuation of their own interests.

**The** assumption that if the manager is the chairman then risks might rise is confirmed and it **proves** that the manager is myopia to the disaster like specified by Guttentag and Herring (1986). **In fact**, in case of a duality of the two functions of the manager and of the chairman, he will have **an** influence on the board (Jensen 1993) and thus it will be able to continue his risky projects. In **this study**, it was noted that duality increases insolvency risk and thus confirms prior studies' **findings**.

**In** this study, cognitive diversity proves of a great utility for the Liberian banks. Indeed, the **presence** of the institutional administrators within the Liberian banks is associated with a lower

relationships were significant. Thus, the study failed to establish a significant relationship between corporate governance and insolvency risk of commercial banks in Liberia.

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In this study, cognitive diversity proves of a great utility for the Liberian banks. Indeed, the **presence** of the institutional administrators within the Liberian banks is associated with a lower

level of insolvency risk. This result is in conformity with the report of Jensen (1993) which **specified** that the presence of the institutional administrators within the boards of directors **allows a** better control of the manager, since these administrators have a better access to **I information** and have a greater expertise in the analysis of the performances. This result confirms **also the** results of various work which treats the problems of diversity in particular those of **Bantel** (1993), Siciliano (1996) and Pelled and Simons, (1999) which find that the improvement **of the decision-making** at the strategic level can be observed with the presence of diversity.

**Finally, the** results showed that the size of the bank had a significant positive effect on its **insolvency risk**. Thus, the bigger the bank, the higher the insolvency risks which proves the need **for large** banks to have risk efficient risk management departments. In addition, it is shown that **the oldest** banks have the level of the highest insolvency risk.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### S.1 Summary

**The study** found that there were generally low insolvency risks in the banking industry in Liberia **given the** mean value of -0.1929. It was also noted that the minimum number of board members **in the** banks was 2 and the maximum number was 14. The mean was 7 members. Duality was not **a major** issue in the banks and most of the boards had high cognitive diversity. Most of the banks **were** small and less than 50 years on average in terms of their ages.

**The study** found that corporate governance was negatively correlated with insolvency risk ( $R = 0.572$ ). Thus, better corporate governance mechanisms reduced the risk of insolvency in **commercial** banks in Liberia. The reverse is also true. It was noted that board size and cognitive **diversity** were negatively related **to** insolvency risk ( $P = -0.280$  and  $-0.732$  respectively) while **duality**, bank size and age had a positive correlation with insolvency risk ( $\beta = 0.000, 0.147$  and  $0.060$  respectively).

Thus, banks with large number of members had lower insolvency risks, banks with more institutional board members had lower insolvency risks and the more the bank had the **CEO** as chairman, the higher the insolvency risk the bank experienced. Further, large banks experienced high insolvency risks and the older banks also had higher insolvency risks.

## 5.2 Conclusions

**This study** sought to study the relationship between board of directors' characteristics and the **insolvency** risk of the Liberian commercial banks by controlling the effects of the size, and the **age**. The results showed that cognitive diversity reduces the insolvency risk of commercial **banks**. The results showed also that the size of the board of directors has a negative effect on the **insolvency** risk of the Liberian banks. The study concludes that larger boards do not necessarily **lead to** lack of coordination and eventual increase in insolvency risk as prior studies have often **proposed**.

**The lessons** learnt from financial crisis are to open awareness of the government and businesses **people on** the important role of implementing good corporate governance in Indonesian firms, **especially in** banking sector. In 2000, some private sectors of business and professional **associations** established Forum for Corporate Governance in Liberia (FCGL). Other parties have **also attempted** to conduct the implementation of good corporate governance in Liberia.

In the end of January 2006, Central Bank announced the implementation of good corporate governance rule for general banks (Rule number 8/4/PBI/2006). Rationales of the regulation are due to coping the bank risk complexity, The managers are, as described by Guttentag and Herring (1986) and showed by the regression results, myopia to the disaster and require an effective control by the administrators. Therefore, this work highlights a result which is opposed to the various results of the studies which treats the problems of "corporate governance" of the banking firm in which the authors often suppose that the manager is averse to risk.



