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EFFECT OF RISK MANAGEMENT DISCLOSURE ON THE PROFITABILITY OF LISTED BANKS IN GHANA

BY

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Thesis submitted to the Department of Economic Studies of the School of Economics, College of Humanities and Legal Studies, University of Cape Coast, in partial fulfillment of the requirements for the award of Master of Philosophy degree in Economics.

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DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Signature……. Date……

Candidate's Name: Grace Darko Appiah-Kubi

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Signature……. Date……

Principal Supervisor's Name: Dr. Grace Ofori-Abebrese

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ABSTRACT

Within the context of corporate reporting and disclosure, information on risk has become important because of the complexity of modern businesses and these complexities have exposed firms to a lot of risks. Aside calls for the study of risk management disclosure in different cultural context, the effects of risk management on the profitability of banks still remain an issue. Content analysis was employed to examine the annual reports of listed banks from 2012 to 2016. Fixed and random effects techniques were used to assess the effects of corporate governance and bank-specific characteristics on the extent and quality of risk management disclosure, and also the effect of risk management disclosure on bank profitability. The study reveals that the amount of risk management information disclosed by listed banks in Ghana is very encouraging, that is, compliance level of 69 and 56 percent respectively for extent and quality of risk disclosure. The regression results suggest that extent of risk management disclosure of listed banks in Ghana is determined by audit committee independence and liquidity, whereas the quality of risk management disclosure is influenced by audit committee independence and bank. Also, extent of risk management disclosure positively affects the profitability of listed banks. Based on the results, the author recommends that there should be a strict regulation by the supervisory bodies; Bank of Ghana, Ghana Stock Exchange and the Securities and Exchange Commission, to enhance the quantity and quality of risk disclosure by banks. In addition, audit committees of the banking institutions should positively play their vital role in ensuring that banks comply with Basel II and IFRS 7 requirements fully.

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KEY WORDS

Annual Report

Content Analysis

Listed Banks

Profitability

Risk Management Disclosure

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DEDICATION

To my wonderful family and friends for the continuous love and support we share.

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LIST OF ACRONYMS

ACI	Audit Committee Independence
ACM	Audit Committee Meetings
ACS	Audit Committee Size
BOG	Bank of Ghana
BS	Board Size
ERMDI	Extent of Risk Management Disclosure
ERP	Economic Recovery Program
FGLS	Feasible Generalised Least Square
FINSAP	Financial Sector Adjustment Program
FINSSP	Financial Sector Strategic Plan
GDPG	Gross Domestic Product Growth
GFC	Global Financial Crisis
GLS	Generalised Least Square
GSE	Ghana Stock Exchange
GSE-CI	Ghana Stock Exchange-Composite Index
GSE-FSI	Ghana Stock Exchange-Financial Stock Index
GSS	Ghana Statistical Service

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HT	Harris Tzavalis
IASB	International Accounting Standards Board
ICAEW	Institute of Chartered Accountants for England and Wales
ID	Independent Directors
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
INF	Inflation
LDM	Licensed Dealing Members
LEV	Leverage
LIQ	Liquidity
LM	Lagrange Multiplier
LSDV	Least Square Dummy Variable
NIM	Net Interest Margin
OLS	Ordinary Least Square
OWN	Ownership
PROF	Profitability
QRMDI	Quality of Risk Management Disclosure
RCI	Risk Management Committee Independence

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ROA	Return on Asset
ROE	Return on Equity
SEC	Security and Exchange Commission
UNCTAD	United Nations Conference on Trade and Development
WACMIC	West African Capital Market Integration Council
WFE	World Federation of Exchanges

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CHAPTER ONE

INTRODUCTION

Within the context of corporate reporting and disclosure, information on risk has become important because of the complexity of modern businesses and these complexities have exposed firms to a lot of risks. Aside calls for the study of risk management disclosure in different cultural context, the effects of risk management on the profitability of banks still remain an issue. This study emanated from the research problem that risk management disclosure and corporate governance mechanisms were cited as the main cause of the Global Financial Crisis (GFC) of 2007-2008 and also cited as one of the reasons for the collapse of Unique Trust (UT) Bank and Capital Bank. It also emanated from the research problem that sought to argue that studies on risk management disclosure across the globe do not explicitly focus on the examining the quality of risk management disclosure in their study. As deposit-taking institutions, the collapse of one bank can bring untold hardships to many people and also destabilise the Ghanaian economy. Thus, a study into how Ghanaian banks are complying with regulatory requirements with respect to risk management disclosure is appropriate as it affects their profitability.

Background to the Study

A major determinant of the growth and development of every country is the strength and sustainability of its banking system. Ghana's banking sector contributed about 9.6% to GDP in 2016 (Ghana Statistical Service (GSS), 2017). The banking sector in recent years has undergone significant transformation and has continued to develop new regulations and guidelines with the objective of

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maintaining stability (Yakubu, 2016). It has also experienced a substantial development after the deregulation of the financial sector under the Financial Sector Adjustment Programme (FINSAP) in the 1980s (Owusu-Antwi, 2011). The implementation of FINSAP in 1988 was part of a comprehensive macroeconomic reform program (ERP/SAP) of the World Bank and International Monetary Fund (IMF). This led to the liberalization and restructuring of the financial sector. Distressed banks were restructured and their non-performing assets cleaned up to restore profitability and viability in the banking system (Owusu-Antwi, 2011).

A successor program to FINSAP was the Financial Sector Strategic Plan (FINSSP) which was largely implemented from 2001 with almost similar objectives but the latter sought to consolidate gains made under FINSAP and was meant to deepen the sector with improved financial service delivery (Bawumia, 2010). The results from both FINSAP and FINSSP impacted positively on the financial system as evidenced in the number of private banks that registered to do business in Ghana. According to the May, 2017 annual report of the Ghana Banking Survey, 37 universal banks operate in Ghana which includes domestic and foreign banks. The number however has reduced to 35 as a result of the recent takeover of UT Bank and Capital Bank by Ghana Commercial Bank.

The increasing number of banks in the country has brought about efficiency in the banking sector leading to growth in the profitability of banks, especially commercial banks in the country (Yakubu, 2016). The growing trend in banks profitability and concerns regarding risk disclosure has attracted the attention of academic researchers and policy makers in the fields of economics and finance.

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According to Opoku-Adarkwah (2011), there is a general belief that the banking sector in Ghana is relatively stable with individual banks having a good risk profile and sound risk management frameworks. The banking industry has not experienced major losses in the face of the global financial crises. The industry however witnessed a worsening asset quality of banks largely as a result of weak macroeconomic factors such as depreciation of the local currency, high inflation rates and interest rates resulting in high default rates. Also, the supervisory and regulatory bodies did not find any bank culpable of flouting prudential arrangements aimed at protecting the interests of clients and shareholders. There is therefore a vacuum with regards to the general belief on the risk position of the Ghanaian banking industry (Opoku-Adarkwah, 2011).

Risk management is defined as the performance of processes or activities that a bank puts in place to control its financial exposures. The process of managing risk comprises the fundamental steps of risk identification, risk analysis and assessment, risk audit monitoring, and risk treatment control (Bikker & Metzemakers, 2005). Whereas a risk in simple terms can be measured using standard deviation, some risks may be difficult to measure requiring more complex methods of risk measurement. Good risk management is not only a defensive mechanism, but also an offensive weapon for commercial banks and this is heavily dependent on the quality of leadership and governance. According to Jorion (2009), a recognized risk is less "risky" than the unidentified risk. Risk is highly complex and often interlinked making it necessary to manage, rather than fear. While not

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avoidable, risk is manageable – as a matter of fact most banks live reasonably well by incurring risks, especially "intelligent risks" (Payle, 1997).

Risk management disclosure has been, and it continues to be a key issue of concern to the global community and as such has gained considerable attention from stakeholders (Aebi, Sabato & Schmid, 2012; Beltratti & Stulz, 2012; Erkens, Hung & Matos, 2012). Risk disclosure provides information about a company's risk which helps stakeholders to understand and evaluate the interrelated risk, the effects of these risks and the strategies the company has adopted to manage these risks (Caldwell, 2012). It also lowers the cost of capital as investors gain more confidence in the business operations when there is reduction in uncertainty (Abraham & Cox, 2007; Linsley & Shrives, 2000).

Risk management disclosure has attracted a lot of attention following the recent financial crises of 2007-2008. As a consequence, there has been a demand for risk disclosure by stakeholders. Beltratti and Stulz (2012) and Erkens, Hung and Matos (2012) argued that the recent global financial crises of 2007-2008 had resulted in significant concerns regarding risk disclosures. Risk disclosure also provides information to users of financial reports, as it enables them to assess the risks affecting firm's future economic performance.

Additionally, Gray (1988) argues that culture has an effect on the level of disclosure provided by managers. Hence, there have been calls for research on disclosure in different cultural contexts (Akhtaruddin, 2005; Gray & Vint, 1995; Rajab & Handley-Schachler, 2009). Moreover, Rajab and Handley-Schachler (2009) explain that demands of investors and regulators in different countries differ

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because culture can affect their demand for information; hence the possibility of differences in risk disclosure by firms in different countries. This raises an issue of whether within the cultural context of Ghana, adoption of some international regulations such as the International Financial Reporting Standards (IFRS) has some implications for risk reporting and disclosure. Ghana adopted IFRS for reporting by listed firms in 2008 with the intent of improving the information environment and quality of reporting (Appiagyei, Agyenim-Boateng & Onumah, 2016).

Prior to the adoption of IFRS in Ghana, the generally accepted accounting principles used were the Ghana National Accounting Standards. The Ghana National Accounting Standards were partly based on UK accounting standards; Statements of Standard Accounting Practices (Agyei-Mensah, 2017). World Bank (2005) conducted a review of accounting and auditing practices in Ghana, which was presented in its Report on Observance of Standards and Codes. This was to "evaluate the weaknesses and strengths of the accounting and auditing requirements, and to review the reporting requirements against actual practices" (Report on the Observance of Standards and Codes (ROSC), 2005). One of the major weaknesses identified in the report was that the Ghana National Accounting Standards were outdated and differ significantly from International Accounting Standards. The World Bank therefore recommended that Ghana should adopt the IFRS, hence The Institute of Chartered Accountants' proclamation that all financial reports from 2007 onwards should comply with the IFRS.

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The effort of managing risk is to ensure that these risks are taken with full awareness and knowledge, a defined purpose with a lot of understanding in enhancing measurement and its mitigation. It however does not prohibit or prevent risk taking activities. Most of the global financial crises would not have happened with proper risk management. Risk must be optimally managed by banks.

Statement of the Problem

A large number of financial institutions collapsed during the Global Financial Crisis (GFC) of 2007-2008 and this raised significant concern in the world's financial markets about their performance and governance of risk (Erkens, Hung & Matos, 2012; Fahlenbrach & Stulz, 2011). Some studies have examined corporate governance performance and additional attention has been paid to bank's risk management (Adams, 2012; Bebchuk, 2010; Beltratti & Stulz, 2012; Erkens, Hung & Matos, 2012).

The lack of risk management and governance mechanisms failures are mostly cited as the major factor that contributed to the GFC of 2007-2008 (Aebi, Sabato & Schmid, 2012; Beltratti & Stulz, 2012; Diamond & Rajan, 2009; Hashagen, Harman & Conover, 2009; Strebel, 2009). Therefore, a bank needs to determine its level of risk and then implement risk management requirements that would cover the risk (Ferguson, 2008).

The GFC also raised several questions for regulators with respect to testing the value of 'risk governance'. Bebchuk (2010) suggests that excessive risk taking by banks played a key role in the financial crisis of 2007-2008. Beltratti and Stulz

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(2012) also argue that banks with poor governance were involved in excessive risk taking leading to huge losses during the financial crises.

In its report on risk disclosure, Ferguson (2008) provides three possible reasons for inadequate risk reporting. These reasons include; i) risk reporting requirements were insufficient; ii) there could be sufficient risk reporting requirements, but the managers who were aware of the risk chose not to report them; and iii) the board of directors of the companies were either unaware of the existing risks or they completely underestimated the risks. Based on the above, Mokhtar and Mellett (2013) stressed on the need to determine the nature and determinants of risk reporting.

The financial sector in Ghana is largely dominated by banks, making their activities key determinant for the collapse or growth of the financial sector. As a result, the nature and extent of risks of these banks are of great concern to the financial market, hence, the need to identify and mitigate them. The recent takeover of two banks, UT Bank and Capital Bank by GCB Bank has brought to fore the need for banks to take risk management seriously. The collapse of UT and Capital bank could have been partly avoided if they had complied with Basel II credit risk management and disclosure requirements. According to Agyeman, Aboagye and Ahali (2013), though Ghana has sufficient laws and regulations with respect to corporate governance, the major challenge is the absence of active devices for their effective enforcement, thus, leaving Ghana deficient in corporate governance practices. As deposit-taking institutions, the collapse of one bank can bring untold hardship to many people and also destabilise the Ghanaian economy. Thus, a study

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into how Ghanaian banks are complying with regulatory requirements with respect to risk management disclosure is appropriate as it affects their profitability.

There has also been a wide variety of investigations by researchers in this area, but the focus of such investigations significantly differs. Boahene, Dasah and Agyei (2012) examined the relationship between credit risk and bank profitability. These authors however concentrated on only the effect of credit risk on the profitability of banks ignoring the other types of risk (market risk, liquidity risk, operational risk, etc).

Hernandez-Madrigal, Blanco-Dopico and Aibar-Guzman (2012) examined the impact of the Unified Code of Good Governance on the quality and quantity of risk disclosure by 35 listed Spanish companies from the period 2004-2009. The authors concluded that implementation (2006-2009) of the Unified code has improved the quality and quantity of risk information. This study analysed the disclosure only in relation to the Committee of Sponsoring Organisations (COSO) II framework. Taylor, Tower and Neilson (2010) found corporate governance, capital raising, firm size and leverage to be positively related with the extent of risk disclosure in Australian listed resource firms. However, this study only examined financial risks and was conducted using data from resource firms.

Linsley and Shrives (2006) studied the nature and practices of risk disclosure in banking institution form 9 banks in U.K and Canada in 2001. The gap in this study however is the difficulty in measuring the quality of risk disclosure.

Though research has been conducted by the aforementioned authors, the coverage is limited. This study is therefore set to fill the gap in the banking risk

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management disclosure and profitability literature by looking at all risks as identified by the regulatory standards and also the quality of disclosure by these banks. This study tries to achieve these objectives by employing the content analysis approach, and the fixed and random effects estimation techniques.

Purpose of the study

The purpose of this study is to examine the effect of risk management disclosure on the profitability of listed banks on the Ghana Stock Exchange.

Research Objectives

This study aims to specifically achieve the following objectives:

- Measure the extent of risk management disclosure by banks listed on the Ghana Stock Exchange.
- Determine the quality of risk management disclosure by the listed banks on the Ghana Stock Exchange.
- Examine the effects of corporate governance and bank-specific characteristics on both the extent and quality of risk management disclosure.
- Investigate the effect of the extent of risk management disclosure on the profitability of listed banks in Ghana.

Research Questions

- What is the extent of risk management disclosure by the listed banks in Ghana?

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- What is the quality of risk management disclosure by the listed banks in Ghana?

Research Hypotheses

This study seeks to test the following hypotheses;

- H_0: There is no relationship between corporate governance and bank-specific characteristics and the extent of risk management disclosure.

  H_1: There is a positive relationship between corporate governance and bank-specific characteristics and the extent of risk management disclosure.

- H_0: There is no relationship between corporate governance and bank-specific characteristics and the quality of risk management disclosure.

  H_1: There is a positive relationship between corporate governance and bank-specific characteristics and the quality of risk management disclosure.

- H_0: There is no relationship between the extent of risk management disclosure and the profitability of banks.

  H_1: There is a positive relationship between the extent of risk management disclosure and the profitability of banks.

Significance of the Study

This research broadens our knowledge on risk management disclosure levels and the empirical knowledge on risk management disclosure in general and risk management disclosure quantity and quality in particular.

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The findings of the study are useful to regulatory bodies like Bank of Ghana by providing information about the inadequacies of risk reporting in the banking sector in Ghana. The findings also help the regulators to know the extent to which the banks are complying with the IFRS 7 and Basel II disclosure requirements. Based on the findings, the regulators are then able to provide appropriate guidelines to help the banks fully meet these requirements.

The study also provides information for managers to keep investors and bank customers satisfied about the risk that their banks encounter. Investors may use the findings for understanding risk disclosure behaviour of listed banks. It also informs regulators and investors about the importance and current levels of risk disclosure in all listed banks in Ghana as well as informing them of the influence of voluntary risk disclosure on the value of the firm. This study also makes major contributions to the disclosure literature and increase the knowledge on risk disclosure and reporting practices in the annual reports of Ghanaian banks.

Delimitation

The scope of this study is limited to the area of risk and risk management disclosure and its effect on bank profitability. Furthermore, the study focused on all listed banks in Ghana with published annual reports from 2012-2016 due to data availability. The study used secondary data drawn manually from the audited annual reports or financial statements of the banks and the World Development Indicators.

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Limitations

There are limitations in the secondary data that were collected which may restrict the ability to draw general conclusions but however do not affect the quality of the work. These include:

- The use of only listed banks and not all financial institutions is the major limitation of this study. This made this study have a small sample size. If more financial institutions were involved in this study, more precise conclusions could have been drawn. Because the study wanted to have a balanced panel, only listed banks with annual reports from 2012 to 2016 were used. Other listed banks with some missing annual reports over the stated period were not used.
- Another limitation of this study is the use of content analysis to measure the level and quality of risk management disclosure by creating risk disclosure indices. The risk disclosure indices are done by simply adding up the number of words which have been predetermined in the risk disclosure checklists. The content analysis approach is thus subjective, this subjectivity is intrinsic in the content analysis approach and cannot be completely removed. However, this is minimised by employing validity and reliability measures.
- Also, the sampling unit, effectively listed banks with available annual reports provides another limitation to this study. This study focuses on risk management disclosure only in the annual report of these banks. However, banks employ other channels such as conference calls, press releases and

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websites. While this could be argued as a limitation, nonetheless annual reports are considered as the major published document for communication (Linsley & Shrives 2006).

- Furthermore, the disclosure scoring system used also posed another limitation. For instance, instead of the extent of discussion, the scoring system equally weights each item in the Risk Management Disclosure Index. As a result, items may not reflect the level of importance as perceived by users of annual reports.

Organisation of the Study

The study is arranged under five chapters. **Chapter one**, the introductory section outlines the background to the study, the research problem, objectives of the study, research questions and hypotheses, research significance, delimitation and limitations of the study. **Chapter two** reviews related theoretical and empirical literature relevant to this study and **Chapter three** examines the research methods used in this study. **Chapter four** discusses the research findings and **Chapter five** presents the summary, conclusion and recommendations of the study.

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CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter reviews the literature on risk management disclosure in banking. It presents an overview of developments on the Ghana Stock Exchange and discusses the issue of risk management from varying perspectives, followed by theoretical underpinnings of risk and risk management disclosure, an overview of international regulatory standings in association with risk disclosure, and a review of prior empirical studies relevant to this study.

Overview of Developments on the Ghana Stock Exchange

The Ghana Stock Exchange (GSE) is the major stock market in Ghana established in 1989. The Exchange began operating as a private company limited by guarantee in 1990 under the country's Companies' Code of 1963 (Act 179) and later converted to a public company limited by guarantee in 1994. There are three categories of members, namely Licensed Dealing Members (LDMs), Associate Members and Government Securities Dealers (PDs). An LDM is a corporate body licensed by the Exchange to deal in all securities. An Associate member is an individual or corporate body which has satisfied the Exchange's membership requirements but is not licensed to deal in securities. A PD is a corporate body which is approved by the Bank of Ghana and registered by the Exchange to deal only in government securities. The GSE operates within a set of Rules, including membership, listing and trading. These are collectively referred to as the GSE Rule

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Book. Before a company can list on the GSE, the following information from the company are required: company background, capitalization and share distribution (authorized and issued capital, distribution of shareholding), names of directors and key management, list of debts and related details (financing arrangements, interest rates, maturity dates), company investments and properties, name(s) of competition and industry, profit and loss record for up to three years, any pending legal actions, and financial records such as dividend records and fiscal year end reports (GSE, 2012).

Regulated by the Securities and Exchange Commission (SEC), the Exchange seeks to build resilient markets for a developing economy. It currently controls three markets; Equity Market, Ghana Alternative Market and Fixed Income Market. It is also a member of the West African Capital Market Integration Council (WACMIC) and the World Federation of Exchanges (WFE). In 2008, the Exchange embarked on a process of automation which was completed in 2009. To enable the implementation of the Automated Trading System, the Exchange created a Depository, the Ghana Stock Exchange Securities Depository Company Ltd in 2008 to ensure fast and efficient supply and clearance system for shares and corporate bonds on the Exchange (GSE, 2012).

The Securities Market has over the years raised a total of GHS 2.1 billion in equity finance. Market capitalisation has also increased from GHS 3.05million in 1990 to GHS 58.8billion in 2017, with an all-time high of GHS 64.3billion in 2014. At present, the capital market lists 40 companies and 42 equities. The main market indices for the Ghana Stock Exchange are the Ghana Stock Exchange

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Composite Index (GSE-CI) and Ghana Stock Exchange Financial Stock Index (GSE-FSI). The GSE-CI is the major index of the Stock Market in Ghana and it includes all ordinary shares listed on the exchange. The GSE-FSI on the other hand, comprises of listed financial stocks only. The GSE-CI has gone up from 70.08 in 1990 to 2580 in 2017, with an all-time high and all-time low of 10,431.64 in 2008 and 62.17 in 1992 respectively (GSE, 2018).

In spite of its performance over the years, the Bourse still faces a number of challenges which are likely to hinder the growth of the Exchange. In the process, it is feared that the potential benefit of the Stock Market to the economy may not be fully gleaned (Manu, 2017).

The first is the problem of low liquidity and high volatility. According to Mensah et al. (2016), the Exchange's liquidity falls below that of key African markets like South Africa, Botswana, Nigeria and Kenya. This means that, it is relatively more difficult and expensive to trade on the Ghana Stock Market. The second problem is the limited number of listings. Though the Exchange's listing has increased from 11 equities to 42 equities over the 25 years of operations, this represents an average of one new listing per year. There is also the problem of limited number of instruments with equities being the major traded security on the Bourse. Finally, investor participation in the Market is also very low (Manu, 2017).

In addition to the above challenges, is the government's quest to remove the capital gains tax exemption, which initially served as an incentive for trading on the Exchange. This decision by the government however could derail the

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Exchange's progress over the years by discouraging both investors and companies from coming into the market (Quaye, Abudu & Agyare, 2016).

In 2017, the market also saw the departure of DPI, a leading African focused private equity firm from CAL Bank through the sale of its holdings to AriseBV from the Netherlands. Leapfrog Strategic African Investments (LSAI) also paid US$130million to buyout Sanlam's stake in Enterprise Group Ltd. UT Bank was delisted from the bourse after the Bank of Ghana revoked the banking license. The GSE suspended the listing status of five companies: African Champion Industries (ACI), GoldenWeb (GWEB), Pioneer Kitchenware (PKL), Transaction Solutions Ltd (TRANSOL), and Clydestone Ltd (CLYD) following their inability to meet listing obligations (GSE, 2018).

