

IT GOVERNANCE PRACTICES IN COMMERCIAL BANKS IN KENYA

BY

MUNENE K. JOHN

D61/75383/2009

**A MANAGEMENT RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT
OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS
ADMINISTRATION, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI**

NOVEMBER 2012

Declaration

This research project is my original work and has not been submitted for a degree in this or any other University for examination.

Signed: _____ Date:

Munene K. John

D61/75383/2009

This research project has been submitted with my approval as the University supervisor

Signed: _____ Date:

James T. Kariuki

Lecturer, Department of Management Science

School of Business

University of Nairobi

Acknowledgements

May I take this opportunity to acknowledge the support of the teaching and support staff at the School of Business, University of Nairobi.

Special thanks go to my supervisor, Mr. J.T. Kariuki for his valuable guidance, patience, wisdom and dedication which has mentored me through this research project. His immense contribution has been a major reason for the achievement of this great and successful outcome.

Special and profound gratitude and appreciation to my entire family and friends for believing in my capabilities. They have shown their dedication to my cause in many great ways through their unconditional love, encouragement, understanding and support.

Special thanks to all the respondents for taking their valuable time to provide me with the necessary information.

Finally, to all my colleagues' at Image Registrars, Michezoafrika and The National Gender Commission, thank you and May God bless you for your moral support.

Dedication

Special dedication to God for granting me this victory, and to my entire family for their overwhelming support and appreciation.

Abstract

The survey had two major objectives. First was to establish the current status of IT Governance practices in Kenyan commercial banks. Further it set out to investigate the challenges that Kenyan Commercial banks face while implementing IT Governance. This was in attempt to investigate the IT-Governance practices in commercial banks in Kenya.

In undertaking the study, commercial banks in Kenya were targeted. Primary data was collected from 78 respondents drawn from the commercial banks using a semi-structured questionnaire. The questionnaires were administered electronically while others were administered using “drop and pick later” method. The respondents were senior managers involved in business and IT strategy formulation and implementation. The commercial banks were identified using sources from Central Bank of Kenya (CBK). The analysis was done through means, standard deviations and factor analysis and was presented through tables, frequencies and percentages.

From the data analysis, it was established that the majority of the banks were locally owned as opposed to being foreign with over sixty percent and have several branches. Many have been in operation for over eleven years. There was evidence that a lot of respondents were from the chief information officer designation. The strategy committee meets quarterly to look at how they can implement and plan good strategy processes for IT governance. The research also noted that the review of budgets and plans isn't done regularly to conform to the IT governance implementation hence non-adherence to IT standards governance framework.

Arising from the study findings, it is recommended that IT- Governance matters need to be given more prominence among the banks. The role of CBK in the process needs to be reviewed to improve on IT governance practices in commercial banks in Kenya. Commercial Banks should act as models to the other business fraternity in implementation and adherence to standard IT processes that conform with the IT governance in business practices. It's evident that there is need to look.

Given the level of limitations encountered, it was concluded that effective IT governance process is a function of many facets as evidenced by the study. The Central Bank as the main controller of both the commercial banks, its machinery has to have the best systems to ensure that there is IT governance becomes a central driver to ensure achievement of IT business strategy alignment, risk management and value delivery from the huge ICT investments. Every officer with a responsibility on the IT governance process must be well endowed with requisite skills and theory to ensure compliance and prudent utilization of the strategies in place. IT governance policy implementation, budget implementation, planning and the resource allocation function have all been confirmed as key deliverables in the IT governance process.

Table of Contents

| | |
|---|------------|
| Declaration | ii |
| Acknowledgements..... | iii |
| Dedication..... | iv |
| Abstract | v |
| Table of Contents..... | vii |
| List of Abbreviations..... | x |
| List of Figures | xi |
| List of Tables..... | xii |
| CHAPTER ONE..... | 1 |
| INTRODUCTION | 1 |
| 1.1 Background of the Study | 1 |
| 1.1.1 Commercial Banks in Kenya | 2 |
| 1.2 Statement of the Problem..... | 3 |
| 1.3 Objectives of the study | 5 |
| 1.4 Value of the Study | 5 |
| CHAPTER TWO..... | 6 |
| LITERATURE REVIEW | 6 |
| 2.1 Background information..... | 6 |
| 2.2 IT Governance | 7 |
| 2.2.1 IT Governance Framework..... | 9 |
| 2.2.2 Setting Objectives and Measuring Performance..... | 11 |
| 2.2.3 IT Governance Success Factors..... | 13 |
| 2.3 Chapter Summary | 14 |
| CHAPTER THREE | 15 |
| RESEARCH METHODOLOGY..... | 15 |
| 3.1 Research Design | 15 |
| 3.2 Population..... | 15 |

| | |
|--|-----------|
| 3.3 Data Collection | 15 |
| 3.4 Data Analysis..... | 16 |
| CHAPTER FOUR | 17 |
| ANALYSIS AND PRESENTATION OF DATA..... | 17 |
| 4.1 Introduction..... | 17 |
| 4.2 General Information of the Respondents | 17 |
| 4.2.1 Classification of ownership of the commercial bank | 17 |
| 4.2.2 The Number of Local Branches..... | 18 |
| 4.2.3 Years the Bank has been in Operation..... | 19 |
| 4.2.4 Designations Level of Respondents..... | 20 |
| 4.2.5 The frequency of IT strategy Committee meeting..... | 21 |
| 4.2.6 The board reviews of IT budgets and plans on regular basis | 22 |
| 4.2.7 Structured Processes for Good IT Governance | 23 |
| 4.2.8 The Banks Adherence to Standard IT Process Governance Frame Work e.g. COBIT, VALIT, ISO/IEC 17799:2005 | 24 |
| 4.2.9 Best Facts that Characterizes IT Governance at the Bank..... | 25 |
| 4.2.10 Measure of the Effectiveness of IT Governance Strategies Within the Organization..... | 26 |
| 4.3 Assessments of the Banks Best practices | 27 |
| 4.4 Challenges hindering successful adoption of appropriate IT governance framework | 29 |
| CHAPTER FIVE | 31 |
| DISCUSSION, CONCLUSION AND RECOMMENDATIONS..... | 31 |
| 5.0 Introduction..... | 31 |
| 5.1 Discussion..... | 31 |
| 5.1.1 Measure of the effectiveness of IT governance strategies within the organization..... | 31 |
| 5.1.2 Assessments of the Banks Best practices | 32 |
| 5.1.3 Challenges Hindering Successful Adoption of Appropriate IT Governance Framework. | 32 |
| 5.2 Conclusions..... | 33 |
| 5.3 Recommendations..... | 33 |

| | |
|---|-----------|
| 5.4 Limitations of the Study | 34 |
| 5.5 Suggestions for Further Research..... | 34 |
| REFERENCES | 35 |
| Appendix 1: Questionnaire..... | 38 |
| Appendix II: List of Banks and Institutions in Kenya (Source Central Bank of Kenya)..... | 42 |

List of Abbreviations

| | |
|--------------|---|
| BMIS | Business-Model-for-Information-Security |
| BSC | Balance Score Card |
| CBK | Central Bank of Kenya |
| CEO | Chief Executive Officer |
| CIO | Chief Information Officer |
| COBIT | Control Objectives for Information and related Technology |
| IS | Information System |
| ISACA | Information Systems Audit and Control Association |
| IT | Information Technology |
| ITGI | Information Technology Governance Institute |
| KBA | Kenyan Banks Association |
| ROI | Return on Investment |
| SLA | Service Level Agreement |
| SWIFT | Society for Worldwide Interbank Financial Telecommunication |
| TCO | Total Cost of Ownership |
| VALIT | Information Technology Value framework |

List of Figures

| | |
|---|----|
| Figure 2.1: COBIT 5 Principles (ISACA, 2012) pg 19..... | 11 |
| Figure 2.2: Measuring Value (ITGI, 2008) Pg 20..... | 12 |
| Figure 2.3: Capability Maturity Model (IT Governance Institute, 2008) pg. 21 | 13 |
| Figure 4.1: Distribution of Respondents by Banks Ownership Structure. | 17 |
| Figure 4.2: Distribution of respondents by local branches..... | 18 |
| Figure 4.3: Distribution of years the Bank has been in operation..... | 19 |
| Figure 4.4: Distribution of Designation levels. | 20 |
| Figure 4.5: Distribution of IT strategy committee meeting..... | 21 |
| Figure 4.6: Distribution of IT budgets and plans. | 22 |
| Figure 4.7: Distribution of Structured Process for Good IT Governance. | 23 |
| Figure 4.9: Distribution of facts that characterizes IT governance in the bank. | 25 |
| Figure 4.10: Distribution of effectiveness of IT governance strategies within the organization .. | 26 |

List of Tables

| | |
|---|----|
| Table 4.1: Distribution of respondents by bank ownership structure. | 17 |
| Table 4.2: Distribution of Number of Local branches..... | 18 |
| Table 4.3: Years the Bank has been in Operation | 19 |
| Table 4.4: Designation Level of Respondents | 20 |
| Table 4.5: The Frequency of IT Strategy Committee Meeting | 21 |
| Table 4.6: The board reviews of IT budgets and plans on regular basis | 22 |
| Table 4.7: Structured Processes for Good IT Governance | 23 |
| Table 4.8: The Banks Adherence to Standard IT Process Governance Frame Work..... | 24 |
| Table 4.9: Levels that Characterizes IT Governance at the Bank | 25 |
| Table 4.10: Measure of Effectiveness of IT Governance Strategies Within the Organization. . | 26 |
| Table 4.11: Assessments of the Banks Best practices | 27 |
| Table 4.12:Challenges Hindering Successful Adoption of Appropriate IT Governance Framework..... | 29 |

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The increased adoption of Information and Communications Technology (ICT) by Kenyan commercial banks is as a result of the realization that ICT can have a significant impact on the success of the enterprise. Williams (2006) observes that the strategic application of ICT is the deciding factor between survival and extinction. According to Jayamaha (2008), the rapid advancement in ICT has had a profound impact on the banking industry and the wider financial sector over the last two decades as ICT has now become a tool that facilitates banks' organizational structures, business strategies, customer services and other related functions. Nolan et al (2005) noted that despite the significant role ICT plays in business, most boards of directors remained largely in the dark when it comes to IT strategy and governance. This trend has however changed with the introduction of Sarbanes-Oxley Act of 2002 that according to McCollum (2006), served to awaken directors and executive managers to their organization's dependence on IT, and the subsequent need to make IT governance a top priority.