## 5J Recommendations

**There is need** to question the wisdom that larger boards are detrimental to corporate governance. In **this study**, the largest board was composed of 14 members and this was a very large bank too. **Size of the board** should not just be construed as the number of board members in the future but **the number** based on the size of the firm. Moreover, concluding about the relationship between **board size** and insolvency without incorporating the human and social capital in the analysis is **often** misguided.

**Whilst the** issues become a major concern in banking practices, the conceptual issues are **literarily** debated. Shleifer and Vishny (1997) define corporate governance as the way in which **suppliers** of finance to corporation ensure themselves of getting a return on their investments. **Corporate** governance concerns the inter-relationships between principals, agents, and other **stakeholders** who may have different interests in the firm. Conflict of interests between different **stakeholders** is potentially high in banking sector. The unusual agency problem in banking sector **could** not be resolved satisfactorily using conventional agency theory.

**The** study findings has presented issues about relationships between corporate governance, risk management, and bank performance. Corporate governance in banking sector consists of two control mechanisms: external corporate governance and internal corporate governance. In this concept, bank owners are extemalquasi control because they are also subject to the regulation. **Hence**, this research also provides a conceptual framework that explains position of type of ownership as a moderating factor of these relationships. Ciancanelli and Gonzales (2000) argue **that banking** sector has different market structures which do not meet the basic assumptions of **agency** theory. Besides unusual agency problem, bank managers and owners are subject to the

Regulation. As a governance force, regulation is intended to serve the public interests, particularly the interests of the consumers of the banking services.

#### **5.4 Limitations of the Study**

There were a number of limitations that affected the outcome of the study. For instance, data was collected from 8 banks out of the total number of 9 commercial banks. With this number most of the banks were not willing to give out the information regarding their financial performance.

The other limitation was time factor and distance as it was very difficult to cover all the 9 commercial banks within the time given to carry out the research. These issues may limit the applicability of the research findings to the wider industry.

Lastly, this research required a lot of time and money for the fact that I have my supervisor and University in Kenya, East Africa while I am doing the research study in Liberia, West Africa which require more time to gather data because of the distance. Money should also be taken into consideration; transportation from East Africa to West Africa for the purpose of the Primary data was highly costly.

## **5.5 Suggestions for Further Research**

**First there** is need to replicate these results to other industries to establish whether significant **contribution** of board characteristics on insolvency risk can be found.

Secondly, there is a need for future studies to increase the sample firms as the number of firms increase in Liberia and also the number of years under study. The study only covered 8 commercial banks.

Lastly it would be prudent to cover more banks as the number of banks increase in time to come in future studies. Further, the present study only covered 5 years. Future studies should increase this period to 10 years in order to establish if the results can hold.

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## APPENDICES:

**Appendix 1:** This section outlines corporate governance index use among commercial banks in Liberia. The index is constructed in an effort to assist investors and firms to determine the corporate governance status of firms. The index is also divided into sub-indices which cover the following areas: Board Responsibility, Board Structure, Shareholder Rights, Transparency & Disclosure, Audit Committee. In this section use the scale 1 - 5 where 1 is to a great extent and 5 is low extent to answer the following question.

