Capital Adequacy under Basel 3

Its Implications for Large Commercial Banks in Ghana and Kenya

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Submitted in accordance with the requirements for the degree of PhD

The University of Leeds

Faculty of Law, Centre for Business Law and Practice

September 2014

The candidate confirms that the work submitted is his own and that appropriate credit has been given where reference has been made to the work of others.

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Acknowledgements

To my loving parents, Mr Robert Ivan Quansah (Snr) and Mrs Milburga Chenard Quansah (nee Amuah) both of whom are retired legal practitioners – I salute you both and say a big THANK YOU.

During the 12 months of my LLM in International Banking and Finance Law (2009), you were both there for me physically, spiritually (in prayers) and materially including financially. You have both replicated this unwavering support for me during the three years of my PhD.

During this period, I never felt alone even though you were thousands of miles away in Ghana. Your words of assurance, reassurance, enthusiasm and boundless financial support kept me going physically, emotionally and mentally.

Words cannot describe how grateful I am to you both for this immense support which was genuine, freely given and above all came from the heart. I will forever be indebted to you both for the confidence and belief you have always had in my commitment and enthusiasm for the law. It is my most fervent hope and indeed my prayer that you both keep going on from strength to strength, in good health and longevity to enable you reap fully the seeds of knowledge you sowed in me many years ago.

Special thanks goes to Professor Andrew Campbell, who I dare say saw the potential in me to do a PhD. Having been my supervisor on my LLM programme in 2009, Andy has always been a source of inspiration. I remember very clearly at our leaving graduation reception when you said to me '...so what are your plans Josiah? Have you considered a PhD?'. Although my response at the time was 'no way, Prof' his question sparked a few months of soul searching within myself during which I increasingly became convinced that a PhD was the pathway for me.

Professor Campbell, you are the main reason why I chose to study my PhD here at Leeds University and may you continue to inspire others like you have inspired me.

I also wish to say a special thank you to Judith Dahlgreen. I give you total credit for giving me the confidence to overcome pre-conference jitters and nerves by describing my first presentation as that delivered by a ‘natural’.

That gave me the confidence boost I needed to deliver other presentations. Judith, I am ever so grateful for the massive input you have provided alongside Andy for the duration of my PhD.

To both of you, I say a big thank you for guiding me to produce this intellectual piece of work. I am indeed grateful for your support, suggestions, constructive criticisms and above all your feedback comments.

Finally, I wish to acknowledge the Ghana Education Trust Fund for providing sponsorship for this intellectual piece of work. I am eternally grateful.

God bless you all!

Abbreviations

ADB	-	Asian Development Bank
AfDB	-	African Development Bank Group
AIRB	-	Advanced Internal Ratings Based
AMA	-	Advanced Measurement Approach
ASEA	-	African Securities Exchange Association
ATM	-	Automated Teller Machines
BCBS	-	Basel Committee on Banking Supervision
BESA	-	Bond Exchange of South Africa
BIA	-	Basic Indicator Approach
BIS	-	Bank for International Settlements
BoG	-	Bank of Ghana
CAD	-	Capital Adequacy Directive
CAMELS	-	Capital Adequacy, Asset Quality, Management Soundness, Earnings, Liquidity and Sensitivity
CAR	-	Capital Adequacy Ratio
CBK	-	Central Bank of Kenya
CBN	-	Central Bank of Nigeria
¢ or Gh¢	-	Cedis or Ghana cedis
CCF	-	Credit Conversion Factor

CCR	-	Counterparty Credit Risk
CDB	-	Carribean Development Bank
CEDB	-	Council of Europe Development Bank
CET 1	-	Common Equity Tier 1
CIB	-	Chartered Institute of Bankers
CRA	-	Credit Rating Agency
CVA	-	Credit Valuation Adjustment
DPFB	-	Deposit Protection Fund Board
D-SIBs	-	Domestic Systemic Important Banks
DTA	-	Deferred Tax Asset
DTL	-	Deferred Tax Liability
EAC	-	East African Community
EAD	-	Exposure at default
EBRD	-	European Bank for Reconstruction and Development
ECA	-	Export Credit Agency
ECAIs	-	External Credit Assessment Institutions
EDTF	-	Enhanced Disclosure Task Force
EIB	-	European Investment Bank
EL	-	Economic loss
ERS	-	Economic Recovery Strategy

ES	-	Expected Shortfall
EU	-	European Union
FCA	-	Financial Conduct Authority
FDI	-	Foreign Direct Investment
FDIC	-	Federal Deposit Insurance Corporation
FEP	-	Financial Education Partnership
FINSAP	-	Financial Sector Adjustment Programme
FINSSP	-	Financial Sector Strategic Plan
FIRB	-	Foundation Internal Ratings Based
FSA	-	Financial Services Authority
FSAP	-	Financial Sector Assessment Programme
FSB	-	Financial Stability Board
FSI	-	Financial Soundness Indicator
G10	-	Group of 10 Industrialised Countries
G20	-	Group of 20 Industrialised Countries
GAAP	-	Generally Accepted Accounting Principles
GDP	-	Gross Domestic Product
GDR(s)	-	Global Depositary Receipt(s)
GSE	-	Ghana Stock Exchange
GT	-	Ghana Telecom
GTB	-	Guaranty Trust Bank

IADB	-	Inter-American Development Bank
IBRD	-	International Bank for Reconstruction and Development
IFC	-	International Finance Corporation
IFRS	-	International Financial Reporting Standard
IMA	-	Internal Measurement Approach
IMF	-	International Monetary Fund
IOSCO	-	International Organisation of Securities Commission
IRB	-	Internal Ratings Based
IRC	-	Incremental Risk Charge
JSE	-	Johannesburg Stock Exchange
Ksh	-	Kenyan schilling
LCFI	-	Large and Conglomerate Financial Institution
LCR	-	Liquidity Coverage Ratio
LDA	-	Loss Distribution Approach
LGD	-	Loss Given Default
LMA	-	Loan Market Association
LSE	-	London Stock Exchange
M	-	Maturity
MPC	-	Monetary Policy Committee

MPR	-	Monetary Policy Rate
MSR	-	Mortgage Servicing Right
N	-	Naira
NIB	-	Nordic Investment Bank
NIBOR	-	Nigerian Inter-bank offer rate
NISE	-	Nigeria Stock Exchange
NNPC	-	Nigerian National Petroleum Company
NPL	-	Non-performing loan
NPP	-	New Patriotic Party (A Ghanaian political party)
NSE	-	Nairobi Stock Exchange
NSFR	-	Net Stable Funding Ratio
ODI	-	Overseas Development Institute
OECD	-	Organisation for Economic Co-operation and Development
OTC	-	Over-the-counter
PD	-	Probability of Default
PRA	-	Prudential Regulatory Authority
RBI	-	Reserve Bank of India
ROA	-	Return on Asset
ROE	-	Return on Equity
RWA	-	Risk Weighted Asset

SAR	-	South African Rand
SARB	-	South African Reserve Bank
SBA	-	Scenario – Based Approach
SCA	-	Scorecard Approach
SIFI	-	Systemically Important Financial Institution
SIV	-	Structured Investment Vehicle
SPV	-	Special Purpose Vehicle
SSA	-	Sub-Saharan Africa
SSNIT	-	Social Security National & Investment Trust
STA	-	Standardised Approach
U.K.	-	United Kingdom
UNCTAD	-	United Nations Conference on Trade and Development
U.S.A.	-	United States of America
USD	-	United States dollars
VaR	-	Value-at-Risk
WAMZ	-	West African Monetary Zone
WTO	-	World Trade Organisation

Abstract

The recent global financial crisis (2007-2009) might seem like a distant memory, however the impact and implications of the Basel 3 Accord[1], (the brain-child of the Basel Committee on Banking Supervision (BCBS) and the G20) lives on; at least for the entire phase-in period (1 January 2013 to 1 January 2023).

Even though Ghana and Kenya like some other African countries were affected by the global financial crisis (although not to the same extent as some European countries), both countries as well as most African countries were conspicuously absent during the negotiations phase of Basel 3, perhaps with the exception of South Africa. Notwithstanding this under-representation by African countries, Basel 3 is expected to have a degree of impact and implications for large commercial banks in Ghana and Kenya and the African continent at large.

In view of this, an analysis of the impact and implications of the capital adequacy provisions of Basel 3 on large commercial banks in Ghana and Kenya would be incomplete without first highlighting the relevance of Basel 3 to African countries.

The capital adequacy provisions of Basel 3 requires banks to ensure that they possess enough capital which must be of sufficient quality to address banking risks and to absorb substantial bank losses – a requirement already being met by banks in South Africa, a member of the G20.

With South Africa having already begun the implementation of Basel 3, it is only a matter of time before other African countries follow suit. Nonetheless and regardless of whether Ghana and Kenya implement Basel 3 or not, there will be implications for all, not least the large commercial banks within these 2 jurisdictions.

This thesis thus investigates the implications of the capital adequacy provisions of Basel 3 on large commercial banks in Ghana and Kenya.

[1] Hereinafter simply referred to as Basel 3.

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Introduction

Notwithstanding the compliance statistics provided by the Sub-Saharan African countries with respect to the Basel 2 Accord[2] and the level of pessimism shared by some where the likely adoption of Basel 3 by African Countries and compliance with it thereof is concerned, it is a grave misconception when legal analysts and scholars[3] suggest that Basel 3 will not apply to African countries. It is submitted that such misconceptions are ill-conceived and ought to be ignored.

One of the rationales[4] for Basel 3 at the time of its endorsement by the G20 and the BCBS[5] was that never again should the ordinary taxpayer be made to bail-out[6] banks which had become too big to fail. Thus the objective of Basel 3 is aimed towards the strengthening of the global banking industry's ability to 'absorb shocks' emanating from both financial and economic stress, thereby reducing the transmission of the effects of a banking crisis from the financial sector to the real economy[7].

The meaning of capital adequacy[8] may still be subject to slight variations in the banking law statutes of countries which set out to incorporate Basel 2 and Basel 3 in their national laws. This is due to the different interpretations and classifications accorded by the incorporating country to the components[9] of the capital adequacy ratio. Thus, whilst attempts at a global regulatory and

[2] Hereinafter simply referred to as Basel 2.

[3] Such as Iwa Salami. See I Salami, 'International Financial standards and the application of Basel 3 in Emerging and Frontier Markets', Law and Financial Markets Review (2012) Volume 6 336, 339.

[4] Another rationale, was that no firm should be deemed too large or too systemically important to fail – http://www.g20.org.documents2010//11seoulsummit_declaration.pdf

[5] The Basel Committee on Banking Supervision (BCBS) was formed in 1994, as a result of the collapse of Herstaff (A bank based in Cologne, Germany).

[6] http://www.g20.org.documents2010//11/seoulsummit_declaration.pdf

[7] Basel Committee on Banking Supervision, 'Basel 3: A global framework for more resilient banks and banking systems' [2010] (Revised June 2011) Bank for International Settlements (BIS).

[8] Capital adequacy is the minimal capital that banks and other financial intermediaries are required to maintain at any given point in time. See 'IOSCO Guidance to Emerging Market Regulators Regarding Capital Adequacy Requirements for Financial Intermediaries' p4 2006.

[9] Such as the classification of assets and the nature and extent of their exposure to risk. The types of assets and the risk methodology used are taken into account when computing capital adequacy, or 'the capital adequacy ratio'.

supervisory framework continue, the harmonisation of national banking practices with global best practice continues to be elusive and tricky in some jurisdictions.

A careful analysis of the statement by Arnout Wellink[10] suggests that the BCBS intends to ultimately 'roll-out' Basel 3 world-wide. Sceptics of this point of view might suggest that Arnout Wellink was only stating his own personal opinions and not that of the BCBS at large, a situation which the author considers 'far-fetched' and highly imaginative, considering he made the statement in South Africa[11] in his distinguished capacity as Chairman of the Basel Committee on Banking Supervision, President of the Netherlands Bank.

It is thus certainly the case that both Ghana and Kenya and perhaps other African countries within the Continent, will view the current upheaval in the global banking industry with some level of uncertainty as to the likely future impact and implications of Basel 3 on their respective national banking systems.

In view of this, the question of whether Basel 3 achieves its objectives is a subjective one for which the jury is still out. Nonetheless, one phenomenon that can almost certainly be guaranteed is that the wheel of global banking regulation will constantly be in motion as it is unlikely that the recent global banking crisis would ever be the last to occur; certainly not in a lifetime.

The remaining part of this thesis has been set out as follows. Chapter 1 discusses the cause(s) of the global financial crisis, Chapter 2 describes how the global financial crisis found its way to Africa through transmission mechanisms, its impact (particularly on banks) and the various responses by Ghana and Kenya as well as South Africa and Nigeria by way of comparison. Chapter 3 discusses the role of international banking regulation in enhancing global financial stability. Chapter 4 discusses bank capital regulation and capital adequacy, highlighting the latter's evolutionary transition under Basel 1 to Basel 2. Chapter 5 introduces the Basel 3 global banking accord with

[10] Chairman of the Basel Committee on Banking Supervision: President, the Netherlands Bank.

[11] On 27th January 2011 at a High level meeting in Cape Town, South Africa on 'The Emerging Framework to Strengthen Banking Regulation and Financial Stability' for Africa.

greater focus on the new capital adequacy provisions contained therein. Chapter 6 provides an in-depth analysis of the Questionnaire which is set out in two parts (Part A & Part B) and Chapter 7 discusses the implications of capital adequacy under Basel 3, on large respondent commercial banks in Ghana and Kenya followed by a concluding paragraph.

Aim & Methodology

In this thesis, the author will seek to assess and analyse the present and future implications of the Basel 3 capital adequacy provisions on large commercial banks in Ghana and Kenya[12]. In doing so, the author seeks to address the following questions:

- Is the international convergence of Capital Adequacy regulations desirable?
- Will Basel 3 be relevant for large commercial banks in Ghana and Kenya?
- What are the likely implications of Basel 3 on large commercial banks in Ghana and Kenya?

To achieve this aim, the 'broader' or new definition of Capital as provided under Basel 3 will be examined. Also, the provisions introduced by Basel 3 that directly impact on the amount of capital banks will need to set aside towards the risks they encounter through banking activities will also be critically examined and its likely impact on commercial banks in Ghana and Kenya assessed.

It is important to remember, that there may be differences[13] in the mode of application of capital adequacy requirements by banks in Africa, particularly in Ghana especially where the capital adequacy requirement under Basel 2 is concerned. Such differences will be taken into consideration throughout this thesis.

[12] The choice of Ghana and Kenya stems from the fact that they are both Frontier African countries that have a sound and robust banking structure. Frontier countries are *'countries which have capital markets that are smaller and less liquid than those in the more advanced and emerging countries'* – Standard & Poor, 2000. Examples of other frontier countries are Nigeria, Tanzania, Egypt, Saudi Arabia, Qatar and Tunisia. Also, Ghana and Kenya have already begun the implementation of Basel 2 (ie the predecessor of Basel 3).

[13] Differences arising from inconsistencies in the application of Basel 2 as a result of ineffective banking supervision.

As a result of a lack of a level playing field[14] in the application of the capital adequacy requirement under Basel 2, the rationale behind Basel 3 will be addressed, particularly where it is likely to have both a direct and indirect effect on banking activities and regulations, as well as banking supervision in both Ghana and Kenya. Also, the provisions of Basel 3 in relation to capital adequacy will be examined and an insight sought to establish whether there could ever be uniformity and or consistency in its application globally, because the intended outcome of a globally applicable guideline will not materialise, if it is unable to achieve its desired effect globally.

If history is anything to go by, it is the author's firm belief, that within a decade or more, Basel 3 will become a requirement that all countries world-wide will have to meet.

Methodology

An empirical legal research consisting of a quantitative methods approach was employed, thus forming the backbone of this thesis. This form of legal research method was to ensure that data collated would be both hard and reliable.

Thus this research was conducted by approaching high ranking individuals[15] from banking institutions and asking them to complete a questionnaire[16] that addressed the core issues which ultimately could provide answers to the questions this thesis poses.

The questionnaire was structured in a way to solicit a combination of short straight answers and also present an opportunity for respondents to provide answers in a summarised paragraph form. A combination of questions requiring a 'Yes'; 'No' or 'Don't know' type answers and also open-response type questions where respondents were encouraged to provide an

[14] While countries that have adopted Basel 2 do have banks that satisfy the minimum capital requirement, there is no 'real maximum capital requirement figure' and Basel 2 compliant banks tend to have varying capital adequacy levels, beyond the minimum capital requirement. This may perhaps be due to the fact that banks tend to possess different types of assets which have various levels of risk or riskiness attached to them. This ultimately affects the loss provision calculation for capital that the bank will have to set aside.

[15] These were individuals responsible for bank policy within the participant banks in the jurisdiction of Ghana and Kenya.

[16] See Appendix 6 on page 260 of this thesis.

explanation for their choice of answer(s). This approach was to enable the completion of the questionnaire to be as time-efficient as possible.

Primary legal resources were also used together with articles and publications from institutions like the Basel Committee on Banking Supervision (BCBS), International Monetary Fund (IMF), World Bank, Financial Stability Board (FSB) and Bank for International Settlements (BIS) etc.

The views of some legal scholars from banking and finance law journals have also been analysed by the author in this thesis.

A historical method and a comparative legal method approach was also adopted to provide a degree of insight into the various forms of financial crisis that have taken place in the history of these two African countries selected for this thesis. This approach in the author's opinion may shed some light on the role and the preparedness of a selected country's banking system, (or the lack of it) towards the level of impact of the global financial crisis in that particular country.

There is an acknowledgement that Ghana and Kenya entered and exited the financial crisis at different stages. Thus, any comparisons and distinctions that would be highlighted would be limited to when the crisis was transmitted to each jurisdiction, the resilience of each jurisdiction's banking system to financial crisis and the extent to which the existing Basel 2 bank regulatory framework is being implemented through their respective national laws.

Also, in this thesis, references have been made to the Financial Sector Assessment Programme (FSAP) Reports prepared by Ghana, Kenya, South Africa and Nigeria[17], in collaboration with the International Monetary Fund and World Bank.

The FSAP was developed[18] as a tool which enables financial systems of countries to be assessed, thereby determining the financial stability of that

[17] Although this thesis largely focuses on the various respondent banks from Ghana and Kenya, a wider comparative analysis of capital adequacy levels pre-global financial crisis is undertaken for all four African jurisdictions primarily because they are all considered to be frontier countries, they have relatively well developed financial/banking systems, and above all were affected in different ways by the global financial crisis.

[18] The birth of the Financial Sector Assessment Programme (FSAP) was necessitated following the financial crisis in the 1990s.

country and assisting in the identification of any shortcomings within the financial system of that country which could then be rectified. For an FSAP to be undertaken by the IMF or World Bank on any country, the request for it must come from the country concerned, as this would make it less intrusive for the requesting country and also ensure that there is active participation by the authorities thus making them responsible for the data and figures provided to the IMF and/or World Bank.

The logic for the reliance on data from the FSAP Reports in this thesis is quite simple. Contained within these Reports are certain figures and data that provide a great deal of insight into the performance of banks within that jurisdiction prior to the crisis. These figures and data are actually referred to as Financial Soundness Indicators (FSIs) and may be defined as the link between 'monetary macroeconomic statistics and micro-prudential data'[19] in the provision of data enabling the health of the financial sector to be assessed.

Thus statistical data provided by the FSI Framework[20] is generally obtained from the rating system called CAMELS[21] which is frequently adopted by supervisory bodies in the assessment of the soundness of banks.

For the purpose of this thesis, only four of the core[22] FSIs would be referred to from time to time, namely Regulatory Tier 1 (Capital Adequacy under Basel 1, 2 and 3), Non-Performing Loans (NPLs), Return on Assets ratio (ROA) and Return on Equity ratio (ROE). This is because these four financial soundness indicators are the most commonly referred to when investigating the financial performance of banks in general and of these four, three[23] have been recognised as capital adequacy indicators. Return on assets (ROA) is widely used as an indicator of a bank's profitability and Return on equity (ROE) is an

[19] A B Schmelz, 'Broadening Financial Indicators in the Special Data Dissemination Standard' [2010], 10 IMF.
[20] ibid 33. Nearly 40 FSIs have been acknowledged by the IMF Board of which 25 of them are linked to deposit-taking institutions with about 12 of them belonging to the Core FSI group.
[21] The acronym CAMELS, refers to capital adequacy, asset quality, management soundness, earnings, liquidity and sensitivity to market risk.
[22] Schmelz (n19).
[23] ibid. Namely Regulatory Tier 1 capital to risk weighted assets, Tier 1 capital to assets as known under Basel 2 and Non-performing loans (NPLs) net of provisions to capital.

important measure through which shareholders and stakeholders can assess the performance of banks.

A common limitation of Financial Soundness Indicators (FSIs) may be the potential inaccuracies in data collated and the argument that the different[24] methodologies adopted in the acquisition and collation of data from varying sources, makes a comparison of the data virtually impossible. This argument may be countered by the author's suggestion that the collation of data relating to FSIs is usually a collaborative effort by the IMF and/or World Bank and the country concerned, and as such any potential high costs involved may be underwritten by funds provided by either the IMF or the World Bank.

Although, the potential high cost involved in acquiring data may act as a disincentive to the country/bank involved in the provision of accurate data, it must be emphasised that FSAP continues to enjoy worldwide recognition[25] as a vital system used in the measurement of the performance of banks which is then used as a yardstick in determining financial stability within a particular jurisdiction. Furthermore, it has been suggested[26] that future FSAPs may provide a different analytical approach in the determination of bank stability through measurement of financial sector indicators by taking into account the ever-increasing cross-border transactions and integration of different financial systems.

Questionnaire Methodology

The questionnaire was sent out for completion to 18 large commercial banks in Ghana and 10 large commercial banks in Kenya. Out of 18 potential participant banks from Ghana, only 16 banks completed the questionnaire – a response rate of approximately 89%. Out of 10 potential participant banks in

[24] The differences in methodology used in obtaining data, may be attributed to accounting and supervisory practices. Although this may be a contributory factor, this view may arguably no longer be deemed valid as a result of global attempts by the IFRS Accounting Body (ies) to have uniform accountancy practices globally. Although the availability of data used in the measurement of financial data may not be forthcoming in every jurisdiction, the increasing nature in the transparency of inter-bank dealings, together with an increase in collaboration amongst banks and between banks and supervisory bodies (relating to corporate governance matters) may help reduce such instances of lack of data.

[25] J Vinale and Brook, 'The Financial Assessment Programme After 10 years: Experience and Reforms for the Next Decade' [2009] p8 IMF.

[26] ibid.

Kenya, only 6 banks completed their questionnaire – a response rate of 60%. Thus there was an overall response rate of approximately 79% when considering both jurisdictions.

The questionnaire comprised of 25 questions. In adherence to legislation in relation to data protection and for commercial confidentiality reasons, the names of the individuals who completed the questionnaires have been deliberately kept anonymous and the responses provided have not been linked or attributed to any particular individual or bank. This is in fulfilment of the author's initial and continuing obligation to treat all information and data provided with utmost confidentiality.

Another purpose for this empirical research approach was to enable the author provide an insight into the views held by industry participants from both jurisdictions on the likely implications of Capital Adequacy under Basel 3 for large commercial banking institutions in both Ghana and Kenya.

In keeping with tradition associated with most research methodologies, there were a number of limitations in the quality of data, however such limitations have been adjudged to be of low significance in relation to the level of impact on the results of this research as well as the conclusions drawn from previous historical data used.

Limitations

- Although the information provided within the questionnaire have been authenticated by the respondents stamping the questionnaires with an official stamp of the bank they represent, the author cannot guarantee that the responses provided in the questionnaires were either ever accurate in the first instance, accurate at the date when it was received by the researcher or indeed whether it would continue to be accurate in the future;
- Also, whilst the author trusts the knowledge and competence of the respondents, it cannot be verified or guaranteed that the information provided represents or reflects the general position and direction of the bank in terms of policy or on the contrary represents their own personal

opinions which has nothing to do with the official policy of the bank they represent;

- Where information has been provided by respondents from foreign banks in Ghana and Kenya, it cannot be guaranteed that the views or opinions of these respondents reflects the general position of the foreign bank in its home jurisdiction or on the contrary represents the personal views or opinions of the respondents;
- An over-arching limitation of the overall methodology employed was in regards to the issue of regulatory arbitrage[27]. This is because, regardless of the efforts of global regulatory bodies[28] towards the harmonisation of regulatory and supervisory processes in global banking, the lack of a level playing field continues to be an unwanted feature in the global banking industry. Due to the global impact of the recent financial crisis, almost all countries suffered a 'hit' on either their real economies, the financial sectors of their economies or even both regardless of whether they had implemented Basel 2 or not.

This undoubtedly raises the possibility of the proposition that even though Ghana and Kenya had either fully or partially adopted Basel 2 in their national banking laws prior to the global financial crisis, both countries were still not 'prepared' for the force of the financial 'tsunami' that hit them. A crucial point to bear in mind, is that the fact that these countries might not have been 'prepared' does not mean that their level of preparedness or perhaps lack of it could be compared to the level of preparedness of countries that had not implemented Basel 2, but were still affected by the financial crisis, such as the USA[29].

Thus as a result of regulatory arbitrage, the extent to which any given country could withstand a global financial crisis cannot in the author's opinion be

[27] The interpretation of Basel 2 or 3 may vary from one jurisdiction to another, and it is an unfortunate situation which is often reflected in the provisions within national banking laws that gives effect to the Basel provisions.
[28] Such as the International Monetary Fund (IMF), the World Bank, the Organisation for Economic Co-operation and Development (OECD), and the Financial Stability Board (FSB) etc.
[29] This may be contrasted with Australia which had adopted Basel II and was not affected by the global financial crisis.

solely determined by whether or not the country concerned had adopted any particular global regulatory framework, but rather in the consistency in application or failing that, the preparedness of national regulators and supervisors to adopt a more prudential approach in the discharge of their duties which should include the readiness to go above and beyond the provisions of any global regulatory framework in order to ensure financial stability.

- Finally a limitation which the author had absolutely no control over, was that the modes of transmission of the financial crisis in both countries were different thus creating the possibility of the potential argument that a particular form of transmission of the crisis could have caused an increase in the effects of the crisis than another mode of transmission.

To address this limitation, an attempt has been made in this thesis to also apply a comparative legal approach where a comparison is made to South Africa and Nigeria.

It must be emphasised, that such an approach will not strictly lend itself to comparative legal scholarship, particularly 'theoretical comparison' which focuses on the similarities and differences among legal systems[30]. The comparisons and distinctions that would be drawn would be limited to the development and extent of Basel 2 bank capital adequacy that each participating country has already adopted in their respective national laws.

[30] R Hyland, 'Comparative Law', in D Patterson (ed), *A Comparison to Philosophy of Law and Legal Theory* (Blackwell, 1999).

Sample Selection[31]

In this thesis, two large global international banks[32] as well as large local, regional or Pan-African[33] commercial banks were selected. To determine the sizes of the respondent banks from both jurisdictions, three factors were considered:

- The total number of assets the bank in question has;
- The size of the bank by way of market capitalisation; and
- The size of a bank in terms of the number of employees the bank has.

While the determination of bank size using employee numbers was easily and quickly discounted as not an appropriate method, it was also concluded that the concept of using market capitalisation as a determinant of bank size would be unreliable and questionable particularly in a period of economic turmoil such as during the global financial crisis and also currently in a period of banking regulatory upheaval where the profitability of banks was likely to be affected.

Thus the choice of respondent commercial banks in this thesis was based on an assessment of bank capital, an approach which the author believes provides 'a more accurate reflection of the total assets' within that 'particular banking system' at any given time which ultimately includes cash and

[31] Refer to tables 1.1 and 1.2 in Appendix 1.

[32] Barclays Bank and Standard Chartered Bank. Although there are a number of other large foreign international banks in Africa, the choice of these two large global banks is due to the fact that they both have a presence in Ghana and Kenya. A global bank may be defined as those large banks that conduct banking operations in at least four of the world's six Continents. See 'Bruised but not broken: can the global bank fight back? – Growth priorities and competitive pressures in the global banking industry' p41 KPMG June 2011. Although there are other large global banks such as Federal National Mortgage Association (Fannie Mae) in the U.S.A., BNP Paribas in France, Deutsche Bank AG in Germany and HSBC Holdings in the UK, these have been excluded from the survey because they are not sufficiently represented in African Countries with the exception of Barclays and Standard Chartered.

[33] Defined as *'Banking Groups domiciled in Africa with subsidiaries in several countries',* See B V Christensen, 'Financial integration in Africa: Implications for monetary policy and financial stability' [2014] BIS Paper 76 11,16. (Accessed electronically in April 2014).

balances held on its behalf at the central bank, inter-bank deposits, loans, securities and other assets[34].

Finally, it was ensured that the jurisdictions (within which the respondent banks reside) had already adopted Basel 2, or at least had expressed an unwavering desire to do so and also have a strong banking regulatory structure in place, with central banks that were effective in the performance of their regulatory and supervisory roles.

The rationale for this mixed sample selection[35] is due to the fact that there isn't a huge presence of large global international banks in African countries and that there is also the likelihood that Basel 3 will in future affect all banks (irrespective of whether the bank is locally systemic or globally systemic) through incorporation into national laws by governments of the jurisdictions in which they reside.

Number of Participant Respondent Banks

- Total number of participant commercial banks – 22 Banks.
- Of this number, 16 are large commercial banks located in Ghana, and the remaining 6 are large commercial banks located in Kenya.

Total number of respondent commercial banks from Ghana – 16 [i.e. 6 local banks and 10 international/foreign banks].

Local Commercial Banks

Bank of Ghana – Central Bank

Ghana Commercial Bank

Unibank Ghana Ltd

HFC Bank

Fidelity Bank

The Royal Bank Limited

[34] See KPMG, 'Bruised but not broken: can the global bank fight back? – Growth priorities and competitive pressures in the global banking industry' (2011).

[35] A combination of Global banks, Pan-African or Regional banks and large local banks. The respondents from these participant banks were of high managerial ranking i.e. Bank Managers, Credit and Risk Analysts of managerial level.

International/Foreign Banks

Barclays Bank – Head office in the United Kingdom

Standard Chartered Bank – Head office in the United Kingdom

Ecobank (A Regional/Pan-African bank) – Headquartered in Togo

SG-SSB Limited – Formerly Social Security Bank (Acquired by SociétéGenerale Banking Group of France)

Stanbic Bank – South African Bank

Access Bank – Subsidiary of Access Bank in Nigeria

Zenith Bank – Nigerian Bank

Guaranty Trust Bank – Subsidiary of GT Bank in Nigeria (Obtained its Universal Licence in 2006)

United Bank for Africa (Gh Ltd) – Previously called Standard Trust Bank Ghana (A Regional/Pan-African bank present in 19 African Countries)

Bank of Africa – A Regional/Pan-African bank and head-quartered in Bamako, Mali and present in 14 African countries

Global Banks

Barclays Bank[36] and Standard Chartered Bank[37].

Total number of respondent commercial banks from Kenya – 6

Local Commercial Banks

Bank of Baroda

Kenya Commercial Bank (KCB)

Fina Bank

International/Foreign Banks

Ecobank (A Regional/Pan African Bank) – Headquartered in Togo

[36] In December 2010, Barclays bank ranked 5th in the list of the 10 largest banks in the world by way of total assets. See KPMG (n34) 21.

[37] Standard Chartered Bank which does not fall into the group of the top 10 largest banks in the world was still chosen for this survey due to its substantial presence in Africa and the fact that it is a fairly large bank in comparison to regional banks in Africa.

Bank of Africa (A Regional/Pan African Bank) – Headquartered in Bamako, Mali and present in 14 African countries

Standard Chartered Bank of Kenya (A subsidiary of Standard Chartered Bank in the United Kingdom).

Summary of Research Findings

The aim of the questionnaire was to elicit relevant information from the large respondent commercial banks in both Ghana and Kenya which was then subsequently analysed and hopefully provides the answers to the research questions this thesis poses.

Research Question 1: Is the International convergence of Capital Adequacy regulations desirable?

Although Archya in his paper[38] finds that the international convergence of capital adequacy regulations is desirable, his findings were arguably of a general nature and was not particularly reflective of African Countries. It is important to obtain the views of African banks on this issue, even more so where they often tend to be affected by the Basel regulations, negotiations of which they never play a starring role.

This research question was answered by all representatives of the 22 banks. Out of 16 banks from Ghana that answered this question, all 16 banks agreed that the international convergence of capital adequacy regulations was desirable.

Again, out of 6 banks from Kenya that answered this question, all 6 banks agreed that the international convergence of capital adequacy regulations was desirable.

Thus, with all the respondent banks answering this research question in the affirmative, it was interesting to note the variety of reasons provided. Without reference to any particular bank or jurisdiction, one of the reasons cited for the desirability in the convergence of international capital adequacy regulations was:

[38] V Acharya, 'Is the International Convergence of Capital Adequacy Regulation Desirable?' (2003) Journal of Finance Volume LVIII No 6, 2745.

'it reduced the impact of insolvency in the banking sector due to lack of sufficient capital adequacy and liquidity'.

Research Question 2: Will Basel 3 be relevant for large commercial banks in Ghana and Kenya?

Notwithstanding Nout Wellink's opinion that Basel 3 would be relevant for African countries 'regardless of the level, state of development and complexity of their banks' and regardless of the fact that South Africa has already commenced implementation of Basel 3 (on 1 January 2013), the author is of the opinion that the answers provided by the industry participants themselves i.e. the banks would provide a better insight into their present and future attitudes to Basel 3 adoption irrespective of whether their respective central banks makes it a requirement for all commercial banks within these two jurisdictions to comply with the Basel 3 provisions or not.

From the responses obtained, it was clear that most of the respondent banks recognise and agree that Basel 3 will be relevant for African banks. Thus of the 16 respondent commercial banks in Ghana, 11 stated that Basel 3 would be relevant for their banks i.e. a representation of approximately 69%. Of these 11 banks, the number of banks indicating a level of agreement of a scale[39] of 5 with respect to the relevance of Basel 3 to banks in Ghana was 7. This suggests that approximately 64% of respondent banks in Ghana were absolutely convinced that Basel 3 would be relevant to their banks. Also, 3 banks in Ghana chose a scale factor of 4 and 1 bank, a scale factor of 3.

For those banks that agreed that Basel 3 would be relevant for African banks but chose a scale of 4 perhaps implies a lesser degree of uncertainty in comparison to the banks that chose a scale of 3. For those banks that chose a scale of 2 and below, it was assumed that they believed Basel 3 would not be relevant for African banks. Also 1 bank said they did not know if Basel 3 would be relevant for their bank and another bank strongly disagreed on the issue.

[39] Refer to table 1.3 in Appendix 1 on page 243 and question 20 of Questionnaire in Appendix 6.

Of the 6 respondent commercial banks from Kenya, 5 stated that Basel 3 would be relevant for banks in Africa, (i.e. 1 chose a scale factor of 5, 3 chose a scale factor of 4 and 1 chose a scale factor of 3) whereas only 1 respondent admitted that they did not know if Basel 3 would be relevant. Thus the percentage of respondent banks from Kenya that believed that Basel 3 would be relevant represents approximately 83%.

Thus out of a total number of 22 respondent banks i.e Ghana and Kenya combined, 16 banks believe Basel 3 is relevant (i.e. respondents choosing a scale of 5 to 3), 3 are highly sceptical about the relevance of Basel 3 (i.e. respondents choosing a scale of 1 or 2), 2 respondents indicated they did not know and 1 respondent explicitly stated that Basel 3 was irrelevant.

Of the remaining 6 respondent banks out of a total of 22 respondent banks that either did not agree to the relevance of Basel 3; or stated that they did not know if Basel 3 would be relevant or stated No, all had various levels of Basel 3 awareness before completing the questionnaire.

It is worth pointing out, that it would be rather difficult in the author's opinion for a bank having a low awareness level of Basel 3 to effectively provide an accurate assessment of the degree of relevance of Basel 3 to African countries in general.

Research Question 3: What are the likely implications of Basel 3 on large commercial banks in Ghana and Kenya?

The majority of the respondent banks recognised that Basel 3 would have implications on their banks regardless of whether they implemented Basel 3 or not. Chapter 7 provides a very detailed assessment of the implications of Basel 3 on large commercial banks in Ghana and Kenya.

CHAPTER 1

CAUSES OF THE GLOBAL FINANCIAL CRISIS

1.1 Introduction

The occurrence of banking crises is arguably no longer an uncommon phenomenon, bearing in mind the different types and magnitude of financial crises that have occurred around the world during the past 20 years.

Inspite of this view, the sheer size and scale of this recent global financial crisis[40] sets it apart from previous crises and has been described as arguably the worst form[41] of financial crisis since the Great Depression.[42] Even though Ghana[43] and Kenya[44] have each experienced financial crises in the past, it is submitted that none of those crises could compare to the impact the global financial crisis has had in both jurisdictions. Notwithstanding the plethora of academic literature and publications on the causes of the global financial crisis, its discussion here is still relevant in order to put into context how this financial crisis, which originated in the U.S.A, spread through Europe and eventually made its way to Africa and in particular Ghana and Kenya.

1.2 The U.S Sub-prime Mortgage Market

The period from early 2000 till just before the crisis hit in 2007, was characterised by strong economic growth and high credit availability in the United States of America. This led to excessive 'borrowing and lending'[45] which was not limited to the U.S.A[46].

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[40] The global financial crisis begun in the U.S.A in 2007 and lasted approximately two years, ending in 2009. However, its impact and effect are still present in many countries today.

[41] L Beale, 'In the Wake of Financial Crisis' (2010), Current Developments in Monetary and Financial Law, Volume 5, IMF p3. (Accessed electronically).

[42] Occurred in the U.S.A from 1923-1933.

[43] Ghana's previous financial crisis was from 1982-1983. – See L Laeven and F Valencia, 'Systemic Banking Crises Database' [2012] IMF Working Paper WP/12/163.

[44] Kenya's previous banking crises were in 1986-1989, 1992-1994 and also in 1998. (See A Kithinji and N M Waweru, 'Merger Restructuring and Financial Performances of Commercial Banks in Kenya' (2007) Economic Management and Financial Markets Journal Vol 2(4), 9-39.

[45] D W Arner, 'The Global Credit Crisis of 2008: Causes and Consequences', (2009) The International Lawyer Volume 43, 92.

[46] ibid.

Douglas Arner suggests that this phenomenon was widespread and affected most markets and asset type[47]. In response to this phenomenal economic growth in the U.S.A and also in an attempt to solve the social problem of unaffordability of houses, particularly by people of poor credit rating, certain policies were introduced by the authorities to make housing affordable to all.

Maziar Peihani in his paper[48] suggests that the term 'sub-prime', quite apart from being used to describe borrowers possessing a low credit score or 'quality', was also used in describing the lender from whom the loan originated.

Thus, because loans originating from these lenders were primarily aimed at poor credit rated borrowers and were characterised by high interest rates, such lenders could be described as sub-prime lenders.

Heidi M. Schooner and Michael W. Taylor suggest[49] that the process of sub-prime lending was aimed at:

> *'borrowers who failed to meet the criteria in terms of income, credit history or down payment demanded by conventional lenders, particularly for home mortgages'[50].*

Attention must also be drawn to the fact that the underwriting institutions also played a crucial role in facilitating the mortgage approval for a huge number of these sub-prime borrowers[51]. Not only did they circumvent their own system of checks and balances in guaranteeing the loans, they also failed to see that some of the sub-prime borrowers had no realistic capacity to afford these mortgages[52].

Although the sub-prime mortgage lending scheme was extremely risky, as it became vulnerable to the possibility of multiple defaults by sub-prime

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[47] ibid.

[48] M Peihani, 'The Global Financial Crisis of 2008: An analysis of contributing trends, policies and failures', (2012) Banking & Finance Law Review Volume 27, 465.

[49] H M Schooner and M Taylor, *Global Bank Regulation: Principles and Policies* (1st Edition) (Academic Press 2010), 45.

[50] ibid.

[51] M Peihani, 'The Global Financial Crisis of 2008: An analysis of contributing trends, policies and failures' (2012) Banking & Finance Law Review Volume 27, 465, 473.

[52] Peihani (n48) 476. The increases in the value of properties came to an end thereby leaving the property with little or no equity to facilitate a re-mortgage or an outright sale of the property.

borrowers, the level of risk increased with the surge in the growth of securitisation[53].

1.3 Other Causes of the Global Financial Crisis

Despite the practice of securitisation having been in existence since the early 1930s[54], it was not until a couple of years prior to the global financial crises that a huge upsurge in its use and popularity begun to develop[55].

Wilmarth Jr[56] attributes this surge in popularity to two main reasons. Firstly, the process of securitisation gave banks the opportunity to refinance illiquid assets like mortgages and other loan products to securities, the scale of which brought in much needed liquidity which could be used to finance other banking activities.

While this application of the securitisation process was entirely legitimate, it was the other use of securitisation that gave cause for concern. Because capital requirements at the time for trading books[57] was less than the requirements for banking books (i.e banks were required to hold less capital for assets held in their trading books as opposed to the banking book), banks began to engage in regulatory capital arbitrage[58]. They avoided their obligations towards capital requirements[59] by regrouping loans into different financial products and taking them off the banking books and into the trading books[60]. This process was achieved by banks through the creation of an entity called a structured investment vehicle (SIV) or a special purpose vehicle (SPV) which held the asset-backed securities.

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[53] Securitisation is the banking practice used by banks to diversify credit risk. Through this practise, banks are able to pool different loans together (e.g residential mortgages, car loans etc) to form a structure or banking product which is then sold to investors who may use it as collateral for securities.

[54] The role of securitisation goes as far back as when the US bank Fannie Mae was created in the 1930s. See 'The Turner Review: A Regulatory response to the global banking crisis', [2009], 14.

[55] Peihani (n48) 478.

[56] A E Wilmarth Jr, 'The Dark Side of Universal Banking: Financial Conglomerates and the Origins of the Sub-prime Financial Crisis', (2009) 41 Conn. L. Rev. 983, 985.

[57] This loophole has since been rectified by Basel 2.5.

[58] Peihani (n48) 479.

[59] This provided the banks with an opportunity to engage in other loan transactions resulting in the banks/financial institutions becoming highly leveraged.

[60] B Mahapatra, 'Implications of Basel 3 for Capital, Liquidity and Profitability of Banks' [2012] RBI Monthly Bulletin**,** 772.

Thus, banks and financial institutions became involved in the securitisation of mortgages in the US mortgage markets, and sold mortgage-backed securities to a substantial number of investors[61].

Douglas Arner argues that the originate-to-distribute model under the umbrella of universal banking assumed a different structure during the late 1990s onwards. Arner suggests that this new structure/model could best be described as a 'manufacturing model' of 'debt securities'[62]. Under this new model, banks and financial institutions were constantly creating, purchasing and trading in such debt securities. This enabled them to frequently pool together different types of assets to form a completely new and structured product to attract potential investors[63].

While these assets were constantly being created and traded, some were also being retained by the originators i.e.banks either on or off their balance sheets, or through SIVs which were sometimes not completely independent of the banks that set them up[64]. It is submitted that the creation of the 'manufacturing model' meant that previously targeted end-investors were no longer purchasing these securitised products as new and existing debt securities were constantly purchased by banks.

As liquidity increased the sub-prime residential mortgage industry experienced phenomenal growth and expansion. This led to property prices reaching very 'high and unsustainable levels'[65]. In order to address the increasing property prices, a number of Central banks (not only in the U.S.A., but also in Europe), increased interest rates[66]. While this move helped curb the ever-increasing property prices and addressed inflation concerns[67], increases in interest rates meant that sub-prime borrowers in the U.S.A, begun to struggle to pay off their mortgages. It thus came as no surprise when the sub-prime borrowers begun defaulting on their mortgage payment

[61] Thus transferring the credit risk to the investors. See The Turner Review: 'A Regulatory response to the global banking crisis', [2009], 15 FSA.
[62] Arner (n45) 107.
[63] ibid.
[64] ibid.
[65] M Wolf, *Fixing Global Finance*, 2008 1st edition, (John Hopkins University Press, USA).
[66] Arner (n45) 95.
[67] ibid.

obligations[68]. Banks that dealt directly/indirectly in these mortgage-backed securities started to suffer huge losses as the value of mortgage-backed securities dropped dramatically[69]. This situation was even made much worse as banks scrambled to deleverage and off-load such toxic financial products[70].

It was far too late at this point as investors lost confidence in the securitised products, particularly asset-backed securities[71]. Banks stopped dealing with each other as they tried to hold on to the liquidity they already had[72]. Liquidity in the inter-bank markets dried up[73] and the contagion of systemic risk was underway, through the direct and indirect investments that banks had in such products and between themselves – the global financial crisis had just begun.

Douglas Arner suggests that a 'combination of debt capital, market technology regulatory incentives, excessively low interest rates and massive global investor demand' set the stage for the crisis[74].

It is submitted that the images of investment bankers from the UK-based U.S. Investment Bank Lehman Brothers carrying their office belongings which was beamed across a number of T.V stations here in the UK and elsewhere marked the unfolding of the global financial crisis.

It is further submitted that such scenes will undoubtedly remain etched in the minds of many people for a very long time, and it is worth pointing out that although the crisis begun in August 2007, the seeds of this unprecedented financial crisis had been sown years earlier in the U.S.A through the implementation of housing and mortgage policies designed to make property ownership affordable.

Although the account provided above, briefly describes the trigger for the global financial crisis, there were other factors at play in the cause of the crisis. These other factors have contributed to the substantial literature available today on the causes of the global financial crisis, and although the

[68] ibid.
[69] ibid.
[70] To reduce their exposure to the mortgage-back securities the value of which had plummeted. See Peihani (n48) 480.
[71] ibid.
[72] Peihani (n48) 481.
[73] Peihani (n48) 480.
[74] Arner (n45) 95.

literature represents different views on the subject, there seems to be a degree of consensus on some of the causes.

The publication of a report by a high level group on financial supervision in the E.U (The Larosiere Report)[75] in 2009, groups the causes of the global financial crisis under six main headings. The Report identifies macroeconomic issues, risk management failings (leading to highly complex financial products and shadow banks), influence of Credit Rating Agencies, failure of corporate governance, the existence of 'remuneration and incentive schemes within financial institutions' which created an environment of excessive risk-taking and finally failures of regulatory and supervisory frameworks as well as that of crises management structures as causes of the global financial crisis.

Linda Beale[76] however, suggests that the cause of the financial crisis was due to three factors i.e, the role played by innovative financial products, inadequate financial regulation and the increasing role that financial innovation plays in the global economy.

As the popularity of securitisation grew, so did the risks associated with it. It was seen by the banking industry as an effective tool in reducing the risks and costs associated with credit intermediation.

Beale argues that the creation of these complex financial products, such as credit derivatives, swaps etc through financial engineering and their subsequent use in financial derivative transactions that were complex and complicated i.e such as in 'back-to-back' transactions[77] increased the level of risks that banks exposed themselves to.

[75] The Larosiere Report was published in 2009 under the Chairmanship of Jacques de Larosiere. It represents the culmination of research conducted by Jacques de Larosiere and his team who were commissioned to investigate the future of European regulation and supervision. (Accessed electronically at http://ec.europa.eu/internal_market/finances/docs/de_larosiere_report_en.pdf

[76] Beale (n41).

[77] The 'back-to-back' transactions rather than a fundamental straight-forward transaction between a bank and its customer with no links to the financial industry, increased the complexity of the transactions.

This was also recognised by Anil K. Kashyaps, Raghuram G. Rajan and Jeremy C. Stein who suggested in a paper[78] that although the initial rationale behind the 'originate and distribute' model of the securitisation process was to transfer risk away from the banks to institutions that could manage the risks[79], this transfer of risk never occurred because a large number of mortgage-backed securities linked to sub-prime lending risk still remained on the balance sheets of most U.S banks. Thus the original purpose of securitisation which enabled banks to reduce credit intermediation costs and to divert credit risks to end investors had become distorted.

This failure of the 'originate-to-distribute' model of the securitisation process, according to the Turner Review[80], occurred because the end investor had not become the ultimate beneficiary of this securitisation process. On the contrary, credit risk that had been bundled and securitised was often purchased by other banks engaged in credit derivative transactions; sold in part by the originating bank, which then either retained the other part or re-securitised the remaining part into an even more complex financial instrument and then sold off. In other instances, these new complex financial products where used to access short-term liquidity by being offered as collateral in financial transactions.

According to Turner, this resulted in multiple financial transactions between banks that were extremely complex in nature; not just in the nature of the financial transactions, but also in the financial products that were being dealt with. Thus what had begun as a much lauded credit risk management process in the embodiment of securitisation had degenerated or mutated into an unrecognisable process which was out of control.

Contrastingly, and perhaps surprisingly, Rosa Lastra does not directly attribute the cause of the global financial crisis to securitisation. She suggests

[78] A K Kashyaps, R G Rajan and J C Stein 'Rethinking Capital Regulation'. A Paper delivered at an Economic Symposium in 2008 under the theme 'Maintaining Stability in a Changing Financial System'.
[79] Example, such as unleveraged pension funds.
[80] Turner Review, 'A Regulatory response to the Global Banking Crisis' [2009], 16 FSA.

that ".... it would be wrong to describe securitisation – a technique needed to bring market liquidity – as 'the cause of the crisis'"[81].

Lastra further suggests that the significant depreciation in house prices, following 50 years of data was unprecedented. She adds that while the technique of securitisation in itself was not a bad thing, the ever-increasing complex nature of the processes meant that supervisors and even to some extent the bankers themselves did not understand and appreciate the nature and magnitude of the risks which were being transferred via these securitised products.

Arner on the contrary points out that while the global financial crisis was initiated by the collapse of the sub-prime mortgage industry through borrower defaults the crisis was systemically transferred 'throughout the financial system' by the 'structures of securitisation'[82].

Following a careful analysis of the findings of the Larosiere Report, it is submitted that one of the findings of the Report, that the cause of the global financial crisis was a direct result of the 'extreme complexity of the structured financial product'[83] resonates with Lastra's assertion that supervisors and bankers did not appreciate the nature and magnitude of risks they were dealing with. This submission is made on the basis that the Larosiere Report, while highlighting corporate governance failures, also states that a number of Boards as well as the senior management of financial firms did not comprehend the complex nature of the 'financial products they were dealing with'[84].

Mark W. Nichols, Jill M. Henderickson and Kevin Griffith in their paper[85], have suggested that notwithstanding the already well–documented reasons for the global financial crisis, the main reason(s) why the global financial crisis

[81] R Lastra and G Woods, 'The Crises of 2007-09: Nature, Causes and Reactions' (2010) Journal of International Economic Law Volume 13(3), 531.
[82] Arner (n74).
[83] The Larosiere Report (n75) 8.
[84] The Larosiere Report (n75) 10.
[85] M W Nichols, J M Henderickson and K Griffith, 'Was the Financial Crisis the Result of Ineffective Policy and Too much Regulation? An Empirical Investigation' (2011) Journal of Banking Regulation Volume 12(3), 236.

occurred should be attributed to two causes, i.e. the crisis was either caused by 'too much regulation' or 'too little regulation'. The authors argue that the unprecedented growth in securitisation was due to 'too little regulation' which resulted in the failure to rein-in the process of securitisation.

Tony Ciro and Michael Longo have suggested[86] that in the immediate aftermath of the global financial crisis, the efforts of governments towards the adoption of a series of reforms in their respective jurisdictions which focused on 'correcting regulatory and supervisory failure'[87] was credible evidence in support of the 'argument that inadequate or "light-touch" regulation'[88] played a major role in the cause of the global financial crisis.

Another issue attributed by Nichols, Hendrickson and Griffith to the cause of the crisis is deregulation. The authors suggest that deregulation within the banking industry allowed an overlap between commercial banking and investment banking through the activities of financial conglomerate institutions[89]. They suggest further that the 'under-regulation of credit rating agencies and mortgage lending'[90] were also contributory factors to the crisis.

Linda Beale suggests[91] that the concept of inter-connectedness had magnified contagion through systemic risk, and that as a result of 'lax regulation'[92], banks had been allowed to form huge conglomerate structures through the provision of different types of financial services. Beale suggests further that single banking conglomerate structures where a single banking entity combines 'commercial banking, investment banking, insurance and proprietary trading'[93] when conducting banking activity, have been allowed to occur, resulting in complex financial structures which have been deemed 'too big to fail' or 'too inter-connected' to fail[94].

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[86] T Ciro and M Longo, 'The Global Financial Crisis: Causes and Implications for future regulation' (2010) Journal of International Banking Law and Regulation Volume 25(1), 1.
[87] ibid 2.
[88] ibid.
[89] Nichols, Henderickson and Griffith (n85) 237.
[90] ibid.
[91] Beale, (n41) 11.
[92] ibid 8.
[93] Beale (n41) 8-9.
[94] Beale (n41) 9.

It is submitted that the lack of an appropriate banking insolvency resolution framework which addresses the failure of such complex financial structures was also a contributory factor to the cause of the global financial crisis. Although the creation of such complex single conglomerate banking structures through the Universal Banking Model allows such banks to be more competitive and profitable through the provision of a 'one-stop-shop', it is further suggested that an appropriate banking insolvency resolution framework is required to enable any ailing part of a conglomerate banking structure to be dissolved without any reverberations on the remaining healthy parts and also on the general public. It is therefore submitted that until such framework is developed, the conglomerate structure will permanently be vulnerable to systemic contagion of the risk emanating from the ailing part of the conglomerate to the healthy parts thus threatening financial stability.

On the issue of whether too much regulation contributed to the global financial crisis as suggested by Nichols, Henderickson and Griffith, it is submitted that over-regulation of financial institutions such as banks resulted in the growth of hedge funds and other financial institutions that effectively fell outside the circle of influence that banking regulations had. This area outside the influence of banking regulations is commonly referred to as shadow banking which although having existed previously, steadily grew in size over the years and is often now listed as one of the causes of the global financial crisis.

With regards to the role played by credit rating agencies towards the onset of the crisis, it may be recalled that credit rating agencies (CRAs) became prominent following the introduction of Basel 2. They became responsible for allocating credit ratings to counter-parties and the higher the credit rating a financial institution possessed, the more favourable their risk profile became. This ultimately impacted on the amount of capital banks had to set aside by way of risk assessment for any financial transaction they entered into.

The Larosiere Report suggests that flaws[95] existed within the methodologies employed/used by CRAs in calculating the actual 'credit default risk' resulting in huge underestimation of their value. This, according to the Report resulted

[95] Due to the unavailability of 'sufficient historical data'. See the Larosiere Report, (n75).

in the CRAs allocating a higher credit rating to securitised financial products than were actually due. The flaws mentioned in the Larosiere Report related to 'the lack of sufficient historical data relating to the US sub-prime market, the underestimation of correlations in the defaults that would occur during a downturn'[96] and a 'severe weakening of underwriting standards'[97] by 'certain originators'[98].

Another issue discussed in the Report in relation to credit rating agencies was that the 'issuer-pays model'[99] approach adopted by Credit Rating agencies raised concerns of 'conflict of interest'[100]. This led to discussions between the originator of the securitised product (i.e. bank/financial institution) and the Credit Rating Agencies on the implications of allocating a particular rating to a structured product. As a result of this, originators of securitised products, 'shopped around'[101] in order to secure a very good rating.

It is submitted that discussions between originators and CRAs, meant that the latter could no longer be trusted to provide an accurate assessment of the risk profile of a bank or its assets. Until such practices came to light, it is further submitted that bank regulators, supervisors and investors in these credit derivatives were reliant on and had great confidence in the risk assessments undertaken by these credit rating agencies[102]. The main reason why investors had such confidence in the assessments provided by the CRAs, was due to the fact that the securitisation process(es) had become very complex and it was almost impossible for investors to accurately assess[103] the magnitude of risk that banks were exposed to through securitisation. The risk models could only be properly evaluated by the credit agencies using highly complex

[96] ibid, 9.
[97] ibid.
[98] ibid.
[99] The Larosiere Report, (n75) 9.
[100] ibid.
[101] ibid.
[102] House of Lords: Select Committee on Economic Affairs – 2nd Report of Session 2008-09. Banking Supervision and Regulation Vol 1: Report published 2 June 2009 p13 para 18.
[103] ibid.

mathematical formulae, or in some cases by the banks themselves which had to rely on their own internal mathematical risk model[104].

Following the global financial crisis, it became evident that the mathematical formulae used by these credit agencies were seriously flawed and could not accurately capture the risks that banks had been exposed to through securitisation. This flaw was compounded by the fact that because the credit derivative instruments were new, there were no sufficient and reliable historical data to help in the assessment of current and future risks[105].

In the Turner Review, it was suggested that the effectiveness of the ratings process took a nose-dive for three reasons. Firstly, the ratings were applied to structured instruments with, 'limited historical data'; of 'highly complex' nature, and finally there had been an erroneous belief and confidence in the accuracy of the mathematical models used by the CRAs to identify risk[106].

Inspite of the role played by the CRAs, the failure of corporate governance was identified in the Larosiere Report as also one of the causes of the global financial crisis. The Report suggests that 'failures in risk assessment and risk management' were exacerbated by failures in corporate governance. The Report suggests further that a failure in corporate governance arose from the very fact that majority of board members and 'senior management' of financial institutions did not comprehend the complex nature of the securitised financial product, hence misunderstood the magnitude of the risks their financial institutions were being exposed to.

Another aspect of corporate governance failure identified by the Report was the culture of excessive remuneration within the financial industry together with other huge incentives that led to 'excessive risk-taking'[107]. It is submitted that the rewarding of 'excessive risk-taking' may have led to certain checks and balances associated with risk management being ignored or circumvented.

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[104] ibid.
[105] The Larosiere Report (n75) 9.
[106] Financial Services Authority (FSA), 'The Turner Review: A Regulatory Response to the Global Banking Crisis' 2009 p77.
[107] The Larosiere Report (n75) 10.

Another cause attributed to the global financial crisis and which is central to this thesis, is the issue of inadequate capital.

B. Mahapatra[108] suggests that a number of banks at the height of the financial crisis entered the crisis with inadequate capital. He explains further by stating that banks had inadequate capital at the time of the crisis as a result of capital arbitrage[109].

Rosa M. Lastra and Geoffrey Wood[110], also suggest that the global financial crisis was caused by a capital shortage. In an attempt to distinguish the global financial crisis from the 'Great Depression', they conclude that 'the first crisis of the 21st century was a capital crisis, not a liquidity crisis'[111].

Contrary to the views of Lastra and Wood, George Alexander Walker[112] points out that the global banking crisis was not directly caused by 'low capital levels'[113]. Walker clarifies his argument by suggesting that capital became an 'aggravating factor'[114] of the crisis after shortage of liquidity in the inter-bank markets had already occurred.

It is therefore submitted that while there was undoubtedly a capital shortage crisis due to lack of quality capital held by banks prior to and at the height of the financial crisis, the global financial crisis was caused by a combination of capital and liquidity shortage.

While aligning myself to the views of George Alexander Walker, evidence for my submission comes from no other jurisdiction other than the U.K, whose economy like that of most advanced countries was badly affected by the financial crisis. In the UK, Northern Rock bank, one of the most well

108 B Mahapatra, (n60) 772.
109 Capital arbitrage involved banks, moving assets meant for the banking book into the trading book, in order to qualify for the lesser requirement of capital that assets in/on the trading book had to satisfy in comparison to the banking book.
110 Lastra and Wood, (n81).
111 ibid, 535.
112 G A Walker, 'Basel 3 Market and Regulatory Compromise', (2011) Journal of Banking Regulation Volume 12(2), 95.
113 ibid, 96.
114 ibid.

capitalised UK banks at the time of the crisis, had to endure a bank run[115]. It was later discovered that a substantial amount of the capital Northern Rock had, was in fact tied up in the derivatives markets particularly the mortgage-backed securities market[116]. Because the market for such securities had dwindled, assets held through such securities had become virtually worthless and could not be off-loaded in exchange for liquidity. Thus there was a complete erosion of bank's capital compounded by the difficulties banks faced in trying to acquire short-term financing.

The unavailability of funds for short-term financing which worsened the crisis and contributed to the lack of liquidity (particularly within the inter-bank market) was because most banks, had begun to hold onto the little funds they had, in the firm belief that other banks would not be in a position to fulfil their repayment obligations to one another.

1.4 Conclusion

Following an analysis of the different accounts of the global financial crisis provided in this chapter, it is submitted that the lack of quality capital and/or the lack of liquidity was arguably the fundamental cause of the crisis.

Notwithstanding this view, it is further submitted that the other factors mentioned in this chapter also collectively played a significant role in the cause of the crisis. The global reach of the crisis through financial globalisation meant that Africa was not spared. Even though the banking industries of Ghana and Kenya were not as badly affected as their counterparts in Europe and America they were still impacted by the crisis. In the next chapter, the author discusses the transmission mechanisms by which the crisis reached Africa particularly Ghana and Kenya and the policy responses undertaken.

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[115] A Milne and G Wood, 'Shattered on the Rock? British Financial Stability from 1866 to 2007', (2009) Journal of Banking Regulation Volume 10(2), 89.

[116] ibid 91. Prior to the global financial crisis, Northern Rock had a business model which relied less on deposit finance. Securitisation provided Northern Rock with about 40% of its funding in 2006.

CHAPTER 2

THE IMPACT OF THE GLOBAL FINANCIAL CRISIS ON GHANA AND KENYA AND THEIR POLICY RESPONSES

2.1 Introduction

This chapter examines the impact of the crisis on Ghana and Kenya and what the authorities did by way of response. It also discusses the transmission mechanisms of the crisis from Europe to Africa particularly Ghana and Kenya, however more emphasis is given to the impact of the crisis on the banking sectors and stock markets of these 2 jurisdictions as well as that of Nigeria and South Africa by way of comparison.

2.2 Modes of transmission and impact of the global financial crisis

It is submitted that although the global financial crisis had a negative impact on growth in Africa at the onset of the crisis, economic growth in Africa had already begun to slow down in a downward decline[117]. This was evident during 2005 - 2008[118] when the growth rate slowed, dropping from an average peak of 6% to 2% in 2009[119].

Notwithstanding Africa's low level of integration with the global financial markets, African countries were nonetheless still affected by the crisis.[120] Fortunately, the small size of local or regional inter-bank markets ensured that inter-bank lending activities involved moderate amounts in comparison to the global inter-bank markets and also the trade in innovative products such as credit derivatives in the markets were either on a very small scale or virtually non-existent in Sub-Saharan Africa[121].

While these factors may have contributed to the relatively low impact of the crisis on African countries, the fact also remains that lending activities

[117] African Development Bank (AfDB) Group Paper, 'Containing the impact of the global crisis and paving the way to recovery in Africa' [2010] p1. A Paper presented at the Meeting of the Committee of Finance Ministers and Central Bank Governors, Capetown, South Africa.
[118] ibid. In the last quarter of 2008, the decline in rate became more pronounced.
[119] African Development Bank Group Paper (n117).
[120] The worst affected African countries in this thesis were Nigeria and South Africa, however the level of impact was not as severe as that experienced by some Advanced European Countries and America.
[121] Excluding South Africa which has a relatively vibrant derivatives market.

conducted by banks in low-income African countries was done in a fairly 'stable domestic saving markets'[122] and was often backed by substantial reserves held by Central banks on behalf of the banks participating in such lending activities which was a significant contributing factor.

Thus, this provided the African region with some level of protection from the immediate effects of the crisis.

Despite this degree of protection enjoyed by banking systems in Sub-Saharan Africa, Sophi Chauvin and Andre Geis, suggest[123] that the contagion effect of the global financial crisis was transmitted to the African region in two waves.

They point out that the first wave[124] of contagion left Sub-Saharan Africa relatively unaffected[125] however it was the second wave[126] of contagion which brought a significant level of damage to the real economy of African countries.

While there is absolutely no doubt that the African continent was affected by the global financial crisis, resulting in some African countries being worse off than others, it is submitted that an accurate assessment as to the exact time an African country entered the crisis, might be a herculean task to ascertain, even more so when the economy of that country concerned might have already suffered some form of economic crisis prior to, but not linked to the global financial crisis.

In the view of Iwa Salami[127], although African countries were somewhat spared the same level of damaging effects experienced by European industrialised countries, countries like South Africa and Nigeria suffered more

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[122] See Global Monitoring Report, 'The Global Financial Crisis and its impact on Developing Countries', 2009, 30.

[123] Sophi Chauvin and Andre Geis, 'Who has been affected, how and why? The spill-over of the Global Financial Crisis to Sub-Saharan Africa and ways to recovery', 2011 European Central Bank – Euro-system Occasional Paper Series No. 124, 2011.

[124] The first wave involved the initial transmission of the crisis from the U.S.A to the banking and financial sectors of other Advanced and Emerging economies.

[125] Excluding South Africa.

[126] The second wave was characterised by the transmission of the crisis from the banking and financial sectors of affected Advanced jurisdictions to their real economies and then subsequently negatively impacting the African Continent.

[127] I Salami, 'The Financial Crisis and a Regional Regulatory Perspective for Emerging Economies in Africa', (2010) Journal of International Banking Law and Regulation Volume 25(3), 128.

'adverse consequences to the market and economy', in comparison with Ghana and Kenya, whose effects were not as bad.

This is perhaps not so surprising according to a paper presented by the AfDB Group which suggests[128] that due to the external nature of the financial shock, i.e. contagion moving across borders, African countries that were most vulnerable and affected the most by the crisis were those countries which relied more on global trade and capital flows for economic growth. Thus, South African and Nigerian economies were significant victims in that sense. According to Dirk Willem te Velde[129], there were four main channels[130] of transmission of the global financial crisis to the African continent.

The findings[131] by te Velde concluded that although the countries that participated in their research were affected differently by the crisis, due to the various levels of exposure to the transmission channels of the crisis, and coupled with the fact that almost all countries surveyed entered the crisis at different stages, there seemed to be a general pattern and agreement thereof that the transmission mechanisms of the effects of the crisis were identical for all the respondent countries i.e. through Private Investment or Financial flows: which included portfolio investment flows; Foreign Direct Investment (FDI); and International Bank Lending; Trade: through Commodity price shocks; Imports and Exchange rate developments etc; Remittances; and Aid[132].

