THE ARCHITECTURE OF THE BASEL ACCORDS: PERSPECTIVES ON EVOLUTION AND ADOPTION IN THE CONTEXT FOR LESOTHO

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Abstract

Following the release of Basel I capital accord in 1988, the Basel Committee on Banking Supervision later issued two other capital accords that were meant to address weaknesses in the regulatory framework underscored by the financial crises that ensued after Basel I. Despite the developments in international regulation, banking sector regulation in Lesotho is still based on Basel I. This exposes banks in the country to regulatory suffocate due to costs incurred in complying with both local regulatory requirements as well as requirements from their parents' regulators. The study provides a modest attempt to ease this burden by proposing adoption of the modern accords. Using a simplicity-suitability selection approach, the paper proposes the adoption of Basel II excluding pillar 3 coupled with the capital definition and requirements as set out in Basel III. In assessing the effects of the new accord on the local banking industry, the study makes two findings. First, the bottom two banks are able to meet all minimum regulatory requirements. Second, the top two banks fall short of meeting the new minimum regulatory requirements.

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1. INTRODUCTION

In the aftermath of the financial market turmoil that ensued after the collapse of the Bretton woods system of fixed exchange rates in 1973, the Central Bank Governors of the Group of 10 (G10)[2] countries established a committee on banking regulations and supervisory practices, which was later named the Basel Committee on Banking Supervision (BCBS). The committee served as a forum for regular cooperation between member countries on banking supervisory matters, with the aim of enhancing financial stability, by improving supervisory knowhow and the quality of banking supervision worldwide (BCBS, 2014). This laid a foundation for the supervision of internationally active banks. The 1982 Latin American debt crisis which was characterised by fiscal burdens emanating from the recapitalisation of international banks, underscored the need for cross-border convergence of supervisory standards, with respect to capital measures and capital standards. As a response, the BCBS issued the Basel Capital Accord in 1988 which came to be known as Basel I. The aim of the accord was twofold namely 1) to strengthen the stability of the international banking system, and 2) to eliminate or mitigate distortions in international competition among banks due to differences in national regulation (Weber, 2009).

Innovation in banking practice as well as a series of financial crises[3] that followed the adoption of Basel 1, brought to the fore the fact that capital standards needed to be dynamic to remain effective, in this way, the standards would reflect changes in the financial sector and address deficiencies in the regulatory regime that were exposed by the financial crises. Consequently, the BCBS effected changes in the international landscape which culminated into Basel II in 2006 and recently Basel III in 2010. It is important to highlight at the onset that the BCBS does not possess any supranational supervisory authority, as such; its accords are not legally binding. However, the accords, specifically Basel I, have been adopted as a worldwide standard upon which Bank Supervisors could benchmark capital measurement for all banks operating in their jurisdictions, with the benefit of harmonisation of the global regulatory landscape. Nevertheless, in Lesotho, the regulatory framework is still based on Basel I. This is despite the fact that three of the four banks in the country are subsidiaries of South African (SA) banks which are already regulated under Basel III.

[2] The G (10) initially consisted of Belgium, Canada, France, Italy, Japan, Netherlands, United Kingdom, United States, Germany and Sweden. Switzerland later joined the group but, the name remained the same.
[3] These included the Asian financial crisis and the Russian debt crisis of the late 90s

It can therefore be deduced from the foregoing that the three banks which are systemically important in the country, are subjected to two different forms of regulation, thereby leading to regulatory-suffocate in terms of high compliance costs. Against this background, the study first attempts to map a selective adoption plan of the modern accords for Lesotho. Second, the study undertakes a preliminary assessment of the possible effects of the proposed accord on commercial banks. Following this introduction section 2 of the paper undertakes a survey of the relevant literature on the subject. Section 3 outlines the methodology adopted by the study specifically, the selection procedure and scenario analysis. Data analysis and discussion of findings is contained in section 4 while section 5 provides a summary and recommendations of the study.

2. LITERATURE SURVEY

2.1 Evolution of the Basel accords

2.1.1 Basel I[4]

Basel I was the pioneering work on bank capital regulation around the globe. It introduced unification in the definition of regulatory capital. It specifically stipulated that for supervisory purposes, capital would be defined in two tiers. Tier I capital known as core capital would comprise of equity capital and published reserves from post-tax retained earnings. This tier would constitute atleast 50 percent of a bank's capital base. Tier 2 capital also known as supplementary capital consisted of five elements[5] which would be allowed subject to set limits. Tier 2 capital would be limited to an amount equal to that of core capital. Furthermore, the accord set out a framework for measuring capital adequacy and the minimum standard to be achieved. Capital adequacy would be measured by using the weighted risk ratio method, in which capital is related to different categories of assets and off-balance sheet exposure, weighted according to broad categories of relative riskiness. Banks' assets were therefore grouped into five categories based on pre-determined risk

[4] This section draws significantly from BCBS (1988)
[5] These elements are: undisclosed reserves, revaluation reserves, general provisions, hybrid debt instruments, and subordinated term debt

weights of 0, 10, 20, 50, and 100 percent, with a view of quantifying banks' credit risk exposures. Credit risk was the only risk addressed under Basel I, because at the time this was viewed as the major risk that banks generally faced. Credit risk on off-balance sheet exposures was also taken into account. Off-balance sheet exposures would be converted into credit risk equivalents by applying credit conversion factors to the different types of off-balance sheet instruments, the resulting amounts would then be weighted according to the nature of the counterparty. In order to determine the amount of capital that banks should hold, the accord introduced two minimum capital adequacy ratios namely, Tier 1 capital ratio and total regulatory capital ratio. Tier 1 capital ratio would be calculated as a ratio of a bank's Tier I capital to its total risk weighted assets. Banks were required to hold a minimum of 4 percent of this ratio. Total regulatory capital ratio on the other hand would be computed as the ratio of a bank's total regulatory capital to its total risk weighted assets, 8 percent was prescribed as the minimum ratio that banks had to hold.

During the early 1990's as banks increased their trading activities, it became apparent that market risk was a major concern for banks. This led to the release of Basel I amendment in 1996 to cater for market risk. The main features of this amendment was the distinction between a trading book and banking book exposures, which required a market risk and credit risk capital charge, respectively. Moreover, it introduced an approach of calculating the total market risk capital charge of a bank. In measuring their market risks, banks would be allowed to choose between two broad methodologies which will be permitted subject to the approval of the national supervisors. The two methodologies were the Standardised Measurement Method and the Internal Models Approach. The market risks addressed by the amendment were general and specific risks pertaining to interest rate related instruments and equities in the trading book, as well as foreign exchange and commodities risk throughout a bank. Under the standardised measurement method market risk is calculated separately for interest rate, equity, foreign exchange and commodities risk. The total capital charge will then be calculated as a summation of all the risks. The internal models approach on the other hand, enabled banks to use their proprietary in-house methods, which are generally Value at Risk (VaR) models, to calculate market risk.

One of the merits of Basel I was its simplicity to implement because it used pre-determined risk weights. Nonetheless, after its implementation, it was not long before it came

in for criticism. It did not adequately cover all risks to which banks were exposed. In addition, the risk weightings were presented in a very crude form resulting in an inadequate reflection of the actual underlying risks (Weber, 2009). Resti, (2004) notes that the simple rules on which Basel I was based were the source of its drawbacks, he cites as an example, that the existence of a considerable gap between supervisory requirements under Basel I and risk-based measures of economic capital determined by banks has led to forms of regulatory arbitrage[6]. This is also a view supported by BCBS (1999) by stating that the broad risk asset classes in Basel I have created a gap between economic capital and regulatory capital. As a result, innovations in the market have enabled banks from a variety of countries to make use of techniques to effectively arbitrage between these two amounts, increasing banks risks relative to minimum capital levels.

2.1.2 Basel II[7]

The high prevalence of regulatory arbitrage rendered Basel I obsolete. Consequently, the BCBS began consultations on Basel II in 1999 culminating in the document called International Convergence of Capital Measurement and Capital standards: a revised framework (BCBS, 2004: Bailey 2005). The main objectives of the Basel II capital accord were, to continue promoting the safety and soundness of the international banking system as well as enhance competitive equality among internationally active banks. These objectives would be achieved through its three mutually reinforcing pillars, namely; capital requirements, supervisory review process, and market discipline.

Under pillar 1 Basel II maintained the required minimum capital ratios of Basel I and the definition of regulatory capital. However, in addition to capital charges for credit risk and market risk, it introduced a specific capital charge for operational risk. Furthermore, for each risk type the accord specified capital calculations based on simple to advanced methodologies. These methodologies were made to give banks incentives of employing sophisticated risk management methodologies. That is, banks' capital requirements should reduce as they adopt the advanced methodologies.