1. To what extent do you think the following justification for corporate governance are applied in your organisation (use the scale)

### Corporate Governance Index

|   | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| <b>A. Board Responsibility</b>  |   |   |   |   |   |
| To what extent has board stated its business objectives   |   |   |   |   |   |
| The extent to which the board ensure and approve that the compensation of senior management members and key personnel is in keeping with the institution's culture? |   |   |   |   |   |
| To what extent does the board understand the statutory obligations of the financial institution?  |   |   |   |   |   |
| Does the board ensure that the compliance of these obligations is fulfilled?  |   |   |   |   |   |
| Does the board monitor financial performance of the firm?   |   |   |   |   |   |
|   |   |   |   |   |   |
| <b>B. Board Structure</b>   |   |   |   |   |   |
| Are at least two board members independent?   |   |   |   |   |   |
| Is the chairman of the board a different person from the CEO of the company?  |   |   |   |   |   |
| Is the division of their responsibilities clear?  |   |   |   |   |   |
| Are all the board members in keeping with the fit and proper guideline?   |   |   |   |   |   |
| Does the firm define "independence" clearly?  |   |   |   |   |   |
| Does the firm have a remuneration committee?  |   |   |   |   |   |
| Does the firm have a compensation committee?  |   |   |   |   |   |
|   |   |   |   |   |   |
| <b>C. Shareholder Rights</b>  |   |   |   |   |   |

|   |  |  |  |  |  |
|---|--|--|--|--|--|
| "Does the firm hold an annual general shareholder meeting?  |  |  |  |  |  |
| Does the firm use the one-share-one-vote rule?  |  |  |  |  |  |
| Does the firm send out notices of general meetings to shareholders at least one week in advance?    |  |  |  |  |  |
| Does the firm have a clearly disclosed dividend policy?   |  |  |  |  |  |
| Does the firm state why the dividend is set a particular value?                                     |  |  |  |  |  |
|   |  |  |  |  |  |
| <b>D. Transparency &amp; Disclosure</b>   |  |  |  |  |  |
| Does the full board meet in accordance with the stipulations in the company's by-laws and articles? |  |  |  |  |  |
| Has the central bank requested more frequent board meetings?  |  |  |  |  |  |
| Do all directors meet when the board meets?   |  |  |  |  |  |
| Does the firm state the attendance of individual directors at meetings?                             |  |  |  |  |  |
| Does the company maintain a website?  |  |  |  |  |  |

APPENDICES

Appendix I: Bank Turnover and Return for 2005-2010

| BANK                                      | TURNOV      |             |             |             |             | RETURN        |                |                |              |               |
|---|-------------|-------------|-------------|-------------|-------------|---------------|----------------|----------------|--------------|---------------|
|   | 2010        | 2009        | 2008        | 2007        | 2006        | 2010          | 2009           | 2008           | 2007         | 2006          |
| <b>Liberian Bank for Development</b>      | 992,397,915 | 924,738,207 | 890,255,404 | 854,640,000 | 741,600,000 | 224,137,004   | 181,315,136.50 | 139,982,921.64 | 125,026,200  | (102,171,600) |
| <b>Bdibank Liberia Limited</b>            | 494,650     | 166,000     | 166,000     | 166,000     | 166,000     | 3,168.74      | 368,194.85     | 235,194.45^    | 160,094.02   | 49,181.50     |
| <b>International Bank Liberia Limited</b> | 763,200,000 | 568,880,000 | 361,882,969 | 230,400,000 | 141,120,000 | 110,294,784   | 75,095,712     | 48,392,771.67  | 73,100,880   | 0             |
| <b>Fist International Bank</b>            | 102,510,877 | 85,586,902  | 82,402,231  | 69,120,000  | 135,360,000 | 7,865,568.32  | 4,909,946.60   | 3,504,372.81   | (19,843,200) | (61,480,000)  |
| <b>Global Bank Liberia United</b>         | 5,229,088   | 4,195,798   | 3,233,374   | NA          | 24,480,000  | 40,353,134.05 | 3,910,259.99   | 497,004.87     | NA           | (345,398,400) |
| <b>ABCSS bank of Liberia</b>              | 1,926,820   | 1,008,218   | NA          | NA          | NA          | 8,623,020     | 7,538,895      | NA             | NA           | NA            |
| <b>Listed bank for Africa Liberia Ltd</b> | 1,742,846   | 2,204,824   | 1,753,980   | 2,183,322   | 1,789,193   | 98,920.79     | 43,802.75      | 65,590.52      | 22,287.23    | 20,296.36     |
| <b>Garanty Trust bank</b>                 | 304,795     | 287,107     | 217,991     | 192,692     | 173,466     | 19,131.18     | 11,426.51      | 9,605.26       | 4,882.82     | 5,916.79      |

