AN EVALUATION OF THE PREPAREDNESS OF KENYAN COMMERCIAL BANKS TOWARDS BASEL II IMPLEMENTATION

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DECLARATION

I hereby declare that the work contained in this project is my original work, and has not previously in its entirety or in part been submitted for any other Degree qualification of this nature or to any other University or Institution of Learning. All the references cited in the text have been duly acknowledged.

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DEDICATION

To my parents, Mr. and Mrs. Maroa Muhingira, there is no better way you could show your love and sacrifice. I am grateful for the greatest inheritance that you could ever give us, education.

To my husband, Martin, your love, insight, invaluable advice and support means the world to me.

To my siblings, Chacha, Sophie and Asegai, your love, prayers, support and encouragement I greatly appreciate.

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To God my Almighty Father, you have blessed me with everything that I own in this world. Glory be to your Name.

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To all my family members, friends and colleagues who in one way or the other were instrumental towards this project, I will always cherish your support.

ABSTRACT

This study sought to assess the preparedness of Kenyan Commercial Banks towards Basel II implementation.

Primary data was collected through questionnaires based upon a review of the theoretical and empirical literature on Basel II. These were then distributed to persons in charge of risk and operations management, specifically risk managers or their equivalents in the commercial banks operational in Kenya. Data collected through the questionnaires was analysed by use of inferential and descriptive statistics, especially through Microsoft Excel. The findings of the study indicate that none of the banks had implemented Basel II in its entirety. Most institutions will be ready to implement the new accord in the year 2010, as evidenced by the level of awareness and the low number of institutions with ready set budgets for Basel implementation.

For successful implementation of Basel II, institutions would have to acquire system infrastructures and upgrade their technology and data systems to facilitate and ensure that models are comprehensively developed and validated, and that the system infrastructures are compatible with the new models with capabilities of effectively managing the requisite data. The risk management policies and strategies will also have to be amended to meet Pillar I stipulations on capital allocation. Despite the highlighted challenges, it is worth noting that Kenyan banks are willing to enact Basel II, which comes with enhanced risk management, improved risk assessment and pricing and objective capital allocation and maintenance.

The critical challenges faced by most institutions are among others, model development, model validation, technology and system infrastructure, expertise and human resources competences, and implementation costs. All the resources namely skills, technology, expertise, money, time and data are considered to be influential in Basel implementation.

The study's major limitation was the low response time by some institutions. However, on the positive side, the study has set pace for research on the grey aspects that have not been tackled herein.

Key words: Basel II, Capital, Risk management, Pillar.

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DEFINITIONS

a) Credit risk

This refers to the current and prospective risk to earnings and capital arising from an obligor's failure to meet the terms of any contract with the bank or if an obligor otherwise fails to perform as agreed. The largest source of credit risk arises from advances.

b) Operational risk

Operational risk is the risk of loss arising from the potential that inadequate information system, technology failures, breach in internal controls, frauds, unforeseen catastrophes or other operational problems that may result in unexpected losses or reputation problems.

c) Market Risk - the risk that changes in market prices, especially in interest rates and foreign exchange rates will adversely affect the value of on or off-balance-sheet positions.

d) Probability of Default (PD) - the probability of a customer going into default.

e) Loss Given Default (LGD) - the amount that would be lost in the event of a default.

f) Exposure at Default (EAD) - the expected exposure at the time of default.

g) Effective Maturity (M) - the effective tenor.

h) Portfolio at Risk (PAR) - proportion of a bank's loan assets that may not be repaid by borrowers.

i) Risk Weighted Assets - these are the total of all assets held by the bank which are weighted for credit risk according to a formula determined by the Central Bank. The on-balance sheet assets like cash, loans and advances secured by cash, balances with the Central Bank of Kenya etc. usually have a zero risk weight while 20% is assigned to deposits and balances due from commercial banks, 50% to loans fully secured by a first legal charge over residential properties and 100% to all other claims.

J) Perpetual Subordinated Debt - this is debt equity or loan capital, which is not redeemable.

K) Subordinated Debt - this refers to loan capital, bonds, commercial paper or debt equity with original maturity period of five years and above. In case of insolvency, it is paid off after depositors and other creditors have been paid, thus used like equity to provide creditors some protection against insolvency.

1.0 CHAPTER ONE: INTRODUCTION

1.1 Background

The Basel Committee on Banking Supervision ("the Committee") issued a Revised Capital Adequacy framework, which is widely called Basel II in June 2004. The Central Bank Governors and Heads of Banking Supervision of the G-10 countries have endorsed this framework. The Group of Ten (G-10) is made up of eleven (11) industrial countries namely; (Belgium, Canada, France, Germany, Italy, Japan, The Netherlands, Sweden, Switzerland, United Kingdom and United States). The committee believes that the revised framework will promote the adoption of stronger risk management practices by the banking industry worldwide.

Basel II supersedes the current capital accord (Basel I), which was implemented in 1988. The new capital adequacy framework is more flexible, offering a menu of risk sensitive approaches and incentives for better risk management. Financial institutions will be required to make considerable changes in their approach to risk management (i.e. infrastructure, systems, processes, data requirements etc). This will ensure the financial soundness of financial institutions, stability of the financial system at large, maintain customer confidence in the solvency of the institutions and protect depositors against losses *(FSI, 2006).*

The objective of Basel II is to modernise the existing capital requirements framework to make it more comprehensive and risk-sensitive, taking account of many modern financial institutions thorough risk management practices.

The current timetable is that banks must be compliant by January 2007. However, regulators are encouraged to implement Basel II framework at their own pace and in a manner as appropriate to their economies, banking systems and supervisory mechanisms. Basel Committee acknowledges that moving towards Basel II adoption in the near future may not be a first priority for all non G -10 supervisory authorities in terms of what is needed to strengthen supervision. Non - members are encouraged to adopt it at such time as they believe is consistent with supervisory priorities and after carefully considering the benefits of the revised framework in the context of its domestic banking system *(Santos, 2007).*

However, Implementation of Basel II requires significant changes to the organization policies, processes and systems which may take time to establish or update. Operational systems have to be upgraded and connected to Risk Management systems. Banks need to install a Credit Risk Management function, distinct and independent of the Credit Management, with the responsibility of developing and validating risk rating models, controlling the execution of the credit processes, collection of data allowing continuous calibration of the models and the information to the management, the supervisors and the market, *Unisys Financial Services and Solutions, 2005.*

New tools and data warehouses will be required to support new reporting obligations, and to channel the credit information flowing from credit operations to credit risk management and inversely. Significant volumes of historical financial risk and default data need to be held. Consistency of the data across the bank will be an issue, which needs to be addressed if different types of risk exposures are to be processed consistently, reconciled, and assembled for supervisor and market information. The Basel II process is highly data and analytical dependent *(Hayler, 2005).*

"The cost of Basel II compliance, both in terms of direct investment and man-hours is likely to be so significant that many regional banks might opt in only if the competitive threat turns out to be real," *Hamilton, 2006.*

Basel is structured around three so-called pillars, which enshrine the key principles of the new regime.

Pillar I - relates to the minimum capital requirements each bank must hold to cover its exposure to credit, market and operational risk. This pillar covers the calculation of risk weights to determine a basic minimum capital figure; risk-weighted assets equal the amount of exposure multiplied by the respective risk weight. Banks must maintain a minimum eight percent (8%) of capital to risk-weighted assets.

$$\frac{\text{Total Bank Capital}}{\text{Risk-weighted Assets for Credit Risk + 12.5 X Capital Charges for Operational Risk and Market Risk}} >= 8\%$$

Total capital is subdivided into three tiers *(carried over from Basel I)*:

- Tier 1 Capital (or 'core capital') which is comprised of only those elements that have the highest capacity for absorbing losses on an ongoing basis for instance common shareholders, disclosed reserves and non-cumulative perpetual preferred shares.

- Tier 2 Capital (or 'supplementary capital'), which is made up of a broad mix of near equity components and hybrid capital/debt instruments. It is subdivided into upper and lower Tier 2, which is limited to 100% and 50% of Tier 1 capital respectively. Upper Tier 2 characteristics are closer to common equity than those eligible for lower tier 2 for example perpetual subordinated debt while lower Tier 2 is made up of securities or loans with characteristics that are closer to those of debt than of equity for example dated subordinated debt, which is subject to specific restrictions because it is not permanent.

- Tier 3 Capital (or 'additional supplementary capital'), which was added in 1996 and can only be used to meet capital requirements for market risk. It consists of short-term subordinated debt with specific characteristics and limitations. In practice, very few banks have used this type of instrument.

Basel II allows a financial institution to measure risk for regulatory capital purposes in one of two ways. Under the *Standardized Approach (SA),* banks use a risk-weighting schedule for measuring the risk of bank assets calculated based on the guidance and factors provided in Basel II. The risk weightings are linked to ratings given to sovereigns, financial institutions and corporations by external credit rating agencies.

The *Internal Ratings Based Approach (IRB)* allows banks to use their own internal ratings of counter parties and exposures, which permit a finer differentiation of risk for various exposures and hence deliver capital requirements that, are better aligned to the degree of risk. This

approach recognizes that banks generally know more than credit rating agencies about their borrowers hence enabling a bank to apply much finer differentiation between risks than the risk-weight buckets in the standardized approach. However, the internal ratings and loss estimates must be within a framework acceptable to the regulator. Risk assessment under the IRB Approach involves measuring risk components including Probability of Default (PD), Loss Given Default (LGD), Exposure at Default (EAD) and the Effective Maturity (M).

Pillar II - concerned with supervisory reviews that aim to ensure that a bank's capital level is sufficient to cover its overall risk. Supervisors are required to review the adequacy of the capital charge maintained by banks against all risks. Such a review includes an evaluation of capital requirement generated by Pillar I to ensure that it gives a consistent picture of the individual bank's operation and change implementation, where the supervisor/regulator is not satisfied with a bank's measurement of all risk capital charge. To this effect appropriate measures may be initiated including requiring the bank to increase capital charge for risk, reduce exposure to activities carrying high risk, improve contingency planning, upgrade IT systems, etc.

Pillar III - relates to market discipline and details minimum levels of public disclosure. This pillar greatly increases the disclosures that the bank must make. This is designed to allow the market to have a better picture of the overall risk position of the bank and to allow the counterparties of the bank to price and deal appropriately. It requires lenders to publish information relating to the amount of capital held against risk, their approach to risk management, objectives and processes and is designed to raise standards through greater transparency.

1.2 Problem Statement

In recent years, various technological advancements and the use of innovative business products have given rise to increased operational risk for Kenyan banks. As initial excitement about the Basel II Accord fades, the harsh realities are emerging as banks struggle to meet deadlines. Discussions on Basel II have shifted from the topic of regulatory compliance to best business practices. Banks are changing their business practices from purely collateral-based lending to using risk-based pricing, as regulators from different countries continue to debate on adoption deadlines.

Implementing the Basel II Accord is, according to the official view, voluntary. Nevertheless, more than 100 countries have implemented the Basel Accord in some form. Countries that do not implement the new accord risk sanction in several ways. Most notably, the lending programmes of the IMF and World Bank come with conditions attached, and these conditions include compliance with international regulatory benchmarks. Developing countries are likely to have the same incentives to implement Basel II as they did the 1988 Accord. The Basel Committee is also encouraging widespread adoption *(Ward, 2002).*

A strong banking sector is essential in fulfilling the national development aspirations encapsulated in the Vision 2030. In the Vision, the banking sector is expected to play a catalytic role in mobilising the substantial resources required to push Kenya to 'new frontiers' of development. The Vision also seeks to transform Kenya into a 'financial services hub' for the Eastern Africa Region. This will in turn require the formulation of a `world class' enabling legal and regulatory framework. It is anticipated that Basel II will in the near term become the global supervisory standard in the same way that Basel I was accepted and adopted by more than 100 countries in the world, *CBK 2007.*

The G-10 countries have already adopted the Basel II accord as well as other non-G-10 countries for example South Africa. While it may not be required for other banks, it's seen as good practice and competitive edge that will probably shape risk-capital management at many financial institutions. Some countries have already undertaken the decision on how to move forward while others intend to start with pillars II and III, and in a second phase move to pillar I with the adoption of the simplified standardised approach and only move to the IRB approach once they have built a data base and capacity within the Central Bank *(Gottschalk, 2007).*

Towards this end, the Central Bank of Kenya has devised a road map to be implemented flexibly taking into account the country context. The Central Bank has fully implemented Basel I and has come up with amendments to incorporate market and operational risk charges in the Capital Adequacy Framework; this awaits the CBK Board approval before the official release for the industry to start complying. The Bank is also in full Compliance with the Basel Core Principles for Effective Banking Supervision (BCPs) including adoption of Risk Based Supervision (RBS) among other principles, *(CBK, 2007).*

Given that the commercial banks are already in compliance with Basel I and well anticipate the enactment of Basel II, the Central Bank is optimistic that the banks will incorporate Basel II elements, especially pillar I amendments for market and operational risk charges. However, the success of this initiative in the Kenyan Banking industry is questionable; the study therefore intends to evaluate the readiness of Kenyan banks for the paradigm shift.

