

**AN ASSESSMENT OF THE EXTENT OF IMPLEMENTATION OF BASEL
II ACCORD IN KENYAN COMMERCIAL BANKS AND ITS
IMPLICATION ON THEIR PROFITABILITY**

BY

MUKANGU PETER MWANGI

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the Requirements for the Award of Degree in Master of Business
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DECLARATION

I **Peter Mukangu Mwangi** hereby certify that....

1. Except where due acknowledgement has been made, this project proposal is my own work.
2. The project has not been previously submitted in whole or in part, to qualify for any other academic award.

Signed-----Date-----

Peter Mukangu Mwangi

D61/75186/2009.

I **Mr. James M. Ng'ang'a**, hereby certify that this project proposal has been presented for examination with my approval as the university of Nairobi supervisor.

Signed-----Date-----

Mr. James M. Ng'ang'a

Lecturer, School of Business - University of Nairobi

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DEDICATION

I am grateful to God for giving me the strength to endure the hardships in the collection of data for this project.

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ABSTRACT

Basel II is the second of the Basel Accords, which are recommendations on banking laws and regulations issued by the Basel Committee on Banking Supervision. Initially published in June 2004, it was intended to create an international standard for banking regulators. It is widely recognized that Basel II is a major breakthrough in theoretical and practical world of banking industry and a dynamic framework which will be able to adapt to ongoing innovation and change.

This study seeks to examine the extent of Basel II adoption in Kenyan commercial banks and how this affects their profitability. It seeks to raise ideas and issues in the hope that the various stakeholders and persons directly addressing issues related to Basel II requirements in the banking sector in Kenya will continue the discussion. The study will make a significant contribution to the growing body of research on Basel II requirements on Kenya's banking sector. In addition, other academic researchers may need the study findings to stimulate further research in this area and as such form a basis of good background for further researches.

The research design was descriptive using both quantitative and qualitative data. Target population was forty three respondents. The study used the entire population to do the study. That means that census method was used as sampling technique. Data was collected using questionnaires and interview and analysed with tables and charts.

The findings of the study indicate that the extent of implementation is directly related to profitability. This is because over time, well-managed banks would benefit from better market conditions, while poorly managed banks would face penalties. The improvements in risk management that Basel II is intended to drive may enhance risk culture, reduce volatility of all risks, lower provision for bad debts, reduce operational losses, improve the institutions' external ratings, and thereby help ensure access to capital markets and raise organizational efficiency.

The study recommends that banks should move in a structured way toward the use of the advanced approaches to credit and operational risk. However, to meet that goal, banks will need to develop and use quantitative models that are acceptable to regulators. Appropriately designed and implemented, such models can enable banks to measure and monitor risks across the organization, enhance risk management and ultimately determine capital requirements.

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ACCRONYMS AND ABBREVIATIONS

AIRB	Advanced Internal Rating Based
AMA	Advanced Measurement Approach
BIA	Basic Indicator Approach
BIS	Bank for International Settlements
CAR	Capital Adequacy Ratio
CBK	Central Bank of Kenya
CEO	Chief Executive Officer
EAD	Exposure At Default
ECAIs	External Credit Assessment Institutions
FIRB	Foundation Internal Rating Based
IRB	Internal Rating Based
IT	Information Technology
LGD	Loss Given Default
M	Maturity
MCR	Minimum capital requirement
PD	Probability of Default
RAROC	Risk - Adjusted Return on Capital
RWA	Risk Weighted Assets
SA	Standardized Approach
SSA	Simplified Standardized Approach
USA	United States of America
VaR	Value at Risk

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Basel II is the second of the Basel Accords, (now extended and effectively superseded by Basel III), which are recommendations on banking laws and regulations issued by the Basel Committee on Banking Supervision.

Basel II, initially published in June 2004, was intended to create an international standard for banking regulators to control how much capital banks need to put aside to guard against the types of financial and operational risks banks (and the whole economy) face. One focus was to maintain sufficient consistency of regulations so that this does not become a source of competitive inequality amongst internationally active banks. Advocates of Basel II believed that such an international standard could help protect the international financial system from the types of problems that might arise should a major bank or a series of banks collapse. In theory, Basel II attempted to accomplish this by setting up risk and capital management requirements designed to ensure that a bank has adequate capital for the risk the bank exposes itself to through its lending and investment practices. Generally speaking, these rules mean that the greater risk to which the bank is exposed, the greater the amount of capital the bank needs to hold to safeguard its solvency and overall economic stability.

1.1.1 Basel II Requirements

More than a decade has passed since the Basel Committee on Banking Supervision (BCBS), a division of the Bank for International Settlements (BIS), introduced its 1988 Capital Accord (Basel I), which was adopted by more than 100 countries around the world. Since then, the business of banking, risk management practices, supervisory approaches and financial markets have undergone a significant transformation.

In June 2004, the Basel Committee on Bank Supervision (Basel Committee), a subgroup of the Bank for International Settlements, announced the “International convergence of capital measurement and capital standards: a revised framework,” commonly known as the Basel II Accord, with the object of preventing bank failures. The final version of Basel II was issued in June 2004, with a minor revision released in November 2005. In June 2006 a comprehensive version was published including all Basel regulations up to that date. Implementation of the Accord was expected as of year-end 2007 in many of the over 100 countries currently using the Basel I Accord. The key driver behind Basel II is that an appropriate or adequate amount of capital is crucial for an efficient bank management to absorb unexpected losses arising from its market, credit and operational risk exposures. The Basel Committee announced Basel II to respond to the deficiencies of the 1988 Capital Accord (Basel I). The 1988 Accord has been criticized for its crude assessment of risk, or risk insensitivity, and for creating opportunities for regulatory arbitrage (Lastra, 2004).

According to Basel Committee on Banking Supervision (2006), the Basel II guidelines establish capital adequacy requirements and supervisory standards for banks to be implemented by 2007.

The main objective of Basel II is: to develop a framework that would further strengthen the soundness and stability of the international banking system, while maintaining sufficient consistency that capital adequacy regulation will not be a significant source of competitive inequality among internationally active banks. The Committee believes that the revised framework will promote the adoption of stronger risk management practices by the banking industry, and views this as one of its major benefits (Basel Committee on Banking Supervision, 2006).

Ferguson (2003) observed that Basel II Accord provides a roadmap for the improved regulation and supervision of global banking. Basel II will provide strong incentives for banks to continue improving their internal risk-management capabilities as well as the tools for supervisors to focus on emerging problems and issues more rapidly than ever before. The Basel II Accord proposes, among other things, more detailed criteria for the treatment of credit risk, and for the first time introduces criteria for the regulatory treatment of operational risk. Beyond merely measuring the capital requirements for the risk categories, it also puts strong emphasis on criteria for supervisory review and increased public disclosure (Rowe *et al.*, 2004).

The studies so far undertaken on Basel II include the following:

A study by Leippold and Vanini (2003) indicate that as of now 3 types of major risks are addressed in Basel II. These include, Credit Risk; whereby the borrower fails to repay the borrowings, Market Risk; which is volatility in the banks' portfolio due to change in market factors and operational risk; being risk arising out of banks' inefficient internal processes, systems, people or external events like natural disasters and robbery. Dutta and Perry (2006)

undertook a study on the implementation of Basel II. They concluded that although the ultimate aim is to achieve the intended benefits by way of enhanced risk management and lower capital requirements, the actual Basel II implementation is turning out to be complex, challenging and involving substantial funds outlay for changes in IT, internal controls and processes and human resources. These challenges offer opportunities to the banks as well, to strengthen and transform themselves to better compete both within and outside domestic markets (Chapelle *et al*, 2004).

Banerjee and Banipal (2005), undertook a survey on the implications of Basel II to banking business. They concluded that Basel II is intended to align capital adequacy assessment more closely with the key elements of banking risks and to provide incentives for banks to enhance their risk measurement. Particularly, the risk adjusted backing of credit exposures with recourse to equity (regulatory capital) is one of the key issues in the New Basel Capital Accord. Basel II will affect banks and customers equally. Significant changes include: the introduction of ratings as the basis for risk assessment and calculation of regulatory capital; and the assessment of credit costs based on the degree of risk. Whereas many studies have been undertaken on implementation of Basel II Accord, especially in the developed countries, little (as detailed above) is documented on the same in the developing countries. The current study thus seeks to examine the extent to which Basel II has been implemented and the managerial perceived implications on commercial banks in Kenya.

1.1.2 Commercial Banks in Kenya

Financial institutions (FIs) are very important in any economy. Commercial banks (CBs) are part of FIs and are key in the provision of financial information and services to the economy. The banking sector in Kenya has, over the last few years, witnessed significant growth in consumer lending. This is evidenced by the growth in the financial sector by 3.1% in 2008 amid the global financial crisis, economic slowdown and effects of post election violence. The resultant credit expansion has brought significant benefits to the economy, but the information asymmetry that is prevailing in the lending environment poses a real challenge in the form of credit risk for the banking sector in Kenya. Besides, following the expansion of credit reference, the level of nonperforming loans has been on the rise for most banks resulting into huge provisions. Banks performance in the last three quarters have been modest with some banks reporting losses or sharp decline in their profitability vis a vis their performance in 2008.

There were 43 commercial Banks in Kenya as at 31st December, 2012 (Central Bank of Kenya (CBK), 2012).

Licensing of financial institutions in Kenya is done by the Minister of Finance, through the central bank of Kenya. The companies Act, the Banking Act, the Central Bank of Kenya, govern the banking industry. The banks have come together under the Kenya Bankers Association, which serves as a lobby for the banks interest and also addresses issues affecting its members. The foreign banks are also regulated by other bodies e.g. the Financial Services Authority (FSA).

Ideally financial reforms and free market should spur the adoption of innovations that improve

efficiency and provide a healthy balance between lending and deposit rates. (Banking Act, Cap 488). This should translate to better performance by banks.

According to Central Bank of Kenya (CBK) (2008) for period ended March 2009, the sector remained stable in 2009 with positive developments recorded in all key financial indicators. Total assets expanded by 20.9% from Kshs. 1.2 trillion as at March 2009 compared to Kshs. 964 billion as at December 2008. This performance was on the back of increased branch expansion, deposit mobilization and new products rollout. As a result of the improved performance, the level of non-performing advances declined by 27.5%.