[6] Regulatory arbitrage is when loopholes in the regulation are exploited to increase the real leverage of a bank without reducing its capital ratios

[7] The section draws from BCBS (2006)

The first approach involves capital calculation for credit risk, in this approach banks choose between two broad methodologies for computing their capital requirements for credit risk, namely; the Standardised Approach and the Internal Ratings Based Approach. The standardised approach would be used to measure credit risk in a standardised manner supported by external credit assessments. In determining the risk weights in this approach banks would be allowed to use assessments by External Credit Assessments Institutions (ECAI) recognised as eligible for capital purposes by national supervisors. The accord provided six criteria[8] which ECAI had to satisfy. Basel II also allowed a wider range of credit risk mitigants (CRM) to be recognised for regulatory capital purposes than was permitted by Basel I. Consequently, no transaction in which CRM techniques are used would receive a higher capital requirement than any other identical transaction where such techniques were not used.

The internal ratings based approach, which is subject to the explicit approval of the banks' supervisors, would allow banks to rely on their own internal estimates of risk components in determining the capital requirement for a given exposure. The risk components include measures of the probability of default (PD), loss given default (LGD), the exposure at default (EAD), and effective maturity (EM), in some cases banks may be required to use a supervisory value as opposed to an internal estimate for one or more of the risk components. Under the internal ratings based approach, banks would categorise their banking book exposures into five broad classes of assets (corporate, sovereign, bank, retail and equity) with different underlying risk characteristics, subject to the definitions set out in the accord. For each of the assets classes, there are three key elements, namely; risk components, risk weight functions and minimum requirements.

For many of the asset classes, the accord provides two broad approaches, a foundation and an advanced approach. Under the foundation approach, banks provide their own estimates of PD and rely on supervisory estimates for other risk components. On the other hand, banks using the advanced approach will have to provide their own estimates of PD, LGD and EAD and their own calculation of EM. However this would be subject to minimum

[8] The six criteria are; objectivity, independence, international access/transparency, disclosure, resources and credibility.

standards. For retail exposures however, there was no distinction between foundation and advanced approach, as a result, banks would provide their own estimate of PD, LGD and EAD. For both approaches, banks would always have to use the risk weight functions provided by the accord for the purpose of deriving capital requirements. In addition to the eligible collateral recognised in the standardised approach, some other forms of collateral are also recognised in the internal rating based approach.

The second approach accommodated capital calculation for operational risk. In this case the accord provided three methods for calculating operational risk capital charges in a continuum of increasing sophistication and risk sensitivity. These are the basic indicator approach, the standardised approach and the advanced measurement approaches. Banks using the basic indicator approach have to hold capital for operational risk equal to the average over the previous three years of a fixed percentage (15 percent) of positive annual gross income[9]. Figures for any year in which annual gross income was negative or zero will have to be excluded when computing the average. In the standardised approach banking activities are divided into eight business lines[10], within each business line, gross income is a broad indicator that serves as a proxy for the scale of business operations and thus the likely scale of operational risk exposure within each of these business lines.

The capital charge for each business line is calculated by multiplying gross income by a factor assigned to that business line. This factor serves as a proxy for the industry wide relationship between the operational risk loss experience for a given business line and the aggregate level of gross income for that business line. The total capital charge is calculated as the three year average of the simple summation of the regulatory capital charges across each of the business lines in each year. The advanced measurement approach which is more sophisticated than the other two approaches is designed to mirror the internal measurement methods used by banks. The regulatory capital requirement will be equal to the risk measure generated by the bank's internal operational risk measurement system using the qualitative and quantitative criteria for the advanced measurement approach specified in the accord.

[9] Gross income is defined as net interest income plus net non-interest income

[10] The business lines are; corporate finance, trading and sales, retail banking, commercial banking, payment and settlement, agency services, asset management and retail brokerage.

Pillar II deals with the supervisory review process, as explained in the previous sub-section, pillar 1 set out the minimum capital requirements for banks. In addition, banks were supposed to determine for themselves the appropriate capital requirements. In order to verify the appropriateness of the capital that banks choose to hold, pillar 2 was included under Basel II, this gave supervisors powers to decide on the appropriate amount of capital a bank should hold, review the appropriateness of capital calculation models for each bank and be able to intervene quickly if a bank's capital declines in a detrimental fashion. Pillar 2 consists of the following four principles first; banks should have a process for assessing their overall capital adequacy in relation to their risk profile and a strategy for marinating their capital levels. Second; supervisors should review and evaluate banks' internal capital adequacy assessments and strategies, as well as their ability to monitor and ensure their compliance with regulatory capital ratios. Supervisors should take appropriate supervisory action if they are not satisfied with the result of this process. Third; supervisors should expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum. Fourth; supervisors should seek to intervene at an early stage to prevent capital from falling below the minimum levels required to support the risk characteristics of a particular bank and should require rapid remedial action if capital is not maintained or restored.

Pillar III focuses on market discipline. The purpose of this pillar was to compliment the other two pillars. In this regard the accord laid out a set of disclosure requirements which will allow market participants to assess key information on the scope of application, capital risk exposures, risk assessment process and ultimately the capital adequacy of a bank. It was believed that these disclosures have particular relevance under the accord since it gave reliance on internal methodologies thereby giving banks more discretion in assessing capital requirements. It is important to note that pillar was intended to apply at the top consolidated level of the banking group.

Basel II was also not free from criticism, for instance Heid (2007), notes that by increasing the sensitivity to risk, the accord made required minimum capital pro-cyclical, which could pose a severe capital management problems to banks due to the possibility of capital charges increasing in an economic downturn at time when banks are confronted with

the erosion of their equity capital as a result of write-offs in their loan portfolio. To add to this, the accord relied upon rating agencies to value risks, which may cause unfavourable implications because banks are permitted to choose the rating agency they employ. This may bring about "a race to the bottom" among the world's major rating agencies where business is given to the agency that assigns a firm the best rating possible. As result, a bank's risk exposure overtime will tend to enlarge even though on paper it still has the same amount of risk, (Balin, 2008).

Pillar II highlights the need for supervisors to intervene promptly if either a bank's capital or models it uses to compute capital are perceived inadequate. The effectiveness of this pillar is undermined by the fact that no powers are explicitly recommended for supervisors to effectively enforce this mandate. Furthermore, pillar III proposes to enhance market discipline by increasing financial disclosure requirements. This pillar might also not be as effective as envisaged, because stakeholders not at risk would have little or no incentive to monitor and influence their banks and thus have little if any use for the information disclosed. This is also exacerbated by the too big to fail argument whereby governments and bank regulators in almost all countries, have tended to avoid failing of certain banks perceived as too big to fail, through bailouts aimed at protecting depositors and other creditors (Kaufman, 2003).

2.1.3 Basel III[11]

Following the release of Basel II the BCBS released several reforms to Basel II, necessitated by some weaknesses identified in the accord. Some reforms were an attempt to address weaknesses in the international regulatory framework that were exposed by the 2007/09 financial crisis. These reforms were collectively referred to as Basel III and represented the BCBS proposal to strengthen global capital and liquidity regulations with the aim of promoting a more resilient banking sector. Specifically, the reforms would strengthen micro-prudential regulation, which will help raise the resilience of individual banking institutions to periods of stress. The reforms also have a macro-prudential focus addressing

[11] The section draws from BCBS (2011)

system-wide risks that can build up across the banking sector as well as the pro-cyclical amplification of the risks overtime. The reforms had five main components.

The first component relate to the definition of regulatory capital. The crisis demonstrated that credit losses and write-downs came out of retained earnings, which is part of banks' tangible common equity base. It also revealed the inconsistencies in the definition of capital across jurisdictions. To this end, the BCBS revised the definition of regulatory capital. This was done to ensure that banks not only hold more capital but high quality capital as well meaning that banks will have more loss absorbing capacity, which in turn means that banks will be stronger, allowing them to withstand periods of stress. Total regulatory capital under the accord would now consist of tier 1 and tier 2 capital which ensures that a bank is able to absorb losses on a going-concern and gone-concern basis respectively. Tier 1 was further divided into two sub-categories namely: common equity tier 1 and additional tier 1. For each of these categories there is a set criteria that instruments are required to meet before inclusion in the relevant category. Moreover, the elements were subject to the following restrictions; common equity tier 1, tier 1 capital and total capital (tier 1 capital plus tier 2 capital) must be atleast 4.5, 6.0 and 8.0 percent of risk weighted assets at all times respectively.