Implementation of Basel II is likely to improve the risk management systems of banks as the banks aim for adequate capitalisation to meet the underlying credit risks and strengthen the overall financial system of the country. Commercial banks will derive benefits from improved operational and credit risk management practices, *(Gupta, 2007).*

1.3 Objective of the Study

To assess the preparedness of Kenyan Commercial Banks towards Basel II implementation.

1.4 Importance of the study

Basel II is primarily about a regulatory capital requirement that is more risk sensitive and through that encouraging better risk management. The findings of this research will be of great assistance particularly to the following:

Banks

The results obtained from the study will enable banks to benchmark their status as far as Basel II is concerned. This will result to the laggards thinking twice, leading to a total paradigm shift in the industry in terms of effective risk management. Basel II will build on the existing risk management approaches of well-managed banks and create incentives for banks to move towards leading-edge risk measurement and risk management practices.

Bank Management

Since bank management will be responsible for filling out the questionnaire, their responses will play a major role in increasing their understanding of and expand their risk awareness on issues related to risk. Bank management will be able to benchmark their risk assessments, models and processes in a more detailed and regular manner.

Researchers and other scholars

Knowledge of Basel II is relatively new, this study is likely to set pace for studies on the grey areas not tackled in the study and provide an opportunity for criticism. It will enrich the body of knowledge in regard to Basel and form basis for further research.

The Investing Public

The study will enlighten the investing public on the minimum public information to be disclosed by banks so that they can independently assess a bank thereby improving their investing decisions.

The Regulator

The Regulator might borrow a hand to strengthen the regulatory framework of supervising banks on the new accord. The study may assist the Regulator to reinforce the rules and regulations guarding depositors in the banking industry. Further, the study will enlighten supervisors on those banks whose risk management and risk levels differ significantly from other banks and the status of banks on Basel II.

1.5 Justification of the study

Studies on Basel II have mainly been general and widely applied. This study will be unique as it evaluates Basel II applicability in the Kenyan context. Further, the study comes in hand to address the increased sophistication of banks' operations and risk management with the intention of aligning required minimum capital more closely with banks' real risk profile.

It is also contemporary in that it intends to explore whether Basel II will place the banking industry in Kenya on a higher effective front given that it will seek to ensure that lenders establish a culture with risk management, taking sufficient account of a bank's internal risk and capital management practices, hence increasing the risk sensitivity of the minimum capital requirements to allow for better determination of risk in a specific transaction.

2.0 CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

When a bank fails, the consequences can spread far beyond the bank, affecting customers and institutions that have deposited funds or invested capital there, and creating ripple effects in the domestic and, in some cases, international markets. Although it is recognized that the regulation of banks, per se, cannot prevent failures, the application of sound risk management standards together with the maintenance of appropriate levels of capital can lower the probability of such occurrences *(FSI, 2006)*.

In the mid-1980s, the Basel Committee on Banking Supervision (BCBS) initiated a project to achieve better international convergence of supervisory standards for the capital adequacy of internationally active banks, triggered by two main supervisory concerns:

- *Increased Exposure* - rapid increase in the size of banks' exposures, both on and off-balance sheet. In many cases, the growth was not matched by an increase in capital, resulting to erosion of capital levels in banks.
- *Lack of Common Regulatory Environment* - as banks started to expand into new business lines and increase cross-border operations, issues surrounding the creation of a level playing field among banks from different jurisdictions gained considerable importance.

In July 1988, the BCBS published 'International Convergence of Capital Measurement and Capital Standards' to address these issues. While the scope of the application of these standards was initially limited to large international banks incorporated in countries represented in the Basel Committee, it is now applied in more than 100 jurisdictions. In addition, in many jurisdictions, banks having solely domestic operations are subject to these standards, regardless of their size or the scope of their activities. Banking activity entails various types of risks, primarily credit risk, market risk, liquidity risk and operational risk. Historically, credit risk has caused the most problems for banks worldwide, but the speed with which market and operational risks can translate into losses explains why banks and supervisors alike are eager to control this risk *(BCBS, 2006)*.

Regulators have long sought to ensure that banks maintain adequate capital to cover all risks. In 1988, the Basel Committee on Banking Supervision agreed on the Basel Capital Accord (Basel I) which introduced a basic risk sensitive capital adequacy regime which provided essentially only one option for measuring the appropriate capital of internationally active banks. More than a decade later, the evolution of banking worldwide and the realization that the best way to measure, manage and mitigate risks, differs from bank to bank, led the Basel Committee to initiate revisions to the 1988 Accord - Basel II - a comprehensive agreement that establishes a spectrum of risk sensitive approaches for banks' calculations of minimum capital requirements, provides a supervisory review process for banks to maintain capital at levels commensurate with their risk profiles and encourages market discipline by requiring the disclosure of pertinent information *(BCBS, 2004).*

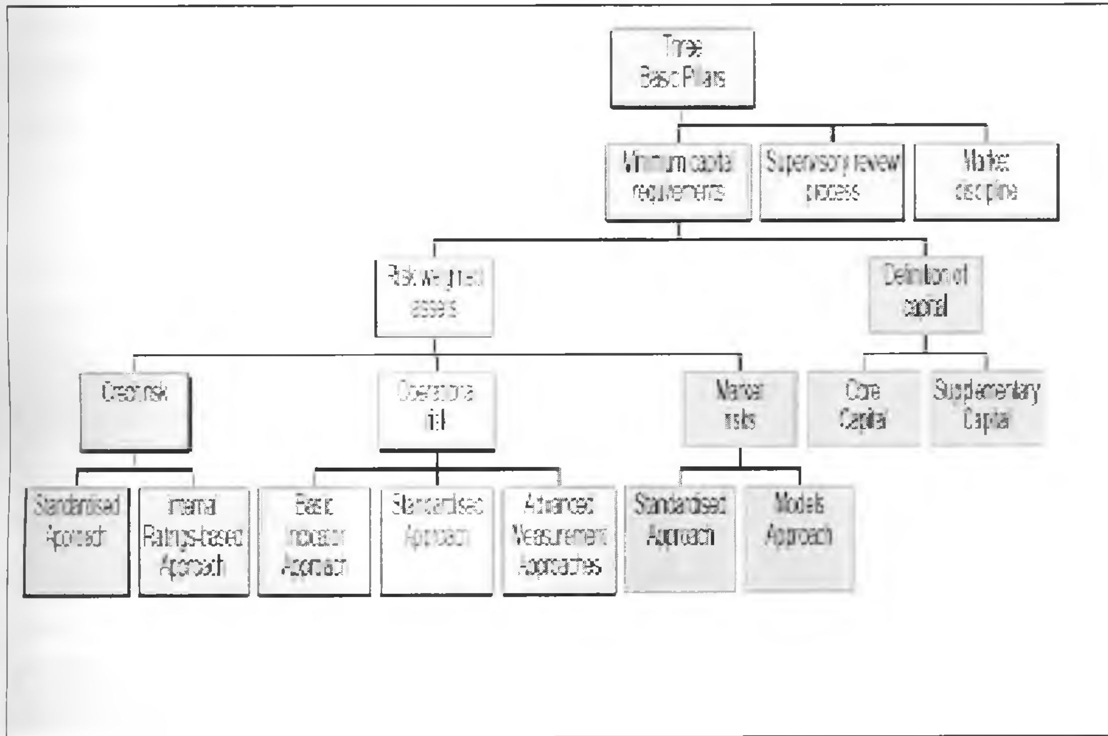
From the supervisor's perspective, regulating risk is essential to ensure the stability of the financial system while from a bank's perspective the primary goal is to protect itself from major losses or failure by controlling and limiting risk. Like all other businesses, banks hold sufficient capital and reserves as a buffer against losses and risks that arise in their business to ensure that they operate in a safe and sound manner.

Implementation of the Basel II Framework continues to move forward around the globe. A significant number of countries and banks (especially the G 10 countries) already implemented the standardized and foundation approaches as of the beginning of this year. In many other jurisdictions, the necessary infrastructure (legislation, regulation, supervisory guidance, etc) to implement the Framework is either in place or in process, which will allow a growing number of countries to proceed with implementation of Basel II's advanced approaches in 2008 and 2009. This progress is taking place in both Basel-Committee member and non-member countries. The Committee's Accord Implementation Group (AIG) and its working groups on validation, operational risk and trading book issues continue to actively share supervisory experiences in Basel II implementation, thereby promoting consistency across jurisdictions, *(BCBS, 2003b).*

2.2 The Basel II Structure and Concept

The New Basel Capital Accord was approved by the Basel Committee on Banking Supervision of Bank for International Settlements in June 2004 and suggests that banks and supervisors

implement it by beginning 2007. Basel II takes a three-pillar approach to regulatory capital measurement and capital standards.



The Basel II Structure

Pillar I spells out the capital requirement of a bank in relation to the credit risk in its portfolio, which is a significant change from the "one size fits all" approach of Basel I. Pillar I allows flexibility to banks and supervisors to choose from among the Standardised Approach, Internal Ratings Based Approach, and Securitisation Framework methods to calculate the capital requirement for credit risk exposures. Besides, Pillar I sets out the allocation of capital for operational risk and market risk in the trading books of banks.

Pillar II provides a tool to supervisors to keep checks on the adequacy of capitalisation levels of banks and also distinguish among banks on the basis of their risk management systems and profile of capital. Pillar II allows discretion to supervisors to (a) link capital to the risk profile of a bank; (b) take appropriate remedial measures if required; and (c) ask banks to maintain capital at a level higher than the regulatory minimum.

Pillar III provides a framework for the improvement of banks' disclosure standards for financial reporting, risk management, asset quality, regulatory sanctions, and the like. The pillar also indicates the remedial measures that regulators can take to keep a check on erring banks and maintain the integrity of the banking system. Further, Pillar III allows banks to maintain confidentiality over certain information, disclosure of which could impact competitiveness or breach legal contracts.

There are three major risks associated with Basel II i.e. credit, operational and market risks. Capital requirements for the risks are determined in various ways:

a) Credit Risk

Standardised Approach

This approach grades the credit risks of an obligor (both on and off balance sheet items) by assigning different risk weights on the basis of the credit ratings given by external credit assessment institutions (primarily rating agencies).

Internal Ratings Based (IRB) Approach

In this approach, a bank uses its internal ratings, instead of external ratings as under the Standardised Approach, to measure the credit risk of an obligor. The IRB Approach is based on the measurement of unexpected loss (UL) and expected loss (EL) derived from four key variables: probability of default (PD); Loss given default (LGD); exposure at default (EAD); and effective maturity (M). The banks will have to estimate the potential future loss from the exposure and assign risk weights accordingly. The IRB Approach has been further subdivided into Foundation Approach and Advanced Approach.

In *Foundation Approach*, a bank would internally estimate the PD and the regulator would provide the other three variables, whereas in *Advanced Approach*, the bank would be expected to provide the other three variables as well. The implementation of IRB approach is subject to explicit approval of the regulator who would have the discretion to allow the bank concerned to use its internal credit rating systems for assessing credit risk. Banks would have to satisfy the regulator about the adequacy and robustness of their risk management systems and internal

rating process, and of their competency in estimating the key variables. The IRB Approach is more risk sensitive as compared with the Standardised Approach and would benefit banks with improved risk management systems, strengthening their risk assessment processes.

b) Operational and Market Risk

Under Basel II, operational and market risk can be measured using three methods: Basic Indicator Approach; Standardised Approach; and Advanced Measurement Approach.