In the budget, the Minister of Finance proposed to amend the Banking Act to allow for branchless banking. This has seen many players adopt mobile banking and e-banking.

1.2 Statement of the Problem

Basel II Accord provides a roadmap for the improved regulation and supervision of global banking, and a strong incentive for banks to continue improving their internal risk-management capabilities. It is intended to align capital adequacy assessment with key elements of banking risks, therefore enhance banks risk measurement (Currie, 2005). Particularly, the risk adjusted backing of credit exposures with recourse equity (regulatory capital) in the New Basel Capital Accord. Basel II will affect banks and customers equally. Significant changes include: the introduction of ratings as the basis for risk assessment; calculation of regulatory capital and the assessment of credit costs based on the degree of risk.

Although there is scarcity of literature on Basel II requirements on Kenya's banking sector, it is essential for the Kenyan banks to make adequate preparations to ensure their compliance with international standards and practices in the field of banking. Related studies undertaken in Kenya include:-. Kabiru (2001) studied the relationship between credit risk assessment practice and the level of nonperforming loans of Kenyan banks. He finds a direct relationship between credit risk assessment practices adopted by commercial banks and the level of non-performing. Adam (2003) undertook an analysis of the usefulness of annual financial statements to credit risk analysts in Kenyan commercial banks; Mutwiri (2003) studied the 6 c's credit risk appraisal model and its relationship with the level of nonperforming loans of commercial banks in Kenya. The findings show direct relationship between the study variables. Njiru (2003) studied Credit risk management by coffee cooperatives in Embu district. Mbole (2004) studied the relationship between credit risk analysis and the level of non-performing loans. He found that the level of credit analysis done was inversely related to the non performing loans.

None of the above studies focused on establishing the extent of Basel II adoption. Whereas research has tended to focus on credit risk management practices in the developing countries, the purpose of this study is to assess the extent of Basel II adoption and its implications on profitability of Kenyan commercial Banks.

1.3 Objectives of the Study

1.3.1 General Objective

The study seeks to examine Basel II adoption in Kenyan banks.

1.3.2 Specific Objectives

The study will be guided by the following specific objectives:

- (i) To establish the extent to which Basel II requirements have been adopted by commercial banks in Kenya.
- (ii) To establish whether this level of implementation affects their profitability.

1.4 Significance of the Study

The current study seeks to raise ideas and issues in the hope that the various stakeholders and persons directly addressing issues related to Basel II requirements in the banking sector in Kenya will continue the discussion. It does not presume to offer a prescription for the ideal measures to be employed by the stakeholders so as to reverse any adverse trends. Specifically, the findings of this study, it is hoped, will be beneficial to the following:

Commercial Banks Management- The management of the commercial banks will gain a better understanding of the Basel II requirements and how they are likely to impact on their performance. On the basis of the findings, the personnel charged with the responsibility of implementing Basel II requirements in the various banks will be able to make informed decisions as they undertake their respective assignments, considering that the key driver behind Basel II is that an appropriate or adequate amount of capital is crucial for an efficient bank management to absorb unexpected losses arising from its market, credit and operational risk exposures (Mignola and Ugoccioni, 2006).

Basel II Accord provides a roadmap for the improved regulation and supervision of global banking. According to Allen (2004), Basel II will provide strong incentives for banks to continue improving their internal risk-management capabilities as well as the tools for supervisors to focus on emerging problems and issues more rapidly than ever before.

Both foreign and local investors in the banking industry will gain a better understanding of the implications of Basel II on banking business, on the basis of which they will be able to make informed investment decisions.

Regulatory bodies that include the Central Bank of Kenya, Capital Markets Authority, The Nairobi Stock Exchange and Kenya Association of Bankers will acquire insight into the Basel II requirements and accommodate the key findings in their policies where applicable. In addition, the findings will also aid in the improvement of the already formulated policies and enforcement of the same in order to facilitate full implementation.

The legislators will be guided on the best possible laws and regulations that could be used to accommodate Basel II accord in the banking sector.

The study will make a significant contribution to the growing body of research on Basel II requirements on Kenya's banking sector. The findings may also be used as a source of reference for other researchers. In addition, other academic researchers may need the study findings to stimulate further research in this area and as such form a basis of good background for further researches.

CHAPTER TWO

LITERATURE REVIEW

2.1 The Basel II Accord

The aim of the literature review is to give an overview of existing research on Basel II. Ever since Basel II Accord first was proposed, both researchers as well as practitioners have debated about the effectiveness of this new minimum capital regime and the new accord has been criticized quite heavily. The existing Basel II literature encompasses both empirical and theoretical research.

Critical Success Factors for the banks are; Risk Identification; Quantitative Risk Measurement; Risk Mitigation; and Minimum Capital Allocation. But banks find compliance to Basel II norms in the above areas difficult, due to increasing number of customer base of the banks, absence of effective risk management solution and absence of system interfaces between the existing stand alone applications of the banks (Dutta and Perry, 2006).

Basel II is the revised capital accord of Basel I. Basel II accord defines the minimum regulatory capital which is to be allocated by each bank based on its risk profile of assets. Banks have to maintain the capital adequacy ratio (CAR) of minimum 9 %. As per RBI, banks which are getting more than 20% of their businesses from abroad have to implement Basel II. But most of the banks are now interested to implement Basel II. Basel II uses a “three pillars” concept to promote greater stability in the financial system stability: Pillar I: Minimum capital requirement;

Pillar 2: Supervisory review process; and Pillar 3: Market discipline requirements (Basel Committee on Banking Supervision (2003).

2.2 Importance of Implementing Basel II Accord

Globally there is a deep interest in Basel II. Worldwide there is a strong commitment for it but the pace of implementation would vary from economy to economy and bank to bank. Presently, on one hand there are differences in economy and institutions' risk management processes, state of tech know how, customers portfolio, and on the other hand, the state of development of rating agencies, external auditors, and above all, regulators vary across economies (Blunden, 2005). By virtue of their better infrastructure, resources, and size of operations, the large internationally active banks particularly in Australia, Japan, Singapore, Hong Kong and Korea are expected to adapt to the new regime in relatively shorter span of time. Meanwhile, economies with less sophisticated, small and fragmented financial structure would be implementing Basel II gradually and remain confined to adoption of Standardized Approach (SA).

Notwithstanding, in next few years, Basel II will drive and shape the bank's business strategies, policies and structure, its risk measurement and capital calculation methods, its internal controls and processes, data requirements, and IT systems. The Basel II framework has substantive breadth and depth. It prescribes different approaches for different sized banks and/or domestic versus internationally active banks and recognizes properly different buckets of assets and assigns risk weights while incorporating the quality of issues/assets through rating mechanism. To allow this flexibility Basel II is elaborate and is bedecked with three mutually reinforcing pillars: Minimum capital requirement (MCR - Pillar I); Supervisory review process (Pillar II);

and Market Discipline (Pillar III). All three pillars complement each other to form an overarching risk-management structure for the promotion of financial stability (Blunden, 2005).

2.2.1 The Pillar 1: provides for minimum capital requirement for 3 main risks - credit risk, operational risk and market risk:

For credit risks, the banks have a choice to adopt a Simplified Standardized Approach (SSA) with a uniform risk weight of 100 percent for corporate loans or based on Standardized Approach (SA) which allows use of ratings of the external credit assessment institutions (ECAIs). Alternatively, banks can opt for Internal Rating Based (IRB) which involves development of internal rating systems to measure capital against credit risk. Banks can adopt Foundation IRB (FIRB) using their own data to estimate probability of default (PD), Loss Given Default (LGD) and Exposure at Default (EAD). FIRB banks will depend on fixed weights approved by their supervisors whereas under Advanced IRB they may use their own estimates (Leippold and Vanini, 2003).

Operational risks captures risks associated with internal processes, systems, and people. Capital for this risk is prescribed by (i) Basic Indicator Approach (BIA), (ii) Standardized Approach and (iii) Advanced Measurement Approach (Allen, 2004).

Market risk relates to losses due to changes in prices, interest rate and equity prices. If opting for standardized approach capital is calculated against market risks by using the parameters as specified by the regulator or under internal approach banks develop their own systems and

models to capture risk under this category. The Pillar I of MCR is interconnected and reinforced with the two other pillars (Larsen and Guha, 2006).

2.2.2 Pillar II or the Supervisory Review Process - Under this, financial institutions should have their own internal capital assessment processes to capture risks which remained uncovered under Pillar 1 and thus set aside capital in line with the bank's risk profile and control environment. The supervisory review process validates the bank's internal assessments by ensuring that the whole array of risks has been taken care of. Three risks in particular ought to be considered under Pillar 2: risks that are not fully captured by the Pillar 1 (credit concentration risk); those factors not taken into account by the Pillar 1 (interest rate risk in the banking book, business and strategic risk); and factors external to the bank (business cycle effects). Besides using qualitative assessments, both banks and regulators, could employ forward-looking stress tests to identify possible events or changes in the market conditions that could adversely impact the capital adequacy.

2.2.3 Pillar III - seeks to enhance disclosure and transparency by strengthening banks' financial reporting system and by encouraging market discipline and allowing the key stakeholders to assess key pieces of information on the scope of application, capital risk exposures, risk assessment processes, and capital adequacy of the institution. Pillar III complements and reinforces the first two pillars and infuses market pressures to bring in better risk management and adequate levels of capital in the banks and keep key stakeholders fully informed about the risk profile of banks and enables them to take prudent decisions while transacting business with them (Dutta and Perry, 2006).

2.3 Implications of Basel II Accord

It is widely recognized that Basel II is a major breakthrough in theoretical and practical world of banking industry and a dynamic framework which will be able to adapt to ongoing innovation and change. Some of the main features (see annexure) of Basel II are noteworthy:

First, while the new Accord maintains the level of capital adequacy requirements at 8% (Tier 2 capital is restricted to 100% of Tier 1 capital) consistent with Basel I, it has shifted emphasis from regulatory to economic capital framework, while giving recognition to new risk mitigation techniques (default protection) and clarifying new trading book capital questions (Banerjee and Banipal, 2005). Careful evaluation of these elements suggests that Basel II is not ideologically about raising capital requirement per se but focuses on efficient and effective capital allocation. Appropriate and sharpened risk articulation and assessment & safeguards; would result in reduced capital requirements. Conversely, ill-conceived financial structures with risky counterparties will attract punitive capital requirements. Basel II in some senses “serves as more intelligent solvency capital redeployment.”