They also noted that while a number of African countries were not affected on the same scale as the Advanced European countries and the USA, there were still a few African countries that suffered considerably[133]. This, they

[128] African Development Bank Group **(**n117).

[129] D W te Velde, 'The Global Financial Crisis and Developing Countries: Synthesis of the findings of 10 Country Case Studies', 2009 Overseas Development Institute (ODI) Working Paper 306, 1.

[130] The four main transmission channels identified were trade, private finance, aid and remittances.

[131] Based on the impact of the global financial crisis on 10 African countries.

[132] Aid, Remittances and Trade all constitute the channels via which the impact of the global financial crisis was felt in the 'Real Sector' which the Author as mentioned earlier, believes is outside the remits of this thesis.

[133] D W te Velde (n129) 8. In Nigeria for example, the oil prices fell from an average value of $100 per barrel in 2008 to between $40 and $45 per barrel in the first four months of 2009. Ghana was also affected by a significant decline in the prices of gold and cocoa.

attributed to the degree to which the affected African countries were linked by export trade to the affected Advanced countries[134].

For a more reflective comparison to be made on the effects of the global financial crisis on large commercial banks in Ghana and Kenya, the author intends to focus more on the impact of the crisis on the financial markets of these two jurisdictions through the stock markets and banking sectors, The author has also highlighted the impact of the global financial crisis on the GDIs, FDIs and Non-Performing Loans (NPLs) of some of the jurisdictions discussed in this thesis[135]. Attention will also be drawn to the impact of the crisis on Nigeria and South Africa[136] thereby providing an insight into the varying levels of impact experienced by the worst-hit Sub-Saharan African countries by way of comparison.

2.2.1 Ghana

Ghana has in the past undertaken a number of financial sector reforms. In 1988, the first wave of financial sector reforms begun under the Financial Sector Adjustment Programme (FINSAP)[137]. This was followed in 2003, by the Financial Sector Strategic Plan (FINSSP)[138] which the then government approved to mark the next stage of financial development in the country i.e. from 2004 to 2008[139].

In 2008, a review of FINSSP was undertaken to provide the basis for continuing the process of financial sector reform in the country. In spite of these financial reforms, the re-denomination[140] of the cedi currency on 1 July 2007 and the increase in the minimum capital from 20 million cedis to 60

[134] D W te Velde (n129) 19.
[135] See Appendix 2 of this thesis.
[136] See Chapters 2.2.3 and 2.2.4 respectively of this thesis.
[137] C G Ackah, E Bortei-Dorku Aryeetey and E Aryeetey, Global Financial Crisis Discussion Series Paper 5: Ghana 2009, 26 Overseas Development Institute (ODI).
[138] IMF Country Report No 11/131, Ghana: Financial System Stability Assessment Update 2011, 5.
[139] ibid. The recommendations of the 2003 FSAP update were adopted under the FINSSP during this period.
[140] Where 10,000 cedis was set to 1 Ghana cedi and 1,000 cedis equivalent to 1 Ghana pesewas.

million cedis[141] (about $40 million) by the Bank of Ghana were arguably the highlights of the financial sector reforms that had begun as far back as 1988.

These reforms combined effectively to improve the macroeconomic stability of the economy and contributed generally to the steady pre-crisis growth of Ghana's economy. Thus the past 20 years have witnessed a real GDP growth at a steady rate of around 5% a year[142] – see table 2.1 in Appendix 2.

While these GDP growth rates may be described as modest in comparison to say that of China during the same period, it is submitted that Ghana's resilience during the global financial crisis might not have been possible had the ongoing financial sector reforms not been embarked upon.

Ghana's resilience is all the more remarkable considering the fuel crisis (2007-2008)[143] that preceded the global financial crisis. Admittedly, the impact of the fuel crisis might have been minimised by the increase in prices of gold[144] and cocoa[145] which are two of Ghana's main sources of export revenue. Notwithstanding this, the impact of the global financial crisis on Ghana came via portfolio investment flows, foreign direct investment and remittances[146].

Impact on Banking Sector

In Ghana's banking sector, the impact of the crisis was described as 'rather modest'[147].

The Bank of Ghana, reported a fall in the growth of total assets in the banking industry from 50.4% in December 2007 to 37.2% over the same period in

[141] Although foreign-owned banks were under an obligation to comply with this requirement by the end of 2009, local domestic banks had up to the end of 2012 to comply.
[142] C G Ackah, E Bortei-Dorku Aryeetey and E Aryeetey (n137).
[143] Where the price of a barrel of crude oil increased internationally thus forcing the government to increase the prices of petrol and other crude oil products. Unfortunately, Ghana had not yet begun the commercial drilling of oil in the country at the time of the fuel crisis.
[144] Gold prices also increased from US$ 650 per ounce in the first quarter of 2007 to US$ 680 per ounce in the third quarter of 2007 – See the Budget Speech of Ghana – 2008 Financial Year.
[145] Cocoa prices on the London international Futures and Funds Exchange increased from £886 in January 2007 to £1,121 in July 2007 – See the Budget Speech of Ghana – 2008 Financial Year.
[146] Remittances to private individuals totalled US$ 728.3 million in 2009 representing a decrease over the same period in 2008 which was US$ 822.8 million.
[147] C G Ackah, E Bortei-Dorku Aryeetey and E Aryeetey (n137) 7.

2008[148], however this was unsurprisingly accompanied by deterioration[149] in loan portfolios.

Although Ghana has a history of high non-performing loans (NPLs), the deterioration in loan portfolios before and during the financial crisis were attributed to a surge in exposure to vulnerabilities in the Ghanaian economy as a direct result of the speed in reforms experienced by the banking sector[150]. This state of affairs was not helped by the Bank of Ghana altering its credit lending position to businesses and individuals[151] in the last quarter of 2008.

Notwithstanding this, it is submitted that the deterioration in loan portfolios might also have arisen as a result of an increase in non-performing loans[152]. See table 2.2 in Appendix 2.

A review of other key banking performance indicators in Ghana indicated that there was some effect on the banking system. Capital adequacy ratios decreased from 14.8% in December 2007 to 13.8% in December 2008[153]. See table 2.3 in Appendix 2.

Although the capital adequacy ratio did not decrease below the minimum capital requirement of 10% in Ghana, it is submitted that there might have been two reasons for this decrease. Firstly, the possibility that the Bank of Ghana lowered the capital adequacy for banks in order to create fiscal space[154] required for the banks in the country to undertake immediate monetary response to the crisis. The other possibility could have been that the lowering of the capital adequacy was to enable banks continue to lend money to institutions and individual borrowers to increase the flow of liquidity.

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[148] ibid.

[149] ibid. In 2008, the percentage of loans and advances recorded was 42.7%, representing a decline in the previous year's (2007) figure of 67.9%.

[150] Ghana: 'Article IV Consultation and Request for a Three-Year Arrangement Under the Poverty Reduction and Growth Facility' [2009] - Staff Report.

[151] The Bank of Ghana and other mortgage lending institutions reduced the availability of funds for house purchasing purposes.

[152] Ghana Article IV Consultation Staff Report (n150). In March 2009, the ratio of non-performing loans rose to a year high of 9.6%. This had been preceded by deterioration in the ratio of the provisions for loan loss to that for gross loans and also the ratio of NPLs to capital ratio net of provisions rose from 7.6% in September 2008 to 7.7% in December 2008.

[153] C G Ackah, E Bortei-Dorku Aryeetey and E Aryeetey (n137) 7.

[154] The reason for this assumption is that a lower capital adequacy ratio does suggest that banks would not have to set aside a higher figure towards potential risks, but rather any excess banks held above and beyond the minimum ratio may be made to apply.

It is further submitted that the latter possibility may seem a bit remote, due to the fact that there was a decrease in lending to businesses and individuals by the Bank of Ghana during the last quarter of 2008. The amount of loans and advances recorded by the Bank of Ghana fell from 67.9% in 2007 to 42.7% in 2008[155].

Impact on Stock Market

Although Stock Markets in Africa are not as developed and sophisticated as those in Europe, Asia and the Americas, they were affected nonetheless[156] by the global financial crisis and the Ghana Stock Exchange (GSE) was no exception. The Ghana Stock Exchange Market started to experience a number of setbacks as the equity markets faltered in the second half of 2008[157].

The GSE All Share Index, its prior outstanding performance of which had been recognised worldwide in 2008, fell by more than 11%[158] since the start of 2009. This performance was in sharp contrast to that of 2007-2008 where as a result of increased activity, the share index closed in the third quarter of 2008 on a return of 65.02 (i.e. 33.20% in dollar terms) for the same period. The general performance of the Ghana Stock Exchange in comparison to other selected African Stock Markets is represented in table 2.4 of Appendix 2.

2.2.2 Kenya

Kenya, in comparison with other east African countries is a country endowed with an array of financial establishments and also has a fairly developed stock

[155] C G Ackah, E Bortei-Doku Aryeetey and E Aryeetey (n137) 7.
[156] I Salami, 'The Financial Crisis and a Regional Regulatory Perspective for Emerging Economies in Africa, (2010) Journal of International Banking Law and Regulation Volume 25(3),128.
[157] C G Ackah, E Bortei-Dorku Aryeetey and E Aryeetey (n137) 8.
[158] The benchmark performance of the GSE, closed at 9247.17 points, representing a fall of -11.35%. There was also depreciation in market capitalisation from a high figure of 91,857.28 million Ghana Cedis in 2005 to 18,073.76 million Ghana Cedis.

market, hence the banking sector in Kenya becoming reknowned for its sheer size and diversity[159].

Inspite of these wonderful attributes, Kenya's banking industry has experienced a number of financial crises[160] as a result of under-capitalisation, increased non-performing loans and a lack of good corporate governance mechanisms[161]. This led to the country's then government publishing an Economic Recovery Strategy (ERS) paper in 2003 in which they initiated and strategically embarked on the implementation of an economic recovery plan.

In this ERS paper, the government acknowledged that the banking sector was facing serious challenges, particularly in relation to the high degree of non-performing loans attributable to certain top banks[162]. Also, the lack of adequate competition within the banking industry coupled with the hike in interest rates which resulted in an increase in the cost of credit, among other factors[163], threatened to destabilise the efficiency required in the operation of Kenya's banking system.

These shortcomings also prompted the Kenyan government to make a number of amendments to their Banking Act (Cap 488) which included the strengthening of bank licensing procedures, corporate governance, observation of capital adequacy requirements and risk management processes[164].

Inspite of these attempts by the Kenyan authorities to ensure stability within the banking system, it was the subsequent publication by the government in 2007 of *'Kenya's Vision 2030'*[165] – a long term economic plan that arguably showed the clearest signal yet of the commitment to financial and economic reform. This is because, at the heart of these reforms, were plans to improve

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[159] Thorsten Beck, 'Banking Sector Stability, Efficiency and Outreach in Kenya' – Policy Research Working Paper 5442 – [2010], The World Bank Development Research Group (Finance and Private Sector Development Team).
[160] In the 1980s and 1990s.
[161] Thorsten Beck (n159) 3.
[162] ibid.
[163] Such as lack of a credit or finance institution that provides long-term finance. The lack of legal backing from legal agencies to enforce contracts coupled with ineffective dispute resolution procedures.
[164] Thorsten Beck (n159) 6.
[165] ibid.

stability within the Banking and Finance industry and the delivery of financial products and services thereof, and most importantly making these financial products and services accessible and within easy reach of the people of Kenya.

When the effects of the global financial crisis hit Kenya, the people of Kenya were already experiencing some sort of crisis of their own. The economic and political upheaval[166] preceding the global financial crisis threatened to derail the financial and economic gains of the past decade or so. Even though post-election violence failed to impact negatively on Kenya's banking industry, which had improved remarkably within the last decade[167], the banking industry unfortunately could not avoid the impact of the global financial crisis.

A survey[168] conducted by the Central Bank of Kenya (CBK) in October 2008 in an attempt to establish the level of exposure of the Kenyan banking system to the crisis had concluded that the impact was likely to be minimal[169] as the banking institutions that participated in the survey indicated that they were unlikely to be impacted by the crisis since the level of involvement in the global financial markets was minimal.

Although this turned out not to be the case, the modes of transmission of the crisis were generally of the kind predicted by te Velde. After year-on-year increases in real GDP since 2002, Kenya's real GDP in 2008 fell from the previous year's high of 6.9% to 1.7%. See table 2.5 in Appendix 2.

Also, the flow of remittances from Kenyans in the diaspora which had increased from approximately $476.7 million in 2007 to $527.1 million in 2008 (i.e. an increase of about 6.6%), fell slightly from $527.1 million to $504.6 million in 2009[170].

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[166] There is some level of uncertainty if this had any form of negative impact on the country.

[167] The banking industry grew from 85% of its GDP in 2001 to around 115% of GDP in 2008 (IMF 2009b) representing an increment of an estimated 20 percentage points. – See Francis M Mwenga, 'Global Financial Crisis Discussion Series Paper 17 Kenya – Phase 2' 2010, 5 Overseas Development Institute (ODI).

[168] F M Mwenga, 'Global Financial Crisis Discussion Series Paper 17: Kenya - Phase 2' 2010, 6 Overseas Development Institute (ODI).

[169] ibid.

[170] ibid.

Although foreign direct investment (FDI) registered a decrease in 2008, this had been preceded by an increase in the previous year i.e. 2007 as a result of an increase in the net FDI flows into the country from 2000 – 2007. See table 2.6 in Appendix 2.

Impact on Banking Sector

The impact of the crisis on the Kenyan Banking Sector was characterised by a fall in bank profits[171] as banks assets depreciated in value. This was attributed to a decrease in the size of loans portfolio as banks refrained from giving credits to the private sector. Another reason for the decrease in bank profits was a low exchange rate for the Kenyan Shilling which resulted in a decrease in the foreign exchange accrued by the banks.

Foreign banks which represent a greater share[172] of the banking industry in Kenya in terms of market capitalisation came under pressure to withdraw or divert liquid funds to other subsidiaries in the African region and elsewhere to prop them up. Although most commercial banks in Kenya had already begun to restrict availability of credit to the private sector and to other borrowers, the inability[173] of existing borrowers to repay their banking loans at the height of the crisis, resulted in a further worsening of the occurrence of non-performing loans[174]. See table 2.7 in Appendix 2.

The high capital adequacy ratios of Kenyan banks prior to and during the crisis must have played a significant role in containing these losses that had begun to materialise through non-performing loans. Unlike in the case of Ghana, where bank capital adequacy decreased slightly, the capital adequacy of Kenyan banks increased. This might have been due to the decision by Kenyan commercial banks to restrict the availability of credit to the private

[171] Bank profits decreased in the first half of 2009 reporting a mere increase of 2.7%.
[172] In 2007, the Central Bank of Kenya stated that out of 43 commercial banks in the country, 11 were foreign banks whose combined capital represented about 40% of the core capital for commercial banks.
[173] There is some degree of uncertainty as to whether this inability by the borrowers to repay was due to the global financial crisis or the high rates of interest charged by the commercial banks – See W Kangaru 'Kenya Banking Industry Profit in Major Slowdown' *Daily Nation* (Kenya, August 2008).
[174] In spite of a slight improvement in the ratio of NPLs to assets as shown in table 2.7, the Central bank of Kenya reported in their September 2009 Monthly Economic Review that the ratio of NPL to gross loans increased to 3.7% in August 2009, from a previous figure of 3.4% in August 2008.

sector and borrowers generally. This policy decision is in stark contrast to that undertaken by Banks in Ghana during the same period. See table 2.8 in Appendix 2.

Impact on Stock Market

Kenya's capital market[175] also became affected by the crisis. As the Nairobi Stock Exchange 20 – Share Index plummeted, foreign investors sought to sell their investments in a bid to avoid huge equity losses[176]. See table 2.4 in Appendix 2.

In March 2009, the NSE market index fell close to its 7 year low figure of 1983 points having fallen by 2000 points[177]. Although this downward slide stopped as the economy recovered somewhat with improvements of about 17.5% between March – June 2009, there was a further slump from July to September 2009, with a loss in the share index value of about 8.8%[178].

Although the decline in share prices at the time was attributed to foreign investors seeking an exit from the markets, it has also been suggested that lack of investor confidence was to blame, as wide-spread 'panic-selling' took hold.

2.2.3 Nigeria

Earlier in this chapter, the intention was made clear to make a comparison between the nature of the impact of the crisis on 'least affected' and that of 'worse-affected' countries within Sub-Saharan Africa. The two Sub-Saharan African countries identified by the author as arguably the worst-affected and hence selected for this comparative analysis were Nigeria and South Africa.

Nigeria, Africa's most populated nation arguably felt the brunt of the global financial crisis more than other African countries, but perhaps not on the same scale as South Africa.

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[175] Kenya possesses the fifth largest bourse by way of market capitalisation in Africa after South Africa, Egypt, Nigeria and Morocco – See Francis M Mwenga, (n168).

[176] ibid. In 2008, the NSE 20 – Share Index fell by 35% and by the end of February 2009, the Share Index had fallen by 23.2% in the one month prior, 26.8% in the three months prior and by 46% over the entire previous year.

[177] ibid.

[178] ibid.

Following the Financial System Stability Assessment[179] conducted by the IMF in 2002, the Nigerian Government undertook a number of financial sector reforms aimed at strengthening financial stability in the country and improving the regulatory and supervisory structures within the Nigerian banking industry.

Chukwuma Charles Soludo (then Governor of the Central Bank of Nigeria) has suggested that had his programme of reforms not been introduced at the time, Nigeria would have probably been a lot worse off[180]. The reforms[181] centred on the importance and need for all banks in Nigeria to improve their operational strength and to recapitalise, thereby increasing individual capital requirements from 2 billion naira to 25 billion naira.

Thus, during the period between July 2004 and December 2005, a sum total of 553.44 billion naira (N) approximately (USD$ 4.29 billion) was raised[182] by 32 banks through the capital markets and in 2006, six banks joined forces to raise N146.98 billion (USD$1.16 billion) in compliance with the new minimum capital requirement introduced by Soludo.

Nigeria had prior to the global financial crisis enjoyed a relative good economic growth, however, the decline in the price of crude oil begun to have a negative impact on the Nigerian economy. With oil revenue accounting for about 80% of Nigeria's foreign export earnings this was undoubtedly going to have an impact of some sort on the economy[183]. See table 2.9 in Appendix 2.

The decline in crude oil prices from USD$147 per barrel in July 2008 to about USD$50 in 2009 – representing a decrease of about 51.2%, resulted also in a

[179] This report highlighted a number of failings of the Nigerian financial system e.g. increase in non-performing loans, improper corporate governance mechanisms resulting in bank loans to 'connected persons'.
[180] Charles Soludo, 'The Unfinished Revolution in the Banking System', a paper presented at the University of Abeokuta Nigeria on 18 March 2008.
[181] Other reforms included the 'Oil-price-based fiscal rule introduced in 2004 which ensured that oil revenues in excess of the budget price and production are transferred into an 'excess crude account' at the central bank in the names of the various governments and would only be drawn upon if and when actual oil receipts fall short of the budgeted amounts. See IMF Country Report No: 09/315, 3 2009.
[182] I Salami (n156) 129. Some under-capitalised banks had to either merge with other banks in order to meet this new capital requirement and where this was impossible to arrange were forced to close down.
[183] In 2008, non-oil growth was 9.5% whereas growth in the oil sector was 4.5%. In spite of this, the overall growth rate did not alter much.

decline in the government's capital expenditure[184]. Nigeria's foreign reserves also declined as the country had to rely on its reserves to undertake various projects and maintain economic stability.

Unemployment figures also rose globally; particularly in Europe and this generally affected the volume of remittances by migrants living in Europe to their families and Nigeria was no exception in terms of this area of impact. Table 2.10 in Appendix 2 suggests that after a pre-crisis continuous increase in volume of remittances, which peaked in 2008, a decrease in the volume of remittances followed.

Impact on Banking Sector

Prior to the onset of the crisis in Nigeria, the Central Bank of Nigeria (CBN)[185] had announced that bank lending had experienced a growth of about 60.9% an indication of the general health and well-being of Nigerian banks. By 31 December 2008, the Nigerian inter-bank offer rate (NIBOR) had recorded increases in all areas of the lending market. Although Nigeria isn't an established player in the global financial markets, its position as a significant exporter of oil puts the country in a vulnerable position when the global oil prices fluctuate and fall[186].

Regardless of the pre-crisis banking reforms and the positive gains to the economy thereof, the Nigerian banking system was affected by the crisis nonetheless. The prior increase in bank lending as reported by the Central Bank of Nigeria all but soon disappeared and local inter-bank lending activity decreased as a result of less liquidity in the Nigerian Banking Market; a hike in the Nigerian inter-banking market and also due to a hike in the NIBOR from 13.8% to 14.6%[187].

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[184] Another contributory factor to the decline, according to the Nigerian National Petroleum Company (NNPC) was the loss of about N 16.9 billion from acts of vandalism on Nigerian petroleum pipelines by saboteurs.

[185] The Central Bank of Nigeria was created by the Central Bank of Nigeria Act (1958) as amended by the Acts of 1991, 1993, 1997, 1998, 1999 and 2007. The bank became operational on July 1, 1959.

[186] World Economic and Financial Surveys – 'Regional Economic Outlook Sub-Saharan Africa – Sustaining Growth amid Global Uncertainty' Chapter 2, 31.

[187] Olu Ajakaiye and Tayo Fakiyesi 'Global Financial Crisis Discussion Series Paper 8: Nigeria' 2009, Overseas Development Institute (ODI), May 2009 10.

There is a degree of uncertainty as to whether a hike in the NIBOR was a good decision, considering the circumstances at the time. It may well be that a reason for this might have been due to a possible rise in the occurrence of non-performing loans as loan default rates increased See table 2.11 in Appendix 2. As liquidity dried up, the rate of non-performing loans increased and banks became less willing to lend money. This impacted negatively on the incidence of non-performing loans, followed by deterioration in bank asset quality resulting in a general decrease in banks' financial soundness indicators figures such as Return on Assets (ROA), Return on Equity (ROE) and risk-weighted Capital Adequacy Ratio (CAR). See table 2.12 in Appendix 2.

Impact on Stock Market

As the crisis continued to take hold in Nigeria, foreign portfolio investors begun to withdraw[188] their investments, either completely or channelling funds into other areas of investment opportunities that were unlikely to suffer heavily from the effects of the crisis. The All Share price index of the Nigerian Stock Exchange (NISE) fell dramatically to 22,349 points in January 2009. This decline in share price index[189] was linked to the fall in market capitalisation from about N12,640 trillion[190] to a market capitalisation of N4,998 trillion. Thus the stock market capitalisation depreciated by 46% over 2008 and the share price index recorded a total share loss of -67% between March 2008 and March 2009. See table 2.13 in Appendix 2.

The Nigerian Bond market was also affected by the crisis. During the period of September 2008 – March 2009 plans for a $500 million Eurobond issue had to be postponed[191]. This state of affairs in the bond market at the height of the crisis is in sharp contrast to the period before the crisis, where in January of

[188] It was reported that foreign investors withdrew approximately USD$15 billion from the Nigerian capital markets at the height of the crisis.
[189] In March 2008, the NISE share price index was 66,371 and market capitalisation was N12.640 trillion having increased in the previous years from 12,137 in 2002 to 66,371 in March 2008.
[190] By March 2009, market capitalisation had fallen further to N4,900 trillion. See table 2.13 in Appendix 2.
[191] IMF Country Report No. 09/315 'Nigeria: 2009 Article IV Consultation-Staff Report; Staff Supplement; Public Information Notice on the Executive Board Discussion; Statement by the IMF Representative; and Statement by the Executive Director for Nigeria', p7.

2007, the Guaranty Trust Bank Plc (GTB, a Nigerian commercial bank) raised $350 million from the issue of a 5-year Eurobond, the demand for which was extremely high[192]. This same bank in July 2007 went on to become the first Nigerian bank to list global depositary receipts (GDRs) on the London Stock Exchange (LSE) following a highly successful global offering that realised $750 million.

2.2.4 South Africa[193]

South Africa, arguably one of Africa's most industrialised countries has emerged[194] from its colourful historic past to become a major economic player in the continent as well as a global partner[195] on a host of international issues.

As one of Africa's leading importers[196] of commodities particularly from Asia, South Africa's economy prior to the global financial crisis enjoyed large increases in inflow of foreign capital resulting in steady economic growth. However, in the five years[197] preceding the crisis, growth rates had begun to fall. See table 2.14 in Appendix 2. This decline in the growth of the economy was dealt a further blow when demand for export commodities fell.

Impact on Banking Sector

It has been suggested that the South African banking and financial markets industry continued to function effectively during the crisis and were able to withstand the impact of the global financial crisis, due to the fact that the banking and finance institutions in South Africa were not highly exposed[198] to sub-prime mortgage related products. This level of protection accorded to the

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[192] I Salami, 'The Effect of the Financial Crisis on the Nigerian Capital Market: A Proper Regulatory Response', (2009) Journal of International Banking Law and Regulation Volume 24(12), 612.

[193] The South African Reserve Bank, 'The International Banking Crisis and Domestic Financial Intermediation in Emerging Market Economies: Issues for South Africa' 2010, 365 (BIS Paper No 54).

[194] Since 1990, when former South African President F.W. de Klerk announced the end of apartheid and set in motion a programme towards the repeal of apartheid laws.

[195] South Africa was invited to join the G20 in 2010.

[196] See Mohammed Nureldin Hussain, Kupukile Mlambo and Temitope Oshikoya, 'Global Financial Crisis: An African Perspective' AfDB (Blackwell Publishers 1999).

[197] Margaret Chitiga, 'The Impact of the global financial and economic crisis on South Africa' [2010].

[198] Since 'vehicles' used in the trade of asset-backed commercial paper are prevented from investing beyond the shores of South Africa – See IMF Country Report No. 08/349*: '*South Africa Financial System Stability Assessment', including Report on the Observance of Standards and Codes on the following topic: Securities Regulation October 2008.

banking institutions in South Africa irrespective of their dealings in derivatives[199], has been credited to the sound macroeconomic policies and risk awareness that have been incorporated into their banking and finance regulations[200].

Regardless of the level of protection provided by the existing banking regulations in South Africa, the Monetary Policy Committee of the South African Reserve Bank (SARB) cut its policy rate by about 500 basis points. Bizarrely, the SARB stated that the changes in policy rate were neither effected[201] to assist their banking sector nor was it a reaction to the global financial crisis.

Notwithstanding this, it became quite evident during the financial crisis that availability of liquidity had become a global issue, particularly for banks involved in the global inter-bank markets and although South African banks were generally not dependent on foreign funding, cross-border bank lending also fell[202]. While the decline in cross-border lending may have been due to other reasons[203] other than increase in cost of lending, there is the possibility that the decrease in the policy rate of 500 basis points followed by subsequent cuts up to 6.5% was on the contrary, designed to stimulate lending within the economy, especially amongst local banks in South Africa.

This view by the author seems to be consistent with the impression created by South African banks, that regardless of the impact the crisis had on the price and the maturity dates in cross-border lending, the ability of South African banks to obtain funds through lending was still possible. Thus the local inter-bank banking activities were not seriously affected and banks functioned

[199] Types of financial instruments used to transfer financial risk in a given asset without the transfer of that asset.
[200] The South African Reserve Bank BIS Paper No 54 (n193).
[201] The SARB, according to its exchange rate policy of non-intervention suggested that exchange levels should always be determined by market forces and not through policy intervention.
[202] This has been attributed to a combination of supply and demand factors, where the cost of lending had been increased by foreign lending banks, thus resulting in the decline in borrowing by South African banks from foreign banks.
[203] Such as where foreign banks in South Africa may have had to divert funds to branches or their parent banks in Europe and elsewhere to help shore-up their bank balances and improve their balance sheet figures.

normally albeit with a heightened sense of care and general preference for a shorter maturity time-frame.

Towards the end of 2009, there was a decline in the level of the South African Reserve Bank's gross reserves by US$500 million to US$ 33.8 billion, but this was attributed to a decline in the price of gold coupled with the appreciation in the exchange rate value of the US dollar. Also, by the end of February 2009, it was reported that the SARB had reduced the level of borrowed reserves to US$640 million having originally been at a high of US$ 3.5 billion in 2006. Unsurprisingly, the SARB suggested that this was an important strategic move, taken to reflect the good state of health of South Africa's foreign reserves.

Impact on Stock Market

Thus, even though there was a general decline in capital inflows, this value was significantly outweighed by the volume of capital outflow from the country[204]. This resulted in the poor performance of equity markets in South Africa, with the Stock Market (J.S.E.) recording a loss. Table 2.15 in Appendix 2 shows the losses of the South African Stock Market in comparison to other Emerging countries.

There was also a decrease in the volume of international bonds[205] issued by South Africa and although South Africa is not heavily dependent on borrowing internationally, this decline was quite significant as it probably indicated a shift in investor's needs and priorities and also a preference for assets of better quality hence their decision to look elsewhere.

Table 2.16 in Appendix 2[206], shows Financial Soundness Indicators for South Africa from 2002 – 2007 indicating that capital adequacy increased slightly from 12.3 in 2006 to 12.8 in 2007 just before the global financial crisis begun

[204] A total volume of US$ 5.7 billion worth of portfolio investment left South Africa in the last quarter of 2008, an increase on the US$ 1 billion that had taken flight in the previous third quarter of the same year**.** See Victor Murinde, *Bank Regulatory Reforms in Africa* (1st Edition, Palgrave Macmillan 2012).

[205] From a high figure of 9,814 in 2007 to 1,533 in 2008 – See IMF, 'Global Financial Stability' Report Database.

[206] Taken from IMF Country Report No. 08/349, 'Financial Stability Assessment Report (FSAP), South Africa', Appendix Table 4, 2008.

in 2007 and the return on equity figures decreased slightly from 18.3 in 2006 to 18.1 in 2007.

2.3 Africa's financial sector responses to the global financial crisis

The responses by African countries to the global financial crisis were varied[207] and occurred at different times within the crisis period[208]. This was because African countries were exposed at varying levels to the different modes of the crisis transmission depending on the level of exposure to the transmission mechanism and also due to the fact that affected countries entered and exited the crisis at different times.

While some affected African countries adopted stimulus packages[209] to prop up their economies and financial sectors, others, particularly low-income African countries had little or limited fiscal space to replicate some of these counter-cyclical measures.

2.3.1 *Ghana*

Although the global financial crisis affected both the 'real sector' and the 'banking and financial sector' of the Ghanaian economy, the author believes that the impact might have been felt more in the former sector.

This argument is put forward because quite a number of the policies[210] undertaken by the Ghana government were aimed at reducing the massive fiscal and current account deficits that had accrued and also to curb the ever-rising inflation and the decline in the value of the currency.

On the contrary however, it could be suggested that the then Ghana government would have implemented a monetary stimulus injection package had it not had limited reserves coupled with an unsound fiscal status[211].

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[207] Responses included banking and financial sector response and various forms of socio-economic responses including poverty alleviation, a discussion of which would be outside the remits of this thesis.

[208] Although the global financial crisis occurred between 2007-2009, the response by Governments and banks are still ongoing through policy implementation.

[209] A number of oil producing countries that had recorded surpluses in revenue prior to the crisis and had built up reserves were able to support their respective economies particularly during the early days of the crisis.

[210] The Monetary Policy Committee of the Bank of Ghana was compelled to adopt measures intended to rein-in inflation, with the hope of achieving single digit inflation.

[211] C G Ackah, E Bortei-Doku Aryeetey and E Aryeetey (n137) 23-25.

Perhaps this is the reason why some political commentators and critics believe that the sale[212] of a 70% stake in Ghana Telecom (GT) by the government was designed to inject much needed[213] financial stimulus into the Ghanaian economy.

The Ghana government's decision in January 2008 to postpone its plans to issue a US$300 million 7 year bond citing adverse global market conditions[214] is generally regarded as a direct 'response' to the crisis. Also, in July 2008, the Monetary Policy Committee increased the prime rate from 16% to 17% and then to 18.5% in February 2009, a move believed to have been undertaken to keep investors happy with increased returns on their investments.

2.3.2 *Kenya*

In the immediate aftermath of the global financial crisis, the Central Bank of Kenya (CBK) decided to put in place a number of monetary policies with the intention of stimulating the economy. One such policy, designed to cut the interest rates[215], resulted in the CBK lowering cash ratio from 6% to 5%[216] and the Central Bank rate fell from 9% to 8.25%[217]. By November 2009, the interest rates had lowered further to 7%[218].

Despite this initial interest rate reduction by the CBK, lending rates rose from 13.7% in September 2008 to 14.7% in September 2009. This unexpected increase[219] in bank lending rates was attributed by CBK to the continuing view by the Kenyan commercial banks of the prevalence of a high loan default rate.

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[212] The NPP Government sold a 70% stake in Ghana Telecom (GT) to Vodaphone International Holdings BV for about US$900 million.

[213] The impact of the financial crisis on trade and Ghana's export commodities had affected revenue accrued by the government. Thus increasing crude oil prices and reduced proceeds from cocoa were a contributory factor to declining revenue.

[214] http://in.reuters.com/article/asiaCompanyAndMarkets/idINLS40896920090128?sp=true – See also, C G Ackah, E Bortei-Doku Aryeetey and E Aryeetey, (n136).

[215] Y Mhango, 'Africa: Insight – Fiscal Stimulus Packages Delivered in the East African Budgets' Standard Bank, 2009.

[216] On 22 July, 2009, CBK reduced the cash ratio further from 5% to 4.5% thus making available to banks an amount of about KSh 5 billion to lend. See Francis Mwega (n168) 27.

[217] ibid.

[218] Y Mhango (n215).

[219] The increase in banks' lending rates to consumers in September 2009 was unexpected because the Kenyan inter-bank rate had fallen and the commercial banks had been expected to pass on this 'available liquidity' to the consumers.

This resulted in the private sector being unable to take up the 'available liquidity' that resulted from CBK's inter-bank interest rate reduction.

To further stimulate the economy, the Central Bank of Kenya issued a Kenyan Government infrastructure bond[220] at the beginning of 2009[221]. Another infrastructure bond was sold in December 2009, having accepted 18.4 billion shillings from investors[222]. Proceeds from the sale of these bonds were then used by the government for projects such as roads, water, energy etc.

2.3.3 *Nigeria*

When the effects of the crisis started to impact on the Nigerian economy, the country had to rely on surpluses that existed due to build up in reserves[223]. Being one of a number of oil producing African countries[224] with a build up of revenue, Nigeria was able to rely on its reserves to reduce the initial impact the crisis had on its economy.

Inspite of this, Nigeria's financial position became all the more precarious despite reforms instituted by Professor Soludo and it took the resilience of the financial sector to keep the economy on track towards recovery.

While the Central Bank of Nigeria undertook some banking reforms following the 2005 Nigerian banking crisis, the author finds it inappropriate to discuss this as these reforms were actually undertaken in a direct response to that crisis and not as a result of the global financial crisis.

Other macroeconomic policies embarked upon by the Central Bank of Nigeria, included a lowering of its monetary policy rate (MPR) from 10.25% to 9.75%; a lowering of cash reserve requirement for banks and a reduction in the liquidity ratio[225].

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[220] These were 12-year securities with a coupon of 12 percent.
[221] L Kasekende, 'Africa's countercyclical policy responses to the crisis', (2010) Journal of Globalisation and Development, Vol 1, 10.
[222] ibid 11. The Central Bank of Kenya accepted 18.4 billion shillings of bids, after having initially received 44.1 billion shillings (USD 589.6 million) in bids for the infrastructure bond.
[223] Kasekende (n221) 11.
[224] Other countries being Angola, Botswana and recently Ghana to name but a few.
[225] Ajakaiye and Fakiyesi (n187) 17.

2.3.4 *South Africa*

South Africa, being an emerging country possesses a better regulated banking system and a strong and effective capital market regulatory structure[226] in contrast to Nigeria, Ghana and Kenya.

According to Mminele[227]**,** South Africa's banking and financial system remained resilient during the crisis and 'unconventional measures or focus on financial stability issues were not necessary'. This view is in contrast to the general perception that the impact the crisis had on the South African economy required the right response.

Thus between December 2008 and October 2009, the South African Reserve Bank lowered its policy rate by 500 basis points to enhance the availability of liquidity. Also, between 2010 and 2012, the South African government adopted a countercyclical fiscal stimulus[228], with the release of R787 billion (equivalent to USD$100 billion) which it channelled into public investments in the public sector.

Thus, although the policy responses undertaken by Ghana, Kenya Nigeria and South African during the immediate aftermath of the global financial crisis were varied, the different accounts of responses provided herein do not by any means represent an exhaustive list of policy measures undertaken. Indeed, numerous other policies have been implemented by these countries which are reflective of the fact that even countries within the same region or continent were all impacted differently by the financial crisis. An account of these other policies however, would be outside the remits of this thesis.

2.4 Conclusion

Although commercial banks in Africa, particularly in the four jurisdictions discussed in this chapter were not as badly affected by the global financial crisis in comparison to their European and American counterparts, the steady increase in the establishment of Pan-African Banks across the African

[226] I Salami, 'The financial crisis and a regional regulatory perspective for emerging economies in Africa', (2010) Journal of International Banking law and Regulation Volume 25(3), 128.
[227] A D Mminele, 'Recent Economic developments in South Africa', 2009.
[228] L Kasekende, 'Africa's countercyclical policy responses to the crisis', (2010) Journal of Globalisation and Development, Volume 1, 1,7.

continent, as well as the increasing presence of the subsidiaries of global banks from countries such as China suggests that Africa might not be so lucky when another global crisis occurs due to the issue of financial interconnectedness.

Thus, as banks continue to expand beyond their shores, so does the risk of financial contagion increase, which ultimately raises issues of national and global financial stability in relation to bank regulation. This highlights the need for banks to not only consider financial stability within their own jurisdictions, but to also look at the bigger picture as no country today is completely immune from the banking and financial crises experienced by another country.

CHAPTER 3
INTERNATIONAL BANKING REGULATION AND FINANCIAL STABILITY

3.1 Introduction

In this chapter, an attempt is made to examine the role that banks play in society as well as within the banking industry. It is submitted that the role of banks has undergone an evolutionary process of change over the years which has resulted in an increase in the inherent risks that banks are exposed to through their daily banking activities.

This increase in accompanying banking risks has brought about a renewed focus in the way banks are regulated, particularly during a period where a lot of banking transactions today both in terms of monetary value and number of transactions are of a cross-border nature. It is submitted that although the primary aim of banking regulation is to ensure financial stability and the ultimate protection of depositors' funds the question of whether banking regulation achieves these objectives is a subjective one.

3.2 The Role of Banks

The role of banks has always been a very important one in any world economy. Banks world-wide, have over the years played a vital role in any 'payment mechanism system'. From a previously traditional role where they accepted deposits from depositors who entrusted them with their money, banks have also always provided a main source of finance for many borrowers[229].

Over the years, banks (particularly large banks) have in addition to retaining their traditional function as deposit-taking financial institutions, been engaging in other banking activities which at best could be described as 'profit-making' financial activities. While such activities[230] in themselves have never been

[229] Howard Davies, 'Why Regulate Banks', A Paper presented at the Henry Thornton Lecture on 4 November 1998, p30.

[230] Such as Fractional-Reserve Banking, a banking practise which permits banks to lend a significant amount of their deposits notwithstanding the fact that in doing so, they will only be retaining the barest minimum of deposits as reserve.

contrary to banking regulations, and in fact have been largely encouraged by the banking industry, it has become a widely known and acceptable reason that these 'other banking activities' tend to amplify or exacerbate the risks that already exist[231] or emanate from their more traditional role.

Inspite of systemic risk being an unacceptable risk element in the activities of banks, and indeed a growing one in the relationships that banks have with one another, both nationally and globally, this inherent form of risk has assumed great significance particularly where banks have seemingly tended to move from perhaps the more common form of profit-making activities through fractional-reserve banking to the sophistry of dealings in largely innovative banking products specially designed to yield even more profits for the banks.

It must be pointed out, that although systemic risk, is an ever-present risk element in any banking system, the inability of banks to control it through adequate prudential bank regulation, heightens the likelihood of local and cross-border contagion within the banking systems of any given jurisdiction, which ultimately becomes an unwelcome recipe for bank failure.

Rosa Lastra, underscored the important role that banks play in a given jurisdiction in an article[232] which is referred to by the author in an LLM dissertation where the author states that banks are special because:

> *'when they fail, there is the added "real possibility"[233] of a spread of systemic risk through contagion, which may result in healthy banks suddenly facing liquidity crisis and ultimately potential collapse due to their intricate bank-on-bank relationships and inter-dependency in the inter-bank market'[234].*

[231] Namely credit risk, liquidity risk, yield risk, market risk, and operational risk. See D. Llewelyn, 'The Economic Rationale for Financial Regulation' FSA Occasional Paper Series 1, April 1999 for a more detailed discussion.
[232] Rosa Lastra, 'Northern Rock, UK Bank Insolvency and Cross-border Insolvency' (2008) Journal of Banking Regulation Volume 9 No.3, 165.
[233] ibid.
[234] J De-graft, 'Deposit Insurance Protection: Developing a Legal Framework for Ghana' LLM Dissertation University of Leeds 2010, p34.

Thus, while the 'systemic risk' and 'subsequent potential collapse'[235] argument is a valid reason for attributing importance to banks, a further argument that could be raised in support of the 'bank importance' phraseology, is that when banks fail, depositors are left exposed to the workings of regulations[236] or official policies[237] that may already be in place to either safe-guard all their deposits, or at worst some of it.

In such a scenario, the protection of a bank depositor's funds will be dependent on the existence of deposit insurance mechanisms amongst others[238] within a given jurisdiction, and where that exists, the amount the depositor is able to reclaim will depend on the terms of the deposit insurance.

Banks are also important because they deal with each other in the inter-bank market and the inability of one bank to settle with another may have a direct impact upon the bank which has not been paid[239]. This in turn may make the bank unable to meet its obligations towards a third bank, and so on.

Another reason why banks are considered important is due to the fact that they deal in maturity transformation[240], which means that they transform illiquid assets, such as loans, into liquid liabilities such as deposits. Because of the nature of fractional-reserve banking, banks will never have sufficient liquid assets to meet all liabilities[241].

This will be problematic, if for some reason, an unexpectedly large number of depositors demand their funds at the same time[242]. Because it is very difficult for customers to distinguish between healthy and unhealthy banks, this may mean that perfectly well-managed banks are also put at risk of a bank run.

Thus, while the importance of banks is undisputed, it is this same level of importance, which provides a host of reasons for banks to be regulated.

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[235] ibid.
[236] Such as national insolvency banking regulations.
[237] Lastra (n232).
[238] Such as Lender of Last Resort role of any Central Bank.
[239] Davies (n229) 29.
[240] H M Schooner and M W Taylor, *Global Bank Regulation: Principles and Policies* 1st Edition Academic Press 2010 pp20-21.
[241] ibid.
[242] This may be due to a complete erosion of the confidence that depositors and investors hitherto had in banks.

3.3 The Regulation of Banks

Notwithstanding the existence of multiple reasons for regulating banks, the traditional and fundamental reason for bank regulation has been to ensure financial stability[243] and the protection of depositors[244].

The importance of financial stability in any economy cannot be over-stated enough and it is as important today as it was in the 1980s and 1990s and even prior. In ensuring financial stability within the banking industry, it is important to recognise that the era of self-regulation is long gone and its practice confined to history and rightly so.

The historical reliance by banks on internally-led markets' standards of practice had to be abandoned in favour of a new approach as banking crises[245] begun to occur globally with worrying frequency. The new approach i.e. regulations was widely seen as a more acceptable approach by many countries in ensuring financial stability and marked a complete departure from the 'status quo' of 'national market correction' and 'self-regulation'[246] to a widely accepted system of banking regulations under the supervision of banking regulators and supervisors and other regulatory institutions.

Following the introduction of bank regulations by national authorities and jurisdictions as a means of ensuring financial stability within jurisdictions, the rationale for banking regulation undertook a shift in focus and with time[247], banking regulations were seen as a useful tool to reduce the level of competition within the banking industry.

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[243] Financial stability has been defined by the European Central bank (ECB) as *'a condition in which the financial system comprising of financial intermediaries, markets and market infrastructures – is capable of withstanding shocks thereby reducing the likelihood of disruptions in the financial intermediation process which are severe enough to significantly impair the allocation of savings to profitable investment opportunities'* – Financial Stability Review, Issue December 2012. (Accessed on 4 January 2013).

[244] D Llewellyn, 'The Economic Rationale for Financial Regulation', Occasional Paper Series 1 April 1999, FSA, p9.

[245] Luc Laeven and Fabian Valencia, 'Systemic banking crises: a new data base', (2008) IMF Working Paper No 08/224 2008.

[246] G A Walker, 'Market and Regulatory Balance' (2012), Journal of Banking Regulation Volume 13, 1-3 Editorial.

[247] In the 1970s and 1980s.

Although the level of importance associated with bank regulations today is often attributed to the failure of the 'market-based standards-setting' [248] approach under self-regulation, G.A. Walker begs to differ. Walker suggests that it is without merit for the 'previous system of self-regulation'[249] to be dismissed as 'fundamentally flawed'[250], but rather, the concept of self-regulation within the banking and finance industry had no longer become fit for purpose. Walker supports his argument by suggesting that the 'environment'[251] for which such a system was designed to work no longer existed; notwithstanding the fact that most regulatory objectives were being met through market-led self-regulation[252]. To add to this, it is submitted that this 'environment' that Walker describes, all but disappeared as a result of the globalisation of the banking and finance industry.

3.4 The International regulation of banks

The era of financial liberalisation that swept through Europe and other industrialised western countries resulted in an increasing state of cross-border integration[253] between banks and financial markets.

It is submitted that this increasing cross-border integration of banks and financial markets was not supported by any form of cross-border banking supervisory framework. The lack of international co-operation and co-ordination amongst banking regulators and supervisors was highlighted by Peter Cooke[254] who stated that:

> '……..no banking regulators knew anything at all about the banking regulations prevailing in other countries before the 1970s. Prior to 1975,

[248] Walker (n246).
[249] ibid.
[250] ibid.
[251] ibid.
[252] In a market-led self-regulatory environment, market participants through a code of conduct, adhere to a particular practice, custom or norm in a consistent manner thus creating an impact which could be likened to the desired impact, had the practice or custom been embodied in a regulatory framework.
[253] S Ingves 'The Evolution of the Basel Committee' – A speech/keynote address to celebrate 25 years of the Basel Capital Accord, 26 September 2013.
[254] Former Chairman of the BCBS and is the longest serving chairman of the Basel Committee from 1976 to 1988.

regulation was nationally prescribed within national legislatures and without international co-operation from other jurisdictions'[255].

Despite this lack of international co-operation from other jurisdictions, it took the failures of the Franklin National Bank and the Bankhaus Herstatt bank for the international community i.e. members of the G10 to address the issue of the need for an international banking framework. This resulted in the formation of a Committee on Banking Regulations and Supervision towards the end of 1974.

This Committee, which was later renamed the Basel Committee on Banking Supervision was given the mandate of establishing 'regular co-operation between its member countries on banking supervisory matters'[256]. On 26 September 1975, the Basle Committee introduced a Concordat[257] of international banking supervision to address the issue of lack of co-operation amongst jurisdictions. The Concordat made it absolutely clear in its introductory paragraph that its objective was to establish guidelines which could define the scope of the co-operation amongst national banking supervisors in the supervision of foreign banks operating within their jurisdictions. The Concordat also introduced guidelines which clarified the supervisory function and requirements of both host and parent banking authorities.

Throughout the subsequent revisions of the Basel Concordat; first in 1983, then in April 1990 and July 1992, the Basel Committee has continually acknowledged the internationalisation of banking and capital markets[258]**.** Perhaps the most significant revision to banking supervision by the BCBS which characterised the international banking regulatory framework at the

[255] Atul K Shah, 'The Dynamics of International Banking Regulation', 1996 Journal of Financial Regulation & Compliance, Volume 4(4) 371.
[256] Basel Committee on Banking Supervision: 'A Brief History of the Basel Committee' October 2014 Bank for International Settlements, p1 (Accessed on February 9 2015).
[257] 'A Report to the Governors on the Supervision of Banks' foreign establishments' – BS/75/44e, p1.
[258] A K Shah (n255).

time was the introduction of the 25 basic core principles that underpin the Basel Committee's banking and regulatory framework[259].

Further to the general recognition within the BCBS of the need to improve the international supervision of banks and to enhance co-operation and harmonisation amongst banks particularly within Europe, the BCBS also recognised that a harmonisation of banking regulations within the European Community could be better achieved through the introduction of 'standard rules' on capital adequacy[260]. These 'standard rules' on capital adequacy are introduced under the minimum capital requirement under the Basel 1 Capital Accord, and although the Basel Committee's recommendations and decisions are not legally binding[261], they have been adopted by over 100 countries world-wide including African countries such as Ghana and Kenya.

Inspite of this compliance statistic, the submission is made that whereas the justification for the regulation of banks within national borders may easily be forthcoming and acceptable, the rationale for the international regulation of banks might arguably not enjoy the same support. Notwithstanding this, the justification for the international regulation of banks has increasingly over the years become difficult to disregard.

While the need for an international banking regulatory framework is increasingly becoming justifiable, it must be appreciated that deeply rooted and potentially divergent national laws which split along common law and civil law trajectories may well provide a spanner in the wheels of efforts being made to harmonise global banking regulation and supervision.

This common law, civil law dichotomy subsequently compounded by the potentially different interpretations accorded by jurisdictions to global banking regulations often results in regulatory arbitrage which if left unchecked may encourage banks to move to jurisdictions in which banking regulations and supervision are relatively softer and less intrusive.

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[259] The Basel Committee on Banking Supervision, 'Core Principles for Effective Banking Supervision' (September 1997).
[260] A K Shah (n255) 373.
[261] Basel Committee on Banking Supervision: A Brief History of the Basel Committee October 2014 Bank for International Settlements: (Accessed on February 9 2015) or see www.bis.org

The disparity in the banking regulations and supervision procedures in countries worldwide was acknowledged by Sahajwala and Van Der Bergh[262] who suggested that differing banking regulations and supervision procedures amongst countries could be attributed to the fact that each country had attained varying levels in the state of development[263] and complexity of their respective financial systems which was matched by the varied levels of openness of the domestic financial system and its exposure[264] to the level of competition that foreign bank competitors would bring or introduce. Other reasons suggested were that the disclosure process and extent of disclosure of a bank's financial position, together with the varying levels in availability of technology and human resources also enhanced inconsistencies in banking regulations and supervision and were also a contributory factor.

While the 'number, size and concentration of banking institutions' are cited by Sahajwala and Van Der Bergh as yet another contributory reason to the variation in banking regulations worldwide, it is also an acknowledged fact, that the size and level of inter-connectedness of banking institutions and non-banking institutions have led to an increase to any financial system of the risk/threat posed by shadow banking to financial stability, particularly where non-banking financial institutions are concerned[265].

Notwithstanding the reasons given by Sahajwala and Van Der Bergh, there had been prior recognition of the need for the harmonisation of national bank regulations amongst industrialised nations towards the end of the 1980s and early 1990s. This was due to the fact that banks had started to develop an international presence and were no longer confined within their own local borders. The idea of foreign banks operating within national jurisdictions was no longer an unwanted proposition[266].

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[262] R Sahajwala and V Bergh, 'Basel Committee on Banking Supervision: Risk Assessments and Early Warning Systems 2000', Working Paper No4 pp1-45.
[263] ibid, 2
[264] ibid.
[265] R Lastra, 'Systemic risk, SIFIs and Financial Stability', (2011) Capital Markets Law Journal Volume 6, 197.
[266] Despite the increase in the presence of foreign banks in most jurisdictions, some countries have in place, laws which either prevent the establishment of foreign banks or restrict their numbers and activities in countries where they are given the license to operate. The UK and

Maximillian J.B. Hall and George Kaufman suggest in their article[267] that the call for harmonisation in banking regulations was an attempt to reduce the likelihood of bank failures and the systemic risk contagion that followed thereafter, and that such harmonisation was unlikely to encourage certain acts by governments which placed certain countries at a competitive advantage than others. They suggest further that such desire, led governments to 'call for a transnational regulation'[268] which would address the limitations of the market disciplines exhibited by banks in many countries, and the inability of private stakeholders and other government bank regulators to monitor their interests in their banks located in other jurisdictions.

Today, whilst several global banks have been entering Africa e.g. from China and perhaps the UK, due to the existence of foreign investment laws that make it easier for these banks to open branches/offices/subsidiaries, not the same could be mentioned for banks in Africa wishing to open branches in say Europe[269].

It is submitted, that today the arguments in favour of the international regulation of banks is difficult to dismiss or ignore but nonetheless must be weighed against the argument in legal jurisprudence of the sovereignty of a State and the accordance of recognition to the individual characteristics of each national culture[270]. It is the strength of such national cultural identity that often leads to some level of bias in favour of national laws or regulations as opposed to harmonisation of regulations[271]. This view is opposed by Universalists, who align themselves to the view that 'universal legal principles would one day govern all of humanity'[272].

Kenya are examples of countries where the presence of foreign banks are actually encouraged.

[267] M J B Hall and G G Kaufman, 'International Banking Regulation', A Paper presented at a conference titled *Structural Foundations of International Finance* held at Saint Mary's University, Halifax, Nova Scotia on May 10-11, 2002.

[268] ibid.

[269] It is admitted, that this could also be attributed to the lack of funds or trained personnel.

[270] M Van Hoeke and M Warrington, 'Legal Cultures, Legal Paradigms and Legal Doctrine: Towards a New Model for Comparative Law (1998), International and Comparative Law Quarterly Volume 47, 495.

[271] G Del Vecchio, 'Science of Universal Comparative Law' [1910] in A Kocourek and J Wigmore (eds), Primitive and Ancient Legal Institutions [1915], 61-70 Boston: Little Brown.

[272] ibid.

The Universalist ideology[273], often cites 'a number of phenomena' as justification in the optimism they have such as the 'convergence of national laws towards common principles' and the frequency with which legal institutions created in one system are adopted by another[274].

In a recently held conference in London[275], Dr David Bholat from the Bank of England stated 'Culture eats law for lunch'. He explained by suggesting that he was unsure if regulation alone could improve the current situation in the banking industry because 'we have had regulations since 1979, i.e. statutory-based regulation yet still we seem to be having the same problem'[276]. While one might argue that Dr Bholat's statement was somewhat limited to the UK Banking Industry, there are legal experts[277] who have criticised the Basel Accords, particularly Basel 2 for its failure to prevent the global financial crisis.

The phrase used by Dr Bholat together with the discussions that followed, prompted Professor Joan Loughrey to suggest that 'If regulations do not seem to be working, what else would? Should there be a mix of principles-based regulation and culture?'[278]

It is submitted that such an approach will be unworkable due to the strong banking cultures that exist in certain jurisdictions like the U.S.A and the U.K. where very powerful bank lobbyist groups thrive. Indeed, Professor Joanna Gray warns of the possibility of 'regulatory capture'[279] if the banking industry is

[273] M Van Hoeke and M Warrington (n270).
[274] Perhaps the creation of the EU may arguably be construed as a work in progress towards governance under 'universal legal principles'.
[275] The theme of this conference was 'My Word is My Bond: Regulating for Integrity in the City' a one-day conference organised by the University of Leeds together with the Centre for Law, Markets and Regulation on 15 January 2013 at the London offices of Allen & Overy LLP.
[276] A verbatim extract from Dr. Bholat's speech at the Conference, 'My Word is My Bond: Regulating for Integrity in the City' on 15 January 2013.
[277] E Avgouleas, 'Rationales and Designs to Implement an Institutional Big Bang in the Governance of Global Finance' Seattle University Law Review (2012) Vol 36 321, 363-365. See also, C Brummer, 'Why Soft Law dominates International Finance - and not Trade' (2010) Journal of International Economic Law Vol 13(3) 623.
[278] A verbatim extract from Professor Joan Loughrey's presentation at the Conference 'My Word is My Bond: Regulating for Integrity in the City' on 15 March 2013.
[279] A verbatim extract from Professor Joanna Gray's presentation at the Conference, 'My Word is My Bond: Regulating for Integrity in the City on 15 January 2013.

constantly allowed to lobby the regulators resulting in the 'watering down' of the regulations[280].

3.5 Financial globalisation and bank regulation in Africa

It is submitted that the era of 'financial liberalisation'[281] which was marked by deregulation was aimed at introducing competition within the banking industry[282]. This resulted in yet another departure from the original purpose of bank regulations as banks had started to become less profitable due to increased competition[283]. Financial liberalisation thus called into question the very reason for which banking regulation was first introduced.

The deregulation within the banking industries of a number of jurisdictions and the relaxation of restrictions on the establishment of foreign banking subsidiaries within these jurisdictions, paved the way for the onset of financial globalisation[284]. The resulting effect, such as ever-increasing banking transactions, cross-border mergers and acquisitions and a growing number of bilateral and multilateral foreign investment agreements being entered into by countries and financial institutions (particularly banks) has resulted in a global explosion of inter-bank activities[285]. In some instances where mergers and acquisitions have resulted in large financial conglomerate structures, it has often been followed by an amplification of the threat of all types of banking risks which would have previously been limited to the individual balance sheets[286] of banks. It is submitted therefore that today, as a result of financial globalisation and banking deregulation, the transmission of systemic risk through financial contagion has become a real threat to both national and international financial stability.

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[280] In a publication by Clifford Chance LLP, 'Basel 3: Relaxations to the Liquidity Coverage Ratio' 2013, it was suggested that the BCBS' finalised details on the Liquidity Coverage Ratio (LCR) was not as onerous as the earlier version published in December 2010.

[281] Andrew Crockett, 'Why is Financial Stability a Goal of Public Policy?'. A Paper presented at a Symposium with the theme *Maintaining Financial Stability in a Global Economy* p18 August 28-30 1997.

[282] ibid.

[283] ibid.

[284] Mark Swinburne, 'The Globalisation of Financial Institutions and its implication for financial stability' 2007, Ch III, IMF Global Financial Stability Report, 98.

[285] ibid.

[286] ibid.

Further to this view, an IMF Global Financial Stability Report[287] published in April 2007 acknowledged that financial institutions had entered an era of institutional globalisation which had serious implications for financial stability[288]. The Report added further that although globalisation of financial institutions had improved financial stability generally, there was some level of uncertainty as to whether globalisation enabled 'financial systems to withstand extreme events'[289]. On the issue of whether globalisation made financial systems capable of withstanding extreme events, it is submitted that the ability of financial systems on both a national level and an international level to withstand extreme events, would be dependent on the inter-linkages of the different banks within that financial system, the sizes of those banks involved and the nature and extent to which credit derivatives are dealt in, on national and cross-border level.

Although the ability of a bank to withstand extreme events is crucial to financial stability, the lack of an effective cross-border bank insolvency resolution procedure implies that when banks fail, local and international bank customers including stakeholders and other institutions that have a vested interest in the failing/failed financial institution may not have any realistic chance of getting their money or investment back.

Also, the intricate nature of the links and relationships that exist between and amongst banks points to the fact that any form of financial crisis could result in a potential conflict between national banking authorities on the issue of bank insolvency resolution. If this occurs, this could go on for years and could be very costly.

The era of financial liberalisation that swept through Europe and other industrialised western countries eventually found its way through the African continent. Inutu Lukonga and Kay Chung[290], suggest that cross-border expansion of banks of Sub-Saharan African (SSA) origin is an ongoing

[287] IMF Global Financial Stability Report 2007, 98.
[288] Swinburne (n284) 98.
[289] Where extreme events could be interpreted as severe shocks to the financial system capable of causing a financial crisis.
[290] Inutu Lukonga and Kay Chung, 'The Cross-Border Expansion of African LCFIs – Implications for Regional Financial Stability and Regulatory Reform' 2010 IMF Research Paper.

phenomenon and by the end of 2009, there were 18 Sub-Saharan banks that had a presence in four or more countries. Such is the rate of expansion that they even suggest that banks of SSA origin have now attained a global presence as well.

3.5.1 Pan-African Banks

Pan-African Banks have been defined as 'Banking groups domiciled in Africa with subsidiaries in several countries'[291]. According to Benedicte Vibe Christensen, their expansion across the African continent may be attributed to the relaxation of investment regulations by certain host countries that previously barred foreign banks from opening subsidiaries within their jurisdictions. It has also been suggested[292] that the ever-increasing financial integration within the various financial markets in the Sub-Saharan African region has been mainly due to the expansion of the Pan-African Banking groups.

Although most of the Pan-African banking groups are headquartered in South Africa, Nigeria and Morocco, other Pan-African banking groups exist that have their head-office in other countries such as Togo. In Ghana, Ecobank[293] and Bank of Africa are typical examples of the presence of Pan-African banks, whereas in Kenya, the Kenya Commercial Bank, Equity Bank and the Commercial Bank of Africa represent a few of the Pan-African Banks originating from Kenya.

It is submitted that the expansion of Pan-African Banking within Sub-Saharan Africa has both positive and negative implications for the African continent. Although Pan-African banks[294] introduce competition[295] within the local banking systems of the host countries they reside in, as well as technical expertise and possibly improved IT systems and infrastructure, their presence in any jurisdiction is a potential source of systemic risk for the host country and the wider financial stability of the African Continent at large.

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[291] B V Christensen, 'Financial Integration in Africa: Implications for monetary policy and financial stability', (2014) BIS Paper 76 11, 16. (Accessed electronically in April 2014).
[292] ibid.
[293] Ecobank has a presence in 32 countries and is headquartered in Togo.
[294] Most Pan-African banks accept local currency deposits in the jurisdictions they reside in, thus acting like domestic banks. They also tend to deal in foreign currency – IMF (2012d).
[295] Through the provision of a greater array of financial services to a wider customer base.

Although Inutu Lukonga and Kay Chung, find in their paper, that the expansion of large conglomerate financial institutions (LCFIs) e.g. Pan-African Banks poses no immediate threat to the financial stability of the African region, they agree that such a potential threat still remains especially where there is no harmonisation in the banking regulatory practices of the home and host jurisdictions of these LCFIs.

They add that the source of such potential threat may be traced to the lack of 'consolidated and cross-border supervision', which leads to a lack of harmony in the banking regulatory standards of both home and host country and the lack of a cross-border banking insolvency framework and until these 'deficiencies' are addressed, the threat of financial stability posed by LCFIs will still remain

3.5.2 Regional harmonisation of banking regulations

The importance of an African regional banking regulatory framework cannot be overstated enough, not least because of the presence of foreign banks within the African continent, a significant number of which are of Pan-African origin.

Hence, it is submitted that the need for such a framework is underscored by the increase in the presence of Pan-African banks within African countries and also the ever-increasing volume of transactions and cross-border dealings between and amongst countries in Africa.

It is further submitted that increased cross-border transactions has a significant impact on African banks in that it increases the threat to regional financial stability through contagion. Thus not only will regional harmonisation of banking regulation significantly reduce the risk of banking crisis through cross-border contagion, but it would increase the variety and efficiency of banking and financial services which would ultimately be beneficial for competition within the banking industry.

The East African Community (EAC) consisting of Kenya, Rwanda, Burundi, Tanzania and Uganda have already begun the consultation process aimed at harmonising their banking and finance regulatory framework whereas members of the West African Monetary Zone (WAMZ) consisting of Ghana,

Gambia, Guinea, Nigeria and Sierra Leone have also begun similar and parallel attempts to harmonise their banking regulations and supervision. Notwithstanding these efforts[296] by African countries, there is still lack of progress after more than a decade of negotiations, a situation which may arguably be due to lack of co-operation between the relevant institutions or possibly a lack of political will to carry these ground-breaking reforms through.

3.5.3 Global harmonisation of banking regulations

While the case for harmonisation in banking regulations has arguably been established, not least following the prolific expansion of Pan-African banks, the African continent is still yet to devise a banking regulatory framework which recognises or takes into account the slow pace in the development of individual financial systems of African countries[297].

Whilst the African continent still awaits such an 'African-designed' banking regulatory framework, the ever-increasing cross-border integration of financial institutions from Emerging countries like China with financial institutions in Africa is increasingly becoming difficult to ignore[298].

Also, notwithstanding the continued presence in African countries of the subsidiaries of global banks domiciled in countries such as the United Kingdom[299] and France[300], Emerging countries such as China have in recent times been expanding their financial institutions in Africa[301]. Other evidence of increasing co-operation between Chinese and African banks, include an Agreement signed in 2009 by China and Ecobank to increase co-operation and a Memorandum of Understanding signed in 2008 between China Development Bank and the United Bank of Africa to provide finance for long-

[296] For a more detailed account of efforts being made by African countries towards monetary union, economic integration and banking regulation and supervision harmonisation, see I Salami, 'Banking harmonisation in the African context', (2008) Journal of Banking Regulation Volume 9(3), 187.
[297] ibid. Perhaps with the exception of South Africa – An Emerging African country.
[298] Lukonga and Chung (n290).
[299] Barclays bank and Standard Chartered Bank.
[300] Société Généralé bank in France.
[301] B V Christensen, 'Financial Integration in Africa: Implications for Monetary Policy and Financial Stability' 2014, BIS Papers No 76 11-15. In 2007, the Industrial and Commercial Bank of China invested $5.5 billion in the Standard Bank of South Africa to cater for Chinese customers and interests within the African region.

term projects aimed at improving the infrastructure within the African continent[302].

3.6 International convergence of banking regulations

It is submitted, that the case for international convergence of banking regulations was established when financial deregulation and financial liberalisation first occurred[303]. This case was further strengthened following increased cross-border financial transactions and co-operation through international trade and the cross-border establishment of financial institutions[304].

Earlier in this chapter, it was established that one of the fundamental reasons for bank regulation was to ensure financial stability[305]. It is thus submitted that it makes sense for there to be consistency in the enforcement of banking regulations worldwide, particularly where there continues to be increased levels of financial integration amongst countries world-wide[306].