Conceptual Issues

Definition of Risk

Risk has been defined by Ale (2009) as "the objectified uncertainty regarding the occurrence of an undesired event". Dobler, Lajili and Zeghal (2011) also defined risk as the occurrence of natural events, whereas Linsley and Shrives (2006) defined it as the positive and negative outcomes of an event. Beretta and Bozzolan (2004) on their broader description of risk defined risk as the communication of elements that have the likelihood of influencing the expected outcome upside (opportunities) and the downside (actions that might go wrong). Cabedo and Tirado (2004) described risk as a probable loss or potential improvement in an organisation's wealth that occurs due to the interaction of some

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internal and external elements. Abraham and Cox (2007) also described risk by putting it into three categories: firstly, variation (that is, volatility), secondly, uncertainty (that is, contingency) and thirdly, opportunity (that is, upside). This study however adopts the definition of risk by Berreta and Bozzolan (2004) as it fits into the objective of this study.

Major Types of Risks faced by Banks

Risks faced by banks have been grouped in different ways by different writers to help develop the frameworks for their analyses but the most common ones which are considered in this study include credit risk, market risk (encompassing foreign exchange risk and interest rate risk), liquidity risk and operational risk.

credit risk

In his article on risk management in banking, Kupper (1998) defines credit risk as the potential financial loss resulting from the failure of customers to honour the terms of a loan or contract. This definition of Kupper (1998) can be broadened to include the risk of loss in portfolio value as a result of migration form a higher risk grade to a lower one. Van Greuning and Brajovic-Bratanovic (2009) also define credit risk as the chance that an issuer or debtor of a financial instrument - whether an individual, a company, or a country will not repay principal and other investment-related cash flows according to the terms specified in a credit

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agreement. Intrinsic in banking, credit risk means that the payments may be delayed or not made at all, which can cause cash flow problems and affect a bank's liquidity.

The essence of credit risk management is to maximise a bank's risk-adjusted rate of return by maximising credit risk exposure within acceptable parameters. About 70% of any bank's balance sheet generally relates to credit and therefore is considered as the principal cause of potential losses and bank failures. Also, lack of diversification of credit risk has been the primary cause of bank failures. The problem is that banks have a comparative advantage in making loans to organisations with whom they have an ongoing relationship, as a result creating excessive concentration in industrial sectors, Van Greuning and Brajovic-Bratanovic (2009).

While defaulters of credit risk cause a total or partial loss of any amount lent to the counterparty, a worsening of the credit standing leads to the increase of the possibility of default (Santomero, 1997). Van Greuning and Brajovic-Bratanovic (2009) further argues that formal policies laid down by a bank's board of directors and implemented by their management plays a vital part in credit risk management. Actually, a bank uses a credit policy to outline the scope and allocation of a its credit facilities and the manner in which a credit portfolio is managed. There are normally three kinds of policies related to credit risk management. The first set aims to limit credit risk, the second lays down aims at classifying assets by mandating periodic evaluation of the collectability of the portfolio of credit instruments, and the third policy aims to make provisions for the

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loss or make allowances at a level adequate to grasp anticipated loss, Van Greuning and Brajovic-Bratanovic (2009).

market risks

Wong (2012) defines market risk as the risk of loss due to adverse changes in the financial markets. He states further that market risk arises from derivative financial instruments such as; futures, swaps and options, and other financial instruments including loans, securities deposits and other borrowings.

According to Kupper (1998), market risk is the risk to earnings arising from changes in underlying economic factors such as exchange rates or interest rates, or from fluctuations in bond, equity or commodity prices. Banks are subject to market risk in both the management of their balance sheets and in their trading operations. Market risk management provides an inclusive framework for measuring, monitoring and managing interest rate, foreign exchange and equity as well as commodity price risk of a bank that needs to be closely integrated with the bank's business strategy. The main market risks are however interest rate and foreign exchange risks.

foreign exchange risk

According to CPA Australia (2009), foreign exchange risk is the risk affecting the financial performance of an organisation due to fluctuations in the exchange rate between currencies. This risk is most acute for organisations that deal in more than one currency, for example; they export to other country and the

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customer pays in its own currency. However, other organisations are indirectly exposed for foreign exchange risk if, for instance, their business relies on imported products and services.

Bessis (2010) defines foreign exchange risk as incurring losses due to changes in exchange rates. This loss of earnings may occur due to a mismatch between the value of assets and that of capital and liabilities denominated in foreign currencies or a mismatch between foreign receivables and foreign payables that are expressed in domestic currency. Van Greuning and Brajovic-Bratanovic (2009) stated further that foreign exchange risk is speculative and can therefore result in a gain or loss, depending on the direction of exchange rate shift and whether a bank is net long or net short (surplus or deficit) in the foreign currency.

Opoku-Adarkwa (2011) also contends that foreign exchange risk is generally considered to include transaction risk, economic risk and revaluation risk. Transaction risk is the price-based impact of exchange rate changes on foreign receivables and foreign payables, that is, the difference in price at which they are collected or paid and the price at which they are known in local currency in the financial statements of a bank or corporate entity. Economic risk on the other hand relates to the impact of exchange rate changes on a country's long-term or an organisation's competitive position. With the increasing trend in globalisation, capital moves quickly to take advantage of changes in exchange rate and therefore devaluations of foreign currencies can lead to increased competition in both overseas and domestic markets. The third constituent, revaluation risk arises when

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a bank's foreign currency positions are revalued in domestic currency, and when a parent institution performs financial reporting of financial statements.

interest rate risk

Interest rate risk can be defined as the potential for changes in interest rates to reduce a bank's value. Most of the loans and receivables of the balance sheet of banks or savings deposits generate revenues and costs that are driven by interest rates and since interest rates are unstable, so are such earnings (Bessis, 2010).

Larbi (2010) defines interest rate risk as the risk of investments value changing due to the fluctuations in the interest rates. She further argues that low interest rate tends to favour borrowing than in the situation of deposits, since low interest rates yield low returns. This risk can also deter multinationals from borrowing locally if the rates are high. This type of risk also tends to affect stocks more directly than bonds. Organisations which deal with or have foreign parties are affected since interest rate determines their cost of transaction, hence, the risk associated with the changes in interest rates can possibly change the value of a firm’s assets (Larbi, 2010).

According to Opoku-Adarkwa (2011), an increasingly source of interest rate risk stems from options fixed in many bank assets, liabilities, and off-balance-sheet portfolios. If not managed well these options can create significant risk for a banking institution because the options held by customers, both explicit and embedded, are generally exercised at the advantage of the holder and to the disadvantage of the bank.

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Generally, interest rate risk management comprises various policies, techniques and actions that a bank uses to limit the risk or lessening of its net equity as a result of adverse changes in interest rates (Opoku-Adarkwa, 2011).

liquidity risk

According to Van Greuning and Brajovic-Bratanovic (2009), a bank is faced with liquidity risk when it does not have the ability to efficiently accommodate the redemption of deposits and other liabilities. They however go further to propose that a bank has enough liquidity potential when it can acquire needed funds (by increasing liabilities, securitising, or selling assets) promptly and at a reasonable cost. In its June 2008 consultative paper, the Basel Committee on Bank Supervision defined liquidity as the ability of a bank to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses.

Bessis (2010) however contends liquidity risk to arise from three distinct situations. The first situation is where the banks have difficulties in raising funds at a reasonable cost due to difficulties relating to the volume of the transaction, the interest rate levels and their fluctuations, and the difficulties in funding a counterparty. The second situation looks at liquidity as a safety cushion which helps banks in gaining time under difficult situations. Here, liquidity risk is looked at as a situation in which short-term asset values are not sufficient enough to clear short-term liabilities or unexpected outflows. The third and final situation is where liquidity is considered as an extreme situation. These situations can arise from cases

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of large losses which creates liquidity problems and doubts on the future of the bank. These doubts can result in massive withdrawal of funds or closing of credit lines by other organisations who try to protect themselves against a possible default.

The Basel Committee (2006) argues that the basic role of all banks in the maturity transformation of short-term deposits into long-term loans makes the banks inherently vulnerable to liquidity risk, both of an institution-specific nature and that which affects markets as a whole. A deficit in liquidity at a single bank can have system-wide consequences and hence liquidity management is of a great importance to both the regulators and players of the industry.

operational risk

According to Basel Committee (2001), operational risk can be defined as the risk of direct and indirect loss resulting from inadequate or failed internal processes, people and systems. The breakdown of the information systems, reporting systems, internal monitoring rules and internal procedures designed to take timely corrective actions, or the fulfillment with the internal risk policy rules result in operational risks (Bessis, 2010). Operational risk appears at different levels, such as human errors, processes, and technical and information technology. Developments in modern banking environment, such as increased reliance on sophisticated technology, expanding retail operations, growing e-commerce, outsourcing of functions and activities, and greater use of derivative techniques that claim to lessen credit and market risk have contributed to higher levels of operational risk in banks (Van Greuning & Brajovic-Bratanovic, 2009).

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The contributory factors mentioned above in operational risk have led to increased attention on the development of sound operational risk management systems by banks with the initiative being taken by the Basel Committee on Banking Supervision. The committee addressed operational risk in its Core Principles for Effective Banking Supervision by requiring supervisors to ensure that banks have risk management processes and policies to identify, assess, monitor, and mitigate operational risk. In its 2003 document, Sound Practices for the Management and Supervision of Operational Risk, the committee additionally provided guidance to the banks for managing operational risk, in anticipation of the implementation of the Basel II Accord which wants a capital allocation of operational risk. Aside all these efforts by the regulators at addressing operational risk, practical challenges exist when it comes to its management.

Risk Management in Banking

Schmit and Roth (1990) describe risk management as the performance of activities designed to minimise the negative impact (cost) and uncertainty (risk) regarding possible losses. Redja (1998) however defines risk management as a systematic process for the identification, evaluation of pure loss exposure faced by an entity or an individual, and for the selection and implementation of the most appropriate techniques for treating such exposures. The systematic process mentioned above involves: identification, measurement, and management of risks.

According to Fatemi and Glaum (2000), the objectives of risk management include the minimisation of foreign exchange losses, reduction in the instability of

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cash flows, protection of earnings' fluctuations, increment in the profitability and assurance of survival for the organisation.

Pyle (1999) also considers risk management as the process by which managers satisfy these needs by identifying key risks, obtaining consistent and understandable operational risk measures, choosing which risks to reduce, which to increase and by what means, and establishing procedures to monitor resulting risk positions. Shapiro (2008) defines risk management as the management of company's finances to maximise shareholder's wealth. Shapiro in his book further identifies the shareholder as being the legal owner of the company and management being the fiduciary obliged to act in the best interest of the company. Since the capital required are provided by the shareholders, it is the responsibility of management to take strategic decisions in controlling risk that the business may face so as to maximise shareholders' wealth in the end.

Bessis (2010) also adds that in addition to it being a process, risk management also involves a set of tools and models for controlling and managing risks. Bessis further pointed out that the goal of risk management is to measure risk in order to monitor and control them, and also enhance in serving other important functions in a bank in addition to its direct financial functions. These include helping in the implementation of the bank's ultimate strategy by providing a better view of the future and therefore defining appropriate policy to assist in developing competitive advantage through the calculation of appropriate pricing and the formulation of other differentiation strategies based on customers' risk profile.

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Categories of Risk Management

A key feature of the franchise of financial institution (including banks) as noted by Merton (1989) is the bundling and unbundling of risks. Nonetheless, not all risks inherent in their business should be borne directly by them; some can be traded or transferred whiles others can be eliminated altogether. To adopt the appropriate strategies to mitigate risk, Oldfield and Santomero (1995) contend that risks that financial institutions face can be fragmented into three distinctive categories from a management outlook. These are risks that can be eliminated by simple business practices (such as operational risk which include fraud, oversight failure, lack of control and managerial limitations), risks that can be transferred to other participants (market risk, where financial risks of the assets created or held by the financial firm that are understood by the market can be sold in the open market at their fair market value), and risks that must be actively managed at the organisation level. Risk avoidance can be done by engaging in actions such as hedging, diversification, underwriting standards, reinsurance and due diligence investigation to lessen the chances of idiosyncratic losses by eliminating risks that are superfluous to the purpose of the bank's business.

Development of Risk Management Disclosure

The debate on the significance of risk reporting began as early as 1998 when the Institute of Chartered Accountants in England and Wales (ICAEW) published a discussion paper titled "Financial Reporting of Risks - Proposal for a Statement of Business Risk." The ICAEW suggested that directors of organisations provide

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risk management information in their annual reports in order to facilitate informed decision making by current and prospective investors in the marketplace (Linsley & Shrives, 2006). They further stated that current annual reports provide some form of risk disclosure but in an understandable manner for the shareholders to understand. In fact, these annual reports do not present a coherent discussion of the risks that challenge the organisation and the actions the directors are planning to alleviate the risks.

Up to now, reviews on the state of risk reporting in terms of regulatory perspective is slow in nature, where it focuses mainly on the market risk associated with the use of derivatives (Beretta & Bozzolan, 2004). In the USA, Financial Reporting Release No. 48 (FRR 48) requires SEC registrants to disclose both qualitative and quantitative information on market risks in the notes of the accounts and also in the management, discussion and analysis (MDA) section.

The Exchange further requires listed companies to report in the Chairman's statement in the annual report, a short description of industry trends and developments and an analysis and discussion of the group's performance during the year and the material factors underlying the results and its financial position. The provisions above are drawn to produce more effective corporate governance practices that would promote transparency, accountability and integrity of financial information on a timely and relevant basis to investors, shareholders and those having interest in the local company.

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Usefulness of Risk Management Disclosure

The study conducted by Linsmeier, Venkatachalam and Welker (2002) provides a strong and important evidence on the usage of risk disclosure by investors. They found out that risk disclosure has the impact of reducing an investor's uncertainty and the diversity of options on the market valuations of firms. According to Hutton (2004), the provision of adequate corporate risk disclosure will enable investors to incorporate such risks especially in the course of valuing their investment, thereby reducing excess demand that can cause stock price to be critically higher than they would be especially in the event that the market had the information that is available to managers. He however states that communicating risk related information will improve corporate transparency, hence, the problem of information asymmetry be resolved.

Murugesu and Santhapparaj (2010) state that if the problem of information asymmetry is not fully resolved between management and investors, consequently, capital markets could undervalue some good companies and overvalue some bad companies relative to the information made available to investors and other stakeholders. However, accurate disclosure of corporate risks and their management can prevent severe damage to long-term health and reputation of a company that may otherwise result from overvalued corporate equities (Adamu, 2013; Fuller & Jensen, 2002).

UNCTAD (2017) provides several usefulness of risk disclosure in their study on the role of disclosure in risk assessment and enhancing the usefulness of corporate reporting in decision-making. According to them, corporate information

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disclosure concerning risks and their management is not only vital for the functioning of efficient capital market but also provides a wider audience beyond investors with information that is useful for assessing stewardship and making economic and policy decisions.

In sum, Berreta and Bozzolan (2004) explained that surveys conducted among institutional investors have revealed a strong demand for increased corporate risk management disclosure in order to improve investment decisions.

Theoretical Review

Theoretical frameworks adopted to explain why banks involve themselves in different levels of disclosure include but not limited to; agency cost theory, signaling theory, information asymmetry theory, legitimacy theory, capital need theory and stakeholder theory. This study however is based on the Agency cost theory, Stakeholder theory, Signalling theory and Institutional theory as it seeks to examine the relationship between risk management disclosure and bank profitability.

Agency cost theory

The central idea of Agency cost theory is that principal-agent relationship should be able to use information in the association efficiently so as to minimise the problem of information asymmetry and risk bearing costs (Eisenhardt, 1989). Agency cost theory was proposed by Jensen and Meckling in 1976 to help explain manager's motivations for voluntary disclosure. They avowed in their study that

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this theory can be considered as a contract among investors (the principal) and managers (the agent). The agent is contracted to perform some activities on behalf of the principal, which usually involve allocation of some decision-making authority to the agent by the principal. The separation of ownership from control by the principal which mostly lead to a differing interest among stakeholders and managers is associated with the agency problem.

Eisenhardt (1989) however outlined two facets of agency cost theory; the 'principal-agent' stream and the 'positivist' stream. According to him, the principal-agent stream can be functional in any agency relationship such as, lawyer-client, buyer-supplier, and employer-employee. Positivist stream however emphases on classifying circumstances where agency relationship has conflicts in order to achieve their set objectives and then describe the governance means that control agents' self-interested behaviour.

It has though been emphasized in agency literature that the problem of agency theory is not purely among owners, managers and outside shareholders but it has now extended to incorporate the demand for contracts among owners, managers, debt-holders and outside capital suppliers.

In spite of its wide scale usage in several literatures and disciplines, agency theory has faced some controversies and critics. Perrow (1986) and Eisenhardt (1989) contend that agency cost theory is hardly subject to empirical tests since it rarely tries to explain actual events. He further stated that agency cost theory is one-sided and fails to discover other key issues such as exploitation of workers. Shapiro (2005) and Surendra (2010) also argued that the intrinsic distrust in the agency

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theory leads to a dehumanisation of the agent, where the inherent motivations are cruelly replaced with a rational calculation of the value of consequences. Therefore, the perspective of the agency theory is purely made for a model to be workable mathematically and reduce agents' vitality (Ghosal, 2005; Surendra, 2010).

Associating risk management disclosure with agency theory

Linsley and Shrives (2000) gave an explanation of the association between agency cost theory and risk disclosure as the disagreements that emerge as a result of the level of information available, which needs to be reported by the internal management to shareholders and outsiders.

Agency theory hypothesises disclosure as a channel that reduces conflicts, example by providing annual reports and increasing the amount of information in such reports (Kelly, 1983; Marston & Shrives, 1996). Healy and Palepu (2001) also argued that there is an agency cost problem in view of disclosure. These authors proposed that, the disclosure of appropriate information will make investors inspect contractual agreements to assess whether agents have administered the organisation's resources in the best interest of the outside owners, instill corporate governance in the board of directors to monitor and discipline management in the best interest of outside owners.

Eisenhardt (1989) argues that agency theory contributes to organisational thinking in two ways. First is the usage of information that plays a crucial role in the formal information system, such as budgeting and more informal aspects such as managerial supervision. Agency theory suggests that the board can be used for

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monitoring purpose in shareholders' interests (Fama & Jensen, 1983). Secondly, the other contribution of agency theory is in its risk implication as an uncertain future is controlled in part by organisation members, rather than being influenced by governmental regulations, emergence of new competitors or rapid technological innovation.

As stakeholders need to understand the risk profile of organisations, they seek information about the risk profile to be disclosed by the organisations, together with how risks are being managed. Improved risk disclosure helps stakeholders to be more aware of internal governance and to interpret the level of various risks the company faces (Nahar, 2015). These higher levels of transparency simplify interpreting risk for external users and reduce agency costs (Cabedo & Tirado, 2004; Hill & Short, 2009; Marshall & Weetman, 2002). Solomon, Solomon, Norton and Joseph (2000) argue that risk disclosure represents a way of controlling the agency problem. Also risk disclosure and sound governance are of interest to regulators as they reduce agency problems (Abraham & Cox, 2007).

According to Nahar (2015), agency theory postulates that the board of directors will exercise the primary control function in business organisations. Corporate governance mechanisms seek to monitor, discipline and remove ineffective management teams to ensure that managers pursue shareholders' interests (Naceur & Kandil, 2009). Therefore, functional governance mechanisms with positive attributes such as board independence, audit committee independence, the presence of a risk committee are necessary.

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Stakeholder theory

Freeman (1994) defines this theory as "a group of individuals who can affect or is affected by the achievement of the organisation's objectives". This extensive definition of stakeholder includes adverse groups such as interested groups and regulatory authorities. The broader definition of stakeholder theory encompasses interested groups and regulatory authorities (Nahar, 2015). Solomon (2010) theoretically explained the stakeholder theory as the pervasive impact on society by firms as they grow large, making them accountable to more sectors of the society than solely on their shareholders. This theory also postulates that directors are accountable to all stakeholders (Chen & Roberts, 2010). Sachs, Rühli and Kern (2009) assert that stakeholders are important for the existence of firms and therefore a firm should know its stakeholders' interests, in order to meet them. Tencati, Perrini and Pogutz (2004) state that stakeholders incorporate employees, shareholders, the financial community, customers, suppliers, financial partners such as banks, government, community, and even the competitors.

Stakeholders who are in a society are largely concerned with the way a firm is managed. Therefore, this theory is based on the assumption that a firm requires the support of its stakeholders for its operations to guarantee the continuity of its functionality (Gray, Owen, Evans & Zadek, 1997). Companies require resources for their operations, however these resources are affected (either directly or indirectly) by the control power of stakeholders. The more powerful the stakeholders are, the more the company must adapt (Gray, Kouhy & Lavers, 1995a). Furthermore, Ullmann (1985) states that when stakeholders exercise their

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control power, the company is more likely to react in a way that are in the interest of the stakeholders.

Associating risk management disclosure with stakeholder theory

It is in stakeholders' best interest that risk is disclosed in a timely manner due to the known importance of risk disclosure to stakeholder in terms of investment decision-making and wealth creation. This theory provides some meaningful insights into the reasons why annual reports should disclose risks. The behaviours of some of the external stakeholders could apply an important pressure in views about risk (Helliar, Lonie, Power & Sinclair, 2002). Firms disclose risk information in order to meet the demand of their shareholders. Research has also shown that disclosure provides a way of minimising and controlling conflict of interests among stakeholders (Chow & Wong-Boren, 1987).

Signalling theory

This theory was developed by Spence (1973) as a means of describing peoples' behaviour in the labour market. He explains the signalling process in terms of education. Spence argues that the level of education of a job applicant was a credible signal of the underlying competence. He further argues that managers might not observe their employee productivity and that employees with greater abilities would signal their abilities to the employer in order to receive benefits. Ross (1977) also postulates that managers with good news or with high-quality

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products may offer a warranty in order to strengthen their signal and distinguish themselves from poor-quality products and misleading information.

Signalling theory also proposes that highly profitable companies will send signals of their quality to investors (Watson, Shrives & Marston, 2002). The purpose of such disclosure is to obtain a good market reputation, increase the trade of shares and hence increase firm value (Al-Maghzom, 2016; Hassan, 2009; Linsley & Shrives, 2000; 2006; Mohobbot, 2005). Oliveira, Rodrigues and Craig (2011b) also presumes signalling theory as a situation where managers tend to provide more risk management information to send a good signal to debt holders regarding corporate ability to meet obligations. In their view on signalling theory, Linsley and Shrives (2000) state that companies who provide more good information are not only informing the market that the company is in good position with strong risk management and internal control systems but are also raising expectations that similar disclosures will be made in future, thus making management more accountable.

Associating risk management disclosure with signalling theory

The signalling process asserts that firm executives who believe their firm can perform better than other firms will desire to signal this to investors with the motive of attracting more capital and investments (Al-Maghzom, 2016). The improvement of disclosure by managers is to obtain more advantages, good reputation and increase firm value, while keeping silent would lead to misinterpretations by investors and the rest of the market as withholding the worst

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possible information (Hassan, 2009; Linsley & Shrives, 2000; Mohobbot, 2005).

Lopes and Rodrigues (2007) believe vehemently that signalling theory offers a connection for risk disclosure and industry type association. Linsley and Shrives (2000) in connection to signalling stated that, firms which offer more good disclosures are not only notifying shareholders and the market about the firm's good position with regards to having a strong risk management and internal control systems intact but are also increasing anticipations that similar disclosures will be performed in the years ahead hence making management more accountable.