Second, the new Accord has depth and breadth in its architecture and it blends and integrates well, with an element of mathematical rigor, all key prudential and supervision norms; however the rules based approach allows substantive national discretion which has its pros and cons (Monfort and Mulder, 2000). Basel II at the very basic level consists of the Standardized Approach (SA) which recognizes and defines various asset buckets and assigns them risk weights in accordance with the type and nature of corporate issue and other transactions and delegating its qualitative assessment to external raters. The matrix of risk buckets and weights is

considered to have added excessive complexity for less sophisticated banks. The linkage and delegation of quality assessment to external ratings, while understandable, lends excessive confidence on the objectivity and soundness of rating agencies which, in at least developing countries has only thus far rated a small proportion of corporates and issues (Huber, 2003).

Notwithstanding, the Pillar 1 offers a choice to resort to either a Standardized Approach (SA) which has pre-specified weights or to turn to Internal Rating Based (IRB) approach which involves a foundation and advanced IRB option. These approaches are differentiated on the basis of the available in-house risk assessment expertise, the size and product mix of the bank, and overall financial sophistication. There is considerable national discretion for regulators to decide, within the parameters defined under Basel II, on risk weights for different types of finances, treatment of collateral and risk mitigation (Blunden, 2005).

The core pillar is bedecked by two other pillars; and all three pillars are interlinked and intertwined and mutually reinforce each other. Pillar 2 (Supervisory Review) underscores need for strengthening the financial institutions' internal capital assessment processes to capture risks which remained uncovered under Pillar 1 and thus set aside capital in line with the banks' risk profile and control environment. The supervisory review process validates the bank's internal assessments by ensuring that the whole array of risks has been taken care of. Pillar 3 (Market Discipline) complements the other two pillars by requiring disclosures and transparency in financial reporting to promote market discipline (Banerjee and Banipal, 2005).

Third, the Accord encourages banks to recognize all types of risk and take appropriate steps to mitigate these risks, while providing for adequate capital. Besides the credit risk, the Accord for

the first time recognizes the operational risk, however, the degree of guidance and complexity in measurement provided within the framework for these risks varies. The Credit Risk (the risk of default by the counterparty) is dealt with most comprehensively in the Basel II in line with legacy of the first Accord as well as the banks traditional edge and competence in credit risk assessments (Leippold and Vanini, 2003).

According to Banerjee and Banipal (2005), the inclusion of Operational Risk, a fundamental improvement over Basel I, captures risks associated with bank's internal control processes and systems and corporate governance policies and practices. Operational risk calculation explicitly requires capital for "the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events" risk. This definition includes legal risk, but excludes strategic and reputational risk. Three approaches underlie measurement of capital against operational risk:

Basic Indicator Approach (BIA) – capital for operational risk should be equal to the average over the previous three years of a fixed percentage (denoted $\alpha=15\%$) of positive annual gross income; Standardized Approach capital charge for each business line is calculated by multiplying gross income by a factor (denoted β) assigned to that business line. β (ranging between 12-18%) serves as a proxy for the industry-wide relationship between the operational risk loss experience for a given business line and the aggregate level of gross income for that business line; and Advanced Measurement Approach - the regulatory capital requirement will equal the risk measure generated by the bank's internal operational risk measurement system using the quantitative and qualitative criteria for the AMA. Overall the approaches for

operational risk assessment are not as nuanced as for credit risk, however the AMA approach does allow for more fine tuning. Once again the banks with better risk assessment would opt for the advanced approaches (Leippold and Vanini, 2003).

Market Discipline pillar underscores need for transparency and disclosure of data and technicalities. The evaluation of banks' risks and its systems and capital adequacy by the market will help ensure integrity and validation of other pillars. For this pillar to work, it needs to be supported by proper accounting rules and more elaborate disclosure of bank's strategies and approaches adopted, risk profile and capital strategy through economic and credit cycle, information of the stress tests, and PD/LGD data (Currie, 2005).

Fourth, within the pillars, the Accord offers a range of options and urges banks to move from SA which assigns high risk weights and capital standards to adopting IRB and within it further having the option to choose either the Foundation versus Advanced IRB.

These options have clear tradeoffs but most importantly, IRB offers greater capital relief relative to SA. Nevertheless, IRB systems will only be feasible if they are supported by databases and history on credit losses, rating models and risk management systems etc. and their soundness and integrity has been validated by supervisors. Banks operating in less developed countries, having limited in-house expertise, and small to medium size are in general opting for SA. The advantage of SA is its relative ease of implementation by even small and mid-sized banks. The main problem, however, is that it would usually result in much higher capital requirements as compared to IRB. There is much less fine tuning of the risk weights, and banks have to rely on

external rating agencies (Basel Committee on Banking Supervision (2003)). The banks adopting this approach would thus be at a disadvantage against their competitors. Jurisdictions that will stick to the SA for too long may find that their domestic banks are losing ground to the foreign banks operating globally who are more likely to adopt IRB.

Fifth, the IRB approach is being preferred by large global banks, which already competitively price credit risk.

The key parameters under IRB approach are PD (probability of Default), LGD (loss given default), M (Maturity) and EAD (Exposure At default). Under the FIRB, the banks calculate PD of their portfolio, while the other parameters i.e. LGD and EAD are prescribed by the regulator. Minimum PD is 0.03% for banks and corporates; no floor has been prescribed for sovereigns. The LGD for senior exposure is 45% and the subordinated exposure attracts a lower recovery of 75%. These rates should be reexamined by the regulators taking into account the ground realities of their respective jurisdictions (Currie, 2005).

The Advanced IRB provides discretion to banks, and as such there is an incentive to move too quickly to AIRB without adequate preparation. The balancing act has to be performed by the regulator, on one hand it has to promote the efficiency of banking capital and pursue more fine tuned risk assessment, and on the other it has to ensure that banks have sufficient resources and expertise to undertake this complex task. The AIRB approach has very high sensitivity to the changes in LGD and M given the differences in PDs. In a paper by ING Bank (Basel Committee on Banking Supervision, 2003), it is shown that at higher LGD levels - 75% there is a

particularly strong impact on the risk weights of bonds of lower rated issuers. On a similar note the variations in maturity M, have greater impact on low rated borrowers as compared to high rated borrowers. It implies that in case of a BBB- rated borrower, the risk weights will be highest for subordinated loans (LGD 75%) having long maturity (5 years). At the same time for short term secured loans (with low LGD) the difference in risk weights will not vary a great deal with the quality of borrowers. The use of AIRB would thus produce winners and losers in the banking sector. The low rated borrowers and users of long term funds would face much higher costs of funds, whereas public sector and other high quality borrowers would gain.

Regulators have to ensure that instead of marginalizing the low rated borrowers any further, policies are in place to enhance the overall credit profile of the business sector in the country. The choice of the approach will also impact sovereign borrowers. Some countries like Hong Kong and China will gain, because the risk weights associated with their sovereign loans will be lower, whereas Turkey and Indonesia will face higher risk weights. According to ING report, the risk weights of OECD and Non- OECD countries would vary depending on the approach applied by the banks. The Accord clearly discourages certain exposures as banks earn more pejorative capital treatment for equity style risks which were under-capitalized in Basel I. An ING study has observed that a number of European banking groups have unwound their industrial and non-strategic financial equity holdings as a part of preparation for Basel II.

Substantial savings can be achieved through freeing up of regulatory capital, depending on the risk characteristics of loan portfolio. For example, a bank carrying substantial mortgage loan portfolio would free up regulatory capital when it moves to Basel II. In case of operational risk,

for big banks that must adhere to Basel II, moving to a proposed advanced measurement standard might generate savings from 20 to 25 percent of the capital requirements for operational risk if regulatory capital exceeds economic capital. Realizing these savings, however, would require substantial investment. For large, diversified global banks, the cost of implementation is estimated at \$100 million but can be as high as \$250 million, and the process could well take up to three years. For diversified regional banks, the cost is estimated at \$25 million to \$50 million important to remember that many banks would incur much of this cost even without Basel II, since they must upgrade their risk-management capabilities to keep pace with changing markets and remain competitive (Basel Committee on Banking Supervision, 2003).

2.4 Challenges of implementing Basel II Accord

Banking industry worldwide today faces several issues and challenges which unless effectively addressed would impact the pace of adoption and implementation of Basel II. According to Ferri, *et al.* (2001) these include Good and Reliable Data and Information; Development of sound risk-management system; Asymmetry in supervision; Imperfect Markets; Pro-cyclicality; Access to finance for disadvantaged; Operational costs; Cross-border challenges; Challenges for the corporate Sector; Cost and volume of capital; and the Problem of Adverse Selection.

2.4.1 Good Reliable Data and Information

Good Reliable Data and Information is critical to proper risk assessment. In absence of this, banks by and large are initially adopting SA for measuring their credit risk. Under SA, the role of the External Credit Assessment Institutions (ECAIs) and external auditors magnifies but

coverage and penetration of both is limited. In the absence of reliable ratings for different assets, banking industry will not be able to fully exploit the flexibility of Basel II and most credit risks will tend to end up in the unrated 100% category and as a result there will be little change in capital requirements relative to Basel I (Basel Committee on Banking Supervision, 2004).

Furthermore, the erratic behavior of loss data due to frequent volatility of economic cycles would deter the proper assessment of risks under IRB and hence the actual capital allocated might not be truly reflective of economic capital. In view of these, national regulators are striving to encourage both further development of national rating and scoring mechanism and encouraging banks planning to adopt IRB to collate reliable and longer trail of data on its basic inputs. The application of more advanced approaches also depends on business continuity planning and sophistication of the IT resources among banks as well as regulators (Huber, 2003).