Basic Indicator Approach

The Basic Indicator Approach links the capital charge for operational risk to a single parameter, that is, the bank's gross annual revenue. The capital charge is calculated as an average of the previous three years of a fixed percentage (defined as "alpha"; set at 15% by the Basel committee) of positive gross annual income, ignoring years in which income was either zero or negative.

Standardised Approach

This approach is a variant of the Basic Indicator Approach. Here, the activities of the bank are divided into eight business lines: namely corporate finance; trading & sales; retail banking; commercial banking; payment and settlement; agency services; asset management and retail brokerage. Within each business lines, a fixed percentage multiplier (specified as "beta"; varies from 12% for retail brokerage to 18% for corporate finance) is specified by Basel II. The capital charge for each business line is calculated by multiplying the beta for each business line with its annual gross income. The total capital charge for the bank is the three-year average of the summation of the capital charge across each business line. The negative capital charges for a business line can offset a positive capital charge from another business line in a year, but not across years.

Advanced Measurement Approach

Under this approach, the capital charge will be the risk measure generated by the bank's internal operational risk measurement system that uses both quantitative and qualitative criteria. The bank would need to satisfy the regulator, that it's Board and senior management has an active oversight on operational and market risk management framework, the operational and market risk management systems are sound and are implemented with integrity; and that it has

resources in the use of the approach in the major business lines as well as control and audit functions. *(Gupta, 2007)*

2.3 Basel II status in various Jurisdictions

East Africa - "It is widely acknowledged that emerging countries such as Kenya will not be able to implement the Accord at the onset as they are yet to implement the prerequisites of Basel II. In this regard, the three East African Central Banks (Uganda, Tanzania and Kenya) resolved in May 2005 to only implement Basel II after fulfilling its' key prerequisites which are:

- Full implementation of the Basel I Accord, in particular the Market Risk Amendment.
- Compliance with the Basel Core Principles for Effective Banking Supervision.
- Adoption of Risk Based Supervision (RBS)."

(Central Bank of Kenya Bank Supervision Annual Report 2006, Pages 36-37)

Uganda - The proposed implementation target date is 2010. Bank of Uganda circulated a Basel II impact assessment questionnaire to all supervised banks and credit institutions and responses are still being analysed to come up with a Basel II activity plan. Uganda has a good baseline supervisory system in place and fully compliant with the Basel Core Principles which was facilitated by the enactment of the new Financial Institutions Act (FIA, 2004). BoU fully shifted to the Risk Based supervision approach in January 2003 and the supervisory methodology used for Banks, Credit Institutions and Micro finance Deposit Taking Institutions is now risk-based.

The FIA, 2004 allows BOU to prescribe higher on-going capital requirements for a specific financial institution if the supervisory review process reveals existing risks that warrant such increases, which is in line with Pillar 2. The FIA, 2004 also outlines some disclosures including a prescription for the form and content of the annual accounts, which provides a good ground for Pillar 3 under the New Capital Accord. *(Opiokello, 2006).*

Uganda is largely compliant with Basel I except on market risk. Preliminary findings however suggest that market risk is considerably low in the Ugandan financial sector. As part of the

strides to implement market risk charge in capital computation, BoU received technical assistance in May 2007. The team conducted a preliminary survey to establish the nature and scope of market risk related activities in banks and an awareness session was arranged to bring on board all supervision staff to understand the relevance and genesis of market risk charge and its application in capital adequacy measurement. The methodology for market risk capital charge and adjustment of capital ratios was also demonstrated and forms for computation of market risk were designed. The technical team also drafted a revised capital adequacy regulation for market risk charge computation.

As part of the initiatives, BoU conducted an assessment to establish the degree of impact of market risk charge on capital adequacy. The findings revealed that the impact is minimal and all banks are compliant with capital adequacy benchmarks, even under extreme scenarios all banks observed the minimum capital adequacy ratios adjusted for market risk charge in December 2007, *(BoU, 2008).*

Tanzania - Is headed towards Basel II Implementation following its effort towards compliance with the Basel Core Principles, Risk-Based Supervision and consideration for both market and operational risk. BoT conducted a survey on risk management practices in the banking industry in year 2005. The survey results indicated that the responsibility for risk management was not clearly assigned in most of banks and financial institutions and also the level of risk management awareness across the banking sector was moderate. The development of a Policy Paper on Risk Based Supervision and Risk Management Guidelines (2005), which were issued to all banks and financial institution, followed suit. Banks and financial institutions were required to develop and submit for review to Bank of Tanzania their Risk Management Programs (RMPs). From July 2007 all banks and financial institutions were being examined using RBS Framework.

Capital Adequacy Regulations have been reviewed to incorporate capital charge for market risk in the draft Capital Adequacy Regulations 2007.

In addition of the provisions of Section 35 of BFI Act, 2006 regarding cross border supervision, the Bank of Tanzania prepared a draft policy paper and regulations on consolidated supervision to ensure that all risk exposures of a bank or financial institution and its subsidiaries, or of a bank or financial institution belonging to a banking, financial or conglomerate group, are taken

into account. The draft regulation on cross border and consolidated supervision, 2007 is in place *(BoT, 2006).*

Rwanda - There is no action plan for Basel II, priority is on the implementation of Risk-Based Supervision and CAMELS rating system for banks. In 2004, the National Bank of Rwanda requested East AFRITAC for technical assistance in implementing the Risk Based Supervision (RBS) approach. The NBR identified a need to upgrade its current supervision methodology from the traditional compliance – checklist and audit-like activities to one, which will enable bank supervisors to obtain a deeper understanding of risks facing the banks and how these risks are managed. Over the past three years NBR has taken a number of initiatives towards achieving a systematic and comprehensive implementation of risk- based.

It is largely compliant with BCPs. In 1999 the NBR Act was revised to grant it independence to formulate and implement monetary policy and ensure monetary policy and ensure financial sector stability. Further, the Central Bank's supervisory capacity was strengthened to enhance regulatory frameworks, reduce regulatory forbearance, ensure market discipline and comply with the Basel Principles for effective supervision. In line with this, the World Bank/IMF Financial Sector Assessment Program was invited in 2005 to carry a diagnostic mission of the banking sector and make recommendations for further reforms.

In the context of addressing the weaknesses raised by FSAP, the Government launched the Financial Sector Development Program in 2006. *(Rusagara, 2008)*

South Africa - South African banks have made progress in the past two years for the implementation of Basel II. South Africa's Tier I banks are well positioned for the implementation of Basel II while the Tier II banks are less so, but they can afford to lag their larger peers, as their business models are simpler, often mono-line, and will therefore require significantly less resources and effort to implement. For the most part, the Tier II banks intend to adopt the more basic approaches within the Basel II framework, whilst the Tier I banks are all considering the advanced approaches, to suit their more complex organizations, and to leverage their advanced risk management process to obtain capital relief. *(Ernst & Young, 2005).*

Zambia - initiated internal sensitisation, workshop & brainstorming and has sent questionnaires to banks to assess the level of awareness. There is partial implementation of Basel II as priority is on full compliance with Basel Committee Principles, Risk Based Supervision, pillar III disclosures and the need to amend banking laws.

China - The current issues in the country include corporate governance, internal controls, asset quality, capital adequacy and accounting standards. China has targeted to put in place all the essential elements for effective banking supervision by end-2006 and to achieve a broad compliance with Basel Committee Principles by year 2012 *(FSI Survey, 2004)*

The China Banking Regulation Commission (CBRC) which was established in May 2008 for promoting the implementation of Basel II in China, reported the general framework for the implementation and proposed the draft of five pieces of guidance including guidance on classifying credit risk exposure in banking book, supervisory guidance on internal rating system for credit risk, guidance on regulatory capital measurement for special lending of commercial banks, guidance on regulatory capital measurement for credit risk mitigation and the guidance on regulatory capital measurement for operational risk of commercial banks.

The Commission has contributed a lot to assisting Chinese banks in preparing for Basel II implementation. The meeting made it clear that the year 2008 and 2009 is preparation period for Basel II implementation and the CBRC will start to process commercial bank's implementation applications from the year 2010. During the next a couple of years, both the CBRC and commercial banks should fully understand the relations of the three pillars of the new Accord and ensure the balanced implementation. Special attention should be paid to organizing training activities for staffs at different levels *(CBRC, 2008)*.

India - Basel II parallel run was to be done between 2006 and 2007, Pillars 1, 2 & 3 is to be implemented using the Standardized approach for credit risk and Basic Indicator approach for operational risk, and banks are preparing for Foundation Internal Risk Base. Risk-based supervision & other financial infrastructure are already in place *(FSI Survey, 2004)*.

"Currently, all commercial banks in India are expected to start implementing Basel II with effect from March 31, 2007, though a marginal stretching beyond this date should not be ruled out in view of the latest indications on the state of preparedness," *Reddy, 2006.*

Ethiopia - Has not fully implemented Basel I, lacks manpower, diagnostic study on implementation of risk-based supervision is being done.

Eritrea - Needs to know more about Basel II, have recently issued Risk Management Guidelines to all banks to build "risk management culture" among bankers.

Botswana - Has embarked a gradual strategy by developing internal capacity, reviewing market practices and extensive consultations. The country is experiencing pressure from foreign banks' subsidiaries.

Congo - No program to implement Basel II yet, the country is facing many other challenges.

Mozambique - Priority is on IFRS (2007), full compliance with Basel Committee Principles and risk management regulations.

(FSI Survey, 2004)

2.4 Basel II status in some Commercial Banks

a) Mauritius Commercial Bank Limited

The Mauritius Commercial Bank Ltd. (MCB) has implemented a comprehensive capital adequacy programme based around the Standardised Approach as defined under the Basel II Capital Accord. MCB are using Quadrant Risk Management (International) Ltd's SAB2 (Standardised Approach for Basel II) Capital Calculation and Reporting Tool in its new risk management systems and processes (MCB, 2007).

On 25 May 2007, Quadrant announced that MCB had successfully achieved its state of readiness using Quadrant's SAB2 (Standardised Approach for Basel II) Capital Adequacy Calculation and Reporting Engine as an important component within its overall architecture of new systems and risk management processes to achieve compliance with Basel II. Quadrant's role included assisting with the specification of MCB's Group Risk and Governance Policy, their Credit Risk, Operational Risk and Market Risk Polices as well as providing the underlying technology, SAB2 and the overall programme management. The implementation was completed by MCB in 18 months from the start of the project.

Tony Withers, the Chief Executive at MCB said, "The new processes and systems implemented as part of this Basel II Programme have provided MCB with improved decision making, more efficient allocation of capital, more accurate understanding of risk concentration and the development of an enhanced assessment of returns against risk by line of business. Over time we anticipate that it will improve our credit rating and competitiveness" *(QRMI, 2007).*

b) Siam Commercial Bank

Siam Commercial Bank (Thailand's first commercial bank) Selected SunGard's BancWare Capital Manager for credit risk management and Basel II compliance. SunGard's BancWare will be implemented at SCB's head office in Bangkok and will help the bank achieve timely Basel II compliance, upgrade its risk assessment capabilities and better manage its credit risk and underlying exposure. This agreement makes SCB one of the pioneering banks in Thailand as it takes steps towards an early implementation of Basel II. "The immediate benefits that SCB expects to see from the implementation of SunGard's BancWare are readiness for all three pillars of the Basel II Capital Accord and improved credit portfolio management. BancWare's credit risk portfolio management capabilities, with built-in Basel II templates, will help provide the bank with a jumpstart to the analytical capabilities required for portfolio management and Basel II compliance", S. Yokporn, Executive Vice President and Chief Risk Officer. *(Hall, 2006)*

c) Barclays Bank Group

Barclays plc has moved a significant way towards meeting Basel II challenge and overcoming the issues that it presents. Barclays concentrated on the early stages that are critical to the success of compliance with the regulation including models; standards and policy; governance and reporting.

Driven by the need to comply with minimum data periods for the validation of certain models, models grew into a significant effort across the business to understand the gaps between current model quality and standards and those required by the regulators. Barclays' approach was to create a superset of credit risk standards that encompassed existing internal benchmarks and hurdles, and combined these with new regulatory minimum standards. Each area of the business

was tested against these standards, facilitated by a bespoke survey tool delivered across the group by intranet technology.