While there is no doubt that a consistent application of global banking regulation is the way forward to ensure global financial stability, there have admittedly been challenges where the application of global banking regulations in Africa is concerned[307]. These challenges have largely been due to a lack of funds, human resources and IT technical expertise to implement international financial standards[308].

It is submitted that this could be one of the reasons why Ricardo Gottschalk and Stephany Griffiths-Jones find that even though 71% of their respondents from Africa[309] expressed an intention to implement Basel 2, only Mauritius and Namibia had fully implemented Basel 2[310].

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[302] ibid.
[303] Crockett (n281).
[304] Lukonga and Chung (n290).
[305] Llewellyn (n244) 9.
[306] Swinburne (n284).
[307] R Gottschalk and S Griffith-Jones, 'Basel 2 implementation in Low-income Countries', 2007 Institute of Development Studies University of Sussex.
[308] ibid.
[309] Gottschalk and Griffith-Jones n307, 7.
[310] I Salami, 'International Financial Standards and the application of Basel 3 in Emerging and Frontier Markets' (2012) Law and Financial Markets Review, Volume 6, 339.

Although global banking regulations enhance global financial stability, it is submitted that the maintenance of adequate capital levels by a bank is not sufficient in itself to guarantee financial stability. Acharya finds that the international convergence of capital adequacy regulation is a desirable outcome which should be 'accompanied by standardisation of closure policies'[311]. While efforts are continually being made towards a global bank insolvency regulatory framework, such a framework may arguably still be a long way off as the countries involved try to reach a common agreement in the face of perhaps deeply entrenched and divergent national bank insolvency regulations.

Majority of respondent banks agreed that the international convergence of banking regulations was desirable however the adoption statistics of Basel 2 by African countries is not representative of this fact.

3.7 Compliance of Basel Regulations in Africa (Ghana & Kenya)

Although Ghana and Kenya are still yet to fully implement Basel 2, it is fair to say that some level of implementation has already taken place in both jurisdictions[312]. While Kenyan banks have been reported[313] to be currently implementing some provisions of Basel 2 in relation to the quality of bank assets as well as provisions relating to capital adequacy, commercial banks in Ghana have already implemented[314] the standard approach in relation to credit risk measurement under Basel 2.

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[311] V Acharya, 'Is the International Convergence of Capital Regulation Desirable?' (2003) Journal of Finance Volume LVIII No 6, 2745 - 2746.

[312] Evidence of this comes from analysis of responses provided to Question 18 of the Questionnaire.

[313] Peterson Thiongó and David Mugwe, *Kenyan banks under testing ahead of new global rules* Business Daily August 26 2013, (Accessed 26 April 2014). See also: http://www/businessdailyafrica.com/kenyan-banks-under-test. Also, A regional workshop was held by the IMF's East African Regional Technical Assistance Centre (East AFRITAC), in Kigali Rwanda on November 18-22, 2013 to discuss issues relating to the implementation of the Basel 2 and Basel 3 Framework.

[314] Following the decision of the Bank of Ghana to adopt Basel 2 by 2012. See R Dzato, 'Ghana goes Basel 2 – Key Challenges and Opportunities' (2012) pp1-6. www.fepinternational.org (Accessed on 15 August 2012).

It is submitted that there is a distinct possibility that African countries will adopt a 'wait and see' attitude and consider the implementation of Basel 3[315] instead, thus by-passing the full implementation of Basel 2. Should this occur, it is further submitted that adoption of Basel 3 by African countries who have still not fully adopted Basel 2 would have been influenced by South Africa's adoption of Basel 3 by virtue of its G20 membership.

There is absolutely no doubt that a consistent and uniform application of Basel Accords would be most desirable[316], however it is submitted that until the challenges that African countries usually experience regarding the adoption of the Basel Banking Accords are addressed, any future implementation of Basel 3 in Africa or for the purposes of this thesis Ghana and Kenya, will be inconsistent from jurisdiction to jurisdiction.

3.8 Why Countries adopt the Basel Accords

In an article written by Daniel Ho[317], he tries to investigate what compels countries to implement the Basel Accord (Basel 1). From a dataset of 107 countries, Daniel Ho made the observation that although Basel 1 was at the time of conception signed by the then G-10 countries (despite being soft law and therefore not legally binding or enforceable), it has since been adopted by over 100 countries globally[318].

Ho points out that although Basel 1 initially set out to regulate internationally active banks, virtually all countries had implemented Basel 1 since 1988. This according to Kern Alexander[319] is due to the fact that regardless of Basel 1 regulations being part of international soft law and as a result, not legally binding or enforceable, they are more than capable of exerting great influence over the attitudes and behaviours of countries and organisations[320].

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[315] ibid. The Chartered Institute of Bankers (CIB) in Ghana (in conjunction with the Financial Education Partnership (FEP) International organised the first-ever training seminar for its corporate members on Basel 3 in Ghana in February 2011.
[316] Acharya (n311).
[317] Daniel Ho, 'Compliance and International Soft Law: Why do countries implement the Basel Accord?' (2002) Journal of International Economic Law Volume 5 No 3, 647.
[318] ibid.
[319] Chair for Finance, University of Zurich, and specialist advisor to the UK Parliamentary Select Committee on the Draft Financial Services Bill.
[320] K Alexander, 'Rebuilding International Financial Regulations' (2011) Journal of International Banking and Financial Law Volume 8, 489.

Kern Alexander further suggests that compliance by States may be due to international pressures from certain organisations that have been established by international treaty and to which these States are all signatories to. The IMF, World Bank, WTO and IOSCO amongst others are some of the organisations through which the Basel regulations are enforced. He explains further that this pressure is channelled by the IMF and World Bank through their Article IV surveillance programme[321] and particularly through their Article V conditionality programme[322].

The Article V conditionality programme according to Kern Alexander is usually linked to the IMF Financial Assessment Programmes which details other conditions IMF member states are required to adhere to. Thus if membership of the IMF puts an obligatory requirement on member states to adopt the Basel regulations, then it is my opinion that African member states of the IMF will be under a perpetual obligation to adopt these soft international banking and finance regulations. It is submitted, that this obligation on African member states will not only arise by virtue of their membership, but also because 99% of African States are not self-sufficient and are constantly borrowing money from these organisations and as such have no choice but to comply with the conditions attached.

It is also submitted that it is on the basis of these 'bullying tactics' that African countries have either implemented Basel 2 or expressed an intention to do so and it is likely that the future implementation of Basel 3 by African countries will follow a similar adoption pathway. Since the implementation of the Basel regulations has always been spearheaded by EU member states that are also members of the G20 in a bid to lead by example, it is quite ironic that decisions taken by the members of the G20 with little or no input by African countries should be made applicable to African States by virtue of their membership of some international organisation and/or being signatory to an international treaty.

[321] ibid 491.
[322] ibid.

With the coming into effect of BaseI 3[323], all member states of the G20 have vowed to implement this new international banking regulation in their respective national laws and South Africa the only African country with membership of the G20 has also begun the implementation of Basel 3.

In spite of the constant international pressure that most African countries have faced in the past where the implementation of Basel 1 and Basel 2 are concerned, a few African countries have either only just recently implemented Basel 2[324] (i.e. well outside the time-frame for implementation) or are even yet to implement Basel 2. This begs the question that if Basel 2 proved to be a challenge in terms of its implementation in Africa, then there is a likelihood that Basel 3 will equally present challenges to the African continent in terms of its uniform application or implementation in the future.

With South Africa already having begun the implementation of Basel 3, the fate of Africa in terms of its future implementation has arguably been sealed. The suggestion by Iwa Salami, that banking regulators in frontier markets may implement Basel 3 in order to send a message that the banking regulatory standards are on a par with international standards and not weaker, in the hope of attracting potential investors[325] is flawed in the light of the evidence[326] provided by Kern Alexander. The flaw in Iwa Salami's argument above is exposed when the question is posed that why would African countries voluntarily implement Basel 3 banking regulations to attract investors when it will be costly to do so?

Although there seems to be conclusive evidence that the international convergence of banking regulations is desirable, it has often been argued, that a fundamental reason attributable to the lack of success in the harmonisation of banking regulations on a global level scale, is the fact that these global regulations are generally regarded as guidelines or soft law[327] which do not have the force of law and as a result cannot be properly

[323] 1 January 2013.
[324] Such as Ghana, Kenya and Nigeria albeit in part.
[325] I Salami (n310) 338.
[326] K Alexander (n320) 491
[327] I Salami, 'Banking Harmonisation in the African context,' (2008) Journal of Banking Regulation Volume 9, 187, 192.

enforced or effectively incorporated into national law for it to have legislative efficacy.

It is submitted however, that within the African region, the issues likely to affect compliance with the Basel laws and are often cited by African countries, are the high cost of implementation or adoption of the Basel regulations; and the lack of resources i.e. human or physical to implement it.

3.9 Conclusion

This chapter concludes with the submission that financial globalisation and the steady increase in pan-African banking have contributed in bringing to the fore the importance and relevance of harmonisation of banking regulations to banks in Africa.

While attempts at harmonisation of African regional banking regulations continue (albeit at a slow pace), it is further submitted that such attempts should not detract from the overall importance and relevance of harmonisation in international banking regulations. Also, the author suggests that the over-riding factor in the argument in favour of an international convergence in banking regulations is the potential reduction in regulatory arbitrariness, thus ensuring an increase in the degree of consistency in the application of banking regulation from jurisdiction to jurisdiction. In the next chapter, the author highlights the attempts by the Basel Committee on Banking Supervision to achieve harmonisation of banking regulations through the application of capital adequacy principles introduced under the Basel Core Principles on Banking Supervision.

CHAPTER 4

BANK CAPITAL REGULATION AND CAPITAL ADEQUACY

4.1 Introduction

In this chapter, the author highlights the evolutionary transition of the concept of capital adequacy. It is submitted that for banks to be adequately capitalised, the role that bank capital plays ought to be addressed. Atuk K. Shah suggests[328] that the introduction of the 25 Basic Core Principles on Banking by the BCBS is a recognition by the BCBS that harmonisation of banking regulations could be achieved if 'standard rules'[329] on capital adequacy were introduced. This chapter hence addresses the meaning of bank regulatory capital, its regulation and the development of the concept of capital adequacy.

4.2 Importance of Bank Capital

Bank capital is one of a number of factors often considered where the safety and viability of banks are concerned. Indeed as pointed out by Rosa Lastra[330], it is represented by the letter 'C' in the acronym 'CAMELS'[331] which was coined in the USA and provides a form of guideline which a significant number of bank managers and regulators take into account when determining the soundness of a bank[332].

In a Report by the House of Lords Select Committee on Economic Affairs[333], 'Bank Capital' was defined as referring:

> *'to the part of the bank's financing that comes from shareholder funds, subordinated debt, certain types of reserves and hybrid debt/equity instruments'[334].*

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[328] A K Shah, 'Dynamics of International Banking Regulation', (1996) Journal of Financial Regulation & Compliance Volume 4(4), 372.
[329] ibid, 373.
[330] Rosa Lastra, 'Risk-based capital requirements and their impact upon the banking industry: Basel II and CAD III' (2004) Journal of Financial Regulation and Compliance Vol 12(3), 225.
[331] See CAMELS n21.
[332] Lastra (n330) 225.
[333] House of Lords Select Committee on Economic Affairs 2nd Report of Session 2008-2009, 'Banking Supervision and Regulation' Volume 1: June 2, 2009, United Kingdom.

Due to the importance[335] of banks it is absolutely vital that banks have enough capital (and liquidity), not only for the purpose of undertaking banking business with the view to make profits, but for the fundamental reason that the ability of bank capital to absorb losses, (both expected and arguably unexpected losses), is an important factor in ensuring depositors' continued confidence in any given bank.

Notwithstanding this, the lack of adequate bank capital could potentially result in the revocation of a bank's license to operate as a business entity, and where such state of affairs result in bank insolvency, the consequences in most cases can be far-reaching, thus negatively impacting depositors, shareholders (both individual and institutional) and the economy[336] at large.

It is absolutely important to distinguish economic capital[337] from regulatory capital[338], which according to Agiwal are both arguably conceptually similar[339]. Lastra, on the contrary suggests that these two types of capital do not coincide[340]. Regardless of the mutual exclusiveness i.e. the distinctions or similarities between these two forms of capital, one thing is absolutely certain i.e. the original purpose for which the concept of economic capital was developed by banks has undergone a gradual change over the years.

The shift in focus has been from a role or function as a:

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[334] ibid 21. Following the introduction of Basel 3, hybrid instruments are being gradually phased out over a 10 year period beginning 1 January 2013 and as a result, this definition would benefit from a revision to exclude hybrid debt/equity instruments.

[335] Highlighted in chapter 3 on pages 38-39 of this thesis.

[336] Such negative impact may sometimes be felt outside the jurisdiction in which the affected banks are located particularly where shareholders and depositors alike are not based in the same jurisdiction as the affected bank.

[337] Economic capital is defined as *'…….the methods or practices that allow banks to consistently assess risk and attribute capital to cover the economic effects of risk-taking activities'*, See BIS *Range of practices and issues in economic capital frameworks,* p1, March 2009.

[338] Regulatory capital on the contrary, refers to that aspect of capital required to address credit risk, as first introduced by the BCBS when the Basel Accord (Basel 1) was first introduced in 1988 and for which Banking regulators globally seek to ensure that banks within their respective jurisdictions strictly adhere to minimum capital charge of 8% of risk-weighted capital.

[339] Swati Agiwal, 'Regulatory and Economic Capital – Measurement and Management' [2011], 3.

[340] Lastra (n330) 226.

'tool for capital allocation and performance assessment'[341]*……..* to *applications that require accuracy in estimation of the level of capital (or risk), such as the quantification of the absolute level of internal capital needed by a bank'*[342].

Greuning and Bratanovic[343] suggest that bank capital ensures the continuing level of confidence that depositors have in banks is maintained due to its ability to absorb losses[344]. While this observation may be true to some extent, it is submitted that the level of confidence depositors may have in the capital levels of any given bank goes only as far as the disclosure of capital by a bank permits, eg say in any given Offering Circular that a bank might issue in the hope of attracting potential investors.

It is further submitted that due to the externality factor of information asymmetry in banks and the fact that the capital (economic or regulatory) of a bank may fluctuate, it is inconceivable that depositors may be aware of such changes in capital positions for it to have any meaningful impact on the level of confidence they might have in a bank. Notwithstanding this view, it is also submitted that the confidence of depositors might be swayed either positively or negatively where pre-tax profits are announced year on year (a sign of a healthy bank) or where an announcement is made that a particular bank has been recapitalised (a sign of a struggling bank) respectively.

Greuning, also suggests that bank capital is the ultimate deciding factor in any bank's capacity to lend[345]. Again, it is submitted that this suggestion may not be entirely true, as the ability or capacity of a bank to lend is hinged on the level of leverage that the bank has already undertaken. During the recent global financial crisis, it was discovered that although some banks, particularly in Europe and perhaps elsewhere[346] boasted of high capital assets in their

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[341] BIS, 'Range of practices and issues in Economic Capital Framework' [2009], 1.
[342] ibid.
[343] Hennie van Greuning and Sonja Bratanovic, *Analysing and Managing Banking Risk: A Framework for Assessing Corporate Governance and Financial Risk* Chapter 6, p105 (World Bank Publications 2003).
[344] ibid 102.
[345] ibid.
[346] In the UK, Northern Rock and Lloyds-TSB were classic examples. See A Milne and G Wood, 'Shattered on the Rock? British Financial Stability from 1866 to 2007', (2009), Volume 10, 89-91.

annual reports and banking/trading books, the true position was absolutely shocking as most banks were highly leveraged[347] and had no room for manoeuvre. Thus it is submitted that too much leveraging had technically eroded their capital base albeit not evident on the balance sheet.

This, amongst other factors discussed earlier in Chapter 1 contributed to the escalation in capital and liquidity shortage at the onset of the crisis. Another suggestion by Greuning that a bank experiencing capital shortage or high cost of capital ultimately loses out to its competitors in the banking industry[348] requires a degree of qualification.

It is submitted that while there is no doubt that a bank experiencing capital shortage is likely to experience some depositor desertion (perhaps not on a very large scale as some depositors are inherently and without reason fiercely loyal), the level of desertion by depositors could potentially increase where banks experiencing a high cost of capital; unilaterally pass on such high costs to consumers (i.e. borrowers, depositors, shareholders etc) without explicit or tacit support from the market industry.

In other words, if the high cost of capital is passed on by all banks within a particular jurisdiction to consumers, then the loss to other banks by way of competition will be minimised but only to the extent that the cost that is passed on to the consumer is not excessively high[349].

Finally, another attribute of capital suggested by Greuning which has arguably stood the test of time up until the global financial crisis is the idea that the purpose of capital is to provide financial stability in any given economy through the absorption of losses thus providing a level of protection to stakeholders, particularly depositors following bank insolvency.

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[347] Some banks were leveraged to about 50 times capital. See B Mahapatra, 'Implications of Basel 3 for Capital, Liquidity and Profitability of Banks' [2012] RBI Monthly Bulletin, 775.

[348] Greuning and Bratanovic, (n343) 102.

[349] In the UK, an announcement in July 2013 that the idea of 'free banking' could soon become a thing of the past did not go down well with the general public. Although some aspects of retail banking in the UK are free, the UK banking industry is considering charging between £150 - £200 per annum for certain transactions that are currently free.

4.3 Bank Capital Regulation

Due to the role that bank capital plays and the level of its importance particularly with respect to the soundness of banks, the argument could be put forward that bank capital ought to be regulated.

Santos[350], suggests that the reasons why bank capital ought to be regulated can be attributed to three factors; the ever-important role that bank capital plays in promoting soundness in banks thus ultimately ensuring financial stability; that bank capital provides the allure of risk-taking incentives that banks cannot resist and end up undertaking; and finally, that bank capital plays a very important role in the corporate governance of banks and as such ought to be regulated.

On the issue of financial stability, it was suggested by Diamond and Dybvig[351] that the aim of capital regulation was to enhance financial stability 'which would otherwise be threatened in the event of widespread bank failures'[352]. This point raised by Diamond is indeed true and relevant but only to some extent. This is mainly because it is submitted that too much bank regulation and for that matter capital regulation has the potential to increase the unwanted scenario of shadow banking[353] which has the tendency to undermine financial stability within any given jurisdiction.

Lastra, however addresses the rationale for capital regulation from a different perspective. She suggests that capital regulation has become the main form of regulatory response which has been developed to counter the difficult practical issues that a 'bank's balance sheet structure' presents[354]. Lastra however, qualifies this assertion by stating subsequently that 'the use of

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[350] J A C Santos 'Bank Capital Regulation in Contemporary Banking Theory: A Review of the Literature', (2001) Financial Markets, Institutions & Instruments Vol 10, 41.
[351] D V Diamond and P Dybvig, 'Bank Runs, Deposit Insurance and Liquidity', (1983) Journal of Political Economy, Volume 91, 401.
[352] ibid.
[353] Defined as '…the system of credit intermediation that involves entities and activities outside the regular banking system'. See the Financial Stability Board Report, 'Shadow Banking: Strengthening Oversight and Regulation' – Recommendations of the Financial Stability Board October 2011.
[354] Lastra (n330) 226.

capital requirements as a regulatory tool is no panacea however. It is not a "cure" for all "the banking problems"'.[355]

The three features which in her opinion characterises a bank's balance sheet structure thus ultimately providing a source of 'financial fragility and the cause of regulatory concern' are, the issue of low cash to assets due to fractional reserve banking; excessive leverage activity resulting in low capital to assets ratio and finally the maturity mismatches that typically characterises bank lending in contrast to its assets.

Thus, although the role of banks together with the capital they possess is very important on their own individual merit to warrant bank regulation, a distinct argument justifying the need for regulation of bank capital is arguably difficult to proceed on without it over-lapping the wider role of banks. This perhaps explains why the argument in support of the rationale for bank capital regulation presented by Lastra, seemed somewhat fused with the rationale for bank regulation.

The Report by the House of Lords Select Committee on Economic Affairs in the author's opinion ensured clarity was not in short supply when it suggested that the rationale for capital regulation emanated from the three purposes that bank capital serve. The Report suggested that firstly, bank capital exposes shareholders to the risk of bank failure and as a result, capital requirements are necessary to counter any potential negative impact that bank failures may have on them thus ultimately enhancing 'good risk management practices'[356].

Secondly, the requirement on banks to ensure that an adequate level of equity-based Tier 1 capital is maintained to act as a buffer[357] against bank insolvency, presents banks with risk-taking incentives which banks capitalise on to maximise their profits. Finally, due to the loss-absorption qualities provided by Tier 2 capital (non-equity) in support of the loss-absorption qualities provided by equity Tier 1 capital, in the possible event of a bank

[355] ibid.
[356] House of Lords: Select Committee on Economic Affairs; 2nd Report of Session 2008-2009. 'Banking Supervision and Regulation' Report Volume 1 Chapter 4, paragraph 49 p21, 2 June 2009 United Kingdom.
[357] ibid.

failure, it becomes absolutely necessary for bank capital to be regulated to enable it fulfil its role and function efficiently.

The Select Committee thus concluded that bank capital regulations were introduced primarily to 'redress the natural tendency of banks to hold insufficient capital'[358] through the undertaking of risk-taking incentives. Although this arguably represents the main justification for the regulation of bank capital, it is submitted that the ever-present problem of creative compliance[359] underscores the continued justification for bank capital regulation, and ultimately bank regulation notwithstanding the distinct disadvantage where capital regulation may potentially exacerbate economic turbulence within regulated financial entities in a pro-cyclical way[360].

Having earlier established the distinction between economic capital and regulatory capital, it is absolutely important to stress that for regulatory bank capital to be classed as eligible, it must be capable of falling into two separate but fundamentally distinct categories, i.e. Going concern capital or Gone concern capital.

In the publication *'A regulatory response to the global banking crisis'*[361]*,* Going concern capital was described as capital which was capable of absorbing losses while the firm continued to operate as a Going concern regardless of whether the firm was in a good state of financial health or experiencing financial stress, whereas Gone concern capital was referred to as capital capable of absorbing losses at a Gone concern stage thus ensuring or safeguarding the interests of depositors following bank insolvency.

Thus whereas the components of economic capital encompass credit risk capital; market risk capital; operational risk capital; business/reputation/strategic risk capital; liquidity risk capital and interest rate

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[358] House of Lords: Select Committee on Economic Affairs Report, (n356), para 51.

[359] McBarnet defines this phenomenon as *'….the use of technical legal work to manage the legal packaging, structuring and definition of practices and transactions such that they can claim to fall on the right side of the boundary between lawfulness and illegality. It is essentially the practice of using the letter of the law to defeat its spirit, and to do so with impunity'.* See FSA, 'The Turner Review: A Regulatory Response to the Global Banking Crisis', March 2009, p17.

[360] House of Lords: Select Committee on Economic Affairs Report (n356) 24 para 69.

[361] FSA, 'A Regulatory Response to the Global Banking Crisis' Discussion Paper DP 09/02 March 2009, p66.

capital, economic capital may broadly be used[362] in the following banking concepts i.e. capital adequacy; risk-based pricing; credit portfolio management; capital budgeting; strategic planning; target selling and risk-based performance management. With this background insight, this thesis will dwell on the application of regulatory capital in respect of capital adequacy.

4.4 Capital Adequacy

Due to the role that banks play in society, daily exposure to risks remains a continuing and inherent part of banking business and business strategic planning. As a result of this, it is important for any bank to have a financial risk management set up in place to ensure that the level of capital held by a bank is commensurate to or adequately caters for the overall risks that a bank faces in the performance of its banking activities. This concept of ensuring that a bank has adequate or sufficient capital to address risks is what is commonly referred to as capital adequacy.

The term or phrase capital adequacy has been referred to as:

> *'……..the adequacy of a bank's aggregate capital in relation to the risks which arise from its assets, its off-balance sheet transactions, its dealing operations and all other risks associated with its business'*[363]*.*

Prior to the concept of capital adequacy becoming embodied in Basel 1, banks existed in an era characterised by individual and inconsistent ways of addressing capital adequacy.

In the early 1970s through to the early 1980s, banks understood the importance of the need to set aside capital which could be used to address the risks inherent in banking business. However, it took the occurrence of a series of banking and financial crises in the early 1980s to spark some kind of response from countries to formally address this issue.

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[362] Agiwal (n339).

[363] J Hitchins, M Hogg and D Mallet 'Banking: A Regulatory Accounting and Auditing Guide', p163 2001 Institute of Chartered Accountants, England and Wales and cited in Marianne Ojo, 'Risk management by the Basel Committee – Evaluating progress made from the 1988 Basel Accord to recent developments', (2010) Journal of Financial Regulation & Compliance Volume 18(4), 305.

Although the recognition of the importance of a formal capital adequacy framework might have been a direct consequence of the banking crises in the early 1980s, there is some degree of certainty in the author's opinion that the ever-increasing role and importance of capital within a typical bank set up was also a contributing factor.

This view notwithstanding, the pathway to the adoption of a minimum capital standard was initiated following a Bilateral Capital Agreement in 1985 between the U.S.A. and the United Kingdom. This Bilateral Agreement eventually paved the way for members of the G10 to commence negotiations that ultimately resulted in the creation of the Basel Capital Accord in (1988). At the time, the rationale for the introduction of a capital adequacy framework was stated in paragraph 7 of the Accord as '…..to establish minimum levels of capital for internationally active banks', however, this Accord was later adopted by over 120 countries world-wide[364] including Ghana and Kenya.

Throughout this period, capital adequacy evolved through the transition from the simple risk-weight system introduced under Basel 1 to a more risk-sensitive approach towards the measurement of banking risks under Basel 2.

This risk-sensitive approach under Basel 2 was preceded by the Market Risk Amendment in 1996 which gave banks the opportunity to apply their own internal models[365] (on condition that the banking supervisory authorities gave their seal of approval) as opposed to the standard[366] computation to assess risks in order to ascertain the regulatory capital requirement needed to be set aside for market risk.

The platform created by the Market Risk amendment, with respect to the use of internal models by banks was broadened when Basel 2 was introduced in 2004. This led to the introduction of risk-sensitive approaches towards the

[364] Constantinos Stephanou and Juan Carlos Mendoza, 'Credit Measurement Under Basel 2: An Overview and Implementation Issues for Developing Countries', [2005] World Bank Policy Research Working Paper 3556, 1,3.
[365] Value-at-Risk models.
[366] Which was flawed due to its 'one-size-fits-all approach'. See BCBS, 'The Regulatory Framework: Balancing Risk Sensitivity and Comparability' Discussion Paper July 2013.

computation of regulatory capital requirements under Basel 2, a framework which largely remains unchanged[367] despite the introduction of Basel 3.

According to an IOSCO Report dated 2006[368], there are four different types[369] of approaches adopted by countries world-wide when implementing capital adequacy, which gives an insight into the fact that no standard and consistent definition of capital adequacy exists, and that different jurisdictions implement some form of capital adequacy process through one of the four approaches. This insight provided by the IOSCO Report gives credence to an earlier statement by Crosse and Hamsel in 1980 that '…..the adequacy of capital is a dynamic concept and it is influenced by the prevailing and expected economic conditions of the entire economy'[370].

Notwithstanding this, it is important for there to be a general consensus to the suggestion that for there to be an appropriate and effective measurement of capital adequacy, there must be consistency in the proper recognition and assessment of all elements of banking risk.

4.4.1 Capital Adequacy – Basel Capital Accord (Basel 1)

Even though the Basel Capital Accord introduced the means by which bank capital could be determined and measured and also a common standard applicable to the measurement of credit risk, it also epitomised the four fundamental principles which the BCBS wanted to introduce to counter the then prevailing issue of banking crises.

The four fundamental principles encapsulated in the Basel Capital Accord established:

- An attempt to provide a common and perhaps consistent definition of regulatory capital;

[367] Perhaps with the exception of the introduction of the Stressed VaR under Basel 2.5.
[368] See IOSCO Report on 'Guidance to Emerging Market Regulators Regulating Capital Adequacy Requirements for Financial Intermediaries' December 2006.
[369] Net Capital Approach, Risk-based Approach, Risk-Adjusted Approach (VaR approach), any other (e.g. Capital Adequacy Directive/Basel Approach).
[370] H D Crosse and G H Hamsel *Management Policies for Commercial Banks* (Bankers Publishing Company, Boston 1980).

- A need for banks to hold a certain amount of capital based on a risk-weight methodology approach, applicable to a bank's assets from the on and off-balance sheet;
- The development of a standard capital adequacy ratio against which a bank can assess its preparedness against credit risks; and
- The importance of consolidated banking supervision towards banking groups i.e. a macro-prudential approach towards banking supervision.

At the time, credit risk was perceived to be arguably the sole source of risk that banks faced as a result of their banking activities and this was evident in the fact that the 1988 Capital Accord only addressed the credit risks that banks were exposed to through their banking activities.

Under the Capital Accord, bank assets were accorded a particular risk-weighting on the basis of the category to which that particular asset had been grouped. This process involved grouping a bank's asset into five (5) 'risk-buckets'[371] depending on the type of asset and irrespective of whether the asset was on or off the balance sheet. See table 4.1 in Appendix 4.

Once a risk allocation had been made, a capital charge would then be applied depending on which risk factor group the asset belonged to.

Thus under Basel 1, the capital adequacy ratio for non-trading book items was represented by the equation:

$$CAR \rightarrow \frac{\text{Tier 1 + Tier 2 Capital}}{\text{Risk-Weighted Assets + Off-balance sheet items}} \geq 8\%$$

For credit risks emanating from a bank's off-balance sheet exposure, the credit risk was first assessed through the application of a credit conversion factor (See table 4.2 in Appendix 4) to the off-balance sheet liability, instrument or transaction, after which the corresponding capital charge would be duly applied.

Thus on the basis of this credit risk assessment methodology, banks were obliged to hold regulatory capital of at least 8% of the applicable risk-weighted

[371] These risk-buckets or categories were indicative of the level of credit risk to which the different types of exposures were perceived to pose to the bank.

asset, of which 4% was to be applied to the 'core' element of capital described as Tier 1 capital.

Following a surge in the trading of securities and credit derivatives by banks together with the growth of global financial markets (and even some local financial markets in developed countries), banks became exposed to market risks[372]. In recognition of this development, the BCBS in January 1996, introduced an additional capital charge to address market risks, however it soon became evident that while Basel 1 was quite straight forward and easy to comprehend particularly with respect to the allocation of risks to different bank assets, this process of risk methodology was deeply flawed and hence sealed the fate of the Basel Accord.

The Basel Accord was criticised and the suggestion made that 'the original scope of the Accord was too restrictive, and that the original methodology for quantifying risk was deficient'[373].

This restriction resulted in the farcical situation where borrowers were grouped in the same credit exposure category, irrespective of the borrower's credit rating[374]. Another issue of grave concern which Saidenberg and Schuerman pointed out was that the Capital Accord provided a recipe for regulatory capital arbitrage particularly because a typical on-balance sheet loan was subjected to a relatively higher capital requirement in contrast to an off-balance sheet loan belonging to the same borrower. This was the case even though such difference could potentially be of little significance as a result of financial engineering.

Despite early warning signs that the Capital Accord was flawed, the BCBS had to reach a general consensus that the risk methodology applied under the 1988 Basel Capital Accord in the determination of regulatory capital was generally too broad. In light of this, Constantinos Stephanou and Juan Carlos

[372] Market risks are risks faced by banks due to proprietary trading, i.e. holding financial instruments for a short-term with the hope of making a financial gain through subsequent sale of the financial instrument. Market risks may also arise through foreign exchange dealings, trading of debt securities, equities, options and commodities.

[373] See B Arnold, 'Systemic risk, macroprudential policy frameworks, monitoring financial systems and the evolution of capital adequacy', (2012) Journal of Banking & Finance 36 3125, 3131.

[374] M Saidenberg and T Schuerman, 'The New Basel Capital Accord and Questions for Research', Wharton Financial Institutions Centre Working Paper May 2003.

Mendoza suggested in their article[375] that the flaws could be grouped into four main problem areas:

Box 1

1. **Inadequate and insufficient risk determining profiles for individual loans**

   Here, the authors point out that the capital charge allocated to all types of corporate exposure regardless of the credit rating of the borrower was evidence in itself that the risk-weighting methodology introduced by the Capital Accord did not in any way acknowledge or incorporate the fact that different counterparties had different risk profiles[376].

2. **No recognition accorded to diversity in loan portfolios**

   The authors suggest that Basel 1 provided no difference in its capital treatment of a highly-diversified loan portfolio which was bound to pose less risk, from a significantly less-diversified loan portfolio which was undoubtedly concentrated, thus more risky.

3. **Lack of a true appreciation of Sovereign risk**

   The attractiveness in bank lending to OECD[377] governments as a result of no regulatory capital charge arising for such lending act, was largely due to the lack of foresight in appreciating the fact that different member countries of the OECD had different credit ratings. Also, the fact that claims to 'national central governments' attracted a risk-weighting of zero, played into the hands of numerous banks particularly banks in developing countries by providing them with an opportunity to flout the fundamental principle of risk-diversification applicable to banking or bank exposures. A number of banks took advantage by providing huge loans to their Governments or

[375] Constantinos Stephanou and Juan Carlos Mendoza (n364).
[376] Notwithstanding the fact that the counterparties (banks) may all have the same capital adequacy even though their risk profiles could be anything but similar.
[377] Organisation for Economic Co-operation and Development.

Sovereigns with a number of State-owned enterprises often directly or indirectly acting as a conduit for such lending.

4. **Lack of an all-round appreciation of risk measurement and prudential management due to few incentives**

This final problem area identified by Stephanou and Mendoza, suggest that a bank with a relatively high capital adequacy ratio often provided a misguided impression that other types of risk[378] had been taken into consideration prior to the calculation of the capital adequacy ratio of the bank. The total lack of recognition of these other risks by banks did little to enhance an awareness of the importance of risk identification and measurement in the process of risk governance.

4.4.2 Capital Adequacy under Basel 2

In 2004, the BCBS published the final version of Basel 2[379] which was meant to replace Basel 1. Although a likely reason for the introduction of Basel 2 might have arguably been due to financial innovation which encouraged banks to succumb to risk mitigation practices, the inherent flaws within the Capital Accord undoubtedly also played a crucial and important role. At the time of publication of Basel 2, the BCBS acknowledged that[380]:

- Capital ratios were not an absolute indicator of the soundness of a bank;
- The risk-weighting methodology introduced by the Basel Capital Accord was obsolete and 'crude' and completely ignored the credit rating of the borrower or the counterparty;

[378] Such as interest rate risk, operational risk, business risk etc.

[379] International Convergence of Capital Measurement and Capital Standards – http://www.bis.org/publ/bcbs107.htm

[380] Slaughter & May LLP, 'The New Basel Capital Accord – A Guide to the Main Provisions', (2004) 3rd edition pp4 and 5, September 2004.

- The insensitivity of the risk-weighting methodology towards credit risk, created an unwanted incentive[381] for banks to engage in the exploitation of the different roles that economic capital and regulatory capital played in the overall capital position of a bank;
- The credit risk mitigation opportunities created through the use of credit derivatives were not taken into consideration under the Basel Capital Accord; and
- Investment by banks in the development of accurate and adequate risk assessment processes were lacking due to lack of sufficient incentives.

Thus the introduction of Basel 2 was based on the overall objective of the BCBS to 'strengthen the soundness and stability of the international banking system'[382] through the adoption and application of an improved risk management system.

Notwithstanding the fact that Basel 2 replaces the Basel Capital Accord, Basel 2 retains the 4 fundamental principles introduced under the Basel Capital Accord. It manages to achieve this feat despite introducing changes at the same time. The fundamental changes introduced by Basel 2, were:

Box 2

1. The introduction and adoption of external credit ratings in the process where counterparty risk weights aligned to credit risk are determined using the Standardised Approach;

2. The ability of banks (subject to the satisfaction of a number of requirements) to apply their individual internal credit ratings in the computation of capital charges in complete contrast to the standardised approach mentioned above;

3. Increased awareness of the use of credit risk mitigation processes

[381] Banks were incentivised to lend more to borrowers with a poor credit rating and at a high interest rate thereby increasing their returns while the capital charge applicable remained the same irrespective of the credit rating of the borrower.
[382] Refer to the summary of the 1988 Basel Capital Accord i.e. International Convergence of Capital Measurement and Capital Standards July 1988.

such as credit derivatives and collateral, to ensure that capital charges for some of these products are increased to help address the issue of regulatory capital arbitrage;

4. The introduction of certain provisions designed to address the concept of securitisations;

5. The recognition of Operational Risk, and the introduction of a capital charge applicable to such risk; and

6. An enhancement in the requirement for market disclosure.

Thus these fundamental changes in unison represented a complete departure from the overly simplified risk approach methodology under the Basel Capital Accord. Despite these changes adding to the complexity of Basel 2, the changes introduced a more robust risk assessment process which ensured that the appropriate capital charge was applied to an asset whose risk profile accurately matched [383] the capital charge.

The regulation and supervision of banks under Basel 2 is driven by a 3 pillar[384] structured approach, of which while maintaining a level of individuality are to some degree over-lapping and mutually inter-dependent towards the attainment of the overall objective of an enhancement in the regulation and supervision of banks.

Pillar 1: Pillar 1 under Basel 2, encompasses the minimum capital requirement which banks ought to adhere to and at 8% of risk-weighted assets remains largely unchanged[385] from the Basel Capital Accord. Under this pillar, Basel 2 also introduces new rules applicable in the calculation of risk-weights for all kinds of loans and sets out a requirement for capital to be held towards 'Operational Risk'.

[383]The risk-weighting methodology under the Basel Capital Accord did not ensure that a bank's capital requirement accurately matched its actual risk profile, thus these changes represented a new risk-sensitive approach towards risk measurement.

[384] Pillars 2 and 3 were non-existent under the Basel Capital Accord.

[385]Except for the introduction of significant changes in the assessment and measurement of credit risk emanating from banks' transactional dealings with other banks as well as other counterparties.

Pillar 2: Pillar 2 under Basel 2, represents the supervisory process which banking supervisors are required to implement to ensure that internal processes within banks are adequately monitored thus enhancing an accurate risk assessment for the purposes of capital adequacy.

Pillar 3: Pillar 3 under Basel 2, introduces new provisions aimed at enhancing disclosure requirements on banks in an attempt to promote market discipline.

4.4.3 Bank Capital under Basel 2

The characteristics and functions of bank regulatory capital under Basel 2, remain unchanged from the features of regulatory capital under the Basel Capital Accord hence the decision by the author to discuss regulatory capital under this title.

Thus, with respect to the capital adequacy ratio equation, the most significant change introduced by Basel 2 was the replacement of the 'crude' risk-weighting methodology approach under the Capital Accord with a more risk-sensitive approach. This new risk-sensitive approach towards risk measurement includes three different methods of calculating credit risk as well as three or four methods applicable in the determination of the capital charge for operational risk.

Although these changes resulted in an increase in the complexity of Basel 2, it most importantly provided a much needed departure from the overly simplified risk methodology under the Basel Capital Accord.

Under the Basel Capital Accord, the BCBS agreed that capital had to predominantly consist of paid-up share capital/common stock and disclosed reserves as these components of capital[386] were always available in an insolvency situation to fulfil a bank's obligations towards its shareholders and other creditors. They also took cognisance of the existence of other types of capital[387], such as capital with both equity and debt-like features (hybrid

[386] Basel Capital Accord, 'International Convergence of Capital Measurement and Capital Standards', (July 1988, updated to April 1998), Annex 1 A – Capital elements Tier 1 p14.
[387] ibid Annex 1A – Capital elements of Tier 2 i.e. undisclosed reserves, asset revaluation reserves, general provisions; general loan-loss reserves, hybrid (debt/equity) capital instruments; and subordinated debt.

capital), quasi-capital and other reserves that were also potentially available to a bank towards the satisfaction of its obligations during insolvency.

To distinguish between the different types of capital (on the basis of quality and individual characteristics, the Basel Capital Accord introduced a 3 tier system of capital of which components of Tier 1 and Tier 2 capital have been further distinguished. Thus under Tier 1 of Basel 1, banks were under an obligation to have a certain minimum level of capital which represented core capital. Such capital had to be 'subordinated and perpetual' and ensured that holders of such capital were the last to claim any distributions in an insolvency (subject to prior payments to other claimants), and also were not entitled to any accumulation of dividends/distributions previously unpaid.

Thus core capital which was effectively Tier 1 capital had to consist of at least 50% of available regulatory capital with the remaining 50% of regulatory capital which included 'quasi-capital' making up Tier 2 and Tier 3. See table 4.3 in Appendix 4.

The Basel Capital Accord also makes provision for the deduction[388] of certain intangibles from capital. Whereas Goodwill[389] is deducted from Tier 1 Capital, other intangibles are expected to be deducted from total regulatory capital[390].

When Basel 2 was introduced, one of the key concepts of the Basel Capital Accord that was adopted by Basel 2 was the definition and components of capital. However, as a result of a surge in the use of innovative capital instruments by banks in the late 1990s and early 2000s, the BCBS had to reiterate in a press release in October 1998, the need for capital instruments in Tier 1 i.e. Core capital to be of a permanent nature and capable of absorbing losses on a going-concern basis[391].

Through this press release, the BCBS highlighted the growing importance of innovative capital instruments but nonetheless underscored the greater

[388] Basel Capital Accord, 'International Convergence of Capital Measurement and Capital Standards' Annex 1C – (Deductions from the capital base) p14 (July 1988, updated to April 1998).
[389] The extra value of a business over and above the fair value of each and every asset net of all liabilities which may be paid for that business.
[390] Such as investments by banks in other banking and financial subsidiaries as well as investments in the direct capital of other banks - See Basel Capital Accord Annex 1C.
[391] Greuning and Bratanovic (n343).

qualities of common stock, disclosed reserves or retained earnings by stating that it was absolutely crucial for Innovative Capital Instruments not to exceed 15% of the entire Tier 1 capital.

While it is submitted that this small allocation of capital was set aside by the BCBS to preserve the loss absorption qualities of Tier 1 through the retention of a larger proportion of the capital base, Greuning is more specific by suggesting that the contents of the press release pointed to the fact that the components of Tier 1 capital:

- Formed a crucial element of capital;
- Were of a permanent nature and enabled a bank to absorb its losses on a going concern basis;
- Did not provide holders of such capital with the right to claim distributions before payments to other claimants had been made in an insolvency situation;
- Represented a yardstick with which the markets could assess the soundness of a bank in terms of its capital adequacy levels;
- Provided a level of stability in terms of market discipline as the voting rights inherent in common shares discouraged potential abuse by holders; and
- Remained to a large extent, the dominant component of Tier 1 capital.

4.4.3.1 Basel 2 (Tier 1 Capital)

As mentioned earlier, the definition and components of capital under Basel 1 continues to apply however, under Basel 2 innovative capital instruments occupy the upper echelons of Tier 1, implying therefore that the remaining components of Tier 1 capital under Basel 2, consists of shareholder's equity, i.e. issued and paid-up ordinary shares and common stock that are permanent in nature; preference shares which are perpetual but non-

cumulative and disclosed reserves[392]. This is also applicable to the composition of Tier 1 capital for any banking group under Basel 2.

The inclusion or exclusion of capital contributions as part of Core Tier 1 capital, according to Greuning depends on whether the contribution was made in cash or kind[393]. He suggests further that contributions in kind were sometimes subjected to a certain limitation by banking regulators i.e. such limitation often being expressed as a percentage value of the entire Tier 1 capital.

These limitations according to Greuning were sometimes imposed by bank regulators in the knowledge that contributions in kind were subject to fluctuations in their value which ultimately made them unreliable in terms of quantifying the exact contribution made. In such circumstances, banking regulators could demand that such 'contributions in kind'[394], seek independent evaluation by an unconnected third-party before being considered as part of a bank's capital.

4.4.3.2 Basel 2 (Tier 2 Capital)

The components of Tier 2 capital under Basel 2 are usually 'quasi-capital' and as such do not share the same characteristic of 'permanence' that underpins Core Tier 1 capital. Examples of components of Basel 2 Tier 2 capital are undisclosed reserves, revaluation reserves, general provisions/general loan-loss reserves, hybrid (debt/equity) capital instruments and subordinated term debt. The inclusion of these components as Tier 2 capital is subject to certain limitations within the Basel Capital Accord.

(i) *Undisclosed reserves*

This form of quasi-capital consists of the post-tax surplus which a bank makes from retained profits and may be eligible for inclusion as Tier 2 capital provided such a practice is acceptable by the banking supervisor within the bank's jurisdiction.

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[392] Disclosed reserves may consist of retained earnings, share premiums, retained profit, general reserves and legal reserves. Disclosed reserves may potentially be augmented to include general funds (such as a fund for banking risks which must satisfy certain requirements) depending on the banking regulations of that jurisdiction.

[393] Any fixed asset.

[394] Greuning and Bratanovic (n343) 105.

Notwithstanding the absence of undisclosed reserves on the balance sheet, it is expected that undisclosed reserves are of such high quality, akin to that of disclosed reserves[395]. As a result, undisclosed reserves are permitted to be included in Tier 2 capital on condition that its availability to meet unforeseeable future losses is not fettered with any encumbrance or liability[396]

(ii) *Revaluation Reserves*

Revaluation reserves may accrue following the revaluation of immovable assets or fixed assets, eg premises of a bank. Revaluations of such kind may be done to reflect fluctuations in the value of such asset and are reflected on the balance sheet.

Accrual of revaluation reserves may also occur through 'latent'[397] revaluation of equity securities that have been the subject of long-term holdings in comparison to its historic cost at the time of acquisition. Following the latent revaluation of equity securities, a discount[398] may be applied to reflect the difference between the current market value and the historic value[399] after which only 50% of the final amount may be made part of Tier 2 capital.

(iii) *General provisions loan loss reserves*

Where provisions or reserves are set aside or allocated to unidentifiable losses that are yet to materialise, such provisions or reserves do qualify for inclusion as Tier 2 capital and may be subsequently appropriated towards the covering of such future losses when they indeed occur. However, any general provisions/loan loss reserves qualifying for inclusion in Tier 2 capital, is subjected to a cap of 1.25 percentage points of the weighted-risk assets to which such provisions/loss may relate[400].

In Ghana, all banks prior to receiving their license to operate as banks are required to deposit a certain amount of money, known as the statutory reserve

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[395] Basel Capital Accord, 'International Convergence of Capital Measurement and Capital Standards', Annex 1 para D(ii)(a) July 1988, updated to April 1998.
[396] ibid.
[397] Thus both forms of revaluation reserves may qualify for inclusion in Tier 2 provided the valuation of the assets are done prudently. See Basel Capital Accord Annex 1 para D(ii)(b).
[398] i.e. 50% discount. This figure was previously 55% under the Basel Capital Accord i.e. Annex 1 para D(ii)(b).
[399] An evidence of market volatility.
[400] Basel Capital Accord Annex 1 para D(ii)(c).

with the Bank of Ghana (the Banking Regulator/Supervisor). While this does not technically form part of disclosed reserves, its purpose is to make such funds available to absorb losses should they occur. It has been observed that because Ghana does not operate a deposit scheme in the traditional sense, this statutory reserve requirement plays a similar role to a deposit insurance framework albeit not explicitly.

(iv) *Hybrid (debt/equity) capital instruments*

Hybrid capital instruments possess both equity and debt-like characteristics and may be eligible for inclusion as Tier 2 capital, provided they are paid-up in full, unsecured and subordinated in nature. They are generally non-redeemable by the holder unless prior consent has been provided by the supervisory authority.

Hybrid capital instruments may also be applied to absorb losses even as the bank continues to operate as a going concern. Where there exists an obligation on the part of a bank to make payment[401] on a capital instrument, such an obligation may be deferred on condition that lack of profitability within the bank makes it unable to honour such payment.

Following the banning of hybrid capital under Basel 3, hybrid capital instruments are being gradually phased out through grandfathering and are expected to be completely phased out by 2023. This implies that cumulative preference shares, possessing both equity and debt-like characteristics would be gradually phased out. Thus with the exception of South Africa, it is envisaged that foreign banks in Africa that have their home jurisdiction in countries that have begun the implementation of Basel 3 may also gradually phase out any of such hybrid capital including perpetual subordinated debt and preference shares from their capital portfolio which may ultimately impact other banks especially in Africa and for that matter Ghana and Kenya. This is because the market for such capital products in jurisdictions where foreign banks own a large proportion by way of market capitalisation and or asset share would begin to dwindle and gradually become non-existent.

[401] Such as Interest.

(v) *Subordinated term debt*

This consists of unsecured, subordinated debt capital instruments with a maturity date exceeding at least 5 years. In the last 5 years prior to reaching maturity, and prior to its inclusion in Tier 2 capital, amortisation will occur, where a cumulative discount of 20%[402] is applied thus acknowledging the receding value of the subordinated debt capital instrument.

Subordinated term debt is only available to absorb losses where the bank has become a gone concern i.e. no longer viable and has ceased trading, and as such, when included in Tier 2 capital, cannot be allowed to exceed 50% of core capital i.e (Tier 1 capital).

4.4.3.3 Basel 2 - Tier 3 Capital

Tier 3 capital may consist of short-term repayable subordinated debt with a maturity date of not less than two (2) years. It is used to address market risks that may arise from the trading book, as well as risks arising from both banking and trading books due to foreign exchange and commodities transactions.

Tier 3 capital is subject to a 'lock-in' clause that prevents the payment of interest and principal if such payment will result in the bank's total capital position falling short of the minimum capital stipulated.

Thus in summary form, an overview of Basel 2 capital may be represented in broad terms in tables 4.3 and 4.4 in Appendix 4.

With the abolishing of Tier 3 capital under Basel 3, banks already implementing Basel 3 in Basel 3 compliant jurisdictions may have to set aside capital from perhaps the capital conservation buffer, the countercyclical buffer or elsewhere towards market risks.

4.5 Deductions under Basel 2

Intangibles[403] are subject to deduction from the components of capital under Basel 2 just as under the Basel Capital Accord. In addition to this, Basel 2

[402] See Basel Capital Accord Annex 1 Para D(ii)(e).
[403] Such as goodwill.

capital is also subject to the following deductions which fall under 5 broad categories:

4.5.1 Investments in majority-owned securities and other financial subsidiaries[404]

Where a bank owns investments in a majority owned securities firm or any other financial subsidiary(ies), Basel 2 requires that deductions of such investments are applied to the holding bank's capital on condition that the holding bank is not consolidated to the subsidiary in which the investments are held. Also, any third-party investments in the subsidiary of such holding bank will be deducted and where a capital shortfall is likely to arise following deductions from such subsidiaries, the amount of shortfall will be deducted from the capital of the holding bank itself[405].

4.5.2 Investments by banks in insurance subsidiaries[406]

Where a bank owns investments in an insurance subsidiary, such investment is excluded or deducted from the holding bank's capital. This also ensures that the insurance subsidiary is adequately capitalised on a stand-alone basis[407], however, if the insurance subsidiary experiences a shortfall in its capital base, such shortfall(s) will have to be made good using capital from the holding bank's capital.

4.5.3 Significant minority-owned investments[408]

Where a bank owns significant but minority-owned investments in other banking entities, securities firms and other financial entities[409] at any given time, deductions are applied to the capital of the holding bank. A threshold level may be applicable to deductions under circumstances of which

[404] BCBS, 'International Convergence of Capital Measurement and Capital Standards' (A Revised Framework) Basel 2, Part 1(II) paragraphs 24-27 June 2004.
[405] ibid paragraph 27.
[406] Basel 2, Part 1(IV) paragraph 30.
[407] Slaughter & May LLP, 'The New Basel Capital Accord, A Guide to the Main Provisions' 3rd edition p9 September 2004.
[408] Basel 2 Part 1(III) paragraphs 28, 29.
[409] For such deduction to be applicable, these firms must be unconsolidated.

determination of such 'cap' level would be the responsibility of relevant national supervisors[410].

4.5.4 Significant investments in commercial entities[411]

Where a bank has individual investments in commercial entities exceeding 15% of the investing bank's capital, such excess investment would be deducted from the investing bank's capital. However, where the bank possesses investments in multiple commercial entities, such investments would be aggregated and where this exceeds 60% of the investing bank's capital, then deductions would be applied to the bank's capital in relation to any excess level of investments.

4.5.5 Investments in unconsolidated entities

Where deductions become applicable to investments by banks in unconsolidated entities, Part (VI) paragraph 37 of Basel 2 states that 50% of such investment would be deducted from Tier 1 capital and the remaining 50% from the Tier 2 capital of the investing bank. However, the limits applicable[412] to investments of such nature, i.e. investments in unconsolidated entities would be applicable only after deductions of goodwill have already been made to the bank's capital, but prior to the actual implementation of deductions to such investments.

4.6 Credit risk and measurement under Basel 2

The introduction of a new risk-sensitive approach towards risk measurement under Basel 2 was arguably the most significant of the fundamental changes ushered in by Basel 2. The overly simplified risk-weighted methodology i.e. the standard approach for credit risk measurement under Basel 1 was replaced by a more robust yet complex system of risk measurement which sought to ensure that the capital charge calculated for a given risk-weighted asset accurately matched the risk profile of that particular asset.

Underpinning this new risk-sensitive approach was the introduction of External Credit Ratings Agencies whose role it was to assess the credit risk of

[410] Basel 2 Part 1(III) paragraph 28.
[411] Basel 2 Part 1(V) paragraph 35.
[412] i.e. Limits applicable to Tier 1, Tier 2 and Tier 3 capital of such bank.

the counterparty and assign to the latter, a 'risk-bucket' or 'credit quality steps' instead of the old risk-weighting system under Basel 1. Likewise, the recognition of operational risk as a real risk under the market risk amendment by the BCBS necessitated the addition of a capital charge requirement for risks that fell under this category.

Whereas Basel 2 introduced the 3 pillar structure under which banking regulation and supervision is conducted by different regulatory bodies world-wide[413], an analysis of the risk-sensitive approach introduced by Basel 2 falls under pillar 1 of the 3 pillar framework i.e. the minimum capital requirement framework. Bearing this in mind, it is only logical that this thesis seeks to make pillar 1 the focal point of the ensuing discussion particularly in relation to the concept of capital adequacy.

Notwithstanding this statement of intent, occasional references may be made to pillar 2 i.e. the pillar that deals with banking supervision and thus subsequently the individual and collective internal capital adequacy processes of the commercial banks that participated in this research. Under Basel 2, the pillar 1 structure retains the Basel 1 minimum capital requirement of 8% of risk-weighted assets. This capital requirement is mandatory and allows banks to adequately cater for all banking risks, particularly the three (3) main types of risk which banks face under pillar 1. These three risks are credit risk, market risk and operational risk. For each of these risks, Basel 2 sets out risk measurement approaches which enable the appropriate capital charges to be set aside.

4.6.1 Credit Risk

Credit risk is referred to by Constantinos Stephanou and Juan Carlos Mendoza in their article[414] as:

> *'…….traditionally defined as default risk, i.e. the risk of loss from a borrower/counterparty's failure to repay the amount owed (principal or*

[413]Jurisdictions that have either partially or fully implemented the Basel 2 provisions in their respective national banking regulations.
[414] Constantinos Stephanou and Juan Carlos Mendoza (n364) 6.

interest) to the bank on a timely manner based on a previously agreed payment schedule'.[415]

Basel 2 introduces three (3) risk measurement approaches in respect of credit risk, namely the standardised approach, foundation internal ratings-based approach (FIRB) or the advanced IRB approach (AIRB).

4.6.1.1 Standardised Approach

This approach, although similar to the standard approach under Basel 1, differs from Basel 1 in that it adopts greater risk sensitivity. This heightened risk sensitivity is attained due to the use of credit ratings provided by external credit assessment institutions (ECAIs). These credit ratings are then used to determine the applicable risk-weights when determining the capital charge for credit risk.

Although the concept of risk-weighted assets is still retained, (i.e. where the level of exposure of a particular asset is multiplied by a risk-weight assigned to a particular counterparty), the main difference here is that the risk-weight of the counterparty is now determined by the external credit rating provided by the ECAI with respect to that counterparty over a period of time[416].

Notwithstanding the ever-present prospect that financial institutions in Ghana and Kenya face of having their credit ratings determined by external credit institutions outside Africa, this new risk-sensitive approach represented a departure from the old approach under Basel 1, where counterparties were grouped into risk-buckets regardless of their individual credit quality[417]. It ensured that the capital charges computed were reflective of the credit risks posed by the counterparty. The standardised approach applies to banks[418]

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[415] ibid.

[416] Due to the possibility of the credit rating of a counterparty changing over the life of a loan, the parties to a particular transaction may wish to insert provisions in their loan documentation addressing any potential increase in capital costs due to a ratings downgrade of the counterparty.

[417] Under the old approach introduced by the Capital Accord (Basel 1), OECD Countries were grouped into zone A with risk-weight of zero and 'all other' including all non-OECD countries, banks and investment firms grouped into zone B. Thus those that belonged to zone B category implied that they had higher but varying 'levels of riskiness'. This approach was abolished under Basel 2.

[418] Approximately 68% of banks that took part in this research applied the standardised approach in assessing credit risk. This figure could have been higher had a few respondent banks not failed to provide a response.

that have not sought permission from banking supervisors within their jurisdiction to apply the internal ratings-based approach. Its application however depends on whether the counterparty risk weight is being computed due to a sovereign exposure or a bank.

i. *Sovereign Exposure*[419]

There are two (2) methods used to determine counterparty risk-weights applicable to sovereign exposures.

First Method

Counterparty risk weight determined on the basis of the external credit rating of the Sovereign.

This method is adopted by national banking supervisors where exposures are in the local currency and are accorded a low risk weight.

Thus, the national banking supervisor may apply a lower risk-weight to the sovereign exposure where the exposure has been funded and denominated in the local currency. See table 4.5 in Appendix 4.

Second Method

Counterparty risk weight provided by national export credit agencies (ECAs).

ECAs under the auspices of the OECD's *'Arrangement on Guidelines for Officially Supported Export Credits'*[420] publish risk scores for different countries which are then used by banks to determine the risk weighting. See table 4.6 in Appendix 4.

Thus any claim on a local public sector body will be regarded as though it was a claim on a bank within the same jurisdiction of that public sector body regardless of the option the banking regulator in that jurisdiction chooses for the bank(s). Alternatively, the banking supervisor within that jurisdiction may regard a claim on a public sector body as akin to a claim on the sovereign

[419] BCBS, 'International Convergence of Capital Measurement and Capital Standards', Basel 2 June 2004, (A Revised Framework) Part II paragraphs 50-55.
[420] See http://www.oecd.org

within which the public sector body is located. The assumption[421] here being that the credit risk posed by a public sector body is likely to be the same as the credit risk posed by the sovereign exposure.

ii. *Banks*

The methods applicable in the determination of counterparty risks weights for bank exposures are based on two options. Under option 1, every single bank incorporated in a given country will be assessed as having a risk weight one level below the risk weight applicable to that particular country or sovereign.

Thus where claims are made on a bank whose sovereign is rated BB+ to B-, then the credit rating of the bank within the same jurisdiction will be assessed as below B-. However, a bank with a credit rating of B- or unrated will have a risk weight cap of 100% applied instead of 150%. See table 4.7 in Appendix 4. It is also unlikely an unrated bank would be treated worse than the ratings of the country in which the bank resides[422].

Under option 2, a bank is accorded a risk-weighting on the basis of the bank's individual credit rating. Where a claim is described as a short-term claim[423], a preferential risk[424] weight may become applicable instead. See table 4.8 in Appendix 4.

iii. *Corporates (See table 4.9 in Appendix 4).*

iv. *Others*

Eg. Claims on Multilateral Development Banks and International Organisations[425]*.*

Claims on e.g International Bank for Reconstruction and Development (IBRD – the World Bank), the International Finance Corporation (IFC), the Asian Development Bank (ADB), the African Development Bank (AfDB), the Inter-

[421] This assumption is on the basis that the public sector body does itself have significant revenue generating capacity or enjoys some level of funding from its government.
[422] Slaughter & May LLP, 'The New Basel Capital Accord – A Guide to the Main Provisions' 3rd edition pp4 and 5, September 2004.
[423] A short-term claim is where the claim has an original maturity of not more than three (3) months.
[424] This is not available to banks having a risk weight of 150%.
[425] Slaughter & May LLP New Basel Capital Accord Guide (n422) 14-18.

American Development Bank, the European Investment Bank, (EIB), the European Bank for Reconstruction and Development (EBRD), the Nordic Investment Bank (NIB), the Caribbean Development Bank (CDB), the Council of Europe Development Bank (CEDB) and all international organisations such as the EC, IMF and BIS all have a credit risk weighting of zero.

4.6.1.2 Internal Ratings Based (IRB)

The rationale behind the introduction of the IRB according to the Basel Committee was to promote two fundamentally important objectives[426], i.e. ensuring that capital charges were risk-sensitive and also providing some kind of impetus on the part of banks to enhance a reduction in risk through better credit risk management procedures.

In the article published by Slaughter & May LLP, the authors suggest there are five key principles[427] that underpin the IRB approach i.e.:

Box 3

1. Each exposure is grouped or classified according to the type of exposure[428];

2. The bank is required to provide its own figures for the probability of default (PD) using internal measurements for each individual exposure. However where the advanced method (i.e. Advanced IRB) is to be applied, estimates for the remaining risk components are to be supplied by the banking regulator;

3. The risk charge is then calculated based on the risk weights allocated to each portfolio, and the values of the risk components which have already been determined;

4. Certain minimum requirements ought to be satisfied before a bank may start to use the IRB approach; and

[426] Slaughter & May LLP New Basel Capital Accord Guide (n422) 19.
[427] ibid 19-20.
[428] Such as Corporate exposures, retail exposures, equity exposures etc.

5.	Banks are obliged to seek permission and obtain consent from their banking regulator prior to using either form of the IRB approach.

Thus as highlighted in the fifth key principle above, the IRB approach can only be adopted and implemented by a bank after permission has been sought[429] from the banking regulator within the bank's jurisdiction. In order to be granted permission to implement the IRB approach, the bank ought to show that its systems are well suited and adapted[430] towards the proper assessment and measurement of credit risks.

The banking regulator may also grant permission where the bank can adequately demonstrate that it had already been using a similar risk measurement approach for the three years prior to the permission being sought. Following the granting of permission by the banking regulator, the permission-seeking bank is prevented[431] from then reneging on its obligation to implement the IRB approach.

Thus, in order for a bank to resort to the Standardised approach following the grant of permission, such bank will have to seek permission again to revert to the less onerous obligations under the Standardised approach.

There are two ways by which a bank could implement the Internal Ratings-Based Approach (IRB) i.e. the 'Foundation Approach' and the 'Advanced Approach'. A bank implementing the IRB approach usually makes a distinction between the exposures by grouping the exposures into six distinct portfolios[432]. After the groupings have been made, the bank may then apply one of the two approaches to a particular portfolio of exposures.

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[429] Where a bank fails to obtain permission to use the IRB approach, such a bank must continue using the standardised approach and where a bank already implementing the IRB approach fails to obtain permission to implement the advanced IRB approach, such a bank will continue to use the foundation IRB.

[430] See European Union Directive – Art 84 of Directive 2006/48/EC.

[431] The exception here is that an IRB implementing bank may be allowed to use the standardised approach in respect of certain exposures, particularly where the total number of the exposures is limited or not excessive. See Art 89 of the European Directive 2006/48/EC.

[432] Identified in Slaughter & May LLP, 'A Guide to the Main Provisions', 3rd edition p20 2004, as corporate exposures, sovereign exposures, exposures to banks and securities firms, retail exposures, equity exposures and eligible purchased receivables.

(i) *Foundation Approach*

Under the foundation approach, the bank is under an obligation to provide the probability of default (PD)[433] for all the different exposures, the sum total of which is applied to the standard figures for 'EAD' and 'LGD' which are provided by the banking regulator in that jurisdiction and a capital charge calculated depending on the risk weight attached to each individual portfolio.

Data for the risk component 'Maturity' (M) which is only applicable to the corporate portfolio is also provided by the banking regulator. The corporate portfolio has within it five sub-groupings[434] based on different types of specialised lending.

Surprisingly, out of the 22 commercial banks that took part in this research, only five banks (two from Ghana and three from Kenya) indicated that the IRB approach was implemented[435]. Of the remaining banks (i.e. 17 banks), 15 used the standardised approach and two banks (from Ghana) failed to indicate which method was being used for credit risk measurement. One respondent bank from Ghana indicated that it used both standardised and advanced IRB depending on the type of risk.

Special rules[436] apply to exposures to a securitisation transaction and purchased receivables both of which remain outside the remit of this thesis.

(ii) *Advanced Approach*

Under the advanced approach, all the risk components are provided by the bank itself. Thus the bank provides its own internal estimates for PD, EAD and LGD using historical data acquired through experience. This suggests that regardless of whether a bank uses the foundation IRB approach or advanced IRB approach, the bank will have to provide the PD, from its own internal measurements.

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[433] Calculated using the bank's own internal measurements.

[434] Project Finance, Object Finance, Commodities Finance, Income producing real estate and high-volatility commercial real estate – See Slaughter & May, 'A Guide to the Main Provisions' 3rd edition p20 2004.

[435] The respondents for these banks did not indicate if they applied the foundation IRB or the advanced IRB.

[436] Refer to Part 3 (Point 5 of Annex VII to Directive 2006/48/EC); also referred to in Andrew McKnight, 'Basel 2: The Implementation in the UK of its Capital requirements for banks' (2007) Law and Financial Markets Review Volume (1) (4) 327, 339.

Although the main difference in the calculation of the capital charge between the foundation approach and the advanced approach depends on who supplies the data for the risk components, there are other factors to be considered. Under the advanced approach of the IRB, the capital charge is calculated using the same formula. However, although both approaches rely on the continuous operation of the risk components i.e. probability of default (PD) and loss given default (LGD), the advanced approach relies on the extra element of 'maturity of exposures'.