Meek, Roberts and Gray (1995) however suggest that insiders have to maintain an equilibrium between benefits of lower capital costs, extra information and the costs related to such reportage. Linsley and Shrives (2003) additionally affirmed that directors might wish to indicate to the market that their firms are more developed in their risk management than other firms and their administrators are superior risk administrators than others, which would in effect offer a reason for some companies to decide to report risk information.

Institutional theory

According to DiMaggio and Powell (1983) and Oliver (1991), institutional theory clarifies the thinking about disclosure in many different ways. Due to cost/benefit uncertainties about disclosure, managers may imitate the disclosures of companies with good reputations to send signal that their risk managements systems are equivalent to the industry standard. Although some risks may apply industry-wide, the way in which these risks affect individual companies may be

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different depending on the firm characteristics. Therefore, according to Day and Woodward (2004) general disclosures have limited use to readers and unlike analysts, they may find it difficult in obtaining more information about the companies in order to assess the risks they face, appreciate the risk profile and evaluate them. In the long run, disclosures will be ignored as they are seen as not being helpful.

In addition, "Institutional pressures can drive organisations to engage in routine social actions" (Cormier, Magnan & Van Velthoven, 2005). This proposes that once managers have decided on their risk disclosure, no matter how they are derived, they become reluctant to making changes to existing disclosures, particularly where the consequences of those altered disclosures are unclear. Hence, companies use standardised disclosures which involve little incremental disclosure cost, either from an internal cost perspective or from a proprietary cost perspective. Managers of organisations may take the belief that if the disclosures are 'tried and tested' they should be retained, as any changes are likely to attract unwelcome attention. Though in the short term the disclosures may appear acceptable, the contents are unlikely to be sustained. Spence, Husillos, and Correa-Ruiz (2010) in the context of environmental accounting refer to the work of an anthropologist named Kirk Huffman who used to term 'cargo cult' while studying behaviour of islanders on Vanuatu. The cargo cult term refers to the obvious practice of South Sea islanders trying (in vain) to attract aircraft purportedly loaded with cargo (westernised goods) by constructing false landing strips complete with bamboo antennae and coconut radios. The antennae and radios do not function, despite

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having the appearance of it working. Thus, no aircraft lands and no cargo ever received. Institutional theory indicates that firms tend to incorporate external norms and rules into their operations and structures in order to gain legitimacy (DiMaggio & Powell,1983; Scott, 1987). Hence, it can be argued that companies can gain social acceptance and legitimise their operations by engaging in risk disclosure.

An overview of the institutional arrangements and accounting regulations in developing a risk reporting framework

There have been several professional and institutional reports worldwide highlighting the importance of risk reporting and this calls for a comprehensive disclosure of risk information in order to satisfy the users of financial reports. Notable amongst them are; The International Financial Reporting Standards (IFRS) 7 and the Basel Committee on Banking Supervision (BASEL II).

International Financial Reporting Standards (IFRS)

The Financial Accounting Standards Board (FASB) in the U.S.A. and the International Accounting Standards Board (IASB) in the U.K. require risk disclosures by organizations to aid users of annual reports in making their investment decisions. The IFRS 7 seeks the provision of information in relation to organisations' financial performance, the associated risk of financial instruments and the risk management policies (IASB, 2009). IFRS 7 includes financial instrument disclosure for all companies under one standard as it includes the disclosure requirements relating to financial instruments which were previously set

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out in IAS 30 (that is, Disclosure in the Financial Statements of Banks and Similar Financial Institutions) and IAS 32 (that is, Financial Instruments: Presentation).

IFRS 7 states that 'an entity shall disclose information that enables users of its financial statements to evaluate the nature and extent of risk arising from financial instruments to which the entity is exposed to at the reporting date'. It also requires a minimum disclosure of qualitative and quantitative information about market, credit and liquidity risk information (IASB, 2007). The qualitative aspect of disclosure describes the management's objectives, policies and processes for managing those risks, and the quantitative aspect of disclosure provides information about the extent to which the organization is exposed to risk based on information provided internally to the organisation's key management personnel (IASB, 2007).

After the Global Financial Crises (2007-2008), the IASB issued several amendments to IFRS7. The first amendment was in October 2008 which permitted reclassification of some financial instruments. The next amendment was in 2009, which introduced a three-level hierarchy for fair value measurement disclosure to improve comparability between companies and strengthen the disclosure about liquidity risk associated with financial instruments (assets and liabilities) (IASB, 2009). Nonetheless, these amendments were controversial as fair value was argued to hide the real risks to which organisations are exposed augment the mistrust by stakeholders (Judge, Douglas & Kutan, 2008). In addition, reclassification of financial assets amendments was controversial as the changes were seen as political and were adopted without any due process (Laux & Leuz, 2009).

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BASEL II: Pillar 3 (Market Discipline)

The Basel Committee on Banking Supervision (BCBS) is a forum for regular collaboration on banking supervisory matters. The Basel Committee comprises representatives from Central Banks and regulatory authorities around the globe. Each member country implements recommendations by the Basel Committee through their national laws and regulations. The Committee requires banks to disclose risks under a capital adequacy and market discipline framework. From 1974, the BCBS has worked to enhance understanding of key supervisory issues and improve the quality of bank supervision all over the world. In 1988, the BCBS published the first global banking guideline for capital adequacy (BASEL I) with two main objectives; one is to support the trustworthiness and firmness of the worldwide banking system; and the other is to achieve fair and consistent practices among international banks (Basel Committee, 2003).

Under Basel I, banks were required to hold a minimum capital reserve based on their own assets, the base for capital with Tiers; such as tier 1 and tier 2, with tier 1 consisting of common equity and preferred stock, and tier 2 consisting of subordinated debt and hybrid instruments. The Basel II developed a framework to further strengthen the soundness of banking institutions (Barth, Caprio & Levine, 2004). The Basel II framework comprise three 'Pillars', Pillar 1 comprises minimum capital requirements and Pillar 2 provides risk management guidance with respect to banking institutions in relation to interest rate risks, credit risks and operational risks. The objective of Pillar 2 is to have sufficient capital to maintain all risks and encourage banks to have better monitoring techniques to manage their

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risks (Basel Committee, 2012). Pillar 3 aims at improving market discipline by providing disclosure guidelines for capital adequacy, risk exposure and risk assessment information provided to market participants (Basel Committee, 2012; Ismail, Rahman & Ahmad, 2013; Nier & Bauman, 2006). The Basel committee in 2006 revised the Basel II framework to encourage stronger risk management practices in the banking industry. The Pillar 3 disclosure requires both qualitative and quantitative information (Basel Committee, 2006).

The Basel Committee after the Global Financial Crisis (GFC) of 2007-2008 promoted the adoption of sound corporate governance guidance practices in the banking sector. They stated that 'risk reporting systems should be dynamic, comprehensive and accurate and should draw on a range of underlying assumptions' (Basel Committee, 2010). They further suggested that by engaging an internal auditor, the board and senior management can easily identify the risk management process and hence improve on the quality of risk reporting (Basel Committee, 2010). To develop a more resilient banking sector and also as a feedback to the GFC, the Basel Committee programmed Basel III to be implemented from 2013 until 2019. The examination of Basel III is however beyond the scope of this study as its focus is more on capital requirements. At present, Basel II: Market Discipline (Pillar 3) contains the most specific disclosure framework to communicate risk exposure and risk assessment in the banking institutions internationally.

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Empirical Literature Review

A wide range of investigations have been done by researchers in the area of risk and risk management disclosure, but the focus of such investigations significantly differs. The existing literature is divided with some researchers focusing on risk disclosure and its association with corporate governance and corporate structure (Abraham & Cox, 2007; Elzahar & Hussainey, 2012; Mokhtar & Mellet, 2013), and others focusing on how organisations disclose risk. Also, Empirical results have provided inconclusive and mixed results due to inter country cultural and institutional differences. Most of the previous literature focused mainly in explaining risk disclosure in terms of agency theory (Abraham & Cox, 2007; Lajili, 2009), institutional theory (Hassan, 2009), stakeholder theory (Amran et al., 2009) and organisational culture (El-Kelish & Hassan, 2014).

In their study on the influence of mandatory requirements on risk disclosure practices in Spain, Hernandez-madrigal, Blanco-Dopico and Aibar-Guzman (2012) empirically examined the influence of the Unified Code of Good Governance on the quality and quantity of risk disclosure by 35 listed Spanish companies from the period 2004-2009. Using content analysis technique, the authors developed two disclosure indices to identify the pattern of behaviour in the disclosure of information on corporate risk by Spanish listed companies. The authors concluded that the post implementation (2006-2009) of the Unified code has improved the quality and quantity of risk information.

Taylor, Tower and Neilson (2010) in their work on corporate communication of financial risk studied the financial risk management disclosure

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of Australian resource listed companies from 2002-2006. Using an Ordinary Least Square Regression (OLS), they found corporate governance, capital raising, firm size and leverage to be significant and positively related to the extent of risk disclosure in Australian listed resource firms whereas oversea stock listing of firms is significant and negatively related to the extent of risk disclosure.

Linsley and Shrives (2006) in their paper on risk disclosures in the annual reports of UK companies explored risk disclosures within a sample of 79 UK companies' annual reports using content analysis. They found significant association between the number of risk disclosures and company size, and also between the level of environmental risk. They further studied the nature of risk disclosures made by the sample companies by specifically examining their time orientation, whether they are monetarily quantified and if good or bad risk news is disclosed. They concluded that, it was uncommon to find monetary assessments of risk information but companies did well to exhibit the willingness to disclose forward-looking risk information.

Linsley and Lawrence (2007) in their work on risk reporting by the largest UK companies focused on the quality of risk disclosure by looking at the readability and obfuscation of risk disclosure. Using Flesch Reading Ease formula to measure readability of risk disclosure, coefficient of variation to measure obfuscation, and content analysis approach to identify risk disclosure, Linsley and Lawrence found the mean Flesch reading ease ratings for the sample companies to be below 50 indicating that the level of readability of the risk disclosure is very difficult. There

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was however no evidence to suggest that directors were deliberately obfuscating or concealing bad risk news through their writing style.

Additionally, Hossain (2008) empirically investigated the extent of disclosure by the 38 listed banking companies in India in 2003. Using the content analysis approach in creating a risk disclosure index, Hossain found that Indian banks were very compliant with the rules concerning mandatory risk disclosure but were far behind in the case of disclosing voluntary items. Also using an Ordinary Least Square estimation technique, the study found size, profitability, board composition and market discipline to be significant in explaining the level of risk disclosure.

Beretta and Bozzolan (2004) in their paper on the framework for the analysis of firm risk communication analysed risk disclosure of publicly listed Italian companies and argue that the quantity of disclosure is not a good proxy for the quality of disclosure, and as such researchers need to focus on what is disclosed. When analysing the Italian stock market, Beretta and Bozzolan found that the companies disclose information about company strategy, financial structure, and business process. Most of the information do not show how risk might affect company performance, and when this is discussed, it is mainly on how the company could be affected positively. Moreover, majority of the disclosed information focused on the past or the present, and not on the future. In addition, they stated that firms have a policy of "formal disclosure but substantial non-disclosure" and then concluded that size of the industry is statistically significant in explaining the

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overall quality of risk disclosure using an Ordinary Least Square estimation technique.

Abraham and Cox (2007) referring to IFRS 13 and the Turnbull Report examined the quantity of risk information of UK companies. Using content analysis: word-based approach, they examined the quantity of risk information of 71 companies in 2002. They found share ownership to be negatively related to risk disclosure.

Appiagyei, Agyenim-Boateng and Onumah (2016) examined risk disclosure of firms on the Ghana Stock Exchange (GSE) pre and post adoption of IFRS. The study employed content analysis to examine the annual reports of listed firms from 2004 to 2011. They then used a paired t-test to test the differences in risk disclosure pre and post IFRS adoption. They found out that the amount of risk information disclosed by these listed firms in Ghana is low although there have been significant improvements after the adoption of IFRS.

Welbeck, Owusu, Bekoe and Kusi (2017) in their investigation on the determinants of environmental disclosures of listed firms in Ghana examined the type of environmental-related information firms disclose mostly in Ghana, the trend of such disclosures and the determinants of environmental disclosures by firms in Ghana. Using the Global Reporting Initiative (GRI) index as a benchmark, a content analysis on the annual reports of 17 firms listed on the Ghana Stock Exchange (GSE) was conducted over a 10-year period from 2003 to 2012 to help determine the total environmental disclosure scores of the sampled firms. The results from their research indicated that though firms listed on the GSE disclosed

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some environmentally-related information, the level of disclosure is low and that the level of disclosure by environmentally-sensitive firms is higher than less sensitive firms similar to existing studies. In addition, using an Ordinary Least Square estimation technique, the study found firm size, auditor type, age of the firm and industry type to be significantly related to environmental disclosure practices.

Tsamenyi, Enninful-Adu and Onumah (2007) in their paper on "Disclosure and Corporate Governance in Ghana" used disclosure scores to measure corporate governance of listed firms in Ghana. A sample of 22 firms listed on the GSE from 2001-2002 were used and Standard and Poors (S & P) transparency and disclosure instruments were used to calculate the disclosure scores of each firm. The study found the level of disclosure by these firms to be low. They also found ownership structure, dispersion of shareholding and firm size to have significant effect on disclosure whereas correlation between leverage and disclosure is insignificant.

Opoku-Adarkwa (2011) also focused on risk management and bank performance of First Atlantic Merchant Bank Limited (FAMBL), Ghana from 2008-2010 with the aim of evaluating the bank's risk profile as well as assessing its risk management framework to ascertain its soundness and conformity to international best practices. Using ratio analysis, common-size analysis, and trend analysis, the study revealed that FAMBL had a fairly adequate risk management structures to ensure sound management of financial operations.

Garr (2013) in his work on the determinants of credit risk in banking industry in Ghana also examined bank-specific, industry-specific and macroeconomic factors that influence credit risk in commercial banks in Ghana

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using unbalanced panel data set from 33 commercial banks from 1990 to 2010. Employing an Ordinary Least Square estimation technique, he disclosed that credit risk in Ghana is significantly influenced by management efficiency, government borrowing and financial sector development with government borrowing and financial sector development having a negative relationship with credit risk while management efficiency is positively related to credit risk

There are however further articles that could be of interest in this study but they do not bring relevance and new findings or insights. There are articles that to a large extent, replicate the reviewed articles to specific countries (Amran, Bin & Hassan, 2009), specific sectors (Linsley & Shrives, 2005), or a comparison of risk disclosure in different countries (Dobler, Lajili & Zegal, 2011).

A review of literature highlights that there is little study documented on risk management disclosure on profitability within the financial institutions. Also a few of the studies reviewed looked at the quality of disclosure, most literature look at the extent or level of disclosure and not quality. Furthermore, review of literature also points to some study focusing on only one type of risk (mostly credit risk). The above deficiencies lead to the value of this research, which attempts to investigate the extent and quality of risk disclosure by focusing on all the types of risks as identified by the international bodies, and the effect on bank profitability.

Conclusion

The purpose of this chapter was to present in detail the theories underpinning this research and empirical review of related research. There are

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several theories explaining disclosure practices, this study however employs the agency theory, stakeholder theory, signalling theory and institutional theory in explaining risk disclosure practices on the profitability of the listed banks on the GSE. A review of literature also points out some gaps in existing disclosure studies such as focusing on only extent of risk management disclosure and also on a particular type of risk of which this study seeks to overcome by looking at the quality of risk management disclosure, all types of risk as identified by regulatory standards and their effect on profitability. The study also provides an overview of the Ghana Stock Exchange and discussion on risk management and risk management disclosure from varying perspectives. It also provides an overview of the international financial and accounting regulations relevant to this study.

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CHAPTER THREE

RESEARCH METHODS

Introduction

This chapter presents the methodological framework within which the study is situated. It discusses the research design, the data type and source, the methods and tools of analysis employed, empirical specification of the model, the description of variables employed in the model and the estimation procedure used.

Research Design

Given the nature of the objectives, this study adopts the explanatory research under the quantitative research design in addressing the hypotheses of the study. The quantitative approach nullifies the qualitative judgement through the use of a quantitative model (panel statistical model) in analysing data. The appropriateness of this approach also lies in the fact that the dependent and independent variables are all continuous in nature.

This study is also situated in the positivist tradition. The positivist tradition assumes that the objective knowledge systematically pursued by researchers is based on relational laws (Acquah, Zoogah & Kwesiga, 2013). Also, the positivist philosophy assumes that knowledge is externally objective and researchers take strictly neutral and detached positions towards the phenomenon being investigated. Such a stance ensures that the values and biases of the researcher do not affect the study and thus, threaten its validity (Eberhardt & Teal, 2011). Statistical tests such

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as the Hausman test was employed to minimize the possible threat to validity, if not eliminated completely.

Reliability in the positivist philosophy encompasses the extent to which the result from a study can be repeated and replicated in comparable settings. Once the assumptions of the positivist research are met, positivist research can exhibit a high likelihood of reliability, enabling confident replication or repetition in similar settings.

Data Type and Source

The study employed a secondary data sourced from the audited annual reports of seven listed banks on the Ghana stock Exchange, and World Development Indicators from 2012 to 2016. These banks include; Access Bank Ghana, Agricultural Development Bank, CAL Bank, EcoBank Ghana, GCB Bank, Home Financing Company (HFC) Bank, and Standard Chartered Bank. This study's focus on annual reports is as a result of them being the main source of information for shareholders, showing their value to user groups (Barakat & Hussainey, 2013; Elshandidy et al., 2013; Elshandidy & Neri, 2015). This is in accordance with Marston and Shrives (1991), who portrayed them as the "main disclosure vehicle" and further argued that annual reports are the most complete financial statements accessible to investors. Furthermore, Beattie et al. (2002) asserted that annual reports provide comprehensive narratives, information as well as explaining accounting figures, sketches and presents perspectives.

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Model Specification

To examine the effects of the determinants on the extent and quality of risk management disclosure, this study adopts the model of Nahar (2015). The model is expressed as in equation 1.1.

$$Y_{it} = a + \sum \beta_k X_{it} + \varepsilon_{it} \quad (1.1)$$

Where, Y_{it} consists of the dependent variables namely; Extent of risk management disclosure and the Quality of risk management disclosure, β_k contains the parameters to be estimated, X_{it} represents the independent variables used in the study. ε_{it} follows a one-way error component model which is specified in equation 1.2.

$$\varepsilon_{it} = \alpha_i + v_{it} \quad (1.2)$$

Where α_i is time invariant and accounts for any unobserved individual specific effect that is not included in the regression model. The v_{it} is the remaining error term and it varies within the individual banks and time.

Based on review of empirical literature (Abdallah et al., 2015; Agyei-Mensah, 2017; Beretta & Bozzolan, 2004; Elzahar & Hussainey, 2012; Hernandez-Madrigal, Blanco-Dopico & Aibar- Guzman, 2012; Linsley & Shrives, 2006; Nahar, 2015) and also theoretical literature found to be relevant to risk disclosure, variables of corporate governance and bank-specific were added to modify the specified model above (1.1). Corporate governance characteristics comprised three variables; board size, independent directors and audit committee independence. Bank-specific characteristics also included four variables; bank size, liquidity, leverage and ownership. The model also controlled for variables such as audit

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committee size, risk management committee independence and audit committee meetings based on prior literature (Agyei-Mensah, 2017; Allini et al., 2016; Elshandidy et al., 2013; Elshandidy & Neri, 2015; Khlif & Hussainey, 2014; Ntim et al., 2013).

The regression models for this study incorporating the determinants into equation 1.1 are;

$$ERMDI_{it} = B_0 + B_1 BS_{it} + B_2 ID_{it} + B_3 ACI_{it} + B_4 lnSIZE_{it} + B_5 LIQ_{it} + B_6 LEV_{it} + B_7 OWN_{it} + B_8 ACS_{it} + B_9 RCI_{it} + B_{10} ACM_{it} + \varepsilon_{it} \quad (1.3)$$

$$QRMDI_{it} = B_0 + B_1 BS_{it} + B_2 ID_{it} + B_3 ACI_{it} + B_4 lnSIZE_{it} + B_5 LIQ_{it} + B_6 LEV_{it} + B_7 OWN_{it} + B_8 ACS_{it} + B_9 RCI_{it} + B_{10} ACM_{it} + \varepsilon_{it} \quad (1.4)$$

Also, to determine the effect of the extent of risk management disclosure on profitability of banks, this study still adopted the model of Nahar (2015) and controlled for variables of macroeconomic and bank-specific traits based on prior literature (Al-Maghzom, 2016; Muzahem, 2011; Nahar, 2015). Bank-specific characteristics include; bank size, liquidity, leverage and ownership while macroeconomic variables include; growth of GDP and inflation rate.

The regression model based on equation 1.1 with the inclusion of some bank-specific and macroeconomic variables is formulated as;

$$PROF_{it} = B_0 + B_1 ERMDI_{it} + B_2 lnSIZE_{it} + B_3 LIQ_{it} + B_4 LEV_{it} + B_5 OWN_{it} + B_6 GDPG_t + B_7 INF_t + \varepsilon_{it} \quad (1.5)$$

Where;

i = bank

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t = year

$ERMDI$ = extent of risk management disclosure.

$ERMDI$ = quality of risk management disclosure.

BS = Board Size

ID = Independent Directors

ACI = Audit Committee Independence

$LnSIZE$ = Bank size

OWN = Bank Ownership

LIQ = Liquidity

LEV = Leverage

ACS = Audit Committee Size

$PROF$ = Profitability

RCI = Risk Management Committee Independence

ACM = Audit Committee Meetings

$GDPG$ = Gross Domestic Product (GDP) Growth

INF = Inflation rate

Measurement and expected signs of variables.

Dependent variables

Extent of risk management disclosure

This measures the level of disclosure by the listed banks. It was measured by comparing the annual reports of these banks to a checklist and summing up the disclosed items of the checklist in the annual reports and dividing by the total items

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in the checklist as used by Al-Maghzom (2016), Agyei-Mensah (2017), Elzahar and Hussainey (2012), Hassan (2014) and Mokhtar and Mellet (2013).

Quality of risk management disclosure

This is a measure of the quality of risk and risk management information provided in the annual reports of these listed banks. It was also measured by comparing the annual reports of these banks to a checklist and summing up the disclosed items of the checklist in the annual reports and dividing by the total items in the checklist as used by researchers such as Agyei-Mensah (2017), Hossain (2008) and Lipunga (2014).

Profitability

This is a measure of the financial performance of a bank. Most studies conducted on bank profitability (Flamini et al., 2009; Khrawish, 2011; Qin & Dickson, 2012) have used ROA, ROE, and Net Interest Margin (NIM) as the possible profitability measures of banks. In this study, ROA is used as a measure of bank profitability following studies by Aebi, Sabato and Schmid (2012), Agyei-Mensah (2017), Hwang et al. (2009) and Nahar (2015). ROA refers to the ratio of net income or profit after tax divided by total assets.

$$\text{Profitability (ROA)} = \frac{income/profit\ after\ tax}{total\ assets} \qquad (1.6)$$

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Corporate governance characteristics

Board size

Board size is defined as the number of both executive and non-executive directors on the board. This variable was measured by simply adding up the number of people on the board of directors in the annual reports of the listed banks. Studies such as Abeysekera (2010), Agyei-Mensah (2017), Chen and Jaggi (2000), Healy and Palepu (2001) and Nahar (2015) found a positive relationship between board size and disclosure. This study also expects a positive relationship between board size and the extent of risk management disclosure.