Using a database of all the credit risk models has allowed Barclays to maintain control over all the critical modelling dimensions such as validation history and performance ranges and to review triggers, ownership responsibility and sign-off levels, *(Wilson, 2004).*

d) Standard Bank, South Africa

"We have been working on the Basel II project for two years and we are well on track. We deliver monthly presentations on our Basel II progress to our group executive committee, ensuring that it receives a consistent level of attention at the most senior level within the organisation. Like most large South African banks, we have opted for the internal ratings-based (IRB) approach for credit risk and the standardised approach for operational risk," *Smith, 2004.*

Standard Bank of South Africa has reached a milestone in its adoption of Basel II compliance by implementing SunGard's BancWare Capital Manager. The Bank has implemented BancWare Capital Manager's wholesale, retail, asset securitization and consolidation models to help facilitate Basel II compliance across the group. The bank has also deployed BancWare Capital Manager for the Basel II standardized approach for operational risk, *(SunGard, 2007).*

e) FirstRand Bank, South Africa

The bank has enacted Basel principles to complement their business model and approach to risk and capital. It has in the last few years, made significant progress in refining and upgrading the risk measurement approach, influenced by both the regulatory focus and increased interaction with large global financial institutions and the ratings agencies.

The risk measurement approach has the same grading technology used by the ratings agencies for ease of reference to the organisation's internal risk that is common with that used in the markets. Modelling of portfolio credit risk and credit pricing is based on actual market results complemented by fundamental views and analyses of developments in the market and on the bank's assessment of the overall reward *(Oberholster, 2004).*

Under market risk, FirstRand has elected not to apply for dispensation to report regulatory capital under the internal model approach. This means that moving over to an internal model reporting framework should not pose a problem. *(Blenkinsop, 2004)*

Under operational risk management, the group is putting the building blocks in place, such as risk self-assessments and loss data collection. This should allow us to progress to the advanced measurement approach (AMA) either at inception of Basel II or at a later date. (*Kruger, 2004)*

f) Ecobank Group

The Group is taking steps to comply with Basel II. The Group risk function has adopted a program to achieve compliance by 2008 or earlier, if so required by local regulations (which is not yet the case). This involves the implementation of automated credit and operational risk management tools (such as Moody's or OpRisk Manager) that meet the Basel II requirements, which triggered significant changes in the way we manage and record our credit and operational risks, *Ecobank annual report, 2006.*

g) Citigroup

In a bid to ensure compliance with the forthcoming Basel II processing regulations, financial services giant Citigroup is said to be implementing Reveleus' risk management technology. This will be implemented across all lines of business at Citigroup.

"We required a comprehensive solution with the flexibility to address the evolving requirements in many jurisdictions. And most importantly, Reveleus demonstrated the capability to manage the "home-host" needs of a global company such as Citigroup." *(Belew, 2006.)*

h) Kenya Commercial Bank

This year has been a record-breaking for IT spending by Kenyan financial institutions. The banking sector spent almost double what it spent last year on ICT solutions, spurred by hanging rules on compliance and regulations, according to industry estimates.

Banks are also being driven to comply with ISO and Basel II standards, both of which have prompted spending on solutions that streamline reporting and management processes within financial institutions. One of the biggest spenders of the year was Kenya Commercial Bank (KCB), who invested Kshs. 560 million in a new core banking system that should help it service it's over 680,000 accounts more efficiently and support an ambitious new drive for customers throughout the region.

The Swiss IT firm Tenemos supplied its solution T24 to the bank in May 2008. The solution includes treasury, retail, corporate and wealth management functionality using an Oracle database. We are anticipating a slight drop in spending for next year but spending will still be high because of meeting regulations like Basel II and other solutions that manage risk. *(Kinyanjui, 2008).*

2.5 Basel II in Kenya

The fulfilment of the key prerequisites before implementation of Basel II has been a very critical component for Central Bank of Kenya. Central Bank has been, from the second half of 2007, engaging the banking industry, the Institute of Certified Public Accountants of Kenya (ICPAK) and other stakeholders on developing a clear roadmap for Basel II implementation with the initiatives of stakeholders' engagement to formulate a Basel II implementation plan/roadmap, formulation and adoption of a Basel II policy paper to guide its' implementation, formation of a Basel II Project Team including representatives from the banking industry to spearhead Basel II implementation, continued participation in national, regional and international forums on Basel II to share and learn from experiences in other jurisdictions and sourcing of technical assistance from development partners and other stakeholders to facilitate preparation for Basel II implementation *(CBK, 2006).*

CBK has fully implemented Basel I save for the Market Risk Amendment issued in 1996 which awaits the Board approval before its release into the market anytime in the year. A Bank Supervision Department project team set up in 2006 visited various banks to assess the levels of market risk faced and conducted a formal survey on the market risk exposure in the banking sector revealed the regulatory changes to be adopted.

The Regulator is in full Compliance with the Basel Core Principles for Effective Banking Supervision (BCPs). The International Monetary Fund (IMF) and the World Bank conducted a Financial Sector Assessment in 2003/4 to assess Kenya's compliance with the principles, and established that CBK was compliant with 16 out of the 25 BCPs. CBK has since then been spearheading the work towards full compliance with the principles through various initiatives including:

- A comprehensive review of the Banking Act that vested some powers to CBK from the Ministry of Finance for independence purposes and efficiency taking into account developments in the banking sector.

- Formulation of Consolidated Supervision Framework, with the global trends seeing the emergence of ''one stop financial supermarkets'' which offer banking, insurance and securities advisory services and regional expansion by banks, CBK is moving towards the adoption of a supervisory framework that will take into account the risks posed by financial, insurance and securities subsidiaries to the bank. Currently, CBK is discussing the implementation of Memoranda of Understanding (MOUs) with other domestic, regional and international financial sector regulators. The MOUs will set out the roles and responsibilities of the various regulators in the oversight of these conglomerates.

- Prompt Corrective Action - CBK has formulated a Prompt Corrective Action (PCA) framework that facilitates the proactive detection and mitigation of potential threats to an institutions' stability. The move towards PCA is consistent with the requirements of Pillar II of Basel II on supervisory review, which requires supervisors to ensure that banks hold capital that is commensurate with their risk profile.

- Adoption of Risk Based Supervision (RBS) - RBS lies at the heart of Pillar II-Supervisory Review of Basel II. It is a proactive approach aimed at deterring potential threats to the stability of institutions. A comprehensive set of Risk Management Guidelines was issued to the Banking Sector in November 2005, to provide guidance to institutions in formulating risk management frameworks.

- Early in the year, Central Bank issued Business Continuity Management (BCM) Guidelines and Examination Procedures to the industry to assist in developing and strengthening continuity business plans.
- Anti-Money laundering and Credit Reference Bureau initiatives are all in line with full compliance with the Basel guidelines.

"I am delighted that we have made substantial progress towards this end. Accordingly, we commenced in September, a consultative process with the Banking Sector that will lead to the formulation of a policy position on implementation of Basel II in Kenya in the course of 2008," *(Ndung'u, 2007).*

2.6 Why the Basel Paradigm Shift

Unlike Basel I that focused on a single risk measure, Basel II puts more emphasis on the banks' own internal methodologies, supervisory review, and market discipline. The Accord is based on three mutually reinforcing pillars that allow banks and supervisors to evaluate properly the various risks that banks face. All of the reinforcing pillars will contribute to safety and soundness in the financial system *(Ndung'u, 2008).*

Assignment of risk weights under Basel I is crude; Basel II aims to make capital requirements more risk sensitive. Further, Basel I only accounts for credit risk while Basel II includes both operational risk and market risk *(Espenilla, 2005)*.

Basel I became increasingly obsolete due to bank's use of internal economic capital models, which estimate portfolio loss distributions and calculate capital to protect against unexpected losses at a particular confidence interval. In this context, the simple 'rule of thumb' capital requirements of Basel I led to perverse incentives by forcing banks to hold more capital than was justified by risk. Basel II goes well beyond this, allowing some lenders to use their own risk measurement models to calculate required regulatory capital whilst seeking to align required minimum capital more closely with lenders' real risk profile, *BCBS 2004.*

Basel II introduces three main innovations in regulatory capital and minimum capital requirements i.e. regulatory capital requirements can be based upon the bank's own risk management and risk assessments, the Supervisory Review Process of a bank's capital

adequacy is based upon the bank's own capital adequacy process and there is an explicit reliance upon public disclosures so that market participants can independently assess a bank's creditworthiness and profitability and exercise market discipline *(Smith, 2007).*

2.7 Benefits of Basel II

If used properly, this new capability is likely to have a profound impact on the banks' ability to not only assess and price for risk, but it will help in the banks' up-stream activities such as market segmentation, product development, account solicitation, customer profitability analysis, improved fraud detection and many more *(Henderson, 2006).*

Basel II represents a crossroad, a watershed and a turning point for the future of global supervisory practices. Basel II presents us with an opportunity to enhance risk management systems in our banks, upgrade our supervisory approaches and inculcate market discipline. This can only serve to enhance financial stability, *(Ndung'u, 2008).*

The Evolution of the New Capital Accord is a comprehensive agreement that will establish a spectrum of risk sensitive approaches for banks' calculations of minimum capital requirements, provide a supervisory review process for banks to maintain capital at levels commensurate with their risk profiles and encourage market discipline by requiring the disclosure of pertinent information *(FSI, 2006).*

Market discipline reinforces the incentives for the management of banking enterprises to manage them along sound lines. It operates on the basis of disclosures and other information available in the market and defines the reward system; for the management of periodic and meaningful disclosures by banks relating to their capital and risk exposures. Risk management techniques enable market participants to make an assessment of a bank's risk profile. The information is also appropriate for supervision in that it generates advice and/or strengthens partnership. Enhanced, high-quality disclosures are mandated." *(Ndung'u, 2007)*

"Basel II will improve risk management because it is putting the emphasis on the right stuff, on proper risk management processes, on content and on procedures," *(Riyad, 2007).*

Concerning disclosure procedures, Basel II will totally change the balance sheet. It requires a lot of accuracy, transparency and minimum levels of public disclosure. This will help

shareholders, customers and other financial institutions dealing with the bank to get detailed data about the bank's position. Its consistent framework will enable supervisors to identify better those banks whose risk management and risk levels differ significantly from other banks, *(Saleh, 2006).*

Basel II will allow timely corrective action upon identifying excessive risk-taking. Bank management will be able to benchmark their risk assessments, models and processes in a more detailed and regular manner. Portfolio risk management will become more active, driven by the availability of better and more timely risk information as well as the differential capital requirements resulting from Basel II. This could encourage the trend towards consolidation in the sector and focus on business strategy to markets with enhanced risks.

2.8 Challenges of Basel II

Dangers of asymmetry in financial intermediation; a likely scenario, which might arise post-Basel II implementation, is the asymmetry in regulatory regime amongst the competing broad segments of the financial sector viz., banking, securities and insurance sectors. While the commercial banking sector is expected to migrate to the Basel II regime soon, the other segments are not likely to be subjected to the same or similar discipline unless they are a part of a banking group, where Basel II regime would apply indirectly through the parent bank once consolidated supervision takes effect. Hence, we are likely to see some scope for regulatory arbitrage amongst the three broad segments unless the regulators of these segments also recognize the need and relevance of a comparable prescription for those segments. Parity in the level of regulatory burden across the three sectors, which compete amongst themselves for the business of financial intermediation, should be achieved.

The more sophisticated risk measures unfairly advantage the larger banks that are able to implement them. The better credit risks will be advantaged as banks move towards true pricing for risk. *Ward (2002)* suggests that the banks that persist with Basel I will be susceptible to adverse selection since Basel I is largely insensitive to risk. The better credit risks will be advantaged as banks move towards true pricing for risk. The improved risk sensitivity means that banks are more willing to lend to higher risk borrowers, just with higher prices. Domestic banks will hold too much capital against good risks and not enough against bad ones. Foreign

banks will therefore be able to 'cherry-pick' good risks and leave local banks with bad ones, against which they will be undercapitalised.

The operation of Basel II will lead to a more pronounced business cycle. This arises because the credit models used for pillar I compliance typically use a one-year time horizon. This would mean that, during a downturn in the business cycle, banks would need to reduce lending as their models forecast increased losses, increasing the magnitude of the downturn.

Basel I was rules based, the role of the regulator was to monitor compliance with a set of simple rules and take remedial action if necessary. This is not the case with Basel II for which discretion and expertise is required, primarily on account of pillar II, which demands that 'supervisors should review and evaluate bank's internal capacity adequacy assessments and strategies, as well as their ability to monitor and ensure compliance with regulatory capital ratios,' *(BCSC, 2004).* This will increase the Regulators responsibility.