Also, banks adopting the advanced approach are able to use their individual internal models for off-balance sheet assets as opposed to the use of credit conversion factors. This concession is applicable provided the exposure would not have attracted a credit conversion factor (CCF) of 100%[437] under the foundation IRB approach.

4.6.2 Minimum Requirements for IRB implementation[438]

There are certain minimum requirements that banks must satisfy before using the IRB approach and these minimum requirements ought to be satisfied regardless of whether they use the foundation or advanced internal ratings-based approach. Box 4 below sets out the minimum requirements for the adoption of the IRB approach:

Box 4

1.	The applicable IRB system must always take into consideration the risk of default of the borrower and the type of transaction to which the exposure relates to;
2.	The bank is expected to be assessed on its credit status, risk management processes and the process of internal capital allocation and its adherence to corporate governance principles prior to permission being granted for the adoption of IRB. Thus banks ought to be able to provide evidence indicating the internal use of a similar

[437] Where the exposure would have attracted a CCF of 100% under the foundation IRB approach, then a CCF of 100% would be applicable under the advanced IRB approach.
[438] Slaughter & May LLP New Basel Capital Accord Guide (n422) 22.

credit risk measurement process for at least three years prior to the application to use the IRB;

3. Internal ratings processes already in place at the banks must be overseen by independent bank personnel who are not responsible for lending money at the bank. Also, the ratings at the bank must be subjected to annual reviews;

4. The bank's internal rating system and processes must have already been approved by senior figures at the bank, e.g. directors who have a good understanding of the design and workings of such processes;

5. The bank's existing internal rating system must be subjected to an annual review, by the audit team of the bank. Likewise, national supervisors of banks must permit external auditors to conduct annual reviews of their systems and processes; and

6. A pre-requisite for a bank aspiring to implement the foundation IRB or advanced IRB is for the bank to conduct a similar assessment or calculation using the Basel Capital Accord as its basis.

4.7 Risk Components

For the concept[439] of IRB to be comprehended in its entirety, the components of risk that together provide the method for the computation of the charge for credit risk must be set out after which the function and seamless interaction of all components discussed.

Box 5

1. **'Default'**: A default arises where a borrower or an obligor is either unable to make good its full credit obligations to a bank following the expiration of 90 days after payment was initially due.

[439] Andrew McKnight, 'Basel 2: The Implementation in the UK of its Capital Requirements for Banks' (2007) Law and Financial Markets Review Volume (4), 327.

2. **'Probability of Default' (PD)**: This represents the probability that a borrower/obligor or a group of borrowers will default within 12 months after their credit obligation to a bank arises. This likelihood of default is to some extent based on the risk characteristic of the borrower/obligor and the nature of the transaction involved.

3. **'Loss' (L) or (EL)**: This amounts to economic loss, including loss(es) arising from market volatility and direct/indirect costs associated with the recovery of debt obligations.

4. **'Loss Given Default' (LGD)**: This is a measurement representing the ratio of the loss on an exposure (arising from the default of the counterparty/borrower) to the outstanding amount at the time of default'[440]. This differs from the (PD) in that the (LGD) is dependent on the type of the transaction as the magnitude of the loss will depend on the type of exposure, (i.e. senior or subordinated)[441] and also on the issue of whether collateral was provided by the borrower.

5. **'Exposure at Default' (EAD)**: This refers to the size or volume of a bank's exposure at the time the borrower defaults. 'EAD' for on-balance sheet transactions is often quite straightforward to ascertain, as this information may easily be obtained from the balance sheet[442]. For off-balance sheet transactions, figures representing 'EAD' will be provided by either the national banking supervisor or the bank itself depending on whether the bank uses the foundation IRB approach[443] or the advanced IRB approach[444].

[440] ibid.
[441] Slaughter & May LLP, The New Basel Capital Accord Guide (n422) 21.
[442] This amount is subject to the existence of a valid netting agreement which is capable of reducing the size of the exposure or loan amount.
[443] Where the bank implements a foundation IRB, the national banking supervisor will supply standard figures used in the computation of 'EAD', but derived from the credit conversion factors applicable under the standardised approach.
[444] Banks using the advanced IRB approach will have to calculate 'EAD' on the basis of estimates derived internally but on condition that a credit conversion factor of 100% is not applicable to the exposure where the foundation IRB approach is concerned.

6. **'Maturity' (M)**: This is indicative of 'the contractual maturity of a bank's exposure to a borrower'[445] and is generally relevant where collateral has been provided by the bank for the exposure or where netting is being applied to the on-balance sheet transaction or exposure'. Another importance of 'Maturity' can be seen where the loan is a long-term loan or a short-term loan as long-term loans are generally considered to be more risky than short-term loans[446].

Risk-Weighted Assets

Whereas the risk-weighting of assets and counterparty risks under the standardised approach was pre-determined by credit ratings provided by ECAIs, the capital charge for risk-weighted assets under the IRB approach is set out using the formula:

RWA = Counterparty risk weight x EAD.

Thus the capital charge is calculated by multiplying the risk-weight attributed to the type of exposure by the value of the bank's exposure at the point where default occurs. The value of the EAD applicable to loans and on-balance sheet assets is thus the nominal value configured following the summing up of individual risk-weighted assets.

For off-balance sheet items[447], the capital charge is computed by first multiplying the counterparty risk weight by a credit conversion factor (CCF) the latter value of which depends on the duration[448] of exposure applicable to the off-balance sheet items.

4.8 Market Risk

Although banks had previously applied statistical methodology in their assessment of market risk arising from different areas of the trading book, the Basel Committee agreed that this approach was not effective enough.

[445] Slaughter & May LLP, New Basel Capital Accord Guide (n422) 23.
[446] ibid, 22-23.
[447] Excluding derivatives.
[448] For all off-balance sheet exposures including exposures of less than 1 year, a conversion factor of 75% is usually applicable. However, for short term exposures such as trade credits, a credit conversion factor of 20% is applicable.

The fluctuations in the market prices of equity and debt instruments as well as in 'foreign exchange and commodity positions'[449] that banks experienced after the introduction of the Basel Capital Accord, prompted the Basel Committee to make amendments to the Basel Capital Accord.

This process was initiated when the BCBS issued a proposal[450] in April 1993 aimed at addressing banks' exposure to market risks. These markets had been identified by the BCBS as comprising of risks emanating from the trading book due to shifts in market prices of equity and debt instruments, off-balance sheet positions and contracts, as well as foreign exchange risk.

Thus after welcoming participants' suggestions and opinions, the BCBS in 1995 accepted that it was logical and prudent to extend the ambit of Basel 1 to include market risks. This paved the way for the BCBS to introduce the Basel Committee's Market Risk Amendment to the Capital Accord (the 'Amendment') in 1996.

The rationale for this amendment was to provide in explicit terms, a requirement for banks that were engaged to a significant degree in some form of business trading to compute a capital charge using the standardised approach or the internal models approach.

This was deemed a necessity by the Basel Committee to address the risk of loss a bank potentially faced following a depreciation in value in the market prices of its equity and debt holdings.

The Market Risk Amendment also established a distinction between financial instruments that were kept by banks on a short-term basis with the intention of gaining profit following a resale. Such assets, constituting the bank's trading book were distinct from assets in the banking book, including off-balance sheet items.

Thus there are two methods that can be employed under the Market Risk Amendment, to calculate the capital charge applicable for assets within the trading book as well as off-balance sheet items, i.e. the standardised approach as already discussed and the Internal Models-based approach.

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[449] McKnight, (n439) 333.
[450] The supervisory treatment of market risks.

4.8.1 Internal Models-based approach.

Under the framework for the internal models-based approach, banks implementing this process were required to conform to qualitative and quantitative standards. The qualitative standard criteria required senior management within the bank to set up an independent risk management unit whose task it was to be closely involved with the daily risk management procedures of the bank.

These processes were expected to be rigorous and robust and there had to be a system in place to ensure independent and regular assessment of the risk measurement processes with a view to ensure compliance.

The quantitative standard on the other hand involved the daily computation of the 'value-at-risk' which involved using a '99^{th} percentile, one tailed confidence interval' measured over a period of 10 days during which the instrument or item is expected to be held in the trading book or on-off balance sheet. Thus a bank using the internal models-based approach was expected to conform to these standards and the capital charge set aside was based on data obtained from a 'historical observation period' of a minimum of 1 year.

Applying such data, the capital charge was calculated using the greater value of either the previous day's 'value-at-risk' measurement or the average figure representing the daily 'value-at-risk' figures for each of the previous 60 business days which is then multiplied by a (factor)[451].

4.8.2 Market Risk Value-at-Risk Model (VaR)

The rationale behind the introduction of the VaR model stems from the fact that exposures in the trading book were not expected to remain in the trading book on a long-term basis as the ultimate intention of the bank was to re-sell thus raking in some profit. The fact that a bank may hold these instruments on a short-term basis and not until maturity implies that the valuation of these instruments should not be conducted on a mark-to-market basis to ensure

[451] This factor is expected to be provided by the national banking supervisor in that jurisdiction and is based on their individual assessment of the risk management framework existing in each bank.

effective management of market risk[452]. It is the nature of such valuation which necessitated the introduction of the VaR model.

The VaR model was indeed more sophisticated than the standardised methodology previously applied and with it came a number of parameters within which it could be applied.

Following the introduction of the VaR model, the Basel Committee encouraged banks to implement their own version of value-at-risk (VaR) within the parameters set by the Committee. The purpose of the VaR model was to ensure a consistent outcome in the calculation (by a bank) of the likelihood of loss that a bank could suffer in the entire trading book.

The likelihood of consistency in outcome was perceived to be characterised by the VaR models' ability to gauge price fluctuations of instruments in the respective markets and to measure the extent to which these market prices differed with other market prices. There are two types of VaR models introduced under the Market Risk amendment of the Basel Capital Accord, i.e. the 'Variance/Covariance analysis' approach and the 'Historical Simulation' approach.

4.8.2.1 Variance/Covariance analysis approach

Under this approach, historical data accumulated for price fluctuations within the market as well as price correlations resulting from market comparisons are inserted into a statistical formula which provides an estimation of the value of likely loss(es).

An assumption is created that the normal distribution of price changes (fluctuations) allows a confidence level to be calculated for the bank i.e. an attempt to predict the value-at-risk figure over a fixed period of time with a degree of near certainty (e.g. 95% or 99% likelihood that this confidence level would not be exceeded).

Finally this approach provides a formula for calculating the confidence level by multiplying a standard deviation derived from previous price fluctuations[453] with a scale factor.

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[452] P Jackson, 'Risk Measurement and Capital requirement for banks', Bank of England Quarterly Bulletin May 1995 pp177-184.

4.8.2.2 Historical Simulation approach

This approach is based on future potential losses which a bank expects to incur through the analysis of data relating to previous price[454] fluctuations. This data analysis is used to assess the volatility in prices on the assumption that the instruments would be kept for the entire duration of two years.

This method ensures the attainment of a 99% confidence level without supporting the assumption that price fluctuations are uniformly distributed, i.e. it indicates that loss was never exceeded in 99% of the time.

A distinguishing feature[455] between the two types of VaR approaches is the assumption of normal distribution of price changes under the variance/co-variance approach. The fact that the historical simulation approach does not make such assumptions ensures that this approach often results in an arguably effective determination of the confidence level by ensuring that price volatility is not miscalculated. This is mainly because price volatility can be very extreme and as a result an assumption that volatility gives rise to a normal distribution is likely to give inaccurate and unreliable results.

An advantage which the historical simulation approach has over the variance/co-variance analysis approach is that the former is able to accurately capture the entire risk within the trading book including risks from the option portfolio[456].

Although banks can implement either of the two approaches in their quest to set aside capital for market risk, the UK banks have been known to favour the historical simulation analysis approach. It is submitted that the analysis of the responses provided by the commercial banks that participated in this research suggests that most of the commercial banks from both jurisdictions commonly

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[453] Measured in percentages.
[454] Usually data over two years is utilised.
[455] Another difference is in the calculation of confidence interval, where a statistical method is used for the variance/co-variance method as opposed to the observation method used for the historical simulation approach.
[456] P Jackson (n452) 180.

used the standardised approach as opposed to the Internal Models – based approach or the Market Risk Value-at-Risk (Model) VaR[457]

This may be attributed to the fact that the risk management systems and framework in place within these banks are not sophisticated enough to support such updated risk management/measurement techniques.

4.9 Operational Risk

Operational risk is defined as 'the risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events'[458]. Andreas A. Jobst, suggests in his article[459] that the definition of Operational Risk should include acts (neglected to be undertaken) which heightens the risk loss.

Under the old Basel Capital Framework (Basel 1), the 'one-size-fits all' approach to risk ensured that capital set aside for credit risks were also utilised in respect of dealing with operational risk matters as and when they arose. Thus there was no formal recognition of operational risk as a credible and real source of risk worth mitigating against.

However, in 1998, following a survey of the banking industry by the Basel Committee, it became evident from the published data, that there was an increasing awareness within the banking industry of the growing threat of other banking risks such as operational risk and that credit and market risks were not the only risks that banks faced. Greuning[460] points out that the increasing use of sophisticated electronic systems in banking retail transactions in addition to the development of efficient and effective application of technology within the e-commerce industry (originally designed to minimise both credit and market risk) inadvertently played a significant role in the increase of operational risk.

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[457] The author is of the opinion that the opposite may be true for subsidiaries of global banks operating in Ghana and Kenya. Such banks by virtue of their size and global nature are expected to use these much improved market risk methodology within their risk management framework.

[458] BCBS, 'International Convergence of Capital Measurement and Capital Standards' June 2004 Basel 2 (A Revised Framework), Part 3(V)A, paragraph 644.

[459] Andreas A Jobst, 'The treatment of Operational Risk under the New Basel Framework: Critical Issues', 2007 Journal of Banking Regulation Volume 8(4), 316.

[460] Van Greuning and Bratanovic (n343)147.

Basel 2 therefore introduced new and specific provisions[461] requiring banks to set aside capital for operational risk. This was another positive step[462] taken by the Basel Committee towards the development of a regulatory framework designed to be more risk-sensitive than its predecessor i.e. Basel 1 Capital Accord.

Today, there is a general recognition by all banks that losses suffered by banks world-wide may emanate from internal operational inadequacies or shortcomings that are usually predictable[463] or on the contrary unpredictable events which at its most extreme, eg an act of God may be so huge and unimaginable.

Jobst suggests that while losses arising from internal operational risk are due to the risk of 'failure of people, processes and technology'[464] during the performance of business operations[465], losses from external operational risk may arise as a result of the entry of a business competitor thus necessitating a revision in business plan or strategy, political or regulatory upheaval, acts of God, terrorist acts, acts of vandalism and 'other such factors that are outside the control of the firm'[466].

The capital requirement for operational risk is calculated on the basis of the measurement of the monetary impact caused by the internal or external event giving rise to operational risk[467].

Basel 2 thus introduces three methodological approaches that may be used in the calculation of the capital charge for operational risk, i.e. the Basic Indicator Approach (BIA); the Standardised Approach (STA); and the Advanced Measurement Approach (AMA).

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[461] Basel 2, Part 3(V)B paragraphs 645-659.
[462] The other steps being the introduction of the IRB i.e. foundations and advanced approaches.
[463] Expected Loss (EL).
[464] Jobst (n459) 317.
[465] Such failures in internal management and control systems, fraud originating from either within or outside the firm (bank), lawsuits or other events likely to affect the smooth operation of business activities.
[466] Jobst (n459) 317.
[467] Following the calculation of operational risk, economic capital may then be assigned to it.

4.9.1 The Basic Indicator Approach (BIA)

The BIA method is the simplest of the three methodological approaches. The simplicity of this approach is evidenced by the fact that the banks do very little by way of input. This approach was seen as the most appropriate method for banks with less sophisticated control processes, board oversight, data reporting and audit processes in place for operational risk[468]. The BIA requires banks to set aside a fixed percentage (15%) of their average gross income over the previous three years for operational risk losses and where for any particular year, annual gross income amounts to zero or a negative figure(s), such figure(s) would be excluded.

The capital charge requirement for banks using the BIA adopts the 'gross income' as the sole indicator of a bank's total operational risk exposure. Thus, capital is set aside for operational risk based on a 'time-weighted fixed percentage (α) of gross income'[469]**,** with gross income being the sum of net interest income and net non-interest income[470].

In circumstances where a bank is unable to provide data relating to its income from three years, such as where the bank has not been in operation for more than three years, such bank may be required to rely on future projections of gross income over a three year period or part thereof to compute the applicable indicator. On the contrary, a bank may request a waiver of this requirement for exceptional reasons such as the sale of one of its major source of revenue lines to avoid an incorrect estimate of its operational risk capital requirement provisions.

4.9.2 The Standardised Approach (STA)

A bank applying the standardised approach is expected to compartmentalise its activities into 8 different business lines. For each of these business lines, the gross income is used as a common indicator.

The gross income is determined using an approach similar to that under the BIA (i.e. the gross income figure representing the average annual gross

[468] Van Greuning and Bratanovic, (n343) 118.
[469] Slaughter & May LLP, 'The New Basel Capital Accord: A Guide to the Main Provisions', 3rd edition p74, 2004.
[470] ibid.

income over the previous three year period). To calculate the capital charge applicable for each business line, the applicable indicator (i.e. the gross income) is multiplied by a percentage capital factor (β).

Where negative capital charges arise in respect of any individual business line, such negative capital charge is usually off-set (without limitation) against other positive capital charges[471] calculated for other business lines. Notwithstanding this, where the figure amounting to the sum aggregate of capital charge for any particular year is a negative figure, such figure would be excluded from the calculation of the operational risk charge.

As the standardised approach is a slightly more sophisticated approach than the BIA, there are certain requirements that banks using it must satisfy. Eligibility for the use of the standardised approach in the measurement of operational risk requires that banks must ensure that:

- Their operational risk framework benefits from the oversight and general involvement of the board of directors of the bank and other senior bank management personnel;
- The management of the bank's operational risk system is conducted with a degree of honesty and openness and that the system in place is actually effective and sound; and
- Sufficient resources are allocated to the smooth running of the operational risk system.

4.9.3 Alternative Standardised Approach

There are provisions within Basel 2 that allows banks to engage in high-margin lending to calculate the operational risk charge without using the gross income as an indicator. The Basel Committee envisaged that applying the normal standardised approach to banks engaged in high-margin lending would grossly over-estimate the true level of operational risk[472] and would be misleading. However, for a bank to implement the alternative standardised approach, the bank would be required to prove to the banking regulator under

[471] Slaughter & May LLP 'The New Basel Accord Capital Guide' (n469) 75.
[472] ibid.

whose jurisdiction it falls that it employs an improved methodology process in the calculation of operational risk.

Although similar in most ways to the standardised approach above, the alternative standardised approach differs from the former in that under the latter, the business lines i.e. retail banking and commercial banking are merged into one business line and accorded a capital factor (ß) of 15%. Here, the capital charge applicable to such a merged business line would be the multiplication of the sum total value of loans and advances by 3.5%, the value of which is then multiplied by the beta value applicable (i.e. 12% or 15%).

Thus in the computation of the capital charge for operational risk under the alternative standardised approach, the average value of the loans and advances over the previous three years (in percentage terms) is used instead of the gross income figure applicable under the standardised approach. Also, where banks are unable to determine the individual gross income of the remaining six business lines[473] (following the merger of the retail banking and commercial banking), such banks may instead incorporate the six business lines into one business line.

Where this occurs, the capital charge for operational risk will be 18% of the total gross income for the six aggregated business lines. In such a scenario, the likelihood that banks that are capable of determining the gross income for individual business lines would opt to merge their remaining six business lines would be remote as to do so would imply that they will have to set aside more capital towards operational risk.

4.9.4 Advanced Measurement Approach (AMA)[474]

Introduced in 2008, the advanced measurement approach is more sophisticated[475] than the basic indicator approach and the standardised approach or even the alternative standardised approach.

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[473] i.e. Corporate finance; Trading and sales; Payment and settlement; Agency services; Asset Management services and Retail brokerage.

[474] Although it is unlikely any of the respondent banks have adopted this method (perhaps with the exception of subsidiaries of global banks and/or Pan-African banks), it is suggested that this approach still merits a discussion as a future adoption cannot be completely ruled out as banks get bigger and more sophisticated and continue to improve their risk management strategies and frameworks.

The rationale for its introduction was to provide banks with a much wider scope to develop and implement their own unique models in the assessment of operational risks. Linked to this rationale was the desire by the BCBS to allow banks operating the advanced measurement approach set aside capital which was characteristically low, thus providing on average a reflection of the low level of operational risk such banks had been exposed to.

Contrastingly, Moosa Imad, suggests that banks using the advanced measurement approach were able to set aside regulatory capital in conformity with the overall economic capital requirements of banks, thus extinguishing any incentives for regulatory arbitrage[476]. This opinion of his, was somewhat a response to the general perception that banks using the AMA, encouraged regulatory arbitrage, and further suggested that the general view that AMA enabled banks to set aside lower capital charges in comparison to the BIA and the STA was not an outcome set in stone but rather an issue worthy of further debate[477].

Ironically the ambit of choices that banks using the AMA have, has led to a number of disagreements amongst scholars as to what really constitutes AMA. These differing opinions have not been helped by the fact that two years after the birth of the AMA, the BCBS introduced a capital threshold[478] applicable to both credit and operational risk, the purpose of which was to ensure that the computed capital charge did not fall below a minimum threshold level following a bank's transition to the internal measurement approach (IMA).

There is a considerable volume of literature that propagates the different views of eminent scholars on what really constitutes the advanced measurement approach (AMA). Imad Moosa suggests in his article[479] that these views, some of which are far removed from the other (or basically occupy opposite sides of the spectrum of views) depend on:

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[475] Slaughter & May LLP, 'The New Basel Accord Capital Guide' (n469) 75.
[476] Imad A Moosa, 'A Critique of the Advanced Measurement Approach to Regulatory Capital against Operational Risk', (2008) Journal of Banking Regulation Volume 9(3), 151.
[477] ibid.
[478] 90% in 2008 and 80% in 2009. See Slaughter & May LLP 'The New Basel Capital Accord Guide' (n469) 76.
[479] Moosa (n476) 151.

- How the techniques implemented in the AMA are listed under the AMA;
- Whether these listed techniques are implemented individually or in tandem with each other in the calculation of capital towards operational risk thus complementing one another; or
- Whether the listed techniques are actually different forms/aspects relating to the same process or indeed are not linked at all and are completely different.

Notwithstanding the above views of what actually constitutes the advanced measurement approach, banks which seek to implement the AMA are required to satisfy certain requirements set out in annexures 6 and 7 of Basel 2[480]. Firstly, banks implementing the AMA must ensure that its own internal operational risk measurement framework or process is represented or reflected by the different event types that constitute operational risk[481]. Secondly, the loss(es) a bank incurs as a result of operational risk must be capable of falling under the different categories of business lines such as retail, banking, trading and sales etc.

The final but by no means the least requirement, which infact is central to the computation of the capital charge for operational risk is that under the AMA, banks are under a requirement to calculate the capital charge using its own model[482] to compute the summation of expected loss (EL) and unexpected loss (UL) for all types of operational risk exposure across each business line. Where expected loss(es) have already been taken into consideration by the bank, then the operational risk charge would be expected to be computed based on unexpected loss(es) only.

Returning to the issue of what constitutes the advanced measurement approach, Moosa argues that the definition of AMA as represented by the BCBS constitutes the Loss Distribution Approach (LDA); Scenario-based Approach (SBA) and the Scorecard Approach (SCA), but excluding the

[480]BCBS, 'International Convergence of Capital Measurement and Capital Standards' (A Revised Framework) June 2004.
[481] Such as Internal/External fraud; Internal failures of management and control systems etc.
[482] It is imperative that the model used by the bank, together with the components of the model such as data, data analysis and any internal or external factors considered are accurate.

Internal Measurement Approach (IMA). However, he explains further by adding that whilst the LDA relies on both internal and external data which are historical in nature, the SCA and the SBA on the other hand rely on hypothetical data that has been compiled through 'expert opinion'[483] where reliance has either been placed on certain scenarios or the outcome(s) resulting from the assessment of various drivers of risk as well as indicators and control mechanisms[484].

Notwithstanding the requirements that banks implementing the AMA ought to satisfy, it is an acceptable fact (even recognised by the BCBS) that banks may mitigate against operational risk by taking out risk insurance. Risk insurance taken out by banks implementing the AMA allows such banks to reduce the charge for operational risk[485]. Although the BCBS concedes that this practice might occur, (even though such measures are undertaken probably to counteract the operational risk exposure due to counterparty risk) it is submitted that this practice may be questionable on moral grounds as it tends to defeat the very essence and purpose for which operational risk charge is calculated.

4.10 Criticism of Risk measuring methodologies/approaches under Basel 2

4.10.1 Credit Risk

4.10.1.1 Criticism of the standardised approach

Although the phrases 'standard approach' and 'standardised approach' (representing credit risk measurement under Basel 1 and Basel 2) tend to be used loosely and interchangeably, they represent very distinct concepts, with the former more associated with Basel 1 and the latter i.e. standardised approach linked to Basel 2.

While the standard approach has already been discussed earlier in this chapter, its evolution into the standardised approach was hailed at the time as a significant development ushered in by Basel 2. It was complimented as a

[483] Moosa (n476) 152.
[484] ibid.
[485] By up to 20 percent where applicable. See Slaughter & May LLP, 'The New Basel Capital Accord Guide' (n469) 76.

more robust (though complex) system of risk measurement which provided an accurate assessment of the riskiness of an asset, for use by external credit assessment institutions (ECAIs).

However, following the global financial crisis, the role of ECAIs have been called into question and infact majority of publications and academic literature suggest that they played a significant part in the cause of the global financial crisis[486]. In Europe, legislation authorising credit institutions to obtain and use external credit assessments is provided within the framework of EU Directive 2006/48[487]. On the contrary, it is submitted that the lack of a similar legislation applicable in Ghana and Kenya implies that most often than not, credit institutions particularly banks in Africa rely on these ECAIs for risk assessments especially in relation to counterparties. Since the external credit assessments provided by ECAIs are based on the determination of risk weights using the standardised approach, criticism(s) of the standardised approach will be discussed in the next paragraph instead of the role of ECAIs which has already been discussed in Chapter 1 of this thesis.

The standardised approach applicable under pillar 1 of Basel 2, allows banks to use the external ratings assessments from the credit ratings agencies to categorise borrowers into seven risk-score categories. Thus the capital that banks are required to set aside under the standardised approach is 8% of the weighted total exposure[488]. Deniz Coskun, a critic of the standardised approach, described it as:

> *'constituting a mere refinement of the Basel 1 method of measuring credit risk via the utilisation of sophisticated and commonly accepted credit ratings of (recognised or registered) CRAs'[489].*

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[486] The Turner Review, 'A Regulatory response to the Global Banking Crisis', March 2009, p75; House of Lords Select Committee Report (n333) 152-170 and The Larosiere Report, 2009 p 9.

[487] European Directive 2006/48, [2006] OJ L177/1.

[488] Marie-Florence Lamy, 'The Treatment of Credit Risk in the Basel Accord and Financial Stability', [2006] International Journal of Business,159.

[489] Deniz Coskun, 'Credit-rating agencies in the Basel 2 Framework: Why the standardised approach is inadequate for regulatory capital purposes', (2010) Journal of International Banking Law and Regulation, Volume 25(4), 157, 160.

While his views may arguably resonate with the views of other academics and legal experts[490], it does represent a stark reminder of the inherent flaws of the credit risk measurement methodology under Basel 2.

Coskun also suggests[491] that the accordance through the standardised approach of the responsibility of credit risk measurement to CRAs did not necessarily represent a radical overhaul of the way credit risk measurement was conducted by banks under Basel 1 but rather it amounted to a 'mere shift' albeit a slight expansion in the credit risk assessments of assets that were undertaken.

Deniz Coskun points out further, that the standardised approach under Basel 2 created an environment of perfect opportunity for financial institutions to engage in 'ratings shopping' in a bid to secure good ratings. Whilst making it clear that this practice provided a catalyst for regulatory arbitrage, Coskun emphasises that this was compounded by the likelihood of some CRAs receiving excessive fees for issuing ratings, thus creating a scenario where there is a competitive race to the bottom amongst CRAs[492].

Other critics such as Rolf H. Weber and Aline Darbellay[493] have questioned the huge responsibility given to the CRAs through the application of the standard approach in credit risk measurement. They point out, that with capital being very costly to the banks, i.e. due to regulatory capital requirements, the attractiveness (to banks) of holding less regulatory capital by reason of having obtained a high credit rating from a CRA suggests that banks would prefer[494] to rely on the assessments of external CRAs.

Thus when this reliance develops and increases, so will banks continue to shirk the responsibility of collecting data on borrowers themselves, resulting in less monitoring of their customers. On this latter point, Deniz Coskun

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[490] Such as Rolf H Weber and Aline Darbellay.

[491] Coskun (n489) 161.

[492] The likelihood of such a 'race' becomes evident where CRAs begin to provide financial institutions with higher credit ratings in exchange for higher payment fees.

[493] Rolf H Weber and Aline Darbellay, 'The Regulatory use of Credit Ratings in bank capital regulations' (2008) Journal of Banking Regulation Vol 1, 1.

[494] This is because apart from having to hold less regulatory capital as a result of having a high credit rating, such banks may be able to engage in certain transactions and deals due to their credit status thus providing them with an added advantage in the competitive arena of banking.

suggests that banks may be incentivised to monitor their customers less perhaps due to the fact that it may be cost effective economically[495] not to have a robust internal rating framework in place as opposed to its reliance on an external assessment by an external CRA.

Another reason suggested by Coskun was that reliance on the standardised approach as effected by the CRAs was likely to result in a much higher credit rating for the bank concerned resulting in the requirement for the latter to hold less regulatory capital. Although this suggestion may not be far from the truth, it is submitted that since the global financial crisis, attitudes towards the role played by the CRAs in the provision of credit ratings have been quite hostile especially in the USA which has actually banned the use of CRAs[496].

The UK has not reacted in the same way as the USA, however it has begun to scrutinise their role more closely. African countries on the contrary have in recent years made attempts to establish CRAs in the region.

4.10.1.2 Criticism of the Internal Ratings Based Approach (IRB).

Although the introduction of the IRB approach under Basel 2 was hailed at the time as representing a significant step away[497] from the broad risk buckets under Basel 1, the changes[498] that it brought to the banking books especially for banks implementing this approach have been cited[499] as amplifying the possibility of pro-cyclicality in the capital requirement process under the IRB approach.

The Turner Review suggests that:

> *'a capital adequacy regime is pro-cyclical if its operation tends to encourage or necessitate business responses that exacerbate the strength of the economic cycle'*[500].

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[495] Coskun (n489) 168.
[496] The Collins Amendment under section 939(A) of the USA's Dodd Frank Wall Street Report and Consumer Protection Act (P.L. 111-203) known as the Dodd Frank Act 2010.
[497] By virtue of the increased risk-sensitivity characterising the IRB approach.
[498] In respect of the introduction of robust and thorough risk analysis procedures of assets which ensured that assets were correctly grouped into sub-categories based on their risk profile. This enabled banks to calculate appropriate capital to address those risks.
[499] See FSA, 'The Turner Review: A regulatory response to the global banking crisis', March 2009.
[500] ibid 59.

Although it is an acknowledged fact that economies are generally inherently pro-cyclical (i.e. the tendency of capital requirements falling during periods of strong economic growth and rising during periods of recession), the Turner Review suggests that this issue is not adequately addressed in Basel 2. Turner attributes this to the design of the risk model banks use when implementing the IRB approach. Turner clarifies this by adding that the 'extent of pro-cyclicality' for banks implementing the IRB approach, depends on whether the risk models use 'point-in-time' or 'through-the-cycle' procedures to estimate figures of losses from loans that are likely to materialise in the different categories.

This according to Turner is due to pro-cyclicality arising from the use of 'through-the-cycle' estimates being less likely than when 'point-in-time' estimates are used by reason of the fact that the 'through-the-cycle' estimates are characterised by the use of historic data (of previous credit loss) of a bank implementing the IRB.

Thus, whilst the 'through-the-cycle' approach may be the most ideal approach of the IRB implementation process (by virtue of being less pro-cyclical), the key issue is how many banks use this approach, since the 'point-in-time' approach might be the most preferred as it may be simpler to implement.

4.10.2 Market Risk

4.10.2.1 Criticism of the Value-at-Risk (VaR) approach.

Value-at-Risk (VaR) is a risk methodology used to estimate the *'probability of losses which could be incurred before the positions are closed'*[501]. Despite the fact that it has over the years achieved prominent status as the leading risk measurement methodology used by banks to address market risks, it has also come under severe criticism that it is beset with limitations. These criticisms have been echoed in the past by Danielsson et al[502] and Hubner et al[503].

[501] Turner Review (n499) 58.
[502] Danielsson, 'An academic response to Basel 2', 2001Special Paper no 130, LSE Financial Markets Group.
[503] R Hubner M Laycock and E Peemoller, 'Managing Operational Risk' in: P Mestchian (ed) *Advances in Operational Risk: Firm-wide Issues for Financial Institutions* (Risk Books London 2003).

Imad Moosa also suggests[504] that the misleading results that VaR methodology provides, encourages complacency by the banks, not least because the measurement of VaR itself (the figure) is subject to some degree of error.

In the Turner Review, it was suggested that VaR methodology could result in pro-cyclical attitude by a bank as it is unable to evaluate the risk of the occurrence of low probability but 'high-impact tail events'[505] and can also provide individual banks with a false sense of security when in fact the aggregate market risk might be quite high.

The Turner Review, goes further to provide an insight into the fact that while the VaR-based approach has been in existence for a considerable period, its ability to distort the value of risk was really brought to the fore following the Global Financial Crisis. Indeed, the VaR's inability to capture 'sudden and sharp changes in market conditions'[506] due to its disregard for large changes in prices was quite evident prior to the global financial crisis. This was due to the fact that the rapid and massive changes in asset prices had not been captured by the VaR methodology. This deficiency according to Imad A. Moosa stems from the fact that there is considerable reliance by this methodology on symmetric statistical measures'[507]that treat upside and downside risk in the same way[508].

Since Basel 2 inherited VaR from Basel 1, the deficiencies of VaR are also evident in Basel 2. VaR is very simple and provides a '99 percent confidence interval'[509] over a fixed trading days period during which an instrument may be held in the trading book. According to Jim Chen, the reliance of VaR on a simplified quantile analysis approach implies that any risk beyond the

[504] I Moosa, 'Basel 2 as a casualty of the global financial crisis' (2010) Journal of Banking Regulation Volume (11) 2, 95.
[505] Turner Review (n499) 59.
[506] I Moosa (n504) 103.
[507] ibid.
[508] ibid.
[509] Jim Chen, 'Measuring Market Risk Under Basel 2, 2.5 and 3: VaR, stressed VaR and Expected Shortfall', A Paper presented at a conference on International Financial Regulation at Georgetown Law Centre on 17 April 2013 at p8.

applicable quantile framework is ignored regardless of the magnitude and distribution of such risk. This is a view also shared by John Hull[510].

Thus the complete disregard for tail risks by the VaR methodology encourages risk-taking at the end of the observation period which at best can be described as reckless. This is because the eventual crystallisation or materialisation of tail risks renders the VaR methodology unfit for purpose. It is this false sense of security that VaR provides which led David Einhorn to add his name to the growing list of critics of VaR by suggesting that it encourages banks to undertake:

> *'Excessive but remote risks as is potentially catastrophic when its use creates a false sense of security among senior executives and watchdogs'[511].*

Another weakness of the VaR methodology and perhaps one that underscores it not being fit for purpose is highlighted by Kevin Shepard when he suggests that VaR is 'subject to both model risk and estimation risk'[512]. Also, Allen Boudoukh and Saunders[513] suggest that the simplicity of the VaR methodology is to a large extent due to its heavy reliance on the issue of assumptions which cannot be backed with empirical evidence[514].

One other criticism of VaR which according to Jim Chen, strikes at the heart of this methodology is its inability to measure and/or forecast risk. Jim Chen points out that quite apart from the inability of VaR to capture tail risks, VaR 'behaves erratically when banks or regulators try to aggregate risks associated with different components of a portfolio'[515].

He clarifies this by suggesting that the summation of separate assets or groupings within portfolios using the VaR methodology could result in 1 out of

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[510] John Hull, *Risk Management and Financial Institutions* p189 Third Edition John Wiley & Sons, Inc., 2012.
[511] David Einhorn, 'Private Profits and Socialised Risk', A paper presented at the Grant's Spring Investment Conference April 8 2008.
[512] See K Sheppard, 'Financial Econometrics Notes' 494 (2012) (available at http://www.kevinsheppard.com/images/c/co/financial_econometrics_2012-2013.pdf
[513] Linda Allen, Jacob Boudoukh and Anthony Saunders, 'Understanding Market, Credit and Operational Risk: The Value at Risk Approach' [2004] 1-19.
[514] ibid.
[515] Jim Chen (n509) 11.

2 possible errors or misleading outcomes[516]. Firstly, a 'type 1 error' or a 'false positive' may be realised, where aggregating individual market risks within a portfolio, could lead to a gross risk overstatement of the entire portfolio in comparison to the risks of each component of the portfolio[517]. Such an outcome according to Jim Chen could result in a bank taking less risk in the erroneous belief that its entire market risk charge has been adequately catered for[518].

Secondly, a 'type 2 error' or a 'false negative' occurs when an under-statement of market risk occurs following an aggregation of risks from each branch and arm of a bank's operations[519]. He suggests that the impossibility of VaR to ascertain or evaluate the true risk of a 'bank robbery' taking place is the most appropriate example[520]. Here, it is submitted that while it is widely accepted that VaR is inherently flawed, the inability of a risk measuring process to calculate the possibility of an event such as 'bank robbery' occurring is not a proper way to justify the effectiveness of such a process or methodology, as the risk of 'bank robbery' is dependent on a much wider range of factors which may further differ from location to location and jurisdiction to jurisdiction.

4.10.3 Operational Risk

4.10.3.1 Criticism of the Advanced Measurement Approach

Although the root source of the criticisms directed towards the advanced risk measurement approach could be traced to the conflicting theories on what really constitutes AMA, Chapelle[521] suggest that the AMA does really consist of the combination of all the individual measurement techniques that result in an outcome where an accurate measure of exposure to operational loss may be obtained.

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[516] ibid.
[517] ibid.
[518] ibid.
[519] ibid.
[520] ibid.
[521] A Chapelle, 'Basel 2 and Operational Risk: Implications for Risk Measurement and Management in the Financial Sector', National Bank of Belgium Working Papers, No 51 (May 2004).

Notwithstanding this view, Peccia[522] suggests that the perception of the AMA as either consisting of individual computational methods for regulatory capital or procedures that jointly complement one another effectively amounts to a 'non-starter' because the use of supplementary historic date obtained through soft data from scenario analysis and scorecards is a frustrating and 'futile exercise'. Whilst Alexander[523] shares this perception, he clarifies his position by suggesting that AMA consists exclusively of the Loss Distribution Approach (LDA) as the Internal Measurement Approach (IMA) is actually a version of the LDA.

Contrastingly, Imad Moosa is of the opinion that the view shared by the BCBS is the correct view i.e. that all approaches should be applied jointly. This opinion according to Moosa is due to the fact that in the Basel 2 document it is stated that:

> *'in addition to using [internal and external] loss data, whether actual or scenario-based, a bank's firm-wide risk assessment methodology must capture key business environment and internal control factors that can change its operational risk profile'*[524]*.*

Regardless of whether the approaches are used in a joint and complementary way or not, Aue, F and Kalkbreber, M[525] argue that applying the LDA to quantify operational risk is a herculean task due to lack of data, the nature of the event giving rise to operational risk, and the difficulty in identifying a particularly robust measure which is highly sensitive to exposure operational risk.

This view seems to be shared by Allen and Bali[526], who suggest that there is inadequate reflection of 'low-frequency', 'high-severity events' – a likely

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[522] A Peccia, 'Operational Risk Ratings Model Approach to Better Measurement and Management of Operational Risk', in ONG, K (ed), *The Basel Handbook* (Risk Books, London 2003).

[523] C Alexander, 'Statistical Models of Operational Loss' in (ed) *Operational Risk: Regulation, Analysis and Management* Prentice-Hall, Financial Times 2003, London.

[524] BCBS, 'International Convergence of Capital Measurement and Capital Standards' (Basel 2) A Revised Framework p147 June 2004 BIS.

[525] F Aue and M Kalkbrener, 'LDA at work: Deutsche bank's approach to quantifying operational risk', 2007 Journal of Operational Risk, Volume 1 49.

[526] L Allen and T G Bali, 'Cyclicality in catastrophic and operational risk measurements' Working Paper, City of University of New York, 2004.

outcome of the reliance on approaches which are not highly risk sensitive. On the contrary, Haas and Kaiser[527], suggest that it is quite rare to have low-frequency, high impact events and even if they did occur, are highly likely to go unrecorded, or worst of all wrongly classified as losses emanating from credit or market risk as opposed to operational risk.

4.11 Criticism of Basel 1 and Basel 2

It is submitted that the minimum capital requirement set out earlier by the BCBS under Basel 1 is generally regarded as the foundation on which the framework for capital adequacy is based and has subsequently given rise to Basel 2[528], Basel 2.5[529] and now Basel 3[530].

Due to the growing disquiet over the inadequacies of Basel 1, the BCBS published Basel 2, which noticeably contained provisions for market risk unlike its predecessor and in addition to the existing provisions for credit risk. The publication of Basel 2 was thus meant to introduce a risk measurement and management mechanism which could assist in ensuring that banks could set aside capital which was more specific and perfectly aligned to the different types of risk a bank became exposed to through its banking activities.

It is therefore submitted, that Basel 2 represented a departure from the rather simplistic and inflexible risk allocation process under Basel 1 to a more risk-sensitive approach process of the setting aside of capital by banks. Although Basel 2 retained the minimum capital requirement of 8% under Basel 1, it introduced two internal ratings-based (IRB) systems[531] which banks could use to estimate the risk they were exposed to using their own mathematical risk model. One irony here was that the type of risk model a bank was allowed to use was dependent on the size of the bank.

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[527] M Haas and T Kaiser 'Tackling the inefficiency of loss data for the quantification of operational loss' in M Cruz (ed) *Operational Risk Modelling and Analysis: Theory and Practice* Risk Books London 2004.
[528] Published in June 2004.
[529] Published in July 2009.
[530] First published in December 2010 and revised in 2011 came into effect on 1 January 2013.
[531] Foundation (IRB) and Advanced IRB.

Although criticisms of Basel 2 surfaced long before the global banking crisis, it was not until the onset of the crisis that the voices of the critics got louder and they could suddenly be heard.

In 2009, the BCBS made a regulatory change to Basel 2 to address the loophole that enabled banks to engage in capital arbitrage and had been recognised as one of the causes of the global financial crisis[532]. This unfortunate phenomenon occurred because the Basel 2 provisions imposed a greater requirement for banks to set aside higher capital in respect of items on the banking book than that required for items on the trading book[533]. Thus the resulting capital arbitrage involved banks recording banking book assets as trade book assets in an attempt to avoid having to set aside more capital.

This loophole triggered a regulatory amendment ushering in Basel 2.5[534] which introduced changes to both Pillar 1 and Basel 2. The changes affecting Pillar 1, included an incremental risk charge (IRC) allocated to any particular specified risk or credit risk that arose from the trading book.

Also, there was an increase in the capital charge set aside by banks for the securitisation of commercial real estate and an introduction of a capital charge for re-securitisation. With regards to Pillar 2, guidance has been issued by the BCBS relating to risk management on a firm-wide basis and extra disclosure measures have also been introduced in Basel 2.5 which are applicable to both Pillar 1 and Pillar 2.

4.12 Conclusion

It is submitted that the deficiencies in the risk management processes under Basel 1 and Basel 2 which was somewhat improved under Basel 2.5 still remain. Perhaps this might arguably be one of the reasons why the Basel Committee on Banking Supervision have focused more on the quality and quantity of capital that banks must possess under the new Basel 3 Accord, as

[532] B Mahapatra, Implications of Basel 3 for Capital, Liquidity and Profitability of Banks' [2012] RBI Monthly Bulletin, 772.
[533] ibid.
[534] Basel Committee on Banking Supervision (BCBS), 'Enhancements to the Basel 2 Framework' July 2009 Bank for International Settlements (BIS).

a means of ensuring better risk absorption as opposed to seeking further means to improve risk management processes.

It is further submitted that there is a general consensus within the banking industry that not every deposit can be safeguarded[535] in the event of bank insolvency leading to liquidation (due to the issue of moral hazard amongst others). Hence, the key changes introduced by Basel 3 which are discussed in the next chapter (particularly in relation to the definition of bank capital), when implemented are likely to ensure a heightened level in the loss absorbency characteristic of bank capital, thus providing better protection to bank depositors and other creditors.

[535] A Campbell, 'Insolvent Banks and The Financial Sector Safety Net – Lessons from the Northern Rock Crisis', (2008) Singapore Academy of Law Journal Volume 20, 316.

CHAPTER 5
BASEL 3

5.1 Introduction

Inspite of the deficiencies of Basel 2, it is submitted that the introduction of Basel 2.5 in 2009 only addressed the loophole in Basel 2 that enabled banks to engage in capital arbitrage. The Basel Committee on Banking Supervision have suggested that the introduction of Basel 3 will be complementary to the existing Basel 2. While there remains optimism in relation to the positive future impact Basel 3 will have on global banking regulations, it is further submitted that this level of optimism is tampered with the knowledge that Basel 3 still fails to reform the flawed risk measurement process under Basel 2.

5.2 Rationale of Basel 3

The global financial crisis revealed an urgent need to subject the global banking industry to a complete overhaul and in particular create a platform from which a renewed drive towards the reform of existing regulatory, supervisory and risk management processes could be launched.

In an attempt to address the task of reforming the global banking industry, the Basel Committee on Banking Supervision (hereinafter the 'BCBS') following a series of meetings and deliberations, unanimously acknowledged that one of the root causes or underlying factors that caused the global financial crisis was the inability of some banks to absorb the losses they accrued. This inability was attributed to the fact that the capital that banks held prior to and during the crisis was of such poor quality making it unable to absorb any losses[536].

After further months of intense negotiations by government representatives and leaders of financial institutions of member countries of the G20 and in conjunction with the BCBS, two documents were published on 16 December 2010 i.e. '*A Global Regulatory Framework for More Resilient Banks and*

[536] BCBS, 'Basel 3: A Global Regulatory Framework for more Resilient Banks and Banking Systems', December 2010 (Revised June 2011), p1.

Banking Systems'[537] and '*An International Framework for Liquidity, Risk Measurement, Standards and Monitoring*'[538] and are collectively referred to as Basel 3[539].

On 13 January 2011, a third document i.e. '*Minimum requirements to ensure loss absorbency at the point of non-viability*'[540] was also published and annexed to the other two documents. The reforms introduced by Basel 3 are categorised under 5 main headings, the implementation of which the BCBS's optimism that they would contribute to the much needed overhaul required in the global banking industry is expected to be realised[541]. Also, the long transition period[542] during which a gradual phase-in of the provisions of Basel 3 is expected to take place will hopefully assist in making this a reality.

5.3 Main provisions of Basel 3 affecting the quantity and quality of bank capital

5.3.1 The Strengthening and Enhancement of the Quality of Capital

The key changes introduced by Basel 3 under this heading are driven by the new interpretation of capital[543] that Basel 3 introduces. Under these changes, capital is accorded a new definition which goes further than the definition of capital under Basel 2, thus ultimately ensuring a much improved loss-absorbing quality in qualifying capital instruments.

This change in the definition of capital is supported by other changes that have been carefully designed to further enhance or improve the quality,

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[537] See http://www.bis.org/publ/bcbs164.pdf. Throughout this thesis, this document may occasionally be referred to simply as Basel 3.

[538] BCBS 188 – December 2010 and can also be accessed at http://www.bis.org/publ/bcbs188.pdf

[539] BCBS, 'Basel 3: A Global Regulatory Framework for more resilient Banks and Banking Systems' December 2010 (Revised June 2011), p1.

[540] See http://www.bis.org/press/p110113.pdf for the full text of the Press release i.e. *Basel Committee Issues Final Elements of the Reforms to Raise the Quality of Regulatory Capital*. Also see http://www.bis.org/publ/bcbs174.pdf for the full text of *The Proposal to Ensure the Loss Absorbency of Regulatory Capital at the Point of Non-Viability.*

[541] The complete overhaul of the global banking industry introduced by Basel 3 will depend on its wide, uniform adoption and consistent application.

[542] Basel 3 came into effect on January 1, 2013 and G20 members are expected to implement it by January 1, 2019. Within this time frame, there are a number of deadlines within which certain provisions are expected to have been put in place by G20 members. See table 5.1 in Appendix 5.

[543] See BCBS publication 'Basel 3: A global regulatory framework for more resilient banks and banking systems' Part 1 [paras 48-96] December 2010 (rev June 2011) BIS.

consistency and definition of a bank's capital thereby providing an element of transparency.

It is quite ironic that most European and American banks at the time of the crisis satisfied the minimum capital requirements of 8% under Basel 2 but yet succumbed to the devastating effects of the global financial crisis.

Indeed, some of these affected banks had a minimum capital which exceeded the Basel 1 globally accepted standard of 8% of risk-weighted assets (which is the same under Basel 2), however, notwithstanding this fact, the financial crisis showed clearly that these increased capital levels were still not enough.

In recognition of this fact, the BCBS concluded that to strengthen capital, pure common equity had to be made up of a larger proportion of Tier 1 capital. This recognition and subsequent conclusion by the BCBS largely dwells on the fact that common equity, whilst having loss absorption abilities also ensures that holders of pure common equity do not qualify for any potential pay-outs as such action is likely to 'eat into' the bank's capital base. This quality of common equity was aptly summed up in an article[544] published by FITCH[545], where common equity was described as:

> '*….the most effective form of capital for maintaining a bank's viability given its high loss absorption potential as 'first loss' capital, full dividend flexibility as well as its contribution to maintaining (or at least not harming confidence….)*'[546].

In a further attempt to re-emphasise this loss-absorption quality that common equity possesses, FITCH draws a comparison between common equity and hybrids and state that, *hybrids are less versatile than common stock*[547] even though they tend to exhibit majority of the salient qualities of common equity. Due to these special qualities, the BCBS in September 2010 declared that the common equity portion of capital, inclusive of reserves would increase from

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[544] Fitch Ratings Global Sector-Specific Criteria Report, 'Treatment of Hybrids in Bank Capital Analysis' pp2 and 3, July 2011 www.fitchratings.com

[545] A recognised and respected global credit rating institution. Although originally founded as Fitch Publishing Company on December 24 1913 by John Knowles Fitch, it currently exists as a Group comprising of Fitch Ratings, Fitch Solutions, Fitch Learning and the Business Monitor International.

[546] Fitch Ratings Global Sector-Specific Criteria Report (n544).

[547] ibid 3.

2% to 4.5%[548] and the total Tier 1 ratio would increase from 4% to 6%[549]. See table 5.1 in Appendix 5.

This signalled a departure from the Basel 2 framework in which banks were capable of meeting the Basel minimum capital requirements of 8% capital by ensuring that Tier 1 held capital equivalent to 4% of risk-weighted assets and the remaining 4% being met by Tier 2 capital.

Thus although all seemed well with banks appearing to satisfy the Basel minimum capital requirement, it was later discovered that the Basel 2 framework had inadvertently provided a loophole[550] which banks exploited with great relish. Not only did the provisions within the Basel 2 framework provide for and support a lower capital requirement[551] for the trading book whilst imposing a higher capital requirement for the banking book, but this anomaly was compounded by the fact that under Basel 2, banks could hold within Core Tier 1, capital amounting to only 2% of its risk-weighted assets with the remaining capital comprising hybrid capital[552] and subordinated debt[553].

Banks thus took advantage of this by transferring assets meant to be in the banking book to the trading book in order to have to satisfy a much lower capital requirement[554] and also improve their credit ratings[555]. Hence, the submission is made that the changes introduced by Basel 3 will herald a new

[548] On January 1 2015. This consists of an increase from 2% to 3.5% by January 1 2013, from 3.5% to 4% by January 1 2014 and from 4% to 4.5% on January 1 2015.
[549] Basel 3, (n543), (Part 1A para 50).
[550] See B Mahapatra (n532) 772.
[551] Since December 21 2010, capital charges have been significantly increased for banks across their trading books following the introduction of Basel 2.5 in July 2009.
[552] A hybrid capital refers to capital that possesses equity and debt-like characteristics, ie. it can absorb losses when an institution remains a going-concern and it can also be applied when the institution is a gone-concern to protect depositors.
[553] Subordinated debt is defined as a debt whose claim is ranked below other claims related to the same asset.
[554] This unethical practice by banks, borne out of a desire to maximise profits in the face of competition from other banks resulted in capital arbitrage. This is because under the Basel Capital provisions, bank book capital is usually set aside to make provisions for unexpected (credit) losses over a duration of 1 financial year whereas capital set aside for trading book credit losses is usually for a short period of time e.g. between 10 to 20 days.
[555] B Mahapatra, (n532) 772. Credit ratings of banks were improved where banks held less capital in their banking books.

era where the importance or the function of Core Tier 1 capital has been recognised and has now become the pre-dominant form of capital[556].

Contrastingly under Basel 2, Tier 1 capital consisted of Core Tier 1 capital and non-Core Tier 1 capital, however under Basel 3, the Core Tier 1 capital has been re-named Common Equity Tier 1 and non-Core Tier 1 capital named Additional Tier 1 capital respectively. Also, although there has been no change to the total capital requirement of 8% under Basel 3, there has been a slight shift in the apportionment of capital, in that Common Equity Tier 1 under Basel 3 increases from 2% to 4.5% and the total Tier 1 capital also increases from 4% to 6%[557].

Basel 3 also introduces changes to Tier 2 of Basel 2. Under Basel 3, Tier 2 will no longer have the distinctive Upper Tier 2[558] and Lower Tier 2[559] category[560] but will simply be known as Tier 2 capital. Furthermore, under Basel 3, a Capital Conservation Buffer[561] and a Counter-cyclical buffer[562] have been introduced and Tier 3 has been abolished.

The main changes to capital introduced by Basel 3 include:

Box 6

1. Increasing the Common Equity Tier 1 capital from the minimum level of 2% under Basel 2 to 4.5% under Basel 3;

2. Increasing the standards or criteria required for capital instruments to be eligible as Tier 1 capital;

3. The elimination of the distinction that existed within Tier 2 capital (i.e. Upper Tier 2 and Lower Tier 2 capital) thus ensuring the same set of criteria applies to all components of Tier 2; and

[556] Basel 3 (n543) (Part 1A, para 48).
[557] Basel 3 (n543) (Part 1A, para 50).
[558] Under Basel 2, Upper Tier 2 capital consisted of perpetual instruments having preferential status as well as subordinated debt.
[559] Under Basel 2, Lower Tier 2 capital consisted mainly of term-dated preference shares and subordinated debt.
[560] Which was characteristic of Basel 2 Tier 2.
[561] Basel 3 Part III [Paras 122-135].
[562] Basel 3 Part IV [Paras 136-150].

4.	A re-assessment of criteria that determines which deductions and/or regulatory adjustments are made to capital.

It is thus evident that Basel 3 ensures a much more precise and narrower definition of regulatory capital which in a way fulfils the pledge by the BCBS to strengthen and enhance the quality of capital. It also potentially allays any fear that any future financial crisis in which governments inject capital into banking institutions will result in a repeat scenario where such quantitative easing measures or recapitalisation results in the effect of not only supporting ordinary depositors, (which arguably might have been desirable), but also supporting investors who had invested in regulatory capital instruments of the distressed banks or financial institutions[563].

This capital intervention by governments of financial crisis-hit countries prevented components of Tier 2 capital as well as non-Core Tier 1 capital (i.e. Additional Tier 1 capital) from performing their required function i.e. absorb losses and thus it is expected that changes to capital introduced by Basel 3 will ensure that the loss-absorbing qualities of both Tier 1 and Tier 2 capital instruments will be greatly enhanced.

Generally, Basel 3 re-affirms the status of common equity as the primary regulatory capital whose enhanced loss-absorbing qualities would be supported by newly eligible hybrid capital which possess greater loss-absorbing qualities but without any incentives to redeem. To ensure that quality and consistency in capital is maintained, Basel 3 imposes a requirement that components of capital within Common Equity Tier 1 (i.e. CET 1) must consist of common shares and retained earnings.

Part 1B paragraph 52 of Basel 3 lists the components of Common Equity Tier 1 (CET 1) Capital as the following:

[563] Sidley Austin LLP publication, 'Securities/Financial Institutions Regulatory Update – Basel 3 – Minimum Requirements to Ensure Loss Absorbency at the Point of Non-Viability 2' February 2011.

5.3.1.1 Common Equity Tier 1

5.3.1.1(a) Components of Common Equity Tier 1 Capital

Box 7

1.	The common shares that a bank issues which satisfy the common shares classification criteria for regulatory purposes;
2.	The surplus from stock (share premium) that arise after the issuance of instruments including instruments from Common Equity Tier 1 (CET 1);
3.	Retained earnings;
4.	Other accumulated banking income and disclosed reserves[564];
5.	Certain minority interests, (i.e. common shares that have been issued by the consolidated subsidiaries of the bank to third-parties) which satisfy the CET 1 criteria for inclusion; and
6.	Certain regulatory adjustments applicable in the computation of CET 1.

Due to the changes introduced by Basel 3, certain capital instruments that previously qualified as common equity capital under Basel 2, will no longer qualify as such under Basel 3. Under Basel 3, capital instruments may be considered as common equity on condition the following criteria[565] are satisfied:

5.3.1.1(b) Criteria for inclusion in Common Equity Tier 1 Capital

Box 8

1.	It must represent the most subordinated claim in any potential bank liquidation process;

[564] Such as unrealised gains or losses that are recognised on the balance sheet are not subject to adjustments to remove them from CET 1.
[565] Paragraph 53 of Basel 3.

2. It must not be subject to any fixed claim or claim with a capped limit, and that in the event of liquidation, it must be capable of being the subject of an unlimited and variable claim following the prior repayment of all senior claims;

3. It must be of perpetual nature and should never be repaid unless in the event of liquidation i.e. it must have semblance of permanence with no step-ups or incentives to redeem;

4. The bank must avoid creating the impression when the capital instrument has been issued, that the capital instrument will either be redeemed or bought back or even worse still cancelled;

5. Any payable distributions must be paid out of potentially distributable items and should under no circumstances have any bearings on the amount paid for the capital instrument at issuance and must not be subject to any cap;

6. Distributions are no longer classed as obligatory and as a result, a non-payment of distribution will not be classed as an event of default;

7. The payments of distributions can only be effected following the satisfaction of other more important obligations such as (legal and contractual) and payments on other higher ranking capital instruments have been made;

8. The issued share capital must initially and in a proportionate manner bear the greatest share of any potential loss(es) as they occur[566]. Thus each capital instrument must be capable of absorbing losses on a going concern basis;

9. The amount of capital that has been paid-in, is regarded as equity for the purposes of applicable accounting standards;

[566] Even where capital instruments have undergone a permanent write-down, this requirement may still be satisfied by common shares.

10. The amount of capital that has already been paid-in, is classed as equity capital for the purposes of balance sheet insolvency;

11. The shares have been directly issued and are paid-up without the banks concerned being directly or indirectly involved in the funding of the purchased instrument(s);

12. The paid-in amount has not been secured or guaranteed by the issuer or any other entity related to the issuer, such as a parent company, a subsidiary or an entity affiliated to the bank in question or for that matter, not subjected to any other financial or contractual arrangement that elevates the status or hierarchy of the claim;

13. The issued shares will be classed as common shares where the approval of the bank owners have been sought and have subsequently been granted either directly or indirectly by the Bank's board of directors; and

14. The capital instrument has been disclosed on the bank's balance sheet.

5.3.1.2 Additional Tier 1 Capital

Additional Tier 1 capital under Basel 3 refers to the remaining Tier 1 capital that does not fall under the requirements of CET 1. Nonetheless, Basel 3 imposes a requirement that Additional Tier 1 capital instruments should also possess the ability to absorb losses on a going-concern basis either through the process of a write-down or a conversion into ordinary shares[567].

In order to possess this quality, Additional Tier 1 capital instruments would be expected to be made up of instruments that are subordinated and give rise to completely discretionary non-cumulative dividends or coupons which do not possess a maturity date or any incentive(s) to redeem. The rationale behind the extension of loss-absorbing capacity to Additional Tier 1 capital in Basel 3,

[567] BCBS, 'The Proposal to Ensure the Loss Absorbency of Regulatory capital at the Point of Non-Viability Minimum requirements' para 1. See http://www.bis.org/publ/bcbs174.pdf

stems from the fact that during the global financial crisis, the ordinary tax-payer's money was used to rescue banks which (even though continued to operate as going concerns), were actually no longer viable.

As a result of such public-sector rescue of non-viable[568] banks across Europe and elsewhere, the huge losses that these ailing banks had incurred were absorbed by the tax-payer's money without any contribution from investors whose capital investment did not constitute common equity.

5.3.1.2(a) Components of Additional Tier 1 Capital

Paragraph 54 of the Basel 3 document[569] lists the components of Additional Tier 1 capital as:

Box 9

1.	Instruments which a bank issues that satisfy the classification criteria for inclusion in Additional Tier 1 capital and are excluded from Common Equity Tier 1;
2.	The surplus from stock (share premium) that arise following the issuance of instruments included in Additional Tier 1 capital;
3.	Instruments that have been issued by the consolidated subsidiaries of a bank to third-parties and satisfy the criteria necessary for inclusion in Additional Tier 1 capital; and
4.	Certain regulatory adjustments applicable in the computation of Additional Tier 1 capital.

The ability of Additional Tier 1 capital to be converted into equity capital through write-down or a conversion suggests that components of Additional Tier 1 capital do possess both equity and debt characteristics. These characteristics ensure that apart from CET 1 capital instruments which automatically possess loss absorption qualities, Additional Tier 1 capital (i.e.

[568] Non-viability indicates the period, within which banks become financially distressed and are no longer profitable however are yet to be declared insolvent. This attribute may also be applicable to a bank that has lost the confidence of its depositors and counterparties and is on a downward spiral towards insolvency. In the UK, the Prudential Regulatory Authority (an offshoot of the previous FSA) will consider a bank to be non-viable where it fails to satisfy the minimum capital level a bank within its jurisdiction must satisfy for authorisation purposes.
[569] Part 1 B para 54 of Basel 3.

non-common equity Tier 1 capital) as well as Tier 2 capital instruments issued by banks also have similar loss-absorption qualities by virtue of certain provisions[570] within Basel 3 conferring such qualities.

To this effect, the Basel Committee announced on 13 January 2011 that:

> *'The terms and conditions of all non-common Tier 1 and Tier 2 instruments issued by an internationally active bank must have a provision that requires such instruments, at the option of the relevant authority, to either be written off or converted into common equity upon the occurrence of a trigger event……'*[571] .

However, for these provisions to apply, the bank must be confirmed by the supervisory authority as having approached or is approaching the point of non-viability. Also, the BCBS in recognition of the fact that certain existing capital instruments under the Basel 2 framework would no longer qualify or possess these loss-absorption features introduced under Basel 3, added a caveat that the provisions applied to all capital instruments issued on or after 1 January 2013, and that any capital instruments issued prior to 1 January 2013 (or already in existence prior to 1 January 2013) that fell foul of this new provision but nonetheless satisfied the criteria for Additional Tier 1 or Tier 2 capital as set out in Basel 3 will qualify or be eligible for limited grandfathering[572].

There are certain requirements that capital instruments are expected to satisfy to qualify as Additional Tier 1 capital. Generally for example, Additional Tier 1 capital instruments are expected to possess loss-absorbing qualities on a going-concern basis implying therefore that they ought to be subordinated and capable of giving rise to dividends or coupons that are completely discretionary and non-cumulative and possess neither a maturity date nor an incentive to redeem.

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[570] Sidley Austin LLP publication, (n563). (http://www.bis.org/publ/bcbs174.pdf). Accessed January 2012).

[571] ibid.

[572] Grandfathering refers to the gradual phase-out of capital instruments issued prior to 1 January 2013 that do not satisfy the Loss Absorption requirements under Basel 3. The phase-out will last 10 years beginning 1 January 2013, with 10% of such capital instruments phased-out in each successive year. See BCBS, 'Basel 3: A Global Regulatory Framework for More Resilient Banks and Banking Systems', December 2010 (Revised June 2011, paras 94, p28-29).

The eligibility criteria[573] for Additional Tier 1 capital are set out in paragraph 55 of the Basel document and are as follows:

5.3.1.2(b) Criteria for inclusion in Additional Tier 1 Capital[574]

In order for an instrument to qualify for inclusion it must be:

Box 10

1.	Issued and paid in;
2.	Subordinated to depositors, general creditors and subordinated debt of the bank;
3.	Is neither secured nor covered by a guarantee of the issuer or related entity or other arrangement that legally or economically enhances the seniority of the claim vis-à-vis bank creditors;
4.	Is perpetual, i.e. there is no maturity date and there are no step-ups or other incentives to redeem;
5.	May be callable at the initiative of the issuer only after a minimum of five years:
	a) To exercise a call option a bank must receive prior supervisory approval;
	b) A bank must not do anything which creates an expectation that the call will be exercised[575]; and
	c) Banks must not exercise a call unless:
	I. They replace the called instrument with capital of the same or better quality and the replacement of

[573] There are 14 criteria that a capital instrument ought to satisfy to qualify as Additional Tier 1 capital.
[574] The criteria in box 10, has been extracted verbatim from paragraph 55 of Basel 3.
[575] Where an option to call an instrument is exercised after 5 years, but before amortisation commences, this would not be considered as creating an incentive to redeem so long as the bank does nothing to create an expectation of an impending call.

this capital is done at conditions which are sustainable for the income capacity of the bank[576]; or

II. The bank demonstrates that its capital position is well above the minimum capital requirements after the call option is exercised[577].