2.4.2 Development of Sound Risk-Management Systems

The foremost challenge facing the banks in implementation of Basel II is to develop well functioning, efficient and integrated risk-management systems. While the treatment of market risk remains the same under Basel II, banks need to strengthen their risk-management systems to properly define and assess credit and operational risks and to recognize the inherent interdependence of such risk. To capture credit risk under IRB, banks will have to generate exposure data and calibrate it properly to differentiate between borrowers' default risks – a complex task in developing countries given the level of industry expertise, lack of historical data and absence of adequate technology (Basel Committee on Banking Supervision, 2004). Most challenging is estimation of operational risks since most banks do not have required systems and

technology to calculate operational risk or determination of capital standards. By increasing the sophistication of the operational risk assessment and management processes, banks can save on capital charge for operational risk. To strengthen risk-management systems, banks and supervisors invariably require capacity building both in terms of human and technology resources to enable them to properly assess the risk-profile and associated capital requirements. Supervisors and banks will have to achieve synergies in their operations to meet the high demands of Pillar II.

2.4.3 Asymmetry in Supervision

When different market participants are regulated by separate supervisors, it is difficult to maintain comparable quality of policy formulation and vigilance. The asymmetry of regulatory regime can arise within one country e.g. between banks and securities firms, as well as on cross-border level. The Basel Accord provides an opportunity for developing common standards; yet it requires a much closer cooperation, information sharing and coordination of policies. In many developing countries, only the banks are coming under the ambit of Basel II and not other financial services providers, thus creating some scope of regulatory arbitrage. The presence of a large number of internationally active banks in the region requires close cooperation among supervisors across the globe to resolve the home-host issues. It would become all the more important for the jurisdictions where the approaches for Basel II would differ (Huber, 2003).

2.4.4 Imperfect Markets

Wilson (2004) argued that the functioning of risk assessments system of banks is affected by distortions in markets namely dominance of large players, high asymmetry of information, and lack of market depth. The price manipulation by significant market players can distort the true market value of securities' portfolio. To make any meaningful assessment of market risk and encourage market discipline, the imperfections have to be removed from the financial markets. The regulator should have the capability to assess the price risk, and identify situations in which market values of portfolios have been over/ under stated by the regulated institution through price manipulation.

2.4.5 Pro-cyclicality

One of the initial criticisms on the Basel II Accord was related to pro-cyclicality. The new accord could generate more pronounced business cycles in an economy particularly in recessionary period when the borrower's credit risk increases, as measured by IRB, and the banks will curtail lending, while in boom time they will expand lending. However, under the new accord the deterioration of a portfolio should begin to be reflected in the bank's capital adequacy ratio at a much earlier stage, and no further deterioration should occur in the capital adequacy ratio at the moment it is recognized as an accounting loss. Pro-cyclicality can be addressed by several ways. For example supervisors have discretionary powers under Pillar 2 to demand additional capital during a business cycle expansion or banks can adjust the value of probability of default (PD) in IRB system based on the historical trend in business cycle. However, the adjusting of the IRB parameters has to be consistent and transparent (Wilson,2004).

2.4.6 Access to Finance for the Disadvantaged

Keeping in view that the new accord would require banks to hold higher capital allocation for assuming higher credit risk, there is a concern that small businesses and poor segments of the society would receive no or very costly credit. Even under the old framework, the problem of access to finance for low income segments is quite significant for developing countries. Given the wider prevalence of poverty, particularly in the African region, the governments' efforts to combat poverty might receive serious blow and hence cannot be addressed in isolation. However policies should be made to bring more segments in the ambit of financial services, without seriously compromising the banks' risk profile (Wilson, 2004).

2.4.7 Operational Costs

The installation of risk assessment systems would obviously carry massive initial costs. Some of these costs would be explicit, for instance, cost of IT systems, hiring of new staff and trainings. There will be, however, several implicit costs such as adjustments in historical processes, and frequent adjustments of the new systems in the beginning of the learning curve. Moreover, compliance failures can result in incurrence of legal costs. In order to contain the costs of implementations for the banking sector, the banks should aim to (i) devise simpler work flows to keep processes easy to understand, (ii) have frequent proactive interaction with the regulator to ensure that compliance systems are developed correctly the first time, (iii) ensure that legal department works closely with compliance and risk management, and (iv) create swift corrective procedures for any compliance failures (Gandy, 2003).

2.4.8 Cross-Border Challenges

The challenges discussed above become more pronounced in a cross-border environment. One of the main benefits of Basel II is to provide a common language to banks and regulators to communicate about risks embedded in an entity or transaction globally. However the difference in readiness across countries would make this quite difficult to achieve. The differences in preparedness of banks would hinder information sharing across sectors and across borders. Moreover, this may also create restriction in credit flow from banks of developed countries into the emerging economies, because these banks may be discouraged due to high capital allocation for such investment. The most basic step is to ensure that whatever is the stage of development vis-à-vis the Basel II implementation, at least adequate information disclosure rules (Pillar III) are in place. This would help in building the confidence level of foreign donors and banks (Matz, 2005).

2.4.9 Challenges for the Corporate Sector

Since the risk-sensitivity is at the core of Basel II, the flow and cost of credit to firms is going to vary depending upon their respective risk-profile. Those with high risk and low credit worthiness are going to be loser whereas the other with low risk and high credit worthiness shall derive benefit, as banks would have to allocate their capital accordingly (Kaufman, 2000). This impact can be deduced from the emerging, peculiar clientele structures for the banks adopting SA and those going for the IRB. The IRB bank would find little attraction in lending to low rated borrowers because they would have to incur a capital charge which would be higher than 8%, while SA banks might be indifferent regarding their lending to such borrowers because they

anyhow would have to incur the capital charge of 8%. By the same token, IRB banks will be forced to attract high rated borrowers through more favorable pricing of products whereas the SA bank would not be able to compete with the IRB bank on price to capture those high rated customers. Consequently, high rated customers would tend to converge into IRB banks and the low rated customers with the SA banks. This not only holds serious connotation for small, local banks of the developing economies because of the higher risk of default and possible deterioration in their asset quality but also for the non-financial firms on low rated spectrum as they might witness serious constraints in their access to credit at fair terms (Matz, 2005).

2.4.10 Cost and Volume of Capital

Some studies have pointed out that Basel II would impact cross-border capital flows to developing countries, particularly reducing access and raising the cost of commercial loans from developed markets. This is largely because developing countries carry low sovereign ratings which attract higher capital charge. Yet another possible implication is that international banks might find reduced incentive to expand their operations into these countries, thus further exacerbating their problem of low capital. However, the situation might favor those countries enjoying superior sovereign ratings by virtue of their economic and financial strength. Under the SA for instance, countries like China, Singapore, Taiwan and Malaysia are going to benefit, as they will attract less than an 8% charge (Kaufman, 2000).

2.4.11 The Problem of Adverse Selection

Under IRB, high quality corporate lending attracts a lower capital charge, while low quality borrowers require a higher charge than the 8% charge under Basel I. Under IRB therefore banks

would prefer high quality over low quality borrowers, while under SA banks will have relatively greater incentive to lend to lower quality borrowers, particularly those that are not externally rated, given that these will continue to attract an 8% capital charge irrespective of the underlying risk. The possibility that high risk borrowers will migrate to banks following SA is a concern for Africa given the risk it poses for less sophisticated banks (Gandy, 2003).

2.5 Empirical Studies on Basel II

Few empirical studies have been undertaken internationally about the application of the Accord. Regarding Kenya and as far as the researcher is aware, the current study represents the first study of its kind. It should be noted here that even the international surveys did not cover the Kenyan banks. The following is an attempt to summarize the main conclusions of previous work done on the Basel II Accord.

Rowe *et al.* (2004) examined bank capital management in the light of Basel II, concluding that the final form of the Capital Accord is not the core implementation issue but rather the ability to have an institution's data well organized and centrally accessible to perform and document the necessary calculations. Rowe *et al.* also believe that addressing the data issue properly will allow banks to leverage their Basel II efforts to improve their fundamental risk management processes and not just pour money into regulatory compliance alone. Rowe *et al.* consider an integrated view on risk measurement and capital determination as a key policy for financial institutions to adopt.

Lastra (2004) investigates risk-based capital requirements and their impact upon the banking industry: She concludes that Basel II has significant economic and structural consequences that cannot be underestimated. Basel II will lead to a substantial redistribution of capital requirements. She adds that capital regulation has become a prominent feature of banking regulation and a major strategic theme for bank management. However, Lastra emphasizes that banks need to pay special attention to some crucial issues. The first of these is cost: “Basel II is costly to implement, complex to understand and prescriptive in its numerous recommendations.” The second issue is operational risk, introduced for the first time in Basel II: there will be a capital charge against this type of risk. The third issue is bank consolidation, where Basel II appears to see the benefit of larger and more sophisticated banks. Small or unsophisticated banks facing an increase in their capital charges could be bought by more sophisticated banks (Mignola and Ugoccioni, 2006).

Many banks around the world are assessing the potential implications of the new Basel capital adequacy framework (Basel II). Compliance with these new regulations, once translated into national legislation, is a sine qua non for the banking industry. To that end, each bank will have to make a choice from the Basel II menu for credit and operational risk capital requirements - following either the less sophisticated basic or standard approaches or going for the more advanced approaches based on internal risk models (Currie, 2005). It should also be borne in mind that through a more onerous and detailed supervisory review (Pillar II) the new Basel II framework requires banks to improve their risk management framework and measure all risks in a consistent and comprehensive way (Leippold and Vanini, 2003). In anticipation of the expected changes more banks are now also seeking to introduce economic capital frameworks, to

implement risk-adjusted return on capital (RAROC) and to reap the benefits of risk-based business applications and streamlined credit processes.

KPMG (2004) International conducted a study titled “Global Basel II Survey 2003: Eight Questions on the New Basel Accord.” The survey represents 294 financial institutions from 38 countries. The survey finds that; considering the implementation time frame until 2007 and the project complexity, banks seem to be behind schedule; Basel II seems to be accepted as a driver for the improvement of credit rating systems and processes quality; capital optimization seems to be secondary; and the main obstacles are the lack of internal resources and cost constraints together with a lack of availability of data and inflexibility of IT systems.