The second component involves enhanced risk coverage. When the financial crisis unfolded it became apparent that there was need to strengthen the risk coverage of the capital framework. This is because failure to capture major on and off-balance sheet risks as well as derivatives related exposures was a key destabilizing factor during the crisis. Consequently, the Basel III reforms raised the capital requirements for the trading book and complex securitization exposures. The enhanced treatment introduced a stressed VaR capital requirement based on a continuous twelve months period of significant financial stress. In addition, higher capital requirements for re-securitizations in both the banking and the trading book were introduced. Capital charge for counterparty credit risk was increased to reflect higher correlation assumptions.

The third component tries to supplement the risk-based capital requirement with a leverage ratio. One of the underlying features of the crisis was the build-up of excessive on

and off balance sheet leverage in the banking system. As a response, Basel III introduced a leverage ratio requirement that is intended to constrain leverage in the banking sector, thereby helping to mitigate the risk of the destabilising deleveraging process which can damage the financial system and the economy. The accord further, aims to introduce additional safeguards against model risk and measurement error by supplementing the risk-based measure with a simple, transparent, independent measure.

The fourth component attempts to reduce pro-cyclicality and promote countercyclical buffers. One of the most destabilising elements of the crisis has been the pro-cyclical amplification of financial shocks throughout the banking system, financial markets and the broader economy. Basel III therefore, introduced measures to make banks more resilient to such pro-cyclical dynamics. The measures are intended to 1) Dampen any excess cyclicality of the minimum capital requirement, 2) Promote more forward looking provisions 3) Conserve capital to build buffers at individual banks and the banking sector that can be used in stress and 4) Achieve the broader macro-prudential goal of protecting the banking sector from periods of excess credit growth.

The firth component introduces global liquidity standards. This is an important aspect of Basel III because no such standards existed before. The standards were introduced due to the fact that during the crisis many banks which were not managing their liquidity prudently experienced difficulties. This was despite the fact that such banks had adequate capital levels. The standards were intended to achieve two separate but complimentary objectives. The first objective is to promote short-term resilience of a bank's liquidity risk profile by ensuring that it has sufficiently high quality liquid resources to survive an acute stress scenario lasting for one month. This objective will be achieved by the Liquidity Coverage Ratio (LCR). The second objective which would be achieved through the Net Stable Funding Ratio (NSFR) is to promote resilience over a longer time horizon by creating additional incentives for a bank to fund its activities with more stable sources of funding on an on-going structural basis. The NSFR has a time horizon of one year.

2.2 Experience of other countries

As aforementioned the BCBS does not possess any supranational supervisory authority, as such; its accords are not legally binding. Moreover, the BCBS allowed the implementation of the accords to be tailored to each jurisdiction, which resulted in a widespread difference in the accord's implementation across the globe. The differences were noted in not only developed countries but in developing countries as well. The study therefore, proceeds by exploring the different approaches that were employed in implementing Basel II, in different jurisdictions. Basel II was a different framework from Basel I while Basel III was a modification of Basel II. Consequently, this section focuses only on Basel II implementation. This is also due to the fact that countries that implement Basel III ought to have implemented Basel II because the latter builds on the former.

2.2.1 Developed countries

In Europe, the European Union (EU) approved the adoption of Basel II by all credit institutions and investment firms irrespective of their size, scope of activities or level of sophistication. Thus, a bank in Europe would choose any of three options in either standardised foundations or advanced approaches to meet its capital adequacy requirement. In this way all banks and investment firms would be subjected to equivalent regulations because they would bear the same risk. By so doing, the EU was applying the principle of level playing field, which was the keystone of the developments of the Basel accords. The approval of all options of the accord for implementation was motivated by perception that EU banks had capabilities of implementing even the advanced approaches. To adequately achieve this objective, the EU issued EU specific implementation framework, which included creating roll-out rules for the internal ratings based approaches. In this case, credit institutions, were allowed to partially use the internal ratings based approaches for some exposures combined with continued use of the standardised approach for other exposures. In addition, small investment firms were exempted from operational risk charges. This was meant to reflect their risk profile and limited systemic importance (CEPS, 2008).

New Zealand followed a route similar to that of the EU in its implementation of Basel II. The New Zealand Reserve Bank (NZRB) which is also a supervisory authority in New Zealand, made all approaches under the Basel II framework available to all banks. However, the approaches based on bank's internal risk modelling would be available to only banks that

meet certain minimum requirements. The implementation timeframe was also allowed to vary by bank. This is because in some cases the timing of implementation by foreign owned banks would be driven by the parent bank or home regulator. Therefore, the NZRB would determine on a bank to bank basis which implementation strategy was appropriate. Banks that planned to adopt the internal model approaches were required to produce Basel II capital calculations while continuing to meet their existing Basel I capital requirement. This dual compliance would be allowed for a period of one year, and was meant to provide the NZRB together with participating banks an indicator of the overall effects that the internal models approach would have on pillar 1 capital requirements and pave the way for a well-informed transition to Basel II (Yeh, *et al* 2005).

The adoption of Basel II was different and relatively slower in the United States of America (US), compared to the EU and New Zealand. Not all approaches of the Basel II accord were permitted in the US. Furthermore, the components of the accord approved for adoption would apply only to US banks that are internationally very active. Such banks were allowed to adopt advanced approaches only, i.e. the advanced internal ratings based approach for credit risk and the advanced measurement approach for operational risk. Hence, in the US banks would either adopt the advanced approaches or remain on Basel I. The standardised and foundation approaches were not permitted. Banks subject to the pillar 1 advanced approaches also had to comply with pillar 2 and 3 requirements. Several reasons were advanced for this partial adoption. First, smaller banks did not have the same level of complexity or resources as the largest banks, thereby rendering the advanced approaches inappropriate for them. Second, smaller banks did not compete internationally; as such the accord was not suitable to them (CEPS, 2008).

Following the issuance of the final rule on Basel II adoption in the US, Herring (2007), notes that there were several challenges that were encountered. These included concerns that allowing some banks to adopt the more advanced approaches would place non-adopting banks at a competitive disadvantage and make them take-over targets or be under-priced in key lines of business. This is because advanced approaches are calibrated to produce the lowest capital charge for most exposures. One other challenge was that the results of the fourth quantitative study (QIS, 4) revealed that aggregate minimum risk-based requirements would fall by 15.5 percent with the median reduction in tier 1 capital requirement being 31 percent. Furthermore, banks that were thought to have similar risk profiles produced

drastically different capital requirements. Consequently, both banks and regulators became concerned with the effects of the accord.

In order to address some of the concerns that were highlighted, the banking agency drafted a document called *Notice of Proposed Rulemaking* (NPR), which introduced additional safeguards designed to prevent actual declines in minimum regulatory capital of the magnitude suggested by QIS 4. This included amongst others floors on the permissible reduction in risk-based capital relative to Basel I standard. With regard to the competitiveness concerns, a document entitled *Advanced Notice of Proposed Rulemaking* (ANPR) was issued. The document outlined a new version of Basel I called Basel IA, which reduced capital charges against several kinds of exposures about which competiveness concerns had been especially intense (Herring 2007).

2.2.2 Developing countries

Basel II implementation in China was overseen by the China Banking Regulatory Commission (CBRC), which issued guidelines that stipulated how the accord was to be implemented. All approaches were made available to banks, even though, large Chinese commercial banks that have overseas operational entities and substantive international business were required to implement Basel II. Small and medium sized Chinese banks would choose whether to implement the accord or not. To ensure the effectiveness of Basel II adoption, the CBRC allowed banks to move to Basel II at different periods of time. Moreover, banks were allowed to make an overall plan based on their own assessments so as to migrate in a phased and well-sequenced manner (Sun, 2009).

Gupta and Srinivasan (2005), state that the Reserve Bank of India (RBI) favoured a phased implementation of Basel II in India. The RBI took a consultative approach rather than a directive one. Consequently, banks in India were requested to examine the choices available to them and draw a roadmap for migrating to Basel II. A steering committee was also set up to suggest a migration methodology. Banks were required to adopt the standardised approach for measurement of credit risk and the basic indicator approach for the assessment of operational risk. However, initially a parallel run with the current Basel I framework was

recommended to formulate smooth transition. Overtime, when risk management skills have developed, some banks would be allowed to migrate to the internal ratings based approach for credit risk measurement. The gradual implementation of the accord particularly with regard to implementing simple models first then moving over to advanced approaches was common among the developing countries, because Brazil also followed a similar route.