Developing countries are susceptible to regulatory forbearance (Walter, 2002), and Kenya is no exceptional. The results of the first 26 assessments for *Core Principles* compliance revealed that 43% of countries were noncompliant or materially noncompliant with the requirement to have powers to take remedial action and 38% with the requirement for legal protection of supervisors, *(IMF, 2002).*

The cost of implementing Basel II is expected to be a big obstacle, as it is a very costly project covering the entire operations of a bank, and includes the cost of introducing new data warehousing systems through revamping the IT Systems and or acquisition of new Systems, training costs for staff and additional staffing needs, insufficient historical data, time consuming transitions, internal models and risk quantification costs and disclosure overload *(Opiokello, 2006).* Collecting data on all bank operations will be costly, as it will require a lengthy period of time and exhaustive processing to validate the data.

Analysts such as *Datamonitor, 2002* believe that data collection and management represent the single greatest Basel II challenge faced by banks. Missing, inaccurate and inadequate data is a big problem across the board. Banks will have to beef-up their operational systems in order to accurately input, store and manage data on their customers and the transactions, which they

undertake on their behalf. The dilemma is that by the time Basel II comes into play, banks must have a three-year history of clean data in order to be compliant

Banks will have to staff-up, to firstly interpret, develop and implement the accord's requirements, and secondly, manage and monitor them thereafter. In a skills-short economy which has an 'un-helpful' approach to the importation of talent, there is growing concern that the supply of suitably qualified and experienced local labour may be insufficient for developing countries *(Henderson, 2006).*

Premature adoption of Basel II in developing countries could inappropriately divert resources from the more urgent priorities, ultimately weakening rather than strengthening supervision *(Santos, 2007).*

Recently, the Minister for Finance published the Finance Bill 2008 on June 12, 2008. Among other things, the Bill seeks to amend the Second Schedule to the Banking Act requiring all licensed institutions to maintain a core capital of at least Kshs. 625 million and Kshs. 1,000 million by 31st December 2009 and 2010 respectively. Banks will need to meet the cost out of their own capital, making them capital constrained and vulnerable to acquisitions by international banks, which are able to offer the fresh injections of capital and expertise sought by regulators. Given this, and the fact that there is no official requirement demanding Basel II compliance, many developing countries should re-examine their decisions to implement the new accord *(Bailey, 2005).*

The structure of the new accord is sufficiently different from the old that significant spend will be required on systems infrastructure, risk modelling skills and process documentation. With resources in short supply, it is likely that the majority of risk managers' time in the next few years will be spent on interpreting the regulations, implementing the solutions and then justifying the output to supervisors. There will be little time left over for innovation and creative development *(Gottschalk, 2007).*

Banks continue to work on embedding Basel II into credit risk processes, model validation and technology planning. Intense effort will be required for new credit processes to be embedded and understood across organizations. While banks understand that disclosures could greatly impact how external stakeholders evaluate their business, it will be challenging to meet Basel II

disclosures especially calculating operational risks and capital market risks. Furthermore, there is lack of adequate internal expertise to assess and assist Basel II implementation given the complexities of financial regulation and the added complexities of the Basel II framework, which will have to be specifically tailored to suit the domestic economy and the domestic banking system.

Each bank is trying to implement Basel standards in its own way. Some banks assign most of the job and accountability to their IT department, whereas others have allocated it to Financial Control or Operations. Some banks, however, set up a dedicated section for Basel II compliance, with shared overall responsibility across the entire bank, with the largest load being given to the Risk Management Department. Most or all of them, however, do require some sort of assistance from outside, be it in the form of risk consultancy or IT systems. There has been, both regionally and internationally, a critical shortage in skilled risk managers and risk professionals who have good Basel II expertise and understanding. Further, internal stakeholders, in particular senior management and front office staff, require education on Basel II. With IFRS reporting initiatives largely behind them, Basel II is now higher on the executive. *(Saleh, 2006)*

3.0 CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter covers the research methodology that was used in the study. It describes; the population, sample size, sampling methods, data, data collection instrument, measuring scale, data presentation and data analysis techniques.

3.2 Research Design

The study utilized a survey research design for data collection in order to gather information on the preparedness of banks as well as the challenges facing the institutions in implementation of Basel II. The respondents were used to represent the large group (population) from which the study was being undertaken. The research design was aimed at providing answers to three questions:

- Who was surveyed (population)
- How many were surveyed (sample size)
- How were they reached (sampling media)

3.2.1Population

The population of the study was derived from all the forty two (42) banks operational in Kenya under the regulatory supervision of the Central Bank of Kenya.

The target respondents were persons in charge of risk and operations management; specifically risk managers or their equivalents, on whom questionnaires were used to collect information pertinent to Basel II implementation.

This study was a census survey involving the whole population of 42 banks operational in Kenya as at June 30, 2008, since most banks have their head office located in Nairobi.

3.3 Data Collection

The study relied on two types of data, primary and secondary data. Primary data was collected through semi-structured questionnaires, which were both closed and open-ended so as to allow the respondents to express their views without undue limitation.

Secondary data on the other hand was obtained from written materials, past speeches and presentations delivered.

The questionnaire content was based upon a review of the theoretical and empirical literature in the area. The questionnaire was divided into four parts. Part A was designed to collect the respondents' general information on awareness, anticipated benefits and costs, implementation schedule, challenges and resource availability. Part B, C, and D were designed to collect data on the integration level of Basel aspects. Part B deals with pillar I, it was intended to establish whether the banks had established a capital charge for credit, operational and market risks, the tools used for allocation of the capital charge and monitoring. Part C focused on Pillar II, with respect to supervisory review while part D focused on pillar III, market discipline.

The full questionnaire covering Basel II implementation was nine pages long. It was accompanied by an explanatory paragraph that assured the confidentiality of responses. Each questionnaire was numbered to facilitate follow-up procedures and to enable the characteristics of responding banks to be identified.

The questionnaire used various question forms including those requiring yes/no answers, numerical estimates, ranking of alternatives, closed-form questions adopting a likert scale and open-ended questions.

Responses were followed up within three and ten days after the initial request.

3.4 Data Analysis and Presentation

Data collected through the questionnaires was edited for accuracy, consistency, completeness and arranged to enable coding and cross tabulation, which statistically analyzed the responses before final analysis. Descriptive and inferential statistics were used to analyze data through measures of central tendencies and dispersions. Microsoft Excel was used to analyze data both qualitatively and quantitatively while inferential statistics was used to investigate if relationships existed between the various aspects of Basel II implementation. The findings were presented in the form of graphs, tables, charts, narrations as well as statistical figures.

In order to conclude whether an institution was prepared for Basel II implementation, the institution ought to be holding adequate capital levels against credit, operational and market

risks, and this capital charge being determined on the basis of an internal model developed by the institution. Adequate resources in form of robust system infrastructure, skill, money and data that are critical in Basel II Implementation had to in place in addition to an implementation timeline of December 2009.

CHAPTER FOUR: DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter discusses the study findings. The data analysis was guided by the objective of assessing the preparedness of Kenyan Commercial Banks towards Basel II implementation. From the initial target population of forty two banks operating in Kenya as at June 30, 2008, thirty (30) banks responded translating to a response rate of seventy one per cent (71%).

4.1.1 Organization profile of the target respondent

The target banks were categorized using the ownership structure as to whether the institution is locally incorporated or a multinational bank, as well as the amount of core capital held by the institution.

Results indicated that of the thirty banks that responded, twenty four (80%) were locally incorporated in Kenya while the remaining six banks (20%), were locally incorporated subsidiaries of multinational banks. The ownership structure is as tabulated below:

Table 4.1.1 Ownership Structure

Ownership Structure	Frequency	Proportion (%)
Local Incorporation	20	80
Multinational subsidiary	6	20
Total	**30**	**100**

The results for core capital of the institutions are represented in Table 4.1.2.

Table 4.1.2 Institutions' Core Capital

Capital (Kshs in Billions)	Frequency	Proportion (%)
Less than 5 Billion	24	80
Between 5 and 10 Billion	4	13.3
Above 10 Billion	2	6.7
Total	**30**	**100**

Source: Research Data

The results indicate that 80% (24 out of 30) of the banks that responded to the study had a core capital of less than five billion whereas 13% (4) of the banks had core capital of between 5 and 10 billion. Only 7% (2) of the banks had a core capital exceeding 10 billion.

4.2 Level of Basel II awareness

The study sought to identify the level of awareness of Basel II of the institutions. This was achieved through both direct inquiry and inquest as to whether banks operated an independent risk department, which managed credit, market and operational risks. Institutions that had an independent risk department, adequately managing the three main risks of credit, market and operations were considered to be having a high level of Basel II awareness. The assessment of the level of awareness by the respondents on a range of low, medium and high is summarized in Tables 4.2.1.

Table 4.2.1 Institution's Basel awareness

No.	Aspect	Yes	No	Total
1.	Independent risk department	18	12	30
2.	Management of: a) Credit risk b) Operation risk c) Market risk	 30 28 25	 0 2 5	30
3.	Aware of Basel II	25	5	30

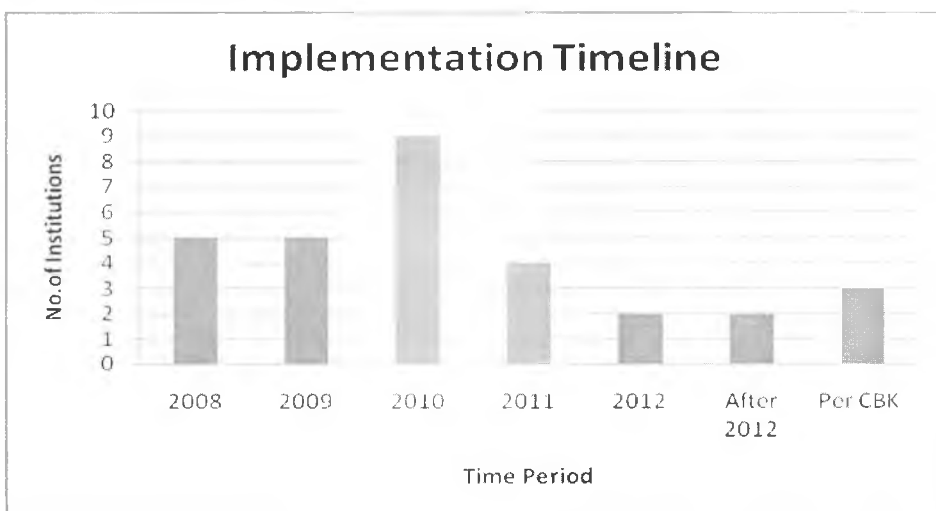
Source: Research Data

Most institutions were rated medium on the level of awareness.

4.3 Implementation timeline

From the responses, only five institutions were ready for implementation in the year 2008, out of which only one institution was local. Most institutions (9) indicated that they will be ready for implementation in the year 2010. The results of the implementation time spans are shown in figure 4.3.1.

Figure 4.3.1 Implementation Timeline



4.4 Benefits of Basel II

Respondents were asked to spell out the benefits they expected to derive from the new Basel accord. As depicted in table 4.4.1, most institutions agreed that the new accord would enhance risk management, improve risk assessment and pricing and objective capital allocation and maintenance.

Table 4.4.1

No.	Benefit	Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
a)	Better Risk Pricing			5	5	20	30
b)	Enhanced Risk Management		1	4	3	22	30
c)	Encourage Market Discipline		5	10	11	4	30
d)	Objective Capital Requirements				6	24	30
e)	Competitive edge tool	2	7	18	3		30
f)	Improved Risk assessment		1	4	3	22	30
g)	Promote safety and soundness		4	11	10	5	30
h)	Maintain capital adequacy levels			4	4	22	30

Source: Research Data

4.5 Costs for Basel II implementation

An analysis of Basel costs as highlighted in table 4.5.1 indicate that acquisition of system infrastructure, model development and model validation are the most critical costs to incur, for successful implementation of Basel II.