In addition to these results KPMG (2004) reported some interesting statistical results: (i) more than 90 per cent of respondents have started a Basel project; 50 per cent of respondents have a budget of less than US\$1 million allocated to the Basel project; (ii) approximately 50 per cent of participants are still in the pre-study or assessment phase; (iii) 70 per cent of participants are not further than the phase of systems modeling; (iv) less than 20 per cent have started the implementation for Credit Risk, and less than 10 per cent for operational risk; (v) less than 10 per cent have started the testing and validation phase, which is one of the key phases of the overall project and one that often proves difficult to complete; and 60 per cent of the participants see the timing of the implementation as the main cause for concern.

The fourth issue is procyclicality, which refers to the factors that exacerbate the swings in the economic cycle, increasing volatility. Wilson (2004) conducted a case study on Barclays’ Basel

II preparations. This case study was based on the author's experience in Barclays Bank on the preparations required for successful implementation of the new Basel II Accord. He concludes that there is still a long way to go.

Its next steps are still important. To be successful, it needs to understand its likely capital requirements under the options available to it. It can learn from the Pillar I process and get involved with the regulator in the Pillar II debate. And it should be sure to get a grip on the implementation issues, and maximize all the advantages from its chosen approach.

Ernst & Young (2006) conducted a global Basel II survey. They surveyed banks around the globe on the status of their Basel II capital adequacy preparations. The online survey polled 307 individuals at large banks around the world. The questions covered areas from compliance to cost. Respondents were asked how significant an impact Basel II would have on compliance with supervisory requirements and on risk management. Respondents were also asked about education on Basel II, and the expected benefits, cost and challenges of Basel II implementation. The survey finds that: respondents still need significant education about the implications of Basel II; Eighty Nine per cent believe that banks with robust risk infrastructure will have a competitive advantage over other banks; Seventy per cent of respondents agree that portfolio risk management will become more active; Eighty Five per cent of respondents believe that economic capital will guide some, if not all, product pricing; Ninety per cent of respondents agree that Basel II will result in more comprehensive risk information and a better understanding of risk in their banks; Seventy Five per cent of respondents think Basel II will have a positive impact on timelines and quality of risk information, both at portfolio and transaction levels;

respondents predict a substantial increase in implementation costs; and embedding Basel II in credit risk business processes represents one of the important challenges for the implementation.

According to Ernest & Young (2004), as reported by Hensen (2005), levels of preparedness of countries in adopting Basel II which differ widely. Basel II Accord is not legally binding; however, many countries aim to adopt the principles and criteria for their local regulatory frameworks to achieve sound banking systems, as well as to ensure a level playing field globally. He also mentions that many regulators are also trying to meet the internationally proposed Basel II compliance..

McDonald (2005), in her article about Basel II and the USA, provides some evidence supporting the delay or non-immediate application of Basel II by the USA banks. She states “ In the USA, the original intention was to the advanced version of Basel II only, which would apply to just ten banks, all of them international banks, on a compulsory basis. The real obstacle to the immediate application arises from the results of the fourth quantitative impact study from 26 American banks, which provided the supervisors with internal measures of credit risk as part of the study”.

Basel I banks will be competing against Basel II banks, which could lead to fewer banks with less diversified loan portfolios. However, McDonald also indicates that many internationally active US banks support working towards Basel II and see the benefits of Basel II in defining the risk management process that leads to the development of quantitative risk-measurement and risk management systems (Gandy, 2003).

In summary, Basel II represents a big challenge facing banks across the globe, but at the same time it represents a real revolution in the area of banking practices. However, some express their concern about the application of Basel II. Majnoni and Powell (2005) in their article “Reforming bank capital requirements: implications of Basel II for Latin American countries,” assume that the implementation of Basel II will start in 2007 by the 13 member countries of the Basel II committee, and they raise the question if and how other countries (e.g. Latin American countries) should apply Basel II – and therefore whether the new Accord will be successful as a standard. Bodriguez (2003) questioned how successful Basel II will be in accomplishing its goals, and if the Basel Accord – that is, the international harmonization of capital standards – is necessary or desirable in creating a stable financial system.

2.6 Summary

Basel II is recognized to have “revolutionized” the risk assessment, management and mitigation systems and offered financial industry innovative and sophisticated approaches to weighing these risks. Concurrently, Basel II has catalyzed new supervisory approaches which have encouraged regulators to start thinking of aligning their national regulations along the Basel II Accord. Most countries have now defined a road map and timetable for adoption of Basel II by industry and to position themselves to conduct the required due diligence for supervision of more advanced approaches to regulatory framework. However, the progress on Basel II implementation varies among the regions reflecting mainly differences in their financial and technological readiness. The speed of adoption could be explained by a succinct analogy that one can travel a certain distance by taking the high-speed autobahn while in Europe, however, the same distance would

require a lot more time in developing countries context given the quality of the roads (Gandy, 2003).

However, the imminent enforcement of the Basel II agreement is intended, among other objectives, to improve the transparency of the financial sector. Thus, this agreement identifies the content that banks should provide through their web pages. The entry into force of the Basel II Agreement will have two main effects. First, the banks will be obliged to improve their transparency by providing a wide range of information through their web pages.

Central Bank of Kenya began its road map towards the assessment of preparedness and formulation of policy framework on Basel II implementation in 2007. To this end CBK has laid down a framework to be followed in the new capital allocation approach. The Basel Committee at CBK is still in discussions to firm up a structure that would be applicable in Kenya. CBK views this approach as critical in developing a strong banking sector which is key in achieving the 'Vision 2030'. Though Basel II implementation has not become a regulatory requirement, CBK has allowed banks to adopt based on their capabilities and priorities. Foreign banks on the other side have had to start implementation based on the FSA requirements.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

The review of literature has produced reoccurring themes emphasizing the importance of good reliable data and information as these are critical to proper risk assessment. In the absence of this, there will be little change in capital requirements relative to Basel I (Basel Committee on Banking Supervision, 2004). Lack of sound risk management systems is the foremost challenge facing the banks in implementation of Basel II. Among others challenges, it begs the question; Have we addressed this and if not, are we ready to address it?

3.2 Research Design

For purposes of this study, a descriptive survey will be undertaken. The method is preferred since it permits gathering of data from the respondents in a natural settings. Descriptive designs result in a description of the data, whether in words, pictures, charts, or tables and whether the data analysis shows statistical relationships or is merely descriptive. “What” questions invariably lead to descriptive designs; Descriptive research is designed to describe the characteristics or behaviors of a particular population in a systematic and accurate fashion. Survey research uses questionnaires and interviews to collect information about people’s attitudes, beliefs, feelings, behaviors, and lifestyles (Brown *et al*, 2003).

Descriptive design is preferred because no matter what method is chosen to collect the data; all descriptive designs have one thing in common: they must provide descriptions of the variables in order to answer the question under study. One of the most useful methods of numeric analysis available is statistics and this study shall use this method to describe and make inferences about measurable characteristics of a large group based on measurements from the representative sample of the population. In particular, frequency distribution which will be used in this study is intended to show the distribution (or the count) for each bank to clearly spell out to what extent each of the various Basel requirements influence that particular bank's activities.

3.3 Population of the Study

The population will be all the commercial banks registered and licensed to undertake commercial banking business in Kenya. The total number of commercial banks stood at 43 as at December, 2011 (CBK, 2011) (See Appendix I). The respondent from each of the commercial banks will be the Chief Executive Officer (CEO), who is charged with the responsibility of shaping the strategic direction of his/her respective organization. In the absence of the CEO, his/her appointed agent will participate in the study.

3.4 Sampling Method and Techniques

A census of the whole population of all the commercial banks in Kenya will be undertaken. The Table 3.1 below presents the distribution in terms of peer classification.

Table 3.1: Target Population

No.	Strata (Peer classification of Commercial Banks – market share)	Population size (Number of commercial banks)	Sample size (100% of the population)
1	Tier I	6	13.95
2	Tier II	14	32.56
3	Tier III	23	53.49
Total		43	100.00

Source: Author (2012)

3.5 Data Collection

Questionnaires will be used to collect data. A semi-structured questionnaire consisting of two sections, Section I and section II will be used. Section I will cover items pertaining to profile of the respondents while section II will cover items pertaining to the area of study. Closed ended questions will be presented on a Likert scale. The Likert type scale, commonly used in business research will be applied because it allows participants to respond with degrees of agreement or disagreement (Brown *et al*, 2003). The rating will be on a scale if 1 (lowest impact or least important) to 5 (highest impact or most important). The questionnaires will be pilot tested on 10 randomly selected respondents before they are administered so as to ensure that the questionnaires are understood in their correct perspective, in order to meet the research objectives.

The procedure that will be used in collecting data will be through distribution of the questionnaires by dropping and picking them from the respondents at their most convenient time that will be agreed upon by both parties. A letter of introduction, stating the purpose of the study will be attached to each questionnaire. In addition, the researcher will make telephone calls to the respective respondents to make a follow up on the questionnaires that will have been

delivered to the respondents. Once completed, the researcher will personally collect the questionnaires. This will give the researcher the opportunity to clarify certain issues arising from the various responses.

3.6 Data analysis and Presentation

Data analysis will involve using of an appropriate model so that it easier to analyze. The data pertaining the profile of the respondents and their respective organizations will be analyzed using content analysis while data pertaining to the objectives of the study will be analyzed by employing descriptive statistic.

3.7 Analysis Model

$Y = \frac{1}{2} X$ (where X is the total of x's, x's are the practices suggested by Basel II for adoption by commercial banks and Y is the profitability)

CHAPTER FOUR

4.0 DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

Data was collected through questionnaires and observation and was edited for completion, consistency and eligibility. It was analyzed using descriptive methods. The researcher made use of Microsoft Word, Microsoft Excel and Microsoft PowerPoint in the gathering, classification and presentation of information.

4.2 Quantitative Analysis

The quantitative data presented aims to summarize, illustrate frequency, draw meaningful companions and valid conclusions and, enable understandable presentation of data.