With regard to pillar 1 particularly credit risk, banks in Brazil were not allowed to utilize ratings assigned by external credit rating agencies for the purpose of estimating capital requirements, as a result they were required to adopt the Simplified Standardised Approach to credit risk. However, large and internationally active banks were given opportunity to adopt the Advanced internal ratings based approach; this would have to be in line with transition period established by the Central Bank of Brazil (CBB). During the transition period, larger banks would be allowed to first adopt the foundation approach and ultimately the advanced approach. With regard to operational risk, banks that were deemed qualified to adopt an advanced approach for credit risk were also required to adopt the advanced measurement approaches for operational risk. The use of internal models for market risk was allowed however, that was subject to banks meeting some eligibility criteria that were established by the CBB (CBB 2005).

2.2.3 Selected African countries

In Egypt, the project owner and a dedicated task force was first set up inside the Central Bank of Egypt (CBE) to manage all aspects leading to the implementation of Basel II framework. The task force also consisted of an EU resident project coordinator from Banque de France. The accord was then implemented according to a time line which involved issuance of CBE Basel II Strategy. The strategy hinged on two main pillars which were simplicity and communication. The CBE resolved to adopt the standardized approach and its related issues for credit and market risks, and basic indicator approach for operational risk. These tasks were undertaken under the first phase. The second phase dealt with assessing the consequences of the accord in terms of risk management and capital ratios. The last phase involved finalisation of the data warehouse and the beginning of parallel run of Basel I and Basel II (CBE, 2013).

Mauritius was one of the first countries in Africa to implement Basel II. The main reason was that the Bank of Mauritius (BOM) felt that the benefits of the accord for the Mauritian banking industry were too appealing to defer its application (BOM 2005). According to BOM (2008), Mauritius took a consultative and participative approach in the implementation of the accord. The process began by setting up a committee on the implementation of Basel II which also established eight working groups. The working groups were to work on different aspects of the accord. The BOM decided to adopt the simplest available approach for each risk category as a first step; this was after taking cognisance of the fact that banks in Mauritius had relatively simple risk management systems. This decision was also informed by the results of a survey that was conducted to assess the industry's readiness to move to Basel II. The banking industry was also supportive of this stance. It is also important to note that the BOM exercised a number of discretions in the adopted framework, which were meant to adapt the standards to the conditions prevailing in the Mauritian banking sector (BOM 2008).

The Bank of Zambia (BOZ) in implementing Basel II adopted the simpler approaches first, with the possibility of moving on to the advanced approaches later on as resource capabilities improve. Moreover, the reasons advanced for this approach were similar to those of Mauritius. Specifically, the BOZ acknowledged that unlike Basel I, Basel II is complicated and resource intensive, as such its implementation especially for the advanced approaches would pose numerous challenges more so in areas such as data, financial, technical and human resources, and information technology infrastructure. The BOZ adopted the accord in a phased manner. However, the process was carried out in flexible manner. This was in view of the various challenges associated with the implementation of the accord. Pillar 2 and 3 of the accord were implemented first and after their successful implementation, pillar 1 was implemented. As was the case in most countries, a Basel II joint implementation liaison committee was constituted. The committee was comprised of representatives from the bankers association of Zambia, the Zambia institute of chartered accountants and the BOZ. Some of the objectives of the committee were to obtain input from the various stakeholders in the implementation process and to disseminate information regarding Basel II to all stakeholders (BOZ, 2007).

Prior to proceeding with the implementation of Basel II, the South African Reserve Bank (SARB) determined a range of preconditions that would facilitate the successful

implementation of Basel II. The preconditions included amongst others, compliance with international standards for both bank supervision and payments system and the legal environment. A fundamental decision that underpinned the SARB's preparation for the implementation of Basel II was that the accord would be adopted letter and spirit as an absolute minimum standard. As a result, no sub-Basel II deviations would be permitted However; enhancements that set a higher standard were and in future may be incorporated into the regulatory and supervisory framework. From the preceding it can be deduced that all approaches contained in Basel II were made available to banks in SA, this was however, subject to relevant conditions being met.

The accord was implemented in eight steps, which began in 2001 until 2008 the year for full implementation. The first step was aimed at gaining an understanding of Basel II and the second and third steps involved the development of a master plan which consisted of key deliverables, deadlines and the establishment of the Accord Implementation Forum (AIF). The AIF was a joint public and private sector forum to assist in driving the Basel II implementation process. The Gap analysis started in the fourth step. Here each bank was requested to perform a high level gap analysis and readiness assessment to facilitate planning, identification of key deliverables, deadlines and responsible persons. Step five involved submission of implementation plans as well as the formation of Basel II team with risk specialists. Quantitative impact studies were conducted under steps six and seven. Step seven also marked the beginning of Basel II and Basel I parallel run. The final leg of implementation involved the full implementation of the accord.

3. DESCRIPTION OF APPROACH

3.1 Selection procedure

The first step of the methodology determines a basket of aspects of Basel II that can be easily adopted in Lesotho. The selection criteria are defined in terms of simplicity[12] of the aspects of the accord and their suitability[13] to the domestic market. The simplicity-suitability

[12] All options other than the advanced approaches are defined as simple.

[13] Suitability is defined in terms of all options of the accord that can address risk faced by the local banking industry, without any harmful effects on the economy. Moreover, such options should be able to be implemented on an as-is-basis without requiring any instruments that are not available in the country.

selection approach is appropriate due to complications that may arise with respect to the requirements of advanced approaches in terms of data requirements, financial, technical and human resources as well as information technology infrastructure. It is important to mention that the aspect of simplicity will mainly be applied in selecting appropriate options of Pillar 1 of Basel II. Table 1 provides a menu of such available options under this pillar. The aspect of suitability specifically applies in selecting which elements of pillar 1 to implement and determines whether or not to adopt pillars 2 and 3 of Basel II.

Table 1: Capital calculations under Basel II – Pillar I

	Approach	Definition
Credit risk	Standardized approach	Measures credit risk in a standardized manner supported by external credit assessments.
	Internal Rating Based (IRB) approach	Allows banks to rely on their own internal estimates of risk components in determining the capital requirements for a given exposure.
	a) Foundation IRB	Banks provide their own estimates of probability of default and rely on supervisory estimates for other risk components.
	b) Advanced IRB	Banks will have to provide their own estimates of all risk components.
Operational risk	Basic Indicator Approach	Measures operational risk as a fixed percentage of three years average gross income.
	The standardized approach	Measures total capital charge as a three year average of capital charges across a bank's business lines in each year.
	Advanced Measurement Approach	Allows banks to use their own internal operational risk measurement system.
Market risk	Standardized Measurement Method	Total market risk capital charge is calculated in a standardised manner as a summation of interest rate equity foreign exchange and commodities risk.
	Internal Models Approach	This approach enables banks to use their proprietary in-house methods to calculate market risk capital charge.

Source: Authors' own summary based on BCBS (2006)

3.2 Scenario analysis of the impact of Basel II

After a basket of options has been selected in the first step, the study proceeds to assess the likely implications of such options on the local banking industry. This will be achieved by undertaking a scenario analysis which will compare the baseline scenario under Basel I with scenario II. Scenario II will be informed by the basket of selected options under Basel II, that

is, the study will compare capital adequacy under Basel I with that under the new accord. Table 2 shows the capital requirements under Basel 1 as adopted in Lesotho, that is, the baseline scenario for this study. The risk-weighted assets referred to in Table 2 represent only assets that expose banks to credit risk; they include both on and off-balance sheet exposures. Thus, under the current framework, banks are mandated to hold capital against credit risk only. This is despite the fact that the BCBS issued the amendment to Basel I 1996 which incorporates market risk.

Table 2: Basel I as implemented in Lesotho

Ratio	Minimum target (%)
Tier 1 capital to risk weighted assets	4
Total qualifying capital to risk weighted assets	8

Source: Authors' own summary based on BCBS (1988)

4. DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Basket of regulatory aspects selected for implementation in Lesotho

4.1.1 Elements of Basel III proposed for adoption: capital requirements

Basel II retained the minimum capital requirement ratios as stipulated under Basel I. Therefore, everything else the same, a move to Basel II capital requirements will not have an impact on banks regulatory capital. However, credit risk has increased in Lesotho in recent years due to two factors. First, banks have aggressively increased their lending book. Second, the loan structure lacks diversification. The high concentration risk in the industry implies that counterparty credit risk is also high. It is thus reasonable to adopt minimum capital requirements under Basel III instead of Basel II. This is because Basel III has increased some of the regulatory capital requirements to ensure that banks have more loss absorbing capacity. It is envisaged that the move to Basel III will not have a significant impact on capital holdings of banks as they already hold capital levels above the current regulatory

requirement. One of the main features of Basel III is not only the requirement for additional capital but also high quality capital, that is, common equity capital. This is no problem for the local banks since their capital is already composed largely of components that qualify as common equity capital. Furthermore, banks in the country remain highly profitable and therefore can easily raise organic capital. Moreover, the local banks are already subject to Basel III via their parents in SA. Therefore, adopting Basel III capital requirement in the manner envisaged here has the potential of easing the regulatory burden on these banks because their reporting of capital requirements will be the same for the local regulator as well as to their parent banks. Table 3 shows Basel III capital requirement ratios as proposed for adoption in Lesotho.