Independent directors

Independent Directors is defined as number of non-executive directors on the board. A non-executive board member is defined as "a member who is not dedicated on a full-time basis to the management of a company or does not receive a monthly or annual salary from a company and is not a member of the executive management of a company. Empirical findings on the relationship between independent directors and risk disclosure however vary. Abraham and Cox (2007), Elshandidy et al. (2013) and Jizi et al. (2014) identified a positive relationship between independent directors and risk disclosure, whereas Lopes and Rodrigues (2007) found no significant relationship between independent directors and risk disclosure. This study however expects a positive relationship between independent directors and disclosure.

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Control variables

Audit committee independence

Audit committee independence refers to the number of independent directors on the audit committee board. This variable was also measured as the number of non-executive directors on the committee. Several researchers have employed audit committee independence variable in their study found a positive relationship between the variable and risk management disclosure (Forker, 1992; Ho and Wong, 2001; Taylor & Zhang, 2011). This study also expects a positive relationship between these variables.

Audit committee size

Audit committee size describes number of people making up the audit committee based on the annual reports of the banks. Prior empirical research has indicated a positive relationship between disclosure and audit committee size (Barako et al., 2006; Chen & Jaggi, 2000; Ho & Wong, 2001). Therefore, this study hypothesises a positive relationship between the size of the audit committee and the extent of risk disclosure.

Risk management committee independence

Risk management committee independence is seen as the number of non-executive directors on the committee. This is measured by simply counting the number of non-executive directors on the committee. Agyei-Mensah (2017), Al-Maghzom (2016) and Chen and Jaggi (2000) explained that an apt independence of

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the risk management committee enhances disclosure. This study also expects a positive relationship between these variables.

Audit Committee meetings

Audit committee meetings describe the number of meetings held by the audit committee in a year. Previous literature has offered practical evidence of a positive association between the regularity of audit committee meetings and disclosure (Allegrini & Greco, 2013; Barako et al., 2006; Karamanou & Vafeas, 2005). This study therefore expects a positive relationship between audit committee meetings and disclosure.

Bank-specific characteristics

Bank size

Bank size refers to the total asset of the bank. How big or small a bank is measured by their total asset. According to Naceur and Goaied (2008), the ability of banks to benefit from economies of scale depends on its size. Bank size according to Elzahar and Hussainey (2012) and Mokhtar and Mellet (2013) is measured as the natural logarithm of total asset.

$$\text{Bank size} = ln\ (\text{total assets}) \qquad (1.7)$$

Empirical evidence on disclosure research indicates that the size of a company on risk reporting is diverse. Researchers such as Abraham and Cox (2007), Barakat and Hussainey (2013), Elshandidy et al. (2013) and Linsley and Shrives (2006), found a positive relationship between risk disclosure and bank size

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while Lajili and Zeghal (2005) found a negative relationship between these two variables. This study expects a positive relationship between bank size and disclosure, and also between bank size and profitability.

Ownership

This is a dummy variable representing the ownership structure of the bank. A value of 1 is assigned if the bank is a foreign owned bank and 0 if it is domestically owned. This study expects positive relationship between ownership and the extent of disclosure, and also between ownership and bank profitability.

Liquidity

It indicates the bank's ability to pay its current liabilities. Banks are mandated to maintain a certain level of liquid assets in running their activities, and insufficient liquidity may lead to banks failure (Rasiah, 2010). It is measured as;

$$\text{Liquidity} = \frac{current\ assets}{current\ liabilities} \tag{1.8}$$

There have been mixed findings on the relationship between risk management disclosure and liquidity. Wallace et al. (1994) found a positive relationship whereas Muzahem (2011) and Nahar (2015) found a negative relationship between these variables. This study however expects a positive relationship between liquidity and the extent of risk management disclosure, and also between liquidity and profitability.

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Leverage

The leverage variable is used as a proxy for signalling arguments to explain disclosure practices within banks. It shows the capital structure of the bank, that is, the ratio of non-current liabilities to shareholders equity of the bank.

$$\text{Leverage} = \frac{non-current\ liabilities}{shareholders\ equity} \quad (1.9)$$

Empirical studies on the relationship between leverage level and risk disclosure indicates either a positive relationship (Deumes & Knechel, 2008; Elshandidy et al., 2013; Hassan, 2009) or a negative relationship (Miihkinen, 2012; Ntim et al., 2013). This study therefore expects a positive relationship between leverage levels and risk disclosure. The study also expects a positive relationship between leverage and profitability.

Macroeconomic characteristics

GDP growth

Gross Domestic Product (GDP) measures the economic activities of a country. It is defined as the rate at which a nation's GDP changes or grows from one year to another. Obamuyi (2013) stated that GDP defines the favourable and unfavourable economic conditions of a country which have an impact on banks deposits and loans. This study used the annual GDP growth as a proxy for GDP. Empirical studies on relationship between risk disclosure and bank profitability also indicates either a positive relationship (Al-Maghzom, 2016; Meijer, 2011) or a negative relationship (Nahar, 2015; Salkeld, 2011). It is measured as;

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$$\text{GDP growth} = \frac{GDP_{current} - GDP_{previous}}{GDP_{previous}} \times 100\%$$

Gross Domestic Product (GDP) growth is expected to have a positive relationship with profitability.

Inflation rate

This is the rate at which price increases over time, resulting in a fall in the purchasing value of money. It was measured as the annual consumer price index over time. Inflation rate in a country contributes to the variations of bank's profitability (Revell, 1979). According to Rasiah (2010), central banks on their effort to control inflation, tend to increase the lending rate which impacts on bank profitability. Inflation and profitability may relate positively or negatively (Perry, 1992).

Data Analysis and Estimation Technique

The nature of data used in this study, that is, sampling seven banks across five years enables us to use panel data model. Panel data involves the pooling of observations on the cross-sectional over several time periods. According to Brook (2008), the advantages of using panel data set include: first and perhaps most importantly, it can address a broader range of issues and tackle more complex problems than would be possible with pure time-series or pure cross-sectional data alone. Secondly, it helps one in increasing the degrees of freedom, and thus the power of the test and also helps mitigate the problems of multicollinearity that may arise if time series were modelled alone.

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Based on this study, unit root tests were first carried out on the dataset to determine whether each of the variables is stationary. Fixed effect and random effect estimators were carried out on the assumption underlying the unobserved effect (α_i). To be able to choose whether to use fixed or random effect estimator, the Hausman test was carried out.

Panel unit root test.

There was a need to be concerned about the stationarity or non-stationarity of the variables since there is a time series component in panel data. This will help in knowing if all the variables are integrated at the same level or not. A panel model contains two subscripts (i & t) which differentiates it from either strictly cross-sectional (i) of strictly time series (t) models. Thus, a panel data can be seen as a time series of individual cross-sections and hence has the attributes of both time series and cross-sectional data. According to Greene (2003), panel data has some superiority over pure cross-sectional or time series data especially its ability to handle individual heterogeneity.

A number of researchers (Breitung & Das, 2005; Choi, 2001; Harris-Tzavalis, 1999; Hadri, 2000; Levin, Lin, & Chu, 2002) employed various unit root tests but Im, Pesaran, and Shin (2003) used a Fisher-type panel-based unit root tests. These researchers however showed that panel unit root tests are more powerful than unit root tests applied to individual series. This makes it less likely to commit Type II error because the information in the time series is enhanced by that contained in the cross-section data.

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This study however adopted the panel unit root test by Harris-Tzavalis (HT) because it is best suited for a strongly balanced micro panel unlike the other tests of stationarity which are best used for macro panels. The Harris-Tzavalis (1999) assumes that all panels have the same autoregressive parameter so that the alternative hypothesis is simply rho < 1. Differing from the other tests, the HT test assumes that the number of time periods, T, is fixed. Baltagi (2008) mentions that T being fixed is a typical case of a micro-panel studies. Here you may have a panel dataset of firms, and it may be more natural to think that if you could increase the sample size of your dataset, you would do so by collecting data on more firms, though the number of time periods available for each firm is fixed.

Fixed versus random effect models

The use of a panel data model examines fixed and/or random effects of individual or time. The main difference between the fixed effect and the random effect models lies in the role of dummy variables. A parameter estimate of a dummy variable is part of the intercept in a fixed effect model and part of an error component in a random effect model. Slopes remain same across group or across time in both models. The functional forms of one-way fixed effect and random effect models are presented as equations 2.0 and 2.1 respectively.

Fixed effect model

$$Y_{it} = (\beta_0 + \alpha_i) + X'_{it}\beta + v_{it} \quad (2.0)$$

Random effect model

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$$Y_{it} = \beta_0 + X'_{it}\beta + (\alpha_i + v_{it}) \quad (2.1)$$

Where, β_0 is the constant term α_i, a fixed or random effect specific to individual or the time period that is not included in the regression, and the errors are independent and identically distributed with zero mean and constant variance, $v_{it} \sim IID(0, \delta^2_v)$.

A fixed effect model examines individual differences in the intercepts, assuming the same slope and constant variance across individual (group and entity). Since an individual specific effect is time invariant and considered part of the intercept, it is allowed to be correlated with other regressors. The fixed effect model is estimated by Least Square Dummy Variable (LSDV) regression, that is, OLS with a set of dummy variables, and within effect estimation methods.

The random effect model assumes that the individual effect is not correlated with any regressors and also not correlated with the estimate error variance specific to groups (or times). Hence, α_i is an individual specific random heterogeneity or component of the composite error term. A random effect model is estimated by the Generalised Least Squares (GLS) when a covariance structure of the individual is known. The Feasible Generalised Least Squares (FGLS) method is used to estimate the entire variance-covariance matrix when sigma is known. There are various estimation methods for FGLS including the maximum likelihood method and simulation (Baltagi & Chang, 1994).

A random effect model reduces the number of parameters to be estimated but will produce inconsistent estimates when individual specific random effect is correlated with regressors (Greene & Hensher, 2008). Fixed effects are tested by

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the F test, while random effects on the other hand are examined by the Lagrange Multiplier (LM) test (Breusch & Pagan, 1980). If the null hypothesis is not rejected in either test, the pooled OLS regression is considered. The Hausman specification test (Hausman, 1978) compares a random effect model to the fixed effect model. If the null hypothesis of no correlation between the individual effects and the other regressors are not rejected, the random effect model is favoured over the fixed effect model. If one cross-sectional or time series variable is considered, it is called a one-way fixed or random effect model. Two-way fixed or random effect model has two sets of dummy variables for individual and/or time variables and as such entails some issues in estimation and interpretation.

Estimating fixed effect model

There are different approaches in estimating the fixed effect model. The Least Square Dummy Variable (LSDV) uses dummy variables whereas the "within" estimation does not. These strategies however produce the identical parameter estimates of regressors. The "between" estimation fits a model using individual or time means of dependent and independent variables without dummies.

The LSDV with a dummy dropped out of a set of dummies is widely used because it is relatively easier to estimate and interpret. However, this LSDV becomes problematic when there are many individuals (or groups) in panel data. If T is fixed and $n \to \infty$ (n is the number of observations and T is the number of time periods), parameter estimates of regressors are consistent but the coefficients of individual effects, $\beta_0 + \alpha_i$, are not (Baltagi, 2008).

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Unlike LSDV, the "within" estimation does not need dummy variables, but it uses deviations from group (or time period) means. That is, "within" estimation uses variation within each individual or entity instead of a large number of dummies. The "within" estimation as given in equation 2.2 is,

$$(y_{it} - \bar{y}_i) = (x_{it} - \bar{x}_i)'\beta + (\varepsilon_{it} - \bar{\varepsilon}_i) \quad (2.2)$$

Where $\bar{y}_i$ is the mean of the dependent variable (DV) of individual (group), $\bar{x}_i$ represent the means of the independent variables (IVs) and $\bar{\varepsilon}_i$ is the mean of errors of the group.

In the "within" estimation, the incidental parameter problem is no longer an issue. The parameter estimates of regressors in the "within" estimation is identical to those of LSDV. The "within" estimation reports correct sum of squared errors (SSE). The "within" estimation however, has several disadvantages.

First, data transformation for the "within" estimation wipes out all time-invariant variables (gender, ethnic group & race) that do not vary within the entity (Kennedy, 2008). Also, the "within" estimation produces incorrect statistics. Finally, the R^2 of the "within" estimation is not correct because the intercept term is suppressed.

The "between groups" estimation uses variations between individual entities (groups). Specifically, this estimation calculates group means of the dependent variable and the independent variables and thus reduces the number of observations. The between estimation therefore is stated in equation 2.3 as;

$$\bar{y}_i = \alpha_i + \bar{x}_i + \bar{\varepsilon}_i \quad (2.3)$$

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Where, $\bar{y}_i$ is the mean of the dependent variable, $\bar{x}_i$ represent the means of independent variables and $\bar{\varepsilon}_i$ is the mean of errors of the group.

Therefore, the empirical fixed effects models based on the expression in equation 2.0 are expressed as;

$$ERMDI_{it} = (B_0 + \alpha_i) + B_1 BS_{it} + B_2 ID_{it} + B_3 ACI_{it} + B_4 lnSIZE_{it} + B_5 LIQ_{it} + B_6 LEV_{it} + B_7 OWN_{it} + B_8 ACS_{it} + B_9 RCI_{it} + B_{10} ACM_{it} + v_{it} \quad (2.4)$$

$$QRMDI_{it} = (B_0 + \alpha_i) + B_1 BS_{it} + B_2 ID_{it} + B_3 ACI_{it} + B_4 lnSIZE_{it} + B_5 LIQ_{it} + B_6 LEV_{it} + B_7 OWN_{it} + B_8 ACS_{it} + B_9 RCI_{it} + B_{10} ACM_{it} + v_{it} \quad (2.5)$$

$$PROF_{it} = (B_0 + \alpha_i) + B_1 ERMDI_{it} + B_2 lnSIZE_{it} + B_3 LIQ_{it} + B_4 LEV_{it} + B_5 OWN_{it} + B_6 GDPG_t + B_7 INF_t + v_{it} \quad (2.6)$$

Estimating random effect model

In the composite error term of a one-way random effect model, α_i is assumed independent of the traditional error term v_{it} and the regressors. This assumption is not necessary in a fixed effect model. The model therefore is;

$$y_{it} = \beta_0 + X'_{it}\beta + (\alpha_i + v_{it})$$

Where $\alpha_i \sim IID(0, {\sigma^2}_\alpha)$ and $v_{it} \sim IID(0, {\sigma^2}_v)$.

The covariance elements of $Cov\,(\varepsilon_{it}, \varepsilon_{js}) = E\,(\varepsilon_{it}\varepsilon'_{js})$ are ${\sigma_\alpha}^2 + {\sigma_v}^2$ if $i = j$ and $t = s$, and ${\sigma_\alpha}^2$ if $i = j$ and $t \neq s$. Therefore, the covariance structure of

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the composite errors is $\Sigma = E\ (\varepsilon_i \varepsilon'_i)$ for individual i and the variance-covariance matrix of the entire disturbances or errors (V) are:

$$\Sigma = \begin{bmatrix} \sigma_\alpha{}^2 + \sigma_v{}^2 & \sigma_\alpha{}^2 & \dots & \sigma_\alpha{}^2 \\ \sigma_\alpha{}^2 & \sigma_\alpha{}^2 + \sigma_v{}^2 & \dots & \sigma_\alpha{}^2 \\ \vdots & \vdots & \vdots & \vdots \\ \sigma_\alpha{}^2 & \sigma_\alpha{}^2 & \dots & \sigma_\alpha{}^2 + \sigma_v{}^2 \end{bmatrix}$$

$$\text{and } V = I_n \otimes \Sigma = \begin{bmatrix} \Sigma & 0 & \dots & 0 \\ 0 & \Sigma & \dots & 0 \\ \vdots & \vdots & \vdots & \vdots \\ 0 & 0 & \dots & \Sigma \end{bmatrix} \qquad (2.7)$$

A random effect model is estimated by the GLS when the covariance structure is known, and by FGLS when the covariance structure of the composite error is unknown.

The empirical random effect models based on the expression in equation 2.1 are expressed as;

$$ERMDI_{it} = B_0 + B_1 BS_{it} + B_2 ID_{it} + B_3 ACI_{it} + B_4 lnSIZE_{it} + B_5 LIQ_{it} + B_6 LEV_{it} + B_7 OWN_{it} + B_8 ACS_{it} + B_9 RCI_{it} + B_{10} ACM_{it} + (\alpha_i + v_{it}) \qquad (2.8)$$

$$QRMDI_{it} = B_0 + B_1 BS_{it} + B_2 ID_{it} + B_3 ACI_{it} + B_4 lnSIZE_{it} + B_5 LIQ_{it} + B_6 LEV_{it} + B_7 OWN_{it} + B_8 ACS_{it} + B_9 RCI_{it} + B_{10} ACM_{it} + (\alpha_i + v_{it}) \qquad (2.9)$$

$$PROF_{it} = B_0 + B_1 ERMDI_{it} + B_2 lnSIZE_{it} + B_3 LIQ_{it} + B_4 LEV_{it} + B_5 OWN_{it} + B_6 GDPG_t + B_7 INF_t + (\alpha_i + v_{it}) \qquad (3.0)$$

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Post estimation techniques

In ensuring that the estimates from the regressions are robust and consistent, the Hausman post estimation test was conducted;

Hausman specification test

$$LM = \left(b_{fixed} - b_{random}\right)' \widehat{W}^{-1}\left(b_{fixed} - b_{random}\right) \sim x^2\,(k) \quad (3.1)$$

$$= Var\left[b_{fixed} - b_{random}\right] = Var\left(b_{fixed}\right) - Var\left(b_{random}\right) \quad (3.2)$$

Where, $\widehat{W}$ is the difference in the estimated covariance matrices of the fixed and random effect estimates. This test statistic follows a chi-square distribution with k degrees of freedom.

The Hausman test formula examines if "the random effect estimate is significantly different from the unbiased fixed effect estimate" (Kennedy, 2008). If the null hypothesis of no correlation is rejected, we conclude that individual effects (α_i) are significantly correlated with at least one of the regressors in the model and as such the random effect model is problematic. Therefore, the fixed effect model is preferred. A drawback of the Hausman test however is that, the $\widehat{W}$ may not be positive definite.

Content Analysis

To determine the extent and quality of risk management disclosure of the listed banks, this study uses a content analysis approach; a technique that is used by observing and analysing documents such as annual reports to create a Risk Management Disclosure Index checklist as used by researchers such as (Abraham

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& Cox, 2007; Beretta & Bozzolan, 2004; Kamla, 2007; Linsley & Shrives, 2006; Parker, 2005). Krippendorf (2004) defines content analysis as a research technique for making replicable and valid inferences from texts on the basis of the contexts of their use. Krippendorf (2004) further states that as a research technique, content analysis provides new insights, increases researcher's understanding of a particular phenomenon and also informs practical actions of the phenomenon under study.

The use of disclosure index aids in making comparisons between different companies, and also captures differences in the magnitude of the financial reporting of firms (Muzahem, 2011).

Construction of risk management disclosure index

Risk management disclosure used in this study is constructed based on a detailed and precise study of the International Financial Reporting Standards (IFRS) 7: Financial Instruments, the Basel recommendation of Pillar 3: Market Discipline and the risk disclosure literature. This risk management disclosure index is applied to annual reports of the listed banks published over a 5-year period from 2012-2016.

Studies such as (Abraham & Cox, 2007; Hassan, 2009; Lajili, 2009; Linsley & Shrives, 2006; Nahar, 2015; Nier & Baumann, 2006; Uddin & Hassan, 2011; Wong, 2012) have used risk disclosure index for their content analysis. The disclosure index study in this research was performed to measure the quantity (extent) and quality of risk management disclosure. Studies on disclosure index uses either a nominal or ordinal coding scheme (Beattie, McInnes & Fearnley,

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2004). The nominal coding scheme checks if an item is present or absent and gives a dummy of 1 if present, and 0 if absent. The ordinal coding scheme captures the degree of specificity of an item and most at times uses three levels. For this study, the disclosure index is based on a nominal coding scheme for both extent and quality of risk management disclosure.

The disclosure index used in this study was developed based on an extensive review of previous literature (Abraham & Cox, 2007; Beretta & Bozzolan, 2004; Hassan, 2009; Lajili, 2009; Linsley & Shrives, 2006; Lipunga, 2014; Nahar, 2015; Uddin & Hassan, 2011; Wong, 2012) which provided common items across the studies and identified these items as benchmark for the risk management disclosure index. These items were further categorised under the regulatory requirements (IFRS 7 and Basel II: Market Discipline).

Measure of risk management disclosure quantity (extent)

To measure the extent of risk management disclosure, a disclosure index checklist created by Lipunga (2014) [Appendix B] was used. This checklist consists of 34 disclosure items under six key categories. These categories include; i) Board and management structure related to risk management; ii) Credit risk; iii) Market risk; iv) Liquidity risk; v) Operational and other types of risks; and vi) Capital Management. The risk management disclosure quantity index consists of both quantitative and qualitative information. Each information is allocated with an equal score; with '1' being information present and '0' being absence of that particular information. The points are then added to get an absolute score for each

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bank for each year. The maximum score for each bank can differ according to its disclosures in the annual reports. The formula for risk disclosure quantity index is;

$$\text{Risk Management Disclosure Index} = \frac{\text{Actual disclosure}}{\text{Total possible disclosure}}$$

$$= \frac{\sum_1^n d_i}{\sum_1^m d_i} \quad (3.3)$$

Where:

d_i = 1 if the item *di* is disclosed (0 if not disclosed)

n = number of items disclosed;

m = maximum number of disclosure items possible

The outcome is a score between 0 and 1. A score of 0.5 and above means the bank is disclosing more information about risk and a score between 0 and 0.5 means the bank is disclosing less risk information.

Measure of risk management disclosure quality

To measure the quality of disclosure in the annual reports of the listed banks, the measurement tool developed by Hassan (2014) [Appendix A] consisting of 22 items categorised under four key qualitative characteristics was used. This tool gives an overview of the measures used in preparing the qualitative characteristics as defined by IASB (2010). This tool was chosen because it has been

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tested for reliability and validity by Hassan (2014). The qualitative characteristics are; i) understandability; ii) relevance; iii) reliability; and iv) comparability

Understandability; This means the information in the annual reports should be prepared in such a way that it would be understandable for its users. According to the International Accounting Standards Board (2010) framework, understandability should be for 'users who have a reasonable knowledge of business, economic activities and accounting and are willing to study the information diligently' (IASB, 2010).

Relevance; This also means that the information presented in the annual reports can be considered as relevant when it influences the economic decisions made by users of annual reports. According to the IASB (2010), relevance has a relationship with material interest and timeliness. Information should be presented in the annual report of companies within the time period in which it is useful for the decisions made by its users (IASB, 2010).

Reliability; Information disclosed in the annual reports of the companies is reliable if 'it is free from material error and bias and can be depended upon by users to represent events and transactions faithfully' (IASB, 2010).

Comparability; There is the presence of comparability when users are able to compare the annual reports of a company with other years (IASB, 2010). IASB (2010) framework stated that users should be able to compare annual reports of different companies to evaluate the relative financial position and performance.