A research by IT Governance Institute, ITGI (2008), found out that the number of enterprises that consider IT to be very important in the delivery of the overall enterprise strategy or vision has increased from 52 percent in 2003 to 57 percent in 2005 and 63 percent in 2007. This has resulted in huge IT budgets but the key concern according to ITGI (2006) has been whether the business value realized is commensurate to the level of investment. ISACA (2012) found out that organizations strive to maintain quality information to support business decisions, generate business value from IT-enabled investments, achieve operational excellence through reliable and efficient application of technology, and maintain IT-related risk at an acceptable level and optimize the cost of IT services and technology. To achieve all this, Grembergen (2008) observes that there is a need for specific focus on IT Governance which Consists of the leadership, organizational structures and processes that ensure that the organization's IT is able to sustains and extend the organization's strategy and objectives.

IT Governance Institute (ITGI) in ITGI (2009) defines IT Governance as the *"Responsibility of executives and the board of directors, and consists of the leadership, organisational structures and processes that ensure that the enterprise's IT sustains and extends the organisation's strategies and objectives"*

1.1.1 Commercial Banks in Kenya

The banking industry in Kenya is governed by the Companies Act, the Banking Act CAP 488, the Central Bank of Kenya Act CAP 491 and the various prudential guidelines issued by the Central Bank of Kenya (CBK). The sector was liberalized in 1995 and exchange controls lifted. The CBK, which falls under the Minister for Finance docket, is responsible for formulating and implementing monetary policy and fostering the liquidity, solvency and proper functioning of the financial system. As at December 2011, the Kenyan banking sector comprised 43 commercial banks, 1 mortgage finance company and 127 foreign exchange bureaus (CBK, 2010). Magutu et al (2010) observes that Commercial banks form the bulk of profit making financial institutions that offer a wide range of services e.g. deposit, loan and trading facilities. ICT has been noted as a key enabler as these banks continuously restructure their operations in order to achieve more cost effective and efficient operations and thereby achieve sustainable competitive advantage.

Anyanzwa (2011) notes that the reputation of the Kenyan banking sector has suffered from a series of scandals all attributed to poor governance. In 1998, several major Kenyan banks collapsed. These included; Trust Bank, Reliance Bank, Prudential Bank, Bullion Bank and another giant National Bank almost folded. To avoid this in future, CBK laid out broad principles, standards and requirements which are aligned with the principles enshrined in the Bank for International Settlements (BIS) Guidelines on "Enhancing Corporate Governance for Banking Organizations" and other international best practices on corporate governance (CBK, 2010). In his research Nworji et al (2011) concluded that corporate governance is necessary to the proper functioning of banks. ISACA (2012) further observes that the external legal, regulatory and contractual compliance requirements related to banks use of information and technology are

increasing, threatening value if breached. The compliance requires the proper application of IT Governance.

1.2 Statement of the Problem

Mirbaha(2008) notes that recent economic pressures and failure of organizations such as Enron, WorldCom, Global Crossing, and BreX, have led to an increased focus on corporate accountability. This could be traced to lack of IT governance. One example is the drafting and enactment of the Sarbanes-Oxley Act of 2002 which introduced legislation imposing new corporate governance requirements.

In Kenya, the banking sector fragility has mainly been attributed to poor governance, management and worsening economic conditions (Anyanzwa, 2011). A report by Central Bank of Kenya, CBK (2009) reveals that most banks in Kenya have been in the forefront in the adoption of Information and Communication technology. The permeating nature of IT has made the banking services inconceivable without the pervasive support of IT and communications. IT governance recognizes the central importance of IT and insists that it is driven by business and for business interests. This calls for IT agenda to be placed where it belongs - at board level. (Hawler, 2011). From their research Zhang et al (2011) found out that those firms with superior IT governance have at least 20 per cent higher profits than firms with poor governance, given the same strategic objectives.

As ITGI (2005) observes, the lack of attention by boards to IT matters has become a serious problem as over the last twenty years, IT has moved from providing largely back-office support to becoming the prime facilitator and enabler of the total business. ITGI (2008) further notes that ICT is not only critical in its support of key business processes, but also transformational. A study by PriceWaterHouseCoopers (ISACA, 2006) found out that while most organizations worldwide recognize the importance of IT governance, most do not have a holistic view that considers all its dimensions. The concept of IT governance as an umbrella framework encompassing a wide spectrum of arrangements, including the measurement of benefits, has yet to emerge. The survey

further revealed that IT alignment is the highest rated driver and desired outcome of IT governance practices.

A large majority of the respondents recognized the importance of IT alignment in order to deliver sustainable business results, and feel IT governance is one of the best means to achieve this. At the same time, however, the focus of IT governance initiatives is still very narrow by focusing mainly on risk and control. The initiatives are not considering IT governance from a holistic perspective that can be used to enhance the value of IT for the organization.

Makau (2010) observes that without proper IT Governance commercial banks ICT systems can lose integrity with serious implications on performance of a bank and can also result in breach of client confidentiality. He adds that necessary for commercial banks to have ICT governance standards to be able to meet compliance requirements e.g. Basel II and avoid commercial banks ICT project failure / resource wastage arising out of non-compliance with expected customer requirement standards.

CBK has been at the forefront in pushing Kenyan commercial banks to adopt good governance principles that address risks especially in operations e.g. CBK's Basel Committee on banking supervision formulated and issued a revised capital framework referred to as Basel II in June 2004 to help address risks emanating from use of ICT systems. During in-house meetings in many Kenyan commercial banks, the parties involved strive to answer the following questions; how do we harness the power of ICT effectively? How do we maximize investment in ICT? How do we mitigate the risks associated with ICT? All these questions point to and rely on one parameter: IT governance. The ever increasing importance of IT governance makes the need to investigate the current practice in Kenyan commercial relevant.

Hill et al. (2009) noted that while there are a number of management frameworks, models and standards available to guide in IT governance, ISACA's Control Objectives for Information and related Technology (COBIT) are the widely adopted framework for implementing IT Governance. The latest version is COBIT 5 that provides a framework for enterprises to achieve their goals and

deliver value through effective governance and management of enterprise. It also helps to create optimal value from IT by maintaining a balance between realizing benefits and optimizing risk levels and resource use. The framework brings together the five principles that allow the enterprise to build an effective governance and management framework based on a holistic set of seven enablers that optimizes information and technology investment and use for the benefit of stakeholders. This research will focus on Kenyan Commercial banks IT governance practices with a specific focus on the five domains starting with the three drivers; IT strategic alignment, IT resource management, and IT performance management. The two outcomes include; IT risk management and IT value delivery (ITGI, 2003). How do banks address the five domains of IT and uncover Challenges hinder the practice of IT Governance in Kenyan commercial banks.

1.3 Objectives of the study

The objectives of the study were to;

- a. Establish the current status of IT Governance practices in commercial banks in Kenya
- b. Establish challenges that Kenyan Commercial banks face while implementing IT Governance

1.4 Value of the Study

This research will provide a theoretical reference to Kenyan banks to facilitate the practice of IT governance. ICT has become the common denominator across organization in varied sectors hence the findings will be applicable across the business sectors and in government institutions. IT Governance is relatively a new concept and the research outcome will contribute toward understanding the state of IT governance theory and will be a useful to future researchers in the field of IT Governance.

CHAPTER TWO

LITERATURE REVIEW

2.1 Background information

Jayamaha (2008) notes that rapid advancement in ICT has had a profound impact on the banking industry and the wider financial sector over the last two decades and ICT has now become a tool that facilitates banks' organizational structures, business strategies, customer services and other related functions. Effective use of ICT is assisting banks to be more customers centric in their operations by building a more solid foundation in customer relationship management system. Awuondo (2008) observes that ICT helps banks grow a range of products/service while mitigating fraud levels and improving risk management, widen customer base, reduce transaction and operational cost and also help gain competitive advantage over others. Awuondo (2008) further observes that application of IT within banks in Kenya is manifested through: Networked branches, Automated teller machines, Point of Sale Banking, Mobile Banking, and Payment Transfers e.g. SWIFT.

A research by KPMG (2004), revealed that for many organizations, governing information technology and integrating it with the company's overall corporate governance has become a confusing and daunting duty for senior executives and board members. The report further noted that discussions on the subject often are disjointed, laced with technical jargons, which only serves to confuse the very people who need to understand how to govern Information Systems (IS). As a result, the business value created when a wellgoverned IS function is aligned with overall business goals remains unrealized. As Nworjiet.al (2011) observes Corporate Governance in the banking system has assumed heightened importance and has become an issue of global concern because it is required to lead to enhanced services and deepening of financial intermediation on the part of the banks and enables proper management of the operations of banks. According to ITGI, (2003), to fully realize stakeholder value, IT governance is necessary. Its two main goals that include the ability of IT to deliver value to the business, which is driven by the strategic alignment of IT with business, and the mitigation of IT risks, which is driven by embedding accountability into the enterprise

Most banks knowingly or unknowingly practice IT Governance but (Sekar V. G., 2010) observes that IT Governance framework would enable a bank to perform its business in an orderly and effective manner benefiting the customers and, in the process, aid in its own survival and growth. Sekar (2010) further observes that success of the banking business increasingly tends to hinge on the proper adoption and utilization of technology, but lately, IT Governance has assumed great significance. ITGI (2009) observes that frameworks, best practices and standards are useful only if they are adopted and adapted effectively. With the current emphasis on the US Sarbanes-Oxley Act of 2002 and similar regulatory requirements related to enterprise governance and control around the world, it is important that IT governance and control be well understood, well positioned and well implemented in the context of overall governance and control.

2.2 IT Governance

A typical organization has corporate governance, IT governance and IT management present. IT governance focuses on the IT-related aspects within a corporate governance framework (Kan 2003: 2). Corporate governance is the as the set of responsibilities and practices exercised by the board and executive management with the goal of providing strategic direction, ensuring that objectives are achieved, ascertaining that risks are managed appropriately and verifying that the enterprise's resources are used responsibly. ITGI (2009) notes that the terms 'governance', 'enterprise governance' and 'IT governance' may have different meanings to different individuals and enterprises depending on (amongst others) the organizational context (maturity, industry and regulatory environment) or the individual context (job role, education and experience).