6. Any repayment of principal (e.g. through repurchase or redemption) must be with prior supervisory approval and banks should not assume or create market expectations that supervisory approval[578] will be given;

7. Dividend/coupon discretion:

a) The bank must have full discretion at all times to cancel distributions/payments[579];

b) Cancellation of discretionary payments must not be an event of default;

c) Banks must have full access to cancelled payments to meet obligations as they fall due; and

d) Cancellation of distributions/payments must not impose restrictions on the bank except in relation to distributions to common stockholders.

[576] Any replacement issue must be done at the same time the instrument is called and not after.

[577] Here, the minimum capital requirement refers to the threshold imposed by the banking regulator within a given jurisdiction and may be higher than the Basel 3 minimum capital requirement.

[578] Supervisory approval or consent is required to act as a deterrent for banks that might try to use their own shares to fund such a repurchase, which could potentially affect the capital adequacy framework.

[579] Having full discretion implies that 'dividend pushers' will be unacceptable. However, any capital instrument having a dividend pusher makes it an obligation for the bank issuing the instrument to pay dividends or coupons on that instrument particularly where the issuing bank has already made a similar payment on a capital instrument or share which is junior in rank to the capital instrument under consideration. Thus the full discretion available to the bank to cancel the payment of dividends or coupons puts this provision on a collision course with the qualities of dividend pushers, hence the prohibition of the latter.

8. Dividends/coupons must be paid out of distributable items;

9. The instrument cannot have a credit sensitive dividend feature, that is a dividend/coupon that is reset periodically based in whole or in part on the banking organisation's credit standing;

10. The instrument cannot contribute to liabilities exceeding assets if such a balance sheet test forms part of national insolvency law;

11. Instruments classified as liabilities for accounting purposes must have principal loss absorption through either (i) conversion to common shares at an objective pre-specified trigger point or (ii) a write-down mechanism which allocates losses to the instrument at a pre-specified trigger point. The write-down will have the following effects:

    a) Reduce the claim of the instrument in liquidation;

    b) Reduce the amount repaid when a call is exercised; and

    c) Partially or fully reduce coupon/dividend payments on the instrument.

12. Neither the bank nor a related party over which the bank exercises control or significant influence can have purchased the instrument, nor can the bank directly or indirectly have funded the purchase of the instrument;

13. The instrument must not possess any feature or characteristic that has the potential to obstruct recapitalisation e.g provisions imposing an obligation on the issuer of the instrument to compensate investors where the instrument has been issued at a reduced price within a particular time frame; and

14. If the instrument is not issued out of an operating entity or the holding company in the consolidated group (e.g. a special

purpose vehicle – 'SPV'), proceeds must be immediately available without limitation to an operating entity[580] or the holding company in the consolidated group in a form which meets or exceeds all the other criteria for inclusion in Additional Tier 1 capital.

5.3.1.3 Tier 2 Capital

One of the main changes to Tier 2 capital structure introduced by Basel 3, is the fact that the distinction between upper Tier 2 capital and lower Tier 2 capital that existed under Basel 2 has been abolished.

Thus, although capital instruments eligible under the Tier 2 capital structure are all now expected to possess the same qualities[581], there continues to exist a number of upper and lower Tier 2 capital which are no longer Basel 3 compliant by virtue of the fact that they do not have provisions within their set-up which allows the process of write-down or conversion into common equity to occur should the bank reach the point of non-viability. This implies that for all capital components of the single-tiered Tier 2 under Basel 3 to satisfy the eligibility requirement, the existing upper and lower Tier 2 capital instruments will have to be grandfathered.

Another change affecting Tier 2 capital under Basel 3 is the reduction in the percentage of capital that Tier 2 is required to hold against risk-weighted assets from 4% under Basel 2 to 2% under Basel 3. This in effect creates a scenario where this new requirement creates a similarity to the hitherto existing limit under Basel 2 on lower Tier 2 capital. Thus if the capital requirement under Basel 3 can be met with capital from lower Tier 2 under Basel 3, then this underscores the importance and emphasis that the BCBS has placed on common equity in order to heighten the quality and loss-absorption characteristics of capital.

[580] An entity established to engage in business deals with clients for the purposes of making a profit for itself.
[581] Capital issued after 1 January 2013.

Paragraph 57 of the Basel 3 document[582] lists the components of Tier 2 as follows:

5.3.1.3(a) Components of Tier 2 Capital

Box 11

1.	Instruments which a bank issues that satisfy the classification criteria for inclusion in Tier 2 capital and are excluded from Tier 1 capital;
2.	The surplus from stock (share premium) that arise following the issuance of instruments included in Tier 2 capital;
3.	Instruments that have been issued by the consolidated subsidiaries of a bank to third-parties and satisfy the criteria necessary for inclusion in Tier 2 capital and have been excluded from Tier 1 capital;
4.	Certain reserves representing loan loss provisions[583]; and
5.	Certain regulatory adjustments applicable in the computation of Tier 2 capital.

5.3.1.3(b) Criteria for inclusion in Tier 2 Capital[584]

For instruments to qualify as Tier 2 capital, Basel 3 paragraph 58 sets out a list of eligibility criteria which are as follows. The qualifying instruments must be:

Box 12

1.	Issued and paid-in;
2.	Subordinated to depositors and general creditors of the bank;
3.	Is neither secured nor covered by a guarantee of the issuer or related entity or other arrangement that legally or economically enhances the seniority of the claim vis-à-vis depositors and general bank creditors;

[582] 'Basel 3: A global regulatory framework for more resilient banks and banking systems' December 2010 (Revised June 2011) p17.
[583] ibid (paragraphs 60, 61).
[584] Basel 3 (n582) paragraph 58.

4. Maturity:

   a) Minimum original maturity of at least five years;

   b) Recognition in regulatory capital in the remaining five years before maturity will be amortised on a straight line basis; and

   c) There are no step-ups or other incentives to redeem.

5. May be callable at the initiative of the issuer only after a minimum of five years:

   a) To exercise a call option a bank must receive prior supervisory approval;

   b) A bank must not do anything that creates an expectation that the call will be exercised[585]; and

   c) Banks must not exercise a call unless:

      I. They replace the called instrument with capital of the same or better quality and the replacement of this capital is done at conditions which are sustainable for the income capacity of the bank[586]; or

      II. The bank demonstrates that its capital position is well above the minimum capital requirements after the call option is exercised[587].

6. The investor must have no rights to accelerate the repayment of future scheduled payments (coupons or principal), except in bankruptcy and liquidation;

7. The instrument cannot have a credit sensitive dividend feature, that is a dividend/coupon that is reset periodically based in whole or in part on the banking organisation's credit standing;

[585] Basel 3 (n582) paragraphs 60 and 61.
[586] See (n576).
[587] See (n577).

8. Neither the bank nor a related party over which the bank exercises control or significant influence can have purchased the instrument, nor can the bank directly or indirectly have funded the purchase of the instrument; and

9. If the instrument is not issued out of an operating entity or the holding company in the consolidated group (e.g. a special purpose vehicle – 'SPV'), proceeds must be immediately available without limitation to an operating entity[588] or the holding company in the consolidated group in a form which meets or exceeds all of the other criteria for inclusion in Tier 2 capital.

These new requirements under Basel 3, are in sharp contrast to upper Tier 2 capital requirements under Basel 2 which included the requirement to be able to absorb losses on a going-concern basis thus paving the way for issuers of such capital to be able to still absorb losses through deferral of coupons/dividends or interests due.

Also under Basel 2, upper and lower Tier 2 capital had the potential to include an incentive to redeem (i.e. a step-up) provision, a situation which has now been rectified by the fourth requirement above. Thus, without the incentive to redeem, eg through a step-up etc, the availability of such capital to pay out in case of insolvency will be ensured.

The second requirement that Basel 3 Tier 2 compliant capital ought to satisfy ensures a contrast to the perpetual nature and characteristic of upper Tier 2 capital which provides less re-financing opportunities. Having said this, it is submitted that an opportunity to replace such Tier 2 capital may arise in circumstances where the call gives rise to a replacement capital instrument of higher quality.

It is further submitted that existing components of lower Tier 2 capital under Basel 2 are not affected by the Tier 2 requirements imposed by Basel 3, simply because lower Tier 2 capital do tend to possess an important feature of original maturity i.e. can be called after five years thereby providing issuers

[588] See (n580).

with the ability to re-finance such capital instruments provided replacement finance is readily available.

A comparison of the components of Tier 2 capital under Basel 2 and the components of Tier 2 capital under Basel 3, suggests that the main change introduced by Basel 3 is the prohibition on the inclusion of provisions which incentivises investors to redeem. Under Basel 2, Tier 2 capital instruments were usually set up with dated maturity of 10 years, however possessing an issuer call after 5 years. Also, failure on the part of the issuer to exercise the call will automatically trigger[589] the incentive to redeem the coupon i.e. (a step-up).

Basel 3 on the contrary, prohibits this by eliminating incentives to redeem thereby increasing the loss absorbency capacity of Tier 2 capital. The introduction of a new restricted definition of capital under Basel 3 was primarily aimed at ultimately introducing a much improved and higher loss-absorbing quality in all qualifying capital instruments. This new heightened loss-absorbency quality was seen as absolutely necessary, as a number of banks particularly in Europe and America were unable to absorb losses with their existing capital during the global financial crisis.

Loss-Absorbency Features

For capital to have a loss-absorption feature or not will depend on whether capital is to be described either as a Going-Concern or a Gone-Concern. Under the provisions of Basel 3, for a capital instrument to qualify as a liability for the purposes of accounting principles[590], such instrument(s) ought to possess principal loss-absorbency through the process of 'conversion to common shares'[591] following the occurrence of a pre-determined trigger or through a write-down[592].

[589] This is due to the fact that there is an assumption on the part of the issuers and investors that the debt instrument became eligible for a possible refinance in the fifth year, thus removing the requirement for the bank to amortise the capital prior to refinancing.
[590] This requirement is not necessary for equity-accounted capital.
[591] Sidley Austin LLP publication, (n570) paragraph 3.
[592] ibid.

A trigger event[593] is the earlier of:

- '*A decision that a write-off, without which the firm would become non-viable, is necessary as determined by the relevant authority; and*
- *The decision to make a public sector injection of capital, or equivalent support, without which the firm would have become non-viable, as determined by the relevant authority'*[594]*.*

Paragraph 6 of the Loss Absorbency Rules defines 'relevant authority' as:

'the relevant jurisdiction in determining the trigger event is the jurisdiction in which the capital is being given recognition for regulatory purposes'.

On the contrary, where regulatory capital is being issued by a parent bank, the relevant authority will be the institution or agency appointed or chosen by the jurisdiction in which the parent bank resides. However, where the bank issuing the regulatory capital wants the capital to be recognised as such at the subsidiary level, the relevant regulatory body in the home jurisdiction of the subsidiary would be responsible for determining the occurrence of a trigger event.

Whereas there seems to be a consensus as to the need for a trigger event, the same cannot be said in relation to the form it should take. Preference for a quantitative trigger is due to the assuredness and tangibility a substantive figure may provide, however supporters[595] of a 'non-quantitative' trigger event suggest that a 'quantitative trigger':

- would ultimately become an automatic trigger for the initiation of loss absorption without the consideration of other unique contributory factors;
- is unlikely to accurately reflect the point at which a bank would need restructuring as such a trigger could ultimately be too high in certain cases;

[593] Sidley Austin LLP publication (n570) paragraph 4 or http://www.bis.org/publ/bcbs174.pdf
[594] ibid paragraph 6.
[595] Such as New Zealand.

- may prove challenging to pin-point the exact point of attainment as capital ratios tend not to be a very accurate indication of solvency; and
- brings with it a degree of uncertainty as to when the trigger level is really attained, a crucial factor which ultimately affects whether a conversion or a write-off should subsequently occur. This is even ever more so important in the case of Tier 2 capital, where such capital instruments should not be considered a write-off until insolvency has been clearly established.

The rationale behind this is that a write-down of an instrument results in a decrease in the initial value of the instrument, thus allowing the issuer to hold onto a non-distributable reserve amount that can be used to absorb losses. It is submitted that such a provision may be contrary to certain existing laws in jurisdictions such as the U.K. where English Company law for example imposes restrictions on the write-down of 'nominal amount of preference shares'[596] belonging to a public limited company, unless it has been approved by the courts[597] as the reduction by a company of its share capital can only be agreed upon by the courts[598].

In a paper published by the FSA[599], Going-Concern capital (that absorbs losses while viability still exists) was described as possessing three characteristics, namely; Loss-absorbency; Coupon Flexibility and Availability/Permanence whereas Gone-Concern capital was referred to as capital which is used to absorb losses where the bank or financial institution becomes insolvent.

Also, the fact that Gone-Concern capital is fundamentally important towards the absorption of further losses, and the protection of significant high value

[596] Slaughter & May LLP, 'Basel 3: A New Capital Adequacy and Liquidity Framework for Banks' June 2011 p14.
[597] Section 641, U.K. Companies Act 2006.
[598] ibid.
[599] Financial Services Authority (FSA), 'Definition of Capital 08/5 Feedback Statement on DP07/6', Jul 2008. The Financial Services Authority (FSA) has now been split into two regulatory bodies ie. The Financial Conduct Authority (FCA) and the Prudential Regulatory Authority (PRA).

creditors, it is imperative that such Gone-Concern capital is not potentially subject to a deferral provision[600].

A Loss-absorbency

The Loss absorbency provisions of Basel 3[601] are applicable to capital instruments issued after 1 January 2013 and thus capital instruments issued before 1 January 2013, which do not meet the requirements of these provisions will be phased out with effect from 1 January 2013.

The effects of a write-down are three-fold:

i) It results in a reduction in claim with respect to the capital instrument in the event of a liquidation of the issuer;

ii) It causes a reduction in the amount repaid, when a call on the capital instrument is made; and

iii) Write-downs may either in full or in part reduce the amounts of any coupon or dividend pay-outs linked to that instrument[602].

Due to the permanent effect of a write-down, once a write-down has occurred, it becomes virtually impossible for the issuer to 'undo' the write-down by 'writing back up' the instruments from future profits[603].

The rationale for this conditional requirement to effect a write-down at the point of non-viability[604], was due to the fact that during the global financial crisis, the expectation that losses would be borne by such capital instruments did not materialise but rather (and particularly in most European jurisdictions affected by the crisis), tax payers' money injected into the various economies

[600] Although Basel 3 does not make it a requirement for the issuer to defer payments where there is a threat of insolvency, Gone-Concern capital ought to be subordinated to enable it satisfy the requirement of further loss absorption.
[601] http://www.bis.org/bcbs174.pdf
[602] BCBS, 'Basel 3: A global regulatory framework for more resilient banks and banking systems,' (December 2010) Paragraph 55 point 11.
[603] This is in sharp contrast to the CRD II under the EU capital provisions which allows a temporary write-down.
[604] The point of non-viability may arise in two different ways. i.e. Where depositors and/or counterparties lose confidence in an institution which although at the brink of insolvency, is still capable of being rescued. In the UK, a bank may be deemed 'non-viable' by the Prudential Regulatory Authority (PRA) if it is incapable of satisfying the minimum conditions required for authorisation under the Financial Services and Markets Act 2000.

by their respective governments, was of direct benefit to Tier 1 and Tier 2 capital instruments thereby averting insolvency.

Following the global financial crisis, it was discovered that most governments had embarked on re-capitalisation (particularly in the UK) and that a number of Tier 1 and Tier 2 capital instruments possessed dividend stoppers[605] on ordinary shares where coupons were not paid. These dividend stoppers in effect became a stumbling block with regards to the process of re-capitalisation. This was due to the fact that the likelihood of private investors investing in share capital diminished as the continued payment of distributions to bearers of capital instruments that were ranked higher (inspite of non-payment of coupons) made it unlikely that such potential private investors would receive any dividend payments/pay-outs.

Due to the fact that there was already in existence, capital instruments that did not have such a provision linked to their set-up, the BCBS proposed[606] that the requirement for an instrument to possess the capacity to be either written off or converted into common equity[607] should be applicable to all capital instruments that were issued either on or after 1 January 2013. Further to this, all other capital instruments issued prior to 1 January 2013 that do not satisfy the new requirement but nonetheless meet the criteria for Additional Tier 1 and/or Tier 2 capital as introduced by Basel 3 will qualify for limited grandfathering.

Although the BCBS is absolutely committed to ensuring that capital instruments in Additional Tier 1 and Tier 2 of Basel 3 have heightened or principal loss-absorption qualities through the processes of write-down or conversion, there are three exceptions where this new requirement for write-down or conversion is inapplicable:

[605] Dividend stoppers have the effect of preventing payments of a dividend due to an existing and continuing obligation for distributions to be made in respect of capital instruments of higher ranking status.
[606] On 13 January 2011.
[607] http://www.bis.org/press/p110113.pdf

EXCEPTIONS[608]:

Box 13

1. Where the jurisdiction within which the bank is located, has in existence regulations which:

   i) Make it mandatory for such Additional Tier 1 and Tier 2 capital instruments to be written-off at the point of non-viability i.e. when a trigger event occurs; and

   ii) Makes it a requirement for Additional Tier 1 and Tier 2 capital instruments to completely absorb all losses before any exposure of taxpayers to further potential unexpected losses.

2. Where such a market-led group review concludes that the jurisdiction in which the bank is located actually has regulations (as stated in (i) above) in place; and

3. The relevant regulator in that jurisdiction together with the bank (also from the same jurisdiction) issuing such capital instruments, i.e. Additional Tier 1 and Tier 2 capital instruments, confirm in any future documents relating to such issuance that the issued instruments are all fully subject to losses under the first exception above.

B Coupon Flexibility

A coupon flexibility characteristic of Going Concern capital introduces an element of discretion with respect to coupon payments. The ability to exercise discretion regarding payment of coupons allows a bank or financial entity to hold onto finances which can ultimately be used to absorb losses should coupon payments become subject to cancellation. Dividend pushers or stoppers have the tendency to negatively impact any coupon flexibility, potentially resulting in non-payment of dividends.

The concept of coupon flexibility may also be examined under mandatory coupon cancellation at pre-determined triggers and also coupon deferral.

[608] See Paragraph 1 [A – C] of the Loss Absorbency Rules.

(I) Mandatory Coupon Cancellation

A bank experiencing a degree of stress, will usually exercise a level of restraint before reluctantly exercising[609] its discretion on the issue of coupon payment. Where the discretion to exercise mandatory coupon cancellation is exercised, it is important for the bank or regulator (if involved in the exercise of the discretion) to ensure that this discretion is not exercised arbitrarily and that there are reasonable grounds for doing so.

In fact, certain market participants have argued that the existence of the prospect of mandatory coupon cancellation at a bank enables investors to determine the likelihood of such an event occurring before committing to an investment. Market participants who lend themselves to this view also agree that the trigger level for the exercise of mandatory coupon cancellation should be low enough and furthermore, credible enough to provide a genuine alternative loss absorbency process.

Counter-arguments also exist within the banking industry that suggest that although it is absolutely important for coupon flexibility characteristics to be retained, the decision to exercise mandatory coupon cancellation must be at the discretion of the bank/firm, following consultations with the banking regulator within that jurisdiction. It is submitted that regardless of whether banks/firms unilaterally exercise full discretion on the issue of payment of coupons at all times or whether in consultation with regulators, the ground for such exercise of discretion should be a genuine and reasonable one. Notwithstanding this view, a justification for the exercise of discretion would be unquestionably sound if the bank/firm consults first with its regulators.

Consultations between bank/firm and regulator should be the norm to justify mandatory coupon cancellation, but should not necessarily be held on the basis of pre-determined triggers for mandatory coupon cancellations. This is because a specially designed pre-determined trigger may not be flexible enough to cover all situations in all jurisdictions.

[609] In times of severe financial stress.

(II) Coupon Deferral

Although coupon deferral allows banks/firms to accumulate unpaid coupons, thus providing some form of liquidity for the banks, it is uncertain whether this extra source of liquidity could be explored by banks on a permanent basis unless perhaps with the exception where the capital instrument is itself of a permanent nature and thus can technically be indefinitely deferred. If the capital instrument is perpetual i.e. of a permanent nature, then the liquidity benefit it provides the bank will be permanent.

Coupon deferral has both positive and negative attributes. When the bank or financial entity no longer exists as a viable institution, it exists as a Gone Concern and as such any coupon deferral would act as a source of 'loss absorption' since coupon payments made subsequently in a Gone Concern scenario would be subordinated in the process of insolvency. Thus the loss absorption benefits to be derived from coupon deferral tend to generally increase where coupons are deferred for longer periods.

On the contrary, coupon deferral may act as a disincentive to potential equity investors who are keen to make profit on their investments. This implies that a bank or financial entity with coupon deferral provisions may struggle to recapitalise as potential equity investors would be concerned about the lack of future cash outflows expected as a return on their equity investments.

(C) Permanence

This characteristic which may be attributable to Going-Concern capital is of utmost importance as capital with such characteristic indicates that it would be available to the bank or financial entity when required to absorb any unexpected losses. Thus any undated capital instrument issued by banks is a capital instrument of permanent nature. On the contrary, a dated capital instrument which possesses a 'lock-in' (i.e. a safeguard mechanism that ensures that it cannot and will not be repaid should the bank enter insolvency) is capable of being considered to be permanent.

5.3.1.4 Tier 3 Capital

Under Basel 2, Tier 3 capital instruments was only available to cover trading book exposures, however the BCBS has decided to abolish Tier 3 capital under Basel 3. Tier 3 capital instruments under Basel 2 consisted of short-term subordinated debt (i.e. debt with a minimum maturity of two years) whose repayments was subject to a 'lock-in' insofar as repayment at maturity is conditional on the bank being able to meet its regulatory requirements following repayment.

Following the provisions under Basel 2.5, the role of Tier 3 capital has become redundant, hence necessitating the riddance of Tier 3.

5.3.2 Introduction of a Capital Conservation Buffer

During the crisis, it was discovered that capital under Pillar 1 of the Basel 2 framework lacked in-depth loss-absorbing capacity thus necessitating the intervention by certain governments, through acts such as bail-outs and re-capitalisation.

Basel 3 thus introduces a new requirement for banks to have in place capital buffers which ought to be accumulated during stress-free periods. This capital conservation buffer represents extra capital above and beyond the minimum regulatory capital that banks are required to hold. Under its predecessor Basel 2, such a requirement did not exist, however the rationale for the introduction of the capital conservation buffer is provided in paragraph 126 of the Basel 3 document which states:

> *'It is not acceptable for banks which have depleted their capital buffers to use future predictions of recovery as justification for maintaining generous distributions to shareholders, other capital providers and employees. These stakeholders, rather than depositors, must bear the risk that recovery will not be forthcoming'*[610]

Further,

> *'It is also not acceptable for banks which have depleted their capital buffers to try and use the distribution of capital as a way to signal their*

[610] Part III A, paragraph 126 of Basel 3.

financial strength. Not only is this irresponsible from the perspective of an individual bank, putting shareholders' interests above depositors, it may also encourage other banks to follow suit. As a consequence, banks in aggregate can end up increasing distributions at the exact point in time when they should be conserving earnings"[611]

The basis for this rationale, according to the BCBS, is hinged on the fact that at the height of the global financial crisis, some banks nonetheless paid out dividends and also made distributions[612] arising from capital instruments even though their individual financial positions were anything but sound.

The application of the capital conservation buffer is expected to begin on 1 January 2016 and the proposed figure of 2.5% should be in place by 1 January 2019[613] (See table 5.1 in Appendix 5). The scope of its application is expected not to be limited to the consolidated banking structure only (i.e. conglomerate structure only), but will also be applicable to individual[614] banks or entities within the consolidated structure based on the discretion of national supervisors within that jurisdiction.

While the BCBS, recognises the fact that banks may occasionally have to rely on their capital buffer following the erosion of its capital in a period of financial crisis, it is expected that once a bank draws on its capital conservation buffer, the automatic restrictions on payment of dividends, distributions from capital instruments, share buy-back options and bonus payments to members of staff would kick-in and these restrictions would increase[615] depending on how far the crisis-hit bank draws from the capital conservation buffer leaving it perilously close to the minimum capital conservation requirement as stated in Pillar 1.

The BCBS has also suggested that the draw-down of capital by banks from the capital conservation buffer should only be done in stressful periods as

[611] Part III A, paragraph 127 of Basel 3.
[612] It has often been argued by senior figures within such banks that had they halted the payment of dividends and withheld distributions, it would have sent the wrong signals to the banking industry and as a result would have worsened the systemic crisis that ultimately followed.
[613] Paragraph 133 of Basel 3.
[614] Paragraph 132(c) of Basel 3.
[615] Paragraph 130 of Basel 3.

opposed to normal periods of credit growth and also it must be conducted for the right reason and not for the purpose of for example giving the 'drawing bank' an unfair competitive advantage in terms of increased market share nor should such capital be used to fund bank acquisitions or any other similar projects.

To avoid any potential abuse by banks of the use of the capital conservation buffer capital, paragraph 132(d) of the Basel 3 provisions, empowers banking supervisors with the ability to grant any bank relying on the capital conservation buffer[616] time limits within which to rely on the capital conservation buffer. Also, once banks begin to operate within the buffer, they will be expected to following normality, avoid undertaking any expansion project, however they will be allowed to replenish the capital conservation buffer through activities to raise new capital.

5.3.3 Introduction of measures to improve Counterparty Risk Coverage

In July 2009, the BCBS introduced a number of changes to the Basel 2 framework. Central to these changes was the increase in the capital requirements for both trading book and securitisation activities. Basel 2.5, as these reforms are commonly referred to, introduced capital requirements based on a Value-at-Risk (VaR) calculation for market risk[617] by incorporating a stressed – (VaR) element. Other measures introduced by Basel 2.5 under Pillar 1 included a risk charge applicable to either a specific risk or credit risk which was calculated using the internal models approach. Thus the value of this risk charge was made directly proportional to the applicable risk.

Also under Basel 2.5, the capital charge required to be set aside for the 'securitisation of commercial real estate'[618] was increased and a requirement for a capital charge for 're-securitisation introduced'[619]. Other new Pillar 1 measures included the introduction of a stressed-VAR risk measurement

[616] Paragraph 132(d) of Basel 3.
[617] Market risk is defined as the risk that arises as a result of volatility or fluctuations in interest rates.
[618] B Mahapatra, 'Implications of Basel 3 for Capital, Liquidity and Profitability of Banks' – RBI Monthly Bulletin 2012, p772.
[619] Basel Committee on Banking Supervision (BCBS), 'Enhancements to the Basel 2 Framework' BIS July 2009, pp1-8.

approach which is used in measuring the capital charge required for market risk.

The changes also introduced under Pillar 2 included improved risk management processes[620] however, notwithstanding these reforms under Basel 2.5, Basel 3 has subsequently introduced further reforms to the computation of the capital requirements that a bank ought to set aside for counterparty credit risk (CCR).

Thus there is now a requirement for banks to use data gathered from 'stress-inputs' to set aside capital for exposures resulting from counterparty dealings. The requirement for banks to conduct 'stress-input' analysis is according to B. Mahapatra to enable banks address the pro-cyclical nature of financial systems or the economy particularly inadequate capital that is often a feature of a 'compressed volatile market system'[621].

Basel 3 imposes[622] a credit valuation adjustment (CVA) capital charge, the purpose of which is to provide some level of protection against any potential mark-to-market losses in the event the counterparty experiences a dip in its creditworthiness. Other provisions introduced by Basel 3 to improve counterparty risk coverage include the strengthening of standards for collateral management and initial margining, and higher capital requirements for all exposures to OTC Derivatives.

5.3.4 Reducing or Counteracting Pro-cyclicality

Although pro-cyclicality is a common phenomenon in arguably every economic cycle, this was never addressed nor taken into account in Basel 2. It is widely known and accepted that almost every financial crisis is preceded with great economic expansion and growth and indeed, banks react to these trends by reducing lending during periods of recession and increasing lending during periods of growth and economic expansion[623].

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[620] ibid 15.
[621] ibid.
[622] Basel 3, paragraphs 97-100.
[623] F Heid, 'Is regulatory capital pro-cyclical? A Macro-economic assessment of Basel 2' Deutsche Bundesbank Working Paper 2003, E Catarineau-Rabell, P Jackson and D Tsomocos 'Pro-cyclicality and the New Basel Accord: Banks' Choice of Loan Rating System

The counter-cyclical buffer introduced by Basel 3 was the result of the recognition by the BCBS, that there was a need to curb or curtail this phenomenon of pro-cyclicality on a macro-prudential level with a view to protecting the banking industry. This counter-cyclical buffer ranges from 0 to 2.5 percent of Risk-Weighted Assets (RWAs) and is expected to be met with CET 1 capital and other capital capable of fully absorbing losses[624].

When in operation, the counter-cyclical buffer will be expected to counteract the inherent pro-cyclical effects that the minimum capital requirement introduces[625]. This opinion by Gary van Vuuren, is in reference to an assertion by the Bank of England stated in his literature review that:

'Every regime that adopted a minimum capital requirement framework could stimulate financial pro-cyclicality……'[626]

He also suggests that in the past, 'academics, practitioners and policy-makers' have indicated that the internal ratings-based (IRB) method[627] of ascertaining capital requirements had the tendency to multiply the effects of pro-cyclicality. Other objectives of the counter-cyclical buffer include, to 'promote more forward-looking provisions'[628] and also retain capital which could be used as buffers on a 'micro-prudential level' and then drawn on during stress-testing situations. On a macro-prudential level, the counter-cyclical buffer will assist in ensuring the protection of the banking system from excessive credit growth periods.

The pro-cyclical nature of the Basel 2 Capital framework was identified as one of the reasons why Basel 2 failed to prevent the global financial crisis. It may be recalled, that one main observation prior to the onset of the global financial

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Bank of England Working Paper no 181 2003**,** Goodhart & Taylor **'**Pro-cyclicality and Financial Regulation', 2006.

[624] The buffer will be expected to act as an add-on to the minimum capital Tier 1 requirement and while it will be expected to be capped at 2.5% when activated, it will, when not activated be zero.

[625] Gary van Vuuren, 'Basel 3 Counter-cyclical Capital Rules: Implications for South Africa' Journal of Economic Law 2012 134 Volume (16), 53.

[626] ibid 54.

[627] Indeed, the issue of whether the IRB approach ensures an adequate capital management structure has been debated and questioned by some.

[628]G von Pfoesti and Michael Auer 'Accenture Risk Management Consulting Services', 2012 p9.

crisis was that the pre-crisis period was marked with an increase in credit growth.

Historically, periods of excessive credit growth are usually followed by crises of varying magnitudes. To prevent any future build-up of excessive credit growth, the BCBS has introduced a counter-cyclical capital buffer, which aims to correct or adjust the capital buffer, should there be excessive credit growth.

The BCBS, prior to introducing the counter-cyclical capital buffer acknowledged that losses experienced by any banking sector were usually more pronounced when the crisis period had been preceded by excessive credit growth[629]; and that the negative impact that such massive losses have on the banking sector and/or the real economy necessitated the creation of extra capital during periods where 'the risks of system-wide stress are growing markedly'[630].

The counter-cyclical buffer is expected to be introduced alongside the capital conservation buffer on 1 January 2016 and is expected to be fully operational by 1 January 2019[631]. National jurisdictions that implement Basel 3 and subsequently introduce the counter-cyclical buffer will be expected to rely on or utilise this capital buffer, where it has been established[632] (by the supervisory authorities within the jurisdiction) that the build-up in systemic risk on a macro-prudential level, could be linked to the excessive credit growth within that jurisdiction.

If such a link is established, then the counter-cyclical buffer would be expected to provide a degree of protection against 'any future potential losses'[633]**.** According to the Basel 3 provisions[634], internationally active banks will be required to compute their respective counter-cyclical buffers on the

[629] Slaughter & May LLP publication, (n596) 45.
[630]See FSA Policy statement, 'Capital Planning Buffers', paragraph 136 10/14, p24.
[631] Initially, the counter-cyclical buffer is expected to be 0.625% of risk-weighted assets in 2016 and will increase each year by an extra 0.625% until the maximum target of 2.5% is reached in 2019. See Basel 3, Part IV (F) paragraph 150, 60.
[632] This conclusion or anything else to the contrary can only be drawn following the monitoring by national banking supervisory authorities of credit growth, as well as any other factor(s) that are likely to result in the build-up of systemic risk, and once made, clears the way for the introduction of a counter-cyclical buffer. See Basel 3 Part IV (A) paragraph 137, 57.
[633] FSA Policy Statement (n630) para 137.
[634] Basel 3, Part IV (A) para 137.

basis of where their exposures are located. Thus if a bank is subject to the imposition of counter-cyclical buffers in a particular jurisdiction in which it is located, that bank will be expected to make provisions for extra capital buffer for the purposes of all exposures attributed to the bank in respect of its borrowers located in that jurisdiction[635]. Although Basel 3 puts the onus of choosing an authority or supervisory body (which will decide the size and implementation of the counter-cyclical buffer)[636] on individual member states comprising the Basel Committee, it is yet to be determined if non-Basel Committee countries would also enjoy such responsibility should they adopt Basel 3. With regards to the activation of the counter-cyclical buffer, Basel 3 sets out conditions on when and how the counter-cyclical buffer provisions should be exercised.

In deciding when a counter-cyclical buffer should be set up, the Basel Committee suggested that an appropriate time to set up[637] the buffer would be when the proportion[638] of credit to GDP is higher than the usually recorded figure over a long period of time. This method relied on by the Basel Committee was questioned in a publication by Slaughter & May LLP[639] where the authors pointed out that the ratio of credit to GDP in any given jurisdiction would not provide a completely accurate measurement of credit growth and in their opinion judgement had to be applied[640].

Paragraph 141 of the FSA Policy statement 10/14 Capital Planning Buffers, provides that countries implementing Basel 3 will be under an obligation to announce the decision to introduce a counter-cyclical buffer up to 12 months prior to the actual settings of the buffer. The rationale for this, is to enable banks accumulate or gradually set up the buffer without increasing financial

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635 The amount of add-on to be added will be dependent on where the credit exposures are geographically located. See Basel 3, Part IV (A) paragraph 138(b).

636 The size of the buffer will be anything up to 2.5% of risk-weighted assets.

637 The counter-cyclical buffer would be capped at 2.5% of risk-weighted assets and once activated, would be considered alongside the minimum capital requirements however, when there has been no prior notification of the need to build up a counter-cyclical buffer, the buffer shall remain zero per cent. See Basel 3, Part IV (B), paragraph 139.

638 Slaughter & May LLP, 'Basel 3: A New Capital Adequacy and Liquidity Framework for Banks', June 2011 p46. See also Basel 3, Part IV (A) paragraph 137.

639 ibid.

640 It has not been made clear whose judgement will be relied upon here, i.e. whether the judgement of the management of the banks or whether the supervisory authorities in that jurisdiction. See Basel 3 Part IV (A) paragraph 138.

stress within the banking industry of that jurisdiction[641]. It is submitted, that any time frame longer than 12 months may be too long for the counter-cyclical buffer to take effect.

However, where a bank fails to set up a counter-cyclical buffer when it is under an obligation to do so (after satisfying the applicable requirements), such a bank would be subjected to restrictions on distribution pay-outs as well as other pay-outs to staff members and the level of restrictions would be proportionate to the extent to which the bank concerned has failed to accumulate the applicable percentage within the buffer.

5.3.5 The introduction of a Leverage Ratio

Basel 3 introduces a new leverage ratio of 3%[642] which is expected to be on a trial basis until 2018, and if this figure is found to be appropriate, will be adopted in 2019. The leverage ratio is expected to act as a backstop to existing Basel 2 risk-based framework. In other words, it is designed to keep in check the accumulation of excessive leverage[643] within the banking system as well as offer some sort of 'in-built' protection against model risk and any potential measurement error.

This new leverage ratio is expected to consist of Tier 1 capital as opposed to the bank's entire assets which includes some off-balance sheet exposures. Prior to the global banking crisis, it was discovered that the leverage of a number of internationally active banks had become extremely high and in some cases as high as about 50 times[644] the value of capital.

Banks had built up significantly higher levels of leverage which had not been disclosed in their capital ratios. This excessive build-up of leverage levels may arguably be attributed to the fact that in the past, the banking industry had relied on the figures generated by the risk-based capital ratios as a means of determining the required amount of capital that a bank needed to have to

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[641] Basel 3 Part IV (B) paragraph 139-141. Where economic conditions are so dire to warrant an immediate setting up of the counter-cyclical buffer, it would be within the right and power of the supervisors to do so.
[642] Basel 3 Part V (B), paragraph 153.
[643] Excessive leverage was found to have exacerbated the severe nature of the global financial crisis. See FSA, 'The Turner Review: A Regulatory Response to the Global Financial Crisis' March 2009 page19.
[644] B Mahapatra (n618) 772.

cover all risks. Banks were thus faced with two options, that is to keep the risky assets on their banking books for which more capital will have to be held, or transferring risky assets off-balance sheet which had the dual benefit of reducing the amount of capital needed to be set aside and also freeing up capital in the banking book enabling the bank to undertake other business in a fiercely competitive banking industry.

Thus during the crisis, when the lack of liquidity became so acute, a number of banks (particularly in Europe and America) were compelled to deleverage in order to create some liquidity. The nature and speed with which these deleveraging processes occurred simultaneously resulted in the diminishing of asset prices, thus increasing mark-to-market losses and further reducing the level of capital. This accentuated further, the lack of credit available in the real economy.

In response to this, the BCBS in 2009, sought to introduce a leverage ratio that would:

> *'constrain the build-up of leverage in the banking sector, helping avoid destabilising deleveraging processes which can damage the broader financial system and the economy…'.*[645]

Thus following supervisory monitoring of the leveraging ratio[646], the BCBS imposes[647] a requirement on banks to provide a report[648] of their leverage ratio to their respective banking regulators. The introduction of the leverage ratio, according to the BCBS is designed to complement[649] Basel 2's risk-based measurements and act as an extra safeguard in addressing model risk and any errors in measurement.

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[645] See Basel 3 Part V (A), paragraph 152.
[646] Since 1 January 2011.
[647] Basel Committee on Banking Supervision (BCBS), 'The regulatory framework: balancing risk sensitivity, simplicity and comparability', Discussion Paper 2013 p16.
[648] Basel 3 Part V (C) paragraph 166. From 1 January 2015, Banks would be expected to disclose their leverage ratios and the components of the ratio and the BCBS are committed to developing a disclosure template to facilitate this. The content of such a report is expected to include the actual leverage ratio, the individual exposures making the total exposure, the methods deployed in managing excessive leverage risk and any factor that affected the leverage ratio during the period to which the leverage ratio applies.
[649] As opposed to being a replacement for the risk asset ratio.

The leverage ratio implementation process has been designed in such a way so as to enable its design and computation assessed with respect to different business models operating within a full business cycle. Thus 2011-2012 was ear-marked as a monitoring period, whereas 2013-2016 is supposed to provide a parallel run prior to full implementation in 2018.

During the transition period, disclosure of leverage ratio will no longer be restricted to supervisors within jurisdictions. Banks will be under an obligation to publically disclose their leverage ratios from 1 January 2015 and the mode of disclosure will be in conformity with an agreed disclosure template[650].

According to the Basel 3 provisions on leverage ratio, the calculation of the ratio will be based on the leverage ratio gathered during each quarter.

$$\text{i.e. Leverage Ratio} \rightarrow \frac{\text{Tier 1 Capital}^{651}}{\text{Total Exposure}^{652}} \geq 3\%$$

While the purpose of a public disclosure is to enable the BCBS determine if the 3% ratio limit is appropriate for all types of business models across a full business cycle, it has already become obvious that a decision on a generally applicable leverage ratio will be a difficult one for the BCBS. This is because it has been reported[653] that in the USA, Federal Reserve officials have been contemplating a much 'stricter cap' on bank leverage ratio with some[654] suggesting that 10% would be ideal whilst others[655] are urging the Federal Reserve to settle for 8%.

In contrast in the UK, the Bank of England[656] favours a 4-7% leverage ratio. Regardless of the differing opinions which are expected to shift yet again by

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[650] In line with proposals published in a report by the Enhanced Disclosure Task Force (EDTF) in October 2012. See Financial Stability Board, Enhanced Disclosure Task Force, *The risk disclosure of banks.* A report presented to the FSB by the EDTF on 29 October 2012. i.e. www.financialstabilityboard.org/publications/r_121029.pdf**.**

[651] The calculation of capital is based on the new definition of capital under Tier 1.

[652] Exposures will be assessed and made to conform to applicable accounting standards.

[653] Tom Braithwaite and Shahien Nasiripour 'Fed weighs tighter cap on bank leverage – Move would provide Basel 3 backstop' *Financial Times*, (London, 1 May 2013) p1.

[654] ibid. Tom Hoenig, Vice-Chairman of the Federal Deposit Insurance Corporation (FDIC) supports a 10% leverage ratio.

[655] Braithwaite and Nasiripour (n653). A Policy group which boasts of members such as Paul Volcker (Former chairman of the Federal Reserve) and Sheila Blair (the former head of the (FDIC)) support an 8% leverage ratio.

[656] ibid. The Executive Director for financial stability at the Bank of England has proposed a 4-7% ratio.

further intense lobbying by experts within the banking and finance industries of both countries and certainly elsewhere[657], it is expected that the final decision on whether 3% would be an ideal leverage ratio and should be the same or differ for different types of financial institutions, will be based on a final report submitted by the European Banking Authority to the European Commission.

5.3.6 A New Liquidity Risk Management Provision

Basel 3 also introduces a framework for liquidity risk management which never existed under Basel 2. This new liquidity risk framework consists of two minimum standards for liquidity risk. These minimum standards are a 30-day Liquidity Coverage Ratio (LCR)[658] and a 1–year Net Stable Funding Ratio (NSFR)[659].

Under the 30-day LCR, banks are required to hold enough high-quality liquid assets which could be utilised in any bank-stress related situation. The 1-year NSFR ratio on the other hand, is designed to ensure that banks are able to withstand long periods of stress up to 1 year, thereby ensuring greater resilience and financial stability.

There is an added requirement for Systemically Important Financial Institutions (SIFIs) to increase capital and liquidity and also implement additional supervision policies to curb the wider impact such institutions have on the global economic system when they encounter serious financial difficulties. The liquidity risk management framework introduced under Basel 3, will not be discussed any further as this would be outside the remits of this thesis.

5.4 Deductions and Regulatory Adjustments[660]

The Basel Committee, in recognition of the fact that some capital neither possess the qualities nor the characteristics that enable available capital to absorb losses or reduce the impact of any expected or unexpected financial shocks, have introduced a requirement that such capital instruments are

[657] From other member countries making up the BCBS.
[658] Paragraph 40 of Basel 3.
[659] Paragraph 42 of Basel 3.
[660] Paragraphs 66 to 90 of Basel 3.

deducted or undergo regulatory adjustments thus making only the applicable capital available to be applied in any given financial crisis.

Thus the purpose of regulatory adjustments or deductions is only to make available, high quality capital instruments capable of absorbing any potential loss, thereby enhancing the quality of capital. This enables the BCBS to achieve its overall long-term objective of narrowing the definition of capital during the transition phase from 1 January 2013 to 1 January 2023.

Although regulatory adjustments/deductions were available under Basel 2, the regulatory adjustments/deductions applicable under Basel 3, goes above and beyond that of Basel 2 especially when the main rationale for the introduction of Basel 3 had been the improvement in the quality of capital. Furthermore, the resultant redundancy or obsoleteness of certain capital instruments has necessitated the introduction of grandfathering provisions by the BCBS during the transition period.

The application of grandfathering provisions will ensure that certain capital having peculiar individual characteristics or qualities will gradually be phased out during the transition period whilst allowing the newly qualifying capital instruments 'take seed and embed' itself in the capital framework of the financial institution e.g. bank.

It is important to highlight the fact that the narrower definition of capital introduced by Basel 3 is applicable after deductions and/or adjustments have been made to total Tier 1 capital (i.e. Core Tier 1 and Additional Tier 1 capital). This is in contrast to Basel 2 where Tier 1 capital was determined before[661] the application of deductions thus reducing the size of capital available to absorb any shocks.

The regulatory adjustments/deductions introduced under Basel 3 include:

5.4.1 Share Premium

As shares are generally regarded as an important component of common equity, the premiums derived from shares are also accorded the same status i.e. part of common equity depending on whether the share premium arose

[661] Latham & Watkins LLP, 'Reforms under Basel 3' 2008 p18.

from shares that were already a part of common equity[662]. Thus the adjustment applicable in this instance ensures that share premiums derived from different types of capital instruments including other shares are allocated to the same grouping of capital from which the respective premiums arose from[663]. Whilst different jurisdictions may currently have different regulations in place with regards to the treatment of share premiums, it is submitted that any country that eventually implements the Basel 3 regulations would have to ensure that any prior existing law that goes contrary to the provisions of Basel 3 is amended to ensure compatibility and consistency.

In the UK, current FSA regulations allow share premiums derived from preference shares to be regarded as Core Tier 1 capital (under Basel 2) where the terms contained in the issuance documents of the preference shares makes provisions for the non-payment of any premium on redemption of the preference shares. Going forward, these provisions will have to be amended in the future as it will be contrary to the provisions under Basel 3.

5.4.2 Goodwill[664] and Intangibles

Goodwill and intangibles (also deducted under Basel 2) are fully deducted from Common Equity Tier 1 capital (CET1) net of any associated deferred tax liability (DTL) that would be extinguished if the assets became impaired or de-recognised under the relevant accounting standards[665].

Since these items are not available to the bank when insolvency occurs, they are deducted from the calculation of regulatory capital. As CET1 is expected to consist of capital with heightened loss-absorption qualities, keeping goodwill and intangibles in the CET1 would be unjustified.

On the contrary, intangibles like Mortgage Servicing Rights (MSRs) are allowed limited recognition in the computation of CET1. This implies that MSRs are recognised for the purposes of inclusion in the calculation of CET1,

[662] Paragraph 52 of Basel 3.
[663] Thus for example, stock surplus (share premium or premia) which do not satisfy eligibility criteria for inclusion in CET1, will qualify for inclusion in Additional Tier 1 capital on condition that the shares from which the stock surplus arise, qualify too be categorised under Additional Tier 1 capital – See paragraph 56 of Basel 3.
[664] The extra value of a business over and above the fair value of each and every asset net of all liabilities which may be paid for that business.
[665] Part 1 paragraph 67 of Basel 3.

provided they do not exceed 10% of the bank's common equity. However, where the MSRs exceed the threshold deduction level of 10% either as a standalone item or exceeds 15% where it is aggregated with significant investments in the common shares of unconsolidated financial institutions e.g. banks and insurance companies, the bank owning such MSRs is expected to deduct the amount beyond 15% of its common equity before 1 January 2013. Thus the capital items that remain within the 15% aggregated cap limit will be subjected to a full disclosure and will be risk-weighted at 250%[666].

5.4.3 Deferred Tax Assets (DTAs)

A deferred tax asset may be defined as a type of bank asset whose very existence is dependent on the future profits that the bank might make[667]. As there can be no guarantee that the bank would make profits in the future, such assets are prima facie excluded in the calculation of CET1[668].

Where taxation laws (within the jurisdiction in which the bank is located) allow setting-off, DTAs could potentially be netted against DTLs on condition that the DTAs that are being netted have arisen as a result of taxes that have been levied by the same tax authorities and also any DTLs that have already been applied in the setting-off of goodwill and intangibles have been excluded.

5.5 De-recognitions

DTAs that arise due to temporary differences in accounting treatment are accorded a different treatment. They are de-recognised from the calculation of CET1 rather than completely excluding or deducting such items.

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[666] See Basel 3, paragraphs 87-89.

[667] Examples of Deferred Tax Assets include the bank's operating losses that are carried forward, any tax losses and tax credits that have not been used. DTAs of this nature may be realised only if the bank reports a profit in the near future.

[668] See Basel 3 Part 1 paragraphs 69-70. Due to extensive lobbying by some members of the G20, e.g Japan, DTAs which relate to temporary differences in say accounting treatment are not excluded in the calculation of CET1 capital subject to a threshold amount of 10%. However, the bank (when standing alone and not part of a consolidated structure) will be under an obligation to deduct DTAs exceeding 10% of its common equity, but where the bank is aggregated with investments in the common shares of unconsolidated financial entities, this threshold deduction rises to 15%, (i.e. any amount exceeding 15% of common equity is deducted and the items that remain within the 15% aggregate threshold limit are fully disclosed by the bank and are allocated a risk-weighting of 250%.

5.5.1 Cashflow Hedge Reserve

The previous practice under Basel 2 where cash flows arising from the fair value of off-balance sheet derivatives were used in hedging has been abolished under Basel 3. This is because this practice created a volatile environment of artificial[669] instability within common equity capital as it is impossible to determine the actual value of common equity through applicable accounting practices as future cash flow that had been hedged could not be subjected to any fair value adjustments.

Thus, cash flow hedge reserves which will no longer be recognised as common equity under Tier 1 are those relating to the hedging of items that are not fair-valued on the balance sheet[670].

5.5.2 Unrealised Gains and Losses[671]

The revised and final draft of Basel 3 allows for the recognition of excess provisions for Tier 2 capital to a limit of 0.6% of credit set aside for risk-weighted assets which have been computed using the 'IRB' process. This maximum limit of 0.6% may be revised downwards and a lower percentage applied through national discretion[672].

This is in contrast to an earlier provision under Basel 3 which favoured the deduction from the capital of the full amount relating to a shortfall in the stock of provisions to expected losses[673]

It has been suggested[674] that the reason why Basel 3 doesn't contain any provisions requiring unrealised gains or losses to be excluded from common equity is to ensure that confidence in Tier 1 Capital is maintained.

Also, assets held within the trading book are generally held in the short term for the purposes of sale and as a result, any proposal to make adjustments to such unrealised trading gains and/or losses will create an atmosphere of uncertainty and inconsistency which may ultimately impact the size of the

669 Slaughter & May LLP, (n596) 21.
670 Paragraphs 71-72 of Basel 3.
671 Part 1 paragraph 73 of Basel 3.
672 See http://www.financialstabilityboard.org/publications/r_101101.pdf
673 Paragraph 73 of Basel 3 (December 2010).
674 Slaughter & May LLP, (n596) 21.

common equity capital. Regardless of this fact, there would also be the added difficulty of trying to ascertain the relevant data and information that would be required to effect the adjustments if full adjustments were applicable.

5.5.3 Gain on sale from securitisations[675]

Paragraph 74 of Basel 3 states that, any gain from a securitisation transaction which results in an increase in equity capital should be de-recognised from CET 1. Under Basel 2, such item qualified for de-recognition under Tier 1 capital.

5.5.4 Changes in own credit resulting in gains and losses

Where a bank experiences cumulative gains and losses as a result of the bank's individual credit risk position in relation to its 'fair valued financial liabilities'[676], such gains or losses will likewise be de-recognised.

5.5.5 Defined benefit pension fund asset and liabilities

Basel 3 makes provisions[677] for defined benefit pension fund liabilities to be deducted from the CET1 capital computation. However, this deduction must be done net of any deferred tax liabilities that may be linked to it, the latter of which must be completely eliminated following the deduction.

Thus, where a bank is at liberty to make withdrawals from the pension fund, the bank would then be under an obligation to off-set this withdrawal with assets that can quickly and without delay or hitch be withdrawn and applied to meet its obligation to satisfy the demands of depositors and creditors.

5.6 Minority Interests

5.6.1 Common Equity Capital

The treatment of minority interests under Basel 3 represents a departure from what the BCBS originally proposed in December 2009. Initially, the BCBS suggested that minority interests should not qualify to be regarded as common equity under Tier 1 capital and on this basis ought to be excluded from the calculation of consolidated capital.

[675] Basel 3 Part 1 paragraph 74.
[676] Basel 3 paragraph 75.
[677] Basel paragraphs 76-77 of Basel 3.

This position by the BCBS was supported by the argument that an equity investment in a subsidiary by a third-party entity should be utilised in the provision of capital towards the risks from that subsidiary only and must not be used to support group-wide risks. However, following interventions during the consultation process, the BCBS has made provisions within Basel 3 to the effect that any minority interest(s) created by virtue of the issuance of common shares by a wholly consolidated subsidiary may be recognised as common equity Tier 1 on condition that:

- The issuing subsidiary (i.e. the subsidiary issuing the capital instrument) is a bank; and
- The capital instrument investment issued by the subsidiary bank and from which minority interests arise, satisfies all eligibility requirements towards its inclusion as common shares for the purposes of regulatory capital.

Importantly, it is imperative that the minority interest is representative only of actual common equity augmentation from the third-party to the subsidiary. Thus, the minority interest that qualifies to be included as common equity under Basel 3 is the amount of excess common equity (i.e. exceeding 7% of the minimum applicable) in the issuing subsidiary multiplied by the percentage of common equity possessed by the third-party investors[678].

5.6.2 Additional Tier 1 Capital

For minority interests[679] to be recognised as Additional Tier 1 capital, they ought to have arisen from qualifying tier 1 capital instruments that have been issued by a fully consolidated subsidiary. On the contrary, any capital instrument issued via a special purpose vehicle (SPV) or entity does not qualify to be included in consolidated common equity (because it was not issued by a bank) however, such capital may still satisfy the requirements to be included as Additional Tier 1 capital or Tier 2 capital.

[678] Paragraph 62 of Basel 3.

[679] This is inclusive of other minority interests within the common equity of a consolidated subsidiary which is not a bank.

A further requirement is that the SPV's sole asset must be the investment in the capital of the bank and must be compliant with the applicable Basel provision[680].

(a) *Investments in a bank's own shares*[681] (Treasury Stock)

Where a bank has an investment in its own shares, such investment must be deducted from CET1 unless it has already undergone de-recognition under the applicable accounting regulations.

Furthermore, netting may be applied within the same exposure where gross long positions are deducted net[682] of the aggregate of any short positions within the same exposure, on condition there are no counterparty risks linked to the short position.

(b) *Reciprocal Holdings in Banking, Financial and Insurance entities*[683]

Reciprocal cross-holdings that banks have in each other's capital tend to provide a misleading picture as to the true capital position of the bank concerned. Such holding is thus fully deducted, using the 'corresponding deduction approach'. Under this approach, the investment by a bank in a particular component of capital in another bank would be deducted from the corresponding component of capital of the investing bank.

(c) *Significant Holdings in Banking, Financial and Insurance entities*[684]

Significant holding basically refers to an investment of at least 10% of the holding bank's own common share equity. Thus where a bank holds more than 10% of its own capital by way of investment in another bank, financial or insurance entity, this material holding by the bank would have to be deducted where it amounts to more than 10% of the share capital of that entity.

Paragraph 80 of Basel 3, emphasises that this regulatory adjustment is only applicable to investments in the share capital of banking, financial as well as

[680] Paragraph 65 of Basel 3.
[681] Part 1 paragraph 78 of Basel 3.
[682] Blaire Keefe and Andrew Pfleiderer, 'Basel 3: What It Means for the Global Banking System', (2012) Banking & Finance Law Review, Volume 27(3) 408, 415.
[683] Basel 3 Part 1 paragraph 79.
[684] Basel 3 Part 1 paragraphs 80-86.

insurance entities that fall 'outside the scope of regulatory consolidation'[685]. Investments considered as significant or material holdings in such circumstances may include direct, indirect[686] and synthetic holdings of capital instruments[687]. Material holdings in the banking as well as trading books of other banks, financial and insurance entities may also be classed as investments for the purposes of this Basel 3 provision.

Paragraph 81 of Basel 3, states that where the sum total of all the holdings by the bank when aggregated exceed 10% of the bank's common equity, (following the application of other regulatory adjustments in full and prior to this current adjustment under consideration), then the amount in excess of 10% of the bank's common equity will have to be deducted.

Deductions under this heading as introduced under the Basel 3 provisions are undertaken using the 'corresponding deduction approach', as already described above in paragraph (b). This 'corresponding deduction approach' is in stark contrast to the approach under previous Basel regulations where deductions were applied equally between Tier 1 and Tier 2 capital irrespective of the type of capital the investments were held in.

5.6.3 Threshold deductions

Paragraph 87 of Basel 3, introduces a provision for certain items to be accorded limited recognition when calculating the Common Equity Tier 1 of a bank. It has been suggested by Blair Keefe and Andrew Pfleiderer[688] that this provision was included in the Basel 3 Agreement as a result of a negotiated compromise to satisfy all member states represented at the Basel Committee for Banking Supervision.

Thus the items which may be accorded limited recognition include[689]:

[685] Basel 3 paragraph 80.
[686] Where indirect holdings refer to a bank's full or partial exposure where a loss in value of the direct holding will result in an equivalent loss to the bank to the extent of the lost value in the direct holding.
[687] Basel 3 paragraph 80.
[688] Keefe and Pfleiderer, n682,
[689] Paragraph 87 of Basel 3.

- Significant investments in the common shares of unconsolidated financial institutions such as banks, insurance and other financial entities;
- Mortgage Servicing Rights (MSRs); and
- Deferred Tax Assets (DTAs) that arise from temporary differences.

The limited recognition attributed to the above capital instruments, stems from the fact that each of these instruments is recognised as capital to a maximum cap of 10% of a bank's common equity. However, when all three capital instruments are to be consolidated simultaneously, or in an aggregated manner, a maximum cap of 15% will be applied.

This implies that banks will be under an obligation to deduct the amount of aggregated capital exceeding 15% of the common equity of the bank where the above listed items are simultaneously considered[690]. Following the application of such threshold deduction, any capital included in the 15% threshold cap will be included in the calculation of common equity and would be subject to a full disclosure[691].

This approach however will change from 1 January 2018. From this date, the 15% threshold limit would be made to apply only after all regulatory adjustments have been made including adjustments to the three above-mentioned capital instruments. Under both approaches, capital items within the 15% threshold deduction limit will be risk-weighted at 250%[692].

5.7 Disclosure

When Pillar 3 of Basel 2 was introduced, the rationale for its introduction according to the Basel Committee was to 'encourage market discipline'[693]. Pillar 3 heralded in an obligation for banks to make disclosures to the market particularly in relation to a bank's exposure to banking risks.

By requiring banks to make such disclosures, the Basel Committee were hoping to put market participants in a position to analyse relevant information

[690] Applicable as of 1 January 2013.
[691] Basel 3 paragraph 88.
[692] Basel 3 paragraph 89.
[693] Basel 2 Part IV, paragraphs 808-809.

with regards to the amount of capital, level of exposure to risk, methods employed in the identification and subsequent measurement of risk, thereby giving them an insight into the capital adequacy position of the bank.

In introducing the disclosure requirement under Pillar 3 of Basel 2, the Basel Committee had to ensure that this requirement was driven by the primary need to determine a bank's capital adequacy and not influenced[694] by a bank's equally important accounting requirements. Disclosure under the latter requirement i.e. accounting requirement has to be made subject to the materiality principle or concept[695]. Where disclosure is deemed not to be mandatory under accounting requirements, it may still be made via other obligatory processes introduced by the banking supervisory body(ies) in the jurisdiction in which the bank is located.

During and after the global financial crisis, there was a general recognition that the disclosure requirements under Pillar 3 had failed to provide the information that investors (both new and old) as well as counterparties needed in order to take certain economic decisions. The lack of transparency and consistency[696] in disclosures by banks ensured that comparisons between risk-weighted assets and the internal models employed in assessing them could not be effectively made.

Thus the enhanced disclosure requirements under Basel 3[697], attempts to address this (i.e. lack of transparency and consistency) by focusing largely on capital, i.e. both on and off-balance sheet capital. Basel 3 disclosure requirement imposes an obligation on banks to ensure[698]:

[694] Basel 2 Part IV (D), paragraph 813.
[695] Basel 2 Part IV (E), paragraph 817 suggests that for information to be considered to be material, its 'omission or misstatement' should be capable of influencing any person who has relied or intends to rely on such information to make an economic decision.
[696] Basel Committee on Banking Supervision (BCBS) 'The Regulatory Framework: balancing risk sensitivity, simplicity and comparability' Discussion Paper, July 2013.
[697] Basel 3 paragraphs 91-93.
[698] ibid.

Box 14

1. Regulatory capital elements are fully reconciled back onto the balance sheet and represented in the bank's audited financial statements;

2. All regulatory adjustments i.e. capital deductions are disclosed individually or separately;

3. Limits and minima[699] are adequately described thus identifying both the positive and negative components of capital against which the limits and minima are applicable;

4. That the main features of characteristics of issued capital instruments are properly described; and

5. Any disclosure of ratios relating to components of regulatory capital ('Core Equity Tier 1', Core Tier 1 or Tangible Common Equity Ratios) is made in tandem with a thorough explanatory account of the method used in calculating these ratios[700].

On the issue of lack of transparency and consistency in the disclosure requirements under Basel 2, the establishment of the Enhanced Disclosure Task Force (EDTF) by the Basel Committee will ensure that through the implementation of the Task Force's recommendations[701], disclosure by banks would be greatly improved.

This view gains support in a Report[702] submitted by the Basel Committee on Banking Supervision to the G20 leaders. In this Report, the BCBS suggest that the enhanced pillar 3 disclosures (under Basel 3) by banks would enhance increased 'market discipline' and prevent inconsistencies and help tackle the different perceptions that exist with regards to the causes and extent of risk-weighted asset variations.

[699] Basel 3 Part 1 A paragraph 50.
[700] Basel 3 paragraph 132(b).
[701] Financial Stability Board, Enhanced Disclosure Task Force, 'The Risk Disclosures of Banks', a Report presented to the FSB, 29 October 2012, www.financialstabilityboard.org/publication/r_121029.pdf.
[702] Basel Committee on Banking Supervision (BCBS), 'Report to G20 Leaders on monitoring implementation of Basel 3 regulatory reforms' – August 2013 BIS.

The author submits that the introduction of standard definitions and the creation of a disclosure template by the BCBS to further provide more consistency and comparability of disclosures across jurisdictions stands the risk of introducing a level of rigidity which would leave no room for manoeuvre. This is because there could well be types of assets that qualify as components of regulatory capital in certain jurisdictions whilst not being recognised as such in other jurisdictions.

When this occurs, there may be disagreements as to whether disclosure ought to be made in those instances. Notwithstanding this opinion, the author further submits that while the disclosure requirements under Basel 3 generally enhances capital adequacy transparency, there is no doubt that the evolution of capital adequacy will continue to play a significant role in any international banking regulatory reform effort, towards the common goal of financial stability.

5.8 Capital Adequacy under Basel 3

Following the global financial crisis, the BCBS in July 2009, increased the capital requirements for specific trading and securitisation in an attempt to close the loop that had existed under Basel 2 which allowed banks to transfer assets to the trading book mainly because the trading book attracted a lower capital requirement.

The three main changes introduced by the BCBS include firstly, the introduction of an incremental risk charge (IRC) the purpose of which was to enable a more accurate figure for migration and default risks arising from securities[703] from the trading book to be measured. Also a 'stressed VaR' capital charge was introduced through the use of the stressed VaR methodology which was meant to accurately measure the volatile nature of the markets thus ensuring that adequate capital had been set aside.

The rationale for the introduction of the 'stressed VaR' charge was:

[703] Such as bonds, credit derivatives and also leveraged loans.

'*… to deliver a capital charge based on a measure of VaR that would be applicable to the bank's current portfolio in a period of stress relevant to that portfolio*'[704].

Finally, a credit value adjustment charge (CVA) was introduced to cover potential counter-party risk of mark-to-market losses. These changes together with others are commonly referred to as Basel 2.5.

The measures introduced by Basel 2.5, impact both pillar 1 and pillar 2 of the banking regulatory framework. Under pillar 1, an incremental risk charge (IRC) for a particular risk or credit risk arising from a bank's trading book[705] has been introduced under the Internal Models Approach (IMA). Also, the capital charge for securitisation of commercial real estate has been increased and a new capital charge introduced for re-securitisation.

An enhancement of the VaR method employed in the allocation of capital charge for market risk seems to have been achieved through the introduction of a 'stressed-VaR' element[706]. This stressed VaR has been specifically designed to calculate a capital charge using an aspect of VaR applicable only to a bank's existing asset portfolio during stress periods relating to that particular asset portfolio.

Under pillar 2, Basel 2.5 issues guidelines on micro-prudential risk management processes, dealing with reputation and liquidity risk, improvement of valuation methods and practices and the implementation of effective stress testing methods/procedures. Also, disclosure is greatly enhanced through the introduction of certain disclosure requirements to complement pre-existing requirements under Basel 2.

Thus, although the capital requirement for a bank's trading book is expected to increase by approximately three-fold through the implementation of these new regulatory requirements under Basel 2.5, it is submitted that the overall risk methodology still remains flawed and the potential introduction by the

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[704] BIS, 'Interpretive Issues with Respect to the Revisions to the Market Risk Framework' July 4, 2011 at p3. Available at http://www.bis.org/publ/bcbs193a.pdf.
[705] Such as default and migration risk arising from correlation trading.
[706] BIS, 'Interpretive Issues with Respect to the Revisions to the Market Risk Framework' July 4, 2011 at p3. Available at http://www.bis.org/publ/bcbs193a.pdf.

BCBS of the Expected Shortfall (ES) methodology although appealing, needs to be carefully considered before widespread adoption. Extreme sensitivity is the main characteristic of the ES methodology and this characteristic enables 'extreme events' or 'tail risks' to be captured.

In response[707] to a consultative paper launched by the Basel Committee, the authors argued that the ES methodology enabled 'potential risk outcomes to be observed beyond the 99th percentile of the expected loss distribution'[708]. Notwithstanding this, it is envisaged that the shortcomings of the VaR are not likely to be addressed and effectively rectified by a better risk model in the near future particularly where Basel 3 fails to make significant inroads[709] in the reform of risk measurement methodology. Michael C. Macchiarola[710]suggests that inspite of VaR's short-comings, it also has benefits. Jim Chen agrees with this view and states that:

> *'Despite its flaws and limitations, VaR analysis represents the most important tool for evaluating market risk as one of several threats to the global financial system'*[711].