Table 4.5.1Basel Implementation costs

No.	Cost	Not Critical	Least Critical	Critical	Quite Critical	Very Critical	Total
a)	Model development			2	4	24	30
b)	Model validation			2	6	22	30
c)	Training Staff			8	14	8	30
d)	Staff compliment		4	6	9	11	30
e)	Outsourcing Skills and Expertise	2	8	8	10		30
f)	Database development	3	4	8	10	5	30
g)	Acquisition of System Infrastr.				4	26	30

Source: Research Data

4.6 Budget for Basel II

A majority of institutions have not specifically set out budgets for Basel implementation except four (4), whose budgets amount to a maximum of 300million. However, most banks have an allocation to upgrade their system software and information technology infrastructure which will ultimately facilitate implementation of the Accord, while others are considering specifically setting a budget.

4.7 Challenges of Basel Implementation

Institutions that are/and those planning to implement Basel II were asked to indicate the challenges they were encountering/expected to encounter in implementing the new accord from the "very critical" to the "not critical". These challenges were ranked on a likert scale with the

"very critical" scoring 5 points and the "not critical" scoring 1 point. The challenges were analyzed by computing the mean score and the results are as tabulated in Table 4.7.1.

Table 4.7.1 Challenges in Basel II Implementation

No.	Challenge	Mean
a)	Implementation costs	3.87
b)	Data collection	1.10
c)	Model development and validation	4.73
d)	Staff compliment	4.00
e)	Skills and Expertise	1.87
f)	Technology & System infrastructure	4.70
g)	Asymmetry in Financial	1.43
h)	Adverse selection by customers	1.57
i)	Premature adoption	1.27

Source: Research Data

Model development and validation, Technology and System infrastructure had the highest mean scores of 4.73 and 4.70, followed by staff compliment and implementation costs at 4.00 and 3.87 respectively. Premature adoption and data collection were considered the least challenges.

4.8 Resources

Institutions were asked to state whether they had adequate resources for the implementation of the new accord, and which among those resources were considered influential in the implementation. The resources were ranked on a likert scale with the "very important" scoring 5 points and the "not important" scoring 1 point. The results were as shown in table 4.8.1 and 4.8.2.

Table 4.8.1 Resource Adequacy

No.	Resource	Yes	No	Total
a)	Skills	11	19	30
b)	Technology	10	20	30
c)	Expertise	8	22	30
d)	Money	12	18	30
e)	Time	19	11	30

f)	Data	17	13	30
	Average	**13**	**17**	**30**

Table 4.8.2 Critical Resource

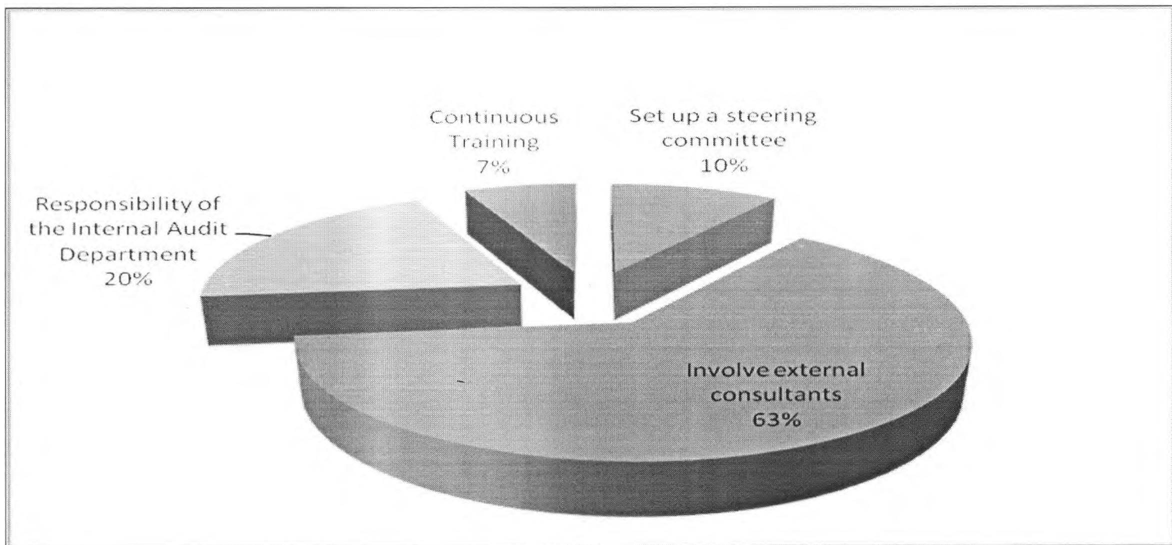
No.	Resource Type	Mean
a)	Skills	4.60
b)	*Technology*	4.00
c)	Expertise	4.83
d)	Money	4.83
e)	Time	4.17
f)	Data	3.97

The results revealed that on average, thirteen (13) institutions had adequate resources while the remaining seventeen (17), translating to more than half of the respondents lacked adequate resources. Ideally all the resources were considered to be influential in Basel implementation, although expertise, money and skill were considered to be the most influential with mean scores of over 4.5.

4.9 Implementation approach

This sought to establish how institutions had gone/intend to go about implementation of Basel II. Of the four approaches highlighted in the questionnaire, use of external consultants topped the list with nineteen (19) institutions, followed by delegating the process to the internal audit department with six (6). Setting up a steering committee and continuous training had three (3) and two (2) institutions respectively. The respective proportions are as shown in figure 4.9.1.

Figure 4.9.1 Implementation approach



4.10 Integration Level of Basel II Aspects

4.10.1 Pillar I

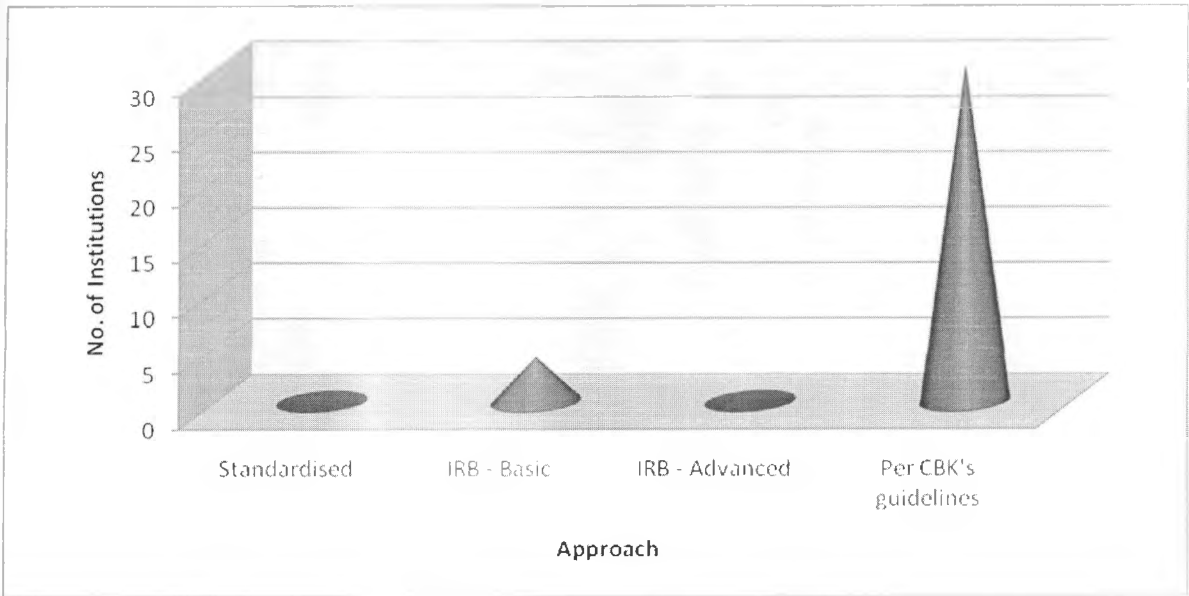
Institutions are required to set aside adequate capital to cater for its level of risk, mainly credit, operational and market risk. The study sought to identify whether institutions provide for capital against the three risks and how they monitor the risks to ascertain the amount of capital to be set aside.

4.10.1.1 Capital provisions for Credit Risk

Capital requirements for credit risk is determined in two major ways, the Standardised Approach which makes use of external ratings and the Internal Ratings Based (IRB) Approach - Basic and Advanced - which allow banks to use their own internal ratings models subject to approval by the Regulator, by making use of Unexpected Loss, Expected Loss, Probability of Default, Loss Given Default and Exposure at Default.

The study results indicated that all the respondent banks set aside capital for credit risk according to Central Bank's prudential guidelines, which advocate for full provision of loans and advances. Only four institutions, one of which is local, make use the Basic Internal Ratings based model to determine the capital charge for credit risk as shown in figure 4.10.1.1a.

Figure 4.10.1.1a Capital allocation approach



However, some banks use accounting models that have been developed with the assistant of their external auditors and consultants in determining the amount of capital set aside for credit risk purposes. These models are usually certified by the Central Bank before being put into use.

The study revealed that although some institutions maintain the data shown in table 4.10.1.1b, they do not make use of it in determining capital allocation for credit risk, as a result of reliance on the regulator's guidelines.

Table 4.10.1.1b Data maintenance

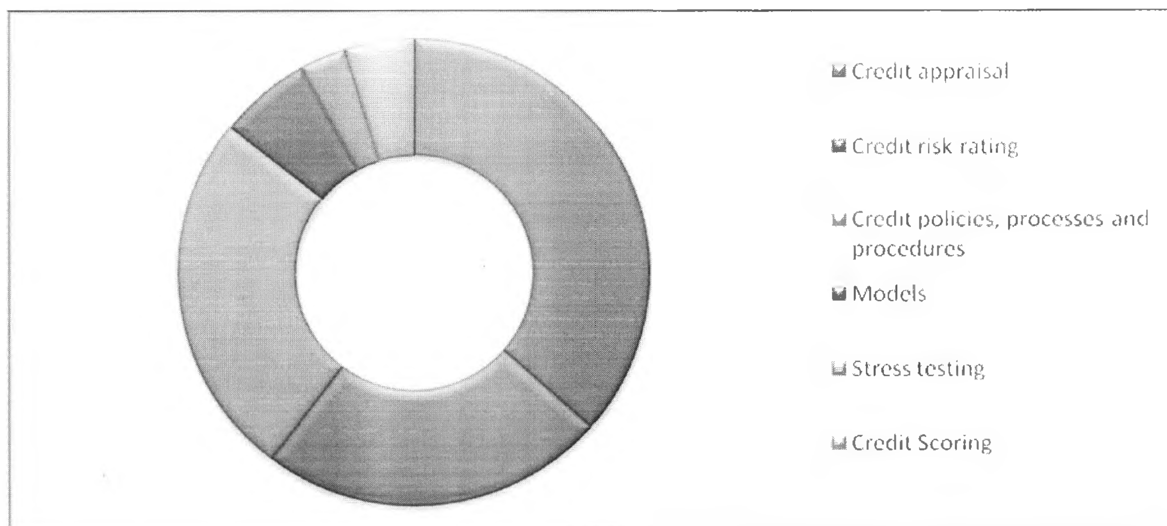
Data Type	No. of Institutions
Probability of default (PD)	4
Loss given default (LGD)	4
Exposure at default (EAD)	7
Portfolio at Risk (PAR)	13

The study indicated that the longest period of data history was four years, and apart from the foreign international banks, none of the banks make use of external ratings.

4.10.1.2 Monitoring Credit Risk

The study results depict that banks use various tools in monitoring credit risk including credit appraisal, credit risk rating, policies, procedures and processes, credit scoring, models and stress testing. The detailed tabulation on how banks monitor credit risk is as follows:

Figure 4.10.1.2 Monitoring credit risk



From the analysis, most banks make use of credit appraisal (77%), credit risk rating (50%) and policies & procedures (50%). This is especially emphasized through "Know Your Customer" procedures.

4.10.1.3 Market Risk

Just like credit risk, capital requirements for market and operational risk are determined in three main approaches, the Basic Indicator Approach which links the capital charge to the bank's gross annual revenue; the Standardised Approach which is a variant of the Basic Indicator Approach and Advanced Measurement Approach, where capital charge is the risk measure generated by the bank's internal risk measurement system.

The study sought to understand the primary types of market risk that banks are exposed to. As highlighted in table 4.10.1.2.1, most banks are exposed to interest rate, foreign exchange and liquidity risks.

Table 4.10.1.3 Exposure to market risk

No.	Risk Type	No. of Institutions

a)	Interest Rate	30
b)	Foreign Exchange	28
c)	Liquidity	9
d)	Others - Equity position	5

4.10.1.4 Capital provisions for market risk

Only four (4) out of 30 banks set aside capital for market risk. These banks make use of the Basic Indicator Approach in capital allocation.