The Institute of Systems Audit and Control Association in (ISACA, 2003) defines IT governance as *"The responsibility of executives and the board of directors, and consists of the leadership, organizational structures and processes that ensure that the enterprise's IT sustains and extends the organization's strategies and objectives"*

IT governance is not an isolated discipline but an integral part of enterprise governance. ITGI(2008) further advises that the board and executive management have the mandate to extend governance to IT and provide the leadership, organizational structures and processes that ensure

that the enterprise's IT supports and extends the enterprise's overall strategies and objectives. IT governance is concerned with two outcomes IT's delivery of value to the business and the mitigation of IT risks. It implies adoption of a well-defined framework of plan, do, check and act while at concurrently utilizing performance metrics, key goal indicators and maturity models.

The need for IT Governance has been driven several factors that include; the significant cost of IT, risks emanating from use of IT systems and desire to achieve value from IT.

In most organizations IT forms the largest category of expenditure after staffing costs, and it can be a difficult task to acquire a clear and complete picture of exactly how much is being spent, on what types of technology assets and processes, and where in the enterprise (ITGI, 2008). The networked economy creates new business opportunities, but also involves increasing risk in key areas such as business continuity, information security. According to ITGI(2006), Risks can lead to, the non-availability of business systems, particularly serve the customers facing, is too visible and costly for any enterprise to ignore. Through effective corporate organizations execute a strategic undertaking with an aim of avoiding the risk of failure. With IT Governance, Strategic IT decisions that will ensure IT value is realized are well derived and executed.

ITGI (2005) notes that IT is not an end in itself. It has no purpose and no value beyond supporting and enabling the business, thus there is a strong argument that ultimate responsibility for IT strategy setting and implementation should rest with the business leadership. This leads to Strategic Alignment. The creation of new value for the enterprise, maintaining and extending existing value, and eliminating initiatives and assets that are not creating sufficient value should drive ICT initiatives. Banks operate in a risky environment and IT governance helps in addressing IT-related risks and using IT to assist in managing business risks. ITGI (2005) also implores on the implementers to have the right capability to execute the strategic plan, and providing sufficient, appropriate and effective resources. IT Governance also helps organizations in tracking the achievement of the objectives of the enterprise and compliance with specific external requirements.

In a research on IT Global Status 2008, ITGI (2008) noted that “Organizations know who can help them implement IT governance, but appreciation for the available expertise and delivery capability is only average”. Weill et al (2004) found out that the best predictor to IT governance performance is the percentages of managers in leadership positions who can accurately describe IT governance. IT governance is the direct responsibility of board members and executive management, and governance-related roles and activities need to be carried out by executives, managers and staff in almost every function and business unit across the enterprise. ITGI (2005) proposes the following four levels in the organisational structure. At the top are the board of directors who bears the ultimate responsibility. They should address IT governance like any strategic agenda during their meetings.

Next in line are the executive managers who have a day-to-day responsibility for embedding processes that provide information to support governance and practices throughout the enterprise and communicating their importance to the enterprise’s employees, including any outsourced functions. The third level is that of Chief Information Officer who should understand how technology can contribute to business value by enabling the delivery of business change through innovation and delivering services to support critical business processes. Last in line are the Business Unit Executives who bear the majority of the day-to-day responsibilities in operating within the governance framework and processes. They and their teams are the ones who sponsor the investments and are accountable for, and live with, the results (ITGI ,2005).

2.2.1 IT Governance Framework

According to ITGI (2006), an increasing IT-enabled business investment that is managed well within an effective governance framework will provide organizations with significant opportunities to create value. In contrast, without effective governance and good management, IT enabled business investments provide an equally significant opportunity to destroy value. For a start, ITGI (2008) proposes that business executives ask themselves the following questions; Are we doing the right things (Strategic question), are we doing them the right way (Architecture question)?, are we getting them done well (Delivery question)?, and are we getting the benefits

(Value question)? Two frameworks namely COBIT 4.1 and VAL IT were advanced to help address the above questions. The main distinction between the two is that while COBIT focuses on architecture and delivery, Val IT focuses on two strategies and value.

The benefit of a well-recognized governance framework is that it will enable a common language and a shared commitment. It will be acceptable to all stakeholders, including stock market analysts who increasingly are monitoring IT investment performance to provide guidance to potential investors and divestures. Control Objectives for Information and related Technology (COBIT) from ITGI, provides a comprehensive framework for the management and delivery of high-quality information technology-based services. It sets best practices for the means of contributing to the process of value creation. (ITGI, 2006). Organizations will consider and use a variety of IT models, standards and best practices. These must be understood in order to consider how they can be used together, with COBIT acting as the consolidator ('umbrella') (BardenHorst, 2009). The recent version of COBIT Framework is Version 5 that consolidates COBIT 4.1, Val IT and Risk IT into one framework, and has been updated to align with current best practices e.g. ITIL V3 2011, TOGAF.

COBIT 5 builds and expands on COBIT 4.1 by integrating other major frameworks, standards and resources, including ISACA's Val IT and Risk IT, Information Technology Infrastructure Library (ITIL) and related standards from the International Organization for Standardization (ISO). ISACA (2011) outlines the benefits for companies that adopt COBIT 5 as ; Maintain high-quality information to support business decisions, achieve strategic goals and realize business benefits through the effective and innovative use of IT, achieve operational excellence through reliable, efficient application of technology, maintain IT-related risk at an acceptable level, optimize the cost of IT services and technology and support compliance with relevant laws, regulations, contractual agreements and policies. Five underlying principles are core to the COBIT 5 frameworks as shown in Figure 2.1.

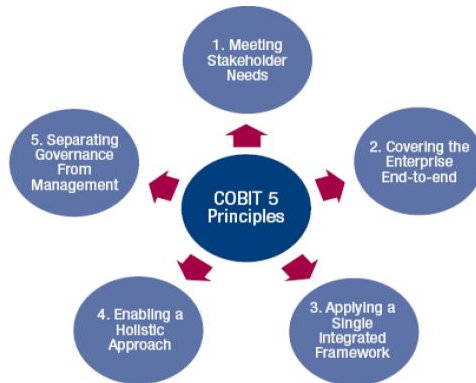


Figure 2.1: COBIT 5 Principles (ISACA, 2012) pg 19

2.2.2 Setting Objectives and Measuring Performance

To implement effective governance of IT, enterprises need to assess how well they are currently performing and identify precisely where and how improvements can be made (ITGI, 2008). Setting clear strategic objectives and using metrics to monitor results ensures that the drivers for governance have been recognized, any improvements are measured, and the expected benefits are realized. Figure 2.2 shows an example of how sample metrics can be utilized to measure IT value to business.

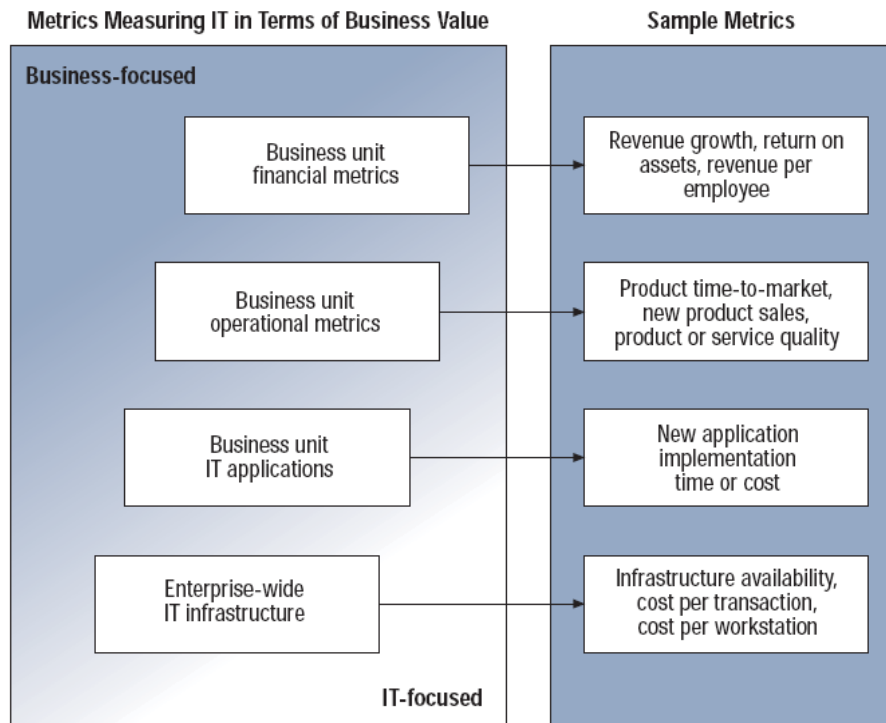


Figure 2.2: Measuring Value (ITGI, 2008) Pg 20

Using a Maturity Model

ISACA (2006) found that IT governance is not being properly measured and managed. In many instances the desired benefits of IT governance are not defined upfront, which makes it impossible to measure them and which makes it more difficult to gain acceptance for changes that are required to introduce better IT Governance practices. ITGI (2008) proposes the use of a maturity model to evaluate the current status and where the gaps exist. The benefit of a maturity model is that it provides a pragmatic and structured means of measuring how well developed the processes are against a consistent and easy-to-understand scale.

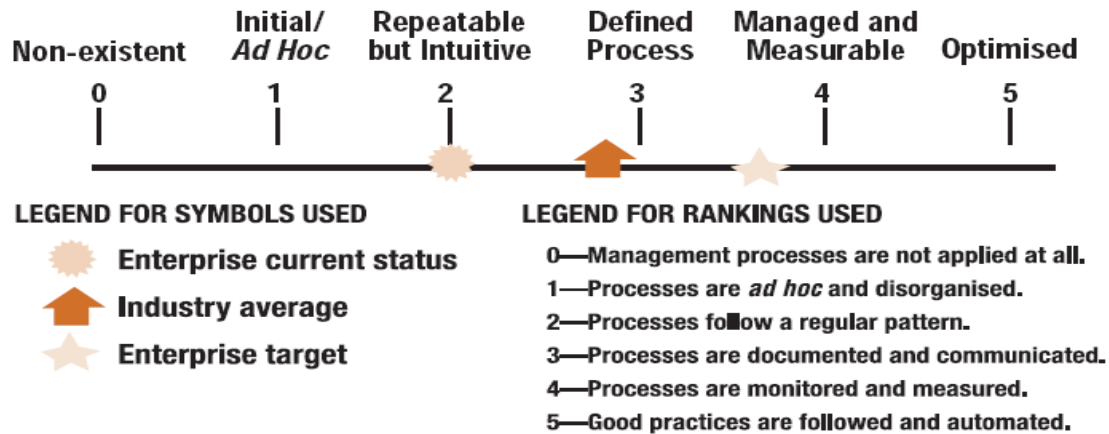


Figure 2.3: Capability Maturity Model (IT Governance Institute, 2008) pg. 21

Benchmarking

Benchmarking is most useful when it is designed and managed as part of a total business and IT improvement strategy. ITGI (2008), notes that out that benchmarking alone will not provide all the answers, but, together with qualitative analysis and other tools, it should help management ask the right questions, identify key attributes of success and failure, and enhance stakeholder value over time.