The measurement tool used for risk disclosure quality is included in the appendix of this study. The annual reports for the listed banks for the sampled years

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were checked for the presence of each of the 22 quality items defined by the tool. This index also uses a nominal coding scheme. If the item is absent, a score of '0' is given. If it is present, a score of '1' is given according to the guidelines of the quality checklist. For each of the item, a score of 0 or 1 can be obtained. This makes it possible to compare the quality of disclosure between companies and years.

The quality of disclosure was measured by calculating a disclosure score for each company for each year. The formula for the quality as used by Tsalavoutas, Evans and Smith (2009) is given as;

$$C_{it} = \frac{T}{M} = \frac{\sum_{i=1}^{n} d_i}{\sum_{i=1}^{m} d_i} \quad (3.4)$$

Where;

C_{it} = total compliance score for bank i in year t, with $0 \leq C_{it} \leq 1$.

T = total number of points scored (d_i) by bank i in annual report t.

M = maximum number of points that can be scored by bank i in annual report t.

This formula is unweighted because each item is weighted equally. After calculating all the scores for each bank in each of the five years, the scores can be compared with each other and across years.

Conclusion

The objective of this chapter was to explain in detail the methodology used to analyse the data required for this study. The research design was first described where the positivist approach to research was adopted. This was followed by the

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data type and source. Empirical models encompassing all the variables (dependent, independent and control) were specified. Fixed and random effect estimation techniques were employed and a post estimation test of Hausman specification was stated to help in choosing the appropriate estimation technique between random and fixed effects. Also, a detailed description of the content analysis approach; a technique that helped in creating the risk management disclosures was made, although the subjectivity nature intrinsic in the content analysis approach serves as a limitation which cannot be completely removed, it is however minimised by employing validity and reliability measures which were already catered for by Lipunga (2014) and Hassan (2014).

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CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter analyses and presents the findings of this study. It first presents the descriptive statistics of this study, the stationarity of the variables used, and then tests of the objectives of this study are presented in the form of tables, figures, and regression analysis.

Descriptive Statistics

This section presents descriptive statistics of all the variables (dependent and independent) used in this study to help in describing the distribution of the data used. Descriptive statistics present quantitative descriptions of the data used in the study. It provides simple summaries about the sample and the measures. It reports the mean, standard deviation, minimum and maximum values of the variables as presented in Table 1.

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Table 1- *Descriptive Statistics*

Variable	Mean	SD	Min	Max	Obs
ERMDI	0.69	0.07	0.59	0.85	35
QRMDI	0.56	0.06	0.46	0.68	35
BS	9.54	1.87	7.00	14.00	35
ID	6.00	2.26	3.00	12.00	35
ACI	3.54	0.89	2.00	5.00	35
LnSIZE	21.70	0.62	20.19	22.81	35
OWN	0.57	0.50	0	1	35
LIQ	1.17	0.09	1.05	1.44	35
LEV	0.36	0.24	0.04	0.94	35
ACS	4.09	0.95	3.00	6.00	35
RCI	3.74	1.22	2.00	6.00	35
PROF	0.03	0.03	(0.04)	0.07	35
ACM	4.37	2.70	3.00	13.00	35
GDPG	5.62	2.32	3.58	9.29	35
INF	14.18	3.31	9.16	17.47	35

Source: Author's construct, 2018

Extent of risk management disclosure (ERMDI) measured by a disclosure index has a mean of 0.69. This means that, on the average, the sampled listed banks on the GSE disclosed only 69 percent information concerning risk and risk management in their annual report for the study period and it had a standard deviation of 0.07 which signifies that the extent of risk management disclosure by the listed banks deviates only 7 percent from the average. Quality of risk management disclosure (QRMDI) registered a mean score of 0.56. Thus, the average of the quality of disclosure by these banks for the study period is 56 percent.

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A standard deviation of 0.06 indicates a 6 percent dispersion of QRMDI from the mean. The implication is that the sampled banks are not fully complying with IASB's qualitative characteristics of financial statements or annual reports. Board size (BS) which is measured as the number of directors on the board recorded a mean score of 9.54 and has a 1.87 dispersion from the mean. The highest board size recorded was 14 and the lowest, 7. The mean score of independent directors (ID), measured as the number of non-executive directors on the board is 6. This implies that a board on the average contains 6 non-executive directors. There is however a 2.26 variation in this variable from the mean with a highest of 12 non-executive directors on a board and a lowest of 3 was recorded.

Audit committee independence (ACI) also measured as the number of non-executive directors on the audit committee had a mean score of 3.45, implying that on the average an audit committee had about 3 non-executive directors as members. With a standard deviation of 0.89, indicating an 89 percent variation from the mean, a maximum independent audit committee recorded was 5 and the minimum was 2. Bank size proxied as LnSIZE measured as natural logarithm of the bank's total asset registered an average score of 21.70 and a standard deviation of 0.62. A minimum score of 20.19 and a maximum score of 22.81 were recorded. Ownership (OWN) having a value of 1 if the bank is foreign owned and 0 if it is locally owned recorded an average score of 0.57 and it deviated 50 percent from the mean. Liquidity (LIQ) measured as a ratio of a bank's non-current assets to non-current liabilities indicating the ability of the bank to have cash on hand for short-term expenses, had an average score of 1.17 and a deviation from the mean of 9 percent.

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Leverage (LEV) also known as the capital structure of the bank, measured as the ratio of non-current liabilities to shareholders' equity recorded a mean score of 0.36. This implies that the banks over the sampled period were more equity financed than debt. It further recorded a standard deviation of 24 percent, a maximum score of 0.94 and a minimum of 0.04. The mean score of audit committee size (ACS) measured as the number of people on the audit committee is 4.09 with the highest audit committee size of 6 members and the lowest of 3 members. It also recorded a 95 percent deviation from the mean.

Profitability (PROF) proxied as return on asset (ROA), measured as profit/income after tax as a percentage of total assets also documented an average score of 3 percent and also a standard deviation of 3 percent. A 7 percent profit was recorded as the highest and a loss of 4 percent was recorded as the lowest. On the average, risk management committee independence (RCI) measured as the number of non-executive directors on the risk management committee consisted about 4 non-executive directors. The highest non-executive directors on a risk management committee was 6 and the lowest recorded score was 2. It deviated 1.22 from the mean. Audit committee meetings (ACM) measured as the number of meetings held by the committee in a year recorded approximately 4 meetings on the average. The highest number of meetings held in year was 13 and the least was 3. It also recorded a standard deviation of 2.7. GDP growth (GDPG) proxied for economic growth recorded an average of 5.62 for the five-year period and a standard deviation of 2.32. Finally, inflation rate (INF) measure annual consumer price index had an average score 14.18 and it deviated 3.31 away from the mean.

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Stationarity Test

The data used for this study is a balanced panel (the same number of time period for each observation), hence the need to conduct unit root test for all variables because of the time series components in a panel data structure in other to inform readers about the stationarity of the variables used in the study. Table 2 reports the Harris-Tzavalis panel unit root test. The Harris-Tzavalis panel unit root test was conducted for this study because it is best suited for a strongly balanced micro panel such as this study.

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Table 2- *Harris-Tzavalis panel unit root test*

Variables	Harris-Tzavalis	P-value	OI
ERMDI	-2.1276	0.0167**	I (0)
QRMDI	-3.1213	0.0009***	I (0)
BS	-2.2168	0.0133**	I (0)
ID	-2.4013	0.0082***	I (0)
ACI	-2.8859	0.0020***	I (1)
LnSIZE	-1.9248	0.0271**	I (0)
OWN	-2.7145	0.0033***	I (0)
LIQ	-3.4148	0.0003***	I (1)
LEV	-1.2987	0.0970*	I (0)
ACS	-1.2905	0.0984*	I (0)
PROF	-3.4651	0.0003***	I (1)
RCI	-3.1373	0.0009***	I (1)
ACM	-4.0461	0.0000***	I (0)
GDPG	-1.7039	0.0442**	I (1)
INF	-6.5563	0.0000***	I (1)

OI means the order of integration, *** p<0.01, ** p<0.05, * p<0.1

Source: Author's construct, 2018.

Variables such as ERMDI, QRMDI, BS, ID, LnSIZE, OWN, LEV, ACS and ACM at their levels passed the panel unit root test at different levels of significance but ACI, LIQ, PROF, RCI, GDPG and INF did not pass unit root at level but at first difference. The Harris-Tzavalis (HT) panel unit root test has its null hypothesis that all panels contain unit root as opposed to the alternative that some series in the panel are stationary. Since all variables show significant results

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(some at levels and others at first difference), the study fails to accept the null hypothesis and concludes that all series in the panel are stationary.

Extent of risk management disclosure by the sampled listed banks in Ghana

In determining the extent of risk management disclosure of listed banks in Ghana, this study used a column graph presented in Figure 1 to capture the average level or extent of disclosure over the years. This gives a pictorial view of how much risk management information were disclosed for each year. It also helps in knowing whether risk management reporting by banks has been increasing or decreasing for the period.

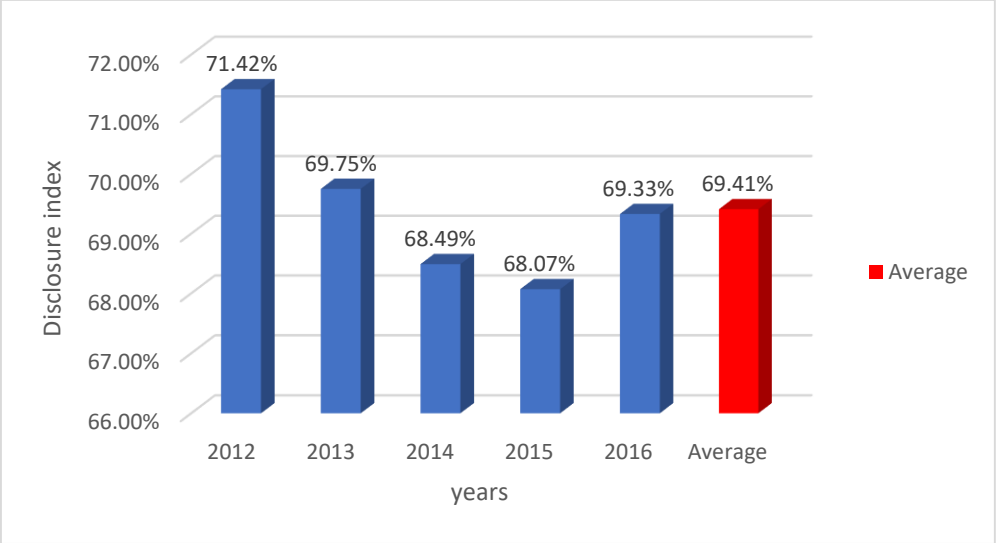

Figure 1: Average of the extent of risk management disclosure.

Source: Author's construct, 2018.

On the average, the extent of risk management disclosed by listed banks in their annual reports for the five-year period is 69.41%. This is consistent with works by (Agyei-Mensah, 2017; Hossain, 2008) who recorded an average risk disclosure of 53% and 60% respectively, that is, above the threshold of 50%. The highest

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disclosure by these banks was recorded in 2012 with a value of 71.42%. From the analysis, the extent of risk management disclosure in the annual reports of the listed banks in Ghana kept declining from 2013 to 2015 but recorded an increase in disclosure in 2016. The average risk management disclosure index score declined from 71.42% in 2012 to 69.75% in 2013, to 68.49% in 2014 to 68.07% in 2015 and an increase in disclosure to 69.33% in 2016. That is, banks complied more to the regulatory standards in 2012 and less in 2015. This declining nature of risk management disclosure is in line with the studies by (Al-Maghzom, 2016; Appiagyei, Agyenim-Boateng & Onumah, 2016).

The extent of risk management disclosure by these banks generally is encouraging. This is because the average score obtained for all the banks over the period was 69.41% which is above 50%. The results provide a clear evidence of the impact of international standards (IFRS 7 and Basel II: Market discipline) that compel banks to respond with disclosing more information about risk management. The overall average of 69.41% is an evidence of the banks' compliance to these international standards.

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In determining the extent of disclosure by each bank, this study used a pie chart to capture this distribution, that is, the proportion of disclosure by each bank over the five-year period. This will help in determining banks that are complying to the regulatory standards and those that are not.

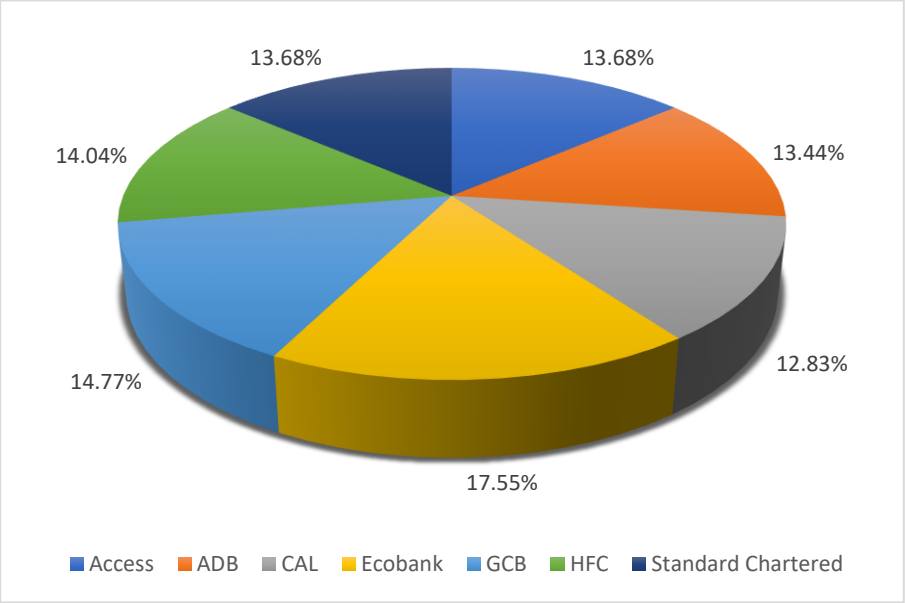

Figure 2: Distribution of the extent of risk management disclosure by banks.

Source: Author's construct, 2018.

Figure 2 shows the proportion of each bank in the extent of disclosed risk over the sampled period. The purpose of this distribution is to identify the bank that is complying more with the reporting or regulatory standards and the one that complying less. From the figure, Access bank for the entire period recorded a risk management disclosure index score of 3.323529 [Appendix C] representing 13.68% of the overall disclosure. Agricultural Development Bank (ADB) on the other hand documented an index score of 3.264706 for the period. This represented 13.44% of the overall risk management disclosure. For the entire five-year period, the extent of risk management disclosure index score for CAL Bank is 3.117647,

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representing 12.83% of the overall risk management disclosure. This represents the lowest disclosure score for the period. This implies that CAL bank is complying less to the reporting or regulatory standards. EcoBank recorded the highest disclosure index for the period, that is 4.264706, contributing 17.55% of the entire disclosure for the sampled period. This also implies that EcoBank Ghana Limited is complying more to the regulatory standards than the other banks.

GCB Bank also disclosed an encouraging amount during the entire period. It recorded the second highest disclosure index for the period. A figure of 3.588235 was recorded by GCB Bank, indicating a 14.77% of the overall disclosure. Home Financing Company (HFC) Bank also contributed in this disclosure. A score of 3.411765 was produced by this bank for the five-year period. This score however represented 14.04% of the entire disclosure score for the five years. And finally, Standard Chartered Bank recorded a disclosure index score of 3.323529. This represented the remaining percentage of the overall disclosure, that is, 13.68%. This means that both Access Bank and Standard Chartered bank disclosed the same amount of information regarding risk management for the five-year sampled period. Though these banks are not complying fully with the regulatory standards, the degree of reporting is encouraging.

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Determinants of the extent of risk management disclosure

Fixed and Random effects regression were run to assess the effects of the determinants on the extent of risk management disclosure. Based on the Hausman test, fixed effect was chosen and interpreted. The results are presented in Table 3.

Table 3- *Fixed and Random effect regression results for ERMDI*

Variables	FE	RE
BS	0.0113	0.0065
	(0.0051)	(0.0073)
ID	-0.0049	0.0165***
	(0.0043)	(0.0057)
ACI	0.0135***	0.0164
	(0.0029)	(0.0251)
LnSIZE	0.0062	0.0303***
	(0.0157)	(0.0107)
OWN		0.0145*
		(0.0084)
LIQ	0.1048**	0.0454
	(0.0420)	(0.5502)
LEV	0.0282	0.0286
	(0.0234)	(0.0654)
ACS	-0.0108**	-0.0019
	(0.0038)	(0.0198)
RCI	-0.0110**	-0.0418***
	(0.0038)	(0.0139)
ACM	0.0039	-0.0005
	(0.0032)	(0.0058)
Constant	0.4665	-0.0872
	(0.3631)	(0.2493)
No. of Obs	35	
Hausman test (χ^2)	368.14	
Prob > chi2	0.0000	

Standard errors in parenthesis, *** p<0.01, ** p<0.05 and * p<0.1.

Source: Author's construct, 2018.

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From Table 3, there is a positive and significant relationship between audit committee independence (ACI) and extent of risk management disclosure (ERMDI) with a coefficient of 0.0135 and significant at 1% alpha level. This means that under an audit committee with more independent directors, there is the likelihood that banks will disclose more information concerning risk and risk management. An additional non-executive director into the audit committee will increase risk management disclosure by 1.4%. This finding is consistent with the study by Taylor and Zhang (2011) who argued that the agency theory argument proposes that the more the independence of the audit committee from the upper administration, the more likely it is to act in the best interest of the investors of the firm such as decreasing information asymmetry. This is also in line with other studies by Wong (2012) and Olivera et al. (2011b) who found a positive relationship between risk management disclosure and independence of the audit committee. This finding is however inconsistent with studies by Neri (2010) and Nahar (2015) who found a positive but insignificant relationship between audit committee independence and the extent of disclosure.

There is also a positive and significant relationship between liquidity (LIQ) and the extent of risk management disclosure (ERMDI) with a coefficient of 0.1048 and also significant at 5% alpha level. This result means that banks with high liquidity profile comply more with mandatory risk reporting and provide more risk management disclosure related information. An increase in the liquidity of banks, that is, an additional increase in the current assets of banks leads to 10.5% increase in disclosure. This finding conforms to Wallace et al. (1994), who stated that high

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liquidity companies are more motivated to report risk information than low liquidity companies. This finding is also consistent with the studies by Al-Shammari, (2014) Muzahem (2011) and Owusu-Ansah (2005). The possible explanation for the positive association between liquidity and risk disclosure is that banks with high liquidity are motivated to signal more information to interested parties to distinguish themselves from other banks with a low liquidity profile. This justification is based on the argument of the signalling theory. This finding of the relationship between liquidity and extent of risk management disclosure is contrary to the studies by Agyei-Mensah (2017) and Muzahem (2011) who found a negative but insignificant relationship between the two variables.

Audit committee size (ACS) on the other hand is negative but significantly related to the extent of risk management disclosure (ERMDI) at a 5% alpha level and a beta of -0.0108. This association implies that the bigger the size of the audit committee, the lesser risk management information is reported, and as such an additional member into the audit committee reduces disclosure by 1.1%. According to the agency theory, bigger committee size leads to free rider problems among members, expanded decision-making time, poor communication and monitoring. These problems have adverse effects on the extent of risk management disclosure leading to a less disclosure of information. This finding conforms to the agency cost problem by Jensen (1993) and also consistent with studies by Agyei-Mensah (2017) and Muzahem (2011). It is however inconsistent with studies by Al-Maghzom (2016) and Forker (1992) who found a positive but insignificant relationship between audit committee size and risk management disclosure.

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Risk management committee independence (RCI) recorded a negative but significant relationship with the extent of risk management disclosure (ERMDI) with a coefficient of -0.0110 at a 5% significant level. The possible explanation for this negative association between risk committee independence and the extent of risk management disclosure is that, in Ghana the risk management committee composition found in the annual reports of these banks constitute more of non-independent directors than independent directors. Independent directors act as a measure of corporate governance quality and are more likely to minimise agency problems and lower the demand for regulatory intervention in corporate disclosure (Abraham & Cox, 2007). Given that the risk management committee is composed of few independent directors as compared to non-independent directors, their function of controlling and monitoring the exposure, policies and procedures affecting non-performing loans and other activities within the risk appetite of the bank will be minimal and this can lead to less disclosure of these information and how they can be managed. The finding of this study is consistent with studies by Meijer (2011) and Oliveira et al. (2011b).

The rest of the corporate governance and financial traits of the banks are insignificantly correlated with the extent of risk management disclosure. Board size, bank size, leverage and audit committee meetings recorded a positive but insignificant relationship with the extent of risk management disclosure while independent directors had negative but insignificant association with disclosure.

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Quality of risk management disclosure by the sampled listed banks in Ghana

Information on the quality of risk management disclosure is presented in Figures 3 and 4. To examine the quality of risk management disclosure of the banks, a column graph was used to depict the average quality of risk management disclosure for the study period. This also helps in determining the compliance of banks to the regulatory standards in terms of quality over the five-year period.

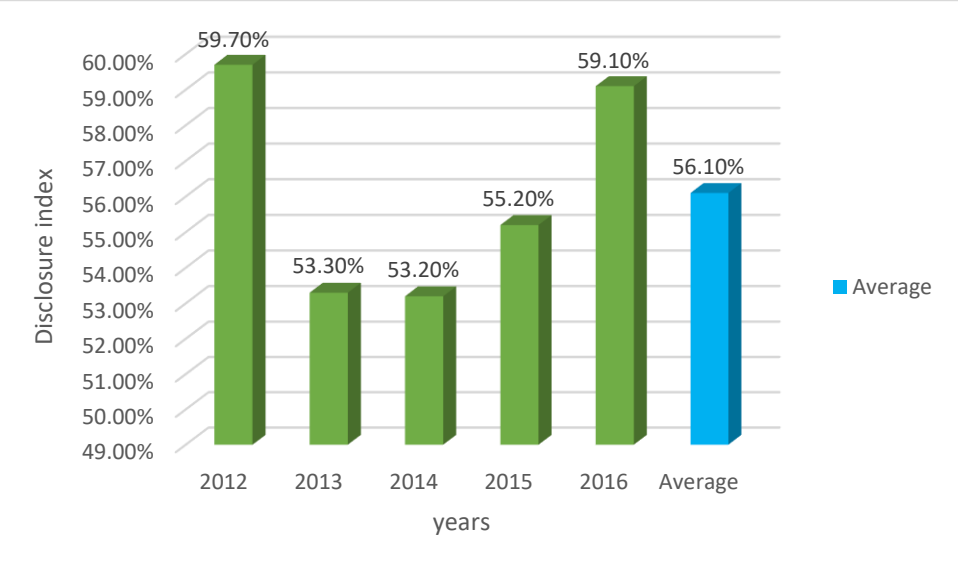

Figure 3: Average score of quality of risk management disclosure.

Source: Author's construct, 2018.

Quality of risk management disclosure on the average is 56%. Agyei-Mensah (2017) in his paper on the "relationship between corporate governance and IFRS 7 compliance", however recorded a lower average score for quality of risk disclosure, that is, 33%. This average score of 56% is in line with Meijer (2011) who also recorded a score above the 50% threshold, that is, an average score of 71%. The highest disclosure score for these banks for the sampled period was

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recorded in 2012 with a value of 59.7%. From Figure 3 above, the quality of disclosure in the annual reports of these listed banks in Ghana from 2012 kept declining until an increase in disclosure was recorded in 2015.