4.3 Response Rate

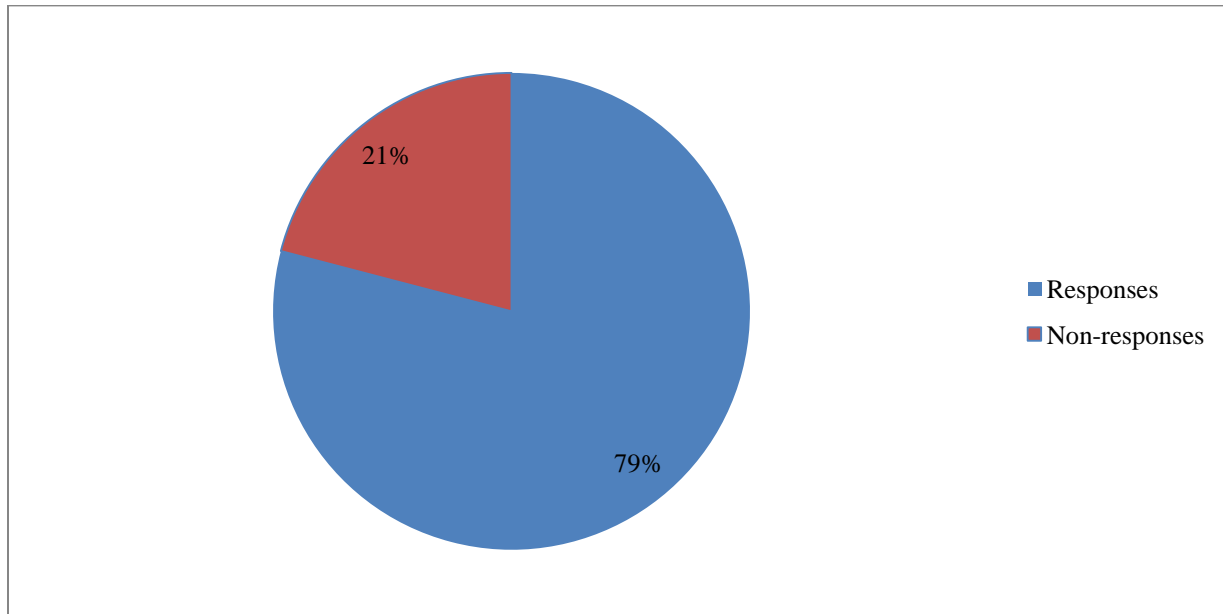
The researcher handed out 43 questionnaires to the sampled population and received back 34 questionnaires duly completed. This was 79% response.

Table 4.1 Response Rate

CATEGORY	FREQUENCY	PERCENTAGE
Responses	34	79
Non-responses	9	21
Total	43	100

Source: Author (2013)

Figure 4.1 Response rate



Source: Author (2013)

4.3.1 Introduction of ratings as the basis of risk assessment and calculation of regulatory capital

The respondents were requested to state whether there was introduction of ratings as the basis of risk assessment and calculation of regulatory capital while filling the questionnaires. This was to facilitate the researcher with information as to whether the respondents were aware of this requirement and also how seriously they have taken it.

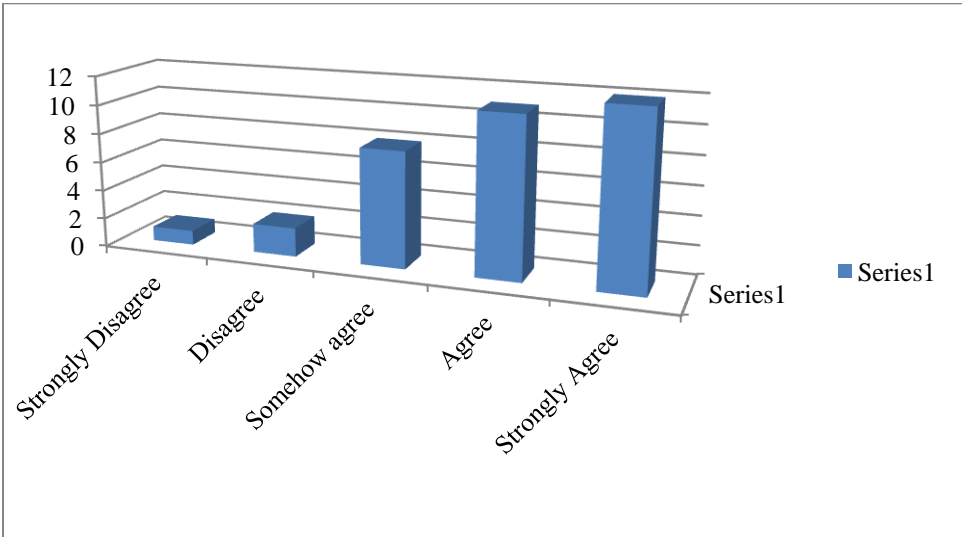
Table 4.2 Introduction of ratings as the basis of risk assessment and calculation of regulatory capital

CONCURRENCE LEVEL	FREQUENCY	PERCENTAGE %
Strongly Disagree	1	3
Disagree	2	6

Somehow agree	8	24
Agree	11	32
Strongly Agree	12	35
TOTAL	34	100

Source: Author (2013)

Figure 4.2 Introduction of ratings as the basis of risk assessment and calculation of regulatory capital



Source: Author (2013)

The research study established that **Introduction of ratings as the basis of risk assessment and calculation of regulatory capital** was a determinant to the extent of Basel II implementation and its effect on productivity in relation to the independent variables. From the above chart it can be seen that out of 34 correspondents, those who agree are 23 making it 67% of respondents.

4.3.2 Assessment of credit costs based on the degree of risk.

The researcher also requested the respondents to state whether assessment of credit costs based on the degree of risk was considered in their respective organizations. This was to enable the

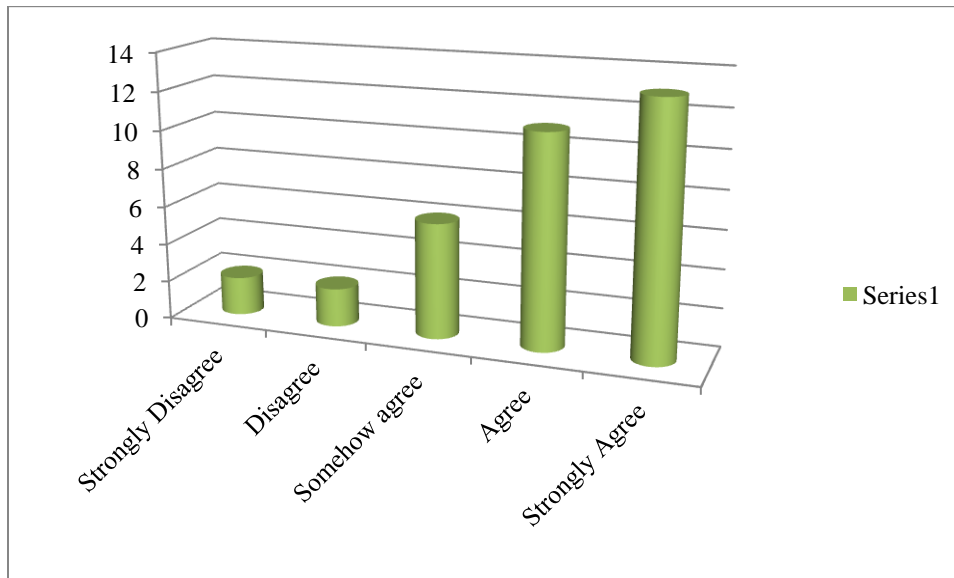
researcher to see how well this was done and whether it was being done in first place. The responses showed that 11 agreed and 13 disagreed which makes it 70 % of respondents.

Table 4.3 Assessment of credit costs based on the degree of risk.

CONCURRENCE LEVEL	FREQUENCY	PERCENTAGE %
Strongly Disagree	2	6
Disagree	2	6
Somehow agree	6	18
Agree	11	32
Strongly Agree	13	38
Total	34	100

Source: Author (2013)

Figure 4.3 Assessment of credit costs based on the degree of risk.



Source: Author (2013)

4.3.3 Adoption of criteria for the regulatory treatment of operational risk.

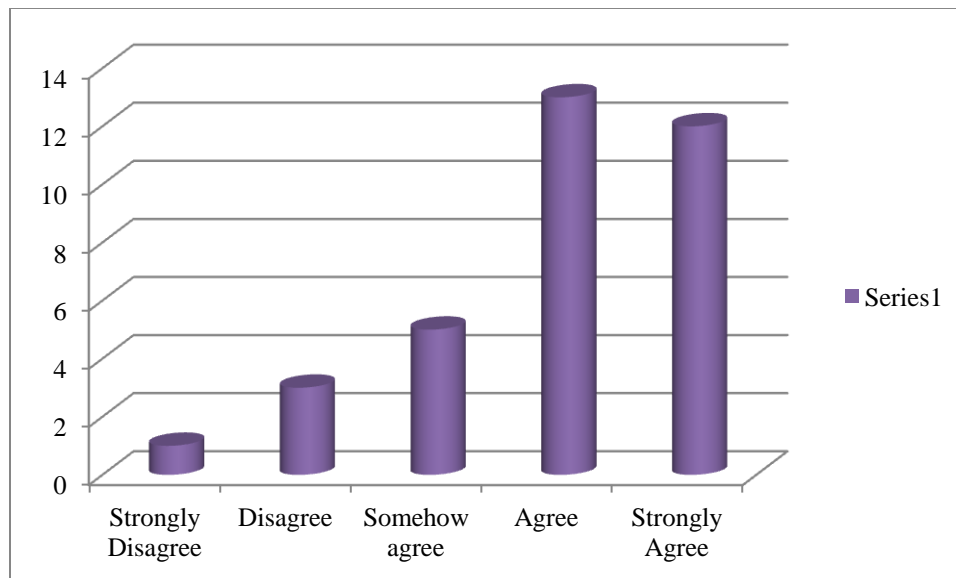
According to the study, the criteria for regulatory treatment of operation risk seem to be popular with many banks. This was demonstrated by the fact that 25 out of 34 which is 73% of the population confirming that it happens in their organizations.

Table 4.4 Adoption of criteria for the regulatory treatment of operational risk.