2.2.3 IT Governance Success Factors

Zhang et al (2011) identified the following as key to the success of effective ICT Governance; a well-functioning ICT governance committee which should be composed of senior managers from all parts of the organizations that meets regularly, and whose performance is evaluated periodically. Also important is strong leadership over the ICT governance infrastructure by the executive management, preferably at the level of the deputy head of the organizations. An appropriate Chief Information Officer (CIO) or equivalent in a senior level post with overall responsibilities and authority and access to the executive management acts as a bridge between the top and lower level of management and helps in translating expectations on both sides. Also necessary is a full-fledged corporate CT strategy aligned to the organizations' business needs and priorities, and yielding true value of the ICT investment, which should be reviewed and updated

periodically, a well-established mechanism to monitor the implementation of the ICT strategy, and strengthened efforts to track ICT costs in the organizations and conduct post-implementation reviews of major ICT investments so as to facilitate strategic decision-making, cost-effectiveness, accountability and transparency.

2.3 Chapter Summary

IT governance is a subset of corporate governance that focuses on whether IT sustains and extends the organisation's strategies and objectives. The five IT governance domains namely; IT strategic alignment, IT resource management, IT performance management, IT risk management and IT value delivery are getting more prominent in boardroom agenda as a result of the need the need to comply with new regulatory requirements, achieve a competitive edge and as a result of shareholders demanding value from their investments.

Despite the over-reliance on IT for their operations, the concept of IT governance as an umbrella framework encompassing a wide spectrum of arrangements, including the measurement of benefits is yet to emerge. Most banks in Kenya are knowingly or unknowingly practicing IT governance mainly driven by regulations e.g. Sarbanes-Oxley Act (Sarbox) and Basel II. The current literature focuses more on the application of ICT by banks but less on whether this leads to value delivery, IT strategic alignment and managed IT risks. Despite the increasing need for IT governance in Kenyan banks, the current practice of IT in Kenyan banks (e.g. do they follow a structured framework? How is performance/value of IT measured?) remains not known and this presents a research gap that the researcher seeks to fill.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

According to Mugenda (2008), research design refers to the process that the investigator will follow from the inception to completion of the research study. A descriptive study design was used in this study. Descriptive research involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collected (Glass & Hopkins, 1984). This kind of design will allow data to be collected within the setting of the respondents and data analysis inductively building from particular to general themes with the researcher interpreting the meanings of the data.

3.2 Population

The study targeted all the 43 commercial banks in Kenya as at 2012 (CBK, 2011). The choice was informed by the fact that banks have led in the implementation of ICT. The low number and accessibility of commercial banks through a head office in Nairobi made a census the most ideal.

3.3 Data Collection

A semi-structured questionnaire was used for data collection in this study. Two questionnaires were administered in each bank. The questionnaires had three sections; Section A was used to collect profile data of the respondents, section B focused on the five IT Governance domains and COBIT while section C helped collect data on challenges that may have hindered successful adoption of appropriate IT governance framework.

Two procedures were involved to protect the respondents' confidentiality. First, the researcher ensured that the respondents did not write their names, personal or identification numbers on the questionnaires. Questionnaires were administered and collected with the help of a trained research

assistant. The research assistant was able to handle sensitive and confidential issues as advised by the researcher.

3.4 Data Analysis

Collected data from the questionnaires was coded and tabulated. This was to facilitate analysis using descriptive statistics. The findings were presented using tables, frequencies and percentages. This aided presenting vital information on IT Governance Practices in Commercial Banks in Kenya.

Section A was analyzed through tables and percentages to depict a pattern. It covered information on demographics from the commercial banks covered in the study.

Section B helped understand the IT governance issues and COBIT. It involved analysis of the extent of adoption of IT governance best practices by the commercial banks in Kenya through tables and percentages.

Section C covered the challenges that may have hindered successful adoption of appropriate IT governance framework. Mean score and standard deviation were used to analyze and interpret the challenges hindering successful adoption of appropriate IT governance framework by the commercial banks. Due to the quantitative nature of data gathered, Statistical Package for Social Sciences (SPSS), as the most suitable tool to analyze the data was used. Factor analysis was also used to find the coefficients of factors and statements and further to group them.

CHAPTER FOUR

ANALYSIS AND PRESENTATION OF DATA

4.1 Introduction

This chapter presents the findings of the study tabulated and presented in narratives and tables for ease of explanation and understanding by the reader. The main objective was to investigate IT governance practices in commercial Banks in Kenya. The study had a 91% response rate.

4.2 General Information of the Respondents

Classification of Banks ownership and other findings are discussed in this chapter.

4.2.1 Classification of ownership of the commercial bank

Table 4.1: Distribution of respondents by bank ownership structure.

| <i>Distribution of Respondents by Banks ownership.</i> | | Frequency | Percent |
|--|---------|------------------|----------------|
| | Local | 50 | 64.0 |
| | Foreign | 28 | 36.0 |
| | Total | 78 | 100.0 |

Source: Research data.

The Table above shows that the ownership of the banks was local at 64.0% and foreign, with a response of 36.0%. The ownership analysis is also represented on figure 4.1.

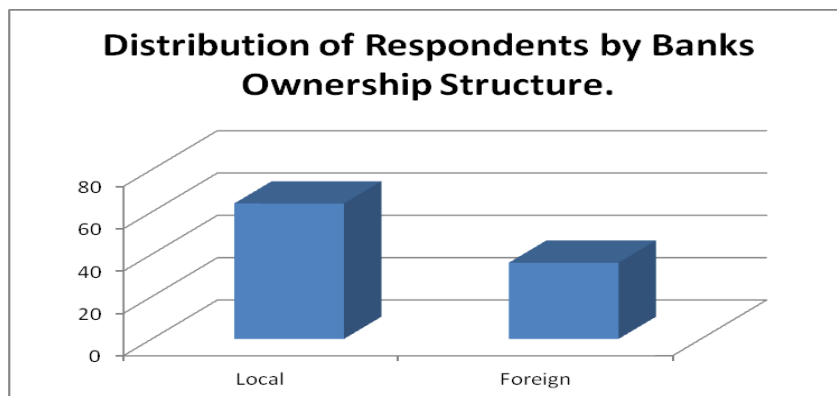


Figure 4.1: Distribution of Respondents by Banks Ownership Structure.

4.2.2 The Number of Local Branches

Table 4.2: Distribution of Number of Local branches

| <i>Distribution of Number of Local Branches</i> | Frequency | Percent |
|---|-----------|--------------|
| 1-5 | 4 | 5.1 |
| 6-10 | 13 | 16.7 |
| 11-15 | 10 | 12.8 |
| 16-20 | 24 | 30.8 |
| 21-50 | 27 | 34.6 |
| Total | 78 | 100.0 |

Source: Research data

Table 4.2 shows most of the respondents banks have between 21-50 local branches of commercial bank, with a response of 34.6%. This is followed by banks with between 16-20 which accounted for 30.8%. The research revealed that only 5.1% of the respondent's banks have between 1-5 branches. Respondent banks with between 11-15 local branches were 12.8%. The distribution of local commercial bank branches is also represented on figure 4.2.

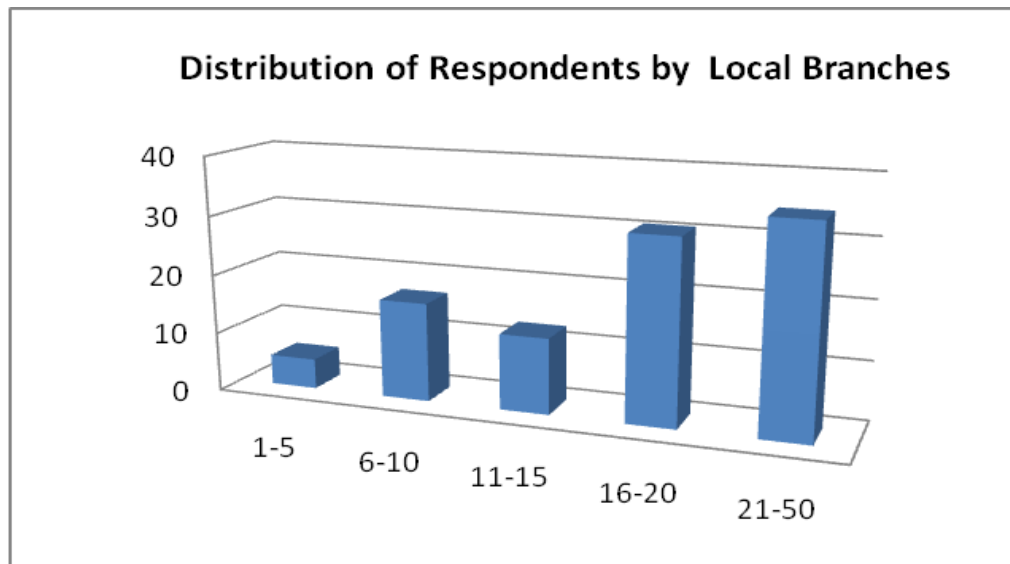


Figure 4.2: Distribution of respondents by local branches.

4.2.3 Years the Bank has been in Operation

Table 4.3: Years the Bank has been in Operation

| <i>Distribution of years the Banks has been in operation</i> | Frequency | Percent |
|--|-----------|---------|
| Between 1 and 5 years | 5 | 6.4 |
| Between 6 and 10 years | 14 | 17.9 |
| Between 11 and 25 years | 40 | 51.3 |
| Between 66 and 50 years | 13 | 16.7 |
| Above 50 years | 6 | 7.7 |
| Total | 78 | 100.0 |

Source: Research data

From the Table 4.3, majority of respondent’s banks have been in operation between 11-25years with a 51.3%. Another 17.9% have been in operation between 6-10 years, while 7.7% have been in operation for more than 50 years. Only 6.4% of respondents have been in operation between 1-5 years as shown on figure 4.3.