On average, the quality of risk management disclosure index score declined from 59.7% in 2012 to 53.3% in 2013, a further decrease occurred in 2014 with a score of 53.2%. However, there was a recorded increase of 55.2% in 2015 which further increased to 59.1% in 2016. Though the overall average of 56.1% is above the 50% benchmark, these banks are not fully complying with the international standards as compared to their compliance with respect to extent. It can also be seen from Figures 1 and 3 that years with high level or extent of disclosure also have an improved disclosure quality and vice versa.

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A distribution of quality category captured by a pie chart was also used in this study to help in identifying which quality category banks were complying more to and the one with less compliance. Figure 4 shows the compliance of the banks to each of the quality category.

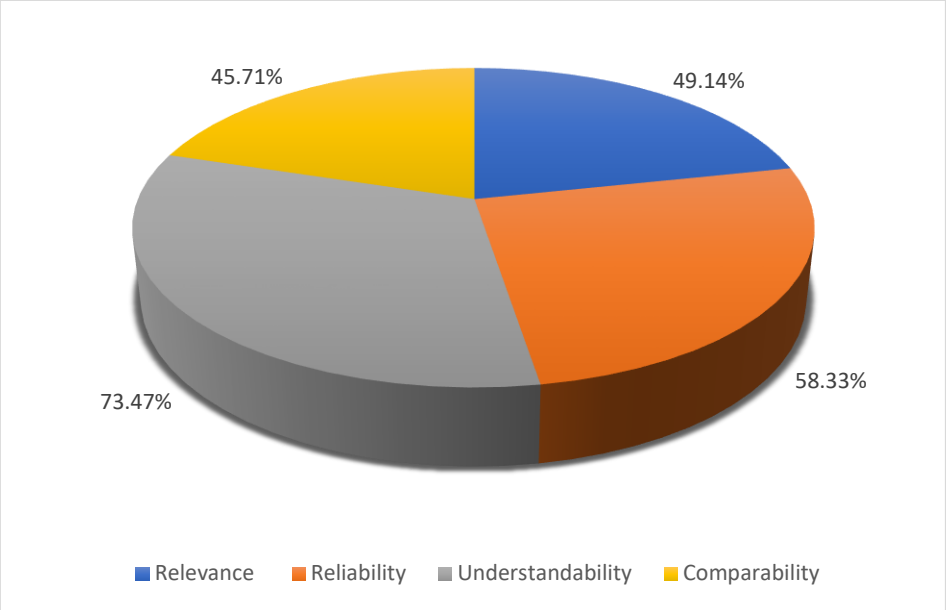

Figure 4: Distribution of the quality of risk management disclosure by categories.

Source: Author's construct, 2018.

From the analysis in Figure 4, banks' compliance to the quality of risk management disclosure differ among the categories for the five-year period. Banks complied more to the understandability category and less with comparability. Banks complied about 73.5% of the quality items under understandability, 58.3% of the items under reliability, 49.1% of the items under relevance and 45.7% of the items under comparability. This distribution implies that banks are not fully complying with the regulatory standards although there is a high compliance with understandability.

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Determinants of the quality of risk management disclosure

Fixed and random regressions were also run to assess the effects of the determinants on the quality of risk management disclosure. Based on the Hausman test, the random effect was chosen and interpreted. The results are presented below;

Table 4- *Fixed and Random effect regression results for QRMDI*

Variables	FE	RE
BS	-0.0015	0.0065
	(0.0187)	(0.0121)
ID	0.0030	0.0091
	(0.0143)	(0.0096)
ACI	0.0395*	0.0423**
	(0.0191)	(0.0170)
LnSIZE	0.0197	0.0315**
	(0.0226)	(0.0143)
OWN		-0.0187
		(0.0125)
LIQ	0.0329	0.0034
	(0.1143)	(0.1110)
LEV	-0.0002	0.0297
	(0.6440)	(0.0537)
ACS	-0.0137	-0.0130
	(0.0116)	(0.0115)
RCI	-0.0291	-0.0362***
	(0.0210)	(0.0135)
ACM	-0.0042	0.0005
	(0.0122)	(0.0033)
Constant	0.1343	-0.2067
	(0.4320)	(0.2902)
No. of Obs	35	
Hausman test ($\boldsymbol{\chi^2}$)	3.69	
Prob > chi2	0.9308	

Standard errors in parenthesis, *** p<0.01, ** p<0.05 and * p<0.1.

Source: Author's construct, 2018.

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From Table 4, there is a positive and significant relationship between audit committee independence (ACI) and the quality of risk management disclosure with a coefficient of 0.0423. That is, an additional member of the committee who is an independent director will increase quality of disclosure by approximately 4.2 percent. This implies that an audit committee with more independent directors is more likely to disclose high quality information regarding risk management than an audit committee with less independent directors. This is in line with Barako, Hancock and Izan (2006) who stated that the independence of the audit committee can play a supervisory role which would lead to an enhanced quality of risk information. This finding is also consistent with studies by Berretta and Bozzolan (2004) and Oliveira et al. (2011b). This finding is however inconsistent with studies by Baysinger and Butler (1985) and Eng and Mak (2003) who found an insignificant relationship between audit committee independence and the quality of risk management disclosure.

Bank size (LnSIZE) on the other hand is also positive and significantly related with the quality of risk management disclosure. This association has a coefficient of 0.0315. This means that the bigger the size of the bank the better the quality of risk management information disclosed and as such an increase in the total asset of the bank will lead to a 3.2 percent increase in the quality of disclosure. According to the agency theory, large firms are motivated to comply with accounting standards by disclosing more risk information in order to support their legitimacy and because of the availability of financial resources and expertise required to implement accounting standards. This outcome is also in line with the

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signalling theory. According to the signalling theory, larger firms rely more on external finance, hence, they are incentivized to disclose more and improve the quality of risk information in order to send a good signal to investors and creditors regarding their ability to manage risk. The finding of this study is also consistent with works by Beretta and Bozzolan (2004), Brammer and Pavelin (2006), Lopes and Rodrigues (2007), Meijer (2011), Miihkimen (2012) and Owusu-Ansah (1998). However, the finding of this study is inconsistent with studies by Agyei-Mensah (2017) and Beretta and Bozzolan (2004) who all found an insignificant relationship between the two variables.

Risk committee independence (RCI) recorded a negative and significant relationship with the quality of risk management disclosure (QRMDI), with a coefficient of -0.0362 indicating that an additional non-executive member of the risk management committee will decrease disclosure quality by 3.6 percent. The possible explanation for this negative relationship between risk committee independence and the quality of risk management disclosure is that in Ghana the risk committee composition found in the annual reports of these banks constitute more of non-independent directors than that of independent directors. Independent directors act as a measure of corporate governance quality and are more likely to minimise agency problems and lower the demand for regulatory intervention in corporate disclosure (Abraham & Cox, 2007). Since the risk management committee is made up of few independent directors as against non-independent directors, its role in controlling and monitoring the exposure, policies and procedures affecting non-performing loans and other activities within the risk

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appetite of the bank will be minimised leading to a reduction in the quality of disclosure of information. The finding of this study is consistent with studies by Meijer (2011) and Oliveira et al. (2011b) but contradicts Brammer and Pavelin (2006) as well as Lopes and Rodrigues (2007) who found no significant relationship between risk management committee independence and the quality of risk management disclosure.

The rest of the explanatory variables are insignificant in explaining the quality of risk management disclosure. Bank size, independent directors, liquidity, leverage and audit committee meetings recorded positive but insignificant relationship with the quality of risk management disclosure. Ownership and audit committee size on the other hand recorded positive and insignificant relationship with the quality of risk management disclosure. These findings are consistent with works by Agyei-Mensah (2017) and Meijer (2011).

Effects of the extent of risk management disclosure on the profitability of the banks

A fixed and random effect regression were also run to assess the effects of the extent of risk management disclosure on the profitability of listed banks in Ghana from 2012-2016. Based on the results of the Hausman specification test, the random effect regression results were interpreted. The results are presented in Table 5.

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Table 5- *Fixed and Random effects regression results for PROF*

Variable	FE	RE
ERMDI	0. 3822 (0. 2029)	0.1451** (0.0634)
OWN		0.0133 (0.0117)
LnSIZE	0.0001 (0.0050)	0.0216 (0.0154)
LIQ	0. 1333 *** (0. 0264)	0.0759 (0.0512)
LEV	0.0313* (0.0132)	-0.0005 (0.0158)
GDPG	-0.0137* (0.0061)	-0.0221*** (0.0079)
INF	-0.0124* (0.0052)	-0.0193*** (0.0058)
Constant	0.3835* (0. 1571)	-0.0852 (0.3676)
No. of Obs	35	
Hausman test ($\boldsymbol{\chi^2}$)	3.02	
Prob>Chi2	0.8066	

Standard errors in parenthesis, *** p<0.01, ** p<0.05 and * p<0.1.

Source: Author's construct, 2018.

From the regression analysis, the extent of risk management disclosure is positive and significantly related to profitability of banks. The coefficient of this relationship implies that an increase in disclosure by banks will lead to a 11.8% increase in their profitability. The results are consistent with Botosan and Plumlee (2002) who found that increased levels of disclosure have a positive economic consequence on profitability of the firm. Shareholders greatly value the information disclosed in annual reports due to the valuable investment decisions they can make based on such information. In addition, such information can reduce asymmetric

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information and agency conflicts between managers and investors. Hussainey and Walker (2009) clearly stated that voluntary disclosure provides value relevant information for users. Also, this finding is in line with the limited empirical literature examining the relationship between firm value and voluntary disclosure, which documented a positive relationship between the two variables (Anam, Fatima & Majdi, 2011; Lim, Matolcsy & Chow, 2007; Nekhili, Boubaker & Lakhal, 2012) but however inconsistent with studies by Al-Maghzom (2016), Agyei-Mensah (2017) and Nahar (2015) who found an insignificant relationship between the two variables.

As revealed in the estimation, GDP growth exerts a negative but significant impact on banks profitability although the study expected a positive relationship. The negative effect of GDP growth on bank profitability may be as a result of non-performing loans due to low levels of GDP for the study period. That is, commercial banks may have to write off non-performing loans when the Ghanaian economy goes bad, hence affecting their profits. From the regression analysis, a growth in GDP will lead a 2.2% fall in the profitability of banks. This finding is consistent with works by Nahar (2015) and Salkeld (2011) who found a negative but significant relationship between GDP growth and bank profitability. This finding is however inconsistent with studies by Al-Maghzom (2016), Athanasoglou, Delis and Staikouras (2006) and Yakubu (2016) who found an insignificant relationship between the two variables.

The estimated coefficient of inflation is negative, indicating its inverse relationship with profitability. Inflation is also found to have a significant

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relationship with banks profitability. The coefficient of inflation indicates that a unit increase in inflation leads to approximately 2.0% reduction in the profitability of banks. This implies that performance of banks reduces when there is persistent increase in prices of goods and services. This finding is consistent with studies by Abreu and Mendes (2002) and Ayadi and Boujelbene (2012), but inconsistent with studies by Guru et al. (2002) and Ofosu-Hene & Amoh (2016) who found a positive and significant relationship between inflation and profitability. It is also inconsistent with studies by Ally (2014) and Yakubu (2016) who found an insignificant relationship between the two variables.

The rest of the explanatory variables are insignificant in explaining profitability of banks. Ownership, bank size and liquidity recorded a positive but insignificant relationship with profitability. Leverage on the other hand recorded a negative and insignificant relationship with banks' profitability. These findings are consistent with works by Al-Maghzom (2016), Ally (2014) and Muzahem (2011).

Post Estimation Tests

In this section we present the results of diagnostic and post estimation tests that were conducted in this study.

Univariate analysis

A possible degree of multicollinearity among the regressors was tested by taking a correlation matrix of the variables. Appendix G presents the correlation matrix of the dependent and independent variables from which, it has been observed

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that the highest simple correlation between the variables was 0.809, and that was between ERMDI and QRMDI. Judge, Hill, Griffiths, Lütkepohl and Lee (1982) and Bryman and Cramer (1997) suggest that simple correlation between independent variables should not be considered harmful until they exceed 0.80 or 0.90. Simple correlations of 0.80 or 0.90 are usually associated with Variable Inflation Factors (VIF) of between 6 and 10. The VIF in excess of 10 should be considered an indication of harmful multicollinearity (Neter, Wasserman, & Kutner, 1989).

Extent of risk management disclosure (ERMDI) shows a significant positive correlation with quality of risk management disclosure (QRMDI), board size (BS), Independence of directors (ID), bank size (LnSIZE) and leverage (LEV), and a negative and significant correlation with risk management committee independence (RCI). Quality of risk management disclosure (QRMDI) is also positive and significantly correlated with board size (BS), independence of directors (ID), bank size (LnSIZE) and leverage (LEV). Board size has a positive and significant relationship with independence of directors (ID), audit committee independence (ACI), bank size (LnSIZE), audit committee size (ACS) and profitability (PROF). Independence of directors (ID) on the other hand has a significant positive correlation with audit committee independence (ACI), bank size (LnSIZE), leverage (LEV), audit committee size (ACS) and risk management committee independence (RCI).

Audit committee independence (ACI) is also positive and significantly correlated with audit committee size (ACS), risk management committee independence (RCI) and profitability (PROF). Bank size (LnSIZE) has a negative

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and significant relationship with liquidity (LIQ), audit committee meetings (ACM) and GDP growth while it has a positive and significant relationship with ownership (OWN) and inflation (INF). Liquidity (LIQ) shows a significant positive correlation with leverage (LEV), audit committee size (ACS), profitability (PROF) and audit committee meetings (ACM), and a negative and significant correlation with inflation (INF). Leverage (LEV) also shows a significant positive correlation audit committee meetings (ACM), so does audit committee size (ACS). Profitability (PROF) is negatively and significantly correlated with audit committee meetings (ACM) and inflation (INF) whereas it is positively and significantly correlated with ownership (OWN) and GDP growth. Audit committee meetings (ACM) is also negatively and significantly correlated with ownership (OWN). And finally, GDP growth is negatively and significantly correlated with inflation (INF).

Overall, the magnitude of the correlation coefficients indicates that the issue of multicollinearity is not a problem in the regression models.

Hausman test to choose fixed or random effect

The Hausman specification test examines if the individual effects are uncorrelated with other regressors in the model. If individual effects are correlated with any of the regressors, the random effect model violates the Gauss-Markov assumption and it is no longer Best Linear Unbiased Estimator (BLUE). Therefore, if the null hypothesis is rejected, the fixed effect model would be preferred over the random effect model. In a fixed effect model, the individual effects are part of the intercept and the correlation between the intercept and the regressors do not violate

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any Gauss-Markov assumption; the fixed effect estimates are always consistent (BLUE) but inefficient compared to the random effect estimates.

This test under the null hypothesis of orthogonality is distributed Chi-Square with degrees of freedom equal to the number of regressors in the model. A $p < 0.05$ is taken as conventional level of significance. Table 6 shows the Chi-Square probabilities for each of the two regression models (determinants of extent of risk management disclosure, quality of risk management disclosure and that of bank profitability). The p-values are 0.0000, 0.9308 and 0.8066 respectively. Therefore, by the conventional significance level of $p < 0.05$, we fail to accept the null hypothesis in the extent of risk management disclosure model but we fail to reject the null hypothesis in the quality of risk management and profitability models. Hence, we conclude that fixed effect model is preferred for the extent of risk management disclosure model and random effect is preferred for the quality of disclosure and profitability models.

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Table 6- *Hausman test to choose fixed or random effect model*

Test summary	Chi-Square statistic	Chi-Square d.f	Probability
Extent of risk management disclosure	368.14	10	0.0000
Quality of risk management disclosure	3.69	10	0.9308
Profitability of banks	3.02	8	0.8066

Source: Author's construct, 2018.

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CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This final chapter of the research presents the summary, conclusions and recommendations on the major findings of the study for banks listed on the Ghana Stock Exchange from 2012-2016. The summary presents major findings of the study with conclusions summarizing the overall outcome of the study in light of a brief overview of the problem statement, objectives, research questions, methodology and hypotheses tested. Additionally, recommendations were made for the relevant bodies and suggestions were also made for future research.

Summary

From the findings, it is observed that listed banks per the sample disclosed an encouraging amount of information on risk management in their annual reports (69 percent for extent of risk management disclosure and 56 percent for quality of risk management disclosure), evidenced that risk management disclosure in Ghana is improving. There have been steady decreases in the extent of risk information disclosed between 2012 and 2015 with an increase experienced in 2016. The most significant increase is recorded in 2012. A similar story is recorded by the quality of risk management disclosure, although an early increase (in 2015) is recorded.

Also, the findings of this study revealed that, audit committee independence, liquidity, audit committee size and risk management committee independence significantly affect the extent of risk management disclosure. Audit

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committee independence and liquidity at different alpha levels positively influenced the extent of risk management disclosure while audit committee size and risk management committee independence at 5 percent alpha level negatively influenced the extent of risk management disclosure.

The study also revealed that audit committee independence and bank size positively and significantly influenced the quality of risk management disclosure while risk management committee independence negatively and significantly influenced quality of disclosure. From the regression analysis, board size, independent directors, liquidity, leverage, ownership, audit committee size and audit committee meetings were insignificant in influencing the quality of risk management disclosure.

Results from this study also suggest that, extent of risk management disclosure, GDP growth and inflation significantly affected the profitability of banks. Extent of risk management disclosure at 5 percent alpha level positively influenced the profitability of these banks while GDP growth and inflation at one percent alpha level negatively influenced banks' profitability.

Conclusions

This study examined risk management disclosure on the profitability of listed banks for a five-year period, 2012 to 2016. Specifically, this study sought to investigate the extent and quality of risk management disclosure, and test factors that determine the extent and quality of risk management disclosure and also the effects of risk management disclosure on bank profitability. Data for this study were

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obtained from the audited annual reports of these listed banks and World Development Indicator (WDI). This study emanated from the research problem that risk management disclosure and corporate governance mechanisms were cited as the main cause of the Global Financial Crisis (GFC) of 2007-2008 and also cited as one of the reasons for the collapse of Unique Trust (UT) Bank and Capital Bank. It also emanated from the research problem that sought to argue that studies on risk management disclosure across the globe do not explicitly focus on the examining the quality of risk management disclosure in their study.

Sampling seven (7) listed banks, the content analysis technique was used to collect and analyse data on risk disclosure from the annual reports of the sampled banks for the sampled period. The sample size was reduced due to non-availability of data for other scheduled banks. Lipunga (2014) and Hassan (2014) framework for risk attributes concerning extent and quality of risk management disclosure respectively were employed for the analysis.

The study made emphasis on five key issues: the extent of risk management disclosure, the quality of risk management disclosure, the effect of corporate governance and bank-specific characteristics on the extent and quality of risk management disclosure, and the effect of extent of risk management disclosure on the profitability of banks.

The study in line with the empirical literature has shown that the extent and quality of disclosure is encouraging (69% and 56% respectively) although full disclosure is yet to be achieved. The results presented in this study also imply that audit committee independence and liquidity have positive effects on the extent of

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risk management disclosure while audit committee size and risk management committee independence negatively affect the extent of risk management disclosure. Also, it was revealed that audit committee independence and bank size have positive effects on quality of risk management disclosure while risk management committee independence has a negative effect on quality of disclosure.

Finally, the study found positive effect of extent of risk management disclosure on the profitability of banks while there was a negative relationship between the macroeconomic variables and profitability. The findings of this study will help the Bank of Ghana in monitoring banking institutions by identifying their compliance with particular standards. Both existing and potential clients of banks can use these findings in strategically choosing their preferred bank of interest. More particularly, the significance of the extent and quality of bank risk disclosure will help clients identify the potential risks of the banks they are interested in doing business with.

Recommendations

Having considered the findings and conclusions of this study, the following recommendations are proffered:

i. Based on the results, that is the extent and quality of risk management disclosure, the author recommends that supervisory bodies like; Bank of Ghana, develop a strict regulation such as revoking the license to operate as a bank by banks who do not fully comply with reporting standards and also

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develop an award scheme to reward banks who fully comply with regulatory standards so as to enhance the quantity and quality of risk management disclosure by banks. Further, Audit committees of the banking institutions should positively play their vital role in ensuring that banks comply with Basel II and IFRS 7 requirements fully.

ii. The study strongly believes that the extent of disclosure affects positively the profitability of listed banks and as such it recommends the Bank of Ghana to enforce these banks to improve on their extent of risk management disclosure by complying to all the requirements of Bank of Ghana, Basel II and IFRS 7 for risk management disclosure in their annual reports so as to increase their profitability.

Suggestions for Future Research

As this study is based entirely on information published in annual reports, future studies may investigate such risk disclosures incorporating information from banks' websites, press releases and prospectuses. Future research under the area of risk disclosure could consider exploring the effects of risk management disclosure on the profitability of all licensed banks or financial institutions in Ghana. Additionally, qualitative data from interviews with regulators and users of annual reports could be a useful complement to the findings of this thesis.

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REFERENCES

Abdallah, A. A. N., Hassan, M. K., & McClelland, P. L. (2015). Islamic financial institutions, corporate governance, and corporate risk disclosure in Gulf Cooperation Council countries. *Journal of Multinational Financial Management*, *31*, 63-82.

Abeysekera, I. (2010). The influence of board size on intellectual capital disclosure by Kenyan listed firms. *Journal of Intellectual Capital*, *11*(4), 504-518.

Abraham, S., & Cox, P. (2007). Analysing the determinants of narrative risk information in UK FTSE 100 annual reports. *The British Accounting Review*, *39*(3), 227-248.

Abreu, M., & V, Mendes. (2002). *Commercial bank interest margins and profitability: evidence from E.U countries*. Porto Working paper series.

Acquah, M., Zoogah, D. B., & Kwesiga, E. N. (2013). Advancing Africa through management knowledge and practice: The way forward. *African Journal of Economic and Management Studies*, *4*(2), 164–176.

Adams, R. (2012). Governance and the financial crisis. *International Review of Finance*, 12, 7–38.

Adamu, M. U. (2013). Risk reporting: a study of risk disclosures in the annual reports of listed companies in Nigeria. *Research Journal of Finance and Accounting*, *4*(16), 140-147.

Aebi, V., Sabato, G., & Schmid, M. (2012). Risk management, corporate governance, and bank performance in the financial crisis. *Journal of Banking & Finance*, *36*(12), 3213-3226.

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Agyei-Mensah, B. K. (2017). The relationship between corporate governance mechanisms and IFRS 7 compliance: evidence from an emerging market. *Corporate Governance: The International Journal of Business in Society, 17*(3), 446-465.

Agyeman, O.S., Aboagye, E. & Ahali, A.Y.O. (2013). Prospect and challenges of corporate governance in Ghana. *International Journal of Scientific and Research Publications*, *3*(5), 1-9.

Akhtaruddin, M. (2005). Corporate mandatory disclosure practices in Bangladesh. *The International Journal of Accounting*, *40*(4), 399-422.

Al-Maghzom, A. (2016). *The Determinants and Consequences of Risk Disclosure in Saudi Banks.* (Doctoral dissertation, University of Gloucestershire). Retrieved from http://eprints.glos.ac.uk/4135/ .

Al-Shammari, B. (2014). Kuwait corporate characteristics and level of risk disclosure: a content analysis approach. *Journal of Contemporary Issues in Business Research*, *3*(3), 128-153.