## Appendix 2: Bank Total Assets and Shareholder Capital for 2005-2010

| BANK                               | ASSETS fLiberian Hnllar^ |               |               |               |               | SHAREHOLDER C;^PITAL |             |             |             |             |
|------------------------------------|--------------------------|---------------|---------------|---------------|---------------|----------------------|-------------|-------------|-------------|-------------|
|                                    | 2010                     | 2009          | 2008          | 2007          | 2006          | 2010                 | 2009        | 2008        | 2007        | 2006        |
| Liberian Bank for Development      | 7,172,384,128            | 6,207,296,697 | 5,161,612,155 | 4,932,000,000 | 3,636,000,000 | 992,397,915          | 924,738,207 | 890,255,404 | 854,640,000 | 741,600,000 |
| Ecobank Liberia Limited            | 15,533,027               | 13,079,746    | 8,963,203     | 5,929,408     | 3,783,192     | 494,650              | 166,000     | 166,000     | 166,000     | 166,000     |
| International Bank Liberia Limited | 5,832,000,000            | 3,441,600,000 | 3,030,605,691 | 1,879,200,000 | 1,836,000,000 | 763,200,000          | 568,800,000 | 361,822,969 | 230,400,000 | 141,200,000 |
| First International Bank           | 691,296,214              | 535,435,834   | 504,226,304   | 381,600,000   | 439,200,000   | 102,510,877          | 85,586,902  | 82,402,231  | 69,120,000  | 135,360,000 |
| Global Bank Liberia Limited        | 96,081,170               | 78,878,825    | 10,511,725    | n.a.          | 482,400,000   | 5,229,088            | 4,195,798   | 3,233,374   | n.a.        | 24,480,000  |
| Access bank of Liberia             | 735,000,000              | 735,000,000   | n.a.          | n.a.          | n.a.          | 1,926,820            | 1,008,218   | n.a.        | n.a.        | n.a.        |
| United bank for Africa liberia ltd | 10,498,916               | 12,696,448    | 9,474,292     | 11,963,086    | 9,555,723     | 1,742,846            | 2,204,824   | 1,753,980   | 2,183,322   | 1,789,193   |
| Guaranty Trust bank                | 1,152,411                | 1,066,503     | 959,183       | 937,561       | 933,542       | 304,795              | 287,103     | 217,991     | 192,692     | 173,466     |

## Appendix 3: Return on Assets and Capital to Total Assets Ratio

| BANK                          | ROA     |         |         |         |         | CAPITAL/TOTAL ASSETS |         |         |         |         |
|-------------------------------|---------|---------|---------|---------|---------|----------------------|---------|---------|---------|---------|
|                               | 2010    | 2009    | 2008    | 2007    | 2006    | 2010                 | 2009    | 2008    | 2007    | 2006    |
| Liberian Bank for Development | 0.03125 | 0.02921 | 0.02712 | 0.02535 | 0.02810 | 0.13836              | 0.14898 | 0.1724  | 0.17328 | 0.20396 |
| Ecobank Liberia Limited       | 0.00020 | 0.02815 | 0.02624 | 0.027   | 0.013   | 0.03184              | 0.01269 | 0.01852 | 0.02799 | 0.04387 |