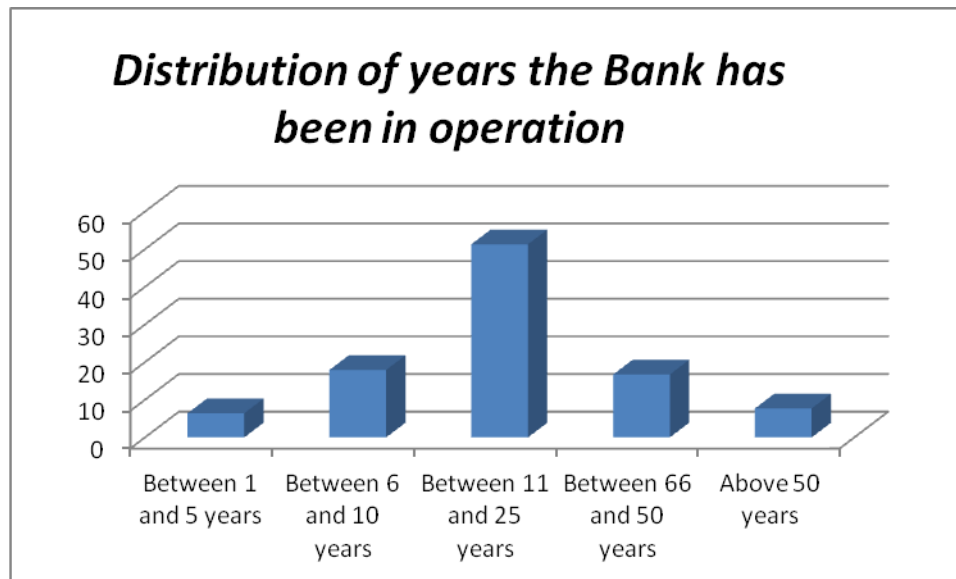


Figure 4.3: Distribution of years the Bank has been in operation.

4.2.4 Designations Level of Respondents

Table 4.4: Designation Level of Respondents

| <i>Distribution Level of Respondents</i> | <i>Frequency</i> | <i>Percent</i> |
|--|------------------|----------------|
| Board of director | 8 | 10.3 |
| Executive Management | 22 | 28.2 |
| Chief Information Officer | 27 | 34.6 |
| Business Unit Executive | 20 | 25.6 |
| Other | 1 | 1.3 |
| Total | 78 | 100.0 |

Source: Research Data

From Table 4.4, majority of respondents are in the level of chief information officer representing a 34.6% of responses. Another 25.6% fall in the Business Unit executive designation, as reported by the respondents, while 28.2% are in the Designation of Executive Management. Only 1.3% of respondents reported other designation level in the research findings. Only 10.3% of respondents fall in the board of directors' designation as shown by figure 4.4.

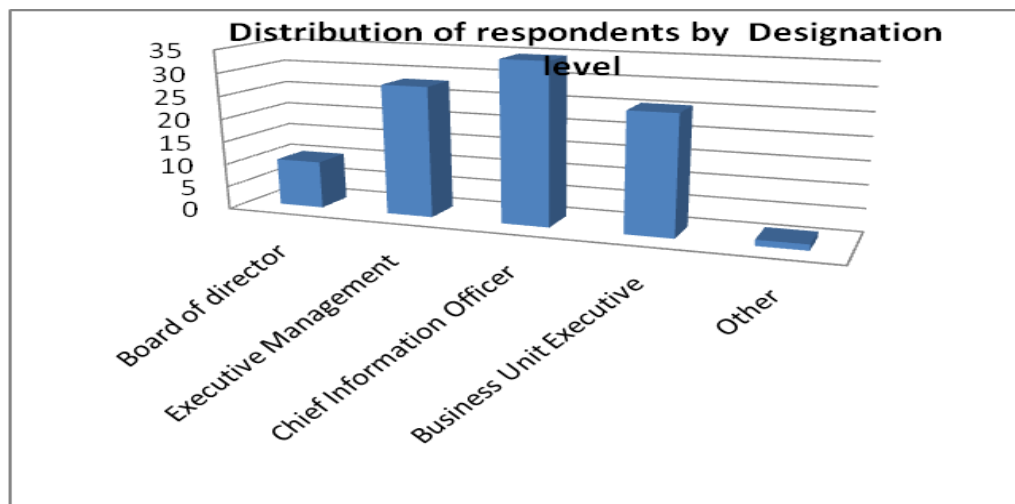


Figure 4.4: Distribution of Designation levels.

4.2.5 The frequency of IT strategy Committee meeting

Table 4.5: The Frequency of IT Strategy Committee Meeting

| <i>Distribution of IT strategy committee meeting</i> | Frequency | Percent |
|--|-----------|---------|
| 2-3 times a month | 12 | 15.4 |
| Monthly | 13 | 16.7 |
| Quarterly | 25 | 32.1 |
| Annually | 16 | 20.5 |
| Never | 12 | 15.4 |
| Total | 78 | 100.0 |

Source: Research data

From Table 4.5, majority of respondents agreed to IT strategy committee meeting quarterly with a response of 32.1%. Another 20.5% agreed to meeting annually. Only 16.7% agreed the IT strategy committee meets monthly while there was a tie in response for those who agreed to meeting 2-3 times a month and those who responded to never meeting at all representing a 15.4% response. This is shown by figure 4.5.

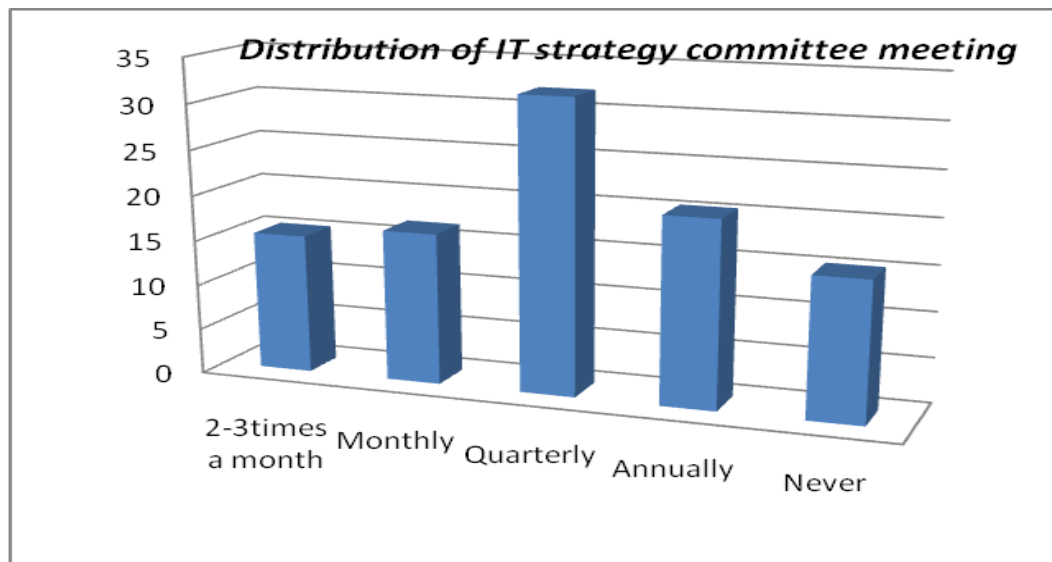


Figure 4.5: Distribution of IT strategy committee meeting.

4.2.6 The board reviews of IT budgets and plans on regular basis

Table 4.6: The board reviews of IT budgets and plans on regular basis

| <i>Distribution of IT Budgets and Plans Reviews</i> | Frequency | Percent |
|---|-----------|---------|
| Yes | 32 | 41.0 |
| No | 46 | 59.0 |
| Total | 78 | 100.0 |

Source: Research data

From Table 4.6, majority of respondents did not agree to the board having budgets and plans on a regular basis. This is represented by a 59.0% response. The rest of the respondents agreed with the statement that the board reviews the budgets and plans on a regular basis with a 41.0% response. This confirms to the study with a slight balance in response by those who agreed and those that disagreed. This is also illustrated by figure 4.6.

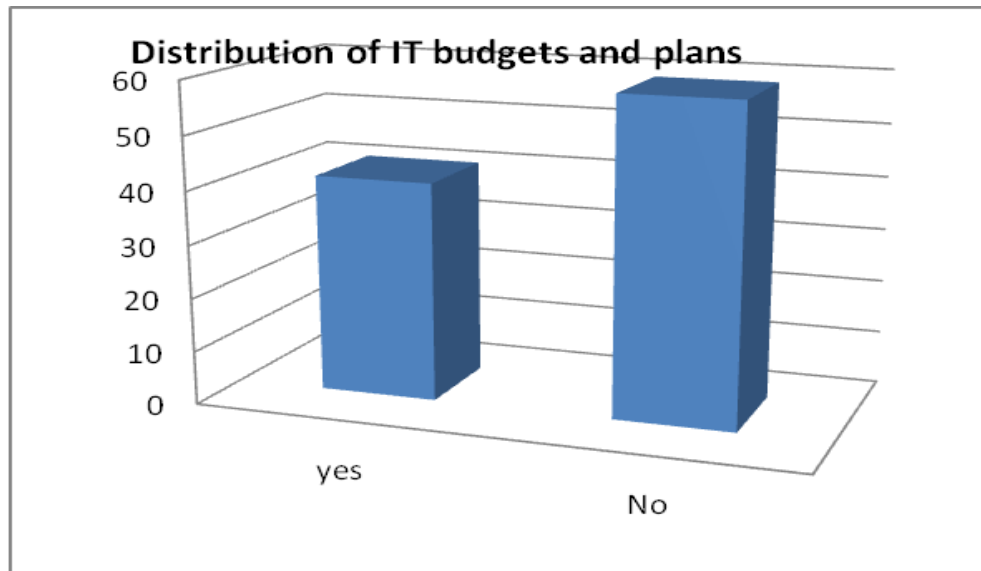


Figure 4.6: Distribution of IT budgets and plans.

4.2.7 Structured Processes for Good IT Governance

Table 4.7: Structured Processes for Good IT Governance

| <i>Existence of Structured Processes to Govern Following aspects of ICT</i> | Frequency | Percent |
|---|-----------|---------|
| IT Assets | 12 | 15 |
| Contracts or Master Service Agreements | 13 | 17 |
| Service & Operational Level Agreements | 25 | 32 |
| All of the above | 16 | 21 |
| None of the above | 12 | 15 |
| | 78 | 100 |

Source: Research data

Table 4.7 shows that majority of respondents felt that having service and operational level agreements is a major boost in IT governance with a response of 32%. Another 16% felt that all the mentioned processes were vital in IT governance, 25% felt that a combination of IT assets and Contracts or master service agreements will deliver sustainable business results while 12% felt none of the structure processes had any impact. This is also illustrated by figure 4.7.