However, according to the BCBS, the broad spectrum of reforms introduced by Basel 3 has been designed to address all the different shortcomings of the global banking regulatory framework that the global financial crisis exposed. In a discussion paper[712], it was suggested that while the capital adequacy measures introduced by Basel 3 generally strengthened the global capital adequacy framework, there were other provisions such as the introduction of a leverage ratio which were introduced to provide a supporting role to the existing capital adequacy ratio, through the provision of a non-risk based capital back-up framework.

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[707] Allan D Grody, 'Comments on Aspects of the BIS's Fundamental Review of Trading Book Risk Measurement Methods' 14 September 2012.
[708] ibid 3.
[709] The only risk management measure introduced by Basel 3, is the non-risk weighted leverage ratio which is complementary in nature to the risk-weighted assets methodology and also to the enhancement introduced under Basel 2.5.
[710] Michael C Macchiarola, 'Beware of Risk Everywhere: An Important Lesson from the Current Credit Crisis' (2009) 5 Hastings Bus. L.J. 267, 294-297.
[711] Jim Chen, 'Measuring Market Risk under Basel 2, 2.5 and 3: VaR, Stressed VaR, and Expected Shortfall' p2 17 April 2013.
[712] Basel Committee on Banking Supervision (BCBS), 'The regulatory framework: balancing risk sensitivity, simplicity and comparability' Discussion Paper July 2013.

While this provision could potentially amount to a masterstroke by the BCBS, it is submitted that the adoption of a globally consistent leverage ratio may still be a couple of years away, a situation further undermined by the ever-present threat of regulatory capture.

The capital adequacy framework under Basel 3 retains the existing framework in Basel 2, i.e.:

$$\text{Capital Adequacy Ratio (CAR)} \rightarrow \frac{\text{Capital (Qualifying Capital)}}{\text{Risk-Weighted Assets}} \geq 8\%$$

However, it is submitted that the capital adequacy measures under Basel 3 adds another dimension to the level of complexity that the banking regulatory framework is already famed for. While the main provisions under Basel 3 arguably relate to the quality of qualifying capital and the total availability of capital, i.e. with respect to the capital conservation buffer, there are other provisions within Basel 3 such as the countercyclical buffer and also new liquidity provisions[713] which enhance financial stability within the overall banking system.

The capital adequacy framework under Basel 3 is thus underpinned by a renewed focus on the role of common equity, evidenced through the narrow and strict capital definition that Basel 3 introduces which completely overshadows the limited inroads it makes with regards to risk measurement. Thus notwithstanding the Basel regulatory reforms that preceded Basel 3, it is fair to say that the nature of capital still remained unchanged; a crucial factor that affected the loss-absorbency ability of capital that banks had available during the global financial crisis.

Inspite of this renewed focus on the narrow and strict definition of capital, certain changes have also been introduced to the definition and method employed in the calculation of risk-weighted assets (RWA). These changes introduced under Basel 2.5 and Basel 3 as mentioned earlier above, mainly affect banks involved in investment banking activities. When the BCBS introduced these changes it was generally acknowledged that for the capital adequacy framework to be effective in a given financial institution, it was

[713] As mentioned earlier, the liquidity provisions under Basel 3 will not be discussed in this thesis.

imperative that risks undertaken by the financial institution would be commensurate to the latter's ability to bear that magnitude of risk.

While the provisions under Basel 3 effectively introduces a revised definition of capital, i.e. capital that possesses a heightened form of loss absorption, it is submitted that large commercial banks (perhaps with the exception of some universal banks) are likely to be unaffected by the changes introduced to the calculation of RWA primarily because there is an assumption that true commercial banks do not engage in investment banking activity(ies). If this is really the case, then commercial banks will generally continue to be affected by the risk methodology applicable under Basel 2 for credit, market and operational risks which could best be described as anything but perfect.

There is however, an element of hope that the introduction of a non-risk based leverage ratio would be effective in mitigating against the inadequacies in the risk methodology(ies) inherited from Basel 2. It is expected that the leverage ratio would have both micro-prudential and macro-prudential impact through the provision of a fall back process which compensates for inherent risk measurement errors still present under the Basel 3 Framework.

In retrospect, perhaps the reason why Basel 3 does not introduce significant changes in the risk methodology processes under Basel 2 and virtually adopts it in its entirety, might be for the simple reason that attempting to implement a consistent approach towards RWA will be a herculean task indeed. Vanessa Le Lesle and Sofiya Avramova suggest[714] that a total harmonisation of RWA methods and practices globally is unlikely to ever be achieved.

Infact, Sonali Das and Amadou N.R. Sy emphasise[715] the importance of risk-weighted assets in the calculation of the capital adequacy ratio. They suggest that banks may increase their capital adequacy ratios in either of two ways:

- *By increasing the amount of regulatory capital held, which boosts the numerator of the ratio; or*

[714] Vanessa Le Lesle and Sofiya Avramova, 'Revisiting Risk-Weighted Assets – Why Do RWAs Differ Across Countries and What Can Be Done About It?' IMF Working Paper WP/12/90 March 2012.
[715] Sonali Das and Amadou N R Sy, 'How Risky Are Banks' Risk Weighted Assets? Evidence from the Financial Crisis', IMF Working Paper WP/12/36 2012.

- *By decreasing risk-weighted assets i.e. the denominator of the regulatory ratio*[716]*.*

Inspite of the relevance of the value of RWA in the calculation of capital adequacy ratio, the difficulty in achieving global harmonisation of RWA methods probably reveals the reason for the Basel Committee opting for the increase in the quantity and quality of regulatory capital i.e. the numerator. Infact, such is the uncertainty surrounding the future pathway of RWAs that Lord Turner suggests that the different methods employed by countries worldwide in the computation of risks and the evaluation of risk-weighted assets had the potential to derail the benefits to be gained from Basel 3[717].

5.9 Conclusion

With the emphasis of Basel 3 being on the strengthening of the quality and quantity of bank regulatory capital as opposed to risk measuring methodology, an attempt has been made in this thesis to investigate the likely implications of capital adequacy on the respondent banks under the Basel 3 framework.

Inspite of South Africa's implementation of Basel 3, there still remains unfortunately, scepticism[718] as to the usefulness of Basel 3 to banks in African countries. Notwithstanding this, Arnout Wellink[719] earlier in a speech presented in South Africa on 27 January 2011 said:

> *'..... the central element of the Committee's response is Basel 3. Our goal is to enhance bank and banking sector resilience to unexpected shocks and thereby promote financial stability.....'.*
>
> *'..... among the components of the new framework, I would like to mention the following that are fully relevant for African banks and banking systems. These elements should protect against the types of internal and external*

[716] ibid 3.
[717] FSA, 'The Turner Review, A regulatory response to the global banking crisis,' March 2009.
[718] I Salami, 'International Financial Standards and the application of Basel 3 in Emerging and Frontier Markets', (2012) Law and Financial Markets Review, Volume 6, 339.
[719] Arnout Wellink is the Chairman of the Basel Committee on Banking Supervision, President De Nederlandsche Bank.

shocks banks and banking systems often face <u>regardless of the state of development or complexity</u>.....[720]'.

On the basis of this quote, it is submitted that although the Basel Committee did not explicitly suggest that African countries ought to also adopt Basel 3, there is a likelihood that within a decade or so, Basel 3 will follow the same 'path' as its predecessor i.e. Basel 1 and Basel 2 in that it would also become a requirement for all banks in the world to adopt.

When this occurs, there will be no doubt that the future implementation of Basel 3 in Africa would have been facilitated by its early adoption by South Africa and for which there will be implications for large commercial banks.

On the contrary, it is also submitted that there will still be implications for large commercial banks in Africa (particularly Ghana and Kenya) even if a future implementation of Basel 3 does not occur in these two jurisdictions or elsewhere within the African continent.

In the next chapter, the author presents a thorough analysis of the questionnaire which has been designed specifically to assist in answering the research questions posed at the beginning of this thesis. Following this, the final chapter, i.e. chapter 7 will discuss the implications of the capital adequacy provisions of Basel 3.

[720] Extract from a speech given by Arnout Wellink at the Financial Stability Institute's (FSI) High Level Meeting on 'The Emerging Framework to Strengthen Banking Regulation and Financial Stability for Africa' held in Cape Town, South Africa on 27 January 2011.

CHAPTER 6
ANALYSIS OF RESEARCH QUESTIONNAIRE
PART A

6.1 Research Findings

Although Basel 3 has not yet been implemented in Ghana and Kenya, an overwhelming majority of respondents i.e. approximately 91% believe that future implementation of Basel 3 in their jurisdiction is inevitable.

A very important issue which the author addresses in the questionnaire is the issue of universal banking. Although all respondent banks were commercial banks, there was also the recognition that a number of these commercial banks could be engaged in universal banking.

The universal banking model provides a 'one-stop-shop' for bank customers as banks operating such a model are able to provide a much wider range of other services[721] and not just purely retail banking services. Inspite of these attributes, the universal banking model is dissimilar to the financial conglomerate model common in Europe, eg the UK, where banks set up subsidiaries to provide other financial services.

It is submitted however, that a common similarity between the universal banking model and the financial conglomerate model is that both tend to exacerbate the issue of systemic risk and in relation to the latter, provided one of the catalysts for the global financial crisis through the 'too-big-to-fail' concept.

As mentioned earlier on page (xxvii) of this thesis, the total number of banks from both Ghana and Kenya that responded to the questionnaire was 22, of which 16 are located in Ghana and 6 in Kenya. Of the 22 respondent banks, 3 banks are deemed to be global banks, 5 banks – regional or Pan-African banks and the remaining 14 banks consisted of both local and foreign commercial banks.

[721] Asset and wealth management, payment services and insurance services.

Whilst it was important to highlight that a number of respondent commercial banks were likely to engage in universal banking activities, there is no evidence in the author's opinion to suggest that such a practice would affect the responses provided.

Universal Banking (Ghana)

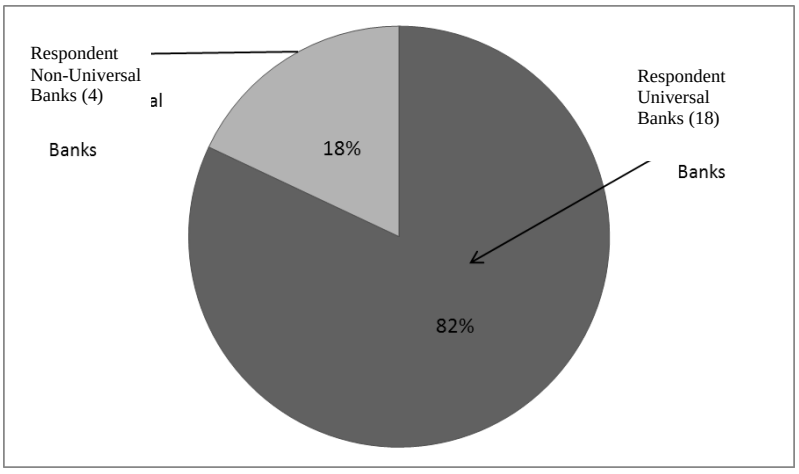
Thus out of the 16 respondent banks from Ghana, 13 described themselves as universal banks. Of this number claiming to be universal banks, 4 were local and 9 foreign banks. Nigerian banks accounted for a greater percentage of foreign banks in Ghana engaging in universal banking. This outcome may be attributable to the fact that Ghana has only recently embraced the concept of universal banking. There was a surprising revelation, where a respondent bank claiming to be a universal bank did not engage in insurance activity which in the author's opinion is one of the commonest services provided by universal banks.

Universal Banking (Kenya)

Out of the 6 respondent banks from Kenya, 5 were universal banks. Of this number claiming to be universal banks, only 1 was local and 4 were foreign banks. The other bank claiming to be a non-universal bank was a local bank.

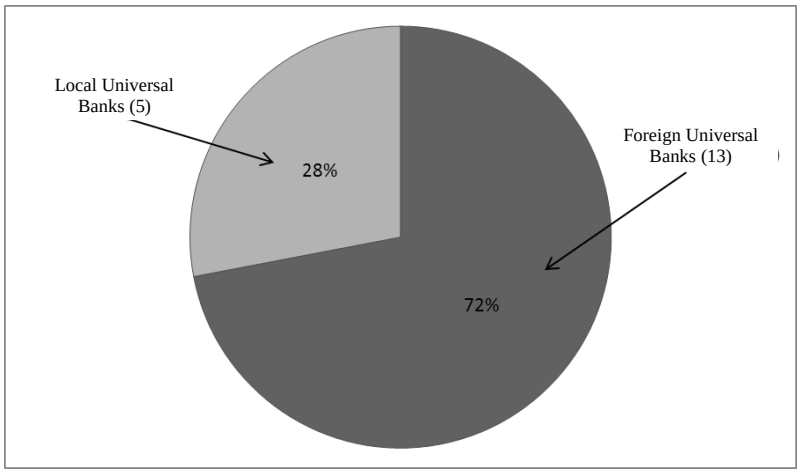
Thus, out of the 22 respondent banks from both jurisdictions, 18 were universal banks and 4 non-universal banks. Below is a graphical illustration of the number of respondent universal/non-universal commercial banks from Ghana and Kenya.

Fig 1



Of the 18 universal banks from Ghana and Kenya, 13 are foreign universal banks and 5 are local universal banks. The total number of foreign/local universal banks from both jurisdictions is represented in a pie chart below.

Fig 2



Thus out of the remaining 4 non-universal respondent banks, 3 are local banks and 1 a foreign bank. Having established which of the respondent banks were universal banks and distinguishing them from those that were not, it was important to return the focus of this questionnaire analysis to the research questions which this thesis from the outset sought to provide answers to.

Research Question 1: Is the international convergence of capital adequacy regulations desirable?

Although Archya[722] finds that international convergence of capital adequacy regulations enhances financial stability as opposed to guaranteeing it, the general nature of his finding and the very wide range of jurisdictions from which participants to his research originated from, suggests that such a finding cannot necessarily be adjudged to be reflective of African countries specifically. After all, in the immediate aftermath of the global financial crisis, the general view amongst African countries had been that the crisis was a European problem and had to be solved by the European countries involved. In other words the crisis had nothing to do with Africa.

While this African perception of the cause of the global financial crisis may be true, the ramifications were felt all over the world including Africa. Indeed,

[722] V Acharya, 'Is the International Convergence of Capital Adequacy Regulation Desirable?' (2003) Journal of Finance Volume LVIII No 6, 2745.

financial globalisation, as well as ever-increasing cross-border banking transactions and the establishment of banking and financial branches and subsidiaries (made possible as a result of favourable investment policies implemented by a growing number of countries worldwide) have ensured that the stark reality of crisis transmission through various channels is never far away.

On the question of whether the international convergence of capital adequacy regulations was desirable, all respondent banks from both jurisdictions agreed that the international convergence of capital adequacy regulations was indeed desirable. Indeed as mentioned earlier, one respondent was of the view that convergence of capital adequacy regulations would 'prevent a systemic failure'. While this view represents the classic view or oft-cited reason for the rationale behind international capital adequacy regulations, the author is of the opinion that the sources or causes of a systemic banking failure or collapse are numerous and are capable of individually or collectively threatening the financial stability of any economy.

Thus the international convergence of capital adequacy regulations in the author's opinion would not necessarily eliminate future systemic failures. On the contrary, it would continue to play a significant role individually or collectively within the acronym CAMELS to ensure financial stability in any economy. Notwithstanding this view, it is submitted that the global application of international capital adequacy regulations has been fraught with challenges for all, particularly the BCBS, not least because different jurisdictions have different interpretations of what constitutes capital adequacy, which ultimately affects its uniform and consistent application on an international level[723]. Irrespective of this, it is hoped that the renewed efforts by the BCBS in ensuring consistency in the application of capital adequacy would yield results.

Another very 'interesting' reason for the desirability of international capital adequacy regulations suggested by one respondent was that 'it reduced the

[723] IOSCO Report, 'Guidance to Emerging Market Regulators Regarding Capital Adequacy Requirements for Financial Intermediaries – Report of the Emerging Markets Committee of the International Organisation of Securities Commissions,' December 2006 p7.

impact of insolvency in the banking sector due to lack of sufficient capital adequacy and liquidity'.

It is submitted that, on face value this statement by the respondent seems to make little sense. Notwithstanding this, the author suggests that the respondent might have implied that international capital adequacy regulations were desirable because such regulations reduced the instances or occurrences of bank insolvency which would otherwise occur as a result of insufficient bank capital or liquidity.

The impact that an insolvent bank could potentially have on other banks and the overall financial stability of that jurisdiction may vary from jurisdiction to jurisdiction and that impact can be mitigated, depending on the existence of appropriate national banking insolvency regulations. Whilst jurisdictions may have adequate national banking insolvency regulations that effectively deal with local bank insolvencies and potential systemic crisis that arise from such failure, the same cannot be said of bank insolvency that has cross-border repercussions and implications.

This is due to the fundamental reason that national bank insolvency laws tend to be generally applicable within borders of jurisdictions and are often subjected to legal challenges when an attempt is made to apply them beyond the borders. The impact of a cross-border banking insolvency can only be reduced in my opinion through the establishment of an international banking insolvency model applicable to international banks, or banks with cross-border subsidiaries, branches and other interests.

Research Question 2: Will Basel 3 be relevant for African banks?

The question of the relevance of Basel 3 for African banks was to ascertain whether the respondent banks believed that the Basel 3 Accord will be useful to their banks and African banks in general. Although Arnout Wellink suggested in his speech that Basel 3 would be 'fully relevant for all African banks and banking systems, regardless of the state of development or

complexity'[724], the author submits that it was also important to directly seek the opinion of the respondents on the issue of relevance.

This question was answered by all 22 respondent banks and an opportunity was provided to the respondents to qualify their responses using a sliding scale of 5 to 1, where 5 represents the highest level of certainty of the relevance of Basel 3 and 1 representing least certainty. This opportunity was provided after the respondents had indicated using a yes/no response to the question of the relevance of Basel 3.

Although this thesis seeks to investigate the implications of the capital adequacy provisions under Basel 3 on large commercial banks in Ghana and Kenya, it would have been virtually impossible for the author to determine the implications without providing the participants/respondents an opportunity to express their personal views on the relevance of the entire Basel 3 regulation.

The views of the industry participants in Africa, particularly Ghana and Kenya are therefore necessary and important and perhaps more important than views from individuals outside the continent. Earlier in this thesis, under preliminary findings, it was established that 11 out of 16 respondent commercial banks in Ghana believed[725] that Basel 3 would be relevant for their banks, representing a percentage of approximately 69%. It was also established that 5 out of the 6 respondent commercial banks from Kenya believed that Basel 3 would be relevant, representing approximately 83%.

Thus when both jurisdictions are considered, 16 out of 22 banks believe that Basel 3 will be relevant for African banks, a combined percentage of approximately 73%. Thus of the 11 commercial banks from Ghana that answered this question in the affirmative, the number of banks indicating a level of agreement of a scale of 5 was 7 suggesting that respondents from these 7 banks were absolutely convinced that Basel 3 would be relevant to their banks.

[724] See n720.

[725] There is an assumption here that respondents who selected a scale factor of 2 and below were least certain of the relevance of Basel 3 to African countries and thus ultimately disagreed on the issue of relevance of Basel 3.

Out of the 5 respondent commercial banks from Kenya that suggested that Basel 3 would be relevant for African banks, only 1 respondent was absolutely convinced of the relevance of Basel 3 and chose a scale of 5. 1 respondent Kenyan bank indicated they did not know if Basel 3 would be relevant for African banks.

Thus out of 16 banks from both jurisdictions that believed that Basel 3 would be relevant for African banks, only 8 chose a scale factor of 5 indicating that 50% were absolutely convinced of the relevance of Basel 3. Respondent banks from both jurisdictions that agreed that Basel 3 would be relevant for African banks but chose a scale factor of 4 perhaps indicate a smaller degree of uncertainty in comparison to those banks that chose a scale of 3.

For those banks that chose a scale of 2 and below, it was assumed that they did not believe that Basel 3 would be relevant for African banks. Only 2 respondent banks out of a total of 22 banks indicated that they did not know if Basel 3 would be relevant for their bank and 1 bank strongly disagreed on the issue.

The total number of respondent banks from both jurisdictions that chose a scale of 2 or below amounted to 6, i.e. 5 from the jurisdiction of Ghana and 1 from Kenya. See table 1.3 in Appendix 1 which shows the scale factor chosen by the respondent banks.

It is quite clear from table 1.3 that those respondents that chose a scale factor of 1 or 2 do have varying degrees of uncertainty. Although the level of uncertainty applicable to this group of respondents could be attributable to a host of factors, the author in his analysis has tried to establish if one of the reasons for the choice of a scale factor of 1 or 2 could have been due to medium or low level of awareness of Basel 3 by these banks.

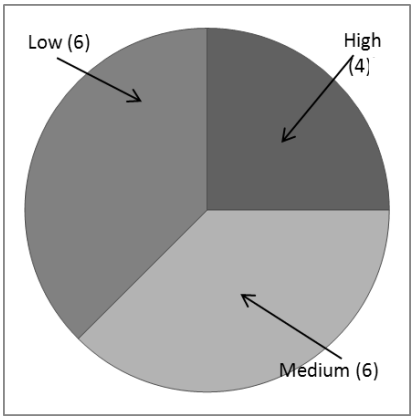
On the issue of Basel 3 awareness, respondents were asked about their level of awareness of Basel 3 prior to completing the questionnaire. With South Africa being the only African member country of the BCBS and the G20 and having already begun the implementation of Basel 3 on 1 January 2013, it was important to assess the awareness of Basel 3 in other African countries

i.e. Ghana and Kenya and in particular within the banking industries of both jurisdictions.

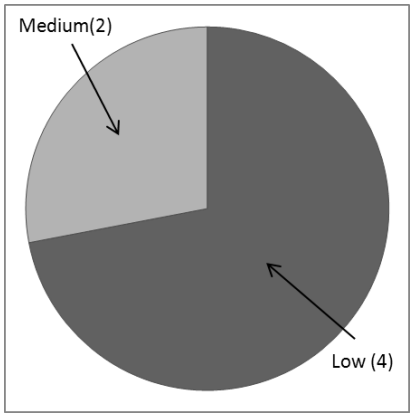
Below is a pie-chart indicating the level in awareness of Basel 3[726] in respondent banks in Ghana and Kenya.

Fig 3

GHANA



KENYA



Combined Jurisdictions

Banks in Ghana generally fared better in terms of their level of awareness of Basel 3. Although the outcome from Kenya might not necessarily be a true reflection of overall industry-wide awareness of Basel 3 in Kenya (since the number of commercial banks in Ghana represented in the data is more than twice the number of respondent commercial banks from Kenya) it is rather surprising that not even 1 bank from Kenya could boast of having a high awareness of Basel 3.

The number of banks in Kenya with a low level of Basel 3 awareness was also surprisingly high. Thus if majority of the respondent banks from Kenya admit to having a low level of Basel 3 awareness, i.e. 4 banks out of 6 banks, then the question could potentially be asked that how can an accurate assessment of the degree of relevance of Basel 3 to African banks/countries be provided when there is a low level of awareness of Basel 3 within the Kenyan banks.

[726] As at end of August 2013. The author submits that determining the level of awareness of the respondents of Basel 3 was crucial in ascertaining whether the respondents had their own prior knowledge of Basel 3 before the distribution of the questionnaire and its explanatory note took place.

Of the 16 respondent commercial banks from Ghana, 6 admitted to having a low level of awareness of Basel 3. Thus in sharp contrast to the position of respondent banks from Kenya, the 6 respondent banks from Ghana, despite their low level of awareness of Basel 3 still generally recognised the relevance of Basel 3 to African banks and countries. In other words, even though 6 commercial banks from Ghana indicated a low level of Basel 3 awareness, a further 6 commercial banks in Ghana indicated a medium level of awareness of Basel 3. There were also 4 commercial banks from Ghana that indicated a high level of awareness of Basel 3.

Of the 6 banks from Ghana that indicated a medium level of awareness, 3 had indicated that they believed Basel 3 would not be relevant to African banks and countries. The respondent bank from Ghana that had indicated that it did not know if Basel 3 would be relevant for African banks also indicated a low level of awareness of Basel 3.

From the information provided above, it is indeed uncertain if the respondent banks that indicated medium and low level awareness of Basel 3 and believed that Basel 3 was irrelevant to Banks in Africa would have formed a different opinion had they had a high level of awareness of Basel 3.

Notwithstanding this, the author is of the opinion that any future implementation of Basel 3 in Ghana and Kenya would have to be preceded by a sustained dissemination of Basel 3 information in these 2 jurisdictions during which the merits of Basel 3 implementation should be explained.

Returning to the issue of whether Basel 3 will be relevant for African countries, the author gauges the attitude of the respondent banks towards international banking regulations particularly the Basel regulations, by examining the compliance history of the respondent banks in relation to Basel 2. This was achieved by trying to determine how many of the respondent banks that believed Basel 3 would be relevant for African countries had themselves implemented Basel 2 either in full or in part or on the contrary, not at all.

There is no intention to suggest that evidence of prior compliance to a Basel regulation i.e. Basel 2 is sufficient grounds to predict a future implementation

of Basel 3. Also, non-compliance by a respondent bank to Basel 2 regulations does not imply that a future implementation of Basel 3 in that jurisdiction is unlikely. This is because the cost of compliance and the lack of human resources and personnel who have to be trained and expected to oversee the compliance of Basel 3 could have a detrimental impact on compliance.

Thus, as mentioned earlier, out of the total number of 16 respondent banks from both jurisdictions that believed that Basel 3 would be relevant for Africa, 11 are from Ghana and 5 from Kenya. 10 had already begun the implementation of Basel 2 and 6 had yet to do so. Of the number (10) that had begun the implementation of Basel 2, 3 had fully implemented and 7 had partially implemented. Of the number that had partially implemented Basel 2, 6 were foreign banks and 1 was a local bank. Thus of the 11 banks that had indicated that Basel 3 was relevant, 10 had either partially or fully implemented Basel 2.

Of the 5 Kenyan banks that believed that Basel 3 would be relevant to African countries, 4 of them had already implemented Basel 2 (albeit all in part). The fifth bank, although believing that Basel 3 would be relevant for African banks had not implemented Basel 2. The sixth bank which had stated it did not know the relevance of Basel 3 to African countries had itself also not implemented Basel 2. Of the 4 Kenyan banks that have already implemented Basel 2, 2 are foreign banks and 2 are local banks.

Research Question 3: What are the likely implications of Basel 3 on large commercial banks in Ghana and Kenya.

It may be recalled that in Chapter 5, the author discussed different provisions under the Basel 3 regulations that were likely to have an impact on the capital adequacy of banks generally. Broadly, the provisions under Basel 3 which affect capital adequacy are those relating to:

- the strengthening and enhancement of the quality of capital;
- the introduction of a capital conservation buffer;
- the introduction of measures to improve counterparty risk coverage;
- the reduction or counteracting of pro-cyclicality; and

- the introduction of a leverage ratio.

These above listed provisions of Basel 3 which individually and collectively affect the capital adequacy of banks, were included in a supplementary document by way of explanatory notes and attached to the questionnaire given to participant banks to help clarify and facilitate the easy comprehension of the issues for which the opinions of the respondents were being sought.

However, prior to evaluating the responses provided by the respondents in relation to this research question, it is important that we consider the fact that regardless of whether banks within Ghana and Kenya adopt Basel 3, either of their own accord (i.e. through subsidiaries or branches in other countries that have already adopted Basel 3 or have plans to do so soon) or through a directive from their central banks i.e. Bank of Ghana (BoG) and Central Bank of Kenya (CBK) respectively, or not, there will be implications for all within the banking industry of these 2 jurisdictions, bank customers and in fact the African continent at large.

In view of this fact, the respondents were asked if they thought the future implementation of Basel 3 in their jurisdiction was inevitable. In response to this question, 14 of the respondent banks from Ghana answered in the affirmative that Basel 3 implementation in Ghana was inevitable. Of this number, 5 are local banks and 9 foreign banks. Of the remaining 2 respondent banks that disagreed that implementation of Basel 3 in Ghana was inevitable, 1 is a local bank and the other a foreign bank.

All 6 respondent banks from Kenya also answered this question in the affirmative of which 2 are local banks and 4 foreign banks. Thus, of the 22 respondent banks from both jurisdictions, 20 banks believe that the implementation of Basel 3 is inevitable. Although none of these banks gave reasons why they believed the implementation of Basel 3 was inevitable, it may be fair to say that this overwhelming view may be attributed to the way in which the predecessors of Basel 3, i.e. Basel 1 and Basel 2 have found their way into the regulatory banking framework of these 2 jurisdictions.

Also, the presence of foreign commercial banks in both jurisdictions may be a factor. These foreign commercial banks may have subsidiaries in other

jurisdictions and not necessarily in Africa alone that might have already begun the adoption of Basel 3. Also, another factor, perhaps an overwhelming one is the fact that South Africa having begun the implementation of Basel 3, is bound to influence other African countries within the continent to follow suit and it is only a matter of time before Basel 3 becomes widely adopted. On the question of whether they were actually in favour of a future implementation of Basel 3 in their jurisdiction 12 of the respondents from Ghana said they were in favour and 4 said not in favour. Of the 12 who were in favour of Basel 3, 2 suggested that even though they were in favour, they were of the opinion that Basel 3 implementation in their jurisdiction was not inevitable.

Of the 4 banks from Ghana that were not in favour of Basel 3 implementation in Ghana, all 4 concluded that Basel 3 was still inevitable despite not being in favour.

All 6 respondent banks from Kenya on the other hand suggested that they were in favour of Basel 3 implementation and again all 6 respondent banks agreed that Basel 3 implementation was inevitable.

Returning to the responses provided by the respondent banks to this research question on 'implication', it may be fair to say that the responses[727] were quite mixed. Even though an information fact sheet on Basel 3 was supplied to the respondents in addition to the questionnaire, 2 respondents from Ghana said they did not know what the implications would be and 1 respondent failed to provide a response to this question. With respect to the respondents from Kenya, 3 out of the 6 banks did not provide an answer to this question.

Thus, out of a total of 22 respondent banks, 2 respondents admitted not knowing what the implications of an implementation of Basel 3 would be for their jurisdiction and a total of 4 respondent banks failed to answer the question. This implies that 16 out of 22 banks provided an answer to this crucial question i.e. a response rate of approximately 76%. Out of the various responses provided, the author has identified 6 issues which the respondents believe would be the implications of a Basel 3 implementation in these 2 jurisdictions.

[727] The respondents from these participant banks were of high managerial ranking, i.e. bank managers and credit and risk analysts of managerial level and high competence.

RESPONSE 1:

‘Due to cost implications of raising higher capital, shareholders may have to either invest more capital or rely on mergers and acquisitions’.

It is a well established fact that regulatory reforms always give rise to cost implications and an implementation of Basel 3 in Ghana or Kenya would be no exception. In other developed countries, particularly members of the G20 that have begun the adoption of Basel 3, banks in those jurisdictions have had to raise capital through mergers and acquisitions and also through increased shareholdings of existing shareholders or new shares being issued by banks to the general public to attract new investors.

The latter, although it brings in much needed capital is usually not favoured by the existing shareholders as it tends to dilute their existing shares. In the case of Ghana and Kenya, more costs would even have to be incurred to train personnel and update systems to ensure a smooth implementation should these jurisdictions decide to adopt Basel 3.

RESPONSE 2:

‘Increase the volume/value of business; some banks may have to merge thus losing its own identity’.

This response, although suggesting a merger as a possible implication, also introduces other interesting issues. While there is some degree of uncertainty on the part of the author as to whether the volume and value of business transactions would increase as a result of implementation of Basel 3, the cost of business transactions may increase due to a likely increase in implementation costs. There is absolutely no doubt in the author’s mind that any costs incurred by the bank would be recouped by the bank, at least a substantial part of it. These costs would largely be recouped through increases in costs of banking transactions, levies or the introduction of bank charges for transactions that were previously free to the bank customer.

While the loss of a bank’s individual identity may be a significant issue for any bank, and perhaps its customers, it might be deemed as a small price to pay in order to remain competitive in an increasingly competitive banking industry.

RESPONSE 3:

‘It will encourage longer-term deposits, so that the long-term lending of banks is better matched by longer-term funding’.

It is a well-known fact, particularly in Ghana and Kenya that long-term lending by the banks is virtually non-existent, even in the mortgage industry. The main reason for this is due to the history of high non-performance loans that have blighted the banking industry in the past and continues to remain a real threat.

While long-term deposits are encouraged by any banking industry, bank customers are usually driven to deposit funds in banks due to the attraction of high deposit interest rates. It is thus the author’s opinion that such incentives encourage longer term deposit of funds by bank customers, and that any attempt by banks to recoup the costs of implementing Basel 3 through measures such as increased cost of banking transactions and perhaps lowering the relatively high interest rates payable to long-term deposits may compel bank customers to switch banks in search of a better deal elsewhere.

Bank lending in Africa, particularly Ghana, is often available on short-term basis and with extremely high interest rates payment obligations attached. Long-term lending especially on the scale seen in the mortgage industry e.g in the UK where a loan can be secured on property for up to 25 years is virtually unheard of in Africa and it is very doubtful in the author’s opinion that implementation of Basel 3, would incentivise banks to lend funds for a longer period.

RESPONSE 4:

‘Corresponding banking lines may be difficult to find, and this would affect the smooth financing of international trade, which may not auger well for the economies of African Countries’.

It is an established fact that the banking and finance industry in Africa is not as well developed as that of advanced European countries and the U.S.A., and there are a number of banking assets and financial products still not available within the African Continent, let alone Ghana and Kenya. Notwithstanding this, there are a number of assets types within banks in

Ghana and Kenya that are common to the asset portfolios of the advanced European Countries, such as deferred tax assets and hybrid capital.

As discussed in Chapter 5, the intention of the BCBS to strengthen the quality of capital through the relevant provisions within Basel 3, will ensure the gradual phase-out of hybrid capital over a 10-year period as this type of capital does not possess enough loss-absorbing qualities. Also under Basel 3, certain provisions ensure that not all deferred tax assets may be recognised as assets depending on the nature of the deferred tax.

Thus the scenario may arise where banks in Ghana and Kenya may no longer have a market for these banking products in jurisdictions that have begun the implementation of Basel 3, and as a result have already begun the phasing-out of these banking products. This would undoubtedly negatively impact international banking and finance as well as international trade.

RESPONSE 5:

'Impact on the different transactions that banks in Ghana and Kenya and in the African region as a whole engage in with corresponding banks from those jurisdictions'.

While this response may be similar to response 4, it is obvious that the nature of the impact on transactions being referred to in response 5, encapsulates a host of other potential ramifications whereas response 4 deals specifically with the availability of certain banking products. The transactions that banks engage in are numerous and varied and the likely impact on these transactions following the implementation of Basel 3 would be discussed much further in Chapter 7.

RESPONSE 6:

'Implementation will definitely be conditional for IMF/World Bank loans, increasing capital requirements and its associate costs'.

It may be recalled that in Chapter 3, the author discussed peer pressure and conditionality clauses being inserted into loan approval documentation issued

by the IMF and World Bank. The fact that this has been repeated by a respondent clearly makes a complete nonsense of all attempts by finance institutions such as the IMF and World Bank to suggest that African countries have never been compelled to adopt the Basel 1 & 2 Banking Accords but that adoption of these Accords had always been optional or a matter of choice for them.

It is thus submitted, that this perception may have played a significant part in the answer provided by respondent banks to the question of whether implementation of Basel 3 in their jurisdiction was inevitable. While it may be further submitted that a formal adoption of the Basel 3 banking regulations by Ghana or Kenya may make it obligatory for the respondent banks to adopt the regulations, a potential argument could be made highlighting the fact that an unofficial adoption of Basel 3 could also potentially take place where it has been made a condition for an IMF/World Bank loan application by either the central bank of Ghana and Kenya, or directly by any of the respondent banks.

PART B

6.2 Analysis of the responses directly impacting the capital adequacy of respondent banks

A better understanding of how the capital adequacy provisions under Basel 3 would impact on the respondent banks in my opinion can only be properly discussed following a detailed analysis of the responses provided by the respondent banks to questions that directly relate to the components of capital adequacy.

In Chapter 4, the author introduced the components of capital adequacy as broadly capital and risk management framework. Thus, in the ensuing paragraphs, the author analyses the responses to key questions such as: what constitutes capital? (i.e. components); what loss-absorption provisions has the respondent bank got in place?; which banking risks are of greater significance to a respondent bank and also what efforts are being made to establish an effective risk management system.

While there hasn't been much change in the risk methodology applicable under Basel 3 from that of Basel 2, except for perhaps the introduction of (stressed VaR and incremental risk charge), the emphasis of an increase in the quantity and quality of capital, i.e. the latter referring to loss absorption quality of capital under Basel 3 suggests that the responses provided by the respondents to these key questions will be vital in determining the likely impact of the capital adequacy provisions of Basel 3 on the respondent banks.

Thus the purpose of Part B of this questionnaire analysis is to analyse the responses provided by the respondents which in the author's opinion will provide an insight as to the perception of the concept of capital adequacy in the jurisdictions of Ghana and Kenya.

It was envisaged that to ask the respondents their opinions on the 'capital adequacy implications of Basel 3' on their banks would have perhaps been unwise as none of the respondents might have fully comprehended the question in order to provide appropriate answers. Thus the research question

3 was drafted in such a way as to welcome all responses and from which responses relating to capital adequacy issues will be analysed.

The author was also firmly of the opinion that including specific questions in the questionnaire was likely to solicit answers that would assist in the analysis of the existing capital adequacy position of a respondent bank and from which the implications of the capital adequacy provisions of Basel 3 on that particular respondent commercial bank could be deduced. Thus the analysis provided in Part A is aimed at providing answers to the research questions posed by this research, whereas Part B is aimed at seeking an insight into the issues surrounding capital adequacy in respect of each respondent bank and for which the capital adequacy provisions under Basel 3 are bound to impact, thereby giving rise to implications. Furthermore, the combined analyses in Part A and Part B of this Chapter will hopefully provide comprehensive answers to the research questions posed.

Through these analyses, any similarities or differences in the definition of the components of capital adequacy in both jurisdictions will be highlighted. These similarities and/or differences would also provide an insight into the degree of consistency in the concept of capital adequacy within these two jurisdictions. From the outset, the minimum capital required to operate as a commercial bank is understandably different in both Ghana and Kenya, although it must be acknowledged that both countries have recently increased their respective minimum capital requirements.

Minimum Capital Requirement

The Central Bank of Ghana (Bank of Ghana) in 2007 increased the minimum capital requirement for both foreign-controlled banks and local banks. Both foreign and local banks were asked to increase their capital base to GHCedis 60 million (US$ 41 million) to improve solvency in the banking industry[728].

Although this decision by the Bank of Ghana had the overall effect of increasing bank capital adequacy from an average of 15.7% in 2007 to 19.1% in 2010, the volume of non-performing loans still increased.

[728] Foreign-controlled banks were required to meet this new requirement within 2 years as opposed to a 4/5 year compliance period for local banks. Most of the local domestic banks had to engage in mergers and acquisitions in order to satisfy this requirement.

A year later in Kenya in 2008, the Central Bank of Kenya also increased the minimum capital requirement. This requirement was introduced by the Finance Act of 2008 and made it a requirement for both existing and newly formed banks to possess a minimum of KES 1 billion (approximately US$ 12 million) by December 2012. The previous amount was KES 250 million (US$ 4 million) in 2008.

Minimum Capital Adequacy Ratio

Although respondent banks from Ghana confirmed the minimum capital adequacy ratio to be 10% in their jurisdiction, their individual capital adequacy ratios were well in excess of this figure i.e. ranging from 10.2% to 25%.

Respondent banks from Kenya on the contrary, confirmed the minimum capital adequacy ratio to be 8% in their jurisdiction. Again, the respondent banks declared that they actually held capital adequacy ratios well in excess of the minimum, i.e. ranging from 8.2% to 15.2%.

While these capital adequacy ratios are significantly high, even higher than those of global banks located in advanced countries, the impression is given that this should make these banks very secure. On the contrary however, the argument is often put forward that such higher capital adequacy ratios are necessary, particularly for African countries as these high capital adequacy ratios can easily be eroded by ever-increasing incidences of non-performing loans, currency fluctuations, concentration risks etc which are amongst the commonest risk issues facing commercial banks in Africa.

BANK CAPITAL

Definition of Capital

As expected, although there were similarities in the nature of items classed as capital by the respondents, there were also a number of differences. The items classed as capital ranged from: paid-up capital; disclosed reserves (including statutory reserves, statutory reserve fund and income surplus account); total shares (ordinary and preference shares); investments in subsidiary(ies); retained earnings; capital revaluation reserves; revaluation reserves; subordinated term debt; subordinated long-term debt; stated capital; undistributable reserves and deferred tax assets.

While not a single respondent bank possessed all the above listed types of capital, there were certain types of capital, such as paid-up capital, retained earnings and statutory reserve fund that were often present in the description of capital assets by most of the respondent banks.

Two respondent banks from Kenya mentioned deferred assets as part of their capital assets. This will undoubtedly give rise to implications for the banks concerned as Basel 3 contains provisions and criteria which deferred tax assets need to satisfy prior to its inclusion as capital.

Prior to this research being undertaken, recognition was given to the fact that although the respondent banks were commercial in nature, some of them offered other services thus making them universal banks or a 'one-stop shop' where other financial services could be provided by one bank. In addition to this, some of the respondent banks were also expected to have investments in other entities, which could be considered as capital assets subject to certain criteria under Basel 3.

Investments in subsidiary(ies):

In Part A of this analysis, it was established that out of the 22 respondent banks that participated in this research, 18 were universal banks of which 13 are located in Ghana and 5 in Kenya. Of the 13 respondent universal banks in Ghana, 7 of them have investments in another entity. Out of this number (i.e. 7), 4 have investments of more than 10% of equity and 3 have investments of less than 10% of the total assets of that entity.

Of the 4 respondent banks that had investments of more than 10% in another entity, 3 stated that the bank (it) had issued the shares in that entity. However, of the 3 respondent banks that had investments of less than 10%, only 1 had issued the shares in that entity themselves; the second had not issued the shares in the other entity and the third did not answer the question of whether the shares they had in the entity had been issued by them.

Out of the 5 respondent banks from Kenya, only 1 indicated that they had investments in another entity. The investment this bank had in another entity was more than 10% and it was also responsible for issuing the common shares in that entity. Part 1 paragraphs 78 to 90 of Basel 3, sets out criteria

which banks must satisfy to either include or exclude certain investments as capital. This will be discussed in greater detail in Chapter 7.

BANK RISKS:

The risks faced by the banking industry although generally the same may vary from jurisdiction to jurisdiction. This suggests that the management of bank risks which is a vital component of a bank's capital adequacy framework is really about choices and what the bank's management perceive to be the most important or least important of the risks within its risk profile.

While the kinds of risks banks face globally are varied and high in number, there are a few notable risks which continually recur in the risk profiles of almost every bank, regardless of its location: such as credit risk; market risk and liquidity risk. Notwithstanding this observation, there are also certain types of banking risks that are unique to the African continent.

In the Financial System Stability Assessment Update of Ghana conducted by the IMF[729], it was concluded that non-performing loans (NPLs) was still high[730] and there had been an increase in the number of under-capitalised banks[731].

Another potential source of bank risk which the publication identified was risk due to cross-border contagion[732]. The report specifically stated that the presence of foreign banks in Ghana, particularly of (British origin) and the combined influence of Pan-African banks and other banks largely domiciled in other countries within the African continent posed a threat to financial stability within Ghana[733].

Concentration risk was also identified in the report as a real and significant risk emanating from credit risk. This was because large exposures due to the advancement of huge loans to single borrowers or a group of individuals working together e.g. a consortium was still a common occurrence. Needless

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[729] Jose Vinals and Antoinette M Sayeh, 'Financial System Stability Assessment' Update prepared by the Monetary and Capital Markets and African Departments, published on 2 May 2011.

[730] It was established within the Report that although 46% of the NPLs in March 2010 were as a direct/indirect result of Government arrears which had since been settled, the level had since risen again due to more borrowing and failure to repay by the Government.

[731] Vinals and Sayeh (n729) 5.

[732] ibid 9.

[733] ibid.

to say that such large exposures exposed the bank to potential collapse should the borrowers default in their obligation to pay thus affecting financial stability within the economy of that jurisdiction.

Another potential source of bank risk mentioned in the report was operational risk arising as a direct result of increased use of information technology to facilitate banking transactions and services.

Although the risks Kenya's commercial banks are exposed to, are generally the same type of risks inherent in any banking system, the IMF Country Report on Kenya[734] highlighted political risk as significant in Kenya. This finding as presented in the Report may have been influenced by the fact that there had been political violence following the 2008 presidential elections and that made political risk and interference by the Government the most significant threat to financial stability in Kenya. The Report also mentioned that NPLs although still generally high, had actually decreased by 1.4% to KSh 57.5 billion in June 2012 from an amount of KSh 58.3 billion in June 2011[735].

Bearing in mind that banks generally had different risk profiles, the questionnaire invited the respondents to choose from a list of banking risks, the risk that was of most concern to their management in order of priority. The list that the banks had to choose from were as follows: credit risk; market risk; political instability; liquidity risk; market risk; NPLs; inflation; operational risk; and lack of corporate governance.

The respondents had to indicate using a numbering scale of '1 to 10' to indicate which risk (type) was of the highest concern or least concern with '1' representing the risk of most significance and '10' representing risk of least significance. It must be pointed out though, that a risk adjudged by a bank to be of most significance in a particular year, might not necessarily remain at that level in the bank's risk profile the following year.

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[734] Kenya: Request for Disbursement Under the Rapid Access Component of the Exogenous Shocks Facility – Staff Report; Staff Supplement; Press Release on the Executive Board Discussion; and Statement by the Executive Director for Kenya. IMF Country Report No 09/191.

[735] Kenya Banking Sector Annual Report, 2012.

A breakdown of the responses is as follows:

Ghana

Only 1 out of the 16 respondent banks located in the jurisdiction of Ghana failed to answer the question of which banking risk was of the highest significance and which posed the least threat to financial stability within their bank/jurisdiction. Thus of the remaining 15 respondent banks from Ghana, 14 identified credit risk (also emanating from NPLs) as posing the most significant threat to financial stability. Out of this 14, 7 banks identified credit risk as the number one risk facing their banks and 5 banks ranked it their number two risk. The only respondent bank that did not identify credit risk as a significant threat was the Bank of Ghana (BoG) i.e. the Central Bank. In fact the BoG specifically stated that 'there was absolutely no threat to it from 'Liquidity risk and Credit risk'.

From the responses provided, operational risk was identified as the next most significant source of risk as 9 out of the 15 respondent banks including Bank of Ghana ranked operational risk within rank 1 to rank 3. The threat of financial instability arising from market risk followed a close third behind operational risk with 7 respondent banks ranking it as either the second or third most significant risk.

According to the responses provided, liquidity risk was the fourth most significant risk that posed a threat to financial stability, with 5 banks giving it a ranking of between rank 1 and rank 3. In relation to the risks posed by foreign exchange fluctuations and inflation, 11 respondent banks gave foreign exchange fluctuations a ranking between rank 1 and rank 5 and only 4 respondent banks ranked inflation risk within its top 5 risk threat to financial stability.

One interesting observation was the significance of the potential threat to financial stability arising from liquidity risk. Whilst liquidity risk is recognised as a very real and significant threat to any banking system, the number of respondent banks that identified it within their top 5 threats was 11, i.e. equalling the same number that ranked foreign exchange fluctuations within their top 5 threats to financial stability. Notwithstanding this, the threat posed

by liquidity risk in the author's opinion was of greater significance compared to the threat arising from foreign exchange fluctuations as it had a higher number of respondent banks ranking it within the top 3 risk threats. That is to say, five respondent banks ranked liquidity risk within the top 3 significant sources of risk as opposed to two respondent banks which ranked foreign exchange fluctuations within their top 3 banking risks that posed a threat to financial stability.

Although inflation is notoriously high in African jurisdictions, generally in double figures as opposed to single low figures in Europe, it was indicated by the respondent banks to be the sixth most significant threat to financial stability. The banking risks that posed the least significant threat to the respondent banks from Ghana were corporate governance and political instability. Eight respondent banks accorded corporate governance either rank 7 or 8 in terms of significance whereas only three respondent banks accorded political instability the rank of 7 or 8. As if to emphasise the insignificance of financial instability arising from political instability, 10 respondent banks ranked political instability in position 8.

The low ranking of corporate governance and political instability as the least significant of potential threats to financial stability in the jurisdiction/bank is potentially good news. This is because it suggests two things. Firstly, that corporate governance practices have improved[736] hence its 'high ranking number' and secondly the political stability that Ghana has enjoyed since 1981 has ensured financial stability; stimulated economic growth and enhanced investor confidence.

Thus the order in which the respondent banks in Ghana recognise banking risks that threaten financial stability are in the order: (i) credit risk (including NPLs); (ii) operational risk; (iii) market risk; (iv) liquidity risk; (v) foreign exchange risk fluctuations; (vi) inflation; (vii) corporate governance; and (viii) political instability.

[736] Although corporate governance practices have generally improved within Ghana, the threat of concentration risk still remains and it is believed that efforts are continually being made to address this issue.

It must be re-emphasised at this point that the identification and analysis of the banking risks faced by the respondent banks (in order of significance) had to be separately considered as the level of significance accorded to each banking risk was expected to differ from jurisdiction to jurisdiction.

KENYA

The analysis of the responses provided by the respondent commercial banks from Kenya suggests that the emphasis on political instability as the most significant threat to bank stability has shifted since the IMF Country report was published. All six respondent banks from Kenya answered the question on ranking and listed the banking risks in order of significance.

Out of the six respondent banks, three ranked market risk as the number one most significant risk threatening financial stability in Kenya. Two respondent banks ranked credit risk (including NPLs) as the most significant source (rank 1). With five respondent banks out of six banks according market risk the ranking of 1 to 3, suggests that market risk undoubtedly poses the most significant threat to financial stability in Kenya.

Also, a total of three respondent banks out of six banks ranked credit risk (including NPLs) from 1st to 3rd ranking, which suggests that credit risk is the second most significant risk faced by banks in Kenya. Interestingly, two banks each ranked operational risk, inflation risk and political instability as their top three significant sources of threat to financial stability. To distinguish the difference in significance between these sources of risk, a further analysis was made of the number of occurrences of these three sources of risk within the first 5 ranking positions.

Following this exercise, it was found that five out of six respondent banks ranked operational risk within the top 5 ranking position; three ranked inflation risk within the top 5 ranking position and two ranked political risk within the top 5 ranking position. Although only one respondent bank ranked liquidity risk amongst the top 3 ranking positions, three respondents overall ranked it amongst their top 5 sources of threat. Notwithstanding this it is submitted that liquidity risk posed the fourth most significant risk, after market risk, credit risk (including NPLs) and operational risk. This is because two respondents

accorded liquidity risk a ranking of 4th as opposed to only 1 respondent according inflation risk a ranking of 4th.

Even though 2 respondents each ranked political instability and foreign exchange fluctuations within the top 5 significant risks, a further two respondents also ranked political instability as the second most significant source of threat, whilst two other respondents accorded foreign exchange fluctuations the ranking positions of 3 and 5. Corporate governance appeared to be the least significant source of threat to the financial stability of banks in Kenya – one bank ranked it 6th; two banks ranked it 7th; and the remaining three banks ranked it 8th.

Thus, the respondent banks from Kenya acknowledge the following banking risks as threats to the financial stability of Kenya in the order: (i) market risk; (ii) credit risk (including NPLs); (iii) operational risk; (iv) liquidity risk; (v) inflation; (vi) political instability; (vii) foreign exchange fluctuations; and (8) corporate governance.

Thus a comparison of the analysis of respondent banks from both jurisdictions confirms that the most significant risks faced by banks are usually the top 3 i.e. credit risk, operational risk and market risk but in no particular order. Liquidity risk surprisingly ranked 4th in both jurisdictions. Corporate governance seems to pose the least significant risk to financial stability in both jurisdictions due to its 7th or 8th ranking position, which is quite surprising. One can only assume that corporate governance compliance in Africa may be stronger within the banking industry in comparison to other sectors of the economy, with particular reference to Ghana and Kenya.

RISK METHODOLOGY:

An accurate assessment of capital adequacy of any given bank ultimately depends on the risk methodology used. The risk management processes implemented by any bank is to some extent dependent on a host of factors such as the size of the bank and the standard of the bank's own internal systems used in the risk assessment processes.

Thus it is acknowledged that risk methodologies implemented in the assessment of banking risks i.e. mainly credit risk, operational risk and market

risk may vary depending on the size and complexity of the bank's internal model system. As a result, large banks with advanced internal model systems often use either the foundation IRB (FIRB) or the advanced IRB (AIRB) in the calculation of capital required to be set aside for credit risk. Banks whose systems are not as advanced as that of large global banks often use basic risk methodology approaches such as the standardised approach for credit risk.

Of the 22 respondent banks, only two respondents stated that their banks used the IRB methodology for credit risk assessment. Even though a number of respondents failed to answer the question on which risk methodology was used by their banks in the measurement of credit risk, majority of the respondents (i.e. 68%) indicated that the standardised approach was the method used. This outcome is not a surprising one, considering the fact that although the respondent banks are large banks, they are definitely not as large as global banks and do not generally possess highly developed internal banking processes in comparison to global banks. Another issue is that banks in Africa often lack the expertise and technical framework required to validate complex models such as the FIRB and the AIRB models and to monitor their application

LOSS ABSORPTION:

During the global financial crisis, it was discovered that the regulatory capital banks possessed, particularly capital that was recognised under the Basel 2 framework did not have loss-absorption characteristics. As a direct result of this, in the UK, tax payer's money was used to bail-out a number of UK banks while the banks concerned continued to pay dividends to their shareholders.

There was no banking insolvency law in the UK to ensure that banks experiencing financial difficulties and were on the brink of insolvency were actually allowed to fail safely, thus safeguarding depositor's funds as well as tax payer's money. Although banks that choose to adopt Basel 3 will ultimately have to ensure that the capital they possess will conform to the Basel 3 requirements, it is quite important for there to be other loss-absorption mechanisms such as banking insolvency laws within any country's regulatory

framework to ensure banks considered to be no longer viable as a going concern are allowed to fail safely.

While it is arguable that a global banking insolvency regulation model is a long way off, the banking industry in jurisdictions such as Ghana, should consider establishing an effective bank insolvency framework; not least because of the absence of a deposit insurance framework. Kenya on the contrary has a deposit insurance protection framework however, that does not make the requirement for a bank insolvency framework any less important. In view of this, respondents were asked if their banks had any loss-absorption mechanisms in place should bank insolvency occur.

Only four out of 16 respondents for commercial banks in Ghana indicated they had loss adoption mechanisms in place which in my opinion is an issue of some concern. This might be mainly because Ghana still has no formal, explicit depositor protection scheme in place and this state of affairs arises because the Government of Ghana considers the statutory reserves that banks operating in Ghana are required to hold at the central bank as monies that could be used to return depositor's funds following a financial crisis.

The commonest form of loss-absorption mechanism adopted by these four banks was through insurance. Another respondent stated that it employed loss absorption mechanisms such as hedging, voidance of complex transactions and setting limits. Whilst these processes may be helpful in absorbing or reducing losses, it is submitted that voiding of complex transaction is dependent on the stage of the transaction since there will be legal obligations and cost implications to satisfy. Setting the limits does not necessarily provide loss absorption measures, because it merely reduces the size of any potential loss the bank might incur through financial activity.

Out of the six Kenyan respondent banks, three indicated they had loss absorption mechanisms in place, whilst the remaining three banks, failed to answer the question. Failure to provide an answer might suggest that the respondents did not know of any loss absorption mechanism operating within their banks or at worst did not have any such processes in place within their own bank.

Nonetheless, of the remaining three that had loss absorption mechanisms in place, two suggested that their losses were absorbed through the legal process and the third suggested it absorbed losses through the sale of foreign currency and the imposition of high interest charges for loans. It is important to distinguish between loss prevention methods and loss absorption mechanisms. It is submitted therefore that losses are completely unavoidable and it is the mechanisms in place to absorb losses that is the crucial issue here since minimising losses ensures that depositor's funds will at least be safe and would not be eroded by the losses.

The sale of foreign currency to cater for losses may be undertaken with caution, as a bank really must rely on such reserve(s) as a matter of last resort. It is submitted that charging of high interest rates amounts to a loss-absorption process, as the borrower being charged high interest is more than likely to be a risky borrower with a high probability of default[737].

Thus of the 22 respondents, only seven indicated they had loss absorption mechanisms in place i.e. a percentage of approximately 32%. The two respondents that indicated that they applied the legal process in the loss-absorption mechanism process did not elaborate on the nature of the legal process. Notwithstanding this, the respondents were asked whether they were subject to any insolvency regulation within their jurisdictions. The responses were interesting and varied. One respondent for a foreign bank in Ghana stated that the Financial Services Authority (FSA, as it was previously known) regulations/guidelines were applicable to them.

Other respondent participants from Ghana cited: Insolvency Act 1962 (i.e. Act 153); Bodies Corporate (Official Liquidations Act) 1963 (i.e. Act 180); the Banking Act 612 (2002); the Banking Act 673 (2004), Banking (Amendment) Act 2007, i.e. Act 738; and Insolvency Act (2006). While it beggars belief that the responses were not consistent, none of the legislations mentioned above have provisions specifically aimed at bank insolvency which underscores the urgent need for a bank insolvency Act in Ghana.

[737] On the contrary, a borrower repaying a loan at a high interest rate may not necessarily be a risky borrower if such high interest margins are common place within the banking industry of the jurisdiction in which they reside and to which their repayment obligations are due.

Respondents from Kenya on the other hand cited the Central Bank of Kenya (CBK) guidelines and the Bankruptcy Act 1930 (as amended).

Conclusion:

The analyses provided in Part B of this Chapter 6 thus gives an insight into existing capital adequacy frameworks in both Ghana and Kenya and the nature of the impact the capital adequacy provisions under Basel 3 will have on large commercial banks (particularly the respondent banks) in both jurisdictions. Although the responses provided by the respondents to research question 3 in Part A were adequate, the author believes that the analysis in this Part B will ensure that every possible and likely implication, (specifically of the capital adequacy provisions under Basel) 3 will be thoroughly addressed in the final chapter, i.e. Chapter 7.

Appendix 6 is an exact copy of the questionnaire sent to the respondents and contains the questions that were posed to the respondents the answers of which have greatly assisted the author in providing a detailed analysis. The rationale for attaching the questionnaire template is to assist anyone reading this piece of scholarly work, develop a better understanding of the nature of the questions asked and the reasons why certain questions have been asked.

CHAPTER 7
THE IMPLICATIONS OF CAPITAL ADEQUACY PROVISIONS UNDER BASEL 3

7.1 Introduction

The implementation of Basel 3 by South Africa it is submitted, paves the way for other African countries to follow suit in the near future. While it may be virtually impossible to predict a date at this point (and understandably so), the author suggests that other African countries are likely to follow in the footsteps of South Africa in a decade or so from now.

There are and will undoubtedly be critics[738] who may not share this view. Their contention that banks in Africa generally hold capital in excess of the Basel Accord capital requirement and as a result, reforms introduced by Basel 3 would not apply[739] to African countries is deeply flawed. This submission is made due to high incidences of non-performing loans, concentration risks, inflation etc which are banking risks normally prevalent in Africa.

This flaw in the critics' argument is further exposed by the increase in systemic banking risk contagion which financial globalisation introduces and requires addressing as discussed in Chapter 3.

7.2 Relevance of Basel 3 to African Countries

Following the analysis provided in the previous chapter i.e. Chapter 6, it is submitted that the role played by financial globalisation and cross-border inter-bank transactions (as discussed in Chapter 3) underscores the need and importance of a harmonised approach towards global banking regulatory standards.

A careful analysis of Arnout Wellink's statement[740] and a subsequent observation of the pace of financial deepening and globalisation in Africa should draw attention to the veracity of his statement. In contrast however,

[738] Such as Iwa Salami and Louis Kasekende.
[739] I Salami, 'International financial standards and the application of Basel 3 in Emerging and Frontier Markets' (2012) Law and Financial Markets Review Volume 6 336,339.
[740] See (n720).

Louis Kasekende et al[741] suggest in their paper that the scope of the impact of Basel 3 provisions on Africa is limited only to the macro-prudential measures therein, and that the provisions within Basel 3 were incapable of mitigating the systemic risks that arose from the cross-border movement of capital through cross-border inter-bank financial transactions.

They suggest further, that African countries faced banking regulatory challenges[742] which required 'a wider array of instruments than those presented in Basel 3'[743]. While admittedly some of the banking risks faced by African banks are uncommon to banking systems in Europe and perhaps elsewhere, it is submitted that the regulatory challenges highlighted by Kasekende as unique to Africa ought to be addressed within the framework of local banking laws across the African continent. The fundamental reason for this submission is that such regulatory challenges are not common to all banks globally and as such it would be a complete nonsense to insert a provision within a global banking regulatory framework that seems to address a banking regulatory issue, characteristic of African banks.

It is therefore submitted that the Basel 3 provisions will impact African countries in diverse ways to the extent that its effect on banks in one jurisdiction may be different to that occurring in other jurisdiction. Thus there will be implications for all commercial banks in Ghana and Kenya regardless of whether both countries subsequently implement Basel 3 or not. These implications are set out within this chapter 7.

While the author's view stands, notwithstanding the fact that no formal request has yet been made by the BCBS or the G20 to African countries (particularly Ghana and Kenya), there is independent evidence though, that each jurisdiction has independently had discussions on Basel 3 within their respective banking industries[744]. Indeed approximately 91% of respondents to

[741] Louis Kasekende, Justine Bagyenda and Martin Brownbridge, 'Basel 3 and the Global Reform of Financial Regulation: How should Africa Respond? A Bank Regulator's Perspective' (2012), Global Economy Journal Volume 12 1.
[742] Such as risk arising from large loan concentrations and risk exposure from foreign exchange fluctuations.
[743] Louis Kasekende (n741) 3.
[744] See Chapter 3.7 of this thesis.

the questionnaire have concluded that the adoption of Basel 3 would become an inevitable requirement for African countries with time.

In Arnout Wellink's statement reiterating the relevance of Basel 3, he identifies 3 broad components of Basel 3 which in his view will be completely relevant for African banks and banking systems:

Firstly, that the provisions under Basel 3 that increase the quality and quantity of capital through its heightened emphasis on common equity will be beneficial to banks in Africa, as better capital quality was likely to enhance loss – absorption.

Secondly, that the leverage ratio introduced by Basel 3 provided a non-risk based backstop to the existing risk-based measures which were all but perfect.

Thirdly, the introduction of a conservation buffer and a counter-cyclical buffer was relevant for African countries and even more so Emerging countries. Even though global systemically important financial institutions (SIFIs) are usually found in large European developed countries, he suggests that the Basel 3 provisions addressing systemic importance will still be relevant to African banks.

Another reason cited by Wellink, which will be relevant for Africa, i.e. global liquidity standards is outside the remits of this thesis and so will not be discussed. The final provisions of Basel 3 which he cites as fully relevant to Africa are the Trade Finance 'concessions under Basel 3'. While the relevance of the above provisions to Africa will each be addressed in turn and thoroughly analysed, it is imperative that Iwa Salami's contrasting views on the relevance of Basel 3 to African countries are also analysed.

Iwa Salami argues[745] that since Basel 3 provisions focused on 'the regulation of leverage, capital and liquidity'[746] all of which are common to financial institutions located in advanced countries, such provisions were incapable of being relevant to African countries. Salami attempts to clarify this view by

[745] I Salami, 'International Financial Standards and the application of Basel 3 in Emerging and Frontier Markets', Law and Financial Markets Review (2012) Volume 6, 336-342.
[746] ibid 339.

suggesting further that most African banks usually held capital levels higher than that suggested under the Basel Accord and that Basel 3 was 'less relevant for African economies whose banking systems do not share the same characteristics and challenges as those in Advanced markets'.[747]

The author disagrees with Salami's view, in that while it is admitted that African financial institutions generally hold higher capital[748] than required under the Basel 1 Accord, the high incidence of non-performance loans (NPLs), concentration risk and the lack of effective credit reference agencies compounded by largely ineffective bank supervisory structures suggest that an even higher capital adequacy requirement may be necessary. Also, with the rate of inflation often considerably high in Sub-Saharan Africa, an even higher capital adequacy ratio is arguably likely to protect banks from losses arising from interest rate fluctuations.

Another point raised by Iwa Salami on the issue of irrelevance of Basel 3 to African countries, is her suggestion that *'questions of relevance of international standards are raised when 80% of countries of the world cannot effectively apply them'*[749]. Here, it is submitted that Salami seems to be confusing relevance with applicability. The fact that the application or implementation of an international financial standard proves challenging does not necessarily imply that the provisions relating to that international standard are irrelevant to that jurisdiction.

It is thus submitted that the capital adequacy provisions under Basel 3 will remain relevant to all banks regardless of their level of complexity and the suggestion is made that African countries ought to be provided with assistance[750] in relation to the future implementation of Basel 3. This view is further strengthened by quantitative empirical evidence obtained from the analysis of the responses provided by participant banks to the questionnaire. With 17 out of 22 respondent banks believing that Basel 3 would be relevant for Africa, is of itself symptomatic of a broader opinion for which critics of the relevance of Basel 3 to African economies should take note of.

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[747] ibid.
[748] Salami (n745) 339.
[749] Salami (n746) 336.
[750] Such as human resource personnel, IT and financial assistance.