Ale, B. J. (2009). *Risk: An introduction: the concepts of risk, danger and chance*. London, UK: Routledge.

Allegrini, M., & Greco, G. (2013). Corporate boards, audit committees and voluntary disclosure: Evidence from Italian listed companies. *Journal of Management & Governance*, *17*(1), 187-216.

Allini, A., Manes Rossi, F., & Hussainey, K. (2016). The board's role in risk disclosure: an exploratory study of Italian listed state-owned enterprises. *Public Money & Management*, *36*(2), 113-120.

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Ally, Z. (2014). Determinants of banks' profitability in a developing economy: Empirical evidence from Tanzania. *European Journal of Business and Management*, 6(31), 363-375.

Amran, A., Bin, A., & Hassan, B. (2009). An exploratory study of risk management disclosure in Malaysian annual reports. *Managerial Auditing Journal*. *24*(1), 39–57.

Anam, O. A., Fatima, A. H., & Majdi, A. R. H. (2011). Effects of intellectual capital information disclosed in annual reports on market capitalization: evidence from Bursa Malaysia. *Journal of Human Resource Costing & Accounting*, *15*(2), 85-101.

Appiagyei, K., Agyenim-Boateng, C., & Onumah, J. M. (2016). Risk disclosures in the annual reports of firms in Ghana. *International Journal of Management Practice*, *9*(2), 142-158.

Athanasoglou, P., Delis, M., & Staikouras, C. (2006). Determinants of bank profitability in the South Eastern European region. MPRA Paper No. 10274 Retrieved from https://mpra.ub.uni-muenchen.de/10274 on May 18, 2018.

CPA Australia. (2009). *Risk Management Guide for small to medium businesses*. CPA Australia Business and Management Centre of Excellence.

Ayadi, N., & Boujelbene, Y. (2012). The determinants of the profitability of the Tunisian deposit banks. *IBIMA Business Review*, 1-21.

Baltagi, B. (2008). *Econometric analysis of panel data*. New York: John Wiley & Sons.

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Baltagi, B. H., & Chang, Y. J. (1994). Incomplete panels: A comparative study of alternative estimators for the unbalanced one-way error component regression model. *Journal of Econometrics*, *62*(2), 67-89.

Barakat, A., & Hussainey, K. (2013). Bank governance, regulation, supervision, and risk reporting: Evidence from operational risk disclosures in European banks. *International Review of Financial Analysis*, *30*, 254-273.

Barako, D. G., Hancock, P., & Izan, H. Y. (2006). Relationship between corporate governance attributes and voluntary disclosures in annual reports: The Kenyan experience. *Financial Reporting, Regulation and Governance*, *5*(1), 1-25.

Barth, J. R., Caprio Jr, G., & Levine, R. (2004). Bank regulation and supervision: what works best? *Journal of Financial Intermediation*, *13*(2), 205-248.

Basel Committee (2001). Regulatory treatment of operational risk. Switzerland: BIS.

Basel Committee (2003). Public disclosures by banks: Results of the 2001 disclosure survey. Switzerland: BIS.

Basel Committee (2006). International convergence of capital measurement and capital standards: A revised framework. Switzerland: BIS.

Basel Committee (2010). Principles for enhancing corporate governance. Switzerland: BIS.

Basel Committee (2012). Basel committee on banking supervision reforms – Basel III. Switzerland: BIS.

Digitized by Sam Jonah Library

© University of Cape Coast

Bawumia, M. (2010). *Monetary policy and financial sector reform in Africa: Ghana's experience*. La Vergne, TN: Lightning Source.

Baysinger, B. D., & Butler, H. N. (1985). Antitakeover amendments, managerial entrenchment, and the contractual theory of the corporation. *Virginia Law Review*, *71*(8), 1257-1303.

Beattie, A., McInnes, S., & Fearnley. (2002). *Through the eyes of management: A study of narrative disclosure. An interim report.* London: Centre for Business Performance.

Beattie, V., McInnes, B., & Fearnley, S. (2004). A methodology for analysing and evaluating narratives in annual reports: a comprehensive descriptive profile and metrics for disclosure quality attributes. *Accounting Forum, 28*(3), 205-236.

Bebchuk, L. A. (2010). Regulating bankers' pay. *Georgetown Law Journal, 98*(2), 247–287.

Beltratti, A., & Stulz, R. M. (2012). The credit crisis around the globe: Why did some banks perform better? *Journal of Financial Economics, 105*(1), 1-17.

Beretta, S., & Bozzolan, S. (2004). A framework for the analysis of firm risk communication. *The International Journal of Accounting*, *39*(3), 265-288.

Berk, J., & DeMarzo, P. (2011). *Corporate finance (Global ed.).* Essex: Pearson Education Limited.

Bessis, J. (2010). *Risk management in banking* (3rd ed.). London, UK: John Wiley & Sons.

Digitized by Sam Jonah Library

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Bikker, J. A., & Metzemakers, P. A. (2005). Bank provisioning behaviour and procyclicality. *Journal of International Financial Markets, Institutions and Money, 15*(2), 141-157.

Boahene, S. H., Dasah, J., & Agyei, S. K. (2012). Credit risk and profitability of selected banks in Ghana. *Research Journal of Finance and Accounting, 3*(7), 6-14.

Botosan, C. A., & Plumlee, M. A. (2002). A re-examination of disclosure level and the expected cost of equity capital. *Journal of Accounting Research, 40*(1), 21-40.

Bourke, P. (1989). Concentration and other determinants of bank profitability in Europe, North America and Australia. *Journal of Banking & Finance, 13*(1), 65-79.

Brammer, S., & Pavelin, S. (2006). Voluntary environmental disclosures by large UK companies. *Journal of Business Finance & Accounting, 33*(7/8), 1168-1188.

Breitung, J., & Das, S. (2005). Panel unit root tests under cross-sectional dependence. *Statistica Neerlandica, 59*(4), 414-433.

Breusch, T. S., & Pagan, A. R. (1980). The Lagrange multiplier test and its applications to model specification in econometrics. *The Review of Economic Studies, 47*(1), 239-253.

Bryman, A., & Cramer, D. (1997). *Quantitative data analysis with SPSS for Windows*. London: Routledge.

Digitized by Sam Jonah Library

© University of Cape Coast

Cabedo, J. D., & Tirado, J. M. (2004). The disclosure of risk in financial statements. *Accounting Forum, 28*(2), 181-200.

Caldwell, J. E. (2012). *A framework for board oversight of enterprise risk*. Toronto, Canada: Canadian Institute of Chartered Accountants.

Chen, C. J., & Jaggi, B. (2000). Association between independent non-executive directors, family control and financial disclosures in Hong Kong. *Journal of Accounting and Public Policy*, *19*(4/5), 285-310.

Chen, J., & Roberts, R. (2010). Toward a More Coherent Understanding of the Organization Society Relationship: A Theoretical Consideration for Social and Environmental Accounting Research. *Journal of Business Ethics,* 97 (4), 651-665.

Choi, I. (2001). Unit root tests for panel data. *Journal of International Finance and Money*, *20*(2), 249-272.

Chow, C. W., & Wong-Boren, A. (1987). Voluntary financial disclosure by Mexican corporations. *Accounting Review*, *62*(3),533-541.

Coles, J. L., Daniel, N. D., & Naveen, L. (2008). Boards: Does one size fit all? *Journal of Financial Economics*, *87*(2), 329-356.

Conyon, M. J., & Peck, S. I. (1998). Board size and corporate performance: evidence from European countries. *The European Journal of Finance*, *4*(3), 291-304.

Cormier, D., Magnan, M., & Van Velthoven, B. (2005). Environmental disclosure quality in large German companies: economic incentives, public pressures or institutional conditions? *European Accounting Review*, *14*(1), 3-39.

Digitized by Sam Jonah Library

© University of Cape Coast

Day, R., & Woodward, T. (2004). Disclosure of information about employees in the Directors' report of UK published financial statements: substantive or symbolic? *Accounting Forum*, *28*(1), 43-59.

Dei Ofosu-Hene, E., & Amoh, P. (2016). Risk Management and Performance of Listed Banks in Ghana. *European Journal of Business Science and Technology*, *2*(2), 107-121.

Deumes, R., & Knechel, W. R. (2008). Economic incentives for voluntary reporting on internal risk management and control systems. *Auditing: A Journal of Practice & Theory*, *27*(1), 35-66.

Diamond, D. W., & Rajan, R. G. (2009). The credit crisis: Conjectures about causes and remedies. *American Economic Review*, *99*(2), 606-610.

DiMaggio, P., & Powell, W. W. (1983). The iron cage revisited: Collective rationality and institutional isomorphism in organizational fields. *American Sociological Review*, *48*(2), 147-160.

Dobler, M., Lajili, K., & Zéghal, D. (2011). Attributes of corporate risk disclosure: An international investigation in the manufacturing sector. *Journal of International Accounting Research*, *10*(2), 1-22.

Eberhardt, M., & Teal, F. (2011). Econometrics for grumblers: a new look at the literature on cross-country growth empirics. *Journal of Economic Surveys*, *25*(1), 109-155.

Eng, L. L., & Mak, Y. T. (2003). Corporate governance and voluntary disclosure. *Journal of Accounting and Public Policy*, *22*(4), 325-345.

Digitized by Sam Jonah Library

© University of Cape Coast

Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of Management Review*, *14*(1), 57-74.

El-Kelish, W., & Hassan, M. K. (2014). Organizational culture and corporate risk disclosure: an empirical investigation for UAE listed companies, *International Journal of Commerce and Management*, *24*(4), 277-299.

Elshandidy, T., Fraser, I., & Hussainey, K. (2013). Aggregated, voluntary, and mandatory risk disclosure incentives: Evidence from UK FTSE all-share companies. *International Review of Financial Analysis*, *30*(1), 320-333.

Elshandidy, T., & Neri, L. (2015). Corporate governance, risk disclosure practices, and market liquidity: comparative evidence from the UK and Italy. *Corporate Governance: An International Review*, *23*(4), 331-356.

Elzahar, H., & Hussainey, K. (2012). Determinants of narrative risk disclosures in UK interim reports. *The Journal of Risk Finance*, *13*(2), 133-147.

Erkens, D. H., Hung, M., & Matos, P. (2012). Corporate governance in the 2007 2008 financial crisis: Evidence from financial institutions worldwide. *Journal of Corporate Finance*, *18*(2), 389-411.

Fahlenbrach, R., & Stulz, R. M. (2011). Bank CEO incentives and the credit crisis. *Journal of Financial Economics*, *99*(1), 11-26.

Fama, E. F., & Jensen, M. C. (1983). Agency problems and residual claims. *The Journal of Law and Economics*, *26*(2), 327-349.

Fatemi, A., & Glaum, M. (2000). Risk management practices of German firms. *Managerial Finance*, *26*(3), 1-17.

Digitized by Sam Jonah Library

© University of Cape Coast

Ferguson, N., & Myers, J. J. (2008). *The ascent of money: A financial history of the world*. New York: Carnegie Council for Ethics in International Affairs.

Flamini, V., Schumacher, M. L., & McDonald, M. C. A. (2009). The determinants of commercial bank profitability in Sub-Saharan Africa. International Monetary Fund Working Paper.

Forker, J. J. (1992). Corporate governance and disclosure quality. *Accounting and Business Research, 22*(86), 111-124.

Freeman, R. E. (1994). The politics of stakeholder theory: Some future directions. *Business Ethics Quarterly, 4*(4), 409-421.

Fuller, J., & Jensen, M. C. (2002). *What's a Director to Do?* C. A. Bartlett, R. M. Kanter, R. S. Kaplan, & M. C. Jensen. (Eds.). Best practice: Ideas and insights from the world's foremost business thinkers. Cambridge, MA: Perseus Publishing.

Garr, D. K. (2013). Determinants of credit risk in the banking industry of Ghana. *Developing Country Studies*, *3*(11), 64-77.

Ghana Statistical Service (2017). Annual Gross Domestic Product, Accra, Ghana: Ghana Statistical Service.

Ghoshal, S. (2005). Bad management theories are destroying good management practices. *Academy of Management Learning & Education*, *4*(1), 75-91.

Guest, P. M. (2009). The impact of board size on firm performance: evidence from the UK. *The European Journal of Finance*, *15*(4), 385-404.

Digitized by Sam Jonah Library

© University of Cape Coast

Guru, B. K., Staunton, J., & Balashanmugam, B. (2002). Determinants of commercial bank profitability in Malaysia. *Journal of Money, Credit, and Banking*, *17*(1), 69-82.

Gray, S. J. (1988). Towards a theory of cultural influence on the development of accounting systems internationally. *Abacus*, *24*(1), 1-15.

Gray, S. J., & Vint, H. M. (1995). The impact of culture on accounting disclosures: some international evidence. *Asia-Pacific Journal of Accounting*, *2*(1), 33-43.

Gray, R., Kouhy, R., & Lavers, S. (1995a). Corporate social and environmental reporting: a review of the literature and a longitudinal study of UK disclosure. *Accounting, Auditing & Accountability Journal*, *8*(2), 47-77.

Gray, R., Dey, C., Owen, D., Evans, R., & Zadek, S. (1997). Struggling with the praxis of social accounting: Stakeholders, accountability, audits and procedures. *Accounting, Auditing & Accountability Journal*, *10*(3), 325-364.

Greene, W. H. (2003). *Econometric analysis*. New Delhi, India: Pearson Education.

Greene, W. H., & Hensher, D. A. (2008). Modeling ordered choices: A primer and recent developments. Retrieved from http://dx.doi.org/10.2139/ssrn.1213093

Ghana Stock Exchange. (2012). Ghana stock exchange fact book. Accra, Ghana: Buck Press Ltd.

Ghana Stock Exchange. (2018). Ghana stock exchange fact book. Accra, Ghana: Buck Press Ltd.

Digitized by Sam Jonah Library

© University of Cape Coast

Hadri, K. (2000). Testing for stationarity in heterogeneous panel data. *The Econometrics Journal*, *3*(2), 148-161.

Harris, R. D., & Tzavalis, E. (1999). Inference for unit roots in dynamic panels where the time dimension is fixed. *Journal of Econometrics*, *91*(2), 201-226.

Hashagen, J., Harman, N., Conover, M., & Sharma, J. (2009). Risk management in banking: Beyond the credit crisis. *Journal of Structured Finance*, *15*(1), 92-103

Hassan, M. K. (2009). UAE corporations-specific characteristics and level of risk disclosure. *Managerial Auditing Journal*, *24*(7), 668-687.

Hassan, M. K. (2014). Risk narrative disclosure strategies to enhance organizational legitimacy: Evidence from UAE financial institutions. *International Journal of disclosure and Governance*, *11*(1), 1-17.

Haugland, E. (2015). *Risk disclosure in the annual reports of public companies.* Master's dissertation, Norwegian School of Economics. Retrieved from https://brage.bibsys.no/xmlui/bitstream/handle/11250/2382944/masterthesis.pdf?sequence=1

Hausman, J. A. (1978). Specification tests in econometrics. *Econometrica: Journal of the Econometric Society*, *46*(6), 1251-1271.

Healy, P. M., & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics*, *31*(1-3), 405-440.

Digitized by Sam Jonah Library

© University of Cape Coast

Helliar, C., Lonie, A., Power, D., & Sinclair, C. (2002). Managerial attitudes to risk: a comparison of Scottish chartered accountants and U.K. managers. *Journal of International Accounting, Auditing & Taxation*, *11*(2), 165-190.

Hernández-Madrigal, M., Blanco-Dopico, M. I., & Aibar-Guzmán, B. (2012). The influence of mandatory requirements on risk disclosure practices in Spain. *International Journal of Disclosure and Governance*, *9*(1), 78-99.

Hill, P., & Short, H. (2009). Risk disclosures on the second-tier markets of the London Stock Exchange. *Accounting & Finance*, *49*(4), 753-780.

Ho, S. M. S., & Wong, K. R. (2001). A study of the relationship between corporate governance structures and the extent of voluntary disclosure. *Journal of International Accounting, Auditing, and Taxation*, *10*(2), 139-156.

Hossain, M. (2008). The extent of disclosure in annual reports of banking companies: The case of India. *European Journal of Scientific Research*, *23*(4), 659-680.

Hussainey, K., & Walker, M. (2009). The effects of voluntary disclosure and dividend propensity on prices leading earnings. *Accounting and Business Research*, *39*(1), 37-55.

Hutton, A. (2004). Beyond financial reporting an integrated approach to disclosure. *Journal of Applied Corporate Finance*, *16*(4), 8-16.

Hwang, D. Y., Lee, A. C., Liu, C. C., & Ouyang, L. (2009). Balanced performance index and its implications: Evidence from Taiwan's commercial banks. *Review of Pacific Basin Financial Markets and Policies*, *12*(1), 27-62.

Digitized by Sam Jonah Library

© University of Cape Coast

International Accounting Standards Board. (2007). Financial Instrument: Disclosures. London, UK: International Accounting Standards Board.

International Accounting Standards Board. (2009). Improving Disclosures about Financial Instruments (Amendments to IFRS 7). London, UK: International Accounting Standards Board.

International Accounting Standards Board. (2010). The conceptual framework for financial reporting. London, UK: International Accounting Standards Board.

Im, K. S., Pesaran, M. H., & Shin, Y. (2003). Testing for unit roots in heterogeneous panels. *Journal of Econometrics*, *115*(1), 53-74.

Ismail, R., Rahman, R. A., & Ahmad, N. (2013). 'Risk management disclosure In Malaysian Islamic financial institutions: Pre- and post-financial crisis', *The Journal of Applied Business Research*, *29*(2), 419-432.

Jensen, M. C. (1993). The modern industrial revolution, exit, and the failure of internal control systems. *Journal of Finance*, *48*(3), 831-880.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, *3*(4), 305-360.

Jizi, M. I., Salama, A., Dixon, R., & Stratling, R. (2014). Corporate governance and corporate social responsibility disclosure: Evidence from the US banking sector. *Journal of Business Ethics*, *125*(4), 601-615.

Jorion, P. (2009). Risk management lessons from the credit crisis. *European Financial Management*, *15*(5), 923-933.

Digitized by Sam Jonah Library

© University of Cape Coast

Judge, G. G., Hill, R. C., Griffiths, W. E., Lütkepohl, H., & Lee, T. C. (1982). *Introduction to the theory of econometrics*. New York: John Wiley and Sons

Judge, W. Q., Douglas, T. J., & Kutan, A. M. (2008). Institutional antecedents of corporate governance legitimacy. *Journal of Management, 34*(4), 765-785.

Kamla, R. (2007). Critically Appreciating Social Accounting and Reporting in the Arab Middle East: A Postcolonial Perspective. *Advances in International Accounting*, *20*, 105-177.

Karamanou, I., & Vafeas, N. (2005). The association between corporate boards, audit committees, and management earnings forecasts: An empirical analysis. *Journal of Accounting Research, 43*(3), 453-486.

Kelly, L. (1983). The development of a positive theory of corporate management's role in external financial reporting. *Journal of Accounting Literature*, *2*, 111-150.

Kennedy, P. (2008). *A guide to modern econometrics.* Oxford, UK: Blackwell.

Khlif, H., & Hussainey, K. (2014). The association between risk disclosure and firm characteristics: A meta-analysis. *Journal of Risk Research*, *19*(2), 181-211.

Khrawish, H. A., & Al-Sa'di, N. M. (2011). The impact of e-banking on bank profitability: Evidence from Jordan. *Middle Eastern Finance and Economics*, *13*, 142-158.

Krippendorf, K. (2004). *Content analysis: An introduction to its methodology*. Thousand Oaks, CA: Sage.

Digitized by Sam Jonah Library

© University of Cape Coast

Kunst, R. M., & Franses, P. H. (2011). Testing for seasonal unit roots in monthly panels of time series. *Oxford Bulletin of Economics and Statistics*, *73*(4), 469-488.

Kupper, E. F. (1998). Risk management in banking. In: C. Cassidy (ed.). *Risk and capital management: Proceedings of a conference on risk and capital management at H. C. Coombs Centre for Financial Studies* (pp. 25-38). Sydney: Australian Prudential Regulation Authority.

Kwiatkowski, D., Phillips, P. C., Schmidt, P., & Shin, Y. (1992). Testing the null hypothesis of stationarity against the alternative of a unit root: How sure are we that economic time series have a unit root? *Journal of Econometrics, 54*(1/3), 159-178.

Lajili, K. (2009). Corporate Risk Disclosure and Corporate Governance. *Journal of Risk and Financial Management*, 2, 94-117.

Lajili, K., & Zéghal, D. (2005). A content analysis of risk management disclosures in Canadian annual reports. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, *22*(2), 125-142.

Larbi, A. A. (2010). *Financial risks management practices of multinational companies in Ghana*. Bachelor dissertation, Ashesi University College, Ghana. Retrieved from https://air.ashesi.edu.gh/handle/20.500.11988/107.

Laux, C., & Leuz, C. (2009). The crisis of fair-value accounting: Making sense of the recent debate. *Accounting, Organizations and Society*, *34*(6/7), 826-834.

Digitized by Sam Jonah Library

© University of Cape Coast

Levin, A., Lin, C. F., & Chu, C. S. J. (2002). Unit root tests in panel data: asymptotic and finite-sample properties. *Journal of Econometrics, 108* (1), 1-24.

Lim, S., Matolcsy, Z., & Chow, D. (2007). The association between board composition and different types of voluntary disclosure. *European Accounting Review*, *16*(3), 555-583.

Linsley, P. M., & Shrives, P. (2000). Risk management and reporting risk in the UK. *Journal of Risk, 3*, 115-129.

Linsley, P. M., & Shrives, P. J. (2003). Risk reporting by German and UK companies: hot air or meaningful disclosure? Paper presented at Financial Reporting and Business Communication conference, Cardiff, United Kingdom.

Linsley, P. M., & J. Shrives, P. (2005). Transparency and the disclosure of risk information in the banking sector. *Journal of Financial Regulation and Compliance*, *13*(3), 205-214.

Linsley, P. M., & Shrives, P. J. (2006). Risk reporting: A study of risk disclosures in the annual reports of UK companies. *The British Accounting Review*, *38*(4), 387-404.

Linsley, P. M., & Lawrence, M. J. (2007). Risk reporting by the largest UK companies: Readability and lack of obfuscation. *Accounting, Auditing & Accountability Journal*, *20*(4), 620-627.

Digitized by Sam Jonah Library

© University of Cape Coast

Linsmeier, T. J., Thornton, D. B., Venkatachalam, M., & Welker, M. (2002). The effect of mandated market risk disclosures on trading volume sensitivity to interest rate, exchange rate, and commodity price movements. *The Accounting Review*, *77*(2), 343-377.

Lipunga, A. M. (2014). Determinants of Profitability of Listed Commercial Banks in Developing Countries: Evidence from Malawi. *Research Journal of Finance and Accounting*, *5*(6), 41-49.

Lopes, P. T., & Rodrigues, L. L. (2007). Accounting for financial instruments: An analysis of the determinants of disclosure in the Portuguese stock exchange. *International Journal of Accounting*, *42*(1), 25-56.

Mangena, M., & Chamisa, E. (2008). Corporate governance and incidences of listing suspension by the JSE Securities Exchange of South Africa: An empirical analysis. *The International Journal of Accounting*, *43*(1), 28-44.