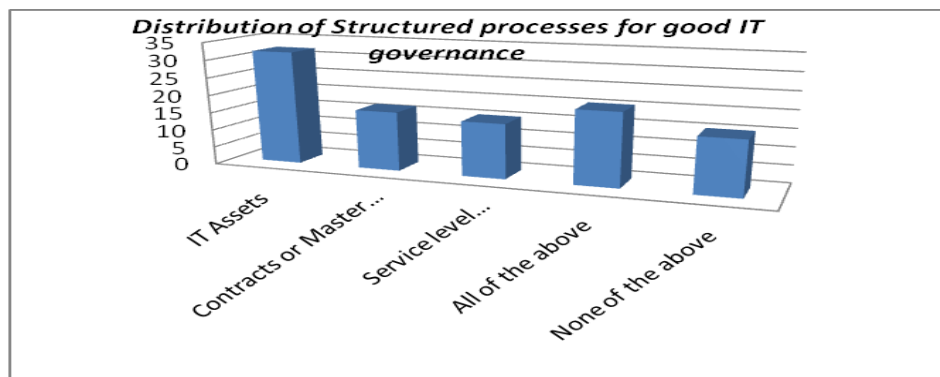


Figure 4.7: Distribution of Structured Process for Good IT Governance.

4.2.8 The Banks Adherence to Standard IT Process Governance Frame Work e.g. COBIT, VALIT, ISO/IEC 17799:2005

Table 4.8: The Banks Adherence to Standard IT Process Governance Frame Work

| <i>Do Banks adhere to standard IT Process Governance Frame Work?</i> | Frequency | Percent |
|--|-----------|---------|
| Yes | 33 | 42.3 |
| No | 45 | 57.7 |
| Total | 78 | 100.0 |

Source: Research data

From Table 4.8, majority of respondents did not agree on the Banks adherence to standard IT process governance framework by a 57.7% response rate. But they also agreed to the bank considering adoption of IT standards. The rest of the respondents agreed with the statement that the bank follows standard IT process governance framework with a 42.3% response. This confirms to the study with a slight balance in response by those who agreed and those that disagreed. This is also illustrated graphically by figure 4.8 below.

4.2.9 Best Facts that Characterizes IT Governance at the Bank

Table 4.9: Levels that Characterizes IT Governance at the Bank

| <i>Levels that Characterizes IT Governance at the Bank</i> | Frequency | Percent |
|--|-----------|---------|
| Non-existent: | 5 | 6.4 |
| Initial | 17 | 21.8 |
| Repeatable | 15 | 19.2 |
| Defined | 17 | 21.8 |
| Managed | 15 | 19.2 |
| Optimized | 9 | 11.5 |
| Total | 78 | 100.0 |

Source: Research data

From Table 4.9, there was a tie from the respondents that stated that IT governance in the bank is in the initial stages of implementation and those that stated that the process is defined with a response of 21.8%. This was followed by those that stated that IT governance is managed and repeatable in the banks with a response of 19.2%. The respondents that felt that IT governance is optimized represented 11.5% of responses from the study. This is illustrated by figure 4.9.

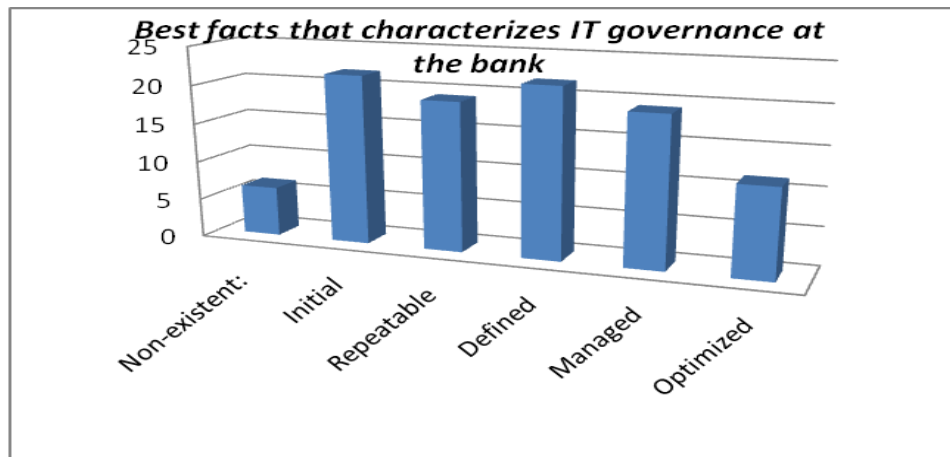


Figure 4.9: Distribution of facts that characterizes IT governance in the bank.

4.2.10 Measure of the Effectiveness of IT Governance Strategies Within the Organization

Table 4.10: Measure of Effectiveness of IT Governance Strategies Within the Organization.

| <i>Distribution of Effectiveness of IT Governance Strategies Within the Organization</i> | Frequency | Percent |
|--|-----------|---------|
| Benchmarking | 42 | 53.8 |
| Use of capability maturity models (e.g. C.M.M) | 33 | 42.3 |
| Other | 3 | 3.8 |
| Total | 78 | 100.0 |

Source: Research data

From Table 4.10, there was a high response from those who believed that the effective way to measure IT governance within the bank organization was through benchmarking illustrated by a response of 53.8%. Another group of respondents believed that to measure the effectiveness of IT governance was to use a capability maturity models like capability maturity models, this was shown by a response of 42.3%. Only 3.8% felt other kinds of strategies of measure to be put in place other than Benchmarking and use of capability models. This is also shown by figure 4.10.

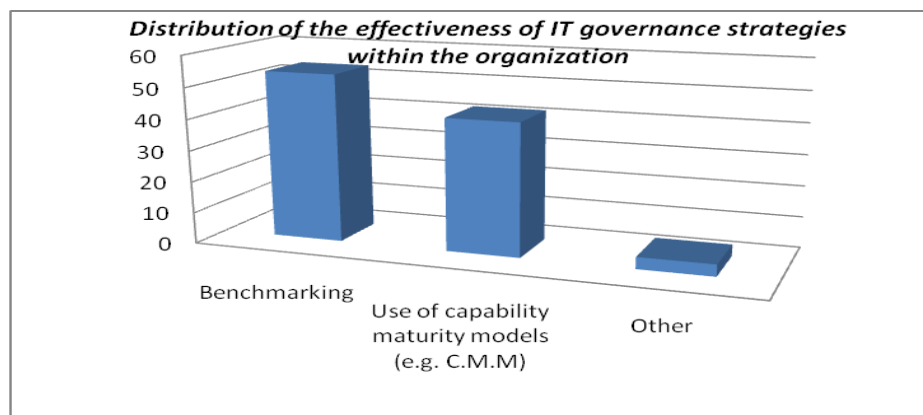


Figure 4.10: Distribution of effectiveness of IT governance strategies within the organization

4.3 Assessments of the Banks Best practices

In order to investigate the commercial banks best practices based on IT governance, the study used a likert-type scale in which 5,4,3,2 and 1 represented continuum scores for *Very Large Extent, Moderately large Extent, Moderately Low Extent, Very Low Extent and No Extent respectively*. These enabled the tabulation and interpretation of the responses from the research instrument. The main statistics derived are mean, standard deviation and variance. The mean illustrated the extent to which the respondents agreed or disagreed with the statements put forth on the Best practices of commercial banks based on IT governance in Kenya as shown on Table 4.11.

Table 4.11: Assessments of the Banks Best practices

| Assessments of the Banks Best practices | N | Mean | Std. Deviation | Variance |
|--|----|------|----------------|----------|
| Our IT proposals are in line with the approved IT strategy | 78 | 3.76 | 1.24 | 1.537 |
| IT covers our business operations end to end | 78 | 3.69 | 1.302 | 1.696 |
| I can accurately describe IT governance at my institution. | 78 | 3.19 | 1.31 | 1.716 |
| There is a close link between risk management and achievement of business objectives in our bank | 78 | 3.12 | 1.459 | 2.129 |
| Every employee in your department well conversant with the banks IT strategy? | 78 | 2.96 | 1.122 | 1.258 |
| We measure return on IT Investment/IT Assets | 78 | 2.96 | 1.243 | 1.544 |
| Our IT investments deliver full value to the business | 78 | 2.92 | 1.771 | 3.137 |
| IT Governance is separate from IT management | 78 | 2.78 | 1.286 | 1.653 |
| IT Risk is well managed | 78 | 2.72 | 1.161 | 1.348 |
| I am personally very involved in IT governance practice at my institution | 78 | 2.58 | 1.212 | 1.468 |
| Our IT Resources are well managed | 78 | 2.5 | 1.066 | 1.136 |

Source: Research data

There is overwhelming agreement by the respondents that the organization has their IT proposals in line with the approved IT strategy. This is represented by a mean of 3.76 but with a minimal standard deviation of 1.24. Another group of respondents felt that IT covers the banks business operations from end to end hence implementation of IT governance has improved business operations, this being observed by a mean response of 3.69. The research also found that respondents can be able to accurately describe IT governance at their institution with a mean representation of 3.19.

Through implementation of IT governance in the commercial banks in Kenya the researcher found through responses from the respondents that there is a close link between risk management and achievement of business objectives. This is represented by a mean of 3.12 and a slight standard deviation of 1.45. Some respondents felt personally involved in IT governance practices at their institution, this is observed by a response mean of 2.58. Another group of respondents felt that there is a measure in return on IT investment/IT Assets while others felt their IT investments deliver full value to the business with a response mean of 2.96 and 2.92 respectively. All this had a slight standard deviation of 1.24 and 1.77 respectively. The response from the research instrument shows an overwhelming recognition of the importance of IT alignment in order to deliver sustainable business results, and feel IT governance is one of the best means to achieve this. The ever increasing importance of IT governance makes the need to investigate the current practice in Kenyan commercial banks relevant.