Table 3: Proposed capital requirements ratios

Ratio	Minimum target (%)
Common equity tier 1 to risk weighted assets	4.5
Tier 1 capital to risk weighted assets	6
Total qualifying capital to risk weighted assets	8

Source: Authors' own summary based on BCBS (2010)

4.1.2 Elements of Basel II: Dealing with credit, market and operational risk

Credit risk

Despite proposing a shift to Basel III capital requirements, the study proposes that the capital calculation for credit risk under Basel II be adopted. The simplified standardised approach detailed in Annex 11 of BCBS (2006) should be adopted. In this approach, the risk weights for different categories of assets are fixed and pre-determined by the regulatory authority. The standardised approach will not be suitable due to lack of third party credit ratings in the country. The internal ratings based approach on the other hand requires banks to use their own internal models to assess default risk; this will require sufficient technical expertise from the regulator to assess and validate the use of these models and may perhaps be considered in due course as capacity becomes available. Furthermore, the internal ratings based approach is not simple because it requires banks to have long and reliable databases which are currently not available. It is deduced from the foregoing that the standardised

approach does not pass the suitability criterion while the internal ratings based approach fails the simplicity criterion.

Market Risk

With regard to capital calculation for market risk, a choice has to be made between the standardised measurement method and the internal models approach. The latter requires banks to use their internal models to compute market risk. The approach therefore fails the simplicity criterion; as a result it is excluded from the proposed basket. Under the standardised measurement method however, capital charges are calculated based on pre-determined ratios[14] implying that the method will be simpler to implement. Hence, the study recommends its adoption. As aforementioned, market risk capital charges are split into specific and general market risk charge for four types of risks, namely; interest rate and equity risk in the trading book, as well as foreign exchange and commodities risk throughout the bank. It is proposed that for interest rate risk, a specific risk charge be adopted as stipulated in Basel II, here specific risk capital charges are provided that are to be applied on different positions held by banks.

In computing the general market risk charge a choice is made between two methods namely the maturity and the duration method. In each method the capital charge is the sum of the net short or long position in the whole trading book, a small proportion of the matched positions in each time-bands, a larger proportion of the matched position across different time-bands and a net charge for positions in options. The duration method which is more accurate than the maturity method requires banks to compute the price sensitivity of each position separately. However, under the maturity method, the accord provides different factors that are designated to reflect the price sensitivity of positions in different time bands. Suffice to say, the maturity method is simpler to compute than the duration method hence the study proposes that it be adopted. For equities risk, the adoption should follow what is set out in the Basel II framework that is, an 8 percent capital charge[15] should be adopted for both

[14] These pre-determined ratios are provided in BCBS (2006), however, the accord also provide for national discretion in some risk weights.

[15] It should be noted however that Basel II provides that for portfolios that are deemed to be both liquid and well diversified a 4 percent capital charge may be applied for specific risk capital charge.

specific and market risk. Under foreign exchange and commodities risk there is no distinction between specific and market risk.

When computing the foreign exchange risk, banks are allowed to choose between the use of internal models and the shorthand method which treats all currencies identically. Thus, due to its simplicity, the shorthand method is proposed for adoption. Nonetheless, banks that do not incur foreign exchange position for their own accounts should be exempted from this capital requirement[16]. Under commodities risk a choice has to be made between three alternative approaches, namely, the use of internal models, the simplified approach and the maturity ladder approach. Of all these approaches the simplified approach is simpler to implement. Consequently, the study proposes that it should be adopted. Table 4 below provides a summary of all methods that are to be adopted in computing market risk capital charges.

Table 4: The proposed market risk capital calculation method

Risk type	**Category**	**Calculation method**	**Definition of method**
Interest rate risk	Specific risk	Pre-determined capital charge ratios are applied to different positions held by the bank	Specific risk capital charge for interest rate exposures
	Market risk	The capital charge is the sum of the overall net weighted position, the matched weighted position in each time band and the matched weighted position across different time bands	Maturity method
Equities risk	Specific risk	8 percent capital charge should be applied on the sum of all long equity positions and of all short equity positions	Specific risk capital charge for equities risk
	Market risk	An 8 percent capital charge is applied on the overall net position in an equity market.	General market risk capital charge for equities risk

[16] This is because risks arising from such exposures are borne by the bank's clients not the bank itself.

Foreign exchange risk	No distinction between specific and market risk	The capital charge will be 8 percent of the overall net open position in foreign exchange	Shorthand method
Commodities risk	No distinction between specific and market risk	The capital charge will be 15 percent of the net position in each commodity	Simplified approach

Source: Authors' own presentation based on BCBS (2006)

Operational Risk

To cater for operational risk, Basel II allows for a selection among three alternatives, the basic indicator, the standardised approach and the advanced measurement approach. The basic indicator approach is simpler and should form part of the proposed basket. In this case, banks will hold capital calculated by multiplying their average gross income for the past three years by 15 percent. In line with its methodology, this study has adopted the simplified approaches for pillar 1 capital requirements. This notwithstanding, it is acknowledged that the parent banks of the foreign owned banks might adopt the advanced approaches and will require their subsidiaries to do so as well. In this case, the local banks will be mandated to report to the local regulator using the adopted local framework, that is, the simplified approaches. This is done in order to avoid possible competitive gains by banks which may use the advanced approaches over their local counterparts. This competitive edge may arise because the advanced approaches attract less capital charges compared to the standardised approach. To add to that, the adoption of the advanced approaches might lead to loss of supervisory power over these banks, as the local regulator does not have sufficient technical expertise to supervise the advanced approaches. This however, exposes the foreign banks to a degree of regulatory suffocate due to differences in the regulatory frameworks locally and at their parent banks' jurisdictions. Nonetheless, with time, as capacity is developed locally the burden will dissipate.

Pillar 2 is intended not only to ensure that banks have adequate capital to support all the risks in their business, but also to encourage banks to develop and use better risk management techniques in monitoring and managing their risk. That is, management of the bank has to ensure that a bank holds enough capital to cover risks over and above those stipulated under

pillar 1. Supervisors are required to evaluate how well banks are assessing their capital needs relative to their risks and to intervene, where appropriate (BCBS, 2006). Currently, the CBL's examinations focuses on ensuring that senior management of the banks as well as the board of directors have adequate risk management systems that mitigate risks inherent in their banks. Thus, it is reasonable to expect banks to execute this pillar with relative ease. Nevertheless, the only exception is that of a sound capital assessment that will relate capital to the level of all material risks in a bank. Currently, the local banks do not have means of adequately assessing their capital in relation to risks.

To be able to determine the level of capital commensurate with their inherent risk, banks will need to develop models that will express their capital as a function of the risks inherent in their business lines. Developing such models might prove challenging for banks, due to the expertise that might be required to develop such models and the fact that capital requirements for foreign banks might be determined at group level implying that the local subsidiaries may have little inputs on the amount of capital they ought to hold. This pillar also poses challenges on the local supervisor, because currently, though examinations are risk-based, the assessment of capital is still rules-based as it only determines if banks' capital meets the regulatory minimum requirement, not whether that capital is commensurate with the bank's level of inherent risk. Despite these challenges the benefits that can accrue from implementation of this pillar are too important to forego. Specifically, the benefits include improved risk management practice not only by banks, but by the supervisors as well. Moreover, the foreign banks can leverage on their parent banks on the expertise required under this pillar. Pillar 2 therefore passes the suitability criteria. Nonetheless, its implementation might increase the compliance costs in terms of securing capital measurement models. However, in the long run, the benefit of better risk management and hence a more resilient banking sector has the possibility of outweighing the costs. As a result, it is proposed that pillar 2 be adopted as is outlined in Basel II.