7.3 Implementation of Basel 3 by African Countries

While there is absolutely no doubt that legal obstacles would have to be surmounted in future in order to integrate Basel 3 provisions into African national banking regulatory frameworks (on the assumption that African countries decide to adopt Basel 3), South Africa's ability to meet the 1 January 2013 deadline imposed on member states of the G20, suggests that determination and the strength of political will, will be a key factor[751] in any future implementation of Basel 3 by Ghana and Kenya. Although the author is not familiar with the legal processes and stages involved in the adoption of Basel 3 by South Africa, it is fair to say that South Africa's Bank Amendment Bill[752] which preceded the formal adoption of Basel 3 provisions contained new definitions, expressions and provisions that either mirrored the provisions within Basel 3 or at least conveyed the meanings and/or intentions behind the Basel 3 provisions[753].

If Ghana and Kenya decide to adopt Basel 3 in future, they may have to adopt either of two forms of implementation. The process of implementation may be initiated through a complete or partial overhaul of existing banking regulatory framework to incorporate provisions of Basel 3, or via the creation of an entirely new banking regulatory framework that will supersede previous regulations. It is submitted however, that the process of implementation undertaken by either jurisdiction would undoubtedly be influenced by the then existing individual legal and political environment, the efficiency of legislative processes, the political will to implement Basel 3 and the availability of resources.

In Chapter 3, attitudes of African countries towards the compliance of Basel regulations in Africa were discussed and it was suggested that inspite of firm commitments previously made by Ghana and Kenya in respect of a full

[751] Other factors are likely to be a need for trained personnel with knowledge and expertise of Basel 3 regulations, financial backing and improved IT systems etc.

[752] See Republic of South Africa – Banks Amendment Bill – Explanatory Summary as published in Government Gazette No 35880 of 16 November 2012 (Accessed March 2014).

[753] Due to an implementation time-table set out for members of the G20 where implementation is expected to be completed in stages (each stage with its own applicable deadline), South Africa's Banks Amendment Bill 2012 is expected to undergo further amendments to reflect any further adoption of the Basel 3 provisions.

adoption of Basel 2[754], there remains a possibility that the authorities in these jurisdictions may eventually decide to side-step a full implementation of Basel 2 as they adopt a 'wait and see' attitude with the ultimate intention of adopting Basel 3.

Regardless of whether or not Ghana and Kenya fully adopt Basel 2 prior to an adoption of Basel 3, evidence from the analysis of the questionnaire suggests that out of the 16 respondent banks from Ghana, 10[755] had implemented Basel 2 and of the six respondent banks from Kenya, four[756] had partially implemented Basel 2. Further analysis of the responses provided in the questionnaire suggests that 12 out of 16 respondent banks from Ghana are in favour of a future implementation of Basel 3 in their jurisdiction i.e. 75%. Thus, even though there seems to be credible evidence pointing to the likelihood of a future adoption of Basel 3 by Ghana and Kenya[757], there is no indication as to how soon this might be and also whether any future adoption of Basel 3 would be somewhat patchy and inconsistent (i.e. where different parts of Basel 3 are adopted) or indeed whether they will even ever be adopted[758].

Notwithstanding whether future implementation of Basel 3 occurs in Ghana and/or Kenya, one thing is certain; there will be implications for all commercial banks in Ghana and Kenya. In view of this, the ensuing discussion on the implications of the capital adequacy provisions of Basel 3 has been set out under two scenarios. The immediate implications i.e. where Basel 3 has not yet been implemented by Ghana and Kenya and also future implications (i.e. where preparations are being made to adopt Basel 3 and its subsequent adoption). It is important to clarify that this discussion will not be on the

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[754] According to Iwa Salami, only Mauritius and Namibia had fully implemented Basel 2 as at the end of 2012. See I Salami, 'International Financial Standards and the application of Basel 3 in Emerging and Frontier Markets' (2012) Law and Financial Markets Review, Volume 6, 339.

[755] Of this number, three had fully implemented Basel 2 and seven had undertaken partial implementation.

[756] None of the six respondent banks had fully implemented Basel 2. Infact two of the Kenyan banks had not implemented Basel 2 at all.

[757] There is evidence to suggest that the Central Bank of Kenya, together with the central banks of other member states of the East African Community (EAC) are currently analysing the Basel 3 provisions with the intention of implementing it – See the article: 'Global Partnership for Financial Inclusion (GPFI) – Kenya's engagement with the standard-setting bodies and the implications for financial inclusion', 2011.

[758] Considering the implementation challenges that African countries are likely to face.

implications of the entire provisions of Basel 3 on large commercial banks in Ghana and Kenya, as such emphasis would be outside the scope and remits of this thesis and indeed would merit a separate academic research in the future.

7.4 Characteristics of the Ghana and Kenyan Banking Sectors

7.4.1 Ghana Banking Sector

The banking reforms of 2003 implemented through the Financial Sector Strategic Plan (FINSSP) played a significant role in the development of Ghana's banking system. Today, Ghana's banking system is well developed with a modernised banking trade and inter-bank settlement infrastructure. This has enabled the banking system to process an ever-increasing number of banking transactions and as a result facilitate a much wider range of financial services than previously possible.

Within the last decade, the number of commercial banks in Ghana has steadily risen. Prior to that, Ghana's banking system had consisted of fewer commercial banks and the subsequent increase in number has largely been due to the influx of foreign-owned commercial banks. The dominance of foreign-owned banks within Ghana's banking system is replicated through the profiles of the respondent commercial banks that participated in this research.

Out of 16 respondent banks from Ghana, six were local banks and 10 foreign/international banks. Thus the representation of foreign banks in this research was approximately 62.5%. This relatively high figure is a reflection of the huge presence of foreign-owned banks in Ghana. In Ghana's Financial System Stability Assessment Update Report in 2011, it was suggested that of the 26 Commercial banks present in Ghana, 13 were subsidiaries of foreign banks which had a combined market share of 51%[759]. Also, even though individual market share was dominated by British banks such as Barclays and Standard Chartered Bank, the combined market share of foreign banks of African origin was considerably bigger.

[759] Jose Vinals and Antoinette M Sayeh, 'Financial System Stability Assessment Update' May 2, 2011 p8 IMF.

Out of the remaining 13 local banks, the State banks[760] which comprise five commercial banks held 29% of the remaining 49% market share of banking assets. Another feature characterising Ghana's banking system is the increase in the number of universal banks. While the extent of universal banking may be difficult to ascertain, its popularity in Ghana is on the rise. As at the end of April 2011, a minimum of nine universal banks[761] had been identified by the Report as accounting for 53% of the country's banking system assets. Although the Report does not state how many of the universal banks are foreign-owned banks, results[762] from the analysis of the questionnaire suggest that most of the universal commercial banks operating in Ghana are foreign-owned banks which also suggests that local banks account for a comparatively small amount of banking system assets.

It is submitted, that within the last decade or so, following the establishment of subsidiaries of foreign banks (both African and International), total assets within the banking system have increased considerably. Accompanying this increase has been the increase in inter-banking relationships and transactions resulting in the magnification of the existing threat of local and cross-border risk contagion.

In Chapter 6, the risks faced by commercial banks in Ghana were thoroughly discussed and as such would not merit another discussion here. However following analysis of the responses, credit risk was identified as the main risk for commercial banks in Ghana. This was thus consistent with the findings of the Ghana FSAP Report in 2011.

Nonetheless, other traits of Ghana's banking system have been identified which renders the entire banking system vulnerable. The unavailability or scarcity of long-term finance ensures that interest rates on loans remain astronomically high. Even mortgage loans are unlikely to be guaranteed over

[760] The State, through State institutions such as the Government, Bank of Ghana and the State-controlled pension fund – Social Security National & Investment Trust (SSNIT) holds a controlling interest in five commercial banks via its direct and indirect shareholding

[761] Even though the Report identified nine universal banks by April 2011, analysis of the questionnaire suggest that of the 16 Commercial banks in Ghana that completed the questionnaire, 13 banks stated they had assets in other banks and surprisingly not in insurance companies as identified in the Report.

[762] Out of the 13 commercial banks claiming also to be universal in nature, nine were foreign banks and four local banks.

a period exceeding 15 years which implies an even higher monthly repayment.

The recent establishment of a credit check system[763] in Ghana is limited in its effectiveness as shared information is not readily available and as a result, a borrower in default could still apply for a number of loans from different banks thereby increasing the risk of further default. The high interest rates also ensure that borrowers are faced with a high cost of financing/borrowing. Although banks in Ghana are generally well capitalised, corporate governance malpractices often ensures that this counts for nothing. In some cases, large loan concentrations exist within a bank's portfolio – a blatant disregard for existing safeguarding measures.

The inability of the Bank of Ghana to provide an effective supervisory role has continued to undermine the banking system and made malpractices such as this increasingly likely. The Financial System Stability Assessment Report 2011 also uncovered a lack of an effective bank resolution procedure and a virtually non-existent framework for robust systemic risk analysis. An even more shocking observation is the fact that Ghana's recent Insolvency Act 2006 (Act 708) does not address the issue of bank insolvency.

7.4.2 Kenya Banking Sector

Although the total number of commercial banks in Kenya amounted to 43 commercial banks as at 31 March 2013, majority of these banks declined to participate in this research hence the author's ability to obtain responses from only six commercial banks from this jurisdiction.

The Kenyan banking system consists of a substantial number of foreign-owned commercial banks. These foreign-owned banks were largely responsible for the increase in overall banking asset size which as at 31 March 2013 stood at Ksh 2.4 trillion[764] compared to Ksh 1.9 trillion[765] in June 2011. Out of the six commercial banks that took part in this research, four

[763] Example, XDS Data Ghana Ltd, Hudson Price Data Solutions and Dun & Bradstreet (the latter being granted provisional approval in 2012). See 'Ghana Banking Survey' 2012 p18 by Pricewaterhouse Coopers
[764] See CBK Annual Report, 2013 p1.
[765] See CBK Annual Report, 2012 p44.

were foreign-owned banks thus highlighting the dominance of foreign-owned banks in this jurisdiction.

Such is the influence of foreign-owned banks in Kenya that the Central Bank of Kenya granted permission in November 2011 to First Rand Bank of South Africa and in June 2012 to Bank of China Limited to set up representative offices[766] in Kenya. While the presence of universal banks in Kenya is not in doubt, there is some level of uncertainty as to the actual figure. Notwithstanding this, out of six respondent Kenyan banks, five described themselves as universal banks.

Although risk management seemed to have been overhauled following the publication at the end of 2012 of a revised prudential and risk management guideline(s) by the Central Bank of Kenya, the volume of non-performing loans still increased from Ksh 61.6 billion in December 2012 to Ksh 70.3 billion in March 2013 (representing an increase of 14.1 percent)[767]. This increase was attributed to the effects of the high interest rates for 2011 and 2012 and non-sharing of information within the Kenyan banking sector.

Inspite of the challenges[768] faced by the Kenyan banking industry in the past, huge strides seem to have been made in the innovation of financial services available to the people of Kenya. Apart from the provision of automated teller machines (ATMs), the introduction of the M-PESA[769] has also literally brought banking and financial services to the doorstep of millions of Kenyans thus significantly reducing the number of Kenyans without access to any form of banking services.

7.5 Establishing a case for the need to increase the quality and quantity of bank capital in African Banks (Ghana & Kenya).

While the aim of this thesis is not to provide an estimate of the optimal level of regulatory capital requirement for African banking systems, the author is of

[766] Kenya's Finance Act 2008, permits representative offices of banks to engage in limited activities such marketing and liaison activities which are linked to the banking and financial activities of its parent bank and subsidiaries.
[767] Central Bank of Kenya (CBK) Annual Report 2013.
[768] Such as what type of asset may or may not be acceptable to the bank as collateral within the legal framework.
[769] The M-PESA is a mobile phone payment system introduced by a company called Safaricom in 2006. 'PESA' being the Swahili interpretation of cash and 'M' stands for mobile.

the opinion that compliance on the part of banks to the capital adequacy requirements under Basel 3 will play a key role in enhancing financial stability in African jurisdictions. In relation to Ghana and Kenya, it is submitted that the quality and quantity of bank capital in these two jurisdictions need to be improved for the following reasons:

- Non-performing loans

The high incidence of non-performing loans in both Ghana and Kenya is a real cause for concern. With the occurrence of NPLs not limited to local banks, any rise in non-performance loans particularly in domestic systemically important banks and subsidiaries of foreign and international banks will arguably have a potential impact on the financial stability of that jurisdiction.

- Lack of an effective corporate governance framework

The lack of an effective corporate governance framework and good supervisory processes implies that banking malpractices will continue to undermine the gains that the banking industries have struggled to make thus far. Concentration risk[770] continues to cause problems as some management figures continue to flout basic banking rules and procedures. Also, the lack of an effective centralised credit reference agency capable of identifying potential loan defaulters is likely to make the issue of high non-performing loans a challenging one.

- Ownership structure

In Ghana, a substantial amount of the non-performing loans can be attributed to the inability of the Government to pay its outstanding debts to a number of state-owned banks. In most cases, the Government only pays up following months and even years of bad publicity in the press and in most cases will return to borrow more after settling the initial debt. This results in a never ending cycle of debts attributable to non-performance loans, not to even mention the interest that is likely to accrue as a result. Where privatisation of certain state banks have occurred, there have been accusations of unethical

[770] The Merchant Bank of Ghana almost went into liquidation following accusations that the rules ensuring the prevention of concentration risk had been flouted.

underhand dealings taking place where the accepted offer bids have generally not been the highest.

In Kenya, where a greater percentage of the banking industry consists of foreign banks, an increase in the incidence of non-performing loans will pose a direct threat to the financial stability of the country.

- Unreliable financial soundness indicator data

Procedural inadequacies often associated with the compilation of financial data often provide misleading information relating to the financial health of certain banks. In Ghana, non-performing loans are sometimes incorrectly classified under a different grouping thus resulting in banks not setting aside the requisite amount to cater for such losses. Also, the tendency for some existing loans that have undergone restructuring to be treated as new and current loans should be avoided.

- Ineffective risk management and supervisory processes

The increase in automated banking services and other financial services heavily reliant on the use of IT makes cyber-crime a source of risk that banks need to invest in to counter its menace. Thus banks will need to have effective risk management systems and practices in place which are easily adaptable to the ever-changing nature of banking risks.

- Financial globalisation

Although there are benefits to be derived from financial globalisation, it must be recognised that the growth of Pan-African banks in Africa could be a potential source of financial instability. Notwithstanding the increase in the array of banking services that Pan-African banking usually brings thus providing healthy competitive banking, it is submitted that they are also of domestic importance systemically and therefore need to be adequately capitalised and also have a robust risk management framework in place. Without such measures in place, there is a risk of such institutions availing themselves inadvertently as conduits for risk contagion.

- Lack of an effective Bank Insolvency framework

The lack of an effective bank insolvency framework raises questions as to how loss-absorption will be undertaken by the bank. Even though Ghana has no depositor protection scheme in place, banks in the jurisdiction are required to retain some funds with the Bank of Ghana purposely for covering any potential losses. However, such a fund will be insufficient towards the return of depositors' monies particularly when the bank suffers a potentially large loss. Thus an increase in the quality and quantity of capital will ensure that a fall back system remains in place should it be required.

Although Kenya has a depositor protection scheme in place, such a scheme will in my opinion be largely ineffective for the purposes of returning depositor's funds as the amount depositors become entitled to following a banking crisis is arguably small.

7.6 Type of Bank Capital held by the respondent banks

Following the analysis in Chapter 6, the types of bank capital held by the respondent banks were found to be of a wide range. While there was some level of consistency in the types of capital held by the respondent banks, some differences[771] also existed which were all too conspicuous.

Examples of the types of capital that were relatively consistent across respondent banks were: paid-up capital; disclosed reserves; current year's unaudited profits; share capital; undistributable reserves and other reserves. Other types of capital not commonly held were hybrid capital, deferred tax assets and a number of convertible bonds.

On the basis of the above observation, there will be implications for the respondent banks where the nature of capital held is concerned and the extent of the implications will be dependent to a substantial degree on the provisions of Basel 3 affecting them. Banks that have among their asset portfolio, hybrid capital and deferred tax assets may become subject to the grandfathering and de-recognition provisions of Basel 3 should they eventually adopt Basel 3. Also, banks intending to adopt Basel 3 will be

[771] It is submitted that there is a distinct possibility that certain types of capital may be similar in nature and characteristics but may bear different names/titles of description.

required to hold more common equity. To do this, they may have to issue more shares – a decision not likely to be favoured by existing shareholders as it may result in the dilution of their existing shares.

On the issue of the risk management processes undertaken by the respondent banks, it is suggested that since most of the respondent banks implemented the standardised approach to credit risk measurement they are unlikely[772] to be significantly affected by the Basel 3 risk management provisions. However, as banks move away from the standardised approach to more sophisticated risk measurement approaches in the future so will the Basel 3 risk management provisions become more applicable.

7.7 The impact and implications of the capital adequacy provisions of Basel 3.

It must be acknowledged that since the central theme of this thesis (i.e. the implications of the capital adequacy provisions of Basel 3) is based to some degree on the responses provided by the respondent banks to question 3 posed[773] at the beginning of this thesis, it would be absolutely necessary to analyse the responses provided by the respondent banks to this question prior to examining the wider implications.

The responses provided by the respondent commercial banks provide an interesting insight into the likely implications of implementation or non-implementation of Basel 3 in their respective jurisdictions. Below are extracted quotes of participants from the respondent banks which have been replicated to provide a general view of their opinions[774] to the final question this thesis poses and for which this research paper seeks to answer.

Thus the responses provided by some of the respondent banks to the final question posed by this thesis were as follows:

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[772] Perhaps with the exception of two respondent banks that indicated that they used the IRB method of credit risk measurement.

[773] It may be recalled that the question posed in the questionnaire (as explained earlier) was on the implications of Basel 3 on the respondent bank(s).

[774] Although these opinions represent only a handful of the views provided by the respondents, it is submitted that some respondents either did not provide a response, or their responses were completely irrelevant to the extent that a replication of those responses would serve no beneficial purpose.

Bank 1: ‘Basel 3….however, this may also crowd out smaller banks, since they may find it difficult to raise the required capital’;

Bank 2: ‘It will compel shareholders to invest more capital or it will result in mergers & acquisitions’;

Bank 3: ‘Regardless of whether central banks adopt the implementation of Basel 3 in Ghana or Africa, the adoption by the G20 and the E.U. will have implications for our jurisdiction in terms of the transactions with our corresponding banks in those jurisdictions. This is because we will be counter-parties in our relations with them’;

Bank 4: ‘Where the large banks are subsidiaries of major international banks, compliance will be dictated from the Head-office, irrespective of the Central Bank’s (Ghana) actions’;

Bank 5: ‘The Central bank will be forced to adopt it in the near future, since most of the counter-party/corresponding banks are in the G20 countries’;

Bank 6: ‘Corresponding banking lines may be difficult to find and this would affect the smooth financing of international trade which may not auger well for the economies of African countries’; and

Bank 7: ‘It will encourage longer-term deposit, so that the long-term lending of banks is better matched by longer-term funding’.

7.7.1 Immediate impact and implications on respondent banks

Although the above responses reflect different opinions, it is submitted that each response highlights an aspect of the numerous implications that the respondent banks could potentially experience as a result of implementation or non-implementation of Basel 3. Admittedly, there are other and much wider implications which will also be the subject of the discussion in this chapter. However, this needs to be preceded with a reflection on the fundamental aim of Basel 3.

In Chapter 5, the rationale for the introduction of Basel 3 by the BCBS was discussed and from which the 2 main objectives for Basel 3 could be summed up as:

'to strengthen global capital and liquidity regulations with the goal of promoting a more resilient banking sector and to improve the banking sector's ability to absorb shocks arising from financial and economic stress'[775].

While one might conclude that the implications for large commercial banks in Ghana and Kenya may be predictable or unpredictable, it is submitted that the uniqueness of this research is hinged on this very issue and that there is currently no other academic research or study which addresses the implications of the capital adequacy provisions of Basel 3 on large commercial banks in Ghana and Kenya.

Swati[776] suggest that the differences in the nature of the impact of Basel 3 on Emerging markets are attributable to the micro-prudential[777] and macro-prudential[778] components of Basel 3. They further suggest that the impact that Basel 3 will have on Emerging markets will result in implications for the 'financial flow channel' as a result of a decline in lending and also fluctuations in interest rates.

According to Swati, the financial flow channel is affected by interest rate fluctuations, the volume of bank lending[779] provided by banks located in advanced countries and counter-party risk assessment.

Even though the implications that Swati highlight are in respect of Emerging markets, it is submitted that the immediate implications for respondent banks in Ghana and Kenya will be similar. This is largely due to the fact that Ghana and Kenya are home to a number of the subsidiaries of foreign and international banks whose parent banks may be head-quartered in jurisdictions that have already begun the implementation of Basel 3.

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[775] Basel 3, 'A Global Regulatory Framework for more resilient banks and banking systems' paragraph 1 p1 (2010 revised 2011).

[776] Swati Ghosh, Naotaka Sugawara, Juan Zalduendo, 'Bank Flows and Basel 3-Determinants and Regional Differences in Emerging Markets' Economic Premise No 56 April 2011.

[777] Provisions relating to individual banks or financial institutions.

[778] In relation to the entire financial system.

[779] Particularly where the volume of bank lending declines due to the high cost of implementation incurred as a result of implementation of Basel 3 by the banks in the advanced countries.

The response provided by Bank 3 reiterates how banking transactions are likely to be affected through banking relationships with other banks located in jurisdictions which might have begun the implementation of Basel 3. It is also submitted that the nature of the implication will undergo a twist should the subsidiaries of the global banks present in Ghana and Kenya be directed by their parent banks (often located in Europe to immediately begin the implementation of Basel 3[780]. Another immediate implication of Basel 3 particularly as a result of the capital adequacy provisions is reflected in the response provided by Bank 6.

The potential lack of correspondent banking lines may arise as a result of the grandfathering and de-recognition provisions under Basel 3. In other words commercial banks in Ghana and Kenya may find it impossible to trade in banks' assets or make use of capital that might have already been grandfathered or de-recognised in the jurisdiction in which the counter-party bank may be located.

7.7.2 Likely impact and implications for Commercial Banks should Ghana and Kenya implement Basel 3

Following the responses provided by the respondent banks to the question of the likelihood of Basel 3 being adopted by African banks; the desirability of Basel 3 implementation in Africa and whether the respondent banks will implement Basel 3, the question that remains to be asked is when (rather than if) will Basel 3 be adopted by Ghana and Kenya and infact by other African countries as a whole?

The adoption and implementation of Basel 3 by Ghana and Kenya will to a very large extent depend on the legal and legislative processes currently in place in both jurisdictions. Unlike in the UK where Basel 3 has been incorporated into European Union Law (EU Law) i.e. the Capital Requirement Directive (IV) (CRD IV), which immediately became applicable as of 1 January 2014, Ghana and Kenya may need to make the necessary amendments to their respective banking regulations before transposing the provisions of

[780] It remains to be seen if such a development will spark some kind of response from the Central Banks of Ghana and Kenya where the central banks are yet to adopt Basel 3 themselves.

Basel 3. South Africa successfully incorporated Basel 3 into its banking regulations following the publication of the South Africa Banks Amendment Bill in the official gazette[781]and there is no doubt that the legal frameworks existing in Ghana and Kenya will support the smooth transposition of this global regulatory framework when implementation becomes a reality.

When adoption and implementation does occur, it is expected that the BCBS will assist both Ghana and Kenya with the acquisition of human and technical expertise which will be consolidated by increased co-operation between home and host bank supervisors. The impact that implementation of Basel 3 would have on banks in Ghana and Kenya is likely to cause upheaval within their respective banking industries and as stated by the respondent banks, some of the immediately expected implications are:

[i] *Existence of some banks will be under threat*

The additional capital requirement under Basel 3 implies that banks will need to raise more capital, particularly equity capital in order to meet the requirements. Whereas some banks, particularly the extremely large ones will be in a position to raise capital, the banks that are either unable to raise new capital or finding it quickly enough may either be compelled to enter into a merger and acquisition resulting in the loss of individual identity.

[ii] *Reorganisation of the Legal Entity and Business Model Restructuring*

Banks that choose not to enter into a merger and acquisition may have 3 options available to them where satisfying the requirement of higher capital ratios is concerned.

- **The issuance of new equity[782]**

The issuance of shares either to existing shareholders or to new investors represents the most ideal means of raising equity capital which under Basel 3 is the most important[783] form of capital.

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[781] Government Gazette No. 35880 dated 16 November 2012.

[782] This option may be avoided if the bank is not a profitable bank especially where a non-profitable bank may struggle to attract potential investors.

[783] Equity capital is considered the most important form of capital due to its high loss-absorbing characteristics.

Notwithstanding this, the issuance of more equity capital through the issuance of new shares may incur the displeasure of existing shareholders as it has the detrimental effect of diluting the value of existing shares which they already possess. This displeasure could potentially disappear if existing shareholders contemplate the potential benefit of a greater protection by virtue of their higher ranking as creditors should insolvency occur.

Where banks decide against this option and rather, favour other options which increase their capital ratios, they stand the risk of allowing their already high leverage to potentially get worse.

- **Through an increase in retained earnings**

Higher capital ratios may also be attained by banks through the implementation of drastic measures such as the reduction or suspension of dividend payments to shareholders; increasing lending rate margins to boost profit levels, introducing fees/charges payable by customers/borrowers for certain banking transactions.

The streamlining and restructuring of operational strategies within a bank to enhance efficiency may have the overall effect of increasing profits of the bank.

It must be borne in mind that the likely effect of implementing such drastic measures will be the desertion by existing bank customers and also the bank's image and reputation may be tarnished as potential customers and investors are driven away[784].

On the contrary, an increase in retained earnings achieved through undertaking increased risky banking ventures may be realised through higher profit margins but could potentially leave the bank vulnerable.

- **Decrease in size of loan portfolios**

Banks may decrease the size(s) of their loan portfolios by ridding both their on-balance sheet and off-balance sheet items of risky assets. This may be achieved through the sale of assets that are not tied down as a loan and the

[784] Dividend reduction or suspension among other measures, are likely to portray the image of a struggling bank which potential investors and customers would like to avoid at all cost.

ultimate acquisition of assets with much lower risk-weighting. Achieving this implies that the bank will not have to set aside relatively more capital for its risk-weighted assets.

[iii] *Bank Business Models*

The impact that Basel 3 implementation will have on the business models of the respondent banks will be profound. Whilst the traditional role of banks is unlikely to undergo any drastic structural change, the services provided by commercial and universal banks will most likely need to undergo a complete overhaul.

Eckhart Tolle[785] suggests that banks implementing Basel 3 will be under considerable pressure to revise business strategies, models and overall operating structures. While this may imply devising other avenues through which profit levels are sustained or even increased, it is submitted that the extent to which business models of participant commercial banks are affected will depend on whether they engage in universal banking or not. This is because commercial banks engaged in universal banking will be under considerable pressure to sustain their profitability, and may have to embark on an overhaul of their business structure to achieve this outcome.

Irrespective of whether respondent banks are purely commercial/retail or commercial/universal banks, the need to still change their business models may still be required, not least because of the multiple requirements[786] under the capital adequacy provisions of Basel 3. Even though commercial/retail banks typically rely on the maturity transformation of their loan to borrowers and also on depositor's funds to provide bank income with the view to profitability, these processes are unlikely to be sufficient hence such banks may consider other means[787] of acquiring more money.

A change in business model could potentially consist of an enhancement in risk management; undertaking cost-cutting measures to off-set the cost of

[785] Eckhart Tolle, 'The most rigid structures, the most impervious to change, will collapse first – Structure Evolving Banking Regulation' Chapter 2, February 2014 KPMG p18-27.
[786] Such as the need to have more capital, satisfying applicable disclosure requirements and the identification and effective measurement and management of risks.
[787] Such as issuance of bonds or commercial paper; inter-bank lending etc.

implementing increased capital requirement; the introduction of new banking products and services; introducing fees for certain banking products and transactions; or re-pricing existing products and services and finally concentrating on key areas or functions that are likely to generate more income or profit for the bank. The provisions relating to the treatment of minority interests and financial investments under Basel 3 may also initiate a structural re-organisation process through which banks affected by these provisions may dis-associate themselves from other financial entities through the disposition of their interest holding(s).

Notwithstanding the above, the over-riding factor here is the need for commercial banks in Ghana and Kenya to adopt a business model which would be considered to be the best, considering the requirements of Basel 3. It is thus submitted that an optimum model should exclude the practice of universal banking in both jurisdictions where applicable. It is ironic, that even though universal banking has been banned in Nigeria, its popularity in Ghana has increased dramatically and that is mainly attributable to the influx of foreign banks particularly Pan-African banks.

Where the practice of universal banking cannot be banned, a ring-fencing of all investment banking activities undertaken under the universal banking model will be a welcomed proposition for banking regulators and supervisors in these 2 jurisdictions to contemplate. This would ensure that all risks emanating from such banking activities would effectively be contained thus minimising the possible contagion of banking risks.

[iv] *Implications of Restructuring Business Models*

- **Profitability**

Since banks generally make profits from the difference in margins between income generated from their assets and the liabilities they are exposed to, a fundamental shift in their business model will undoubtedly affect profitability in one way or another.

Banks in Africa are well known to have very high interest margins and typically short-term funding. Thus the impact on profitability that banks experience (which often results in a re-structuring of business models) is

largely dependent on how sensitive the lending rates are or will be to the capital portfolio the bank possesses and also the effect a growth in the economy will have on lending rates.

- **Lending**

Jonathan Bridges[788] suggest that the effect capital requirements have on a bank's lending behaviour is hinged on 2 broad concepts, i.e. the impact on lending due to changes in capital resources of the bank and the impact on lending due to changes in capital requirements. For the purposes of this thesis, only the second concept will be discussed and appropriately so.

Also, in a study undertaken by Noss and Toffano[789] to investigate the mechanics involved in the relationship between bank capital and lending at the consolidated level in the UK, it was concluded[790] that bank lending potentially declined by up to 4.5% after there had been a 1% point hike in capital requirements 'during a period of credit growth'.

Although the impact that changes in capital requirements have on bank lending may vary from jurisdiction to jurisdiction, depending on whether the banks are consolidated or not and also whether the nature of the impact being investigated is macro-prudential or micro-prudential, there are other factors in the author's opinion that also need to be taken into consideration.

Factors that need to be taken into consideration include:

1. Whether lending is secured or unsecured;
2. Whether lending is to the corporate sector (i.e. corporate lending) or to individual borrowers;
3. The size of the commercial bank in terms of total assets and also where there is an expectation that the total size is unlikely to remain the same over a period of time;

[788] Jonathan Bridges, 'The impact of Capital requirements on bank lending' Working Paper No. 486, Bank of England, January 2014.
[789] J Noss and P Toffano, 'Estimating the impact of Changes in Aggregate Bank Capital requirement during upswing' Bank of England Working Paper No 494 March 2014.
[790] This conclusion was arrived at on the basis of an assumption that the relationship between capital and capital requirements was a linked one which moved in 'unison'.

4. The kind of business environment that prevailed at the time changes in capital requirements were introduced; and

5. The percentage size of the applicable capital buffer. It is expected that where banks have a smaller capital buffer, its capacity to lend will be curtailed as opposed to banks with a much larger capital buffer.

While lending by banks in Africa particularly Ghana and Kenya is often on a short-term basis and characterised by very high interest margins, it is submitted that with NPLs still relatively high, any future increase in capital requirements through implementation of Basel 3 would result in even higher interest margins payable by borrowers. Policies regarding the use of collateral to secure funds through long-term borrowing are also likely to be re-worded to maximise profits, potential benefits or options available to the lending bank when default occurs.

Swati Ghosh, Sugawara and Zalduendo[791] suggest that the effect of an implementation of Basel 3 on banks will be of both a direct and indirect nature. They clarify this by adding that a direct impact on bank lending would occur when banks in advanced countries reduce their lending to non-banks in Emerging countries whereas an indirect impact on lending would occur when banks in advanced countries reduce their lending to banks in Emerging countries. Although South Africa is perhaps currently the only African country capable of being described as an Emerging country, it is submitted that this conclusion by Swati et al may be extended to Frontier countries such as Ghana and Kenya. This is because African banks are known to constantly seek loans from advanced countries and are therefore bound to be affected should lending to Emerging countries be reduced by advanced countries.

- **Costs**

Although banks will naturally wish to maintain cost-effective business models purposely to maintain previous levels of profitability or augmenting their profit margins, or to counter the cost of funding and or implementing Basel 3,

[791] Swati Ghosh, Naotaka Sugawara and Juan Zalduendo, 'Banking Flows and Financial Crisis – Financial Interconnectedness and Basel 3 Effects' Policy Research Working Paper WPS5769 August 2011.

Eckhart Tolle[792] suggests that for a bank to embark on cost-cutting measures, they may wish to ensure that all processes are efficient, including their IT and data management systems.

Thus it is submitted that banks in Ghana and Kenya when considering the cost implications of implementing Basel 3 may wish to undertake or embark on certain cost-cutting measures or policies to mitigate the cost of adopting Basel 3. These cost-cutting measures must take into consideration the needs and general demography of the customers or potential customers within their jurisdiction.

B. Mahapatra[793] suggests that banks must consider the substantial overall long-term benefits of a reduction in the probability of banking crisis when contemplating the cost of implementing the new capital requirement. Thus, whether or not the cost implication of an increase in a bank's capital requirement was foreseeable by the Basel Committee, it is submitted that it is an unavoidable consequence of implementing new banking regulation. While it is inevitable that implementing the new capital requirements under Basel 3 will be costly, it is the method(s) by which these banks may seek to recoup these costs that is likely to become an issue of concern amongst borrowers.

Ever since Basel 2 was first introduced, the general perception has always been that when a revision in a law results in banks or lenders having to incur extra costs in implementing that law or provisions therein, such banks or lenders would be allowed to insert increased costs provisions following negotiations which allowed them to recoup the costs incurred.

In recognition of this, the Loan Market Association (LMA) incorporates provisions applicable and generally incorporated in all UK loan documentation subject to English law which permits lenders to make claims for various types of costs. For the purposes of this thesis, examples of costs that may be recouped may include costs incurred following the implementation of legislation and the compliance with it thereof.

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[792] Eckhart Tolle (n785) 18-27.

[793] B Mahapatra, 'Implications of Basel 3 for Capital, Liquidity and Profitability of Banks' RBI Monthly Bulletin April 2012.

Thus certain loan transaction documentation would be expected to contain provisions[794] which would allow lenders to make cost claims. It is thus expected that should Ghana and Kenya adopt Basel 3 (subject to the existence of similar legal provisions within their respective legislative frameworks), banks within these two jurisdictions would be expected to increase their capital charges particularly for corporate loans to bank corporate borrowers[795] and as a result recoup some of the costs incurred through the implementation of Basel 3.

On the contrary, borrowers (particularly corporate borrowers who are likely to be impacted greatly) may insist through negotiations on the insertion of certain provisions preventing any future cost claims being made following the future implementation of any legislation more specifically in relation to banking.

- **Type of transaction/business lines**

It is submitted that the provisions under Basel 3 relating to de-recognitions, deductions and grandfathering are all likely to affect the business lines of majority of the banks in Ghana and Kenya. Where an investor has an investment in a minority interest, the immediate and future impact that de-recognitions etc has will make such a product less attractive to a potential investor even during the period of transition.

As mentioned earlier, the expectation is that there will be an immediate impact due to existing banking relationships between banks yet to implement Basel 3 and counter-parties (other banks) which are located either within the same jurisdiction or cross-border that have already begun the implementation of Basel 3 by virtue of being subsidiaries of foreign banks.

Although Basel 3 made no specific provisions within the capital framework for trade finance, it is submitted that this may be due to the fact that the BCBS had recently made provisions for trade finance under the Basel 2.5 framework.

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[794] Such as indicating potential increase in interest margins and/or an increase in the banking fee payable for the processing of that banking transaction.

[795] There is a real possibility that some bank customers may switch allegiance to another bank whose charges might not be as high, or even worse still engage in financial transactions with ‘shadow banks’.

There are two main provisions[796] introduced by the BCBS which are applicable to the treatment of trade finance, however it is submitted that only one of them is likely to be applicable to Ghana and Kenya (particularly Ghana). Under the applicable provision, the 1 year maturity 'sovereign floor for trade finance related claims on banks using the standardised approach[797] for credit risk' has been waived. This implies that bank finance instruments such as confirmed letters of credit which are commonly used in jurisdictions like Ghana and Kenya for the importation of goods would attract less capital requirements when used in trade finance transactions.

This is a departure from the provisions under Basel 2 where counter-party risk weights were typically determined by external credit ratings.

Because banks from Ghana and Kenya are unlikely to have a risk weighting based on an external credit rating agency, such banks will be considered as unrated and thus any claim against them cannot be lower than the risk weighting of the sovereign from where the issuing bank has been incorporated which is usually 100%. Thus the rationale behind the BCBS's decision to dispense with this requirement is to encourage the importation of goods (using trade finance) through the reduction in the capital requirements associated with such transactions.

[v] (a) *Implications of the new definition of Bank Capital*

- **Quality of capital**

The various responses provided by respondents to the question of what constitutes bank capital suggests that what may be considered as capital in one jurisdiction may not necessarily be recognised as such in another jurisdiction. Hence, the renewed effort under Basel 3 which highlights the need for capital to have greater loss-absorbing qualities thus increasing the significance of common equity, suggests that banks in Ghana and Kenya will have to significantly increase their common equity.

[796] See http://www.financialstabilityboard.org/cos/cos_111025.htm

[797] This provision is also applicable to banks using the AIRB method in credit risk measurement.

Thus in both jurisdictions, common equity and retained earnings will assume greater significance. Also, the de-recognition and deduction provisions under Basel 3 will imply that the respondent banks that included hybrid capital and deferred tax in their components of capital will have to either de-recognise or deduct these components from their capital base in accordance with the applicable provision(s). Thus banks possessing hybrid capital or deferred tax assets (DTAs) may either immediately eliminate them from their asset portfolio or apply grandfathering provisions to allow for a slow phase-out of these types of capital. It is submitted though, that the impact on DTAs will depend on whether the DTAs are of the kind that rely on the future profitability of the bank concerned or rather the type that arise as a result of 'temporary differences'.

Since the reduction of future tax liabilities of a bank can never be guaranteed, let alone the future profits that could possibly be realised following such reduction in future tax payments, reliance on DTA's that depend on future profitability is completed excluded from a bank's assets. On the contrary however, DTA's arising from temporary differences will be subjected to a threshold deduction approach.

Thus where the DTAs have accrued as a result of excessive pre-payment of tax by the bank to their respective Government or through a tax receivable from the applicable tax revenue authorities, such DTAs will be subjected to risk weighting commensurate[798] to that of a claim from the relevant Government and will not[799] be deducted from a bank's capital.

Where banks adopting Basel 3 become obligated to deduct or de-recognise DTA's and hybrid capital, they may seek to compensate for this 'loss' by replacing and augmenting their common equity through the issuance of share capital and bonds. They may also seek to deliberately suspend or reduce the dividends payable to shareholders with the view to strengthening the equity component of the bank's capital base. It is submitted though that the latter option is likely to prove very unpopular amongst shareholders.

[798] The rationale behind this is an assumption that such risk weighting was reflective of sovereign risk.
[799] The logic behind this being that such DTA's are considered to be a debt owed by the relevant Government to the bank.

Also, the relevant provisions under Basel 3 relating to a bank's investment in another financial entity will be applicable as set out in Chapter 5 of this thesis. In Chapter 5, it was highlighted that under Basel 3, investments by a bank either in its own common shares and whether directly or indirectly held, must be deducted from the computation of Common Equity Tier 1 Capital, i.e. (CET 1). It must be pointed out though, that since the treatment of investments by banks in other banks under Basel 3 is considered on a consolidated basis as opposed to individual banks having financial investments in other banks, it has been suggested that the principle[800] under Basel 3 will still be applicable. However, the banking supervisory authorities in the respective jurisdictions will be expected to issue guidelines as to what threshold of deduction will be applicable for each size of investment for individual banks.

In respect of implications for other bank capital i.e. Additional Tier 1 capital and Tier 2 capital, it is submitted that since respondent banks from Ghana and Kenya both included subordinated debt as part of their capital base, only the short-term subordinated debt will be impacted as they do not possess long-term subordinated debt. Also, it is submitted that the amount of capital that banks in Ghana are required to hold as reserve at the Central bank, ensures its future potential utilisation when an ailing bank assumes a Gone Concern status.

- **Quantity of capital**

The introduction of the capital conservation buffer under Basel 3 ultimately increases the overall capital requirement that banks implementing Basel 3 would have to adopt. It has been suggested by Louis Kasekende, Justine Bagyenda and Martin Brownbridge that because African countries generally make it a requirement for their banks to hold a Tier 1 capital ratio of at least 6% of RWA, African countries ought not to adopt this Basel 3 requirement.

It is submitted that this conclusion is flawed because it is inconceivable that the BCBS intended the 2.5% of RWA buffer size to be capped at this figure and as such, this figure in my opinion should be used as a guide. Thus African banks should be required to accumulate a capital conservation buffer during

[800] The rationale behind the principle is to avoid double-gearing.

good stress-free times even if this results in total tier 1 capital exceeding 6% of RWA.

Considering the tendency of the value of assets to easily dissipate in African countries due to high rates of inflation, a decision by a bank to accumulate capital conservation buffer which results in Tier 1 capital exceeding 6% of RWA will not be misplaced. Thus large commercial banks in Ghana and Kenya will find it useful implementing the capital conservation buffer and this process needs to be orchestrated by the banking supervisors in the respective jurisdictions.

Although the impact that the Basel 3 provisions on the quality and quantity of bank has on banks may be described as micro-prudential, there are other implications for banks arising from the macro-prudential capital adequacy measures that are also contained therein.

(b) *Counter-cyclical Measures*

The introduction of a counter-cyclical buffer provision within Basel 3 marks an attempt by the BCBS to address the threat of pro-cyclicality within banking systems globally. Although pro-cyclical behaviour is a common feature of most banking systems, the provisions of Basel 2 failed to address this problematic issue and critics[801] of the Basel 2 framework have often suggested that pro-cyclicality on the contrary thrived under the Basel 2 framework.

Louis Kasekende et al[802] suggest that African countries tend to have fiscal policies in place that are pro-cyclical. They further suggest that these fiscal policies negatively impact the long-term growth of African economies and as such ought to be abandoned. To address this issue of pro-cyclicality in African banking systems, Kasekende et al suggest that African countries ought to

[801] Michael B Gordy and Bradley Howells, 'Procyclicality in Basel 2: Can We Treat the Disease Without Killing the Patient?', May 2004, www.bis.org/bcbs/events/rtf04gordy_howells.pdf. See also; Anil K Kashyap and Jeremy C Stein, 'Cyclical Implications of the Basel 2 Capital Standards' 2004.

[802] Louis Kasekende, Justine Bagyenda and Martin Brownbridge, 'Basel 3 and the Global Reform of Financial Regulation: How should Africa respond? A Bank Regulator's Perspective' (2012), Global Economy Journal Vol 12 1, 34.

undertake measures to counter the inherent pro-cyclical nature of their banking frameworks.

The author concurs with the views of Kasekende et al especially when it became evident in the immediate aftermath of the global financial crisis that a number of African countries, i.e. Frontier and developing countries lacked the fiscal space, international reserves and other relevant economic tools and mechanisms to undertake measures to counter the threat of pro-cyclicality to systemic stability.

In light of these observations, the suggestion by Kasekende et al that African countries need to undertake measures to counter the inherent pro-cyclical nature of their banking frameworks is an important one indeed. One of the measures they proposed includes the build-up of sufficient reserves during the periods of excessive credit growth which is identical to the counter-cyclical measures provided under Basel 3.

While counter-cyclical policies are important in any given economy, it is submitted that any current national counter-cyclical policy framework that Ghana and Kenya has should be revised to incorporate provisions that give effect to or adopt the counter-cyclical buffer introduced under the Basel 3 framework. Thus the incorporation of provisions to counter pro-cyclicality will have to address the excessive credit growth associated with booms in the economy while addressing also the lack of credit when the economy experiences a downturn.

Whereas the author suggests that future implementation of a counter-cyclical buffer in Ghana and Kenya is important and highly relevant, a proposal is submitted that rather than adopt the 2.5% that Basel 3 proposes, national regulators[803] in Ghana and Kenya should be allowed to impose[804] a counter-cyclical buffer of 2%. This proposal is suggested for the simple reason that Banks in these two jurisdictions are not as big as banks in Europe. Also, these banks in Ghana and Kenya are generally not internationally active banks,

[803] Such as the Central Banks of Ghana and Kenya.
[804] Such responsibility should be supported by trigger measures which ensure that the build-up of the capital is timed correctly.

perhaps with the exception of subsidiaries of international banks present in these two jurisdictions e.g. Barclays and Standard Chartered Bank.

Also, the nature of the exposure that commercial banks in Ghana and Kenya have with counter-parties is not as 'deep' as exposures that internationally active banks are usually exposed to. Notwithstanding this, the presence of Pan-African banks and the size of their combined assets by way of combined share suggest that a surge in pro-cyclicality due to credit growth will be largely attributed to these (Pan-African) banks and such a counter-cyclical buffer will be relevant for commercial banks in Ghana and Kenya to rein-in such credit cycle phenomenon.

(c) *Leverage ratio*

Although the rationale behind the leverage ratio provision is to prevent banks from assuming more liabilities than they can afford to safely manage, some critics have continued to question its merits. It is submitted that a case which underscores the importance of a leverage ratio could easily be made on the basis that the risk weighting system/measurement changes under Basel 3 is largely applicable to banks exposed to risks from financial derivatives and other securitised products (i.e. investment banks), whilst retaining the imperfect risk weighting methodology under Basel 2.

Hence, with the participant banks (of this research) being generally commercial in nature, suggests that the risk weighting methodology under Basel 2 would continue to be largely applicable to them. While it may be argued that the impact the global financial crisis had on Ghana and Kenya was via transmission mechanisms already discussed and not as a result of off-balance sheet securitisation activity which led to excessive leveraging, this does not in the author's opinion diminish or lessen the counter-argument that the leverage ratio will still be relevant to commercial banks in Ghana and Kenya.

Although securitisation is not a common banking activity within these two jurisdictions, a leverage ratio in my opinion is still relevant. However its implementation in Ghana and Kenya should in my opinion be for the purpose of acting as a backstop to counter concentration risk and NPLs. Furthermore,

the continued retention of the Basel 2 risk-based methodology under Basel 3 implies that the commercial banks will continue to be exposed to its inherent flaws. As a result, a leverage ratio will act as a backup to an otherwise flawed risk methodology framework.

Another fundamental reason why a leverage ratio is important is deposit protection. Although Kenya has a deposit protection scheme in place implemented through the Deposit Protection Fund Board (DPFB), the amount of money that each participant to this scheme[805] contributes to the Fund by way of deposit is meagre, i.e. (KES 100,000) for each account held as at 2012. While this contribution per account held is evidently insufficient, a leverage ratio will undoubtedly ensure that the temptation to embark on an excessive leverage build-up is always kept in check.

Thus, a successful implementation of a leverage ratio in Ghana and Kenya needs to be preceded by an assessment of the different accounting principles that may be applicable in both jurisdictions and more so the banks therein. It is submitted though, that due to renewed efforts being made by the BCBS towards consistency in the application of the IFRS accounting principles, a consistent application of the leverage ratio may in the future be easily attainable across all jurisdictions.

The BCBS recently issued a document i.e. 'Basel 3 Leverage ratio framework and disclosure requirements' which outlines the scope[806] of an application of the leverage ratio and the issues to be considered in determining the size of the leverage ratio. To address the uncertainty that may arise as to the type of capital required to constitute the leverage ratio, it is submitted that the composition of the leverage ratio should comprise of capital within Additional Tier 1 as opposed to Common Equity Tier 1 (CET1) capital.

[805] Such as licensed banks or other deposit-taking institutions.
[806] See www.bis.org/publ/bcbs128.pdf

[vi] *Tax implications*

The tax implications[807] that will arise from a future implementation of Basel 3 were with hind sight not intended to be a potential outcome of Basel adoption[808].

The unintended nature of possible tax implications resulting from implementation of Basel 3 is described as such due to a lack of foresight on the part of the BCBS in appreciating the fact that different jurisdictions engaged in different accounting regulatory practices which affected the way assets and liabilities were valued. Due to the emphasis that Basel 3 places on the quantity and quality of capital, any other processes (such as accounting regulatory processes) impacting the way assets and liabilities are valued are likely to affect the overall quantity and quality of capital within that jurisdiction.

It is on this basis that it is submitted that accounting standards applicable in Ghana and Kenya are likely to impact the computation of assets and liabilities and hence capital adequacy in both jurisdictions. Ahmed Al-Darwish et al[809] suggest that banks value their liabilities by using either the amortised cost process or the fair value basis approach. As these processes produce different outcomes, the computation of a bank's financial liabilities will depend on the method used by the bank. The different outcomes arise because the amortised cost approach results in financial liabilities that are considered to possess greater stability than those arising following the implementation of the fair value basis approach, whose value changes with interest rate fluctuation.

While it would be outside the remits of this thesis to discuss the advantages/disadvantages of either the amortised cost method or the fair value method, one fact is certain that all the banks that participated in this research indicated that financial reporting by their banks was consistent with

[807] The author is of the opinion that should neither Ghana nor Kenya adopt Basel 3, then the extent of tax implication on capital adequacy within these 2 jurisdictions would only be as far as both jurisdictions incorporate any of the international accounting changes.
[808] Ahmed Al-Darwish, 'Possible Unintended Consequences of Basel 3 and Solvency 2' IMF Working Paper WP/11/187 August 2011.
[809] ibid.

the guidelines of the IFRS Reporting Framework[810]. This overwhelming admission to the adoption of the IFRS Reporting Framework, may well suggest that the practical challenges[811] identified by the Ghana Banking Survey 2009 might have now long been rectified.

Notwithstanding the fact that all participant banks conducted their financial reporting according to the IFRS framework, inconsistencies could possibly still exist depending on the way their assets and liabilities are valued, and whether they are regarded as on or off-balance sheet items. Furthermore, banks and their subsidiaries may have the unenviable task of implementing different accounting and tax regulatory obligations depending on where they are located. This ultimately results in the unwelcome scenario where banks may be under an obligation to file their financial reports in accordance with say Basel 1[812] or Basel 2 obligations in one jurisdiction and in accordance with Basel 3 regulations in another.

Recent accounting regulatory changes introduced by the IASB further increases the scope for 'asset type' and 'capital' arbitrage. This is because there remains a level of uncertainty as to the extent to which the IFRS 9, a new accounting regulatory standard[813] will be relevant or applicable in Africa, particularly Ghana and Kenya.

[vii] *Implications of Basel 3 on Financial Stability*

When Basel 3 was first introduced, the BCBS stated that its fundamental purpose was to ensure the existence of a 'more stable and resilient banking sector'[814]. It is therefore submitted that to ascertain whether the provisions of Basel 3 collectively ensure the achievement of this goal, it is important for an

[810] According to the Ghana Banking Survey 2009 by PwC, the Bank of Ghana has already directed all banks in Ghana to implement the IFRS framework in the preparation of financial statements before the end of the December 2008 financial year end.
[811] The Ghana Banking Survey 2009 reported that even though banks in Ghana applied the IFRS when producing their year-end financial statements, their financial reporting regulatory requirements towards the Bank of Ghana was still done using the Ghana GAAP.
[812] Where banks continue to use the standardised approach for credit risk calculation.
[813] Introduced by the IASB to replace the IAS39 and is applicable in Europe from January 2013.
[814] Stefan Schwerter, 'Basel 3's ability to mitigate systemic risk' Journal of Financial Regulation and Compliance, (2011), 19(4), 337-354.

assessment to be made of the impact the provisions of Basel 3 will have on the overall financial stability of banks and banking systems.

An assessment of whether Basel 3 enhances financial stability will depend to a large extent on whether Basel 3 eliminates or reduces systemic risks in banks or banking systems. Whilst it would be outside the remits of this thesis to determine the extent to which each provision under the entire Basel 3 (either individually or collectively) contributes to the enhancement of financial stability, the author recognises that the regulation of capital is not of itself sufficient to ensure financial stability.

Regardless of this, it must be recognised that the capital adequacy provisions within Basel 3 collectively play a significant role in the mitigation of systemic risks within banks and banking systems, and they represent a piece of the jig-saw puzzle, slotting alongside other parts or provisions to ensure the final desired outcome – financial stability.

Giovanni Caggiano and Pietro Calice suggest in their paper[815] that the micro-prudential and macro-prudential provisions of Basel 3 will be beneficial to the entire African Continent. They further suggest that the benefits to be derived arise from the 'macro-prudential approach' that Basel 3 adopts towards the management of systemic risk.

It is submitted that even though there are macro-economic and macro-prudential benefits to be derived by Ghana and Kenya should they adopt Basel 3, the emphasis here is on the macro-prudential benefits or implications i.e. financial stability of commercial banks within these two jurisdictions. While systemic risk is a common feature of every banking system, its nature and depth arguably varies from jurisdiction to jurisdiction and even continent to continent.

In a paper[816] by Cedric Mbeng Mezui, Stefan Nalletamby and Hugues Kamewe, the authors rely on findings by Laeven and Valencia (2010) to conclude that three main sources of systemic risk were identified in Africa in

[815] Giovanni Caggiano and Pietro Calice, 'The Macro-economic Impact of Higher Capital Ratios on African Economies' [2011], Working Paper Series No 139 AfDB.
[816] Cedric Mbeng Mezui, Stefan Nalletamby and Hugues Kamewe, 'African Systemic Financial Crises' (2012) Africa Economic Brief Volume 3 AfDB.

the period of 1970-2009. Even though the authors identified currency crisis as the most common source of systemic risk out of the three, they submitted that all three sources of systemic risk were inter-linked and caused banking crises through 'negative fiscal balances, current account deficit devaluation, high inflation and high interest rates'[817].

The authors added that the negative impact of these systemic risks were made worse as a result of a lack of adequate macro-prudential supervision which contributed to increases in non-performing loans, undue significant bank exposure through concentration risk and lack of adequate bank capital. Thus the capital adequacy provisions of Basel 3[818] alongside the relevant risk management provisions[819] in my opinion will collectively enhance financial stability in Ghana and Kenya thereby reducing the likelihood of banking crises[820].

The fact that banks in Ghana already possess higher capital ratios than their counterparts in Europe and possibly elsewhere does not detract from the need to have an adequate capital framework in place to cater for all banking risks. This need is even more important due to the significance of the increasing role(s) of foreign banks in African countries, particularly Pan-African banks. This is because these Pan-African banks arguably represent a source of systemic risk contagion by virtue of their cross-border financial activities.

It is for this latter reason that the author submits that the financial stability implication of Basel 3 could be enhanced further through an extension of the BCBS's principles on systemic risk and interconnectedness to a domestic level. Thus the requirement for globally systemic banks to have additional loss absorbency[821] in my view should be extended to domestically systemic banks therefore making it a requirement for Pan-African banks and other large

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[817] ibid 3.
[818] As discussed earlier above.
[819] Particularly those affecting trade finance under Basel 2.5.
[820] It is submitted that the likelihood of banking crisis in any jurisdiction can never be completely eliminated but could ultimately be minimised.
[821] See the assessment methodology rules for globally systemic important banks (G-SIBs) which were issued by the BCBS in November 2011. See http://www.bis.org/publ/bcbs207.htm

foreign banks within Ghana and Kenya to maintain extra capital to cater for additional loss.

While Pan-African banks may not be as large and 'international' as global banks, they still possess the ability to positively or negatively influence their respective domestic financial systems as a result of their cross-border financial activities. It is the existence of such influential capacity which in the author's opinion highlights the significance of the collaboration and subsequent joint decision by the BCBS and the FSB to extend the globally systemic principle to domestic systemic banks. To apply this principle to domestic systemic important banks (D-SIBs), national banking supervisory authorities will be expected to identify the banks that are domestically important within their respective jurisdictions using 12 principles. These 12 principles making up the D-SIB framework[822] collectively provide the basis for which a financial institution may be declared a D-SIB and represents a reflection on the potential impact the failure of a D-SIB could have within the local jurisdiction.

The magnitude of the impact a failure of a D-SIB is likely to have within a jurisdiction, would be dependent on the size of the financial institution, the interconnectedness, the infrastructure of the financial institution(s) within the banking industry and the level of complexity in relation to the cross-border dealings of that financial entity.

It is submitted that the applicability of the D-SIB framework to financial or banking consolidated groups and their respective subsidiaries suggests that financial stability will be greatly enhanced[823] should Pan-African banks be made to comply with the Higher Loss Absorbency requirement under the D-SIB framework. It is further submitted that the application of the D-SIB principles to Pan-African banks should be supervised by national banking supervisory authorities who should also have the right to extend its ambit to other domestic systemically important banks (which might not necessarily be Pan-African in nature) where applicable.

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[822] See 'Basel Committee on Banking Supervision: A Framework for dealing with domestic systemically important banks', October 2012, BIS.
[823] Through a reduction in systemic risk contagion from cross-border financial activities.

In view of this, it would be absolutely crucial for there to be consistency in the application of the D-SIB framework to Pan-African banks and other potential D-SIBs as this strengthens the resilience of the banking industry within the jurisdiction and the wider African region and does not make one Pan-African bank any less competitive than another.

7.8 Conclusion

Although implementation of Basel 3 by members of the G20 is in the very early stages, this thesis has attempted to highlight its relevance and implications for large commercial banks in Ghana and Kenya. It would be completely wrong for the assumption to be made that since the global financial crisis originated in Europe and America and had nothing to do with Africa, any attempts by Europe to introduce global banking regulations with the intention of impacting African banks should be resisted at all cost or simply ignored.

The pace of financial globalisation, although slower in Africa in comparison to Europe and elsewhere is steadily picking up. As a result of the continued innovation of financial products globally and the ever-increasing cross-border financial transactions between and amongst States, banking regulations (whether on a national or global level) should be seen as having the capacity to cause reverberations within and beyond the borders of jurisdictions.

The findings in this thesis, suggest that although the international convergence of capital adequacy regulations is a goal shared by an overwhelming majority of commercial banks in Ghana and Kenya, the compliance statistics do not necessarily reflect this. Whereas this anomaly may be attributable to the lack of funds and technical expertise to facilitate adoption, there is also evidence to the contrary that the adoption and implementation of Basel 2 in Africa, has in the past largely been secured through other less dignified means.

It would thus be fair to suggest that should African countries be provided with the funds and the technical backing e.g. personnel and IT systems, there would be a significant leap in compliance statistics for Basel 3.

Another finding of this thesis which is backed with substantive empirical evidence is that majority of the respondents (industry participants themselves) recognise that Basel 3 is and would be relevant for African countries. This finding is particularly of such huge significance, as it undermines the views of some academics who have questioned the relevance of Basel 3 to African countries without supporting their views with quantitative or qualitative evidence.

Finally, this thesis has attempted to show that due to the global nature of banking today, an introduction of a global banking regulatory framework is bound to have far-reaching consequences and implications for banks world-wide irrespective of the jurisdictions in which they are located. These implications, some foreseen and others unforeseen are bound to occur as a direct result of how globalised the banking industry has become today. Infact, such is the extent of cross-border banking transactions that there will be implications for majority of banks in Africa (Ghana and Kenya) even before a formal requirement is made for African banks to implement Basel 3.

While there will be implications arising from the application of the entire provisions of Basel 3, this thesis has only highlighted one aspect of it – capital adequacy. The liquidity provisions under Basel 3, inasmuch as will result in implications for all banks is not discussed herein as it would be outside the remits of this thesis and will require a separate analysis in a future piece of scholarly work.

On the basis of the above submissions, the relevant authorities in Ghana and Kenya and perhaps the African continent at large, are encouraged to take the immediate necessary steps in anticipation of a formal request for the implementation of Basel 3 being made by the BCBS. These steps should include requesting financial and technical assistance from the World Bank, IMF and BCBS if required and an implementation phase-in period framework drawn which does not need to mirror the current transition period being adhered to by members of the G20.

Thus although Basel 3 is relevant for African countries regardless of the level of development of their banking industries, its implementation in Africa should

in the author's opinion be closely aligned to the level of financial development of that jurisdiction's banking industry. However, as different African jurisdictions are at different stages of financial development it is further submitted that certain aspects of the Basel 3 framework must be regarded as fundamental to any banking system world-wide and that the phase-by-phase implementation of the remaining aspects of the framework should be guided by the level of financial development.

It is admitted though, that these submissions would only be effective where appropriate supervisory mechanisms have been put in place to ensure consistency in their application. This entire thesis thus adds to the body of legal knowledge as it represents the first time an empirical analysis of the implications of Basel 3 capital adequacy has been undertaken for Ghana and Kenya. It does not by any means represent a template describing what the capital adequacy implications of Basel 3 are likely to be for banks in African countries generally, as implications may vary from jurisdiction to jurisdiction depending on the characteristics and extent of development of their respective banking industries.

Appendix 1

Table 1.1

Data below represents the approximate size of the assets held by respondent banks as at 31 December 2012.

Commercial Banks Local and Foreign (Ghana)	ASSET SIZE (As at 31/12/2012)					
	Greater than $1 Billion	More than $500m but less than $1B	More than $400m but less than $500m	More than $300m but less than $400m	More than $200m but less than $300m	Less than $100m
Bank of Ghana	✓					
Barclays Bank	✓					
Ecobank Ghana Ltd	✓					
Standard Chartered Bank	✓					
Ghana Commercial Bank	✓					
SG-SSB Limited		✓				
Unibank Ghana Ltd		✓				
Stanbic Bank		✓				
Access Bank Gh Ltd			✓			
Zenith Bank			✓			
Guaranty Trust Bank				✓		
United Bank for Africa Gh Ltd				✓		
Bank of Africa – Ghana					✓	
HFC Bank					✓	
Fidelity Bank						✓
The Royal Bank Ltd						✓

Table 1.2

Data below represents the approximate size of the assets held by respondent banks as at 31 December 2012.

Commercial Banks Local and Foreign (Kenya)	ASSET SIZE (As at 31/12/2012)						
	Greater than $1 Billion	More than $500m but less than $1B	More than $400m but less than $500m	More than $300m but less than $400m	More than $200m but less than $300m	More than $150m but less than $200m	More than $100m but less than $150m
Ecobank					✓		
Bank of Africa							✓
Standard Chartered Bank		✓					
Bank of Baroda		✓					
KCB						✓	
Fina Bank							✓

Table 1.3

The table below shows the choices made by the respondent banks concerning the relevance of Basel 3.

	Relevance of Basel 3						
Scale factor(s)	5	4	3	2	1	Don't Know	No
Number of respondent banks in Ghana	7	3	1	1	2	1	1
Number of respondent banks in Kenya	1	3	1	-	-	1	-

Appendix 2

Table 2.1

Ghana's Real GDP Growth

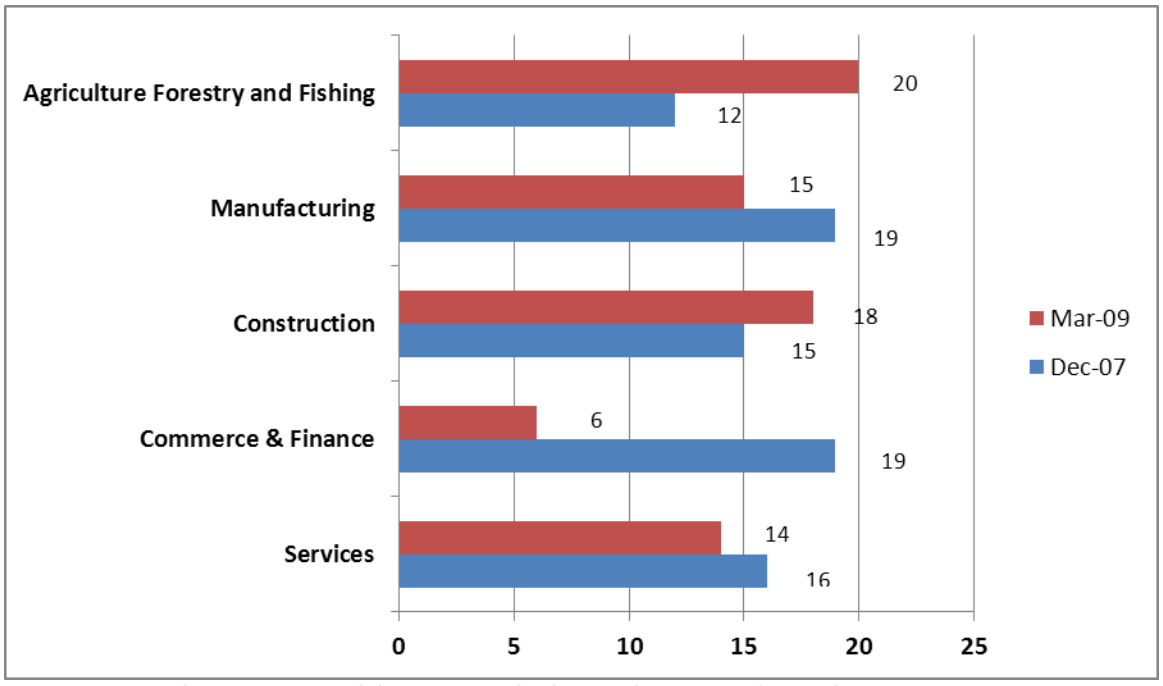
Year	2005	2006	2007	2008	2009	2010
	(Annual percentage change) %					
Real GDP	5.9	6.4	5.7	7.3	4.1	5.0

Source: Official data and IMF staff projections.

Table 2.2

Ghana: Sectoral NPLs

(In percent of total sectoral loans)



Source: See *Ghana: 2009 Article IV Consultation and Request for a Three-Year Arrangement Under the Poverty Reduction and Growth Facility* – Staff Report p18.