|   |                      |                      |                      |                      |                      |                      |                      |                |                      |                      |
|---|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------|----------------------|----------------------|
|   | <b>4</b>             |                      |                      |                      |                      |                      |                      | <b>0</b>       |                      |                      |
| <b>International Bank Liberia Limited</b> | <b>0.01891<br/>2</b> | <b>0.02182</b>       | <b>0.01596<br/>8</b> | <b>0.0389</b>        | <b>0.015</b>         | <b>0.13086</b>       | <b>0.16527</b>       | <b>0.11938</b> | <b>0.12260</b>       | <b>0.07686</b>       |
| <b>First International Bank</b>           | <b>0.01137<br/>8</b> | <b>0.00917</b>       | <b>0.00695</b>       | <b>-0.052</b>        | <b>-0.140</b>        | <b>0.1482</b>        | <b>0.15985</b>       | <b>0.1634</b>  | <b>0.18113</b>       | <b>0.30819</b>       |
| <b>Global Bank Liberia Limited</b>        | <b>0.04199<br/>9</b> | <b>0.04957<br/>3</b> | <b>0.04728<br/>1</b> | <b>n.a</b>           | <b>-0.716</b>        | <b>0.05441</b>       | <b>0.05312</b>       | <b>0.30759</b> | <b>n.a</b>           | <b>0.05074</b>       |
| <b>Access bank of Liberia</b>             | <b>0.01173<br/>2</b> | <b>0.01025<br/>7</b> | <b>n.a.</b>          | <b>n.a.</b>          | <b>n.a.</b>          | <b>0.00262<br/>1</b> | <b>0.00136</b>       | <b>n.a.</b>    | <b>n.a.</b>          | <b>n.a.</b>          |
| <b>United bank for Africa liberia ltd</b> | <b>0.00942<br/>2</b> | <b>0.00345</b>       | <b>0.00692<br/>3</b> | <b>0.00186<br/>3</b> | <b>0.00212<br/>4</b> | <b>0.16600<br/>2</b> | <b>0.17365<br/>7</b> | <b>0.18513</b> | <b>0.18250<br/>5</b> | <b>0.18723<br/>8</b> |
| <b>Guaranty Trust bank</b>                | <b>0.01660<br/>1</b> | <b>0.01071<br/>4</b> | <b>0.01001<br/>4</b> | <b>0.00520<br/>8</b> | <b>0.00633<br/>8</b> | <b>0.2644</b>        | <b>0.26923</b>       | <b>0.22726</b> | <b>0.20551</b>       | <b>0.18587</b>       |

**Appendix 4: Insolvency Risk, Board Dimensions and Control Variables**

| BANK                               | SD(ROA)     | M(ROA)   | E/TA     | IR       | HSI/I: | CEODUAL | DIV | BANKSIZE | AGE |
|------------------------------------|-------------|----------|----------|----------|--------|---------|-----|----------|-----|
| Liberian Bank for Development      | 0.02529     | 0.0169   | 0.1673   | 0.137296 | 14     | 0       | 1   | 9.85566  | 51  |
| Ecobank Liberia Limited            | 0.012139    | 0.0186   | 0.02465  | 0.280671 | 6      | 0       | 0   | 7.19125  | 13  |
| International Bank Liberia Limited | 0.009753    | 0.02212  | 0.1229   | 0.067253 | 6      | 0       | 0   | 9.76582  | 11  |
| First International Bank           | 0.06548     | -0.0329  | 0.1921   | 0.411307 | 5      | 0       | 1   | 8.83966  | 7   |
| Global Bank Liberia Limited        | 0.0711      | -0.1442  | 0.1164   | -2.55755 | 7      | 0       | 1   | 7.98264  | 7   |
| Access bank of Liberia             | 0.00104     | 0.0109   | 0.00199  | 0.080683 | 6      | 0       | 1   | 8.86625  | 3   |
| United bank for Africa liberia ltd | 0.003296587 | 0.004756 | 0.178906 | 0.017949 | 2      | 0       | 1   | 7.10367  | 6   |
| Guaranty Trust bank                | 0.004478    | 0.009775 | 0.2304   | 0.018645 | 6      | 0       | 0   | 6.06161  | 3   |