4.4 Challenges hindering successful adoption of appropriate IT governance framework

In order to investigate the challenges hindering the successful adoption of IT governance framework in commercial banks in Kenya a likert-type scale in which 1,2,3,4 and 5 represented continuum scores for *Very Large Extent, Moderately large Extent, Moderately Low Extent, Very Low Extent and No Extent respectively*. These enabled the tabulation and interpretation of the responses from the research instrument. The main statistics derived are mean and standard deviation. The mean illustrated the extent to which the respondents agreed or disagreed with the statements put forth on the challenges hindering the successful adoption of IT governance framework in commercial banks in Kenya. This is well elaborated in Table 4.12 and narratives which show the respondents and the statistics.

Table 4.12: Challenges Hindering Successful Adoption of Appropriate IT Governance Framework.

| <i>Challenges Hindering Successful Adoption of Appropriate IT Governance Framework.</i> | N | Mean | Std. Deviation | Variance |
|--|----------|-------------|-----------------------|-----------------|
| Lack of project ownership | 78 | 3.18 | 1.266 | 1.604 |
| Lack of skilled personnel to impact the knowledge | 78 | 3.14 | 1.336 | 1.785 |
| Lack of clear communication strategies | 78 | 3.12 | 1.386 | 1.922 |
| Lack of clear understanding of IT Governance | 78 | 3.05 | 1.258 | 1.582 |
| Lack of established metrics to assess level of IT governance | 78 | 3.03 | 1.358 | 1.843 |
| Lack of enough institution to train on IT strategy issues | 78 | 2.95 | 1.161 | 1.348 |
| Absence of documentation of IT strategies in our bank | 78 | 2.94 | 1.417 | 2.009 |
| Lack of working concept and knowledge by the board and executive management on issues related to IT governance | 78 | 2.91 | 1.311 | 1.719 |

Source: Research data

The researcher found that majority of respondents felt that Lack of project ownership was a major hindrance in implementing appropriate IT governance framework. This was represented by a mean of 3.18 and a standard deviation of 1.266. We find that another hindrance was lack of skilled personnel to impact the knowledge of IT governance throughout our banking institutions. A response mean of 3.14 highlighted these findings. This was followed by respondents by mean of

3.12 who felt that lack of clear communication strategies posed as a major hindrance in implementation of IT governance framework. There was also lack of clear understanding of IT governance as an obstacle through implementation process of IT governance as indicated by a mean of 3.05 and a standard deviation of 1.258 of responses from the research instrument. The researcher noted that, while there are a number of management frameworks, models and standards available to guide in IT governance, majority lacked established metrics to assess level of IT governance. This was through the response mean of 3.03 and standard deviation of 1.358 from the respondents.

Lack of enough institution to train on IT governance issues also posed as a major hindrance in implementation of IT governance as seen from the response mean of 2.95 from the respondents. Several respondents felt that there was absence of documentation of IT strategies in the commercial banks. This is represented by a mean of 2.94 and a slight standard deviation of 1.417. this conforms to the study and we realize that there are many factors that pose hindrance to organizations implementing IT governance case study here being commercial banks in Kenya. The report further noted that discussions on the subject often are disjointed, laced with technical jargons, and lack of working concept and knowledge by the board and executive management on issues related to IT governance as seen from a response mean of 2.91 from respondents.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This study had two objectives. First was to establish the current status of IT Governance practices in Kenyan commercial banks. It also sought to identify the challenges that commercial banks in Kenya face while implementing IT Governance. The overall objective was to provide a theoretical reference to Kenyan banks to facilitate the practice of IT governance as it has become the common denominator across organizations that leads to IT business strategic alignment.

5.1 Discussion

Majority of the Banks were locally owned as opposed to being foreign with over 56% and has over 16 branches also have been in operation for over 11 years. This is indicated by 30.8% and 51.3% responses respectively. There was evidence that a lot of respondents were from the chief information officer designation and the strategy committee meets quarterly to look at how they can implement and plan good strategy processes for IT governance. The research also noted that the review of budgets and plans isn't done regularly to conform to the IT governance implementation hence none adherence to IT standards governance framework.

5.1.1 Measure of the effectiveness of IT governance strategies within the organization..

There is overwhelming agreement on the measure of effectiveness of IT governance strategies in commercial banks in Kenya. Deployment of benchmark processes to enhance conformation towards IT governance has played a major impact in the improvement of the bank's operations a result of the realization that ICT can have a significant impact on the success of the commercial Bank. Use of capability maturity models has had a profound impact on the banking industry and the wider financial sector and supports business decisions, generate business value from IT-enabled investments, achieve operational excellence through reliable and efficient application of technology, and maintain IT-related risk at an acceptable level and optimize the cost of IT

services and technology. On the issue of benchmark process implementation the respondents were in agreement with a percentage of 53.8. Use of capability maturity models had a percentage of 42.3 indicating a high level of agreement.

5.1.2 Assessments of the Banks Best practices

Majority of the respondents are in agreement that the banks have put in place some practice to conform to the IT governance in Kenya. Majority of the banks have put in place IT proposals in line with the approved IT strategy and the strategies covers the banks business operations from end to end hence implementation has enhanced business operations governance to IT and provide the leadership, organizational structures and processes that ensure that the enterprise's IT supports and extends the banks' overall strategies and objectives. The researcher found that IT resources are well managed with a mean response of 2.50 hence the investments deliver full value of the business. Also the risk is managed. The analysis also found that there is a close link between risk management and achievement of business objectives in the commercial banks. There is a strong indication that respondents can accurately describe IT governance at the institution. This is true and is evidenced in many other banks and organizational settings.

Central bank of Kenya has been at the forefront in ensuring Kenyan commercial banks adopt IT governance principles that address risks and enhances accountability and performance. The survey further revealed that IT alignment is the highest rated driver and desired outcome of IT governance practices as majority of respondents felt that they are conversant with the banks IT strategy with a mean of 2.96. Generally there is evidence that IT governance greatly affects the business process and operation.

5.1.3 Challenges Hindering Successful Adoption of Appropriate IT Governance Framework.

The challenges hindering adoption of IT governance framework in the banks included lack of project ownership in implementation of IT governance. There were varied responses but majority of the respondents felt that the lack of project ownership was the major hindrance in implementation of IT governance in commercial banks. There were indications that Lack of

skilled personnel to impact the knowledge to the respondents with regard to IT governance was also a major obstacle. This was as a result of overwhelming response mean of 3.14 also the lack of enough institution to train on IT strategy posed as a major obstacle in achieving It governance processes. It can be clearly seen that Lack of working concept and knowledge by the board and executive management on issues related to IT governance posed as an obstacle to the banks adherence to the standard IT governance processes. This is a continuation of the responses recorded in the previous question. The implementation of IT governance has been a major concern for the organizations, case study Commercial banks in Kenya. It is thus imperative that any efforts geared towards streamlining this function will be highly appreciated by the Banks technocrats and the customers as well.

Many of the respondents felt that there is room for improvement for the implementation of IT governance in both commercial banks and other organizations both public and private especially when it comes to automating the record keeping and reporting of the various related operations. Many respondents thought that they would be more effective if they applied IT governance not only to conform to regulations but to achieve the desired business alignment, ensure value delivery, manage risk and provide a mechanism to measure IT performance as well as manage the resources well for better business operations and continuity.

5.2 Conclusions

The factors affecting IT governance process have been tested and proven from the research data. The role of CBK in the process needs to be reviewed. Commercial Banks should act as models to the other business fraternity in implementation and adherence to standard IT processes that conform with the IT governance in business practices. It's evident that there is need to look into the information and communication industry and resolve the factors affecting it.

5.3 Recommendations

Effective IT governance process is a function of many facets as evidenced by the study. This is strengthened by the responses in the research. The Central Bank as the main controller of both the

commercial banks and other banks, machinery has to have the best systems to ensure that there is transparency in how the IT governance and conformation is practiced. Every officer with a responsibility on the IT governance process should be well endowed with necessary theory and skills necessary to ensure conformance and the championing of IT governance from top to bottom of the banks management structures. IT governance performance management and resource management are central to the realization of value, strategic alignment and management of ICT related risks.

5.4 Limitations of the Study

This study covered commercial banks to represent all the strategies leading to and status on the implementation of IT governance. This was due to time and other resources. The researcher relied on a questionnaire that required meeting many senior officers. This presented logistical challenges including reluctance by some respondent to being listed as part of the research respondents. Given more resources and time, the study would have covered other sectors of the economy.

5.5 Suggestions for Further Research

It would be helpful to replicate the study in another setting particularly in other sectors of the economy where the IT governance processes are practiced or in process of adoption. The factors affecting IT governance process in Kenya are varied and may even be better brought out if the study extended to other Banks and conventional business organizations. A careful assessment of the factors affecting IT governance process is required from all sectors of the economy including the private sector, governmental and non-governmental agencies. This will ensure that adherence and practice of IT standards and governance is adequately followed and practiced. The role of IT-governance in business strategies is not only to ensuring ensure compliance but also ensure investors realize full value as a result IT business alignment and the minimization of risks emanating for utilization of IT in banks. Each of the five IT governance domains could form a basis for other researches that will even lead to better IT Governance practices in all sectors of the economy.

REFERENCES

- Anyanzwa, J. (2011). *New safety net for bank depositors*. Retrieved June, 2012, from, <http://www.standardmedia.co.ke/?articleID=2000033059&pageNo=3>.
- Awuondo, I. (2008). *Commercial Application of ICT in the Banking Sector*. Strathmore University. Nairobi.
- BardenHorst, M. (2009). *Making Sense of IT Governance*, Retrieved April, 2012, from, [ww.icsa.co.za/docume.ts/speakerPres/MarleneBadenhorst1.ppt](http://www.icsa.co.za/docume.ts/speakerPres/MarleneBadenhorst1.ppt).
- Borg, W.R. & Gall, M.D. (1983). *Educational Research: An Introduction*. New York.
- Central Bank of Kenya (2010). *Prudential Guidelines for Institutions Licensed Under the Banking Act*. Retrieved June, 2012, from <http://www.centralbank.go.ke/downloads/bsd/Draft%20Revised%20Prudential%20Guidelines,%202012.pdf>.
- Central Bank of Kenya (2010). *Annual Report 2010*, Retrieved December, 2011, from http://www.centralbank.go.ke/downloads/publications/annualreports/cbk/annual_2009-10.pdf.
- Dallas B. (2004). *The Need for IT Governance: Now More Than Ever (AV-21-4823)*, Gartner, 20 January 2004.
- EDUCAUSE (2005). *IT Governance: Determining Who Decides*. European Center for Applied Research.
- Frederick J Gravetter, Lori-Ann B. Forzano, (2006). *Research Methods for the Behavioral Sciences*, 2nd Edition. Belmont, CA: Wadsworth.
- Glass G.V. and Hopkins K.D. (1984). *Statistical methods in Education and Psychology*. (2nd Edition). Englewood Cliffs, N.J. Prentice-hall.
- Grembergen, V.W., (2008). *Analyzing the Relationship Between IT Governance and Business/IT Alignment Maturity*. Proceedings of the 41st Hawaii International Conference on System Sciences.
- Hawley, J. (2011). *Contemporary-business-environments-and-IT-governance-in-financial-services*. Retrieved June, 2012, from, <http://www.articleinput.com/e/a/title/Contemporary-business-environments-and-IT-governance-in-financial-services>.