CONCURRENCE LEVEL	FREQUENCY	PERCENTAGE %
Strongly Disagree	1	3
Disagree	3	9
Somehow agree	5	15
Agree	13	38
Strongly Agree	12	35
Total	34	100

Source: Author (2013)

Figure 4.4 Adoption of criteria for the regulatory treatment of operational risk.



Source: Author (2013)

4.3.4 Adoption of criteria for supervisory review and increased public disclosure

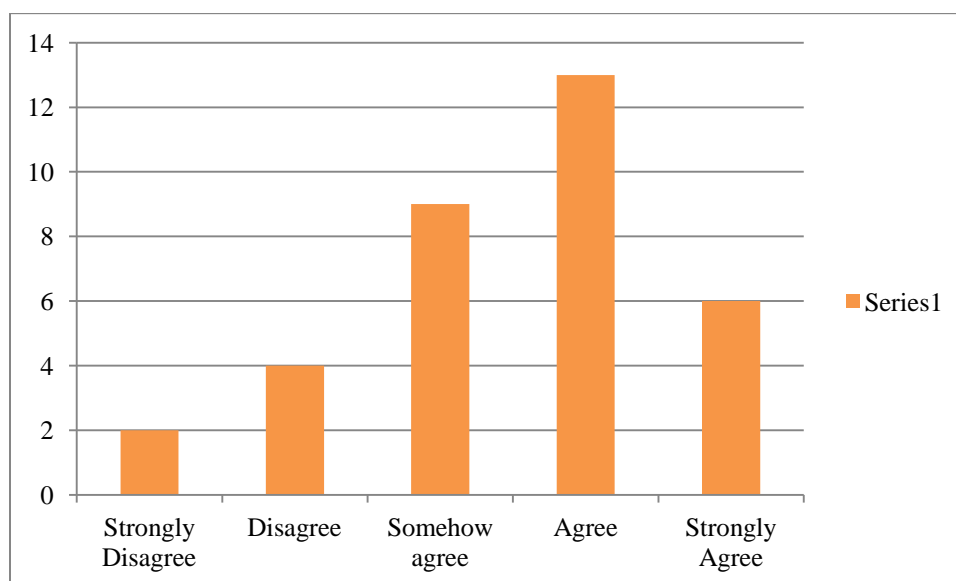
The proposed regulation was argued by some that it provides incentives for banks to develop new ways to evade the intended consequences of the proposed regulation. Supervision alone cannot prevent banks from ‘gaming and manipulation.’ 19 out of 34 seem to agree with this regulation which is 56% which does not look like a very high percentage.

Table 4.5 Adoption of criteria for supervisory review and increased public disclosure

CONCURRENCE LEVEL	FREQUENCY	PERCENTAGE %
Strongly Disagree	2	6
Disagree	4	12
Somehow agree	9	26
Agree	13	38
Strongly Agree	6	18
Total	34	100

Source: Author (2013)

Figure 4.5 Adoption of criteria for supervisory review and increased public disclosure



Source: Author (2013)

4.3.5 Compliance with the minimum regulatory capital which is to be allocated by each bank based on its risk profile of assets

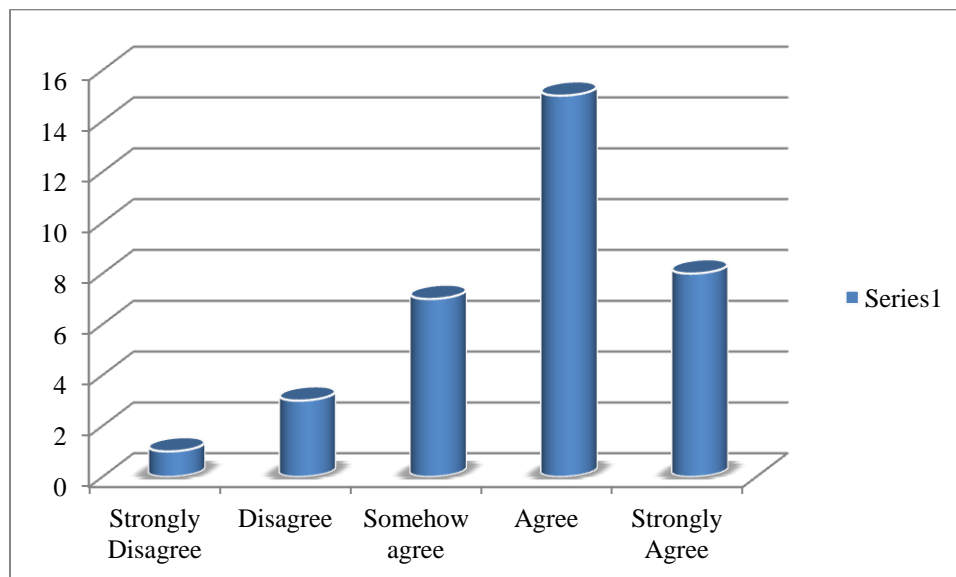
68% of respondents agreed with this although majority seemed to just agree.

Table 4.6 Compliance with the minimum regulatory capital which is to be allocated by each bank based on its risk profile of assets

CONCURRENCE LEVEL	FREQUENCY	PERCENTAGE %
Strongly Disagree	1	3
Disagree	3	9
Somehow agree	7	21
Agree	15	44
Strongly Agree	8	24
Total	34	100

Source: Author (2013)

Figure 4.6 Compliance with the minimum regulatory capital which is to be allocated by each bank based on its risk profile of assets



Source: Author (2013)

4.3.6 Maintenance of capital adequacy ratio (CAR) of minimum 9%.

Many banks have begun to evaluate how Pillar I's approaches to credit and operational risk could affect their minimum capital requirements. Fewer institutions, however, have given comparable consideration to Pillar II, under which banks could have to set aside regulatory capital in addition to what is required under Pillar I. Moreover, it is under Pillar II that the New Accord introduces two critical risk management concepts: the use of economic capital, and the enhancement of corporate governance. To achieve the business benefits that Basel II makes possible, banks need to pay particular attention to the requirements of Pillar II.

Pillar II is based on a series of key principles of supervisory. These principles address two central issues:

- i. The need for banks to assess capital adequacy relative to risks overall.
- ii. The need for supervisors to review banks' assessments and, consequently, to determine whether to require banks to hold additional capital beyond that required under Pillar I. To comply with Pillar II, banks must implement a consistent risk-adjusted management framework that is comparable in its sophistication to, and closely linked with, the risk approaches the bank chose under Pillar I. The four principles provide necessary guidance, as does the Basel Committee's other guidance related to the supervisory review process (e.g., "Principles for the Management of Credit Risk," September 2000, and "Sound Practices for the Management and Supervision of Operational Risk," February 2003).

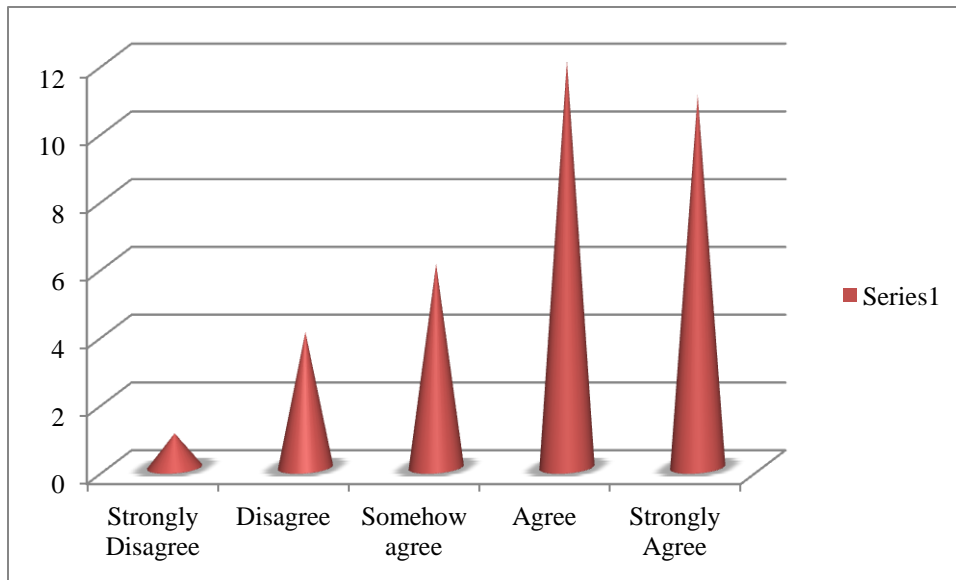
The table below and its diagram illustrate how local banks are doing on this requirement

Table 4.7 Maintenance of capital adequacy ratio (CAR) of minimum 9 %.

CONCURRENCE LEVEL	FREQUENCY	PERCENTAGE %
Strongly Disagree	1	3
Disagree	4	12
Somehow agree	6	18
Agree	12	35
Strongly Agree	11	32
Total	34	100

Source: Author (2013)

Figure 4.7 Maintenance of capital adequacy ratio (CAR) of minimum 9%.



Source: Author (2013)

CHAPTER FIVE

5.0 SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the findings of the research study, deduces the conclusion from the study and recommends suggestions for further study.

5.2 Summary of Findings

Basel II represents a long-term opportunity but with budget issues and operating profits under pressure worldwide. The initial investments banks must make to comply with the New Accord also represent a short-term challenge. Over time however, the improvements in risk management Basel II is intended to drive may enhance risk culture, reduce volatility of all risks, lower provision for bad debts, reduce operational losses, improve the institutions' external ratings, and thereby help ensure access to capital markets and raise organizational efficiency.

For both credit and operational risks, the new accord offers a continuum of three approaches of increasing risk sensitivity to allow banks and their regulators to select the approaches that are most appropriate to a bank's size, the complexity of its operations, and the nature of its risks. The choice of approaches to calculating credit and/or operational risk will be affected by competitive dynamics, regulatory pressures, and other factors.