According to BCBS (2006) pillar 3 is intended to apply at the consolidated level of a bank group, as such disclosures related to individual banks within the group would not generally be required to fulfil the disclosure requirement set out under pillar 3. Given that three banks in Lesotho are subsidiaries of foreign banks, this implies that pillar 3 does not fit the suitability criteria. Consequently, it is excluded from the proposed regulatory basket. Furthermore, the motivation of this pillar was due to the fact that Basel II gave reliance on

banks' internal methodologies which gave them more discretion in assessing their capital requirements. However, because the study has proposed the standardized approaches of Basel II which limit the reliance on banks internal methodologies, pillar 3 will not be as effective. As a result implementing it has the possibility of only increasing the compliance costs of banks, without any improvement on banks stability. Table 5 provides a summary of the proposed Basel II framework for Lesotho.

Table 5: Basket of selected options for Lesotho

Pillar	Type of risk	Approach	Adopt? (Yes/No)
Pillar 1	Credit risk	Simplified standardized approach	Yes
		Standardized approach	No
		Foundation internal ratings based approach	No
		Advanced internal ratings based approach	No
	Market risk	Internal models approach	No
		Standardized measurement approach	Yes
	Operational risk	Basic indicator approach	Yes
		The standardized approach	No
		Advanced measurement approach	No
Pillar 2	Addresses all other risks not covered under pillar I	There is no alternative approaches	Yes
Pillar 3	Complements pillar 1 and pillar 2	There are no alternative approaches	No

Source: Authors' own analysis

4.2 Scenario analysis

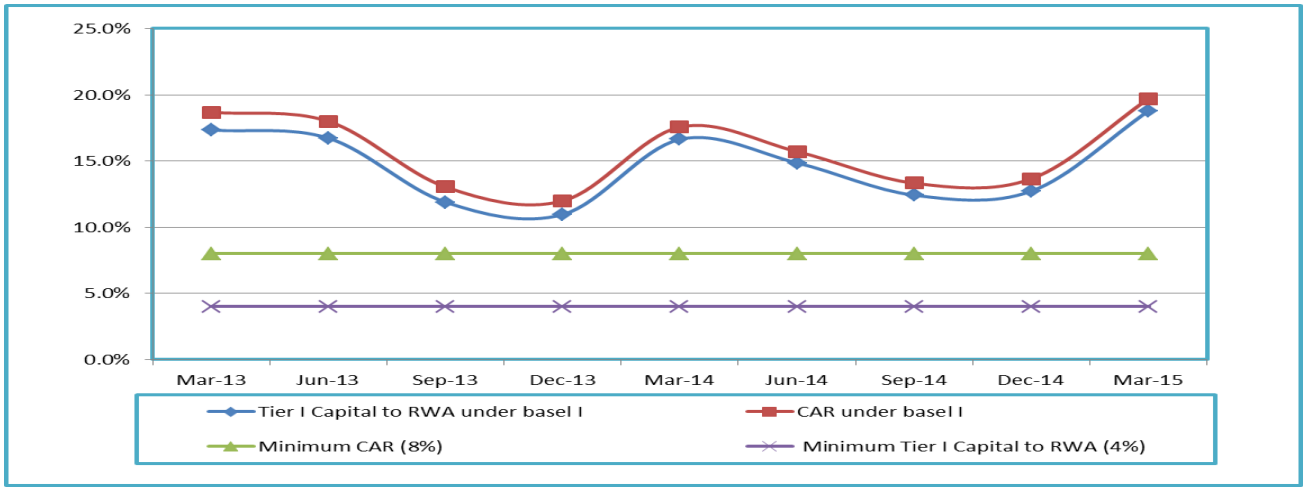
In assessing the implications of Basel II on the local banking industry, the banks are split into two tiers, namely top two and bottom two banks[17]. This assessment is undertaken by comparing the regulatory requirements under Basel I with those under Basel II. Figure 1 shows the regulatory requirements under the current framework as well as the actual capital banks held from the first quarter of 2013 to the first quarter of 2015 for the top two banks.

[17] Top two banks are the biggest banks in terms of market share, total assets and deposits

Figure 2 shows the minimum capital requirements and actual capital held by the bottom two banks. It is deduced from both figures that banks hold capital in excess of the regulatory requirements under the current framework. For instance, tier 1 and total regulatory capital to risk weighted assets for the top two banks averaged 14.7 percent and 15.7 percent, respectively, for the nine quarters shown in figure 1. For the Bottom two banks tier 1 and total regulatory capital to risk weighted assets averaged 7.5 percent and 9.2 percent respectively for the period under study, these were well above the regulatory requirements of 4 percent tier and 8 percent of tier 1 and total regulatory capital to risk weighted assets respectively.

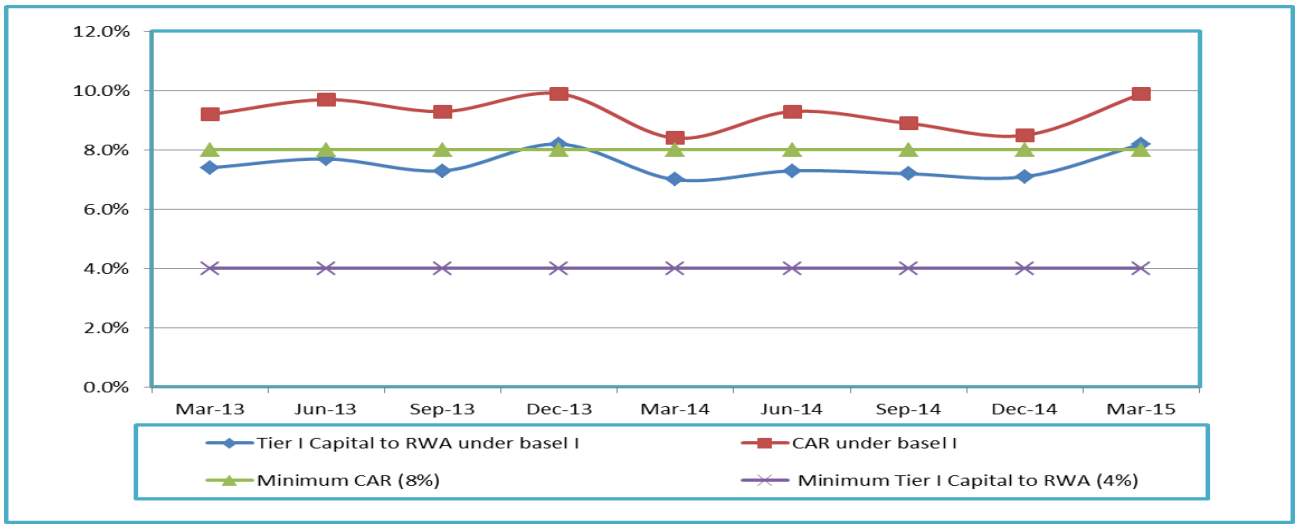
It can also be noted that for both tiers, banks were not only highly capitalised but held capital of a very high quality, evidenced by the high tier 1 ratio. Tier 1 constituted the majority of the capital base and was comprised of paid-up ordinary shares, statutory reserves, general reserves and audited retained earnings for all banks. The industry's high level of capital underscores three important issues; first, this is a result of the high capital requirements demanded by the regulator of the foreign banks' parent companies. Second, this is a reflection of the inherent risk in the local financial sector, particularly the high concentration risk. Third, the local financial sector is still rudimentary resulting in limited avenues for banks to invest their surplus funds; this is corroborated by the fact that retained earnings account for majority of the bank's capital base. It is also important to note that the fact that retained earnings account for majority of the capital base has resulted in a volatile capital base this is especially so for the top two banks (see Figure 1). Retained earnings include declared dividends; as these are paid out during the year the capital base also declines.

Figure 1: Top two banks' capital requirements under Basel I



Source: Authors' own computations

Figure 2: Bottom two banks' capital requirements under Basel I



Source: Authors' own computations

Basel I as currently implemented in Lesotho only caters for capital requirements for credit risk, implying that there are no capital requirements for market risk. It should be noted that the risk weighted assets under Basel I refer solely to assets that expose the bank to credit risk. The simplified standardised approach proposed for adoption provides new risk weights some of which are different from those under Basel I. These weights are applied on banks'

exposures to derive the credit risk weighted assets under Basel II. The first major difference between the two sets of risk weights is that under the new weights, claims on government and Central Bank are risk weighted 100 percent which is an increase from 0 percent under Basel I. Under the simplified standardised approach, claims on sovereigns and their Central Banks are risk weighted according to the country risk scores of export credit agencies (ECA) participating in the 'Arrangement on officially supported export credits' (BCBS 2006; p322).