Manu, F. (2017). *Performance of the Ghana Stock Exchange and economic growth*. Bachelor dissertation, Ashesi University College, Ghana. Retrieved from https://air.ashesi.edu.gh/handle/20.500.11988/322.

Marshall, A. P., & Weetman, P. (2002). Information asymmetry in disclosure of foreign exchange risk management: can regulation be effective? *Journal of Economics and Business*, *54*(1), 31-53.

Marston, C. L., & Shrives, P. J. (1996). A review of the development and use of explanatory models in financial disclosure studies. Paper presented at the 19th European Accounting Association Congress, Bergen, Norway.

Digitized by Sam Jonah Library

© University of Cape Coast

Marston, C. L., & Shrives, P. J. (1991). The use of disclosure indices in accounting research: a review article. *The British Accounting Review*, *23*(3), 195-210.

Meek, G. K., Roberts, C. B., & Gray, S. J. (1995). Factors influencing voluntary annual report disclosures by US, UK and continental European multinational corporations. *Journal of International Business Studies*, *26*(3), 555-572.

Meijer, M. (2011). *Risk disclosures in annual reports of Dutch listed companies during the years 2005-2008*. (Master's thesis, University of Twente).

Mensah, L., Bokpin, G. A., & Owusu-Antwi, G. (2016). Time your investment on the Ghana Stock Exchange (GSE). *African Journal of Economic and Management Studies*, *7*(2), 256-267.

Merton, R. C. (1989). On the application of the continuous-time theory of finance to financial intermediation and insurance. *The Geneva Papers on Risk and Insurance-Issues and Practice*, *14*(3), 225-261.

Miihkinen, A. (2012). What drives quality of firm risk disclosure? The impact of a national disclosure standard and reporting incentives under IFRS. *The International Journal of Accounting*, *47*(4), 437-468.

Mohobbot, A. (2005). Corporate risk reporting practices in annual reports of Japanese companies. *Japanese Journal of Accounting*, *16*(1), 113-133.

Mokhtar, E. S. & Mellet, H. (2013). 'Competition, corporate governance, ownership structure and risk reporting. *Managerial Auditing Journal*, *28*(9), 838-856.

Digitized by Sam Jonah Library

© University of Cape Coast

Murugesu, J., & Santhapparaj, A. S. (2010). Impact of risk disclosure in the prospectus on valuation and initial returns of initial public offerings in Malaysia. *IUP Journal of Applied Finance, 16*(6), 30-53.

Muzahem, A. (2011). *An empirical analysis on the practice and determinants of risk disclosure in an emerging capital market: the case of United Arab Emirates*. Doctoral dissertation, University of Portsmouth, England. Retrieved from http://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.588615.

Naceur, S. B., & Goaied, M. (2008). The determinants of commercial bank interest margin and profitability: Evidence from Tunisia. *Frontiers in Finance and Economics, 5*(1), 106-130.

Naceur, S. B., & Kandil, M. (2009). The impact of capital requirements on banks' cost of intermediation and performance: The case of Egypt. *Journal of Economics and Business*, *61*(1), 70-89.

Nahar, S. (2015). Risk disclosure practices: their determinants and association with bank performance. Doctoral Thesis. Swinburne University of Technology.

Nekhili, M., Boubaker, S., & Lakhal, F. (2012). Ownership structure, voluntary R&D disclosure and market value of firms: the French case. *International Journal of Business, 17*(2), 126.

Neter, J., Wasserman, W., & Kutner, M. G. (1989). *Applied linear regression analysis*. Homewood, IL: Irwin.

Digitized by Sam Jonah Library

© University of Cape Coast

Neri, L. (2010). The informative capacity of risk disclosure: evidence form Italian stock market. *Proceedings of the Fifth international workshop on accounting and regulation conference. European Institute for Advanced Studies in Management*.

Nier, E., & Baumann, U. (2006). Market discipline, disclosure and moral hazard in banking. *Journal of Financial Intermediation*, *15*(3), 332-361.

Ntim, C. G., Lindop, S., & Thomas, D. A. (2013). Corporate governance and risk reporting in South Africa: A study of corporate risk disclosures in the pre- and post-2007/2008 global financial crisis periods. *International Review of Financial Analysis*, *30*, 363-383.

Obamuyi, T. M. (2013). Determinants of banks' profitability in a developing economy: Evidence from Nigeria. *Organizations and Markets in Emerging Economies*, *4*(2), 97-111.

Oldfield, G. S., & Santomero, A. M. (1995). *The place of risk management in financial institutions*. Wharton School, University of Pennsylvania.

Oliver, C. (1991). Strategic responses to institutional processes. *Academy of Management Review*, *16*(1), 145-179.

Oliveira, J., Rodrigues, L.L., & Craig, R. (2011b). Voluntary risk reporting to enhance institutional and organizational legitimacy: evidence from Portuguese bank. *Journal of Financial Regulation and Compliance, 19*(3) 271-289.

Digitized by Sam Jonah Library

© University of Cape Coast

Opoku-Adarkwa, R. (2011). *Risk management and bank performance: a case study of First Atlantic Merchant Bank Ghana Limited (FAMBL)*. Master's dissertation, Kwame Nkrumah University of Science and Technology.

Owusu-Antwi, G. (2011). Impact of financial reforms on the banking system in Ghana. *International Business & Economics Research Journal*, *8*(3), 77-100.

Owusu-Ansah, S. (2005). Factors influencing corporate compliance with financial reporting requirements in New Zealand. *International Journal of Commerce and Management*, *15*(2), 141-157.

Parker, L. D. (2005). Social and environmental accountability research: A view from the commentary box. *Accounting, Auditing & Accountability Journal*, *18*(6), 842-860.

Payle, D. (1997). Bank risk management. *University of California., Berkeley Research Program in Finance Working Papers. No: RPF-272*.

Perrow, C. (1986). *Complex organizations*. New York: Random House.

Perry, P. (1992). Do banks gain or lose from inflation? *Journal of Retail Banking*, *14*(2), 25-31.

Pyle, D. H. (1999). Bank risk management: theory. In *Risk Management and Regulation in Banking* (pp. 7-14). Springer, Boston, MA.

Qin, X., & Dickson, P. (2012). Commercial banks profitability position: the case of Tanzania. *International Journal of Business and Management*, *7*(13), 136-144.

Digitized by Sam Jonah Library

© University of Cape Coast

Quaye, I., Mu, Y., Abudu, B., & Agyare, R. (2016). Review of Stock Markets' Reaction to New Events: Evidence from Brexit. *Journal of Financial Risk Management*, *5*(4), 281-314.

Rajab, B., & Handley-Schachler, M. (2009). Corporate risk disclosure by UK firms: trends and determinants. *World Review of Entrepreneurship, Management and Sustainable Development*, *5*(3), 224-243.

Rasiah, D. (2010). Theoretical framework of profitability as applied to commercial banks in Malaysia. *European Journal of Economics, Finance and Administrative Sciences*, *19*(19), 75-97.

Redja, G. (1998), *Principles of Risk Management and Insurance*. New York: Addison-Wesley.

Revell, J. (1979). *Inflation & Financial Institutions*. Financial Times Limited.

Ross, S. A. (1977). The determination of financial structure: The incentive Signalling approach. *Bell Journal of Economics*, *8*(1), 23-40.

Sachs, S., Rühli, E., & Kern, I. (2009). *Sustainable Success with Stakeholders: The untapped potential*. London: Palgrave Macmillan.

Salkeld, M. (2011). Determinants of banks' total risk: Accounting ratios and macroeconomic indicators. Retrieved from http://digitalcommons.iwu.edu/busadmin_honproj/24.

Santomero, A. M. (1997). Commercial bank risk management: an analysis of the process. *Journal of Financial Services Research*, *12*(2/3), 83-115.

Schmit, J. T., & Roth, K. (1990). Cost effectiveness of risk management practices. *Journal of Risk and Insurance*, *57*(3), 455-470.

Digitized by Sam Jonah Library

© University of Cape Coast

Scott, W. R. (1987). The adolescence of institutional theory. *Administrative Science Quarterly*, *32*(4), 493-511.

Shapiro, A. C. (2008). *Multinational financial management*. London: John Wiley & Sons.

Shapiro, S. P. (2005). Agency theory. *Annual Review of Sociology*, *31*, 263-284.

Solomon, J. (2010). *Corporate governance and accountability* (3rd ed.). Chichester, UK: Wiley.

Solomon, J. F., Solomon, A., Norton, S. D., & Joseph, N. L. (2000). A conceptual framework for corporate risk disclosure emerging from the agenda for corporate governance reform. *The British Accounting Review*, *32*(4), 447-478.

Spence, M. (1973). Job Market Signaling. *The Quarterly Journal of Economics*, *87*(3), 355-374.

Spence, C., Husillos, J., & Correa-Ruiz, C. (2010). Cargo cult science and the death of politics: A critical review of social and environmental accounting research. *Critical Perspectives on Accounting*, *21*(1), 76-89.

Strebel, R. (2009). Time to bring real shareholders back on board. *Financial times*, *13*.

Surendra, A. (2010). Aristotelian-Thomistic virtue ethics, emotional intelligence & decision-making. *Advances in Management*, *3*(4), 7-13.

Taylor, D., & Zhang, J. X. (2011). Corporate risk disclosures: the influence of institutional shareholders and the audit committee. *Journal of Corporate Finance*, *9*(1), 1-27.

Digitized by Sam Jonah Library

© University of Cape Coast

Taylor, G., Tower, G., & Neilson, J. (2010). Corporate communication of financial risk. *Accounting & Finance, 50*(2), 417-446.

Tencati, A., Perrini, F., & Pogutz, S. (2004). New tools to foster corporate socially responsible behaviour. *Journal of Business Ethics, 53*(1/2), 173-190.

Tsalavoutas, I., Evans, L., & Smith, M. (2010). Comparison of two methods for measuring compliance with IFRS mandatory disclosure requirements. *Journal of Applied Accounting Research, 11*(3), 213-228.

Tsamenyi, M., Enninful-Adu, E., & Onumah, J. (2007). Disclosure and corporate governance in developing countries: Evidence from Ghana. *Managerial Auditing Journal*, *22*(3), 319-334.

Uddin, M. H., & Hassan, M. K. (2011). Corporate risk information in annual reports and stock price behavior in the United Arab Emirates. *Academy of Accounting and Financial Studies Journal*, *15*(1), 59-84.

Ullmann, A. A. (1985). Data in search of a theory: A critical examination of the relationships among social performance, social disclosure, and economic performance of US firms. *Academy of management review*, *10*(3), 540-557.

UNCTAD. (2017). *The role of disclosure in risk assessment and enhancing the usefulness of corporate reporting in decision making.* Geneva: United Nations.

Van Greuning, H., & Brajovic-Bratanovic, S. (2009). *Analyzing banking risk: a framework for assessing corporate governance and risk management*. Washington, D.C.: World Bank.

Digitized by Sam Jonah Library

© University of Cape Coast

Wallace, R. O., Naser, K., & Mora, A. (1994). The relationship between the comprehensiveness of corporate annual reports and firm characteristics in Spain. *Accounting and Business Research*, *25*(97), 41-53.

Watson, A., Shrives, P., & Marston, C. (2002). Voluntary disclosure of accounting ratios in the UK. *British Accounting Review*, *34*(4), 289-313.

Welbeck, E. E., Owusu, G. M. Y., Bekoe, R. A., & Kusi, J. A. (2017). Determinants of environmental disclosures of listed firms in Ghana. *International Journal of Corporate Social Responsibility*, *2*(1), 2-11.

Wong, S. P. (2012). The impact of culture on risk management disclosures: an exploratory study of international banks. Lismore, New South Wales.

World Bank. (2005). Report on the observance of standards and codes (ROSC), Corporate Governance Country Assessment, Ghana, May. Washington, D. C.: World Bank.

Yakubu, I. N. (2016). Bank-specific and macroeconomic determinants of commercial banks profitability in Ghana. *International Finance and Banking*, *3*(2), 89-99.

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APPENDICES.

A: Quality of risk management disclosure checklist

Criteria	Disclosure items
A. Relevance	1. Disclosure of risk management
	2. Disclosure of risk occurrence probabilities
	3. Disclosure of the impact of risk (positive or negative, quantitative or qualitative both current and expected)
	4. Disclosure of significant risk factors and risk concentrations
	5. Disclosure of the impact of development in current activities of the company on the opportunities and threats that possess the company
B. Reliability	1. Disclosure of quantitative information about risk
	2. Disclosure of information about measurement models used
	3. Disclosure of the basic assumptions underlying the measurement models used
	4. Disclosure of the limitations of the measurement used
C. Understandability	1. Disclosure of specific definition for each type of risk
	2. Definition of risk management
	3. Disclosure of each type of risk separately
	4. Using tables, graphs and illustrations along with descriptive narrative information
	5. Definition for the measurement models used
	6. Presentation of risk information in the context of the company's strategy and past performance
	7. Presentation of risk information in the context of the company's plans and expectations for the future
D. Comparability	1. Consistency in the presentation bases of risk information from period to period
	2. Inclusion of comparable risk information for the year preceding the reporting year
	3. Consistency in the measurement bases of risk from period to period
	4. Disclosure of any changes in risk compared to the period preceding the current reporting period
	5. Disclosure of any changes in risk treatment compared to the previous period
	6. Disclosure of any changes in risk management strategies compared to the previous year

Source: Hassan (2014)

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B: Extent of Risk Management Disclosure Checklist

Category	Disclosure Items
Board and management structure related to risk management	1. Risk Governance structure
	2. Bank's philosophy towards risk management, its risk culture and risk appetite
	3. Functions of audit committee and risk committee
	4. Discussion of compliance with BOG Corporate governance guidelines
	5. Discussion of compliance with Basel II
	6. Statement attesting effectiveness of risk management system
	7. Compliance with IFRs
	8. Statement expressing satisfaction of effective management of all material risks
Market Risk	9. Brief definition and features of market risk
	10. Market risk responsibility, structure, policies etc.
	11. Methodology (procedure) used to measure market price risk.
	12. Quantitative analysis of market risk – Currency
	13. Quantitative analysis of market risk - Interest rate
	14. Explanations supported by graphs and tables
Liquidity Risk	15. Brief definition of liquidity risk
	16. Liquidity risk responsibility, structure, policies etc.
	17. Key procedures to manage liquidity risk
	18. Quantitative analysis of liquidity risk
	19. Explanation supported by graphs and tables
Credit Risk	20. Brief definition of credit risk
	21. Credit risk responsibility, structure, policies etc.
	22. Key procedures to manage credit risk
	23. Quantitative analysis of credit risk
	24. Explanation supported by graphs and tables
Operational risk and other risks	25. Brief definition and features of operational risk and other risks
	26. Operational risk responsibility, structure, policies etc
	27. Key procedures to manage operational risk and other risks

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	28. Quantitative analysis of operational risk
	29. Types of other risks (e.g. environmental, social, strategic, reputational etc)
Capital Management	30. Brief definition of capital management
	31. Capital management framework, responsibility, structure, policies etc
	32. Regulatory capital discussion
	33. Capital adequacy – tier 1 and 2 capital and ratios
	34. Explanation supported by graphs and tables

Source: Lipunga (2014)

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C: Extent of risk management disclosure by each bank

C-1: Access Bank

Year	Board & mgt structure	Market risk	Liquidity risk	Credit risk	Operational & other risk	Capital Mgt	Total	RDI
2012	5	5	3	4	3	4	24	0.7059
2013	5	4	3	4	2	4	22	0.6471
2014	5	4	3	4	2	4	22	0.6471
2015	5	4	3	4	2	4	22	0.6471
2016	5	5	3	4	2	4	23	0.6765

C-2: ADB

Year	Board & mgt structure	Market risk	Liquidity risk	Credit risk	Operational & other risk	Capital Mgt	Total	RDI
2012	5	4	3	4	3	4	23	0.6765
2013	4	4	3	4	3	4	22	0.6471
2014	4	4	3	4	3	4	22	0.6471
2015	4	4	3	4	3	4	22	0.6471
2016	4	4	3	4	3	4	22	0.6471

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C-3: CAL Bank

Year	Board & mgt structure	Market risk	Liquidity risk	Credit risk	Operational & other risk	Capital Mgt	Total	RDI
2012	5	4	3	3	3	4	22	0.6471
2013	5	4	3	3	3	4	22	0.6471
2014	4	4	3	3	3	4	21	0.6177
2015	5	4	3	2	2	4	20	0.5882
2016	5	4	3	2	3	4	21	0.6177

C-4: Eco Bank

Year	Board & mgt structure	Market risk	Liquidity risk	Credit risk	Operational & other risk	Capital Mgt	Total	RDI
2012	5	5	5	5	4	5	29	0.8529
2013	5	5	5	5	4	5	29	0.8529
2014	5	5	5	5	4	5	29	0.8529
2015	5	5	5	5	4	5	29	0.8529
2016	5	5	5	5	4	5	29	0.8529

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C-5: GCB Bank

Year	Board & mgt structure	Market risk	Liquidity risk	Credit risk	Operational & other risk	Capital Mgt	Total	RDI
2012	6	4	4	4	3	4	25	0.7353
2013	6	4	4	4	3	4	25	0.7353
2014	5	4	4	4	3	4	24	0.7059
2015	5	4	4	4	3	4	24	0.7059
2016	5	4	4	4	3	4	24	0.7059

C-6: HFC Bank

Year	Board & mgt structure	Market risk	Liquidity risk	Credit risk	Operational & other risk	Capital Mgt	Total	RDI
2012	5	5	3	4	3	4	24	0.7059
2013	5	4	3	4	3	4	23	0.6765
2014	5	4	3	4	3	4	23	0.6765
2015	5	4	3	4	3	4	23	0.6765
2016	5	4	3	4	3	4	23	0.6765

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C-7: Standard Chartered Bank

Year	Board & mgt structure	Market risk	Liquidity risk	Credit risk	Operational & other risk	Capital Mgt	Total	RDI
2012	5	4	3	4	3	4	23	0.6765
2013	5	4	3	4	3	4	23	0.6765
2014	5	4	3	4	2	4	22	0.6471
2015	5	4	3	4	2	4	22	0.6471
2016	5	5	3	4	2	4	23	0.6765

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D: Extent of risk management disclosure index score (Average & proportion)

Banks	2012	2013	2014	2015	2016	Total	Average	Bank's share in total RDI
Access	0.7059	0.6471	0.6471	0.6471	0.6765	3.3235	0.6647	**0.136804**
ADB	0.6765	0.6471	0.6471	0.6471	0.6471	3.2647	0.6529	**0.134383**
CAL	0.6471	0.6471	0.6176	0.5882	0.6176	3.1176	0.6235	**0.128329**
Eco bank	0.8529	0.8529	0.8529	0.8529	0.8529	4.2647	0.8529	**0.175545**
GCB	0.7353	0.7353	0.7059	0.7059	0.7059	3.5882	0.7176	**0.1477**
HFC	0.7059	0.6765	0.6765	0.6765	0.6765	3.4118	0.6824	**0.140436**
Standard Chartered	0.6765	0.6765	0.6470	0.6471	0.6765	3.3235	0.6647	**0.136804**
Total	5	4.8824	4.7941	4.7647	4.8529	24.294	4.8588	**1**
Average	**0.7143**	**0.6975**	**0.6849**	**0.6807**	**0.6933**	**3.4706**	**0.6941**	

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E: Quality of risk management by categories

Year	Bank	Relevance	Reliability	Understandability	Comparability
2012	Access	2	2	5	3
2013	Access	2	2	4	2
2014	Access	2	2	5	2
2015	Access	2	2	4	3
2016	Access	3	2	5	3
2012	ADB	2	2	6	3
2013	ADB	1	2	5	3
2014	ADB	2	2	5	2
2015	ADB	2	2	5	2
2016	ADB	2	2	6	2
2012	CAL Bank	3	2	5	3
2013	CAL Bank	3	2	4	2
2014	CAL Bank	2	2	4	2
2015	CAL Bank	2	2	3	3
2016	CAL Bank	2	2	5	3
2012	Eco Bank	3	2	6	3
2013	Eco Bank	3	2	6	3
2014	Eco Bank	3	2	6	3
2015	Eco Bank	3	2	7	3
2016	Eco Bank	3	2	7	3
2012	GCB	3	2	6	3
2013	GCB	3	2	5	3
2014	GCB	3	2	5	3
2015	GCB	3	2	6	3
2016	GCB	3	2	6	3
2012	HFC Bank	3	2	5	3
2013	HFC Bank	2	2	5	3
2014	HFC Bank	3	2	5	2
2015	HFC Bank	2	2	5	3
2016	HFC Bank	2	2	5	3
2012	Standard chartered	3	2	5	3
2013	Standard chartered	2	2	5	2
2014	Standard chartered	2	2	4	3
2015	Standard chartered	2	2	5	3
2016	Standard chartered	3	2	5	3

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	Total	**86**	**70**	**180**	**96**
	Maximum possible disclosure	175	120	245	210
	Percentage of disclosure	49.14%	58.33%	73.47%	45.71%

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F: Average score of quality of risk management disclosure

Banks	**2012**	**2013**	**2014**	**2015**	**2016**
Access	0.5455	0.4545	0.5	0.5	0.5909
ADB	0.5909	0.5	0.5	0.5	0.5455
CAL	0.5909	0.5	0.4545	0.4545	0.5455
Eco bank	0.6364	0.6364	0.6364	0.6818	0.6818
GCB	0.6364	0.5909	0.5909	0.6364	0.6364
HFC	0.5909	0.5454	0.5455	0.5455	0.5455
Standard Chartered	0.5909	0.5	0.5	0.5455	0.5909
Total	4.1818	3.7273	3.7273	3.8636	4.1364
Annual Average	0.5974	0.5325	0.5325	0.5519	0.5909

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G: Correlation Matrix

	ERMDI	QRMDI	BS	ID	ACI	LnSIZE	LIQ	LEV	ACS	RCI	PROF	ACM	OWN	GDPG	INF
ERMDI	1														
QRMDI	0.809***	1													
BS	0.659***	0.628***	1												
ID	0.625***	0.608***	0.842***	1											
ACI	0.021	0.226	0.456***	0.440***	1										
LnSIZE	0.485***	0.454***	0.331*	0.413**	.174	1									
LIQ	-0.002	-0.015	0.180	0.052	0.202	-0.320*	1								
LEV	0.371**	0.349**	0.180	0.305*	-0.025	-0.061	0.393**	1							
ACS	0.277	0.264	0.569***	0.451***	0.537***	-0.006	0.316*	0.232	1						
RCI	-0.327*	-0.136	0.179	0.330*	0.758***	0.133	0.124	-0.190	0.222	1					
PROF	0.180	0.108	0.349**	0.164	0.373**	0.228	0.358**	-0.032	0.076	0.271	1				
ACM	0.036	0.002	0.017	0.063	-0.136	-0.452***	0.407**	0.606***	0.422**	-0.193	-0.395**	1			
OWN	0.118	-0.077	-0.027	-0.104	0.076	0.314*	-0.030	-0.241	-0.044	0.007	0.341**	-0.378**	1		
GDPG	0.146	0.122	0.055	-0.170	0.095	-0.343**	0.268	0.028	0.023	-0.171	0.289*	-0.039	0.000	1	
INF	-0.141	-0.074	-0.057	0.177	-0.090	0.362**	-0.307*	-0.042	-0.036	0.171	-0.353**	0.037	0.000	-0.986***	1

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