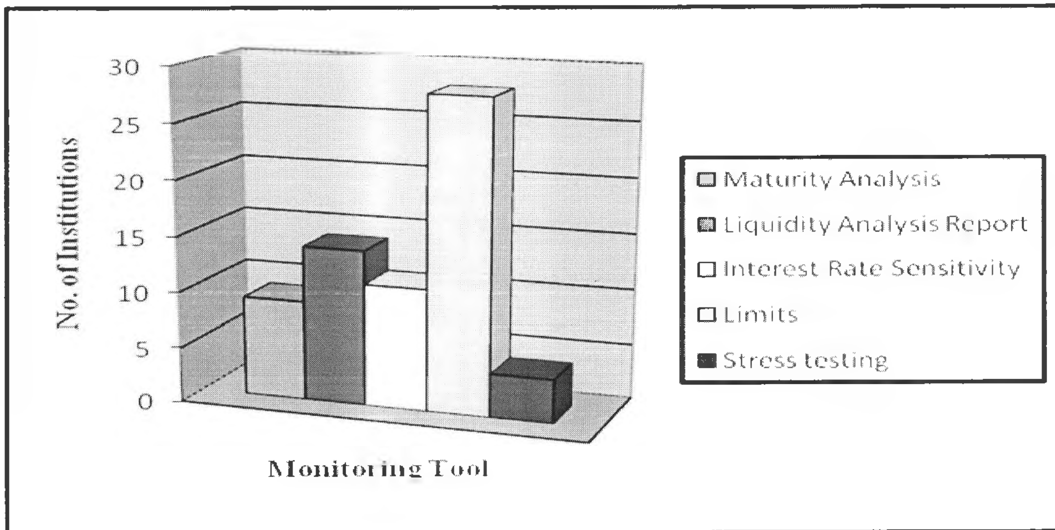
Figure 4.10.1.4 Capital allocation approaches for market risk

Approach	No. of Institutions
Basic Indicator Approach	4
Standardized Approach	0
Advanced Measurement Approach	0
Total	**30**

4.10.1.5 Monitoring Market Risk

Analysis of the responses highlighted that institutions use a number of tools in monitoring market risk. Of these tools, market limits was dominant at 93%, followed by liquidity analysis report and interest rate sensitivity at 47% and 30% respectively. Analysis of monitoring tools is as shown in figure 4.10.1.5 below.

Figure 4.10.1.5 Monitoring market risk



4.10.1.6 Capital provisions for Operational risk

Six (6) out of the 30 banks set aside a charge for operational risk using the Basic Indicator Approach as shown in table 4.10.1.6.

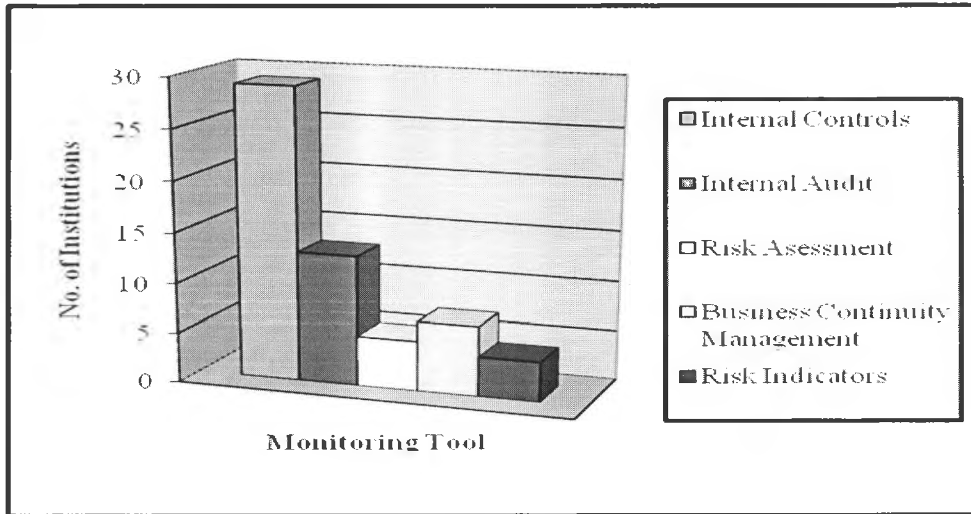
Table 4.10.1.6 Capital allocation approaches for operational risk

Approach	No. Of Institutions
Basic Indicator Approach	6
Standardized Approach	0
Advanced Measurement	0
Total	**30**

4.10.1.7 Monitoring Operational Risk

In monitoring operational risk, most banks in Kenya use internal controls (97%) as well as internal audit (43%). Other monitoring tools are as in figure 4.10.1.7.

Figure 4.10.1.7 Monitoring market risk



4.10.2 Pillar II - Supervisory Review

Pillar II provides a tool to supervisors to keep checks on the adequacy of capitalisation levels of banks. This study sought to find out whether banks have a process of assessing their overall capital adequacy against their risk profiles, and whether they have a strategy for maintaining their capital levels.

4.10.2.1 Internal Capital Adequacy Assessment Process (ICAAP)

These are processes put in place by a banking institution to ensure that adequate levels of capital are held for the nature and scale of the institution's operating environment. The study revealed that eleven (11) out of the 30 banks maintain their own ICAAPs. Most banks rely on the Regulator's Capital Adequacy Prudential Guidelines. The banks with ICAAPs incorporate the following elements.

Table 4.10.2.1

No.	Constituents of ICAAP	No. of Institutions
a)	Future capital levels commensurate with risk appetite	5
b)	Benchmarking with other banks	6
c)	Includes stress testing of earnings and asset growth	7
d)	Capital cushions against anticipated volatility	7
e)	*Others* - Capital buffer requirements and anticipated volatility	5
f)	- Focuses on economical capital requirements	3

4.10.3 Pillar III - Market Discipline

Pillar III provides a framework for the improvement of banks' disclosure standards for financial reporting, risk management, asset quality, regulatory sanctions, and the like. The pillar aims at encouraging market discipline through disclosures that empower the public on assessing the capital adequacy of institutions.

Table 4.10.3.1 discloses the type of information that banks avail to the members of the public.

Table 4.10.3.1

No.	Information Provision	Frequency
a)	Management policies	28
b)	Definitions and statistical methods used in Risk Analysis	5
c)	Information on the supervisor's acceptance of the risk management	4
d)	Capital charge against risk and its adequacy	30
e)	Model validation	3
f)	Stress-testing procedures	3
g)	Others - Risk exposure and assessment	19

Disclosure of banking institutions is currently guided by the Regulator, Accounting standards and the Capital Markets Authority (for listed banks). Most of the institutions are already disclosing some of the information as dictated by pillar III of Basel II, subject to the regulation of Central Bank, Capital Markets Authority and the International Financial Reporting Standards.

These disclosures are made available to the public through print media, at the institution's premises and in the annual report.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides the summary of the study findings, conclusions and recommendations arising thereof. The chapter concludes with limitations to the study, and suggestions for further study.

5.2 Summary of the study findings

The objective of the study was aimed at assessing the preparedness of Kenyan Commercial Banks towards Basel II implementation. This was achieved by collecting relevant data from the forty two (42) banks operational in Kenya. A questionnaire based upon a review of the theoretical and empirical literature on Basel II was used as the main data collection instrument. Conclusions drawn from the findings are discussed in the next section.

The findings of the study indicate that none of the banks had implemented Basel II in its entirety. Most institutions will be ready to implement the new accord in the year 2010, as evidenced by low numbers of institutions with ready set budgets for Basel implementation and the fact that majority of the institutions had a medium level of awareness on the new accord, on a scale of low, medium and high. Only nineteen (19) banks would be ready to implement Basel II by end of 2010 if the Regulator was to make it a regulatory requirement.

Banks felt that they would enhance risk management, improve risk assessment and pricing and objectively allocate and maintain capital on implementing the new accord. The various costs that the institutions are/would face were identified and ranked based on their criticality with sub classes of very critical, quite critical, critical, least critical and not critical. Acquisition of system infrastructure, model development and model validation were identified as the most critical costs to incur for successful implementation of Basel II.

With regard to challenges, model development and validation, technology and system infrastructure and staff compliment were considered the most difficult huddles. All the resources were considered to be influential in Basel implementation, although expertise, money and skill were considered to be the most influential with mean scores of over 4.5. However, the

research highlighted a good number of institutions (57%) as not having adequate resources for the implementation of the new accord.

As far as the implementation approach is concerned, use of external consultants was preferred by 63% of the banks, with only 37% willing to take responsibility internally. With regard to Pillar I, the study revealed that all institutions allocate capital for their credit risk profiles pursuant to Central Bank's capital prudential guidelines. As a result, institutions which have data on Unexpected Loss, Expected Loss, Probability of Default, Loss Given Default, Exposure at Default and Maturity do not make use of it, the longest period of data history being four years. Only four banks use the Basic Internal Ratings Based model to determine the capital charge for credit risk and apart from the foreign international banks, none of the banks make use of external ratings.

Given that it is not a regulatory requirement; unlike for credit risk, only four (4) and six (6) out of the 30 banks set aside capital for market and operational risk using the Basic Indicator Approach.

The study indicated that institutions do monitor the three primary sources of risk i.e. credit, market and operational using various tools. Of dominance were credit appraisal (77%), credit risk rating (50%) and policies & procedures (50%) for credit risk, market limits (93%), liquidity analysis report (47%) and interest rate sensitivity (30%) for market risk and internal controls at 97% as well as internal audit at 43% for operational risk.

The three major types of market risk that banks are exposed to were identified to be interest rate, foreign exchange and liquidity risks.

The study aspect of Pillar II revealed that eleven (11) out of the 30 banks maintain their own Internal Capital Adequacy Assessment Processes (ICAAP), to ensure that adequate levels of capital are held for the nature and scale of their operating environment.

Finally, on Pillar III, most institutions are already making disclosures on some of the information required by Basel II, subject to the regulation of the Central Bank, Capital Markets Authority and the International Financial Reporting Standards.

5.3 Conclusions and recommendations

The research findings point out that the Kenyan banks still have a great task ahead as they prepare towards Basel II implementation. It is however clear that the international banks are in a better state of preparedness as viewed against the local institutions, on account of support from their parent groups. There is need to enhance Basel II awareness in institutions as the level of awareness was rated medium. This is attributed to lack of prerequisite human resource competences, the fact that Basel II is not a regulatory requirement and the new accord is not regarded as a competitive tool, as evidenced by feedback from the institutions. There are quite a number of challenges that would need to be overcomed for successful implementation of the new accord.

Institutions will definitely have to upgrade their technology and data systems to facilitate and ensure that models are comprehensively developed and validated, and that the system infrastructure is compatible with the new models with capabilities of effectively managing the requisite data.

Although institutions seem to be having minor challenges with Pillar III and Pillar II, it is overt that the risk management policies and strategies will have to be amended to meet Pillar I stipulations, especially on capital allocation. Currently banks are relying on the Regulator's prudential guidelines while the standardized approach to assessing the credit risk charge under Pillar I is based on ratings by External Credit Rating Agencies. The study highlights that banks in Kenya generally do not rely on External Ratings. Perhaps this could be as a result of lack of credit rating agencies in the country. However, the recent launch of Credit Reference Bureaus in (February 2009) Kenya is going to be a milestone towards the standardized approach as banks begin to make use of the available information. Basel II allows for the use of internal models by banks to determine their capital charges pursuant to supervisory approval. These models require the use of historic data up to five years. Nevertheless, Kenyan banks are by and large yet to adopt model based approaches to assessing their capital adequacy needs. Adequate time is therefore of essence for banks to collect the requisite data and come up with appropriate models.

Expertise and human resources competences have also been identified as a key challenge given that it is a very critical resource in successful implementation of the new accord. Most banks have expressed preference to use of external consultants in their implementation, an indication that the existing staff is not well equipped with the right skills and competence to roll out Basel II. Institutions will therefore need to upscale their human resource base to collaborate with the experts, and who will thereafter continue with the implementation process upon exit of the experts.

Despite the highlighted challenges, it is worth noting that Kenyan banks are willing to enact Basel II, which comes with enhanced risk management, improved risk assessment and pricing and objective capital allocation and maintenance.