Lesotho has an ECA risk score of 5, and attracts a risk weight of 100 percent. The study also applies the 100 percent risk weight on all claims to the government and the Central Bank of Lesotho. Despite adopting this risk weight, it should be acknowledged that Basel II framework allows for a lower risk weight to be applied at national discretion. The weighting of all exposures to government and Central Bank by 100 percent is expected to have a significant impact on the banks' capital holdings. This is because these exposures constitute a significant portion of a bank's portfolio. Furthermore, this new weighting may induce banks to remove such exposures from their books, due to the increased cost associated with holding them. This therefore has a potential of being counterproductive as it might be an obstacle to some objectives of the government. For instance, government debt is used not only as a tool in the conduct of monetary policy in the country but also in the development of the capital market. Commercial banks are the main players in the capital market and increasing the cost of bank exposures to government might be a disincentive for banks to hold such exposures which would ultimately hinder the development of the market.

Under the simplified standardised approach, claims on banks and other financial institutions are assigned a risk weight based on the weighting of claims on the country in which they are incorporated. Needless to say, claims on local banks will attract a 100 percent risk weight. This increase in exposures to local banks has the possibility of hindering the development of the interbank market as well as encouraging capital flight from Lesotho. Currently, exposures to banks incorporated in any of the Southern African Development Community (SADC) countries require a risk weight of 20 percent. These exposures constitute a significant portion of the total claims due from banks and other financial institutions this is more so for the top two banks. With the proposed accord some of the exposures are going to attract a 150 percent risk weight, these include claims on banks from Swaziland and Zimbabwe. Due to the increased cost of holding such claims, banks might opt to place their surplus funds in banks that are incorporated in the developed countries, which would bear a

lower risk weight. The risk weights on commercial loans are similar under the proposed accord to that under the current framework. All commercial loans require a risk weight of 100 percent. This is one of main disadvantages of adopting the simplified standardised approach, as it lacks risk sensitivity when compared with the advanced approaches. That is, under the simplified standardised approach a loan to a company with a steady cashflow attracts a similar risk weight with a loan to a company with uncertain cashflow.

All personal loans are included in the regulatory retail portfolio; as such they are liable to a 75 percent risk weight, which is a decline from the 100 percent which was required under Basel I. In Lesotho the majority of the personal loans are unsecured, this coupled with the relative ease with which individuals can get access to credit in the informal market as well as from loan sharks heightens the risk of these exposures. Furthermore, business management skills have always been regarded to be at the low ebb, a testament to this is the fact banks usually complain about below standard business proposals submitted to them seeking finance, as well as poor accounting records for existing business. These factors also compound the risk of retail loans. Consequently, the 75 percent risk weight of the retail portfolio is envisaged to expose banks in cases of default, that is, banks might not have enough funds to cushion losses arising from such loans. Residential real estate housing loans receive a risk weight of 35 percent which is a decline from 50 percent; this is meant to reflect the low level of risk inherent in such loans due to the fact that they are fully secured by mortgage on the properties. Following the release of the Land Act 2010 there has been a surge in mortgage loans. The reduction in the risk weight of these assets is therefore expected to entice banks to further increase them in their portfolio.

Due to the lack of granularity in the data used in this study, all exposures to banks and other financial institutions were assigned a risk weight of 100 percent. This is because with the current reporting templates these exposures are aggregated into claims on banks licensed in Lesotho, OECD and approved regional countries[18]. Suffice to say, risk weights applied in this study might not be a true reflection of those required under the simplified standardised approach. This is due to the fact that exposure to banks incorporated in countries that attract higher risk weights are not explicitly indicated. As such, the study failed to accurately determine the appropriate weights for each exposure. Furthermore, exposures are risk

[18] Approved regional countries are SADC countries

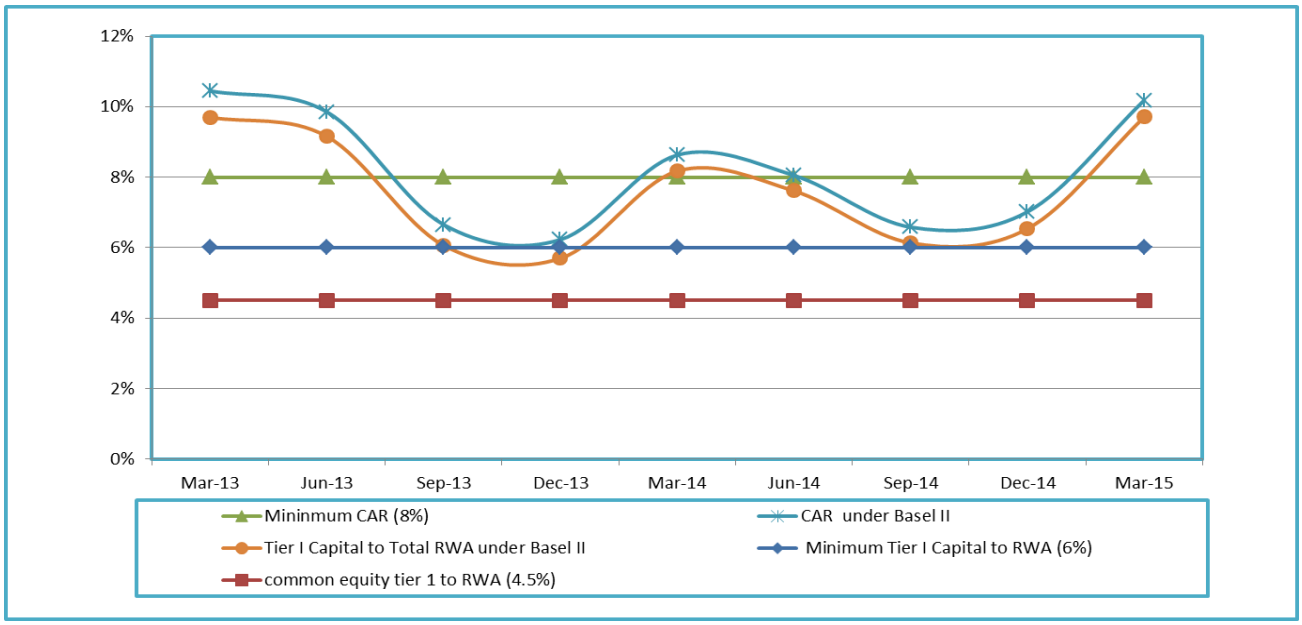
weighted net of specific provisions, for some exposures such as past due loans risk weights differ depending on the level of specific provision. Such data, though available to banks does not form part of data currently reported to the Central Bank. Consequently, it was not used as the study only employed data reported to the Central Bank. The proposed accord will introduce for the first time in Lesotho capital requirements for operational and market risk. The operational risk capital charge is computed by multiplying the average gross profit of the previous three years by 15 percent. The market risk capital charge on the other hand is obtained by multiplying the net open position in foreign exchange[19] by 8 percent. It should be noted that the study used the net open position as provided by banks. Consequently, there is a need to verify that this is computed in line with the requirements under the shorthand method that is proposed for adoption in this study.

To derive the total risk weighted assets under the proposed accord, the operational and market risk capital charges are then multiplied by 12.5[20], the resulting figures are then added to the total credit risk weighted assets to determine the total risk weighted assets under the Basel II. Having determined the total risk weighted assets, the study then assesses whether banks are in a position to meet the minimum target ratios under Basel II. As aforementioned, the minimum target ratios under Basel I were Tier 1 and total capital to risk weighted assets of 4 percent and 8 percent, respectively. Under the proposed accord, tier 1 capital to risk weighted assets has increased to 6 percent while total capital to risk weighted assets is still the same at 8 percent. There is however, a new ratio namely common equity tier 1 capital to risk weighted assets which has a minimum target ratio of 4.5 percent. Figure 3 and 4 shows the minimum regulatory capital requirements under the proposed accords as well as the actual capital that banks held for the top two and bottom two banks respectively. For the nine quarters reported in Figure 3, tier 1 capital and total capital to risk weighted assets under the new regulatory requirements averages 7.64 percent and 8.18 percent, respectively. This implies that banks are able to meet the new minimum requirements of 6 and 8 percent, respectively.

[19] The study only computes capital charges for foreign exchange risk because the local banks do not have a trading book, which therefore means that interest rate and equities risk capital charges have to be excluded. Furthermore, commodities risk capital charge is also not computed because local banks are not exposed to commodities risk.