Table 2.3

Ghana: Financial Soundness Indicators, 2004-09

(Percent, end-of-period, unless otherwise specified)

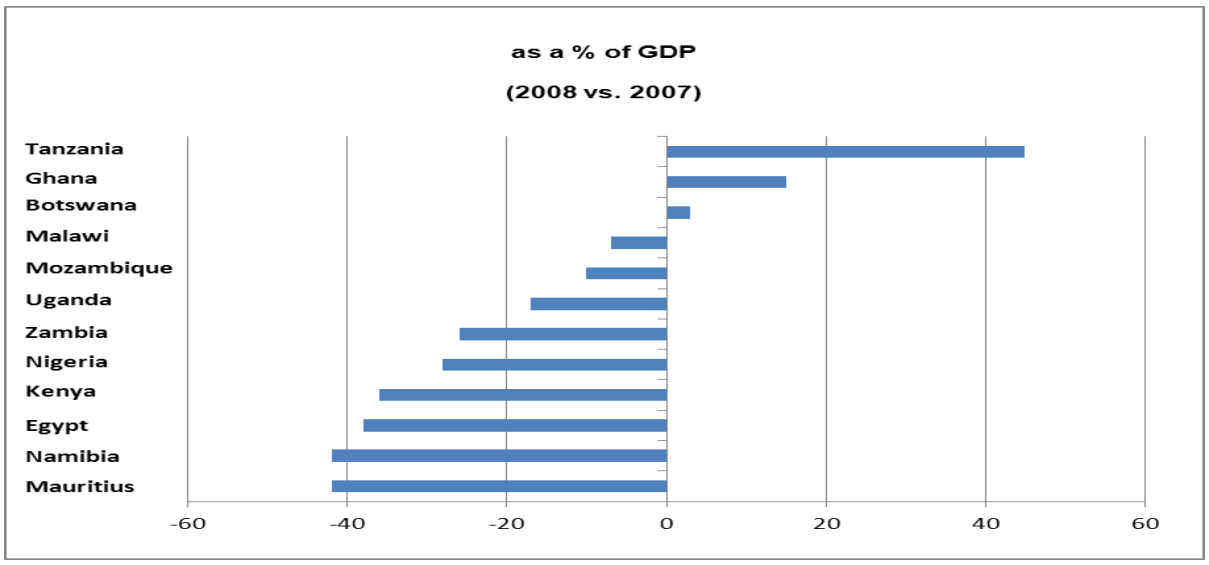
	2004	2005	2006	2007	2008	2009 March
Capital adequacy:						
Regulatory capital ratio	13.9	16.2	15.8	14.8	13.8	14.6
Regulatory tier1 capital ratio	64.2	71.6	15.0	13.6	12.8	13.3
Asset quality:						
Nonperforming loans to total gross loans	16.3	13.0	7.9	6.4	7.7	9.6
Credit to total assets	44.0	48.7	45.0	50.3	52.3	54.0
Loan loss provision to total gross loans	13.8	8.5	7.4	5.5	6.3	7.6
Earning and profitability:						
Return on assets before taxes (average)	5.8	4.6	4.8	3.7	3.2	3.4
Return on equity before taxes (average)	33.7	32.6	39.6	35.8	23.7	21.6
Interest margin to gross income	62.9	64.0	51.8	46.1	41.3	37.9
Interest spread	20.3	19.3	18.3	18.3	20.8	23.9
Liquidity:						
Core liquid assets to total assets ratio	25.4	20.7	23.5	23.4	25.2	22.6
Broad liquid assets to total assets ratio	53.5	47.0	46.3	40.7	39.4	37.3
Core liquid assets to short-term liabilities ratio	34.6	42.8	31.4	31.0	33.5	29.7
Broad liquid assets to short-term liabilities ratio	72.8	97.4	61.9	54.1	52.4	49.1
Exposure to foreign exchange risk:						
Share of foreign currency deposits in total deposits	29.3	26.3	28.1	22.3	28.4	30.3
Share of foreign liabilities in total liabilities	2.8	2.4	4.0	8.1	7.0	6.5

Source: Bank of Ghana

[1]Average lending rate minus average (saving and demand) deposit rate.

Table 2.4

Selected African Markets: Losses in Market Capitalisation



Source: Adapted from African Securities Exchange Association (ASEA) Yearbook 2008.

Table 2.5

Kenya's Real GDP Growth, 2002-2009

Year	2002	2003	2004	2005	2006	2007	2008	2009
	(Annual percentage change)%							
Real GDP	0.5	2.9	5.1	5.7	6.1	6.9	1.7	2.7

Source: World Development Indicators - Banking Sector Stability, Efficiency and Outreach in Kenya.

Table 2.6

Net FDI flows to Kenya, 2000-2008

Year	Net FDI (US$m)	FDI stock (US$m)	Net FDI/GDP (%)	Net FDI/gross fixed investment (%)	FDI stock/GDP (%)
2000	111	931	1.05	6.84	8.82
2001	5	937	0.04	0.31	8.34
2002	21	964	0.17	1.03	7.66
2003	80	1046	0.58	3.27	7.54
2004	42	1092	0.29	1.50	7.61
2005	11	1113	0.07	0.33	6.86
2006	27	1164	0.15	0.64	6.47
2007	692	1892	2.34	12.70	6.4
2008	52	1988	0.17	0.80	6.8

Source: UNCTAD FDI database.

Table 2.7

Ratio of Kenya's

NPLs to Kenya's Assets, 1999–2008 in percentages

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
NPLs/total assets (%)	19.98	23.27	20.67	16.14	13.92	12.07	10.56	8.49	4.29	4.02
Provisions and interest in suspense/NPLs (%)	52.98	59.90	58.06	52.85	67.97	62.33	111.65	117.57	91.49	55.84

Sources: Oloo (2007; 2008; 2009).

Table 2.8

Kenya Financial Soundness Indicators of the Banking Sector

	Dec-07	Dec-08	Jun-09	Dec-09	Jun-10	Sep-10
	(Percent unless otherwise indicated)					
Capital adequacy:						
Regulatory capital to risk-weighted assets	18.0	18.9	19.8	19.5	19.6	20.6
Regulatory Tier 1 capital to risk-weighted assets	16.8	16.9	17.6	17.2	17.5	18.6
Total capital to total assets	12.0	12.6	13.0	12.7	14.0	12.8
Asset quality:						
Nonperforming loans to total gross loans	10.6	9.0	9.0	7.9	7.4	7.0
Nonperforming loans net of provisions to capital	12.8	11.3	12.4	12.6	10.0	8.0
Earning assets to total assets	79.4	88.6	88.1	85.0	85.1	88.7
Earning and profitability:						
Return on assets	3.0	2.8	3.1	2.9	3.5	3.4
Return on equity	27.5	25.2	28.5	24.8	31.4	31.3
Interest margin to gross income	34.6	34.9	35.6	35.6	33.2	33.7
Noninterest expenses to gross income	50.6	51.7	49.1	50.8	47.1	49.2
Liquidity:						
Liquid assets to total assets	37.5	36.4	35.0	35.9	39.7	39.9
Liquid assets to short-term liabilities	40.0	37.0	40.6	39.8	45.1	46.7
Liquid assets to total deposits	47.4	46.4	45.7	46.3	50.4	51.5
Total loans to total deposits	71.3	73.3	75.7	72.4	68.0	69.2
Sensitivity to market risk						
Net open position in foreign exchange to capital	...	5.6	6.1	4.9	4.9	4.8
Interest bearing assets to interest bearing liabilities	100.5	113.0	114.4	113.2	111.6	114.4
FX currency denominated assets to total assets	8.7	9.7	9.9	8.1	10.1	9.7
FX currency denominated liabilities to total liabilities	16.3	20.2	17.6	18.1	16.3	17.1
Spread between lending and deposit rate	7.5	7.8	8.8	8.7	9.4	9.3
Total expenses to gross income	68.9	72.0	70.0	71.4	65.6	66.1

Source: Central Bank of Kenya: See IMF Article *Request for a Three-Year Arrangement under the Extended Credit Facility* p.30 Table 5.

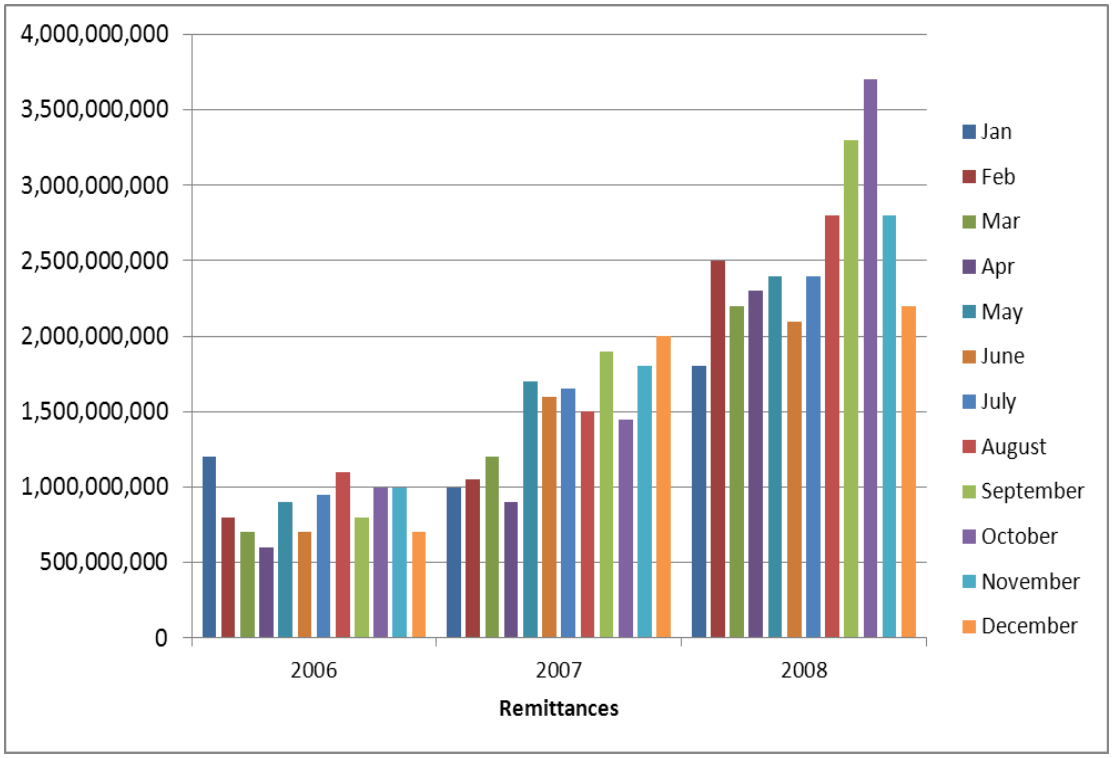
Table 2.9

Total GDP figures for Nigeria from 2003 to 2009

Year	2003	2004	2005	2006	2007	2008	2009
	(Annualised percentage change) %						
Total GDP	9.57%	6.58%	6.51%	6.03% (5.63%)	6.22% (7.64%)	6.8% 6.3	?? 3.0

Source: CBN (2008a).

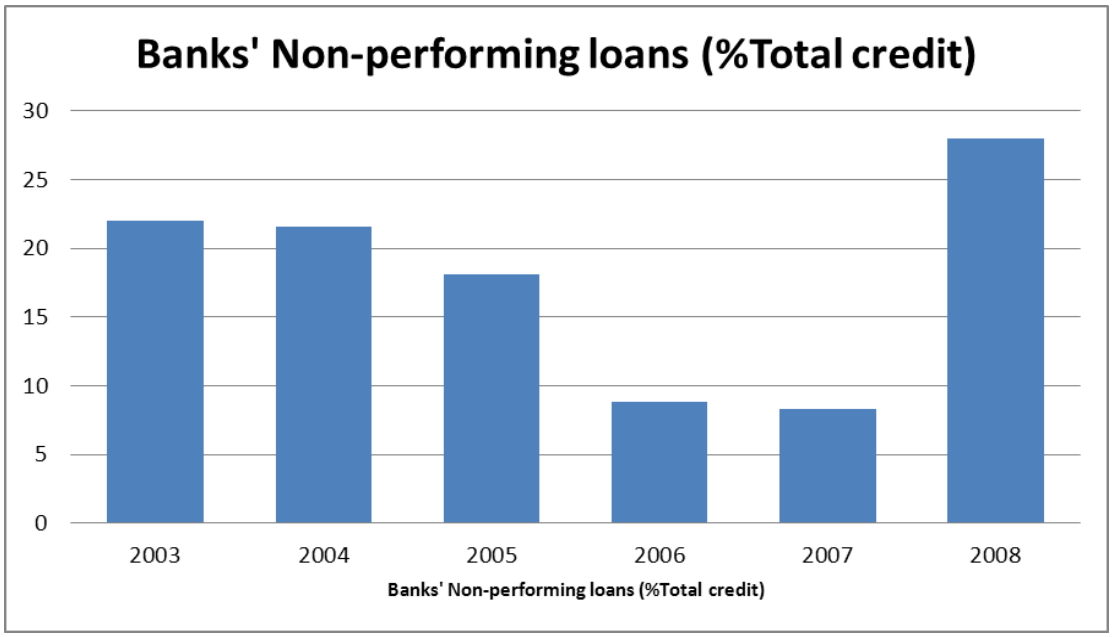
Table 2.10 Monthly Remittances to Nigeria, 2006-2008 (naira)



Te Velde: The Global Financial Crisis and Developing Countries Working Paper 306 2009.

Table 2.11

NIGERIA NPLs, 2003-2008
(% of commercial bank loans)



Note: *Indicates estimated value based on the amount of margin loan swept by the crash in the capital market. The total margin loan (N1 trillion), represents 20% of total credit. If the crisis continues, most of the loans will enter the NPL profile. *Source*: CBN (2008a).

Table 2.12

Nigeria Financial Soundness Indicators, 2006-09

(In percent, unless otherwise indicated)

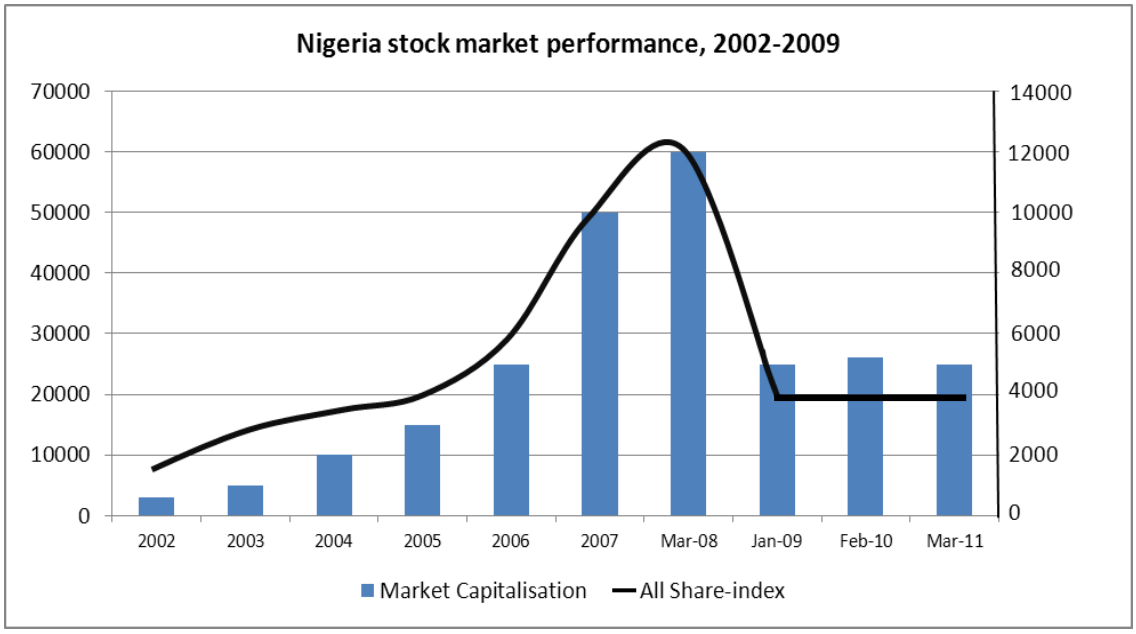
	2006	2007	2008	2009 March *
Capital Adequacy:				
Regulatory capital to risk-weighted assets	22.6	21.0	21.9	21.5
Regulatory Tier1 capital to risk-weighted assets	21.8	20.2	21.5	21.2
Capital (net worth) to assets	14.7	16.3	18.0	18.4
Asset quality and composition:				
Non-performing loans to total gross loans	8.8	8.4	6.3	6.6
Non-performing loans net of loan-loss provision to capital	21.3	22.7	16.8	5.5
Sectoral distribution of loans to total loans				
Manufacturing	16.9	11.1	13.1	12.9
Trade and Services	22.0	15.3	16.6	22.4
Energy and Minerals	10.1	10.7	11.4	11.1
Agriculture	2.3	3.3	1.4	1.5
Construction and Property	6.2	6.3	6.3	6.9
Government	7.6	5.3	2.4	3.1
Other	35.0	48.2	48.7	34.4
Earnings and profitability:				
Return on assets	1.6	2.1	4.0	1.8
Return on equity	10.4	13.1	22.0	10.0
Interest margin to gross income	39.6	40.8	39.4	39.8
Non-interest expenses to gross income	52.7	46.0	43.1	45.5
Personnel expenses to non-interest expenses	42.7	44.2	42.1	44.3
Trading and fee income to total income	33.3	30.0	12.9	13.1
Liquidity:				
Liquid assets to total assets	32.5	32.1	28.1	20.4
Liquid assets to total deposits	63.7	62.6	54.2	38.4
Liquid assets to short-term liabilities	..	..	..	36.8
Customer deposit to total (non-interbank) loans	73.7	85.8	117.4	116.3
Foreign currency denominated liabilities to total liabilities	12.5	5.7	6.6	7.1

Source: CBN 2009.

*/ Reflects bank data available prior to the special audits of bank balance sheets by the central bank.

Table 2.13

Nigeria Stock Market Performance 2002-2009



Source: See Figure 2 in Te Velde *The global financial crisis and developing countries* Working Paper 306 p3 June 2009 ODI.

Table 2.14

South Africa Growth Rates

Year	2003	2004	2005	2006	2007	2008	2009
	(Annualised percentage change) %						
Real GDP	3.1	4.9	5.0	5.4	5.1	3.1	3.7

Source: Extracted from: South African Reserve Bank (SARB): IMF, International Financial Statistics

Table 2.15

The losses of South African Stock Markets in comparison to the other Emerging Countries

EMERGING COUNTRY	INDEX NAME	INDEX CODE	BENCHMARK 31/7/2008	VALUE AT END WEEK 12/2/2009	LOSSES DURING FINANCIAL CRISIS
SOUTH AFRICA	All Share Index	JALSH	27552.65	20650.38	-25.05
BRIC					
BRAZIL	Bovespa Index	IBOVESPA	59505.00	41674.00	-29.97
RUSSIA	RTS Index	RTSI	1966.68	624.21	-68.26
INDIA	BSE SENSEX 30	BSESN	14355.75	9634.74	-32.89
CHINA	Shanghai Composite	SHANGHAI COMPOSIT	2775.72	2320.79	-16.39

Source: *'Financial Crisis: Implications for Africa's Financial System'*. By Victor Murinde, Birmingham Business School, University of Birmingham 2009, p22. Extracted from Table 4, p22.

Table 2.16

South Africa's Financial Soundness Indicators, 2002-2007

	2002	2003	2004	2005	2006	2007
	(Percent unless otherwise indicated)					
Capital adequacy:						
Regulatory capital to risk assets(a)	12.6	12.4	14.0	12.7	12.3	12.8
Regulatory Tier 1 capital to risk-weighted assets(a)	8.7	8.9	10.5	9.7	9.0	9.5
Asset quality:						
Non-performing loans to total gross loans(b)	2.9	2.4	1.8	1.5	1.1	1.4
Non-performing loans net of provisions to capital(b)	13.2	8.5	6.2	6.4	5.6	8.2
Share of mortgage advances in domestic private Credit(c)	40.7	39.6	43.3	46.2	47.7	48.9
Earning and profitability:						
Return on assets (average)	0.4	0.8	1.3	1.2	1.4	1.4
Return on equity (average)	5.4	11.6	16.2	15.2	18.3	18.1
Interest margin to gross income	52.3	38.3	41.6	38.2	43.8	58.5
Non-interest expenses to gross income	60.4	74.8	68.5	61.5	48.5	48.9
Liquidity:						
Liquid assets to total assets	4.7	4.7	4.7	4.8	4.6	4.6
Share of short-term deposits in total deposits	47.9	45.7	43.7	43.5	42.8	42.5
Exposure to FX risk:						
Maximum effective net open FX position to capital	3.6	1.3	0.8	1.9	1.4	0.7
Share of foreign currency loans in total lending	13.6	11.9	10.9	11.1	11.4	9.3
Share of foreign currency deposits in total deposits(d)	4.4	2.7	2.7	2.7	3.3	3.0
Share of foreign liabilities in total liabilities(e)	6.3	3.8	4.0	4.2	5.3	6.0

South African Reserve Bank.

Taken and replicated from FSAP Report Oct 2008. IMF Country Report No: 08/349.

a. Total (banking and trading book).

b. The official definition of non-performing loans comprises doubtful and loss loans. Doubtful loans are loans overdue for 180 days unless well secured, or with a timely realisation of collateral.

c. Domestic private credit not seasonally adjusted.

d. Foreign funding to total funding.

e. Foreign funding to total liabilities.

Appendix 3

Table 3.1

Extent of Basel 2 implementation in respondent banks

	Full Implementation	Partial Implementation	No Implementation
Ghana	3	7	6
Kenya	0	4	2

Source: Author's analysis of questionnaire.

Table 3.2

Type of risk methodology used by respondent banks

	Standardised Approach (SA)	Internal Ratings Based Approach (IRB)	Not Applicable (N/A)/No Response
Ghana	13	2	1
Kenya	3	3	0

Source: Author's analysis of questionnaire.

Table 3.3

Accounting methods used by respondent banks

	IFRS	GAAP	OTHER
Ghana	16	0	0
Kenya	4	1	1

Source: Author's analysis of questionnaire.

Appendix 4

Table 4.1

Risk weights by category of on-balance sheet asset	
0%	(i) Cash[a]. (ii) Claims on central governments and central banks in national currency and funded in that currency. (iii) Other claims on OECD[b] central governments[c] and central banks. (iv) Claims collateralised by each of OECD central government, securities[c] or guaranteed by OECD central governments.[d]
0, 10, 20, or 50%	(i) Claims on domestic public-sector entities, excluding central government, and loans guaranteed by or collateralised by securities issued by such entities[d].
(at national discretion) 20%	(i) Claims on multilateral development banks (IBRD, IADB, AsDB, AfDB, EIB, EBRD) [e]. (ii) Claims on banks incorporated in the OECD and claims guaranteed[d] by OECD incorporated banks. (iii) Claims on securities firms incorporated in the OECD subject to comparable supervisory and regulatory arrangements, including in particular risk-based capital requirements[f], and claims guaranteed by these securities firms. (iv) Claims on banks incorporated in countries outside the OECD with a residual maturity of up to one year and claims with a residual maturity of up to one year guaranteed by banks incorporated in countries outside the OECD. (v) Claims on non-domestic OECD public-sector entities, excluding central government, and claims guaranteed by or collateralised by securities issued by such entities[d]. (vi) Cash items in process of collection.
50%	(i) Loans fully secured by mortgage on residential property that is or will be occupied by the borrower or that is rented.

*Taken from the 1988 Basel Capital Accord i.e. International Convergence of Capital Measurement and Capital Standards, Annex 2 [p17-18] (July 1988, updated to April 1998).

Table 4.1 *continued*

Risk weights by category of on-balance sheet asset		
100%	(i)	Claims on the private sector.
	(ii)	Claims on banks incorporated outside the OECD with a residual maturity of over one year.
	(iii)	Claims on central governments outside the OECD (unless denominated in national currency – and funded in that currency – see above).
	(iv)	Claims on commercial companies owned by the public sector.
100%	(v)	Premises, plant and equipment and other fixed assets.
	(vi)	Real estate and other investments (including non-consolidated investment participations in other companies).
	(vii)	Capital instruments issued by other banks (unless deducted from capital).
	(viii)	All other assets.

a. Includes (at national discretion) gold bullion held in own vaults or on an allocated basis to the extent backed by bullion liabilities.

b. For the purpose of this exercise, the OECD group comprises countries which are full members of the OECD (or which have concluded special lending arrangements with the IMF associated with the Fund's General Arrangements to Borrow), but excludes any country within this group which has rescheduled its external sovereign debt in the previous five years.

c. Some member countries intend to apply weights to securities issued by OECD central governments to take account of investment risk. These weights would, for example, be 10% for all securities or 10% for those maturing in up to one year and 20% for those maturing in over one year.

d. Commercial claims partially guaranteed by these bodies will attract equivalent low weights on that part of the loan which is fully covered. Similarly, claims partially collateralised by cash, or by securities issued by OECD central governments, OECD non-central government public-sector entities, or multilateral development banks will attract low weights on that part of the loan which is fully covered.

e. Claims on other multilateral development banks in which G-10 countries are shareholding members may, at national discretion, also attract a 20% weight.

f. i.e. Capital requirements that are comparable to those applied to banks in this Accord and its Amendment to incorporate market risks. Implicit in the meaning of the word "comparable" is that the securities firm (but not necessarily its parent) is subject to consolidated regulation and supervision with respect to any downstream affiliates.

Table 4.2[824] **TYPES OF INSTRUMENTS AND CCF**

Instruments		Credit conversion factors (CCF)
(1)	Direct credit substitutes, e.g. general guarantees of indebtedness (including standby letters of credit) and acceptances.	100%
(2)	Transaction – related contingent items (e.g. performance bonds, bid bonds, warranties and standby letters of credit related to particular transactions).	50%
(3)	Short-term self-liquidating trade-related contingencies (i.e. documentary credits).	20%
(4)	Sale and repurchase agreements and asset sales where the credit risk remains with the bank.	100%
(5)	Forward asset purchases, forward deposits and partly-paid shares and securities.	100%
(6)	Note issuance facilities and revolving underwriting facilities.	50%
(7)	Other commitments (e.g. formal standby facilities and credit lines) with an original maturity of over one year.	50%
(8)	Similar commitments with an original maturity of up to one year, or which can be unconditionally cancelled at any time.	0%

[824] Taken from the 1988 Basel Capital Accord *International Convergence of Capital Measurement and Capital Standards* Annex 3 [p19-20] (July 1988, updated to April 1998).

Table 4.3

CHARACTERISTICS OF BASEL 2 BANK REGULATORY CAPITAL[825]

	TIER 1 (50% of Regulatory Capital) (Core Capital)	**TIER 2** (Supplementary Capital)	**TIER 3** (Ancillary Capital)
Components:	Capital or Hybrid Capital Instruments.	**Upper Tier 2** (At least 50% of Tier 2 capital). e.g. Quasi-capital or Hybrid capital.	**(Applicable for Trading Book only)** e.g. Repayable subordinated debt of more than 2 years.
Characteristics:	Subordinated, Perpetual and Non-cumulative.	Subordinated, Perpetual and cumulative.	
Examples:	(i) Ordinary Share Capital; (ii) Perpetual non-cumulative preference shares; and (iii) Retained Earnings.	(i) Cumulative subordinated debt instrument (perpetual in nature); (ii) Cumulative preference shares (perpetual in nature); and (iii) General provisions/Revaluation reserves.	
		Lower Tier 2 (Subject to a maximum of 50% of Tier 2 capital).	
Components:		(i) Quasi-capital or Hybrid capital.	
Characteristics:		Redeemable capital instruments.	
Example:		(i) Dated cumulative preference shares; and (ii) Repayable subordinated debt of more than 5 years.	

[825] Extracted from Table 1 of Andrew McKnight, 'Basel 2: the implementation in the UK of its capital requirement for banks' (2007) Law and Financial Markets Review Vol 1(4): 327, 329.

Table 4.4 **CAPITAL ALLOCATION UNDR BASEL 2**

<table>
<tr><th>TIER 1 CAPITAL</th><th>TIER 2 CAPITAL</th><th>TIER 3 CAPITAL</th></tr>
<tr><td>15% INNOVATIVE TIER CAPITAL*</td><td rowspan="2">50% UPPER TIER 2 CAPITAL</td><td rowspan="3">TIER 3 CAPITAL</td></tr>
<tr><td>CORE TIER 1</td></tr>
<tr><td>ADDITIONAL TIER 1 CAPITAL</td><td>50% LOWER TIER 2 CAPITAL</td></tr>
</table>

***** Allocation of capital towards innovative tier 1 capital amounted to 15% of the entire Tier 1 capital. Source: Author's deductions.

Table 4.5 **RISK WEIGHTS AND CORRESPONDING CREDIT ASSESSMENTS FOR SOVEREIGN EXPOSURE**

Credit assessment	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	Below B-	Unrated
Risk Weight	0%	20%	50%	100%	150%	100%

See *The New Basel Capital Accord: A Guide to the Main Provisions* p12 3rd Edition September 2004, Slaughter & May LLP.

Table 4.6 **RISK WEIGHTS AND CORRESPONDING EXPORT CREDIT AGENCY RISK SCORE**

ECA risk score	0-1	2	3	4 to 6	7
Risk Weight	0%	20%	50%	100%	150%

See *The New Basel Capital Accord: A Guide to the Main Provisions* p13 3rd Edition September 2004, Slaughter & May LLP.

Table 4.7 RISK WEIGHTS AND CORRESPONDING SOVEREIGN CREDIT ASSESSMENT

Credit assessment of Sovereign	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	Below B-	Unrated
Risk Weight	20%	50%	100%	100%	150%	100%

See *The New Basel Capital Accord: A Guide to the Main Provisions* p13, 3rd Edition September 2004, Slaughter & May LLP.

Table 4.8 PREFERENTIAL RISK WEIGHTS ACCORDED TO INDIVIDUAL BANKS WHERE A SHORT-TERM CLAIM EXISTS

Credit assessment of banks	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	Below B-	Unrated
Risk Weight	20%	50%	50%	100%	150%	50%
Short-term claims	20%	20%	20%	50%	150%	20%

See *The New Basel Capital Accord: A Guide to the Main Provisions* p14, 3rd Edition September 2004, Slaughter & May LLP.

Table 4.9 RISK WEIGHTS AND CORRESPONDING CREDIT ASSESSMENT FOR CORPORATES

Credit assessment	AAA+ to AA-	A+ to A-	BBB+ to BB-	Below BB-	Unrated
Risk Weight	20%	50%	100%	150%	100% unless the home country's rating is worse

See *The New Basel Capital Accord: A Guide to the Main Provisions* p14 3rd Edition September 2004, Slaughter & May LLP.

Appendix 5

Table 5.1

Transition Period – Phase-in Arrangements

(shading indicates transition periods – all dates are as of 1 January)

	2011	2012	2013	2014	2015	2016	2017	2018	As of 1 January 2019
Leverage Ratio	Supervisory monitoring		Parallel run 1 Jan 2013 – 1 Jan 2017 Disclosure starts 1 Jan 2015					Migration to Pillar 1	
Minimum Common Equity Capital Ratio			3.5%	4.0%	4.5%	4.5%	4.5%	4.5%	4.5 %
Capital Conservation Buffer						0.625%	1.25%	1.875%	2.50%
Minimum common equity plus capital conservation buffer			3.5%	4.0%	4.5%	5.125%	5.75%	6.375%	7.0%
Phase-in of deductions from CET 1 (including amounts exceeding the limit for DTAs, MSRs and financials)				20%	40%	60%	80%	100%	100%
Minimum Tier 1 Capital			4.5%	5.5%	6.0%	6.0%	6.0%	6.0%	6.0%
Minimum Total Capital			8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
Minimum Total Capital plus conservation buffer			8.0%	8.0%	8.0%	8.625%	9.25%	9.875%	10.5%
Capital instruments that no longer qualify as non-core Tier 1 capital or Tier 2 capital									
Liquidity coverage ratio	Observation period begins				Introduce minimum standard				
Net stable funding ratio	Observation period begins							Introduce minimum standard	

Source: Taken from *Basel 3: A Global Regulatory framework for more resilient banks and banking systems* Annex 4 p69, (December 2010 (rev June 2011)).

Appendix 6

QUESTIONNAIRE

1. Please tick the appropriate range below that best describes your bank's total assets. (i.e. individual assets and not group assets).

- Less than $100 million dollars ☐
- Between $101 million dollars and $150 million dollars ☐
- Between $151 million dollars and $200 million dollars ☐
- Between $201 million dollars and $300 million dollars ☐
- Between $301 million dollars and $400 million dollars ☐
- Between $401 million dollars and $500 million dollars ☐
- More than $500 million dollars but less than $1 billion dollars ☐
- More than $1 billion dollars ☐

2. Does your bank have any investments in another 'entity'[826]? If the answer is 'no', go straight to question 5. **Yes** ☐ **No** ☐

3. If you have ticked 'yes' to question 2, is the investment more or less than 10% of the common shares in that entity? **More** ☐ **Less** ☐

4. If you have ticked 'yes' to the question above, were the common shares in that entity issued by your bank? **Yes** ☐ **No** ☐

[826] Entity refers to another financial institution or insurance company.

5. What is the minimum capital adequacy ratio for banks in your jurisdiction, i.e. as stated by the Central Bank in the jurisdiction in which your bank is located?

   ……

   ……

   ……

6. What is the actual capital adequacy ratio of your bank?

   ……

   ……

   ……

7. Please number the following according to what you consider to be potential threats to the financial stability of banks in your jurisdiction, starting with the one that poses the most significant risk as '1', to the one that poses the least significant risk to your bank as '10'.

Market Risk	Credit Risk
Liquidity Risk	Operational Risk
Non-performing Loans	Inflation
Foreign Exchange Fluctuations	Political Instability
Lack of Corporate Governance	Other – [Please state]

8. What proportion of the capital does your bank allocate to each of the risks listed in **Question 10** in a financial year (Nearest estimate if possible).

Type of Risk	**Percentage of Capital allocation %**
Credit Risk	
Market Risk	
Liquidity Risk	
Operational Risk	
Non-Performing Loans	
Inflation	
Foreign Exchange Fluctuation	
Lack of Corporate Governance	
Political Instability	
Other	

9. Which of the following risk methodologies below does your bank use in assessing Risk? (Please **tick** more than one if applicable).

Risk Methodology

Standardised Approach (SA) ☐

Internal Ratings-Based (IRB) ☐

Advanced (IRB) ☐

10. Does your bank engage in Universal Banking? i.e. provides other services other than retail banking such as insurance services and investment services? **Yes** ☐ **No** ☐

11. Which items does your bank class as **'capital'** for the purposes of calculation of capital adequacy ratio?

……

……

……

……

……

……

12. What accounting method does your bank use in the reporting of its financial statements? Please tick below.

GAAP ☐ **IFRS** ☐ **OTHER** ☐ (Please Specify)

13. Apart from allocation of capital by your bank to identifiable or foreseeable and probably unforeseen risks, are there other means by which your bank absorbs very large losses? **Yes** ☐ **No** ☐

If **yes**, please explain how your bank absorbs large losses:

……

……

……

14. Are there any bank insolvency regulations or procedures that your bank and other banks in your jurisdiction are subject to should your bank fail? **Yes** ☐ **No** ☐

……

15. If **yes**, please name the regulation(s).

……

16. Please provide in monetary terms the value of cross-border transactions undertaken by your bank with other African banks other than branches/subsidiaries from 2005 till 2012.

Year	**Value of Transactions ($US millions)**
2005	
2006	
2007	
2008	
2009	
2010	
2011	
2012	

17. Banking today has become a global phenomenon, but are the various attempts by global banking regulatory bodies such as Basel Committee on Banking Supervision (BCBS) towards the international convergence of capital adequacy requirements desirable? **Yes** ☐ **No** ☐

Please explain:

……

……

……

……

18. Has your bank already implemented BASEL 2?

Yes (In full) ☐ **Yes (In part)** ☐ **No** ☐

If you have selected the second or third option as your answer, could you please explain?

……
……
……
……

19. What is your rating of the level of awareness low; medium; high; of BASEL 3 within your bank prior to the receipt of this Questionnaire and its accompanying documents?

……

20. Using a 5-point scale, where '5' means you 'strongly agree' and '1' means you 'strongly disagree', please indicate your level of agreement in the statement: 'BASEL 3 is and will be relevant to/for African Banks'?

[Strongly Agree] ☐ **[Strongly Disagree]** ☐ **[Don't Know]** ☐

5 4 3 2 1 Don't know

(Please circle the number most appropriate to you. If you don't know, please tick the box provided.)

Please explain your choice as best you can ……..
……
……
……
……

21. BASEL 3 introduces an increased capital adequacy requirement. Do you think your bank would benefit from this new capital adequacy requirement? **Yes** ☐ **No** ☐

Please explain:
……
……
……
……

22. Are you in favour of an implementation of BASEL 3 in your jurisdiction? **Yes** ☐ **No** ☐

Please explain:

……
……
……
……

23. In your opinion will BASEL 3 prevent a future global financial crisis? **Yes** ☐ **No** ☐

Please state your reason:

……
……
……
……

24. With the exception of banks in South Africa (that begin the implementation of BASEL 3) from January 1 2013, in accordance to the timetable set by the Basel Committee on Banking Supervision, do you think that a future implementation of BASEL 3 in your jurisdiction is inevitable? **Yes** ☐ **No** ☐

Please explain:

……
……
……
……

25. Which implications do you think the implementation of BASEL 3 by the members of the G20 and in Europe will have on large banks (or banks) in your jurisdiction regardless of whether or not the central bank in your jurisdiction implement it or makes it a requirement for your bank to implement it? **Yes** ☐ **No** ☐

Please explain:

……
……
……
……

BIBLIOGRAPHY

Books

Barfield R. et al *A Practitioner's Guide to Basel III and Beyond* Thomson Reuters UK Limited 1st Edition 2011.

Berman P.S, *Global Legal Pluralism: A Jurisprudence of Law Beyond Borders* Cambridge University Press 1st Edition 2012.

Busch A, *Banking Regulation and Globalisation* Oxford University Press 1st Edition 2009.

Chorafas D. N, *Basel III, the Devil and Global Banking* Palgrave Macmillan 1st Edition 2012.

Crosse H.D, Hamsel G.H, *Management Policies for Commercial Banks Bankers* Publishing Company, Boston 1980.

Gleeson S, *International Regulation of Banking: Basel II: Capital and Risk Requirements* Oxford University Press 1st Edition 2010.

Gleeson S, *International Regulation of Banking: Capital and Risk Requirements* Oxford University Press 2nd Edition 2012.

Haas M, Kaiser T, *Tackling the inefficiency of loss data for the quantification of operational loss* in Cruz M, (ed) *Operational Risk Modelling and Analysis: Theory and Practice* 2004 Risk Books London.

Hoflich P, *Banks at Risk: Global Best Practices in an Age of Turbulence* John Wiley & Sons Ltd 1st Edition 2011.

Hubner R, Laycock M, Peemoller E, *Managing Operational Risk* in: Mestchian P, (ed) *Advances in Operational Risk: Firm-wide Issues for Financial Institutions* 2003 Risk Books London.

Murinde V. et al, *Bank Regulatory Reforms in Africa* Palgrave Macmillan 1st Edition 2012.

Peccia A, *Operational Risk Ratings Model Approach to Better Measurement and Management of Operational Risk* in Ong K (ed) *The Basel Handbook* Risk Books London 2004.

Schooner H.M, Taylor M. W, *Global Bank Regulation: Principles and Policies* 1st edition Academic Press 2010.

Scott H.S, et al *Capital Adequacy Beyond Basel: Banking, Securities and Insurance* Oxford University Press 2005.

Wolf, M, Fixing Global Finance 1st Edition (John Hopkins University Press U.S.A. 2008).

Journals

Acharya V, *Is the International Convergence of Capital Adequacy Regulation Desirable?* The Journal of Finance Volume LVIII No.6 December 2003.

Alexander K, *Rebuilding International Financial Regulations* Journal of International Banking and Finance Law (2011) 8 JIBFL 489.

Arner DW, 'The Global Credit Crisis of 2008: Causes and Consequences' [2009], The International Lawyer Vol 43, 92.

Arnold B, et al *Systemic risk, macro-prudential policy frameworks, monitoring financial systems and the evolution of capital adequacy* Journal of Banking and Finance 36 (2012) pp3125-3132.

Avgouleas E, *Rationales and Designs to Implement an Institutional Big Bang in the Governance of Global Finance* Seattle University Law Review 2012 Vol 36 321.

Beale L, *In the Wake of Financial Crisis* Current Developments in Monetary and Financial Law Volume 5 2010 IMF.

Blundell-Wignall A, Atkinson P, *Thinking Beyond Basel 3: Necessary Solutions for Capital and Liquidity* OECD Journal: Financial Markets Trends Issue 1 Volume 2010.

Brummer C, *Why Soft Law dominates International Finance – and not Trade* Journal of International Economic Law [2010] Vol 13(3) 623.

Ciro T, Longo M, *The Global Financial Crisis: Causes and Implications for future regulation,* Journal of International Banking Law and Regulation Volume 25(1) 2010.

Coskun D, *Credit-rating agencies in the Basel 2 Framework: Why the standardised approach is inadequate for regulatory capital purposes* Journal of International Banking Law and Regulation 25(4) 2010.

Del Vecchio G, *Science of universal comparative law* [1910] 1915 in Kocourek A, Wigmore J (ed) *Primitive and Ancient Legal Institutions* Boston Little Brown.

Diamond D, Dybvig P, *Bank Runs, Deposit Insurance and Liquidity* Journal of Political Economy 1983.

Ho D, *Compliance and International Soft Law: Why do countries implement the Basel Accord* Journal of International Economic Law no3 pp647-688 2002.

Jobst A, *The Treatment of Operational Risk under the New Basel Framework: Critical Issues* Journal of Banking Regulation 8.4 pp316-352 August 2007.

Kasekende L, Brixova Z, Ndikumana L, *Africa: Africa's Counter-Cyclical Policy Responses to the Crisis* Journal of Globalisation and Development Volume 1 Issue 1 Article 16 2010.

Kasekende L, Bagyenda J and Brownbridge M, *Basel 3 and The Global Reform of Financial Regulation: How should Africa Respond? A Bank Regulator's Perspective*, 2012 Global Economy Journal Volume 12 pp1-34.

Keefe B, Pfleiderer A, *Basel 3: What it means for the Global Banking System* Banking & Finance Law Review 27(3) No 3 B.F.L.R March 2012.

Kithinji A, Waweru NM, *Merger Restructuring and Financial Performances of Commercial Banks in Kenya* Economic Management and Financial Markets Journal Vol 2(4), 9-39.

Lamy M, *The Treatment of Credit Risk in the Basel Accord and Financial Stability* International Journal of Business Vol 11(2) 2006.

Lastra R, *Risk-based capital requirements and their impact upon the banking industry: Basel II and CAD III* Journals of Financial Regulation and Compliance 12.3 August 2004.

Lastra R, *Northern Rock, UK Bank Insolvency and Cross-Border Insolvency* Journal of Banking Regulation Volume 9 No. 3 2008.

Lastra R, Woods G, *The Crisis of 2007-09: Nature, Causes and Reactions* Journal of International Economic Law 13.3 2010 531 1 September 2010.

Macchiarola M, *Beware of Risk Everywhere: An Important Lesson from the Current Credit Crisis* 5 Hastings Bus. L.J. pp294-297 2009.

McKnight A, *Basel 2: The implementation in the UK of its capital requirements for banks* Law and Financial Markets Review LFMR 2007 1(4) 327-339 1 July 2007.

Mezui C, Nalletamby S, Hugues K, *African Systemic Financial Crisis* African Economic Brief Volume 3 Issue 9 August 2012 AfDB.

Miele M, Sales E, *The Financial Crisis and Regulation Reform* Journal of Banking Regulation 12.4 September 2011, 277-307.

Milne A, Wood A, *Shattered on the Rock? British Financial Stability from 1866 to 2007,* Journal of Banking Regulation Volume 10(2), 89 2009.

Moosa I, *A Critique of the Advanced Measurement Approach to Regulatory Capital against Operational Risk* Journal of Banking Regulation 9.3 May 2008.

Moosa I, *Basel 2 as a casualty of the global financial crisis*. Journal of Banking Regulation Volume II, 2 pp95-114.

Nichols M, Henderickson J, Griffith K, *Was the Financial Crisis the Result of Ineffective Policy and Too much Regulation? An Empirical Investigation* Journal of Banking Regulation 12(3) pp236-251 2011.

Ojo M, *Risk Management by the Basel Committee – Evaluating progress made from the 1988 Basel Accord to recent developments* Journal of Financial Regulation & Compliance 18(4) pp 305-315 2010.

Peihani M, *The Global Financial Crisis of 2008: An Analysis of Contributing Trends, Policies and Failures* Banking & Finance Law Review 27(3) B.F.L.R pp465-493 2012.

Persaud A, *Basel 3: A Welcome start but much more to be done* Journal of International Banking and Financial Law (2010) Vol II 650

Salami I, *Banking Harmonisation in the African Context* Journal of Banking Regulation Volume 9, 3 2008 pp187-195.

Salami I, *The Effect of the Financial Crisis on the Nigerian Capital Market: A Proper Regulatory Response* Journal of International Banking Law and Regulation Volume 24(12) pp612-618.

Salami I, *The Financial Crisis and a Regional Regulatory Perspective for Emerging Economies in Africa* Journal of International Banking Law and Regulation Volume 25(3) 2010 pp128-139.

Salami I, *International Financial Standards and the application of Basel 3 in Emerging and Frontier Markets* Law and Financial Markets Review Volume 6 Issue 5 pp336-342 September 2012.

Santos J, *Bank Capital Regulation in Contemporary Banking Theory: A Review of the Literature* Financial Markets Institutions & Instruments Volume 10 Issue 2 December 2001.

Schwerter S, *Basel 3's ability to mitigate systemic risk* Journal of Financial Regulation and Compliance 2011 19(4) pp337-354.

Shah A K, *The Dynamics of International Banking Regulation*, Journal of Financial Regulation & Compliance Volume 4(4) 371 1996.

Van Hoeke M, Warrington M, *Legal Cultures, Legal Paradigms and Legal Doctrine: Towards a New Model for Comparative Law* (1998) International and Comparative Law Quarterly 495.

Van Vuuren G, *Basel 3 Countercyclical Capital Rules: Implications for South Africa* [2012] Journal of Economic Law 134 Vol (16) 53.

Wilmarth (Jr) A.E., *The Dark Side of Universal Banking Financial Conglomerates and the Origins of the Sub-prime Financial Crisis* 41 Conn. L Rev. 983 at 985 (2009).

Walker G.A., *Market and Regulatory Balance* Journal of Banking Regulation (2012) 13, 1-3 Editorial.

Walker G.A., *Basel 3 Market and Regulatory compromise* Journal of Banking Regulation 12(2) (March 2011): pp95-99.

Weber R, Darbellay A, *The Regulatory use of Credit Ratings in Bank capital regulations* Journal of Banking Regulation Volume 1 pp 1-16 2008.

Articles/Publications

Ackah CG, Aryeetey EB, Aryeetey E, *Global Financial Crisis Discussion Series* Paper 5: Ghana May 2009.

Adelegan O.J., *The Derivatives Market in South Africa: Lessons for Sub-Saharan African Countries* IMF Working Paper WP/09/196 September 2009.

Adelegan O.J., Radzewicz-Bak *What Determines Bond Market Development in Sub-Saharan Africa?* IMF Working Paper WP/09/213 September 2009.

African Development Bank *Federal Republic of Nigeria: Extension to 2011 of the 2005-2009 Country Strategy Paper* Regional Department West Africa 1 April 2010.

African Development Bank Group Paper *Containing the Impact of the Global Crisis and Paving the way to Recovery in Africa* Capetown 21 February 2010.

Agiwal S, *Regulatory and Economic Capital – Measurement and Management* 18 November 2011.

Ajakaiye O, Fakiyesi T, *Global Financial Crisis Discussion Series* Paper 8: Nigeria May 2009.

Al-Darwish A, Hafeman M, Impavido G, Kemp M, O'Malley P, *Possible Unintended Consequences of Basel 3 and Solvency 2* IMF Working Paper WP/11/187 August 2011.

Alexander C, *Statistical Models of Operational Loss* in (ed) *Operational Risk: Regulation, Analysis and Management,* Prentice-Hall Financial Times, London 2003.

Aryeetey E, *The Global Financial Crisis and Domestic Resource Mobilisation in Africa* African Development Bank Group Working Paper No. 101 July 2009.

Babihuga R, *Macroeconomic and Financial Soundness Indicators: An Empirical Investigation* IMF Working Paper WP/07/115 May 2007.

Bank for International Settlement (BIS) *Basel 2: International Convergence of Capital Measurement and Capital Standards:* A Revised Framework – Comprehensive version, Basel June 2006.

Bank for International Settlement (BIS) *Interpretive Issues with Respect to the Revisions to the Market Risk Framework* 4 July 2011 http:/www.bis.org/publ/bcbs193a.pdf.

Bank for International Settlement (BIS) Paper No. 54 *The South African Reserve Bank, The International Banking Crisis and Domestic Financial Intermediation in Emerging Market Economies: Issues for South Africa* December 2010.

Basel Committee on Banking Supervision *International Convergence of Capital Measurement and Capital Standards (Basel 1)* July 1988 updated to April 1998.

Basel Committee on Banking Supervision *A Global Regulatory Framework for More Resilient Banks and Banking Systems* December 2010 http://www.bis.org/publ/bcbs164.pdf

Basel Committee on Banking Supervision *An International Framework for Liquidity, Risk Measurement, Standards and Monitoring* December 2010 http://www.bis.org/publ/bcbs188.pdf

Basel Committee on Banking Supervision *Basel 3: A global framework for more Resilient Banks and Banking Systems* December 2010 (Revised June 2011) Bank for International Settlements (BIS).

Basel Committee on Banking Supervision *The Proposal to Ensure the Loss Absorbency of Regulatory Capital at the point of Non-Viability* August 2010 http://www.bis.org/publ/bcbs174.pdf

Basel Committee on Banking Supervision *A Framework for dealing with domestic systemically important banks* October 2012 BIS.

Basel Committee on Banking Supervision *The Regulatory Framework: Balancing Risk Sensitivity, Simplicity and Comparability (Discussion Paper)* July 2013.

Basel Committee on Banking Supervision *Report to G20 Leaders on Monitoring Implementation of Basel 3 regulatory reforms* August 2013 (BIS).

Beck T, Cull R, Fuchs M, Getenga J, Gatere P, Randa J, Trandafir M, *Banking Sector Stability, Efficiency and Outreach in Kenya* – Policy Research Working Paper 5442 – The World Bank Development Research Group (Finance and Private Sector Development Team, October 2010).

Berg A, Papageorgiou C, Pattillo C, Schindler M, Spatafora N, Weisfield H, *Global Shocks and their Impact on Low-Income Countries: Lessons from the Global Financial Crisis* IMF Working Paper WP/11/27 February 2011.

Braithwaite T, Nasiripour S, *Fed weighs tighter cap on bank leverage – Move would provide Basel 3 backstop* 1 May 2013.

Bridges J, Gregory D, Nielsen M, Pezzini S, Radia A, Spaltro M, *The Impact of Capital requirements on bank lending* Working Paper No. 486, Bank of England, January 2014.

Burgi-Schmelz A, *Broadening Financial Indicators in the Special Data Dissemination Standard Annex 1 p33* – IMF (Statistics Department) 22 February 2010.

Caggiano G, Calice P, *The Macroeconomic Impact of Higher Capital Ratios on African Economies* AfDb Working Paper Series No 139 November 2011.

Catarineau-Rabell E, Jackson P, Tsomocos D, *Procyclicality and the New Basel Accord: Banks' Choice of Loan Rating System* Bank of England Working Paper No. 181 2003.

Central Bank of Kenya (CBK) Annual Report 2012.

Central Bank of Kenya (CBK) Annual Report 2013.

Chapelle A, Crama Y, Huber G, Peters J, *Basel 2 and Operational Risk: Implications for Risk Measurement and Management in the Financial Sector* National Bank of Belgium Working Papers No. 51 May 2004.

Chauvin S, Geis A, *Who has been affected, how and why? The spill-over of the Global Financial Crisis to Sub-Saharan Africa and ways to recovery* European Central Bank – Euro-system [Occasional Paper Series] No. 124/March 2011.

Chen J, *Measuring Market Risk Under Basel 2, 2.5 and 3: VaR, Stressed VaR, and Expected Shortfall* 17 April 2013.

Chitiga M, Decaluwe B, Mabuga R, Maisonnave H, Robichaud V, *The Impact of the Global Financial and Economic Crisis on South Africa* 7 January 2010.

Christensen B, *Financial Integration in Africa: Implications for monetary policy and financial stability* BIS Papers No. 76 February 2014.

Clifford Chance *Basel: Relaxations to the Liquidity Coverage Ratio* January 2013.

Cosimano T, Hakura D, *Bank Behaviour in Response to Basel 3: A Cross-Country Analysis* IMF Working Paper WP/11/119 May 2011 IMF Institute.

Crockett A, *Why is Financial Stability a Goal of Public Policy?* [28-30] August 1997.

Davies H, *Why Regulate Banks ?* A Paper presented at the Henry Thorton Lecture 4 November 1998.

Deléchat C, Ramirez G, Wagh S, Wakeman-Linn J, *Sub-Saharan Africa's Integration in the Global Financial Markets* IMF Working Paper WP/09/114 2009 IMF.

Demirgüc-Kunt A, Detragiache E, *Basel Core Principles and Bank Risk: Does Compliance Matter?* IMF Working Paper WP/10/81 2010.

Dzato R, *Ghana goes Basel 2 – Key Challenges and Opportunities* 2012 pp1-6. www.fepinternational.org.

Edwards J, Vine P, Gray K, *An Introduction to Basel 3 – Its consequences for lending* Norton Rose LLP October 2010.

Edwards R, *Financial Soundness Indicators: Experience with the Coordinated Compilation Exercise and Next Steps* IMF Statistics Department 18 October 2007.

Einhorn D, *Private Profits and Socialised Risk,* April 8 2008. (A speech presented at the Grant's Spring Investment Conference).

Ernst & Young *Global Regulatory Reform: Shaping tomorrow's business today – Basel 3: Strategic Forecasting* 2012.

Financial Services Authority (FSA) *Definition of Capital 08/5 Feedback Statement on DP07/6* July 2008.

Financial Services Authority (FSA) *The Turner Review: A regulatory response to the global banking crisis* March 2009.

Financial Services Authority (FSA) Policy Statement 10/14 *Capital Planning Buggers* September 2010.

Financial Stability Board (FSB) Enhanced Disclosure Task Force *The Risk Disclosures of Banks* A Report presented to the FSB 29 October 2012 www.financialstabilityboard.org/publication/r_121029.pdf.

Fitch Core Capital *The Primary Measure of Bank Capitalisation* January 2012.

Ghana Banking Survey 2009 Pricewaterhouse Coopers in association with Ghana Association of Bankers.

Ghana *Article IV Consultation and Request for a Three-Year Arrangement under the Poverty Reduction and Growth Facility Staff Report* 2009.

Ghana *Financial System Stability Assessment Update* IMF Country Report No. 11/131 June 2011.

Ghosh S, Sugawara N, Zalduendo J, *Banking Flows and Financial Crisis Financial Interconnectedness and Basel 3 Effects* Policy Research Working Paper WPS5769 August 2011.

Gosh S, Sugawara N, Zalduendo J, *Bank Flows and Basel 3 – Determinants and Regional Differences in Emerging Markets* 2011.

Global Financial Crisis *Implications for Africa's Financial Systems* 2009.

Global Financial Stability Report Database 2013.

Global Monitoring Report *The Global Financial Crisis and its impact on Developing Countries* 2009.

Global Survey 2009 *Regulatory and Market Developments* Institute of International Bankers October 2009.

Global Survey 2011 *Regulatory and Market Developments* Institute of International Bankers September 2011.

Goodhart & Taylor 2006 *Procyclicality and Financial Regulation 2006*

Gordy M, Howells B, *Procyclicality in Basel 2: Can We Treat the Disease Without Killing the Patient?* May 2004.

Gottschalk R, Griffith-Jones S, *Review of Basel 2 Implementation in Low-Income Countries* Institute of Development Studies University of Sussex, December 2006.

Greuning H.V, Bratanovic S.B, *Analysing and Managing Banking Risk: A Framework for Assessing Corporate Governance and Financial Risk* 2003 World Bank Publications.

Gueorguiev N, Ramcharan R, Stuart A, Aydin B, *South Africa: Selected Issues* IMF Country Report No. 09/275 September 2009.

Hall M, Kaufman G, *International Banking Regulation* A Paper presented at a conference titled *Structural Foundations of International Finance.* May 10-11 2002.

Heid F, *Is regulatory capital pro-cyclical? A Macroeconomic assessment of Basel 2* Deutsche Bundesbank Working Paper 2003.

Hiroyuki K, *Confronting the Global Financial Crisis: Bank Efficiency, Profitability and Banking System in Africa* October 2009.

Hitchins J, Hogg M, Mallet D *Banking: A Regulatory Accounting and Auditing Guide*, 2001 Institute of Chartered Accountants, England and Wales

Ho S, *Rethinking African Economic Policy in Light of the Global Economic and Financial Crisis Conference – Global Economic and Financial Crisis: Transmission Channels and Impacts on Sub-Saharan African Economies* 2009.

Honohan P, Laeven L, *The Systemic banking crisis of 1985-1986* 2005.

House of Lords Select Committee Report on Economic Affairs 2nd Report of Session 2008-2009 *Supervision and Regulation Report Volume 1, 2 June 2009 United Kingdom.*

Hussain M, Mlambo K, Oshikoya T, *Global Financial Crisis: An African Perspective* 1999.

IMF Country Report No. 08/349 [South Africa] *Financial System Stability Assessment including Report on the Observance of Standards and Codes on the following topic: Securities Regulation* October 2008 IMF.

IMF Country Report No. 09/315 [Nigeria] *Article IV Consultation Staff Report* November 2009.

IMF Country Report No. 09/191 [Kenya] *Request for Disbursement Under the Rapid Access Component of the Exogenous Shocks Facility – Staff Report.*

IMF Working Paper WP/13/273, *IMF-Supported Programs in Low Income Countries: Economic Impact over the Short and Longer term IMF* (2012d).

IMF 2009 *Impact of the Global Financial Crisis on Sub-Saharan Africa* African Department IMF.

International Organisation of Securities Commission (IOSC) *Guidance to Emerging Market Regulators Regarding Capital Adequacy Requirements for Financial Intermediaries* December 2006.

Jackson P, *Risk Measurement and Capital Requirement for Banks* Bank of England Quarterly Bulletin pp177-184 May 1995.

Kangáru W, *Kenya Banking Industry Profit in Major Slowdown* Daily Nation 17 August 2009.

Kasekende L, Ndikumana L, Taoufik R, *Impact of the Global Financial and Economic Crisis on Africa* Working Paper No. 96 March 2009 African Development Bank.

Kashyaps A, Stein J, *Cyclical Implications of the Basel 2 Capital Standards* 2004.

Kashyaps A, Raghuram G, Stein J. *Rethinking Capital Regulation* 2008.

Kenya Banking Sector Annual Report 2012.

KPMG *Bruised but not broken: can the global bank fight back?* June 2011.

Latham & Watkins LLP *Reforms under Basel 3* 2008.

Laeven L, Valencia F, *Systemic Banking Crisis: A new Data base* IMF Working Paper No. 08/224 2008.

Laeven L, Valencia F, *Systemic Banking Crisis Data base* IMF Working Paper WP/12/163 June 2012.

Larosiere J, The Larosiere Report, 2009 (Accessed electronically at http://ec.europa.eu/internal_market/finances/docs/de_larosiere_report_en.pdf.

Le Lesle V, Avramova S, *Revisiting Risk-Weighted Assets – Why Do RWAs Differ Across Countries and What Can Be Done about it?* IMF Working Paper WP/12/90 March 2012.

Lizondo S, Desruelle D, *Request for a Three-Year Arrangement Under the Extended Credit Facility: Kenya* 14 January 2011 IMF.

Llewelyn D, *The Economic rationale for Financial Regulation* FSA Occasional Paper Series 1 April 1999.

Lukonga I, Chung K, *The Cross-Border Expansion of African LCFIs – Implications for Regional Financial Stability and Regulatory Reform* September 2010.

Mahapatra B, *Implications of Basel 3 for Capital, Liquidity and Profitability of Banks* RBI Monthly Bulletin April 2012.

Mhango Y, *Africa: Insight – Fiscal Stimulus Packages Delivered in the East African Budgets* Standard Bank June 2009.

Mminele A D, *Recent economic developments in South Africa 4 October* 2009.

Mwenga F, *Global Financial Crisis Discussion Series* Paper 17 Kenya – Phase 2 January 2010 Overseas Development Institute ODI.

Noss J, Toffano P, *Estimating the impact of Changes in Aggregate Bank Capital requirements during upswing* Bank of England Working Paper No 494 March 2014.

OECD *Arrangement on Guidelines for Officially supported Export Credits* IMF 2003 http://www.oecd.org.

Pfoesti G, Auer M, *Accenture Risk Management Consulting Services Document* 2012.

Regional Economic Outlook *Sub-Saharan Africa – Sustaining Growth amid Global Uncertainty* World Economic and Financial Surveys 2012 IMF.

Sahajwala R, Bergh V, Basel Committee on Banking Supervision Supervising *Risk Assessment and Early Warning Systems* December 2000.

Saidenberg M, Schuerman T, *The New Basel Capital Accord and Questions for Research* Wharton Financial Institutions Centre Working Paper May 2003.

Sheppard K, *Financial Econometrics Notes* p494 2012 http://www.kevinsheppard.com/images/c/co/financial_econometrics 2012-2013.pdf

Sidley Austin LLP Securities/Financial Institutions Regulatory Update Basel 3 - *Minimum Requirements to Ensure Loss Absorbency at the Point of Non-Viability* 2 February 2011.

Slaughter & May LLP *The New Basel Capital Accord – A Guide to the Main Provisions* pp 4, 5 3rd Edition September 2004.

Slaughter & May LLP *The New Basel Capital Accord – A Guide to the Main Provisions* September 2009.

Slaughter & May LLP *Basel 3: A New Capital Adequacy and Liquidity Frameworks for Banks* June 2011.

Soludo C, *The Unfinishd Revolution in the Banking Sector* 18 March 2008.

Sonali D, Amadou S, *How Risky Are Banks' Risk Weighted Assets* IMF Working Paper WP/12/36 1 January 2012.

South Africa: *Financial System Stability Assessment including Report on the Observance of Standards and Codes on the following topic* Securities Regulation IMF Country Report No 08/394 2008.

South Africa: *Detailed Assessment of Compliance on Basel Core Principles for Effective Banking Supervision* IMF Country Report No 10/353.

South Africa (Republic) – *Banks Amendment Bill Explanatory Summary as published in Government Gazette No. 35880* of 16 November 2012.

South African Reserve Bank *The International Banking Crisis and Domestic Financial Intermediation in Emerging Market Economies: Issues for South Africa* BIS Paper No 54 p365 December 2010.

Stephanou C, Mendoza J, *Credit Risk Measurement under Basel 2: An Overview and Implementation Issues for Developing Countries* World Bank Policy Research Working Paper 3556 April 2005.

Swinburne M, *Chapter III The globalisation of financial institutions and its implication for financial stability* IMF Global Financial Stability Report p98 April 2007.

Te Velde D.W., *The Global Financial Crisis and Developing Countries – What Countries are at Risk and What can be done?* Overseas Development Institute (ODI) October 2008.

Te Velde D.W, *Effects of the Global Financial Crisis on Developing Countries and Emerging Markets: Policy responses to the Crisis* Conference Note – Overseas Development Institute (ODI) 2008.

Te Velde D.W., *The Global Financial Crisis and Developing Countries: Synthesis of the findings of 10 Country Case Studies* Working Paper 306, June 2009.

Te Velde D.W. and Others, *The Global Financial Crisis and Developing Countries* Phase 2 Synthesis Working Paper 316 Overseas Development Institute (ODI) March 2010.

Thiongo P, Mugwe D, *Kenyan banks under testing ahead of new global rules* Business Daily, 26 August 2013 (Accessed 26 April 2014).

Tolle E, *The most rigid structures, the most impervious to change, will collapse first* – Structure Evolving Banking Regulation Chapter 2, pp 18-27 14 February 2014 KPMG.

Turner Review *A Regulatory response to the Global Banking Crisis* March 2009 FSA.

Van Greuning H, Bratanovic *S.B. "Analysing and Managing Banking Risk: A Framework for Assessing Corporate Governance and Financial Risk; World Bank Publications 2003.*

Vinals J, Brook P.J, *The Financial Assessment Programme After 10 years: Experience and Reforms for the Next Decade* 28 August 2009.

Vinals J, Sayeh A. M, *Financial System Stability Assessment Update* – prepared by the Monetary and Capital Markets and African Departments published on 2 May 2011.

Legislation

UK

- United Kingdom Companies Act 2006

U.S.A

- Dodd Frank Act 2010

Ghana

- Insolvency Act 2006 (Act 708)
- Bodies Corporate (Official Liquidations Act) 1963 (Act 180)
- Insolvency Act 1962 (Act 153)
- Banking (Amendment) Act 2007 (Act 738)
- Banking Act 2004 (Act 673)
- Banking Act 2002 (Act 612)

Kenya

- Central Bank of Kenya Act 2014 (CAP 491)
- Kenya Finance Act 2008
- Regulations and Guidelines pursuant to the Banking Act (CAP 488)
- Bankruptcy Act of Kenya 1930 (As amended)

Nigeria

- Central Bank of Nigeria Act 1958

European Union (E.U.)

- Basel 3 (2010 – revised 2011)
- Basel 2 (2004)
- Basel 1 (1998)
- Capital Adequacy Directive IV (CRD IV) 2013
- Capital Adequacy Directive III (CRD III) 2010
- E.U. Directive Art (84) 2006/48/EC