5.4 Study limitations

Some institutions took longer than anticipated to complete and finalise the questionnaires while others did not give out the true position, citing confidentiality on provision of sensitive information that could be beneficial to the competitors and the fact that no institution wanted to be seen as being ill-prepared for the new accord. Further, despite a response rate of 71%, it's possible that the results of the study could have been overly representative of the banking sector in Kenya if the response rate had been higher, if not 100%.

5.5 Suggestions for further study

Knowledge of Basel II is relatively new and the study has set pace for research on the grey areas not tackled herein, for instance an exploration on the effects of the new accord on lending practices by banking institutions. Similar research should be replicated to analyse the loopholes of Basel II, and possibly embracement of another accord to seal the loopholes. Additionally, research could be conducted on the Regulator to establish how the findings compare with the banking industry.

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APPENDIX I: QUESTIONNAIRE Questionnaire No.: __

This questionnaire is designed to collect data on "the preparedness of Kenyan commercial banks towards Basel II implementation". Collected data shall be used for academic purposes only, and thus shall be treated with strict confidence.

Your participation in facilitating this study is highly appreciated.

A. General

Designation of Respondent: ____

1.0 Is the institution

(a) Locally incorporated with the headquarter based in Kenya or ☐

(b) Locally incorporated subsidiary of a multinational bank? ☐

(Please tick appropriately)

1.1 What is the core capital of the Institution *(Please tick appropriately)*

Tier 1: Above Kshs. 1billion ☐

Tier 2: Between Kshs. 500 million and Kshs. 1 billion ☐

Tier 3: Less than Kshs. 500 million ☐

1.2 Does your institution have an independent Risk Department?

Yes ☐ No ☐

1.3 If yes, does the department manage the following risks?

	Yes	No
a) Credit risk	☐	☐
b) Operation risk and	☐	☐
c) Market risk	☐	☐

1.4 Is the department aware of the new capital accord, Basel II?

Yes [ ] No [ ]

1.5 With the level of awareness, has the institution commenced Basel II implementation? If yes, *kindly specify* when. If No, *proceed to 1.6.*

Year: .... Quarter: ....

1.6 When do you expect to commence implementation of Basel II?

Year		**Tick as applicable**	**Year**		**Tick as applicable**
2008	Quarter 1		2009	Quarter 1	
	Quarter 2			Quarter 2	
	Quarter 3			Quarter 3	
	Quarter 4			Quarter 4	
2010	Quarter 1		After 2010	Specify the year	
	Quarter 2				
	Quarter 3				
	Quarter 4				

1.7 To what extent do you expect to benefit from Basel II implementation? *Tick appropriately.*

Benefit		**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
a)	Better Risk Pricing	[ ]	[ ]	[ ]	[ ]	[ ]
b)	Enhanced Risk management	[ ]	[ ]	[ ]	[ ]	[ ]
c)	Encourage market discipline	[ ]	[ ]	[ ]	[ ]	[ ]
d)	Objective capital requirements	[ ]	[ ]	[ ]	[ ]	[ ]
e)	Competitive edge tool	[ ]	[ ]	[ ]	[ ]	[ ]

Benefit		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
f)	Improved Risk assessment	[ ]	[ ]	[ ]	[ ]	[ ]
g)	Promote safety and soundness	[ ]	[ ]	[ ]	[ ]	[ ]
h)	Maintain capital adequacy levels	[ ]	[ ]	[ ]	[ ]	[ ]
i)	Others *(specify)*	[ ]	[ ]	[ ]	[ ]	[ ]
		[ ]	[ ]	[ ]	[ ]	[ ]
		[ ]	[ ]	[ ]	[ ]	[ ]

1.8 To what extent do you expect to incur the following costs on Basel II implementation? *Tick appropriately.*

Cost		Not Critical	Least Critical	Critical	Quite Critical	Very Critical
a)	Model development	[ ]	[ ]	[ ]	[ ]	[ ]
b)	Model validation	[ ]	[ ]	[ ]	[ ]	[ ]
c)	Training Staff	[ ]	[ ]	[ ]	[ ]	[ ]
d)	Staff compliment	[ ]	[ ]	[ ]	[ ]	[ ]
e)	Outsourcing Skills and Expertise	[ ]	[ ]	[ ]	[ ]	[ ]
f)	Database development	[ ]	[ ]	[ ]	[ ]	[ ]
g)	Acquisition of System Infrastructure	[ ]	[ ]	[ ]	[ ]	[ ]
h)	Others, *specify*	[ ]	[ ]	[ ]	[ ]	[ ]
		[ ]	[ ]	[ ]	[ ]	[ ]
		[ ]	[ ]	[ ]	[ ]	[ ]

1.9 How much do you expect to spend on the implementation?

Kshs.......................................

2.0 To what extent do you expect to face the following challenges in implementation of Basel II? *Tick appropriately*

Challenge		**Not Critical**	**Least Critical**	**Critical**	**Quite Critical**	**Very Critical**
a)	Implementation costs	[ ]	[ ]	[ ]	[ ]	[ ]
b)	Data collection	[ ]	[ ]	[ ]	[ ]	[ ]
c)	Model development and validation	[ ]	[ ]	[ ]	[ ]	[ ]
d)	Staff compliment	[ ]	[ ]	[ ]	[ ]	[ ]
e)	Skills and Expertise	[ ]	[ ]	[ ]	[ ]	[ ]
f)	Technology and System Infrastructure	[ ]	[ ]	[ ]	[ ]	[ ]
g)	Asymmetry in Financial Intermediation	[ ]	[ ]	[ ]	[ ]	[ ]
h)	Adverse selection by customers	[ ]	[ ]	[ ]	[ ]	[ ]
i)	Premature adoption	[ ]	[ ]	[ ]	[ ]	[ ]
j)	Others *(specify)*	[ ]	[ ]	[ ]	[ ]	[ ]
		[ ]	[ ]	[ ]	[ ]	[ ]
		[ ]	[ ]	[ ]	[ ]	[ ]

2.1 Does your institution have adequate resources to embark on Basel II implementation and adoption? *(Kindly tick appropriately)*

	Yes	**No**
a) Skills	☐	☐
b) Technology	☐	☐

c) Expertise ☐ ☐

d) Money ☐ ☐

e) Time ☐ ☐

f) Data ☐ ☐

g) Others, *specify*

2.2 If yes, kindly *specify* by ticking (√) appropriately in the space provided below the resource that will mostly influence Basel implementation.

Resource Type	Very Important	Fairly Important	Important	Least Important	Not Important
a) Skills	[ ]	[ ]	[ ]	[ ]	[ ]
b) Technology	[ ]	[ ]	[ ]	[ ]	[ ]
c) Expertise	[ ]	[ ]	[ ]	[ ]	[ ]
d) Money	[ ]	[ ]	[ ]	[ ]	[ ]
e) Time	[ ]	[ ]	[ ]	[ ]	[ ]
f) Data	[ ]	[ ]	[ ]	[ ]	[ ]
g) Others (specify)	[ ]	[ ]	[ ]	[ ]	[ ]

2.3 How do you intend to go (or have gone) about the implementation, *kindly tick as applicable.*

- Set up a steering committee ☐
- Involve external consultants ☐
- Responsibility of the Internal Audit Department ☐
- Continuous Training ☐

B. Pillar I - Minimum Capital Requirements

3.0 Credit Risk Charge

3.1 How does your institution monitor credit risk? *Kindly specify.*

a)

b)

c)

3.2 Does your institution make capital provisions for credit risk?

Yes ☐ No ☐

3.3 If yes, what approach do you use in assessing the capital charge for credit risk?

a) Standardised Approach ☐

b) Internal Ratings Based (IRB) Approach

- Foundation or ☐
- Advanced ☐

c) Other *(specify)*

3.4 Does your bank make use of the following measures of data in determining capital charge for credit risk?

a) Probability of default (PD) ☐ Yes No ☐

b) Loss given default (LGD) ☐ Yes No ☐

c) Exposure at default (EAD) ☐ Yes No ☐

d) Portfolio at Risk (PAR) ☐ Yes No ☐

3.5 If yes, please *provide* the duration of historic data available.

3.6 Does your bank use ratings from External Credit Rating Institutions in the credit assessment of borrowers? If yes, please indicate the name(s) of the Credit Rating Agency used.

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4.0 Market Risk Charge

4.1 What types of market risk is your bank exposed to? *Tick appropriately.*

a) Interest Rate ☐

b) Foreign Exchange ☐

c) Liquidity ☐

d) others *(specify)*

4.2 How does your institution monitor market risk? *Kindly specify.*

a)

b)

c)

4.3 Does your institution make capital provisions for market risk?

Yes ☐ No ☐

4.4 If yes, which approach do you use in assessing the capital charge for market risk? *Select appropriately.*

a) Basic Indicator Approach ☐

b) Standardised Approach ☐

c) Advanced Measurement Approach ☐

5.0 Operational Risk Charge

5.1 How does your institution monitor operational risk? *Kindly specify.*

a)

b)

c)

5.2 Does your institution make capital provisions for operational risk?

Yes ☐ No ☐

5.3 If yes, which approach do you use in assessing the capital charge for operation risk? *Select appropriately.*

a) Basic Indicator Approach ☐

b) Standardised Approach ☐

c) Advanced Measurement Approach ☐

C. Pillar II - Supervisory Review

6.1 Does your institution have an Internal Capital Adequacy Assessment Process (ICAAP) in place?

Yes ☐ No ☐

6.2 Does your ICAAP incorporate the following?

☐ Future capital levels commensurate with risk appetite of bank

☐ Benchmarking with other banks

☐ Includes stress testing of earnings and asset growth

☐ Capital cushions against anticipated volatility

D. Pillar III - Market Discipline

7.1 Does your bank provide the following information to the public?

	Yes	No
a) Management policies	☐	☐
b) Definitions and statistical methods used in Risk Analysis	☐	☐
c) Information on the supervisor's acceptance of the risk management approach	☐	☐
d) Capital charge against risk	☐	☐
e) Model validation	☐	☐
f) Stress-testing procedures	☐	☐
g) Others *(specify)*		

7.2 If yes, where and when do you disclose the information? *Briefly describe.*

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..............................**THANK YOU FOR YOUR CONTRIBUTION**..

APPENDIX II

THE BANKING SECTOR			
1	African Banking Corporation	22	Fina Bank Limited
2	Bank of Africa Ltd	23	First Community Bank Ltd
3	Bank of Baroda	24	Giro Commercial Bank
4	Bank of India	25	Guardian Bank
5	Barclays Bank of Kenya Ltd	26	Gulf African Bank Ltd
6	CfcStanbic Bank Limited	27	Habib AG Zurich
7	Chase Bank Limited	28	Habib Bank Limited
8	Citibank, N.A.	29	Imperial Bank Limited
9	City Finance Bank	30	Investment & Mortgages Bank
10	Commercial Bank of Africa	31	Kenya Commercial Bank Ltd
11	Consolidated Bank of Kenya	32	K-Rep Bank Ltd
12	Co-operative Bank of Kenya	33	Middle East Bank of Kenya
13	Credit Bank Limited	34	National Bank of Kenya Ltd
14	Development Bank of Kenya	35	National Industrial Credit Bank
15	Diamond trust	36	Oriental Commercial Bank
16	Dubai Bank Limited	37	Paramount-Universal Bank
17	EABS Bank Ltd	38	Prime Bank Limited
18	Equatorial Commercial Bank	39	Southern Credit Banking Corp.
19	Equity Bank Limited	40	Standard Chartered Bank Ltd
20	Family Bank Ltd	41	Transnational Bank Limited
21	Fidelity Commercial Bank	42	Victoria Commercial Bank Ltd

APPENDIX III

BASEL CORE PRINCIPLES FOR EFFECTIVE SUPERVISION

1. Objectives, Autonomy, Powers, and Resources
2. Permissible Activities
3. Licensing Criteria
4. Ownership
5. Investment Criteria
6. Capital Adequacy
7. Credit Policies
8. Loan Evaluation and Loan-Loss Provisioning
9. Large Exposure Limits
10. Connected Lending
11. Country Risk
12. Market Risks
13. Other Risks
14. Internal Control and Audit
15. Money Laundering
16. On-Site Supervision
17. Bank Management Contact
18. Off-Site Supervision
19. Validation of Supervisory Information
20. Consolidated Supervision
21. Accounting Standards
22. Remedial Measures
23. Globally Consolidated Supervision
24. Host Country Supervision
25. Supervision Over Foreign Banks' Establishments.