[20] 12.5 is the reciprocal of the minimum capital ratio of 8%

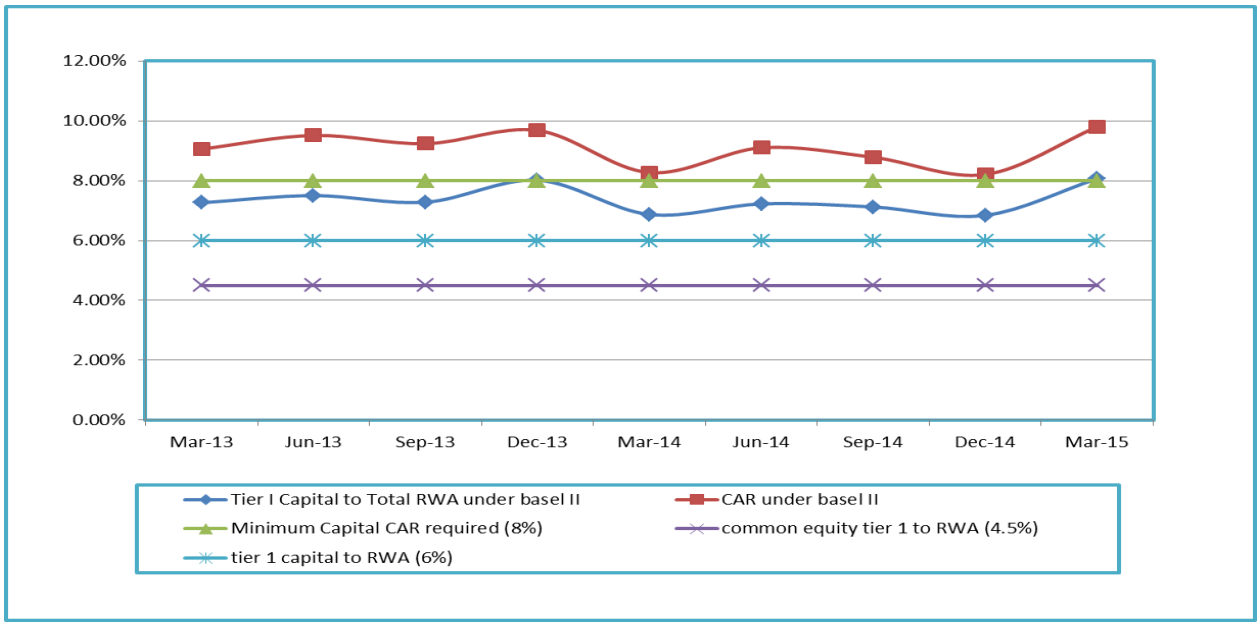
Figure 3: Top two banks' capital requirements under Basel II



Source: Authors' own computations

Tier 1 capital for the top two banks is composed of common equity only. Hence, common equity tier 1 capital to risk weighted assets is also 7.64 percent which is above the 4.5 percent minimum requirement. It can be observed from Figure 3 that there are instances where banks fail to meet the new minimum requirements particularly the total capital to risk weighted assets. For instance, in September and December 2014 total regulatory capital to risk weighted assets was 6.58 percent and 7.02 percent, respectively. A similar trend is also noted in 2013 where total capital to risk weighted assets is reported as 6.65 percent and 6.23 percent in September and December, respectively. Thus, during the last two quarters of the year the top two banks are not able to meet the new regulatory requirements. These last two quarters represent the period in which declared dividends are paid out which therefore explains the decline in capital adequacy. For the entire period reported in Figure 3 the top two banks record tier 1 capital to risk weighted assets that is below the new minimum requirement once in December 2013 at 5.70 percent.

Figure 4: Bottom two banks' capital requirements under Basel II



Source: Authors' own computations

The bottom two banks also record averages higher than the new minimum regulatory requirements. For instance, tier 1 and total regulatory capital to risk weighted assets average 7.35 percent and 9.07 percent, respectively. As with the top two banks tier 1 capital for the bottom two banks is composed solely of common equity capital. Consequently, tier 1 capital to risk weighted assets and common equity tier 1 to risk weighted assets are also similar for these banks. An important revelation that springs from Figure 4 is that the bottom two banks meet the new minimum regulatory requirements for the entire period reported in Figure 4. The three possible explanations for this fact are; first, these banks have not declared dividends to date. Second, the asset book of these banks is composed largely of retail loans which attract a lower risk weight under Basel II than under Basel I. Third, these banks do not hold exposures in several assets whose risk weights increased under Basel II.

From the foregoing discussion it is apparent the bottom two banks are able to meet all the minimum regulatory requirements under the new framework. The top two banks on the other hand are not able to meet these requirements particularly the total capital to risk weighted assets. Consequently, they would either have put on hold declaring dividends or raise capital to comply with the new requirements. Due to the underdeveloped capital market, banks'

options would be to change their assets and liability mix, cut back on lending, raise capital from their profits in the form of retained earnings, or capital injection by their shareholders. Cutting back on lending would have detrimental effects on the economy as banks are the main source of finance particularly for business enterprises which are crucial for economic development. Raising capital through retained earnings would only be viable for the foreign owned banks because they are the only profitable banks in the country. This option will however mean that banks would have to halt their expansion plans, which would endanger national efforts towards financial inclusion. Of all banks in the country only one has footprints in all the districts. Thus, capital injection by these banks shareholders would appear the only viable option.

5. SUMMARY AND RECOMMENDATIONS

The study set out to propose a new regulatory framework for Lesotho and assess the possible effects of the new framework on the county's commercial banks. The motivation of this study was to develop a framework that would amongst others ease the regulatory burden on some local banks that arises from differences in the local regulatory framework and that of their parent banks which they are also subjected to. Using a simplicity-suitability selection approach, the study proposes adoption of selected elements of Basel II as well as the capital requirements under Basel III. That is, the calculation of capital requirements in Basel II pillar I be adopted, however, only the simplified approaches. Further, it is proposed that pillar 2 be implemented as is, this is due to the benefit associated with better risk management. Pillar 3 is however, excluded from the proposed framework, because the pillar is meant for a head of a banking group, and therefore does not apply to the local banks which are mostly subsidiaries of foreign banks.

Despite proposing adoption of the simpler approaches of the modern accords, particularly, with regard to the capital calculation in Basel II, the study notes that the parent banks of the foreign owned banks might adopt the advanced approaches which might still result in high compliance costs on these banks. Nonetheless, it is envisaged that this burden might not be as pronounced as it currently is, this is because Basel I and II are totally different frameworks hence complying with both accords at the same time is costly. However, the framework proposed in this study is similar to that under which banks are

currently reporting through their parent banks, the only difference will be in the methods used in calculating capital requirements. Consequently, the compliance costs are expected to decrease. With the new regulatory framework designed for Lesotho a key finding of the study is that the bottom two banks are able to meet all the minimum requirements under the new framework, while the top two banks fail to meet these requirements. This therefore underscores the fact that adoption of the new framework will have to be in a phased manner to allow the top two banks time to adjust towards compliance.

The study used data submitted to the Central Bank; this however, posed some challenges in that the data lacked granularity as a result some assets might not have been assigned appropriate weights. Consequently, there is need to develop new reporting templates that would be more detailed than the current ones. Moreover, all risk weights used in the study are as provided under Basel II, this is despite the accord providing for some national discretion on some. The study proposes that in such cases new risk weights be determined that would ensure that banking sector regulation is in harmony with national development agendas. Finally, the study used data aggregated into top two and bottom two banks as such the reported results might not be the same on all banks hence the need to undertake a similar study using individual bank data. Such a study will further help in deciding whether the new framework is to be adopted by all banks or whether some banks will have to be excluded for some time.

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Appendix 1: Basket of selected options for Lesotho Zambia and South Africa (RSA)

Pillar	Type of risk	Approach	Lesotho	Zambia	RSA
Pillar 1	Credit risk	Simplified standardized approach	Yes	Yes	Yes
		Standardized approach	No	No	Yes
		Foundation internal ratings based approach	No	No	Yes
		Advanced internal ratings based approach	No	No	Yes
	Market risk	Internal models approach	No	No	Yes
		Standardized measurement approach	Yes	Yes	Yes
	Operational risk	Basic indicator approach	Yes	Yes	Yes
		The standardized approach	No	No	Yes
		Advanced measurement approach	No	No	Yes
Pillar 2	Addresses all other risks not covered under pillar I	No alternative approaches	Yes	Yes	Yes
Pillar 3	Complements pillar 1 and pillar 2	No alternative approaches	No	Yes	Yes

Source: Authors' own analysis