- ISACA (2004) *.IT Governance and Its Mechanisms*. Information Systems Audit and Control Association
- ISACA (2008). *Practices in IT Governance and Business/IT Alignmen.*,Information Systems Audit and Control Association.
- ISACA (2009).*An Executive View of IT Governance*. Information Systems Audit and Control Association.
- ISACA, (2003).*Board Briefing on IT Governance*.Information Systems Audit and Control Association.
- ISACA,(2006).*IT Governance in Practice*, PriceWaterHouseCoopers.
- ITGI (2005) *.IT Alignment: Who is in Charge*.IT Governance Institute.
- ITGI (2008).*Unlocking Value: An Executive Primer on the Critical Role of IT Governance*.IT Governance Institute.
- ITGI (2009).*Implementing and Continually improving IT Governance*. IT Governance Institute.
- ITGI, (2006).*Enterprise Value: Governance of IT Investments: The Business Case*, IT Governance Institute.
- ITGI, (2006).*IT Governance Global Status Report – 2006*.IT Governance Institute. ITGI, 2007.
- ISACA, (2011).*COBIT 5*.Information Systems Audit and Control Association.
- ITGI, (2007).*IT Governance Roundtable: IT Governance Trends*.IT Governance Institute.
- Jayamaha, R, (2008). *Impact of IT in the Banking Sector*.Retrieved January,2012,from www.bis.org/review/r080201d.pdf.
- Kenya Institute of Management (2006).*Research Methodology*. Nairobi: Longman.
- Kothari, C.R. (2004). *Research Methodology: Methods and Techniques*. New Delhi.
- KPMG (2005).*Creating Stakeholder Value in the Information Age*.Management Journal, Vol 11(2), pp. 139–149.
- Makau, P.(2010).*ICT Governance Framework Commercial Bank's Perspective September*. Retrieved January,2012.
- http://isaca.or.ke/2010conf/downloads/presentations/Peter_Makau_ISACA_2010.pdf
- Michael Quinn Patton, (2002). *Qualitative Research & Evaluation Methods*. Publisher: Sage Publications, Inc; Third Edition. (17 Jan 2002).

- Mirbaha, M. (2008). *IT Governance in Financial Services and Manufacturing*. Stockholm, Sweden.
- Mugenda, Abel G. (2008). *Social Science Research*. Nairobi : Arts Press 2008.
- Mugenda, O.M. and Mugenda, A.G. (1999). *Research Methods: Qualitative and Quantitative Approaches*. Nairobi: Acts Press.
- Neuman W. Lawrence, (2000). *Social Research Methods: Qualitative and Quantitative Approaches*, 4th ed. (Boston: Allyn and Bacon, 2000). New Age International Limited Publishers.
- Nworji, D.(2011). *Corporate Governance and Bank Failure in Nigeria: Issues, Challenges and Opportunities*. Research Journal of Finance and Accounting Paper Vol.2, No 2, 2011.
- Peterson, R.R., 2004. *Integration Strategies and Tactics for Information Technology Governance, in Grembergen, V.W. (Ed.). Strategies for Information Technology Governance*, Idea Group Publishing.
- Rosalito ,J. (2007). *The State of IT Governance in South Africa* , Pretoria University.
- Ross W, & Peter Weill. *Recipe for Good Governance*. CIO magazine, 36 (June 15, 2004), 36-42.
9 Ibid.
- Ross, J. and Weill, P. (2004). *IT Governance: How Top Performers Manage IT Decisions Rights for Superior Results*. Cambridge University Press.
- Sekar V. G. *Emerging Trends in technology adoption by Indian banks and IT Governance-A Practical Guide*. Retrieved January, 2012, from,
<http://www.cab.org.in/Lists/Knowledge%20Bank/Attachments/43/Emerging%20Trends.pdf>.
- Tatham, C. (2004). *Completing the IT Value Equation*. Retrieved June ,2012, from, <http://www.informationweek.com/news/software/bi/20300911>.
- Venkatraman, N; Henderson, J (1993), *Strategic Alignment: Leveraging Technology for Transforming Organizations* , IBM Systems Journal, Volume 32, Page 4.
- William F. (2006). *Information Technology Governance for Consideration by Boards of Directors*. University of Oregon.
- Zhang, Y. and Chulko, N. (2011). *Information And Communication Technology Governance In The United Nations System Organizations*. United Nations, Geneva

Appendix 1: Questionnaire

This questionnaire seeks your responses on IT Governance practices in Kenyan Commercial Banks.

A: General Information (Please tick as appropriate).

1. Classify ownership of the commercial bank where you work?

- Local Foreign Both

2. How many local branches do you have?

- 1-5 6-10 11-25 26-50

3. How many years has the bank been in operation?

- 1-5 yrs
- 6-10 yrs
- 11-25 yrs
- 26-50 yrs
- Above 50 years

4. What is your designation level?

- Board of Director
- Executive Management
- Chief Information Officer
- Business Unit Executive
- Other

SECTION B: IT Governance issues

5. How often does IT strategy Committee meet?

- 2-3 times a month
- Monthly
- Quarterly
- annually
- Never

6. Does the board reviews IT budgets and plans on regular basis

- Yes
- No

7. We have structured processes to govern the following (Tick as appropriate)

- IT Assets
- Contracts or Master Service Agreements
- Service level Agreements and Operational Level Agreements
- All of the above
- None of the above

8. a. Does your bank follow a standard IT process governance framework e.g COBIT, VALIT, ISO/IEC 17799:2005?

- Yes
- No

c. If No in a. above, are you considering adoption?

- Yes
- No

9) Which of the following best characterizes IT governance at your bank?

- Non-existent: The banks have not recognized the need
- Initial: The processes are informal and uncoordinated.
- Repeatable: The processes follow a regular pattern.
- Defined: Processes are well documented and communicated.
- Managed: Processes are monitored and measured.
- Optimized: Best practices strictly adhered to and there are provisions for amending

10) How do you measure the effectiveness of IT governance strategies within your organization?

- a) Benchmarking
- b) Use of a capability maturity models (e.g. CMM)
- c) Other.....

11. How would you assess your bank based on the following best practices?

| Issues | Strong agree (5) | Agree (4) | Neutral (3) | Disagree (2) | Strongly Disagree (1) |
|--|-----------------------------|-----------------------|------------------------|-------------------------|----------------------------------|
| Every employee in your department well conversant with the banks IT strategy? | | | | | |
| Our IT proposals are in line with the approved IT strategy | | | | | |
| Our IT Resources are well managed | | | | | |
| Our IT investments deliver full value to the business | | | | | |
| IT Risk is well managed | | | | | |
| We measure return on IT Investment/IT Assets | | | | | |
| I can accurately describe IT governance at my institution. | | | | | |
| I am personally very involved in IT governance practice at my institution | | | | | |
| There is a close link between risk management and achievement of business objectives in our bank | | | | | |
| IT Governance is separate from IT management | | | | | |
| IT covers our business operations end to end | | | | | |

SECTION C:

12) What challenges may have hindered successful adoption of appropriate IT governance framework;

| Issues | Strong agree (5) | Agree (4) | Disagree (3) | Neutral (2) | Strongly Disagree (1) |
|--|-------------------------|------------------|---------------------|--------------------|------------------------------|
| Lack of enough institution to train on IT strategy issues | | | | | |
| Lack of clear understanding of IT Governance | | | | | |
| Lack of skilled personnel to impact the knowledge | | | | | |
| Lack of established metrics to assess level of IT governance | | | | | |
| Absence of documentation of IT strategies in our bank | | | | | |
| Lack of clear communication strategies | | | | | |
| Lack of project ownership | | | | | |
| Lack of working concept and knowledge by the board and executive management on issues related to IT governance | | | | | |

Other reasons

Appendix II: List of Banks and Institutions in Kenya (Source Central Bank of Kenya)

- 1 African Banking Corporation Ltd.
- 2 Bank of Africa (K) Ltd.
- 3 Bank of India
- 4 Barclays Bank of Kenya Ltd.
- 5 CFC Stanbic Bank Ltd.
- 6 Charterhouse Bank Ltd.
- 7 Chase Bank (K) Ltd.
- 8 Citibank N.A. Kenya
- 9 City Finance Bank Ltd.
- 10 Commercial Bank of Africa Ltd.
- 11 Consolidated Bank of Kenya Ltd.
- 12 Co-operative Bank of Kenya Ltd
- 13 Credit Bank Ltd.
- 14 Development Bank of Kenya Ltd.
- 15 Diamond Trust Bank Kenya Ltd
- 16 Dubai Bank Kenya Ltd
- 17 Ecobank Ltd
- 18 Equatorial Commercial Bank Ltd.
- 19 Equity Bank Ltd.
- 20 Family Bank Ltd.
- 21 Fidelity Commercial Bank Ltd.
- 22 Fina Bank Ltd.
- 23 First Community Bank
- 24 Giro Commercial Bank Ltd.
- 25 Guardian Bank Ltd.
- 26 Gulf Africa Bank (K) Ltd
- 27 Habib Bank Ltd.
- 28 Housing Finance Ltd.
- 29 Imperial Bank Ltd.
- 30 Investment & Mortgages Bank Ltd.
- 31 Kenya Commercial Bank Ltd
- 32 K-Rep Bank Ltd.
- 33 Middle East Bank (K) Ltd.
- 34 National Bank of Kenya Ltd.
- 35 NIC Bank Ltd.
- 36 Oriental Commercial Bank Ltd.
- 37 Paramount Universal Bank Ltd.
- 38 Prime Bank Ltd.
- 39 Southern Credit Banking Corporation

Ltd.

- 40 Standard Chartered Bank (K) Ltd.
- 41 Trans-National Bank Ltd.
- 42 UBA Kenya Bank Limited
- 43 Victoria Commercial Bank Ltd.