5.3 Areas of high concern

The study sought to address the following questions and got the following responses:

a) Credit Risk Calculations

Basel II provides banks with three approaches for the calculation of the minimum capital requirements necessary to cover credit risk:

- Standardized Approach
- Internal Ratings Based (IRB) Foundation Approach
- Internal Ratings Based (IRB) Advanced Approach

Under the Standardized Approach, ratings from external agencies such as Standard & Poor's or Moody's provide the basis for measuring the credit risk posed by a particular customer. In the IRB approaches, however, banks that receive regulatory approval can use their own internal rating systems, along with formulas specified by the Basel Committee, for the calculation of the capital charge. My survey showed that the majority of banks (some 74%) intend to adopt an IRB approach.

b) Operational Risk Calculations

The Basel Committee acknowledges the difficulty of developing measures for operational risk, but it sought to provide incentives to banks to continue to develop such measures. Indeed, in April 2003 it asserted that it is "prepared to provide banks with an unprecedented amount of flexibility to develop an approach to calculate operational risk capital that they believe is consistent with their mix of activities and underlying risks." Basel II provides three approaches for the calculation of the minimum capital requirements necessary to cover operational risk:

- Basic Indicator Approach
- Standardized Approach
- Advanced Measurement Approach (AMA)

The survey found that while 38 percent of banks have chosen the Standardized Approach, many banks remain undecided about which approach is best for them.

c) New disclosures

“The committee believes that public disclosure is particularly important with respect to the New Accord where reliance on internal methodologies will provide banks with greater discretion in determining their capital needs.” Thus, focus on market discipline is designed to complement the minimum capital requirements, encompasses both quantitative and qualitative disclosure requirements for capital adequacy and capital structure as well as credit risk, market risk, operational risk, and interest rate risk in the banking book. Still undecided, however, are the specifics of required disclosures, including the materiality of disclosed data, its confidentiality, its frequency, and the medium by which it is to be disclosed. Enhanced disclosure is intended to enhance the transparency of banks’ business and risk structures. It is also intended to provide banks with positive incentives to strengthen risk management and internal controls. The Basel Committee’s belief is that investors, armed with enhanced information, will be able to distinguish between well-managed and poorly managed banks and to use this knowledge in determining a portfolio strategy and an appropriate risk premium. The theory is that across the industry over time, well-managed banks would benefit from better market conditions, while poorly managed banks would face penalties. Thus, an individual bank may not always benefit from the gains investors and regulators derive from new disclosures. New scrutiny, by the market and by ratings agencies, could have difficult consequences that might evolve differently in a less transparent environment. Problems that banks might be able to work out with their regulators may prompt an immediate, and potentially volatile, response in the market.

Understanding the risks of new disclosures is another aspect of risk management that will likely evolve as a result of Basel II.

The Basel Committee affirms that the means by which banks will share information publicly will depend on the legal authority of local regulators. Moreover, the Pillar III (focus on market discipline is designed to complement the minimum capital requirements) disclosure requirements apply solely to capital adequacy. They are intended not to conflict with the broader accounting disclosure standards with which banks must comply.

For example, the Basel Committee and the International Financial Reporting Standards (IFRS) Board were seeking to harmonize the two standards during 2003, particularly with regard to Pillar III requirements concerning:

- Disclosures in the financial statements of banks and similar financial institutions (IAS 30). At present, the timetable for completion of IAS 30 extends beyond the proposed timetable for implementation of Basel II. As a result, Pillar III requirements likely will not be incorporated into financial reporting and will require a separate reporting mechanism.
- Financial instruments: presentation and disclosure (IAS 32)
- Financial instruments: recognition and measurement (collaterals, guarantees, derivatives)

One of the most difficult aspects of implementing an international agreement is the need to accommodate differing cultures, varying structural models, and the complexities of public policy and existing regulation. Banks' senior management will determine corporate strategy—as well as

the country in which to base a particular type of business—based in part on how Basel II is ultimately interpreted by various countries’ legislatures and regulators.

5.4 Conclusions

Every type of research has implicit, if not explicit, research design. In the most elementary sense, the design is a logical sequence that connects empirical data to a study’s initial research questions and ultimately, to its conclusions. In a sense the research design is a blueprint of research, dealing with at least for problems: what questions to study, what data are relevant, what data to collect, and how to analyze the results. Hence the research design deals with a logical problem and not a logistical problem, and also specifies how the investigator will address the two critical issues of representation and legitimization.

5.5 Recommendations

Banks should do their own impact studies to help them assess the cost/benefit ratio of specific approaches, both in terms of regulatory capital requirements and implementation effort required. Banks should also consider the expectations of their regulators as well as how market perceptions of the decision could affect their business and product pricing.

Large banks can expect that regulators will likely want to see them move in a structured way toward the use of the advanced approaches to credit and operational risk. To meet that goal, banks will need to develop and use quantitative models that are acceptable to regulators. Appropriately designed and implemented, such models can enable banks to measure and monitor risks across the organization, enhance risk management and ultimately determine capital requirements. Banks also need to be aware of the views of rating agencies and capital providers,

which will likely expect them to use robust risk management methods that enable use of the more sophisticated approaches—and could reward them for such choices. Ultimately however, regulatory capital requirements for operational risk could dilute benefits achieved from adoption of the more sophisticated credit risk management approaches, although the Basel Committee appears to support the overall goal of providing capital incentives for adopting the more advanced approaches.

5.6 Limitations

The research had its challenges for various reasons. Among the challenges is lack of 100% response. Some organizations did not return the questionnaire despite various follow ups. Also, there were those who were not sure of the answer to give. There was also the issue of some organizations giving “popular answers” so that their organizations can be viewed as doing the “right thing.”

5.7 Suggestions for further study

Further study is recommended to find out the impact of Basel II in Kenya Banking systems as a result of changes in which banks conduct businesses. Most importantly, the impact it will have on market segments, pricing, product offering and internal impact on the banks in form of increased cost, decision making and capital management.

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APPENDIX I:

LIST OF COMMERCIAL BANKS AS LISTED IN THE CENTRAL BANK OF KENYA

COMMERCIAL BANKS DIRECTORY

(Peer classification is as per The Banking Survey Kenya 2012 publication)

(Tier 1-Market share > 5%, Tier 2 > 1% & <5%, Tier 3 < 1%)

No.	Name of Commercial Bank	Peer Ranking (Tiers)
1.	African Banking Corporation Ltd.	111
2.	Bank of Africa Kenya Ltd.	11
3.	Bank of Baroda (K) Ltd	11
4.	Bank of India	11
5.	Barclays Bank of Kenya Ltd.	1
6.	CFC Bank Ltd	1
7.	Charterhouse Bank Ltd	111
8.	Chase Bank (K) Ltd	11
9.	Citibank N.A	11
10.	Commercial Bank of Africa Ltd.	11
11.	Consolidated Bank of Kenya Ltd.	111
12.	Co-operative Bank of Kenya Ltd	1
13.	Credit Bank Ltd.	111
14.	Development Bank of Kenya Ltd.	111
15.	Diamond Trust Bank Kenya Ltd	11
16.	Dubai Bank Kenya Ltd.	111
17.	Ecobank Kenya	11
18.	Equatorial Commercial Bank Ltd	111
19.	Equity Bank Ltd.	1
20.	Family Bank Limited	11
21.	Fidelity Commercial Bank Ltd	111
22.	Fina Bank Ltd	111
23.	First community Bank Limited	111
24.	Giro Commercial Bank Ltd.	111
25.	Guardian Bank Ltd	111
26.	Gulf African Bank Limited	111
27.	Habib Bank A.G Zurich	111
28.	Habib Bank Ltd.	111
29.	Investment & Mortgages Bank Ltd	11
30.	Imperial Bank Ltd	11
31.	Jamii Bora Bank Limited.	111
32.	Kenya Commercial Bank Ltd	1
33.	K-Rep Bank Ltd	111
34.	Middle East Bank (K) Ltd	111
35.	National Bank of Kenya Ltd	11
36.	NIC Bank Ltd	111
37.	Oriental Commercial Bank Ltd	11
38.	Paramount Universal Bank Ltd	111
39.	Prime Bank Ltd	11
40.	Standard Chartered Bank (K) Ltd	1
41.	Transnational Bank Ltd	111
42.	UBA Kenya Bank Limited	111
43.	Victoria Commercial Bank Limited	111

Source: Central Bank of Kenya (CBK) (2012)

APPENDIX II:
QUESTIONNAIRE INTRODUCTION COVER LETTER

Mr. Joshua Oigara,
CEO, Kenya Commercial Bank,
Kencom House,
Nairobi.

Dear Sir,

I am a finance student from the University of Nairobi. As part of my project, I'm conducting a market research on the implementation of Basel II accord and its implications on banks' operations in Kenya. So I would request you to participate in this survey. I would be happy to share the results if you need.

Please mark the first choice that comes to your mind when you face a question. The questionnaire is a combination of open ended and close ended questions. All the information that you provide will be strictly confidential. So answer all the questions honestly and to the best of your knowledge.

If you feel you are not able to answer a question, just leave that aside and answer the rest. Please give fair and honest opinions. Thank you for spending your effort in making this survey effective.

Sincerely,

Mr. Peter Mukangu Mwangi.

APPENDIX III: QUESTIONNAIRE

This questionnaire has been designed to collect information from the selected Chief Executive Officers (or their representatives) of Commercial Banks in Kenya and is meant for academic purposes only. Please complete each section as instructed. Do not write your name or any other form of identification on the questionnaire. All the information in this questionnaire will be treated in confidence.

THE EXTENT OF BASEL II REQUIREMENTS ADOPTION BY COMMERCIAL BANKS IN KENYA.

Listed below are some of the practices suggested by Basel II for adoption by commercial banks. With respect to your organization, please indicate the extent to which you agree or disagree that the organization is currently implementing each of them (write 1-5, where 1 is least agreed and 5 is strongly agreed)

Basel II requirements	Strongly disagree	Disagree	Somehow agree	Agree	Strongly agree
Introduction of ratings as the basis for risk assessment and calculation of regulatory capital					
Assessment of credit costs based on the degree of risk.					
Adoption of criteria for the regulatory treatment of operational risk.					
Adoption of criteria for supervisory review and increased public disclosure					
Compliance with the minimum regulatory capital which is to be allocated by each bank based on its risk profile of assets, as stipulated by Basel II accord defines the minimum regulatory capital.					
Maintenance of capital adequacy ratio (CAR) of minimum 9 %.					

Source: www.bis.org

Please list and briefly discuss other challenges that your organization has faced in implementation of Basel II accord.

END